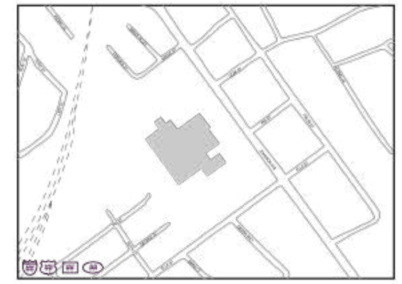
ATTACHMENT 1

Dignity Health French Hospital New Patient Tower Plan Set, March 2021

DIGNITY HEALTH FRENCH HOSPITAL MC
NEW PATIENT TOWER

1911 JOHNSON AVENUE
SAN LUIS OBISPO, CA 93401

Vicinity Map



Project Image

Project Information

OWNER:	FRENCH HOSPITAL MEDICAL CENTER
OSHPD FACILITY NUMBER:	12964
FACILITY CLASSIFICATION:	GENERAL ACUTE CARE HOSPITAL
OCCUPANCY (TOWER):	GROUP I-2
DESCRIPTION OF USE:	NEW INPATIENT TOWER
CONSTRUCTION TYPE:	TYPE I-A
SPRINKLERS:	YES
NUMBER OF STORIES:	4
BUILDING HEIGHT:	68'-0"
RISK CATEGORY: SEISMIC	IV
CLIMATE ZONE:	5
NEW CONSTRUCTION (SF):	89,775 SF PATIENT TOWER
PARKING GARAGE:	
OCCUPANCY (PARKING GARAGE):	GROUP S-2/B
CONSTRUCTION TYPE:	II-B
STORIES:	1 & ROOF PARKING
BUILDING HEIGHT:	29'-0"
FLOOR AREA (PARKING GARAGE):	26,000 SF (LEVEL 1) + 31,000SF (ROOF)
FLOOR AREA (LAB SHELL/STORAGE):	5,800 SF
FIRE SPRINKLERS:	YES
ALLOWABLE BUILDING HEIGHT:	35'-0" MAX. (REQUEST FOR HEIGHT VARIANCE FOR 68'-0" FOR PATIENT TOWER)
LOT COVERAGE:	EXISTING: 17% PROPOSED: 25%
REFER TO PA100 FOR PARKING CALCULATIONS	
EXISTING F.A.R.:	0.17
PROPOSED F.A.R.:	0.35
PATIENT BED COUNT:	
CURRENT BED COUNT:	98 BEDS
PHASE 1 BEDS ADDED*	36 BEDS FOR A TOTAL OF 134
LATER PHASE(S):	46 BEDS *
FINAL TOTAL COUNT:	180 BEDS

*BUILDING WILL BE BUILT WITH SHELLED SPACES TO ACCOMMODATE THE 46 BEDS IN THE FUTURE.

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L102	Parking Structure Landscape Plan
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Scope of Work

NEW PATIENT TOWER:
NEW 87,870 SF FOUR STORIES INPATIENT MEDICAL TOWER THAT IS ADDITION TO THE EXISTING FRENCH HOSPITAL MEDICAL CENTER (FHMC) LOCATED AT 1911 JOHNSON AVENUE, SAN LUIS OBISPO, CALIFORNIA.
THE INITIAL BUILD OUT OF THE TOWER CONSISTS OF THE FOLLOWING SPACES:
- LOBBY, DINNING AND KITCHEN AREA
- EIGHT NICU BAYS
-TWENTY-EIGHT MED SURG. PRIVATE PATIENT ROOMS
-SHELL SPACE

SHELL SPACE IN THE FUTURE WILL BE CONVERTED INTO THE FOLLOWING MEDICAL SPACES:
-IMAGING DEPARTMENT
-ADDITIONAL EIGHT NICU BAYS
-TEN ICU BEDS
-TWENTY-EIGHT MED-SURG PRIVATE PATIENT ROOMS

NEW PARKING GARAGE:
NEW PARKING DECK OVER GRADE LEVEL PARKING, HELISTOP AND SHELL SPACE FOR A FUTURE LAB

Property / Legal Description

LAND USE ZONE:	O-S
PRESENT LAND USE:	O-S
PROPOSED USE:	PATIENT TOWER ADDITION AND PARKING STRUCTURE

PARCEL 1: APN: 003-571-025
PARCEL 1A
PARCEL 2: APN: 003-568-004
PARCEL 2A, PARCEL 2B, PARCEL 2C
PARCEL 3: APN: 003-578-026
PARCEL 3A
PARCEL 4: APN: 003-578-057
PARCEL 4A: PARCEL 4B
PARCEL 5: APN: 003-568-005
PARCEL 6: APN: 003-578-063
PARCEL 6B, PARCEL 6C, PARCEL 6D, PARCEL 6E, PARCEL 6F, PARCEL 6G, PARCEL 6H
PARCEL 7: APN: 003-578-048
PARCEL 7A, PARCEL 7B, PARCEL 7C, PARCEL 7D, PARCEL 7E, PARCEL 7F
PARCEL 8: APN: 003-578-049
PARCEL 8A, PARCEL 8B, PARCEL 8C, PARCEL 8D, PARCEL 8E, PARCEL 8F
PARCEL 9, APN: 003-578-050
PARCEL 9A, PARCEL 9B, PARCEL 9C, PARCEL 9D, PARCEL 9E, PARCEL 9F

Fire Department Notes:

1. FIRE DEPARTMENT ACCESS: ACCESS SHALL BE IN ACCORDANCE WITH CHAPTER 5 AND APPENDIX D OF THE 2016 CALIFORNIA FIRE CODE (CFC). ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET AND AN UNOBSTRUCTED VERTICAL CLEARANCE OF 13' 6". ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF A 60,000 POUND FIRE APPARATUS AND SHALL BE PROVIDED WITH A SURFACE SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES. THE ALL-WEATHER ACCESS ROAD(S) SHALL BE INSTALLED PRIOR TO THE START OF COMBUSTIBLE CONSTRUCTION. DEAD END ROADS IN EXCESS OF 300 FEET IN LENGTH SHALL TERMINATE IN A CUL-DE-SAC TURNAROUND WITH A MINIMUM UNOBSTRUCTED TURNING RADIUS OF 35 FEET (70 FOOT DIAMETER). THE MAXIMUM ROAD GRADE FOR FIRE DEPARTMENT ACCESS IS 15%, WITH A MAXIMUM CROSS SLOPE OF 5%. THE MAXIMUM ANGLE OF APPROACH AND ANGLE OF DEPARTURE IS 10%. SHOW ALL FIRE LANES, INCLUDING WIDTHS OF FIRE LANES. LADDER TRUCK ACCESS TO BUILDINGS SHALL BE IN ACCORDANCE WITH THE 2016 CALIFORNIA FIRE CODE, APPENDIX D.

2. APPROVED ADDRESS NUMBERS SHALL BE PLACED ON ALL NEW BUILDINGS IN SUCH A POSITION TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET FRONTING THE PROPERTY. NUMBERS SHALL BE A MINIMUM OF 8" HIGH BY 1" STROKE AND BE ON A CONTRASTING BACKGROUND.

3. WATER SUPPLIES: WATER SUPPLIES SHALL BE IN ACCORDANCE WITH SECTIONS 507 OF THE CFC. AN APPROVED WATER SUPPLY CAPABLE OF PROVIDING THE REQUIRED FIRE FLOW FOR FIRE PROTECTION IS REQUIRED. THE FIRE FLOW SHALL BE DETERMINED USING APPENDIX B OF THE CFC.

4. FIRE DEPARTMENT ACCESS TO EQUIPMENT: ROOMS OR AREAS CONTAINING CONTROLS FOR AIR-HANDLING SYSTEMS, AUTOMATIC FIRE-PROTECTION SYSTEMS, OR OTHER DICTION, SUPPRESSION OR CONTROL ELEMENTS SHALL BE IDENTIFIED FOR USE BY THE FIRE DEPARTMENT AND SHALL BE LOCATED IN THE SAME AREA. A SIGN SHALL BE PROVIDED ON THE DOOR TO THE ROOM STATING: "FIRE SPRINKLER RISER" AND "FIRE ALARM CONTROL PANEL". FIRE SPRINKLER RISERS SHALL BE LOCATED IN A ROOM WITH EXTERIOR DOOR ACCESS. SHOW ANY PROPOSED FIRE SPRINKLER RISER ROOM(S) NEAR ELECTRICAL ROOM(S).

5. KNOX BOX: A KNOX BOX SHALL BE PROVIDED ON THE OUTSIDE OF THE FIRE SPRINKLER RISER ROOM(S) WITH A KEY TO THE ROOM.

6. FIRE PROTECTION SYSTEMS AND EQUIPMENT: FIRE PROTECTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE CFC AND THE CALIFORNIA BUILDING CODE. AN APPROVED NFPA 13 FIRE SPRINKLER SYSTEM WILL BE REQUIRED. SHOP DRAWINGS AND SPECIFICATIONS SHALL BE A DEFERRED SUBMITTAL, FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. STANDPIPES SHALL BE INSTALLED IN ALL STAIRWELLS FOR BOTH BUILDINGS. ONE STANDPIPE SHALL GO TO HELIPAD ON ROOF OF PARKING STRUCTURE. FIRE MAIN AND ALL ASSOCIATED CONTROL VALVES SHALL BE INSTALLED PER NFPA 24 STANDARDS AND CITY ENGINEERING STANDARDS.

7. FIRE SAFETY DURING CONSTRUCTION: BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CHAPTER 34 OF THE CFC.

8. ALL EXTERIOR CONSTRUCTION METHODS AND MATERIAL SHALL COMPLY WITH CHAPTER 7A (IGNITION RESISTANT CONSTRUCTION) OF THE BUILDING CODE, EXCEPT FOR WINDOWS, FOR BUILDINGS LOCATED IN WILDFIRE PRONE AREAS.

Project Team

ARCHITECT
Name: CUNINGHAM GROUP ARCHITECTURE, INC.
Contact: GERALD WAYNE HUNTER
Address: 8665 HAYDEN PLACE, CULVER CITY, CA 90232
Phone: (619) 849 -1080
FAX: (619) 849 -1080
E-Mail: WHUNTER@CUNINGHAM.COM

OWNER
Name: DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER
Contact: DAN FARNUM
Address: 1911 JOHNSON AVE, SAN LUIS OBISPO, CA 93401
Phone: (805) 542-6455
FAX: (805) 542-6220
E-Mail: DANIEL.FARNUM@DIGNITYHEALTH.ORG

GENERAL CONTRACTOR
Name: LAYTON CONTRUCTION CO.
Contact: MICHAEL BLASINGIM
Address: 9090 S. SANDY PARKWAY, SANDY, UTAH 84070-6409
Phone: (801) 563-3664
FAX: (801) 563-4811
E-Mail: MBLASINGIM@LAYTONCONSTRUCTION.COM

KITCHEN
Name: DMH FOOD SERVICE DESIGN
Contact: RICHARD DIELI
Address: P.O. BOX 28197, SAN DIEGO, CA 92128
Phone: (619) 285-1169
FAX: (619) 602-4107
E-Mail: RDIELI@DMHFOODSERVICEDESIGN.COM

VERTICAL TRANSPORTATION
Name: OTIS ELEVATORS
Contact: NIKKI WINDHAM
Address: 470 LAKESIDE DRIVE, SUITE D, SUNNYVALE, CA 94085
Phone: (415) 286-1148
FAX: (860) 660-7723
E-Mail: NIKKI.WINDHAM@OTIS.COM

CIVIL
Name: ASHLEY & VANCE ENGINEERING, INC.
Contact: KEN BROWN
Address: 1413 MONTEREY STREET, SAN LUIS OBISPO, CA 93401
Phone: (805) 545-0010
FAX: (###) ###-####
E-Mail: KEN@ASHLEYVANCE.COM

STRUCTURAL
Name: DEGENKOLB ENGINEERS
Contact: ANJU BANSAL
Address: 375 BEALE STREET, SUITE 500, SAN FRANSISCO, CA 94105
Phone: (415) 392-6952
FAX: (415) 981-3157
E-Mail: ABANSAL@DEGENKOLB.COM

MECHANICAL / PLUMBING
Name: PAN-PACIFIC MECHANICAL
Contact: PATRICK GEORGE
Address: 18250 EUCLID STREET, FOUNTAIN VALLEY, CA 92708
Phone: (949) 474-9170
FAX: (949) 474-9180
E-Mail: PATRICK@PPMECHANICAL.COM

LANDSCAPE
Name: OASIS ASSOCIATES
Contact: MICHAEL CRIPE
Address: 3427 MIGUELITO COURT, SAN LUIS OBISPO, CA 93201
Phone: (805) 541-4509
FAX: (805) 546-0525
E-Mail: MICHAEL@OASISASSOC.COM

FIRE PROTECTION / SPRINKLER SYSTEM
Name: COSCO FIRE PROTECTION
Contact: KEVIN CLAIBORNE
Address: 4233 SIERRA MADRE #108, FRESNO, CA 93722
Phone: (599) 352-2278
FAX: (599) 275-8006
E-Mail: KCLAIBORNE@COSCOFIRE.COM

ELECTRIC/LOW VOLTAGE/FIRE ALARM/NURSE CALL
Name: HOWE ELECTRIC
Contact: BOON TEE
Address: 4682 E. OLIVE AVE, FRESNO, CA 93702
Phone: (559) 255-8992
FAX: (559) 255-9745
E-Mail: BOON.TEE@HOWE-ELECTRIC.COM

MEDICAL EQUIPMENT
Name: CRITERION SYSTEMS, INC.
Contact: JIM OUYE
Address: 34700 PACIFIC COAST HIGHWAY, SUITE 206, CAPISTRANO BEACH, CA 92624
Phone: (949) 488-3456
FAX: (949) 488-3442
E-Mail: JOUYE@WEARECRITERION.COM

CURTAIN WALL
Name: ATASCADERO GLASS
Contact: SHANE PAYTON
Address: 8730 EL CAMINO REAL, ATASCADERO, CA 93422
Phone: (805) 466-2644
FAX: (805) 466-1815
E-Mail: SPAYTON@ATASCADEROGLASS.COM

WALL FRAMING / EIFS
Name: NEVELL GROUP, INC.
Contact: NANCY OTTAVIANO
Address: 3001 ENTERPRISE STREET, SUITE 200, BREA, CA 92821
Phone: (714) 579-7501
FAX: (714) 579-7588
E-Mail: NANCY@NEVELLGROUP.COM

CUNINGHAM GROUP
Cuningham Group Architecture, Inc.
8665 Hayden Place, Culver City, CA 90232
www.cuningham.com

Agency Approval OSHPD No.: H190224-40-00

Registration

Revisions

No.	Date	Description

Project Information

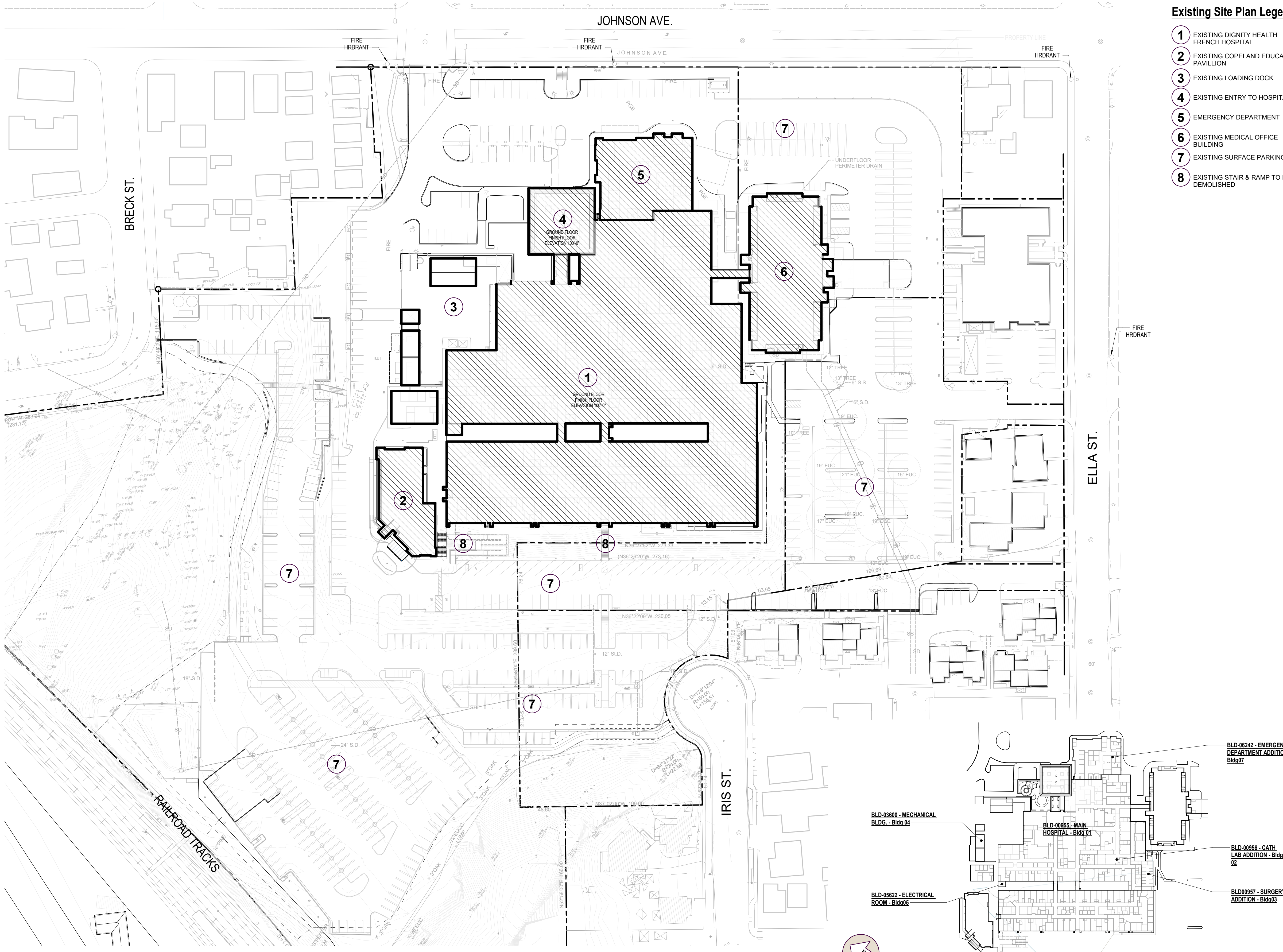
Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Cover Page

Sheet Number
G001



1 Site Plan Existing
A001 1" = 40'-0"

2 Site Plan - Key Plan
A001 1" = 80'-0"

Existing Site Plan Legend

1. EXISTING DIGNITY HEALTH FRENCH HOSPITAL
2. EXISTING COPELAND EDUCATION PAVILLION
3. EXISTING LOADING DOCK
4. EXISTING ENTRY TO HOSPITAL
5. EMERGENCY DEPARTMENT
6. EXISTING MEDICAL OFFICE BUILDING
7. EXISTING SURFACE PARKING
8. EXISTING STAIR & RAMP TO BE DEMOLISHED

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Cuningham Group Architecture, Inc.
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DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Site Plan - Existing Conditions

Sheet Number
A001

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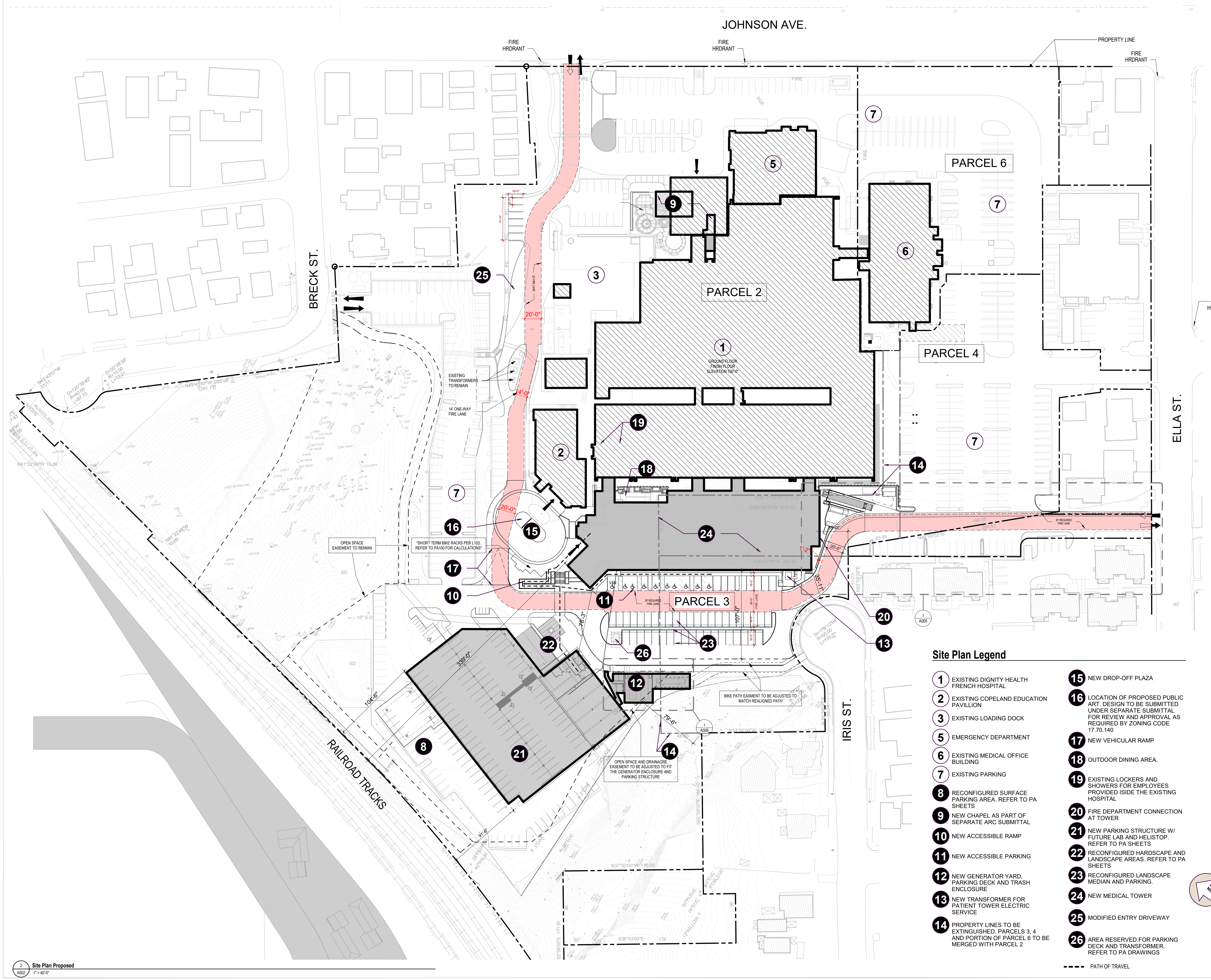

Site Plan Legend

1. EXISTING DIGNITY HEALTH FRENCH HOSPITAL
2. EXISTING COPELAND EDUCATION PAVILLION
3. EXISTING LOADING DOCK
5. EMERGENCY DEPARTMENT
6. EXISTING MEDICAL OFFICE BUILDING
7. EXISTING PARKING
8. RECONFIGURED SURFACE PARKING AREA. REFER TO PA SHEETS
9. NEW CHAPEL AS PART OF SEPARATE ARC SUBMITTAL
10. NEW ACCESSIBLE RAMP
11. NEW ACCESSIBLE PARKING
12. NEW GENERATOR YARD, PARKING DECK AND TRASH ENCLOSURE
13. NEW TRANSFORMER FOR PATIENT TOWER ELECTRIC SERVICE
14. PROPERTY LINES TO BE EXTINGUISHED. PARCELS 3, 4 AND PORTION OF PARCEL 6 TO BE MERGED WITH PARCEL 2
15. NEW DROP-OFF PLAZA
16. LOCATION OF PROPOSED PUBLIC ART. DESIGN TO BE SUBMITTED UNDER SEPARATE SUBMITTAL FOR REVIEW AND APPROVAL AS REQUIRED BY ZONING CODE 17.70.140
17. NEW VEHICULAR RAMP
18. OUTDOOR DINING AREA.
19. EXISTING LOCKERS AND SHOWERS FOR EMPLOYEES PROVIDED ISIDE THE EXISTING HOSPITAL
20. FIRE DEPARTMENT CONNECTION AT TOWER
21. NEW PARKING STRUCTURE W/ FUTURE LAB AND HELISTOP. REFER TO PA SHEETS
22. RECONFIGURED HARDSCAPE AND LANDSCAPE AREAS. REFER TO PA SHEETS
23. RECONFIGURED LANDSCAPE MEDIAN AND PARKING.
24. NEW MEDICAL TOWER
25. MODIFIED ENTRY DRIVEWAY
26. AREA RESERVED FOR PARKING DECK AND TRANSFORMER. REFER TO PA DRAWINGS

PATH OF TRAVEL

2 Site Plan Proposed
A002 1" = 40'-0"

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Registration

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DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Site Plan - Proposed

Sheet Number
A002

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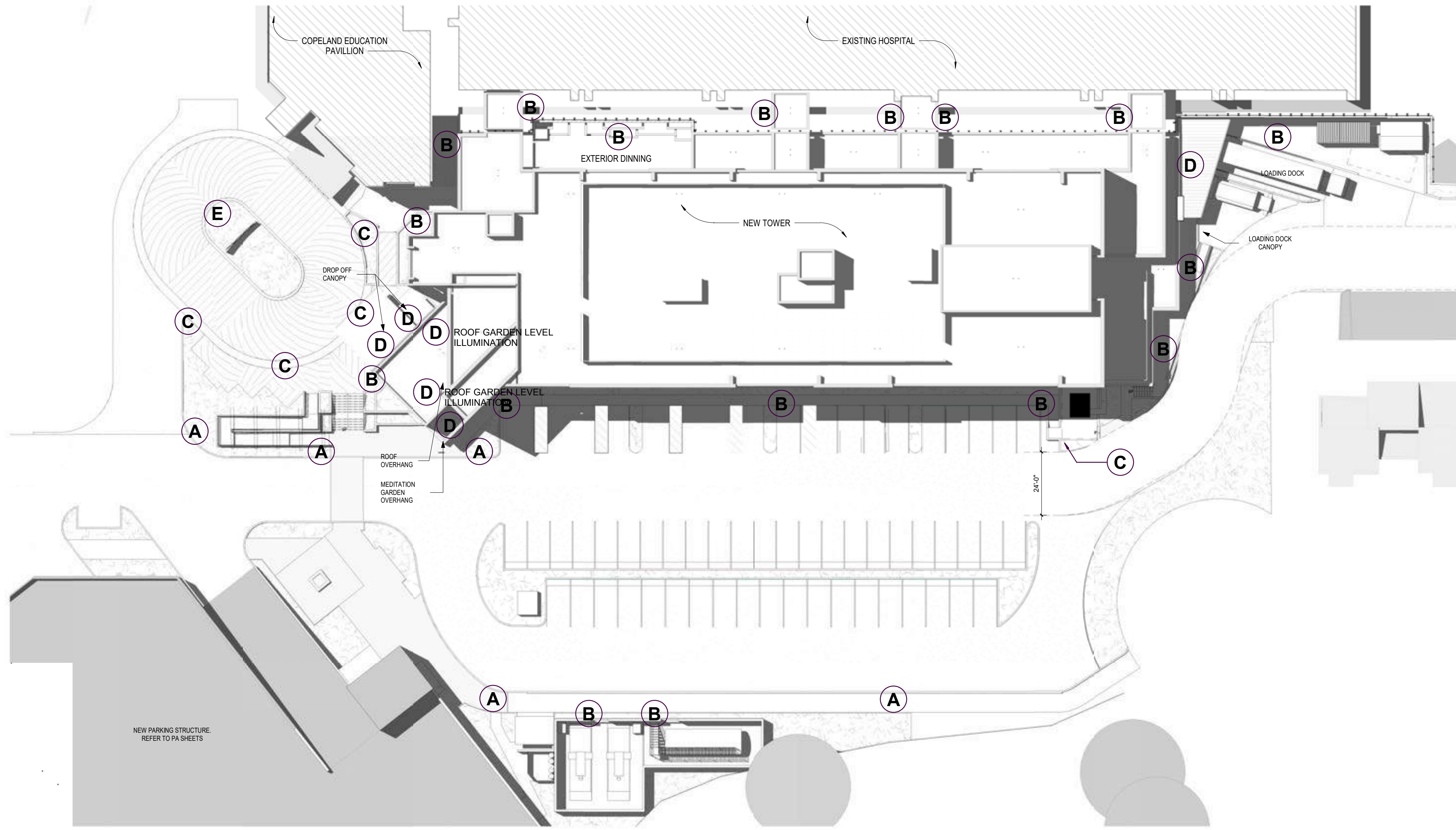
A PARKING LIGHT GLEON GALLEONLED 120 WATT, PHOTOCELL, 20' MAX HEIGHT

B ARCHITECTURAL LED WALL PACK ILLUMINATION SYSTEMS LED 42 WATT

C BOLLARD. ABB ARBOR BOLLARD 25 WATT, PHOTOCELL

D CANOPY LIGHT. TOP TIER LED

E IN-GROUND LED LUMINAIRE. SIGNAGE



1 A.003 PATIENT TOWER - SITE LIGHTING
1" = 20'-0"

Key Plan

Agency Approval

PRELIMINARY NOT FOR CONSTRUCTION

Revisions

No.	Date	Description

Project Information

Phase:	I - MR	Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Site Lighting Exhibit

Sheet Number
A.003

Current Revision

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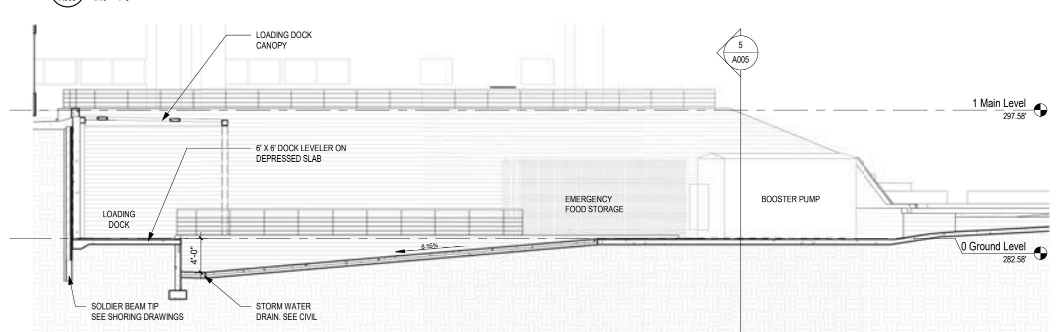
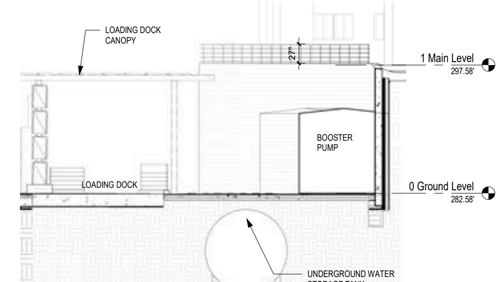
2 A005 Loading Dock Area

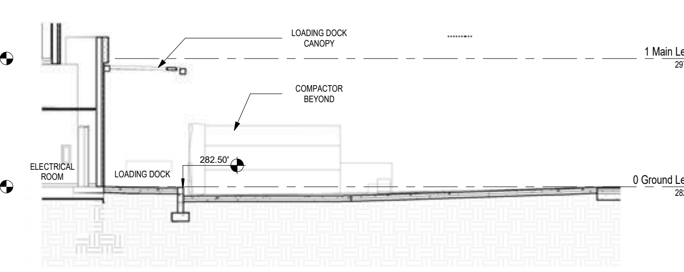
1 A005 Loading Dock Area Enlarged Plan
1/16" = 1'-0"



3 A005 Loading Dock
1/8" = 1'-0"



5 A005 Loading Dock Section 2
1/8" = 1'-0"



4 A005 Loading Dock - Section 1
1/8" = 1'-0"

Site Plan Keynote

1. EMERGENCY FOOD STORAGE
2. BOOST PUMP SHED
3. 30 YARD SELF CONTAINED COMPACTOR
4. BALER
5. UNDERGROUND WATER STORAGE TANK
6. DEPRESSED LOADING DOCK
7. RAILING
8. 6'X6' DOCK LEVELER, DEPRESSED CONCRETE
9. PLANTER AREA TO BE REPAIRED
10. LANDSCAPE
11. ELECTRICAL TRANSFORMER

Agency Approval — OSHPD No.: H190224-40-00

Registration

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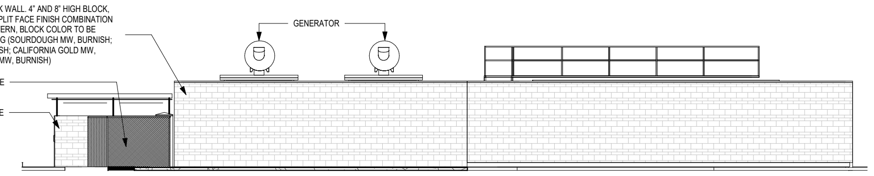
Project No.: PR18-0327	PIC / AIC: KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

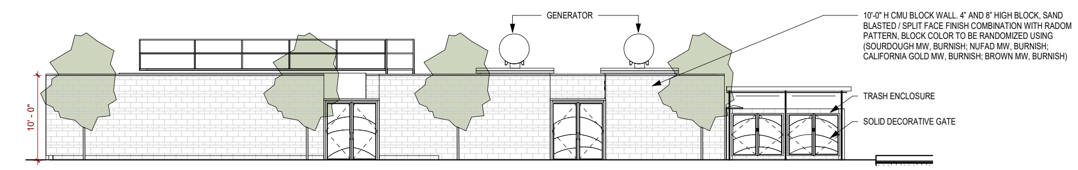
Drawing Package
ARC Submittal

Sheet Title
Enlarged Site Plan - Tower Loading Dock

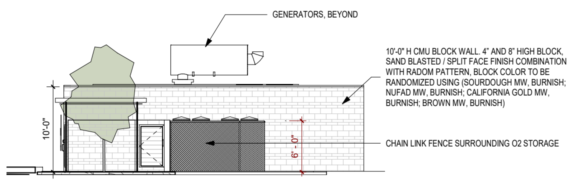
Sheet Number
A005



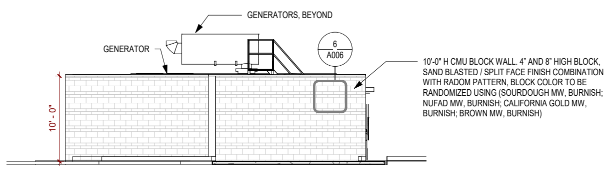
4 A006 **Generator Yard - South Elevation**
1/8" = 1'-0"



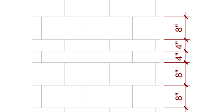
2 A006 **Generator Yard - North Elevation**
1/8" = 1'-0"



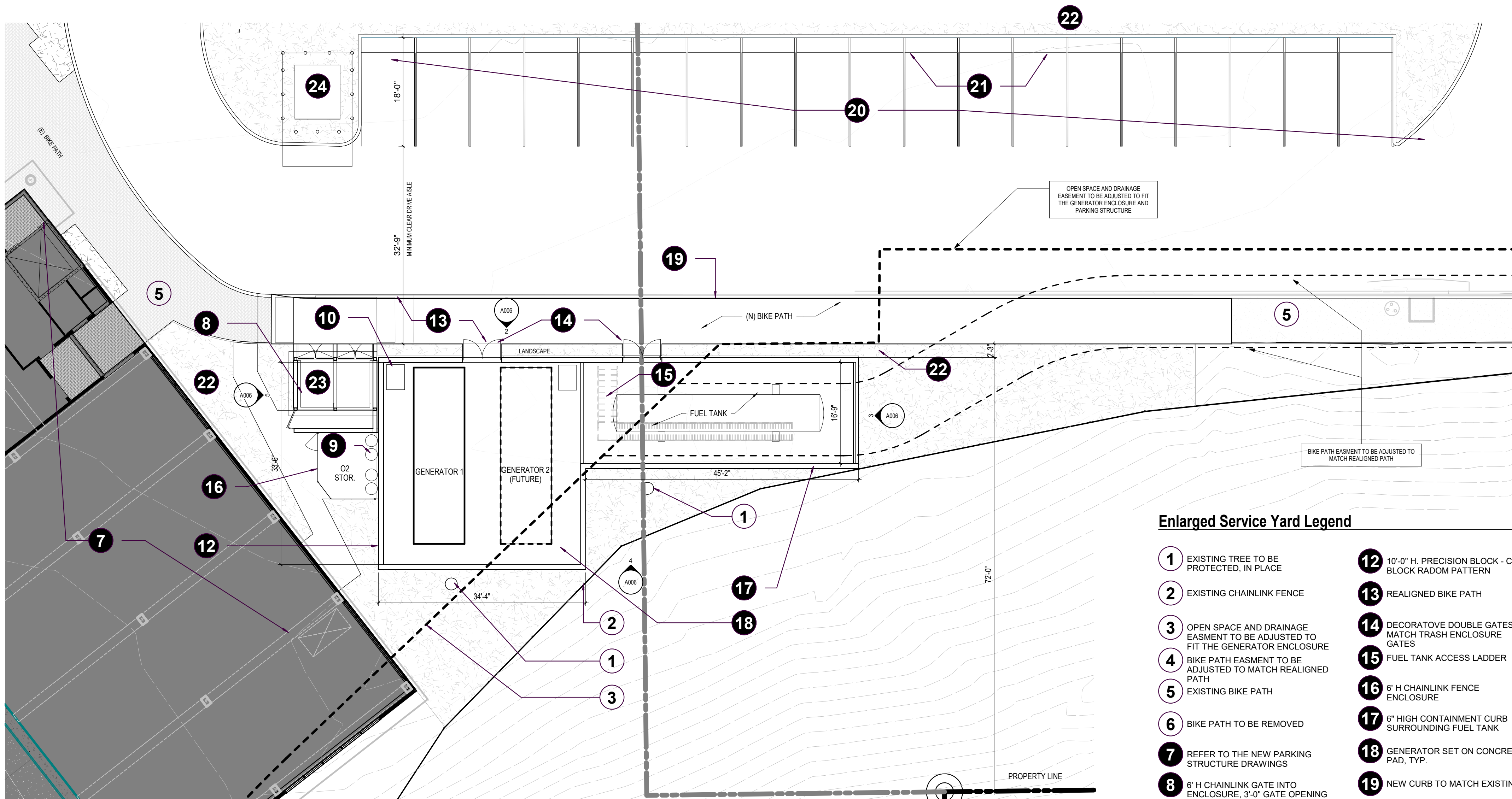
5 A006 **Generator Yard - West Elevation**
1/8" = 1'-0"



3 A006 **Generator Yard - East Elevation**
1/8" = 1'-0"



6 A006 **02 Gen Yard - East Elevation - Callout 1**
1/2" = 1'-0"



1 A006 **Generator and Oxygen Tank Enclosure - Enlarged Site Plan**
1/8" = 1'-0"

Enlarged Service Yard Legend

1. EXISTING TREE TO BE PROTECTED, IN PLACE
2. EXISTING CHAINLINK FENCE
3. OPEN SPACE AND DRAINAGE EASMENT TO BE ADJUSTED TO FIT THE GENERATOR ENCLOSURE
4. BIKE PATH EASMENT TO BE ADJUSTED TO MATCH REALIGNED PATH
5. EXISTING BIKE PATH
6. BIKE PATH TO BE REMOVED
7. REFER TO THE NEW PARKING STRUCTURE DRAWINGS
8. 6' H CHAINLINK GATE INTO ENCLOSURE, 3'-0" GATE OPENING
9. 4 EMERGENCY BACKUP CYLINDERS REFER TO PLUMBING DRAWINGS
10. DAY TANK
11. 2X2 MANIFOLD WITH DEWARS, REFER TO PLUMBING DRAWINGS
12. 10'-0" H. PRECISION BLOCK - CMU BLOCK RADOM PATTERN
13. REALIGNED BIKE PATH
14. DECORATOVE DOUBLE GATES TO MATCH TRASH ENCLOSURE GATES
15. FUEL TANK ACCESS LADDER
16. 6' H CHAINLINK FENCE ENCLOSURE
17. 6" HIGH CONTAINMENT CURB SURROUNDING FUEL TANK
18. GENERATOR SET ON CONCRETE PAD, TYP.
19. NEW CURB TO MATCH EXISTING
20. RESTRIPED PARKING AREA
21. NEW CURB AT RECONFIGURED MEDIAN, TYP.
22. LANDSCAPE
23. TRASH ENCLOSURE
24. TRANSFORMER - REFER TO PA DRAWINGS

CUNINGHAM GROUP
Cuningham Group Architecture, Inc.
8665 Hayden Place, Culver City, CA 90232
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Revisions

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DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Enlarged Site Plan - Service Yard

Sheet Number
A006

- DIETARY
- DINING
- GARDEN
- HORIZONTAL CIRCULATION
- ICU
- IMAGING
- IT
- LOBBY / WAITING
- MED/SURG
- MEP
- NICU
- OFFICE
- SHELL
- SUPPORT
- VERTICAL CIRCULATION

CUNINGHAM GROUP

Cuningham Group Architecture, Inc.
8665 Hayden Place, Culver City, CA 90232
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1
A100

Ground Level Floor Plan - Overall
3/32" = 1'-0"

Agency Approval OSHPD No.: H190224-40-00

Registration

Revisions

No.	Date	Description

Project Information

Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Ground Level Overall Plan

Sheet Number
A100

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- DIETARY
- DINING
- GARDEN
- HORIZONTAL CIRCULATION
- ICU
- IMAGING
- IT
- LOBBY / WAITING
- MED/SURG
- MEP
- NICU
- OFFICE
- SHELL
- SUPPORT
- VERTICAL CIRCULATION

1
A101
Main Level Floor Plan - Overall
3/32" = 1'-0"

Agency Approval OSHPD No.: H190224-40-00

Registration

Revisions

No.	Date	Description

Project Information

Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Main Level Overall Plan

Sheet Number
A101

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- DINING
- GARDEN
- HORIZONTAL CIRCULATION
- ICU
- IMAGING
- IT
- LOBBY / WAITING
- MED/SURG
- MEP
- NICU
- OFFICE
- SHELL
- SUPPORT
- VERTICAL CIRCULATION

1
A102
Second Level Floor Plan - Overall
3/32" = 1'-0"

Agency Approval OSHPD No.: H190224-40-00

Registration

Revisions

No.	Date	Description

Project Information

Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH
HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Second Level Overall Plan

Sheet Number
A102

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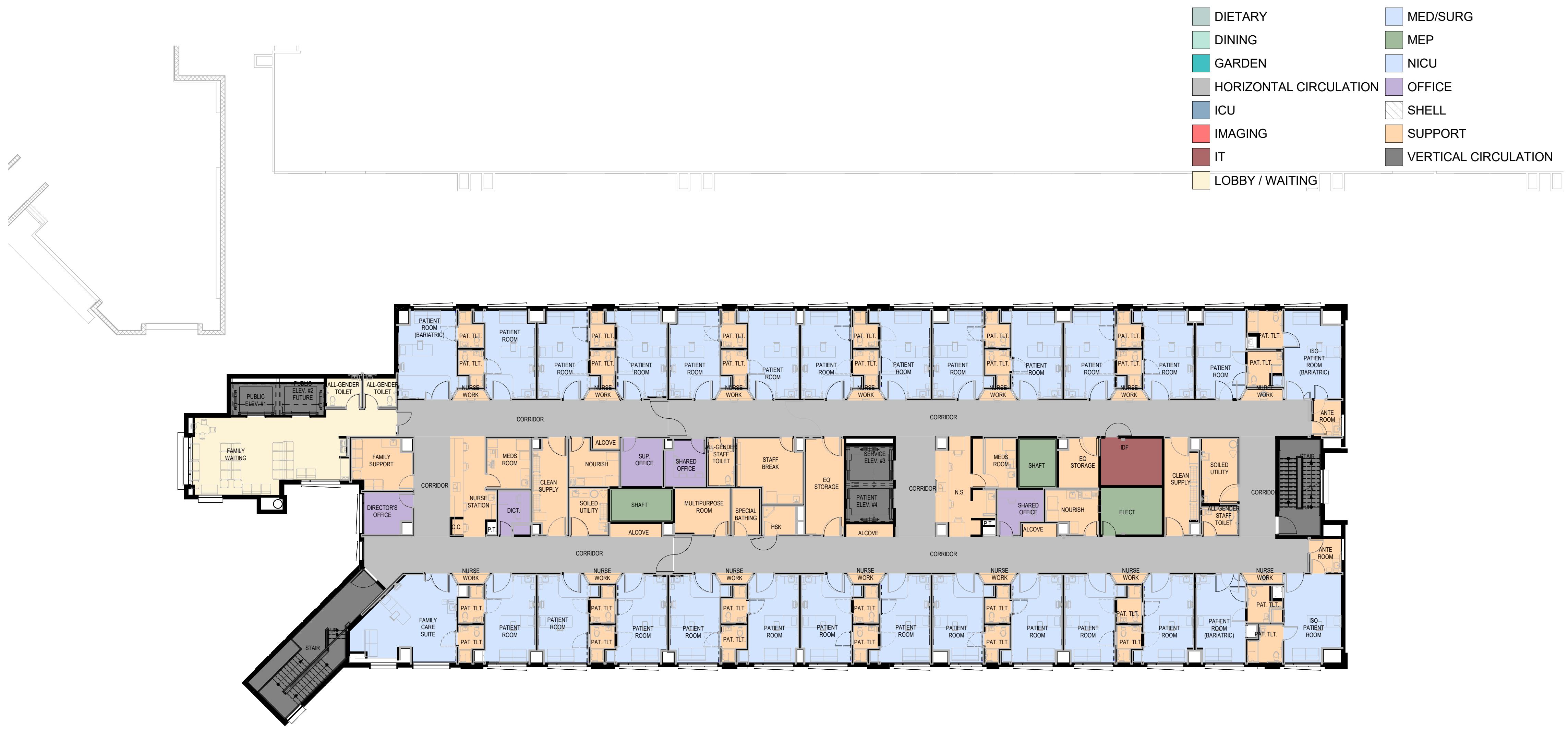


1 A103 Third Level Floor Plan - Overall
3/32" = 1'-0"

Agency Approval — OSHPD No.: H190224-40-00

Registration

Revisions

No.	Date	Description

Project Information

Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

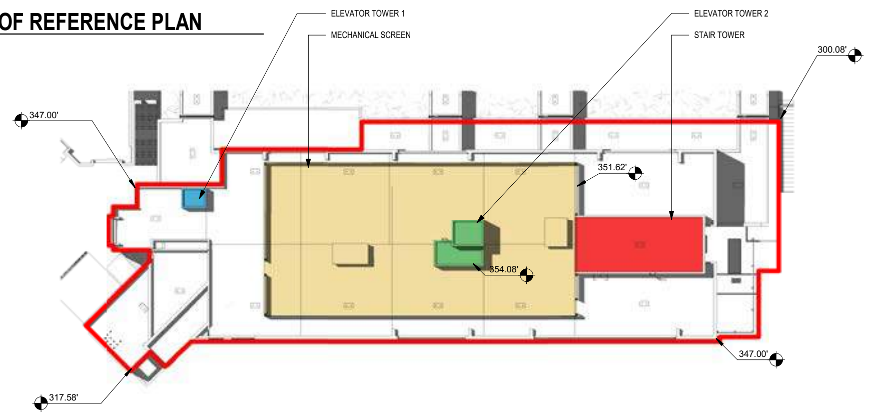
DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

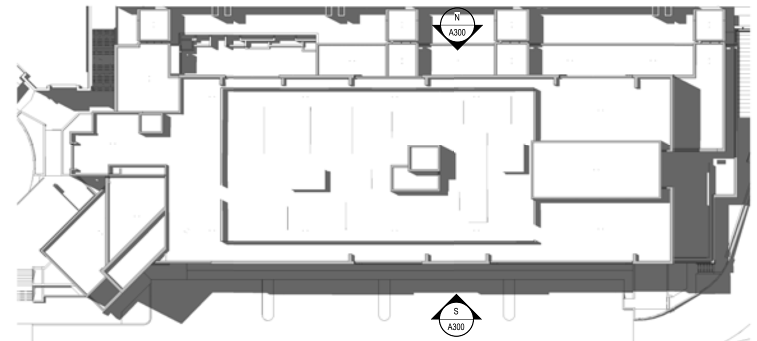
Sheet Title
Third Level Overall Plan

Sheet Number
A103

ROOF REFERENCE PLAN



Key Plan



ADDITIONAL INFORMATION

1" = 1'-0"

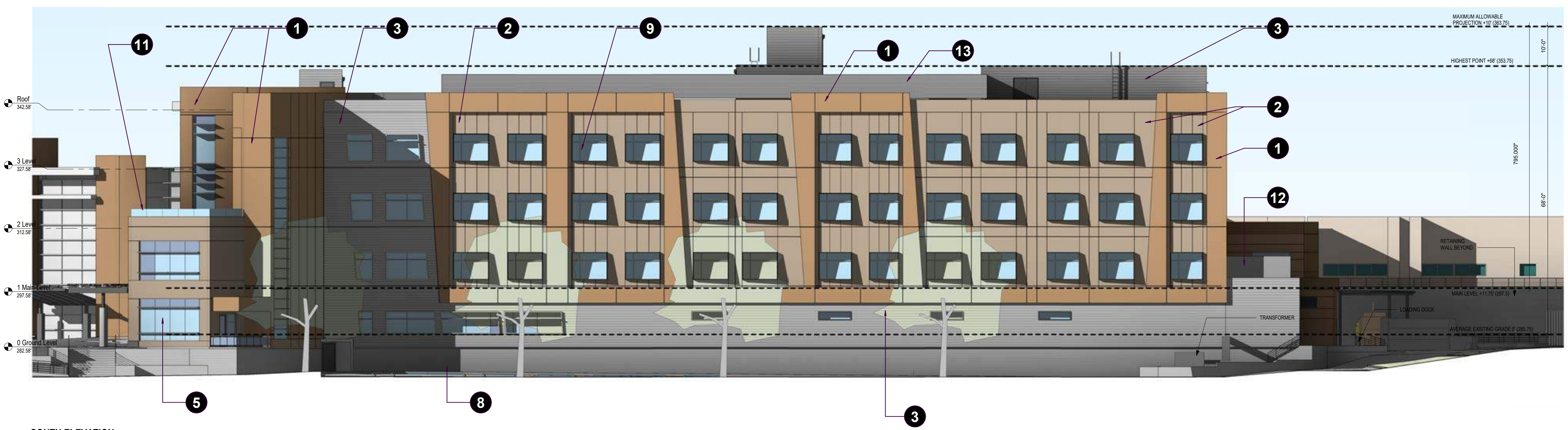
AVERAGE NATURAL GRADE (A.N.G.)			
(See Civil Plan)			
294.00 - 277.50 / 2		+ 294.00 =	285.75
ALLOWABLE BUILDING HEIGHT (w/Variance) :			
285.75 + 68'			353.75'

MATERIAL FINISH LEGEND

1. ELASTOMERIC FINISH: COLOR: SW7680 LANYARD, SUPERFINE DARK
2. ELASTOMERIC FINISH: SW 7508 TAVERN TAN
3. METAL SIDING: MC ELROY MEGA RIB; SLATE GRAY
4. EIFS REVEAL 1/4" X 3/4"
5. STOREFRONT
6. DROP-OFF CANOPY: GLASS AND STEEL
7. EIFS REVEAL 3/4" X 3/4"
8. CONCRETE FINISH - FORM LINER
9. DEEP FRAME WINDOW
10. HOSPITAL SIGNAGE - REFER TO A302
11. GLASS RAILING AT TERRACE
12. METAL SCREEN ; COLOR: SLATE GRAY
13. MECHANICAL LOUVERED SCREEN; COLOR: SLATE GRAY

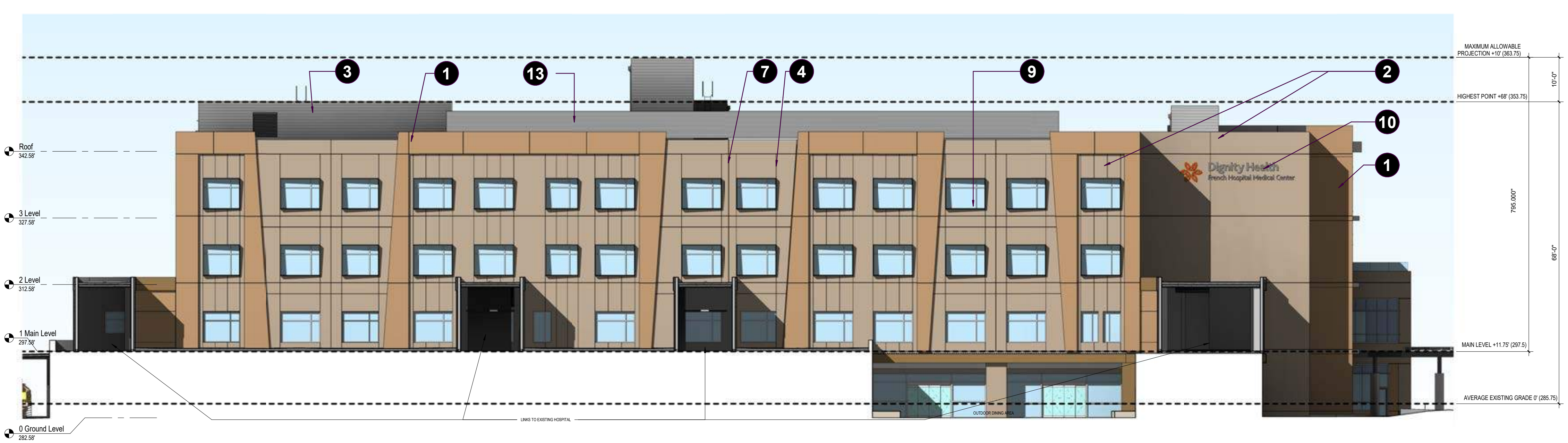
CUNINGHAM GROUP

Cuningham Group Architecture, Inc.
201 Main St. SE, Suite 325, Minneapolis, MN 55414
www.cuningham.com



SOUTH ELEVATION

3/32" = 1'-0"



NORTH ELEVATION

3/32" = 1'-0"

Key Plan

Agency Approval

PRELIMINARY NOT FOR CONSTRUCTION

Revisions

No.	Date	Description

Project Information

Phase:	I - MR	Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package

ARC Submittal

Sheet Title

Exterior Elevation

Sheet Number

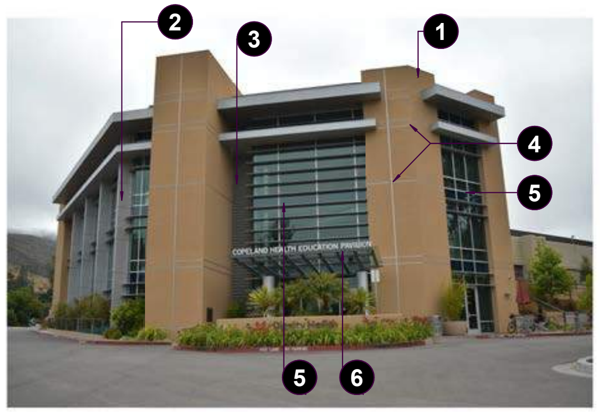
A300

Current Revision

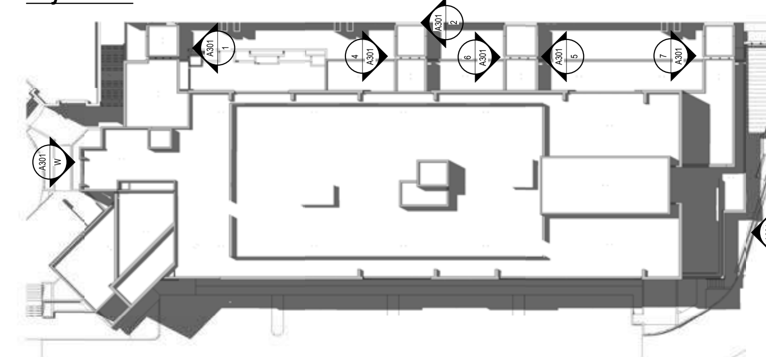
PALETTE OF EXTERIOR FINISHES AT COPELAND HEALTH EDUCATION PAVILION BUILDING

NEW PATIENT TOWER TO CONTINUE SAME DESIGN THEME WITH SIMILAR MATERIALS

1. ELASTOMERIC FINISH: COLOR: SW768 LANYARD, SUPERFINE DARK
2. ALUMINUM FINISH
3. METAL SIDING: MC ELROY MEGA RIB; SLATE GRAY
4. SCREED: 3/4" X 3/4"
5. STOREFRONT
6. DROP-OFF CANOPY: GLASS AND STEEL

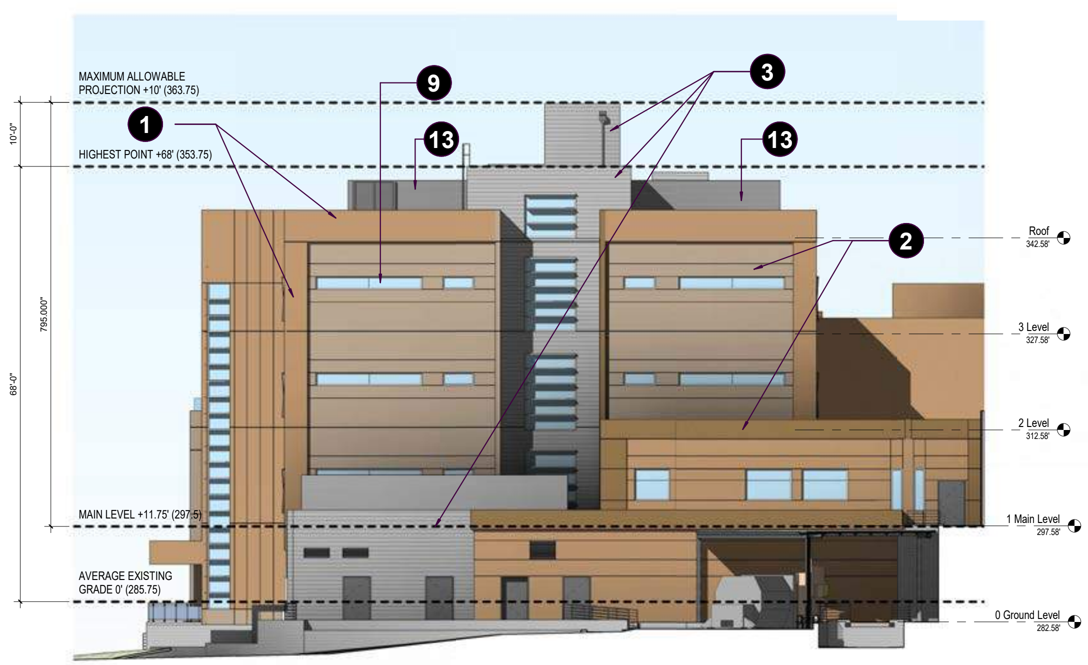


Key Plan



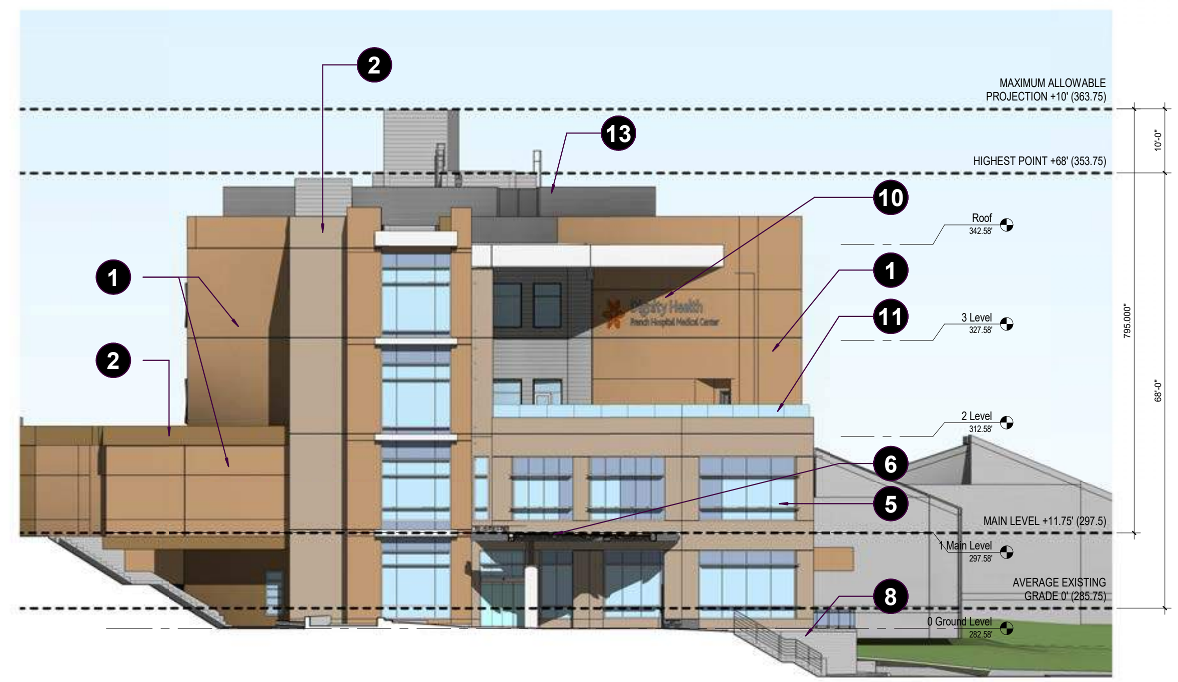
MATERIAL FINISH LEGEND

1. ELASTOMERIC FINISH: COLOR: SW7680 LANYARD, SUPERFINE DARK
2. ELASTOMERIC FINISH: SW 7508 TAVERN TAN
3. METAL SIDING: MC ELROY MEGA RIB; SLATE GRAY
4. EIFS REVEAL 1/4" X 3/4"
5. STOREFRONT
6. DROP-OFF CANOPY: GLASS AND STEEL
7. EIFS REVEAL 3/4" X 3/4"
8. CONCRETE FINISH - FORM LINER
9. DEEP FRAME WINDOW
10. HOSPITAL SIGNAGE - REFER TO A302
11. GLASS RAILING AT TERRACE
12. METAL SCREEN ; COLOR: SLATE GRAY
13. MECHANICAL LOUVERED SCREEN; COLOR: SLATE GRAY



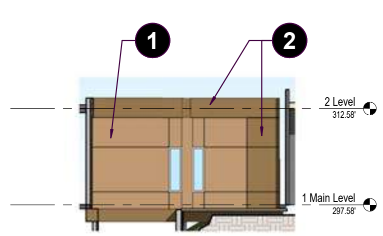
EAST ELEVATION

3/32" = 1'-0"

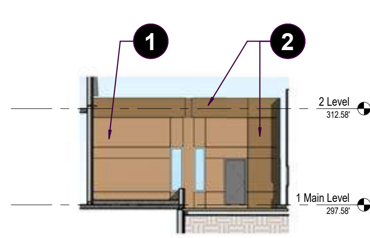


WEST ELEVATION

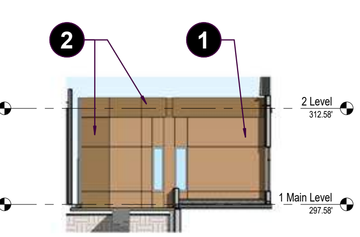
3/32" = 1'-0"



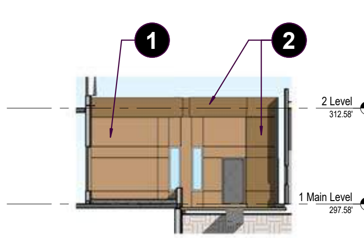
1 A301 Connecting Link 1 - East Elevation 3/32" = 1'-0"



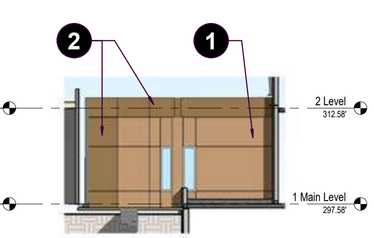
2 A301 Connecting Link 2 - East Elevation 3/32" = 1'-0"



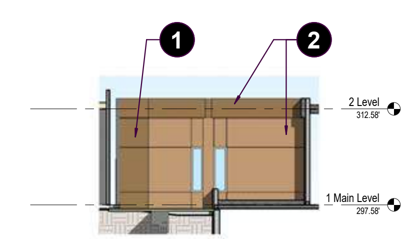
4 A301 Connecting Link 2 - West Elevation 3/32" = 1'-0"



5 A301 Connecting Link 3 - East Elevation 3/32" = 1'-0"



6 A301 Connecting Link 3 - West Elevation 3/32" = 1'-0"



7 A301 Connecting Link 4 - West Elevation 3/32" = 1'-0"

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Registration

Revisions

No.	Date	Description

Project Information

Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package

ARC Submittal

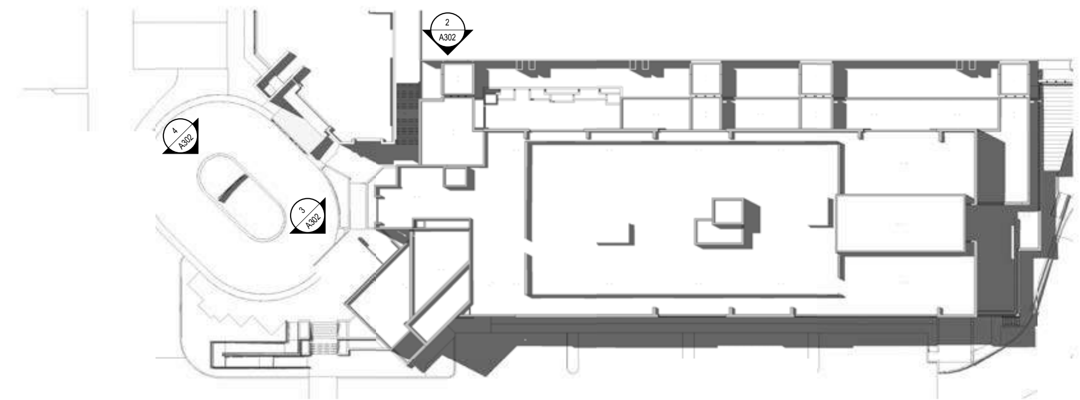
Sheet Title

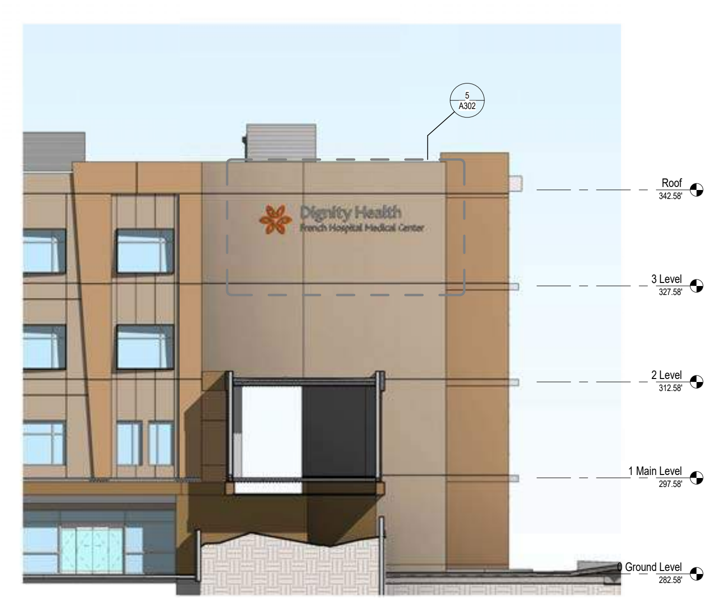
Exterior Elevation

Sheet Number

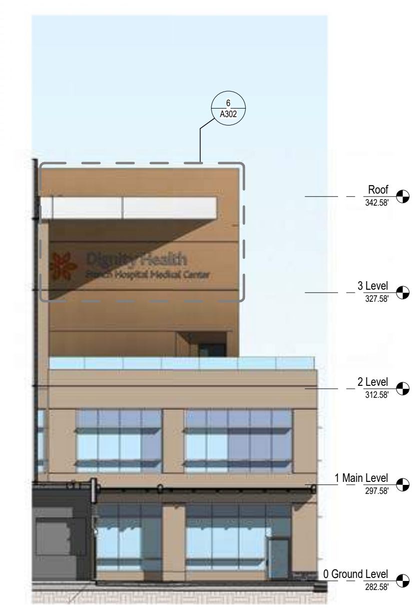
A301

Key Plan





2 A302 North - Wall Sign
3/32" = 1'-0"



3 A302 Northwest - Wall Sign
3/32" = 1'-0"

4 A302 MONUMENT SIGN
1/4" = 1'-0"

5 A302 NORTH WALL SIGN - ENLARGED
1/4" = 1'-0"

6 A302 NORTHWEST WALL SIGN - ENLARGED
1/4" = 1'-0"

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Revisions

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Project Information

Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Exterior Signage

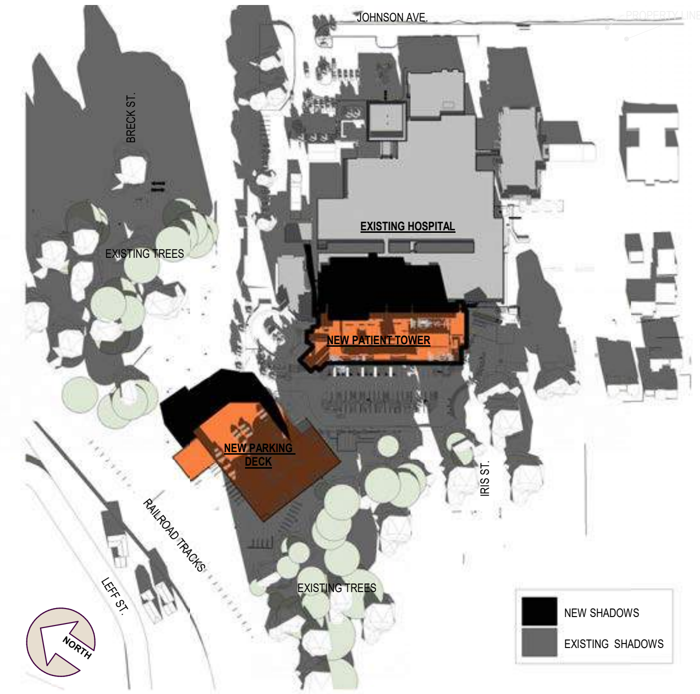
Sheet Number
A302

SOLAR STUDY - WINTER SOLSTICE

9.00 am

12.00 pm

3.00 pm



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Registration

Revisions

No.	Date	Description

Project Information

Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

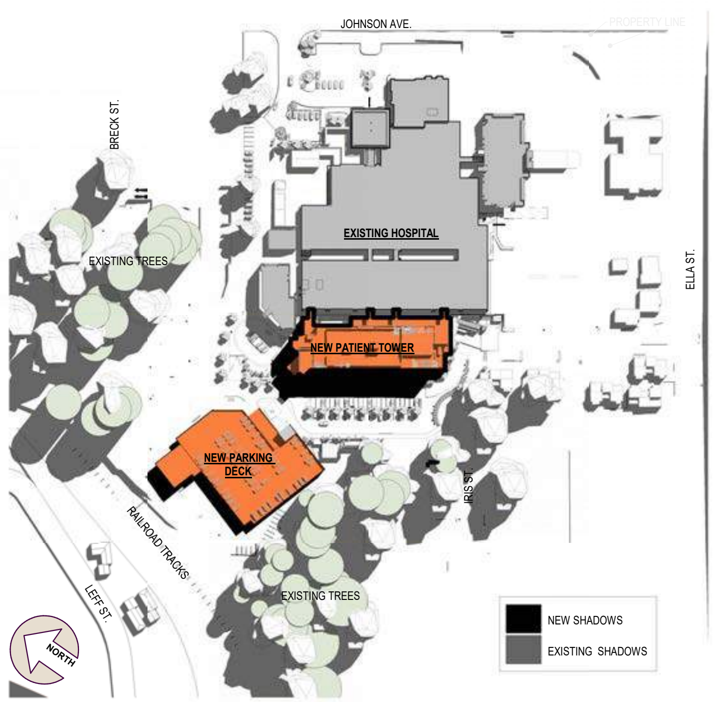
Sheet Title
Solar Study

Sheet Number
A303

SOLAR STUDY

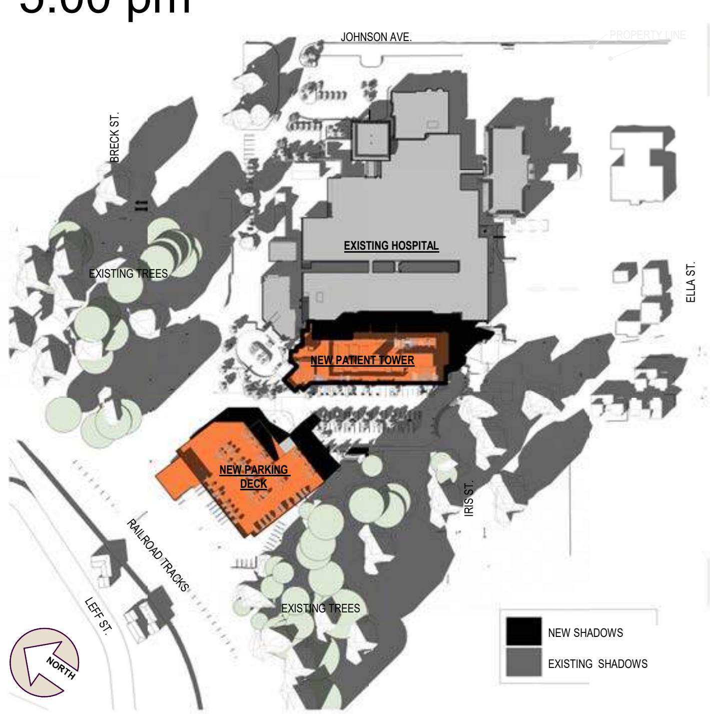
SUMMER SOLSTICE

9.00 am



4 A304 Site Plan Solar Study - Summer Solstice 9AM
1 : 1500

5.00 pm



3 A304 Site Plan Solar Study - Summer Solstice 5PM
1 : 1500

FALL EQUINOX

9.00 am

1 A304 Site Plan Solar Study - Fall Equinox 9AM
1 : 1500

SPRING EQUINOX

9.00 am

2 A304 Site Plan Solar Study - Spring Equinox 9AM
1 : 1500

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Revisions

No.	Date	Description

Project Information

Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

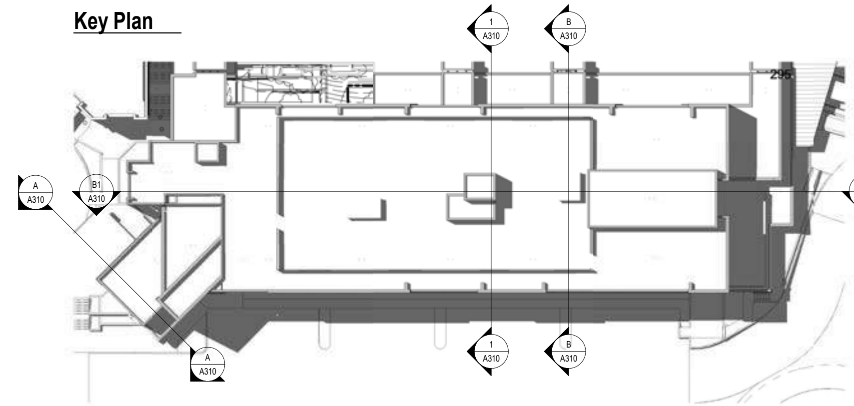
Drawing Package
ARC Submittal

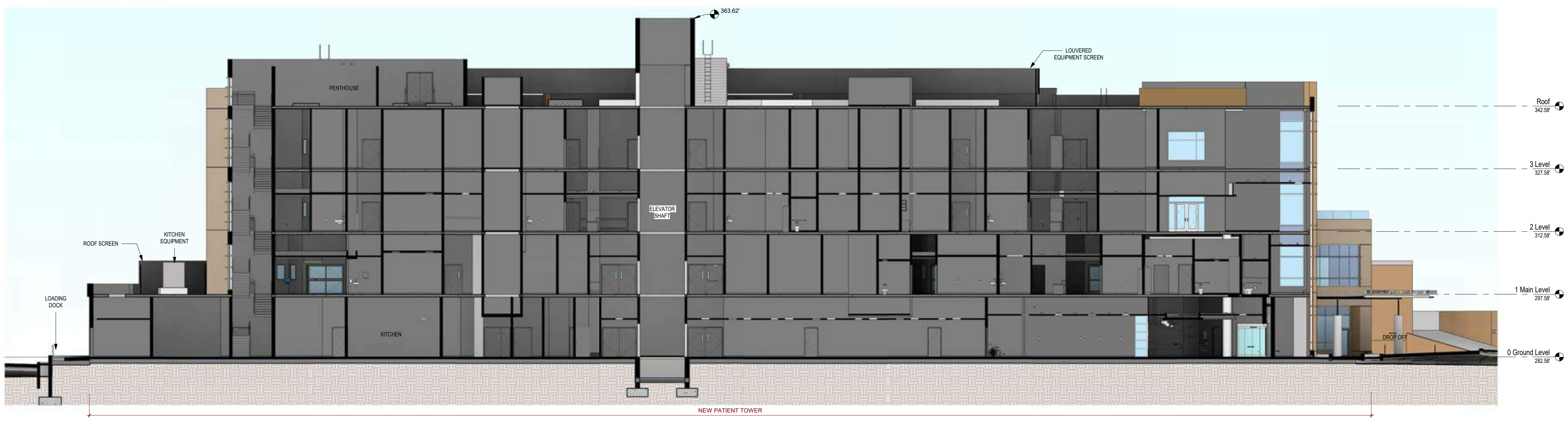
Sheet Title
Solar Study

Sheet Number
A304

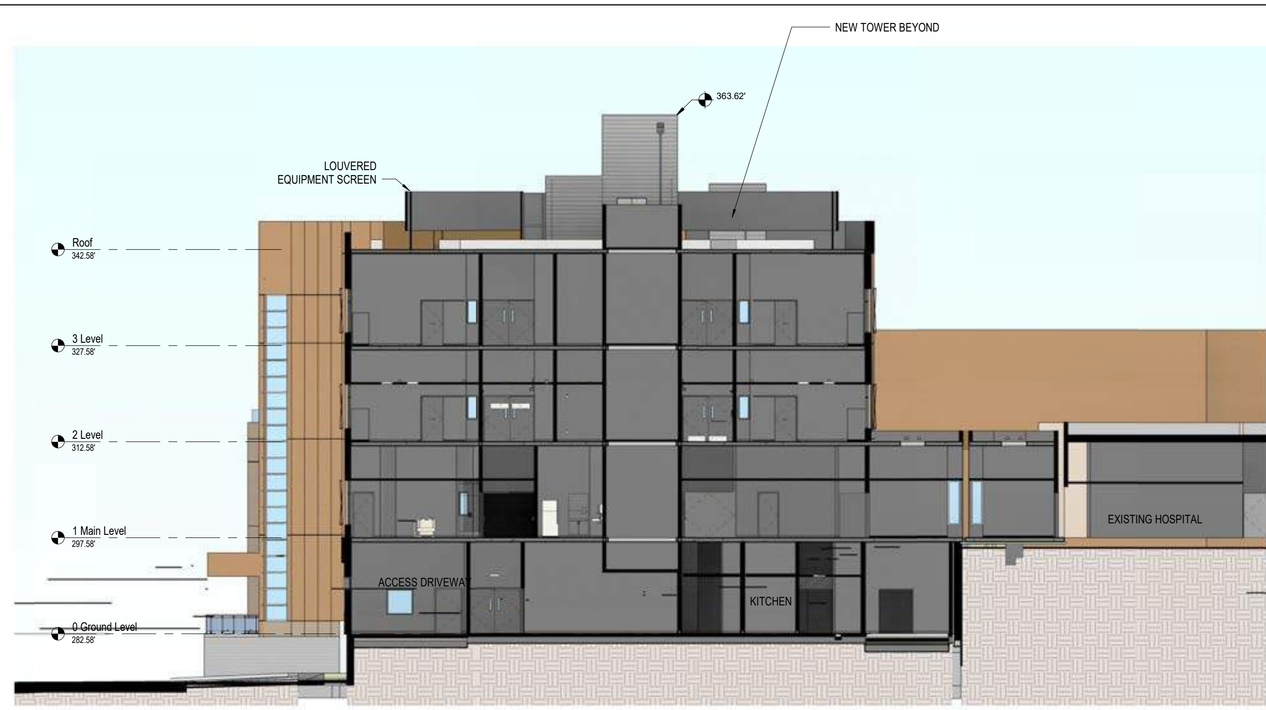
A SITE SECTION A
A310 3/32" = 1'-0"

Key Plan





B1 SITE SECTION B1
A310 3/32" = 1'-0"



B SITE SECTION B
A310 3/32" = 1'-0"

1 SITE SECTION A1
A310 3/32" = 1'-0"

CUNINGHAM GROUP

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201 Main St. SE, Suite 325, Minneapolis, MN 55414
www.cuningham.com

Key Plan

Agency Approval

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Revisions

No.	Date	Description

Project Information

Phase:	I - MR	Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package
ARC Submittal

Sheet Title
Building Sections

Sheet Number
A310

Current Revision

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Registration

Revisions

No.	Date	Description

Project Information

Increment:		Date:	07/16/2020
Project No.:	PR18-0327	PIC / AIC:	KM

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW TOWER

Drawing Package

ARC Submittal

Sheet Title

Renderings

Sheet Number

A320

STUDIO DESIGN GROUP
ARCHITECTS, INC
762 Higuera Street, Suite 212
San Luis Obispo, CA 93401
805-541-3848
Fax: 805-541-9260
sdg@sdgarchitects.com

ENLARGED SITE PLAN

0 16 32

FLOOR AREA

HOSPITAL LAB SHELL:	+/-4,000 S.F.
ELECTRICAL/STORAGE:	+/-1,800 S.F.
HELISTOP:	2,000 S.F.
PARKING STRUCTURE	
L1 (AT GRADE):	+/-26,000 S.F.
L2 (DECK):	+/-31,000 S.F.

PARKING INFORMATION

NET NEW SPACES AT PARKING DECK LOCATION: +66
NET LOSS OF SURFACE PARKING AT BUILDING SITES: -100

ACCESSIBLE SPACES

TOTAL NUMBER OF PARKING SPACES PROPOSED AT LOWER LOT (PARKING DECK & TOWER SITES): 298 SPACES

SPACES REQ'D *PER CBC TABLE 11B.208.2:* 7 SPACES

ACCESSIBLE SPACES PROVIDED
- PARKING DECK: 4 SPACES
- PATIENT TOWER: 10 SPACES

TOTAL ACCESSIBLE SPACES ADDED: 14 SPACES PROVIDED (12 STANDARD, 2 VAN)

EV PARKING

PER CITY ZONING (BASED ON REQUIRED PARKING FOR NEW USES, SEE SHEET R101):
- EV READY (10%): (10) SPACES INCL. (2) ADA
- EV CAPABLE (25%): (25) SPACES

MOTORCYCLE PARKING

(14) PROVIDED INCLUDING:
- (4) REQUIRED PER CITY ZONING (1:20)
- (10) REPLACEMENT DUE TO LOSS ON SITE

BICYCLE PARKING

HOSPITAL ADDITION:
- 89,775 SF @ 1:7,500 S.F = (12) TOTAL SPACES
- 25% LONG TERM: (3) SPACES
- 75% SHORT TERM: (9) SPACES

FUTURE LAB ADDITION:
- 4,300 SF @ 1:1,500 S.F. = (3) TOTAL SPACES
- 75% LONG TERM: (2) SPACES
- 25% SHORT TERM: (1) SPACE

TOTAL BICYCLE SPACES: (15) SPACES
- LONG TERM: (5) SPACES @ PARKING DECK STORAGE (1ST FLOOR)
- SHORT TERM: (10) SPACES @ AT PATIENT TOWER DROP OFF

Key Plan

Agency Approval

Revisions

Project Information

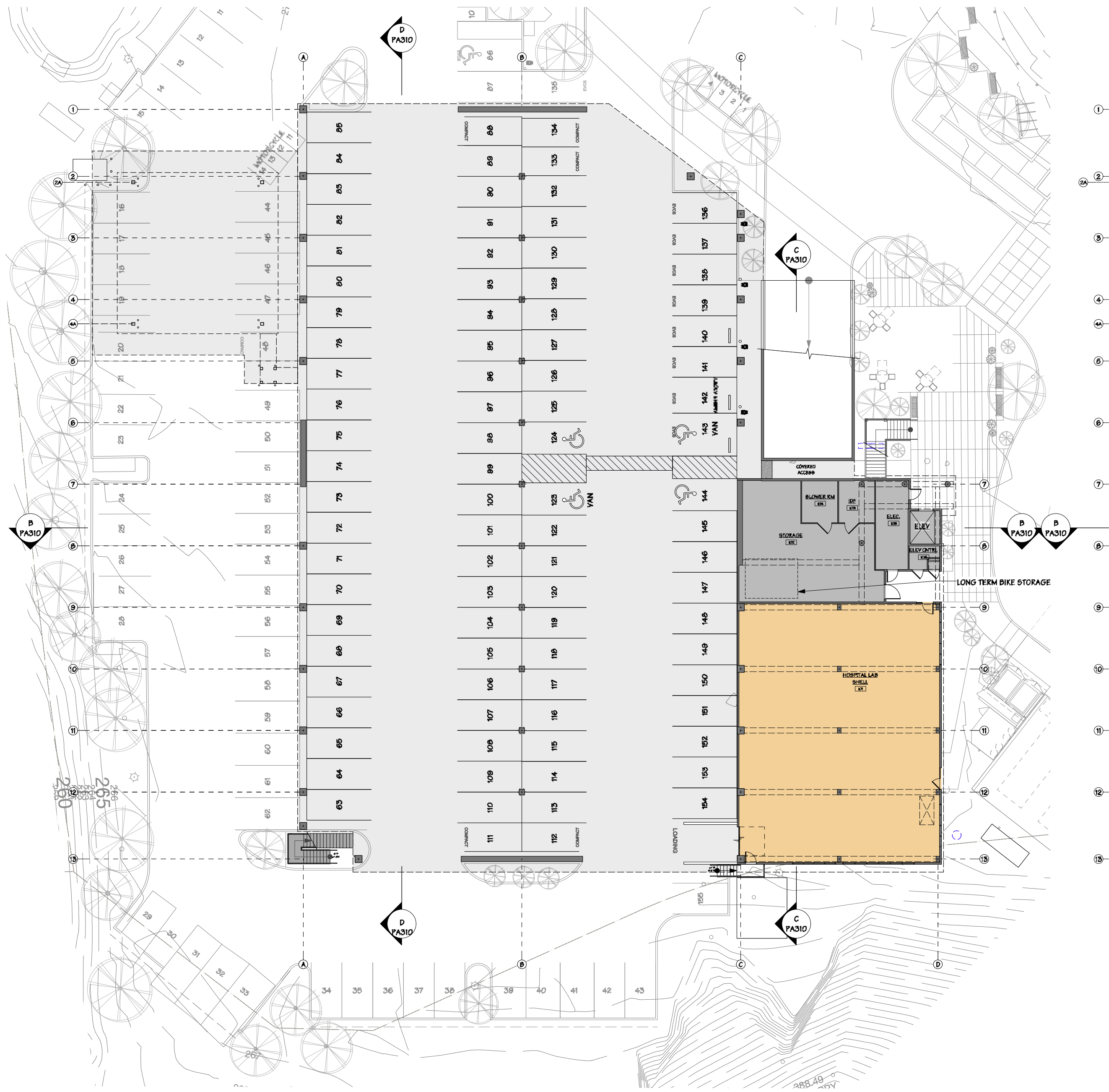
Phase:	DD	Date:	06/10/20
Project No.:	2012	PIC / A/C:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

Drawing Package
SCHEMATIC DESIGN

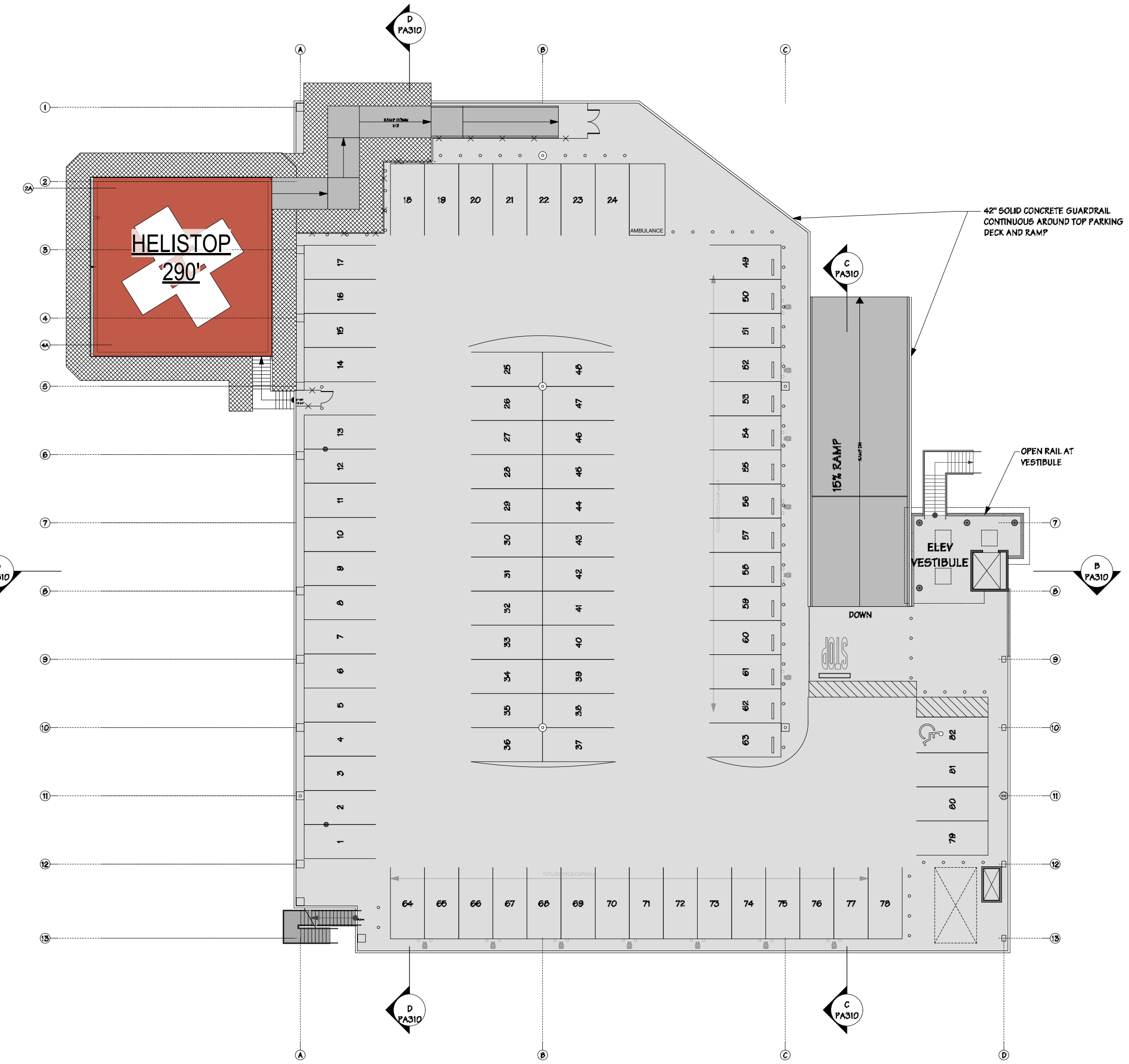
Sheet Title
PARKING DECK - ENLARGED SITE PLAN

Sheet Number: PA100
Current Revision



ENLARGED LOWER LEVEL PLAN

0 16 32



ENLARGED DECK PLAN

0 16 32

STUDIO DESIGN GROUP
ARCHITECTS, INC

762 Higuera Street, Suite 212
San Luis Obispo, CA 93401

805•541-3848
Fax: 805•541-9260

sdg@sdgarchitects.com

Key Plan

Agency Approval

Revisions

Project Information

Phase:	DD	Date:	06/10/20
Project No.:	2012	PIC / AIC:	

DIGNITY HEALTH FRENCH
HOSPITAL MEDICAL CENTER

Drawing Package

SCHEMATIC DESIGN

Sheet Title

ENLARGED
DECK PLAN

Sheet Number **Current Revision**

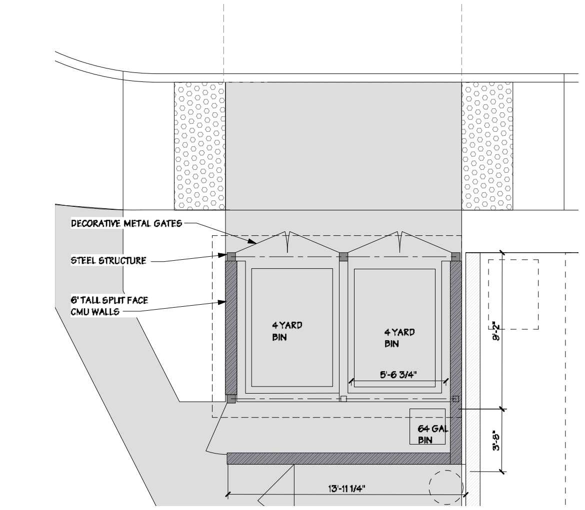
PA101

PARKING STRUCTURE - LEED CHECKLIST

LEED v4 for BD+C: New Construction and Major Renovation
Project Checklist

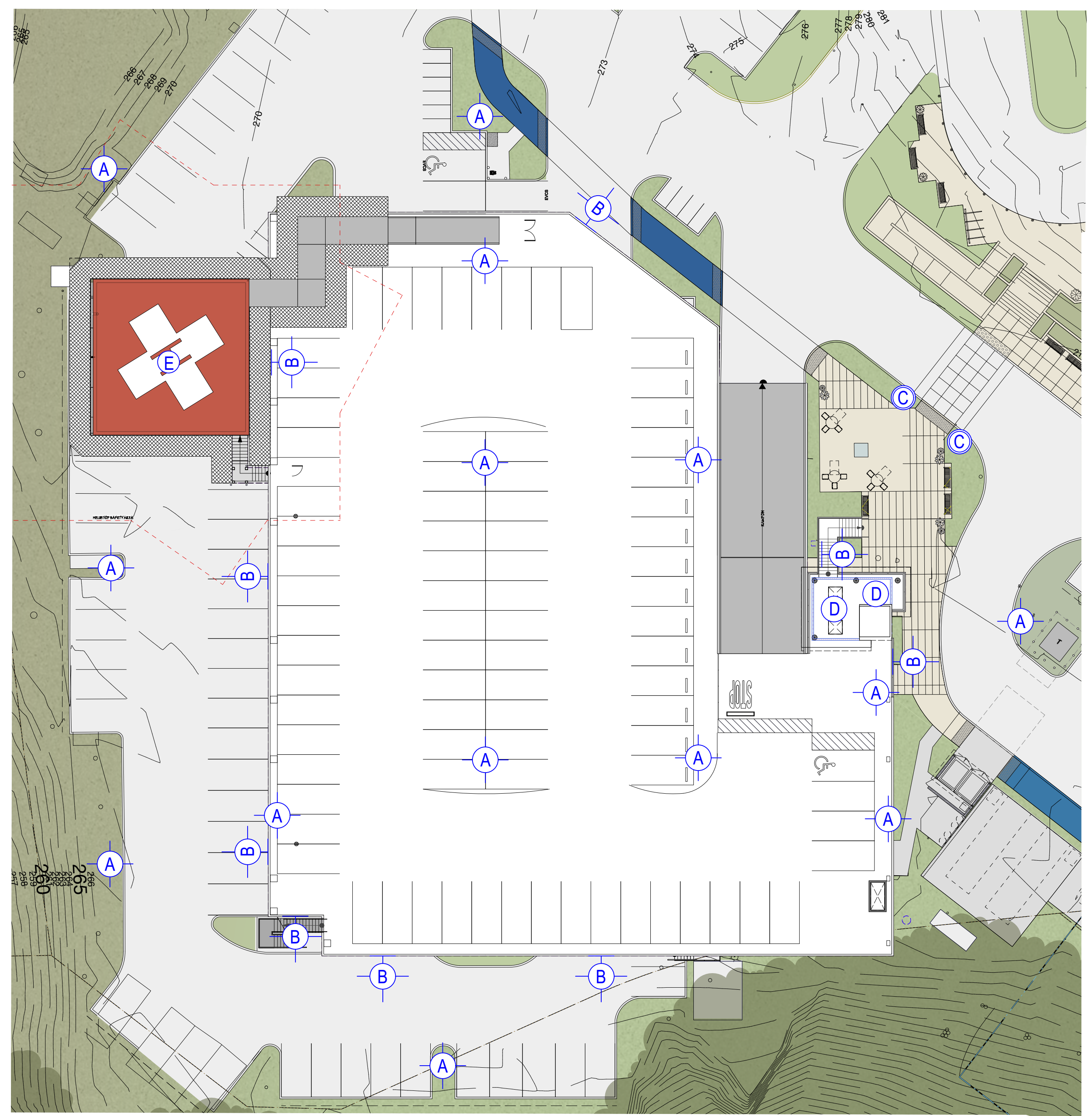
Y	?	N			
			Credit	Integrative Process	1
12	**0**	**0**		**Location and Transportation**	**16**
			Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
			Credit	High Priority Site	2
5			Credit	Surrounding Density and Diverse Uses	5
4			Credit	Access to Quality Transit	5
1			Credit	Bicycle Facilities	1
			Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1
3	**0**	**0**		**Sustainable Sites**	**10**
Y			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
			Credit	Site Development - Protect or Restore Habitat	2
			Credit	Open Space	1
			Credit	Rainwater Management	3
1			Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1
0	**0**	**0**		**Water Efficiency**	**11**
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
			Credit	Outdoor Water Use Reduction	2
	-		Credit	Indoor Water Use Reduction	6
	-		Credit	Cooling Tower Water Use	2
			Credit	Water Metering	1
0	**0**	**0**		**Energy and Atmosphere**	**33**
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
	-		Credit	Enhanced Commissioning	6
	-		Credit	Optimize Energy Performance	18
	-		Credit	Advanced Energy Metering	1
	-		Credit	Demand Response	2
	-		Credit	Renewable Energy Production	3
	-		Credit	Enhanced Refrigerant Management	1
	-		Credit	Green Power and Carbon Offsets	2
1	**0**	**0**		**Materials and Resources**	**13**
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
			Credit	Building Life-Cycle Impact Reduction	5
			Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
			Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
			Credit	Building Product Disclosure and Optimization - Material Ingredients	2
1			Credit	Construction and Demolition Waste Management	2
0	**0**	**0**		**Indoor Environmental Quality**	**16**
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
	-		Credit	Enhanced Indoor Air Quality Strategies	2
	-		Credit	Low-Emitting Materials	3
	-		Credit	Construction Indoor Air Quality Management Plan	1
	-		Credit	Indoor Air Quality Assessment	2
	-		Credit	Thermal Comfort	1
	-		Credit	Interior Lighting	2
	-		Credit	Daylight	3
	-		Credit	Quality Views	1
	-		Credit	Acoustic Performance	1
1	**0**	**0**		**Innovation**	**6**
			Credit	Innovation	5
1			Credit	LEED Accredited Professional	1
0	**0**	**0**		**Regional Priority**	**4**
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
17	**0**	**0**		**TOTALS** Possible Points:	**110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110



PARKING STRUCTURE - TRASH ENCLOSURE

0 4 8



PARKING STRUCTURE - SITE LIGHTING PLAN

0 16 32

(A) PARKING LIGHT
GLEON GALLEONLED 120 WATT, PHOTOCELL, 20' MAX. HEIGHT

(B) WALL PACK
ILLUMINATION SYSTEMS MLB-1
LED 42 WATT, MOTION DETECTOR

(C) BOLLARD
ABB ARBOR BOLLARD 25 WATT, PHOTOCELL

(D) RECESSED DOWNLIGHT
(OIL RUBBED BRONZE TRIM NOT SHOWN)
LITHONIA L7XLED T24 11 WATT, PHOTOCELL

(E) HELISTOP LIGHTING AS REQUIRED (WHEN IN USE)

STUDIO DESIGN GROUP
ARCHITECTS, INC
762 Higuera Street, Suite 212
San Luis Obispo, CA 93401
805•541-3848
Fax: 805•541-9260
sdg@sdgarchitects.com

Key Plan

Agency Approval

Revisions

Project Information

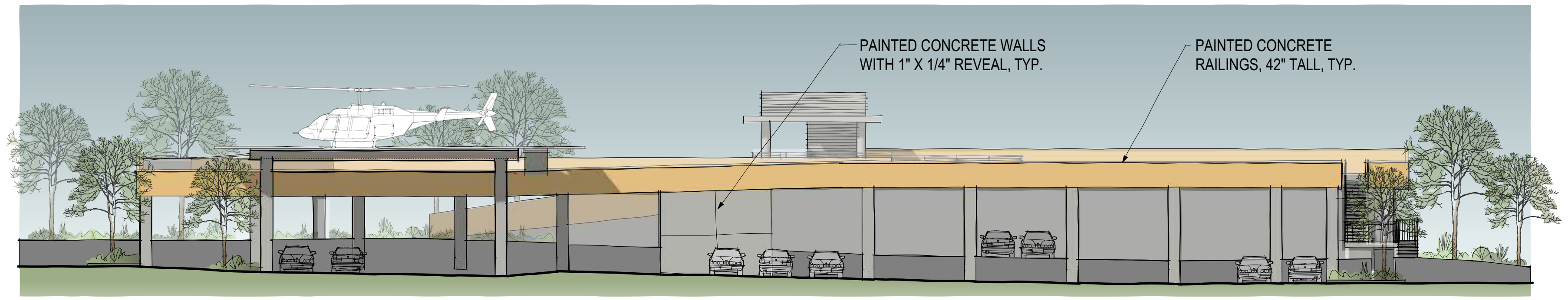
Phase:	DD	Date:	06/10/20
Project No.:	2012	PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

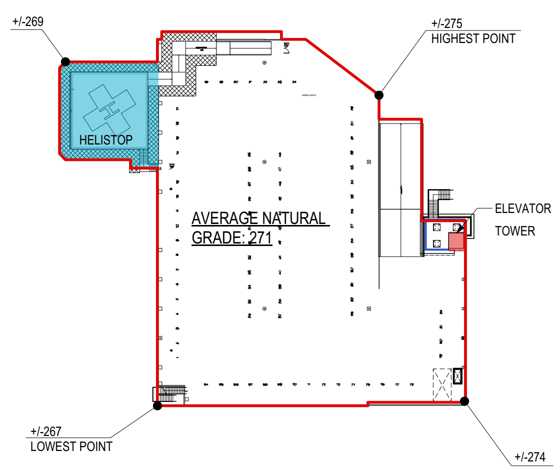
Drawing Package
SCHEMATIC DESIGN

Sheet Title
PARKING DECK - SITE LIGHTING
GREEN BUILDING CHECKLIST

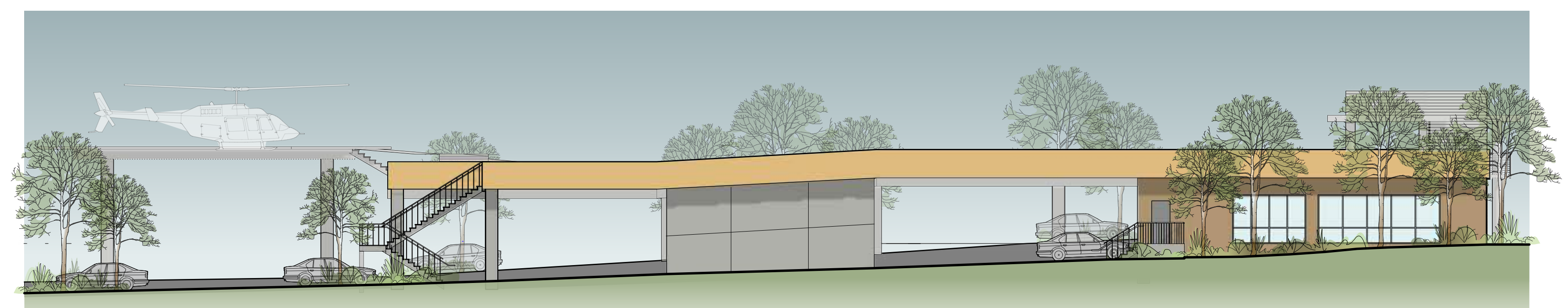
Sheet Number: PA102
Current Revision



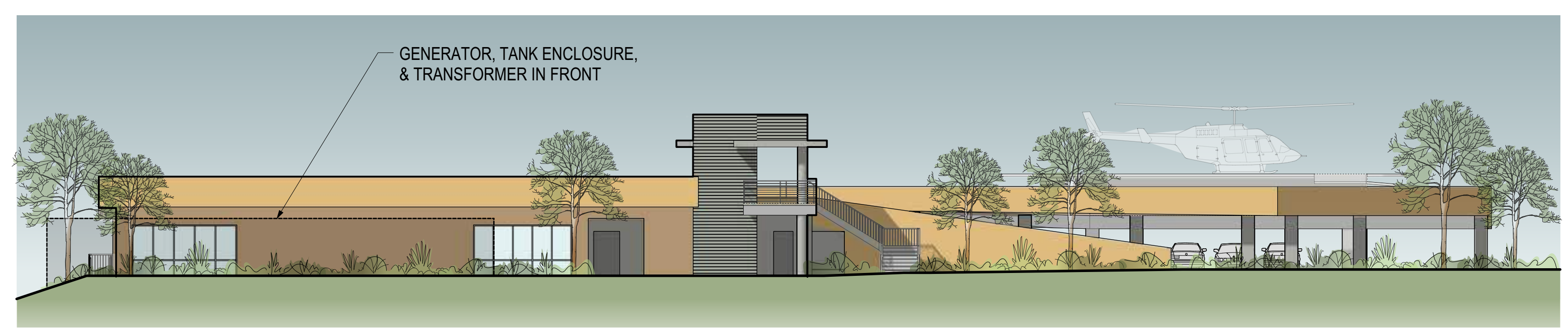
WEST ELEVATION



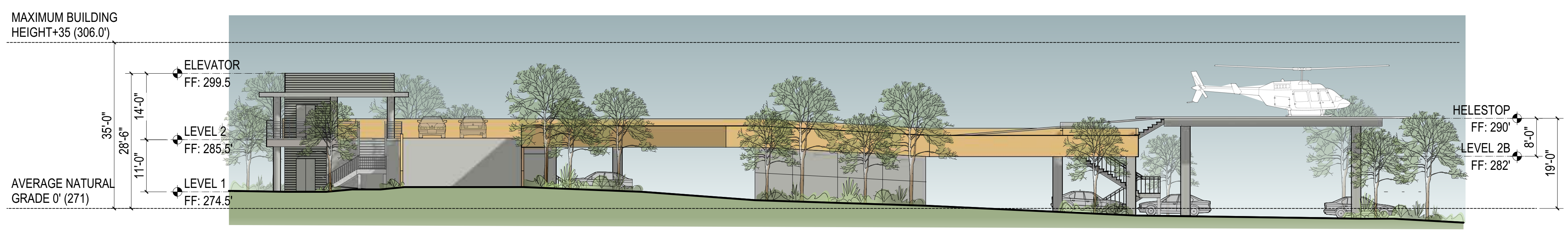
AVERAGE NATURAL GRADE CALCULATION



SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION

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DESIGN
GROUP
ARCHITECTS, INC

762 Higuera Street, Suite 212
San Luis Obispo, CA 93401

805•541-3848
Fax: 805•541-9260

sdg@sdgarchitects.com

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Project Information

Phase:	DD	Date:	06/10/20
Project No.:	2012	PIC / AIC:	

DIGNITY HEALTH FRENCH
HOSPITAL MEDICAL CENTER

Drawing Package

SCHEMATIC DESIGN

Sheet Title

PARING DECK -
ELEVATIONS

Sheet Number

Current Revision

PA300

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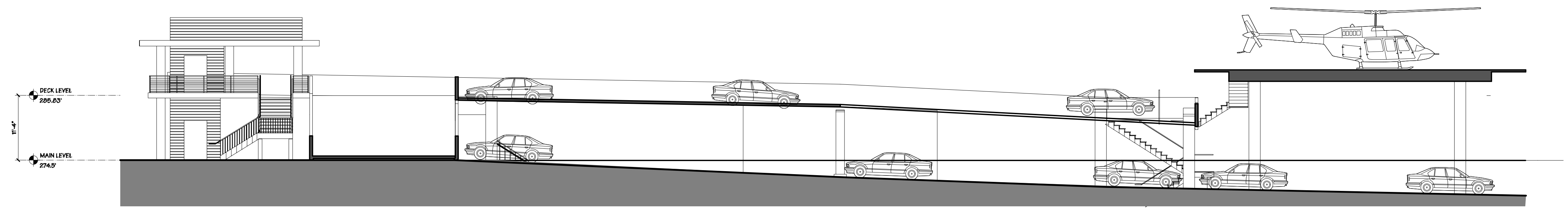
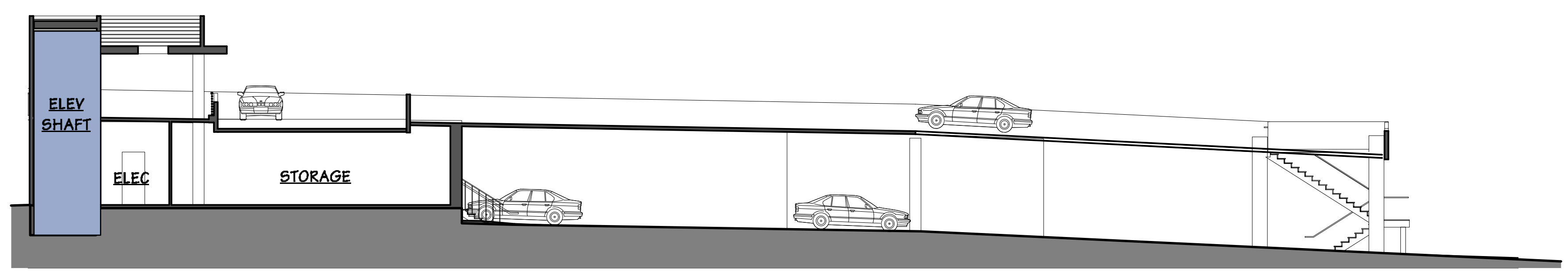
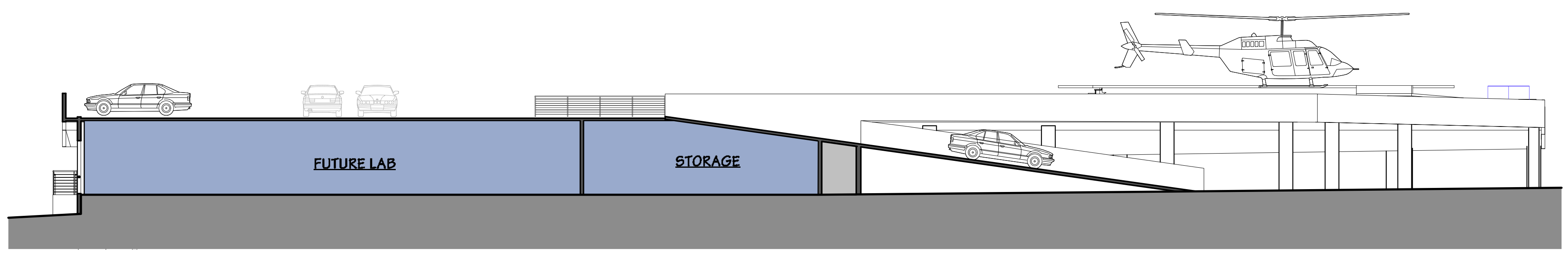
ARCHITECTS, INC
762 Higuera Street, Suite 212
San Luis Obispo, CA 93401
805-541-3848
Fax: 805-541-9260
sdg@sdgarchitects.com



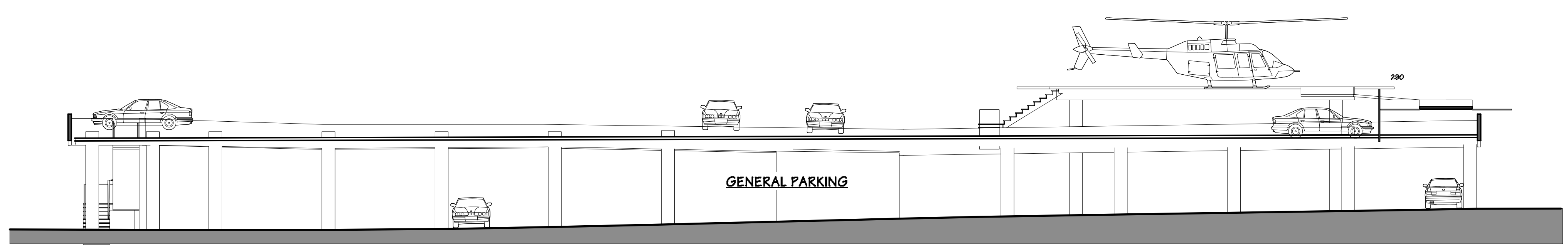
A SECTION 1/8" = 1'-0"



B SECTION 1/8" = 1'-0"



C SECTION 1/8" = 1'-0"



D SECTION 1/8" = 1'-0"

Key Plan

Agency Approval

Revisions

Project Information

Phase:	DD	Date:	06/10/20
Project No.:	2012	PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

Drawing Package

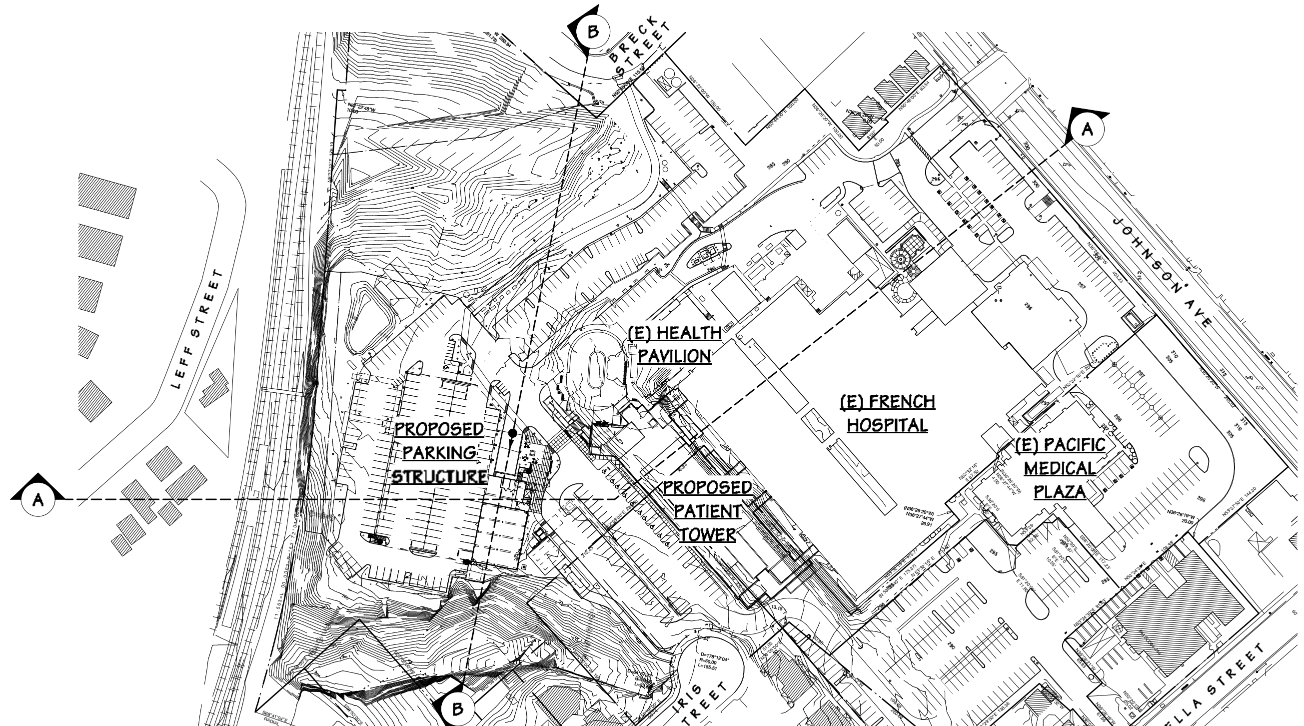
SCHEMATIC DESIGN

Sheet Title

PARKING DECK - SECTIONS

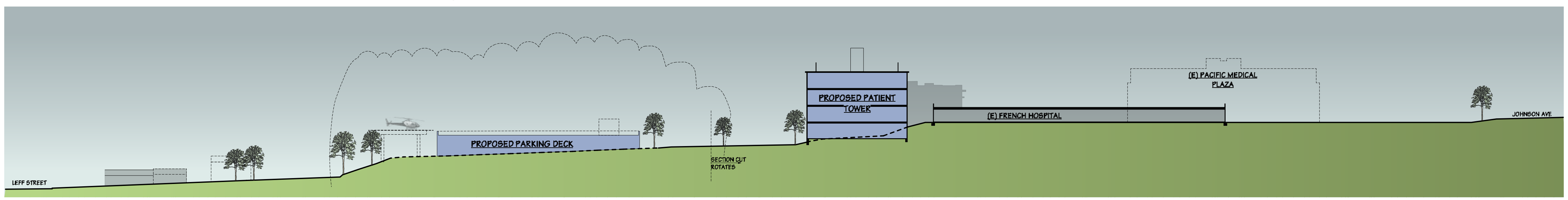
Sheet Number **Current Revision**

PA310



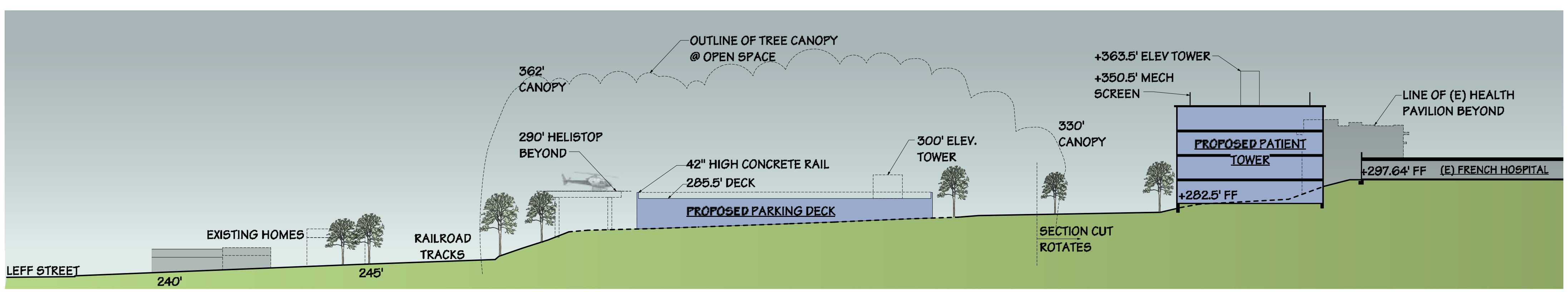
SITE PLAN

N.T.S.



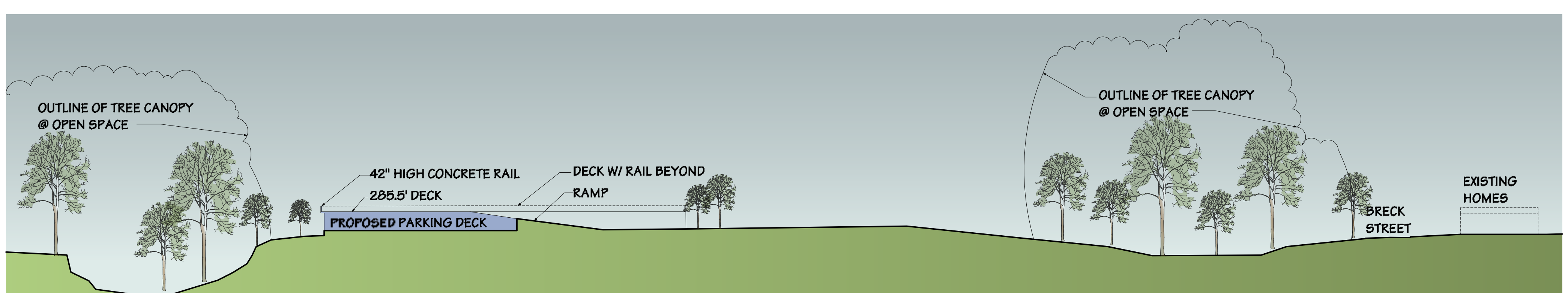
A - SITE SECTION

0 40 80



ENLARGED SITE SECTION A

0 30 60



SITE SECTION B

0 30 60

STUDIO DESIGN GROUP ARCHITECTS, INC

762 Higuera Street, Suite 212
San Luis Obispo, CA 93401

805•541-3848
Fax: 805•541-9260

sdg@sdgarchitects.com

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Revisions

Project Information

Phase:	DD	Date:	06/10/20
Project No.:	2012	PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

Drawing Package

SCHEMATIC DESIGN

Sheet Title

SITE SECTIONS

Sheet Number

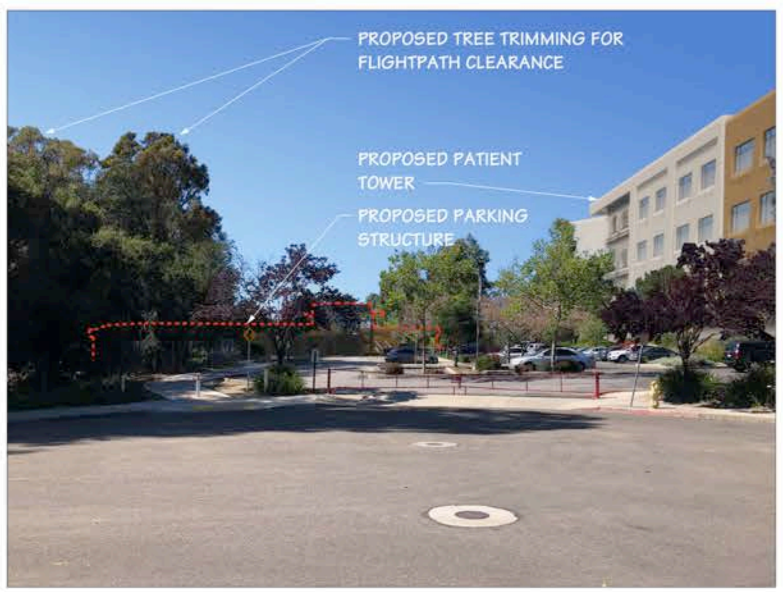
PA311

Current Revision

BEFORE

BEFORE

BEFORE

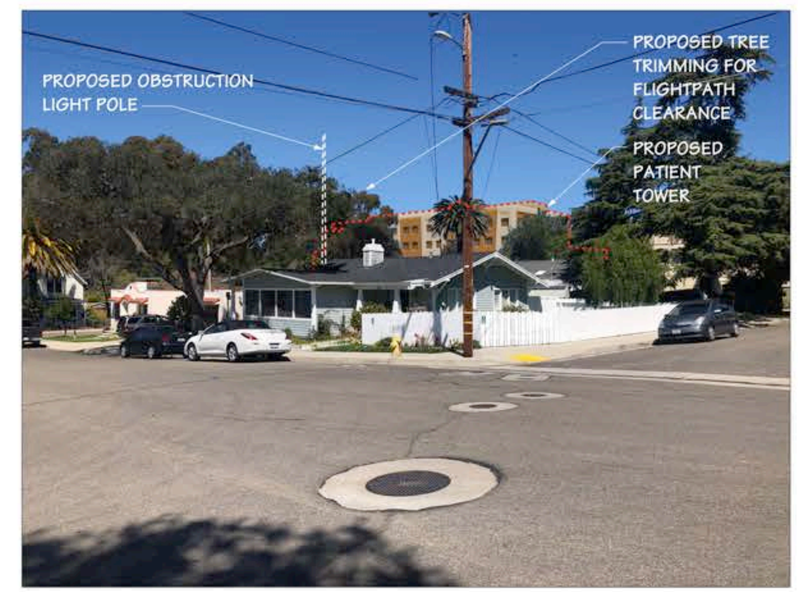


AFTER

(A) VIEW FROM IRIS ST CUL-DE-SEC

AFTER

(B) VIEW FROM RUTH & IRIS ST



AFTER

(C) VIEW FROM RUTH & GEORGE ST

PHOTOGRAPH LOCATION MAP

STUDIO DESIGN GROUP
ARCHITECTS, INC
762 Higuera Street, Suite 212
San Luis Obispo, CA 93401
805-541-3848
Fax: 805-541-9260
sdg@sdgarchitects.com

Key Plan

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Revisions

Project Information

Phase:	DD	Date:	03/29/21
Project No.:	2012	PIC / A/C:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

Drawing Package

SCHEMATIC DESIGN

Sheet Title

NEIGHBORHOOD PHOTO SIMULATONS

Sheet Number

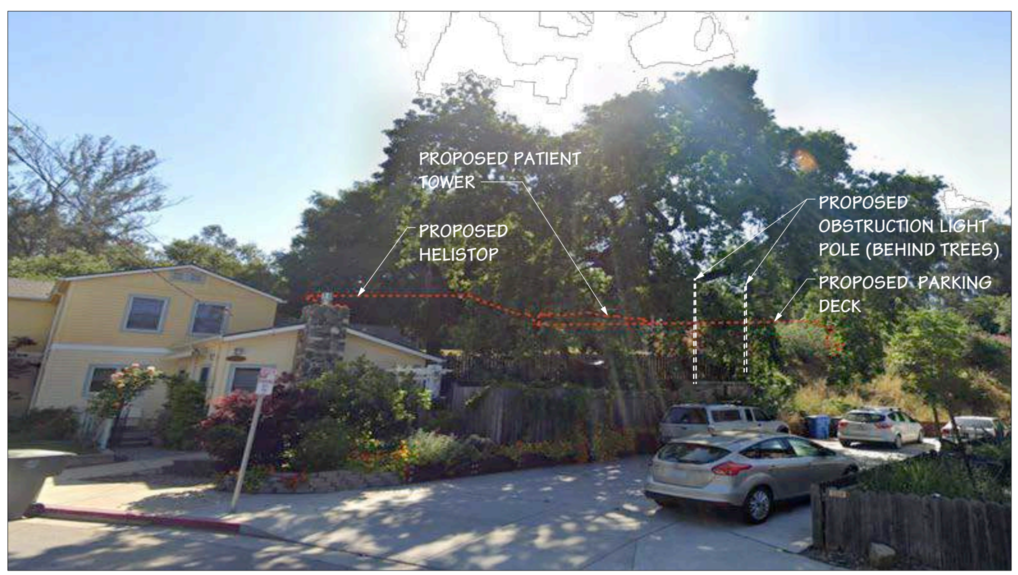
Current Revision

PA400

STUDIO DESIGN GROUP
ARCHITECTS, INC
762 Higuera Street, Suite 212
San Luis Obispo, CA 93401
805-541-3848
Fax: 805-541-9260
sdg@sdgarchitects.com

D VIEW FROM ELLA & HENRY ST — AFTER

E VIEW FROM LEFF STREET — AFTER



F VIEW FROM LEFF STREET — AFTER

G VIEW FROM MITCHELL PARK — AFTER

PHOTOGRAPH LOCATION MAP

Key Plan

Agency Approval

Revisions

Project Information

Phase:	DD	Date:	06/10/20
Project No.:	2012	PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

Drawing Package
SCHEMATIC DESIGN

Sheet Title
NEIGHBORHOOD PHOTO SIMULATONS

Sheet Number
PA401

Current Revision

STUDIO DESIGN GROUP
ARCHITECTS, INC

762 Higuera Street, Suite 212
San Luis Obispo, CA 93401

805-541-3848
Fax: 805-541-9260

sdg@sdgarchitects.com

120v to 277v NVG Compatible Pole Mounted Perimeter Light

This newly redesigned Pole perimeter light is the latest addition to the FEC Heliports line of high quality LED lights. Perimeter and Obstruction lights are one of the most important safety features on your heliport. They are used to mark and illuminate the FATO, TLOF, and Obstructions as well as to help the pilot locate the pad and safely land during night operations and inclement weather conditions.

Technical Details

Operating voltage: 120V to 277V, 50/60Hz

Maximum Power Consumption: 6 watts, .2 amps @ 120V; 6 watts, .1 amps @ 277V; 350mA constant current supply

Operating temperature: - 13F to 122F; - 25C to +50C

Operating LED Lifespan: Rated at 50,000+ hours

Light Source: Omni-directional LED Lamp
1x Osram OSLON SSL 150 LED w/ Custom Optic
3 IR LEDs (IR LEDs 850nm)
2"(50mm) diameter aluminum circuit
RoHS and 94VO compliant

Standard Part Numbers:

HP1790P	True Green (528nm)
HP1705P	Blue (470nm)
HP1704P	White 6000K
HP1707P	Yellow/Amber (590nm)
HP1782P	Red

Key Features:

- Mil-spec anodized cast aluminum body suitable for the harshest environments
- Pre-wired for quick and easy installations
- Standard color in Anodized Grey
- Blue, Red, and Gold are special order

WWW.FECHELIPORTS.COM
WWW.HELIPORTSEQUIPMENT.COM

Physical Characteristics

Light Fixture:

Dimensions:
Height 5 inches(127mm)
Lid Diameter 6-1/2 inches(165.1mm)

Materials:
Lens Tempered Glass
Casting 356 T6 Aluminum Alloy

Notes: All machining on the Aluminum casting is done in house by FEC Heliports

Mounting:

1"(25.4mm) NPT located on the bottom of each pole light

Materials:
Casting 356 T6 Aluminum Alloy

Notes: All machining on the Aluminum casting is done in house by FEC Heliports

Light: 6lbs.

Standards & Certification:

INTERTEK:
- Test Verification of Conformity U.S. Department of Transportation, Federal Aviation Administration, Memorandum, Heliport Perimeter Light for Visual Meteorological Conditions. Engineering Brief No. 87.

- International Civil Aviation Organization (ICAO), Aerodromes, Annex 14, Volume 2, Fourth Edition, dated July 2013

- International Civil Aviation Organization (ICAO), Aerodromes, Annex 14, Volume 1, Seventh Edition, dated July 2016

CAP 437 design criteria

Photometric:

Standards
U.S. Department of Transportation, Federal Aviation Administration, Memorandum, Heliport Perimeter Light for Visual Meteorological Conditions. Engineering Brief No. 87

Parameter	Requirement	Measured		Result
Min. Peak Intensity	5 cd from 16° - 90°	12.6	cd	Pass
Min. Peak Intensity	10 cd from 0° - 15°	23.3	cd	Pass
Min. Avg Intensity	15 cd from 0° - 15°	46.7	cd	Pass

cd = Candela

Standards
Internal Civil Aviation Organization (ICAO):
Aerodromes, Annex 14, Volume 2, Fourth Edition, dated July 2013
Aerodromes, Annex 14, Volume 1, Seventh Edition, dated July 2016

Parameter	Requirement	Measured		Result
Min. Peak Intensity	3 cd from 21° - 90°	12.6	cd	Pass
Min. Peak Intensity	8 cd from 13° - 20°	36.1	cd	Pass
Min. Peak Intensity	15 cd from 11° - 13°	51.5	cd	Pass
Min. Peak Intensity	30 cd from 6° - 10°	41.7	cd	Pass
Min. Peak Intensity	15 cd from 2° - 5°	30.9	cd	Pass

Test Purpose - Performance Testing (Photometry and Chromaticity)

Test Dates - December 11, 2018

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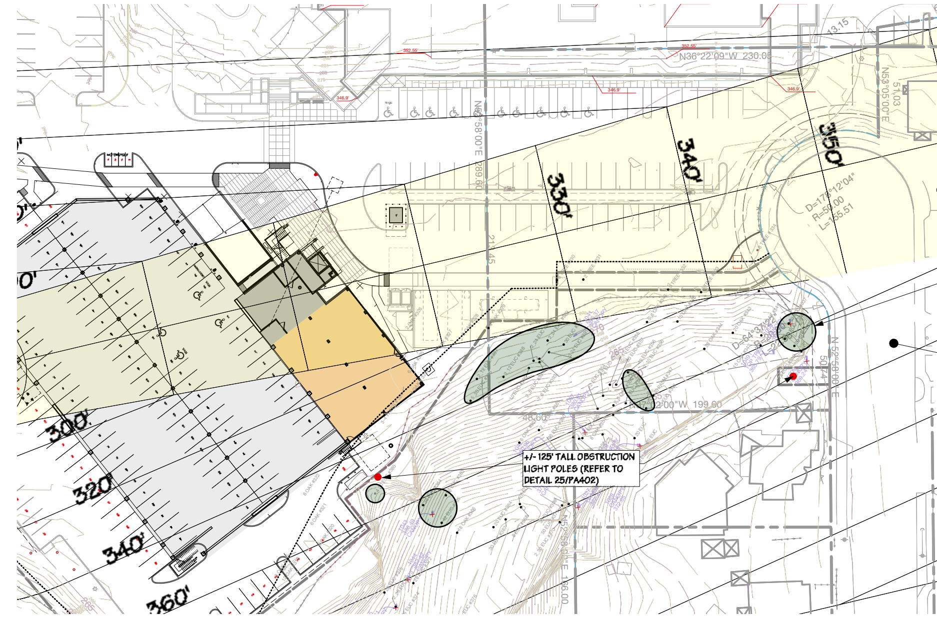
65 L-810 OBSTRUCTION LIGHT SPECIFICATIONS - FEC HELIPORTS



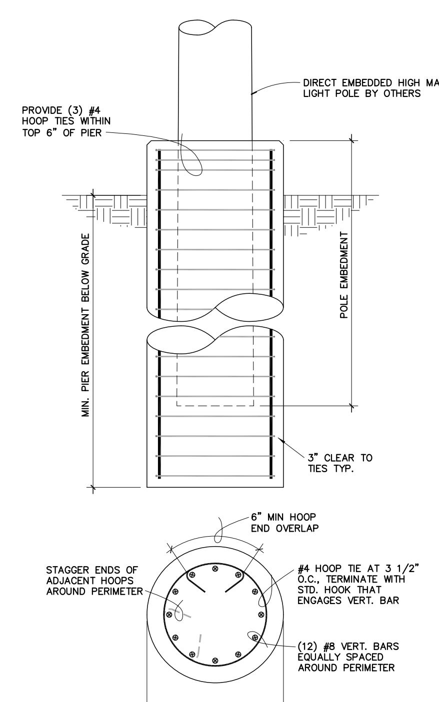
8:1 APPROACH/DEPARTURE SURFACE
NO PENETRATIONS ALLOWED

GREEN SHADE INDICATES
TREE TRIMING/REMOVAL
REFER TO L104

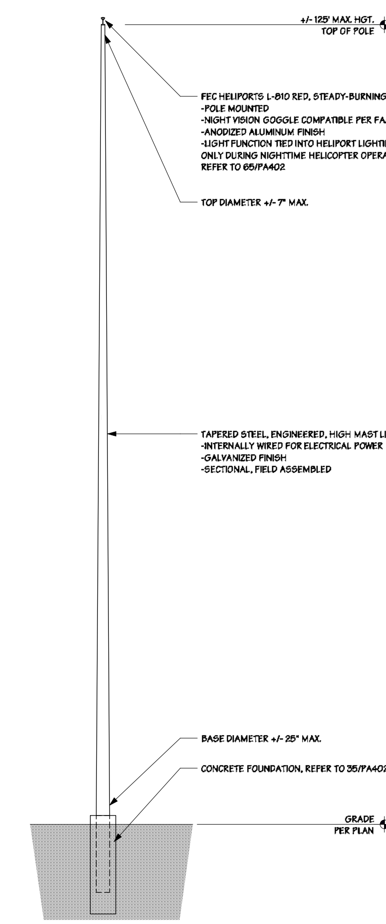
2:1 TRANSITIONAL SURFACE
PENETRATIONS ALLOWABLE, BUT LIMITED TO ONE SIDE & REQUIRING OBSTRUCTION LIGHTS

FLIGHTPATH - OBSTRUCTION LIGHT POLES
FRENCH HOSPITAL MEDICAL CENTER

0 40 80



35 CONCRETE FOUNDATION



25 OBSTRUCTION LIGHT POLES

Key Plan

Agency Approval

Revisions

Project Information

Phase:	DD	Date:	03/29/21
Project No.:	2012	PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

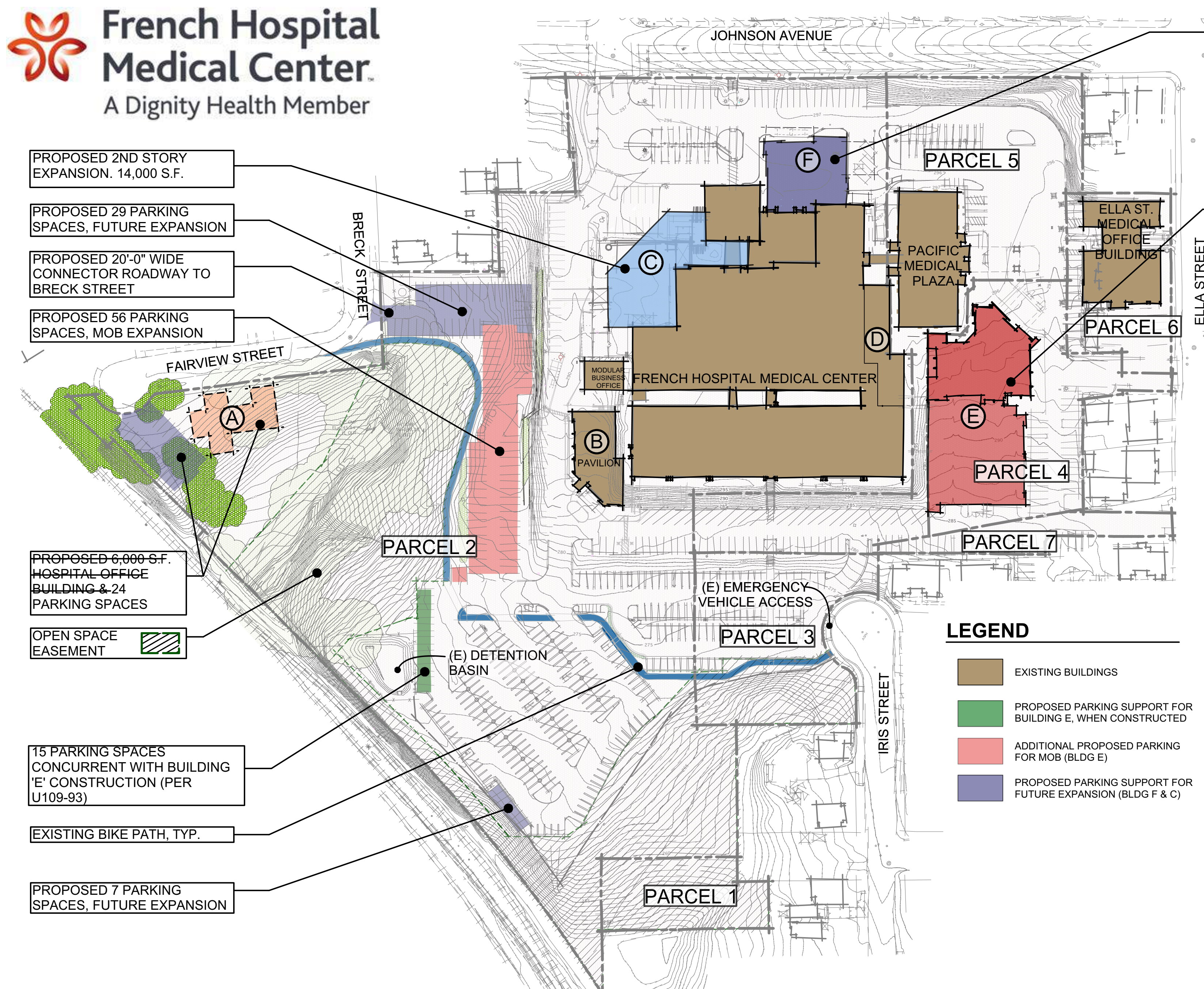
Drawing Package
SCHEMATIC DESIGN

Sheet Title
OBSTRUCTION LIGHT POLES

Sheet Number: PA402
Current Revision:

3/30/21
FHMC Parking Structure 3.16.vwx

STUDIO DESIGN GROUP
ARCHITECTS, INC
762 Higuera Street, Suite 212
San Luis Obispo, CA 93401
805•541-3848
Fax: 805•541-9260
sdg@sdgarchitects.com



PROPOSED OVERALL CAMPUS MASTER SITE PLAN

FRENCH HOSPITAL MEDICAL CENTER

Master Plan Proposed 2016 Revisions & Parking Requirements

	Building/Use	SF (Gross per City standard)	# Licenced Beds	Parking Calc/Ratio	Min. Parking Required
	Existing Buildings				
	French Hospital	83,000	112	N/A	173
	Pacific Medical Plaza	48,000	N/A	1/260 [2]	185
	Modular Business Office	1,800	N/A	1/300	6
D	OR Expansion (Bldg D)	4,850	N/A	N/A	0
B	Health Education and Technology Pavilion (Bldg B), Office	17,742	N/A	1/300	59
	Proposed Buildings				
~~A~~	~~**Hospital Office (Bldg A)**~~	~~6,000~~	~~N/A~~	~~1/300~~	~~20~~
E	**MOB (Bldg E)** 58,600 S.F				
	Surgery Center/Cath Lab: Floor 1	16,500	N/A	N/A	18 [3]
	Clinic: Floor 1	10,600	N/A	1/200	53
	Medical Office: Floors 2, 3 & 4	31,500	N/A	1/200	158
F	**ED Expansion (Bldg F)**	8,669	N/A	N/A	4 [4]
C	**Hospital Expansion (Bldg C)**	14,000	24	N/A	24
	Sub-Total	**236,661**			**680**
	Ella Street Office Building [1]	12,000	N/A	1/200	20
	Total	**248,661**	**136**		**700**

Total parking spaces presently provided	632
New MOB (Bldg E)	
Net loss of spaces at building site	-32
Proposed spaces to be added at lower parking lot	15
Proposed spaces to be added at Breck Street connection & lower lot	56
Total w/ MOB (Bldg E)	**671**
ED Expansion (Bldg F)	-30
Proposed spaces to be added at Breck St connection	36
New parking at Building A Site	24
Grand Total of parking spaces as shown on this sheet	**701**

FOOTNOTES
[1] '93 Approved Plan did not account for Ella Street MOB (46 spaces total; 26 on Ella site plus 20 on Campus) Per Use Permit U 1100 and ARC 83-39, 20 spaces of the required 46 spaces are required "off-site". (ie shared parking on the Campus).
[2] City allowed 1/260 parking ratio for mixed use of Medical Offices and Hospital uses.
[3] One parking space per operating room and patient holding bed equals 18 per 9/17/15 correspondence with City of SLO Planning.
[4] One parking space per treatment room per 9/17/15 correspondence with City of SLO Planning.

Medical Arts Building
French Hospital Medical Center Campus
San Luis Obispo, California
Sheet Title: Proposed Overall Campus Plan
Sheet Number: A1.2
STUDIO DESIGN GROUP ARCHITECTS, INC

9/23/16
French Master Site Plan 3-9.vwx

FOR REFERENCE

Key Plan

Agency Approval

Revisions

Project Information

Phase:	DD	Date:	04/27/20
Project No.:	2012	PIC / AIC:	

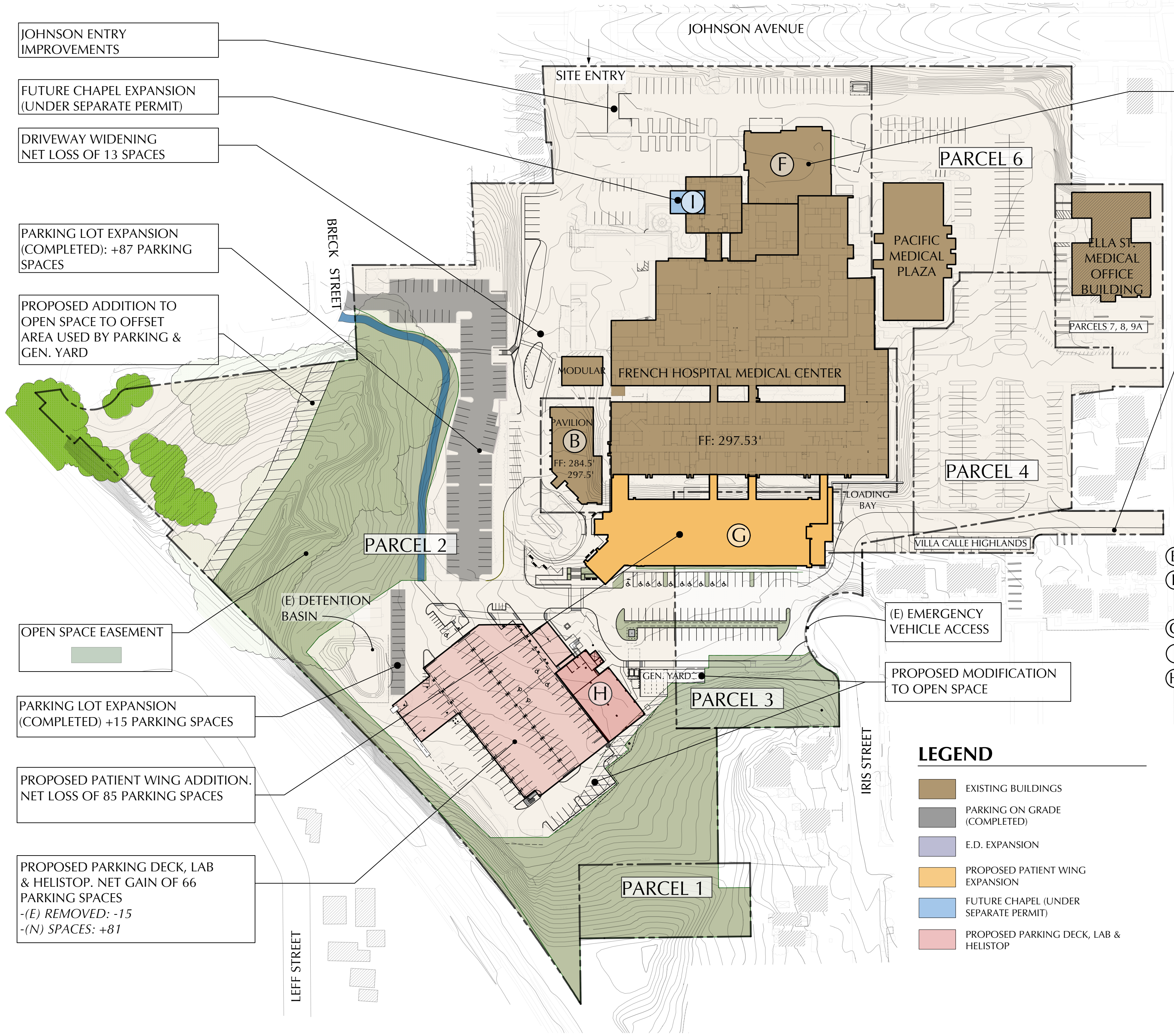
DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

Drawing Package
SCHEMATIC DESIGN

Sheet Title
2016 Master Plan - For Reference

Sheet Number
R100

Current Revision



PROPOSED OVERALL CAMPUS MASTER SITE PLAN
FRENCH HOSPITAL MEDICAL CENTER

0 60 120 240

Master Plan Proposed 2021 Revisions & Parking Requirements

Building/Use	SF (Gross per City standard)	# Licenced Beds	Parking Calc/Ratio	Min. Parking Required
Existing Buildings				
French Hospital	87,850	98	N/A	173
Pacific Medical Plaza	48,000	N/A	1/260 [2]	185
Modular Business Office	1,800	N/A	1/300	6
B Health Education and Technology Pavilion (Bldg B), Office	17,742	N/A	1/300	59
F ED Expansion (Bldg F)	8,669	N/A	N/A	4 [3]
Proposed Buildings				
G Patient Wing Tower (Bldg G)	89775	82	1 per bed	82 [3]
I Chapel (Bldg I) *under separate permit*	1000	N/A	N/A	0
H Lab (Bldg H)	4300	N/A	1/300	14
Sub-Total	**259,136**			**523**
Ella Street Office Building [1]	12,000	N/A	1/200	20
Total	**271,136**	**180**		**543**

Total parking spaces presently provided	709
Net loss of surface spaces at building sites	-98
Plus New Parking Structure	+/- 66
Total On-Campus Parking Spaces	**+/- 677**
Staff parking available off-site	75 [4]
Total parking available to Facility	**+/- 752**

FOOTNOTES
[1] '93 Approved Plan did not account for Ella Street MOB (46 spaces total; 26 on Ella site plus 20 on Campu
Per Use Permit U 1100 and ARC 83-39, 20 spaces of the required 46 spaces are required "off-site".
(ie shared parking on the Campus).
[2] City allowed 1/260 parking ratio for mixed use of Medical Offices and Hospital uses.
[3] One parking space per treatment room per 9/17/15 correspondence with City of SLO Planning.
[4] 75 spaces +/-10. Final off-site parking count to be determined.

STUDIO DESIGN GROUP ARCHITECTS, INC
762 Higuera Street, Suite 212
San Luis Obispo, CA 93401
805•541-3848
Fax: 805•541-9260
sdg@sdgarchitects.com

Key Plan

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Revisions

Project Information

Phase:	DD	Date:	03/29/21
Project No.:	2012	PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

Drawing Package
SCHEMATIC DESIGN

Sheet Title
2019 PROPOSED MASTER PLAN

Sheet Number **Current Revision**
R-101

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ARCHITECTS, INC

762 Higuera Street, Suite 212
San Luis Obispo, CA 93401

805•541-3848
Fax: 805•541-9260

sdg@sdgarchitects.com

French Hospital Medical Center- Campus Master Plan Comparison - 1993 to Present

4/17/20

Building Areas and City Required Parking

	ORIGINAL MASTER PLAN		SUBSEQUENT MASTER PLAN AMENDMENTS								CURRENT PROPOSAL		
Building/Use	**1993 Master Plan (1)**		**2012 Master Plan**		**2013 Pavilion ARC (3)**		**2014 MAB ARC**		**2016 MAB ARC/Master Plan**		**2019 Patient Wing**		**Parking Change**
	Area	Parking	Area	Parking	Area	Parking	Area	Parking	Area	Parking	Area	Parking	from 1993 Plan
French Hospital	83,000	173	83,000	173	83,000	173	83,000	173	87,850	173	87,850	173	0
Pacific Medical Plaza (medical offices)	48,000	185	48,000	185	48,000	185	48,000	185	48,000	185	48,000	185	0
Modular Business Office	1,800	6	1,800	6	1,800	6	1,800	6	1,800	6	1,800	6	0
OR Expansion (Bldg. D)	9,500	0	4,850	0	4,850	0	4,850	0	In Hospital	0	In Hospital	0	0
Copeland Pavilion (Bldg. B-offices)	35,000	175	18,000	48	17,742	59	17,742	59	17,742	59	17,742	59	-116
Hospital Office (Bldg. A)	6,000	20	6,000	20	6,000	20	6,000	20	0	0	0	0	-20
Medical Arts Building Total (Bldg. E)	30,000	150	30,000	150	30,000	150	31,471	157	58,600	229			-150
Surgery Center / Cath Lab Floor 1									16,500	18			
Clinic Floor 1									10,600	53			
Medical Office Floors 2, 3									31,500	158			
ER Expansion (Bldg. F)	-		5,450	27	5,450	27	5,450	27	8,669	4	8,669	4	4
Hospital Expansion (Bldg. C)	6,000	20	17,550	22	17,550	22	17,550	22	14,000	24			-20
Patient Wing Tower (Bldg G)											89,775	82	82
Chapel (Bldg I)											1,000	0	
Hospital Lab/Pharmacy (Bldg H) (2)											4,300	14	14
Sub-Total	219,300	729	214,650	632	214,392	642	215,863	649	236,661	680	259,136	523	-206
Ella Street Office Building	12,000	20	12,000	20	12,000	20	12,000	20	12,000	20	12,000	20	0
Total	231,300	749	226,650	652	226,392	662	227,863	669	248,661	700	271,136	543	-206
					2/1/19 Parking provided	709	Not constructed		Not constructed		Parking provided at completion	677	

(1) The 1993 Master Plan received a mitigated negative declaration (MND) following the environmental review process. This MND was also used to support the 2013 Master Plan revisions. Therefore the 2018 Patient Wing parking is compared to the parking in the 1993 Master Plan since the MND that evaluated the traffic and parking impacts was based on this Master Plan.

(2) City parking requirements for a freestanding Medical Laboratory are 1:300. Propose 1:600 as a compromise for a dedictaed lab and pharmacy that serve only the hospital.

(3) "2013 Pavilion ARC" represents the present actual campus conditions as of 2/1/19.

Key Plan

Agency Approval

Revisions

Project Information

Phase:	DD	Date:	04/27/20
Project No.:	2012	PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

Drawing Package

SCHEMATIC DESIGN

Sheet Title

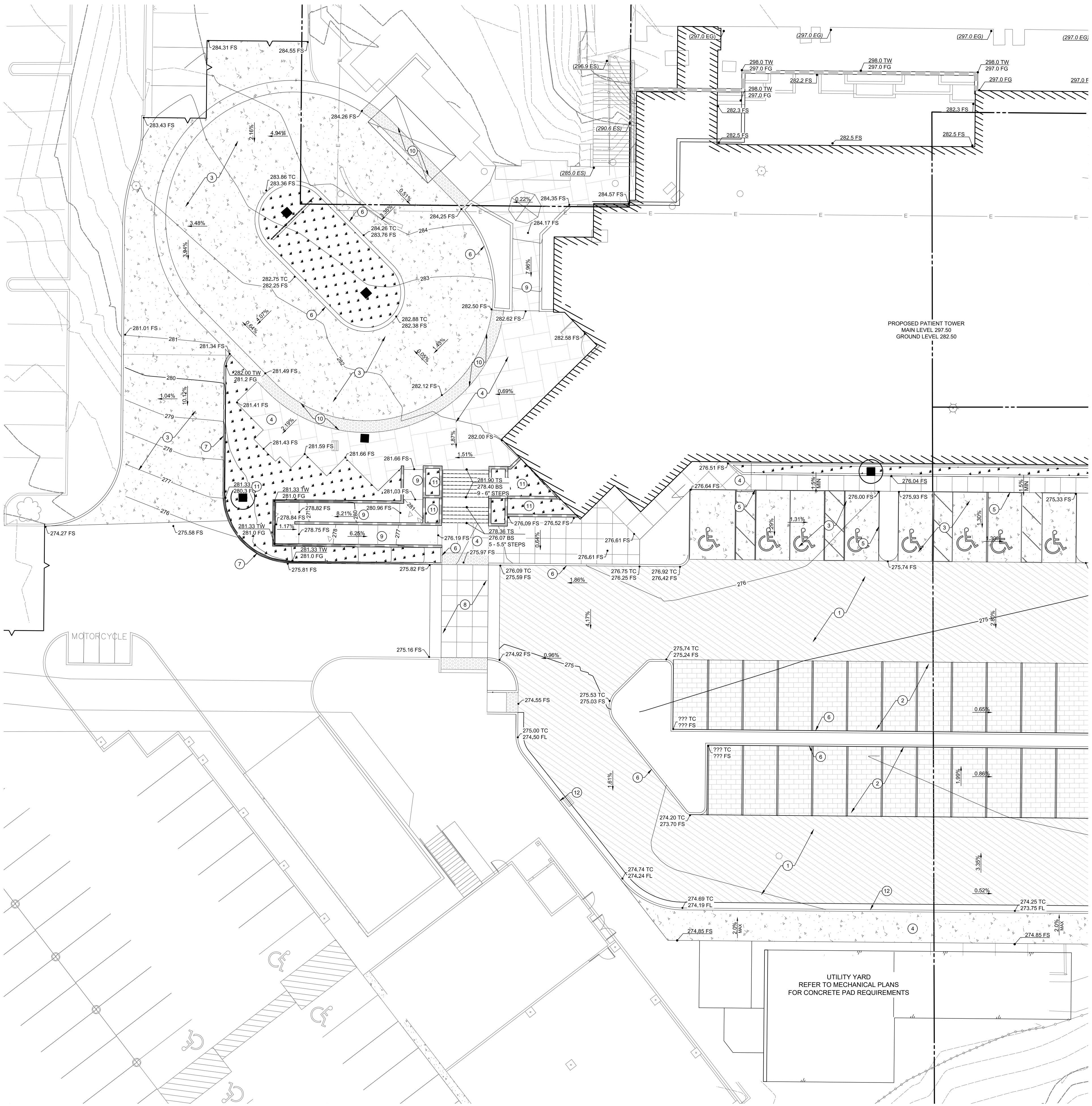
Master Plan Comparision Spreadsheet

Sheet Number

R102

Current Revision

4/24/20
FHMC Parking Structure 3.4.xlsx



GENERAL NOTES:

SEE DEMOLITION AND PROTECTION PLAN FOR ADDITIONAL INFORMATION.

ALL DEMOLITION AND GRADING SHALL BE IN COMPLIANCE WITH THE RECOMMENDATIONS CONTAINED IN THE SOILS REPORT PREPARED BY INDEPENDENT SOLUTIONS , FILE NO. 19-3487-01, DATED AUGUST 2, 2019 AND ALL ADDENDA TO THE REPORT SHALL BE CONSIDERED PART OF THESE PLANS. CONTRACTOR SHALL CONTACT SOILS ENGINEER PRIOR TO START OF DEMOLITION WORK.

CONTACT: WILLIAM H. CHU, PE, GE PHONE: (951) 674-3222

SITE CONSTRUCTION NOTES:

1. CONSTRUCT ASPHALT DRIVEWAY SECTION PER DETAIL 1, SHEET C300.
2. CONSTRUCT PERMEABLE PAVER PARKING STALL SECTION PER DETAIL 4, SHEET C300.
3. CONSTRUCT CONCRETE DRIVEWAY SECTION PER DETAIL 2, SHEET C00.
4. CONSTRUCT 3" PCC FLATWORK PER DETAIL 3, SHEET C300.
5. CONSTRUCT 0-INCH CONCRETE CURB PER DETAIL 5, SHEET C300.
6. CONSTRUCT 6-INCH CONCRETE CURB PER DETAIL 6, SHEET C300.
7. CONSTRUCT RETAINING WALL PER STRUCTURAL PLANS
8. CONSTRUCT RAISED CROSSWALK PER CITY STANDARD OF SAN LUIS OBISPO 7325.
9. CONSTRUCT ADA RAMP WITH HANDRAILS
10. INSTALL DETECTABLE WARNING SURFACE PER CALTRANS STANDARD RSP A99A
11. CONSTRUCT BIOFILTRATION PLANTER PER DETAIL 7 ON SHEET C300
12. CONSTRUCT 6-INCH CONCRETE CURB AND GUTTER PER DETAIL 8, SHEET C300.

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10 0 10 20

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Cuningham Group Architecture, Inc.
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www.cuningham.com

Plan Prepared By:

Ashley&Vance ENGINEERING, INC.
1413 Monterey Street
San Luis Obispo, CA 93401
www.ashleyvance.com (805) 545-0010 • (323) 744-0010
CIVIL • STRUCTURAL

Engineer of Record:

Agency Approval OSHPD No. H190224-40-00

Registration

PLAN REVIEW SET NOT FOR CONSTRUCTION

Revisions

No.	Date	Description

Project Information

Increment:		Date:	04/17/2020
Project No.:	181067	PIC / AIC:	KM

Dignity Health French Hospital MC - New Patient Tower

Drawing Package

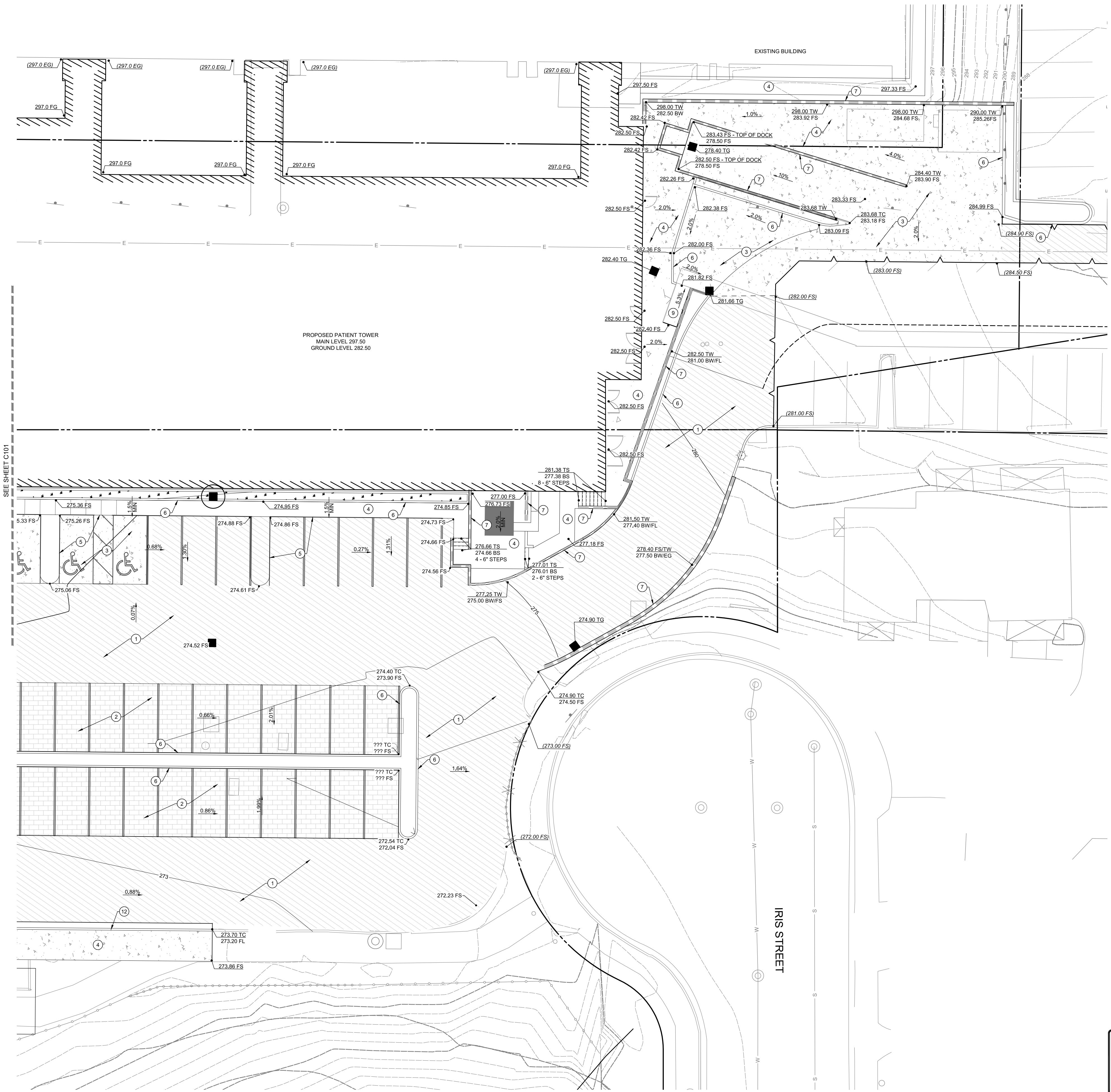
SCHEMATIC DESIGN

Sheet Title

GRADING PLAN

Sheet Number

C100



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CUNINGHAM GROUP
Cuningham Group Architecture, Inc.
8065 Hayden Place, Culver City, CA 90232
www.cuningham.com

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Engineer of Record:

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Revisions

No.	Date	Description

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10 0 10 20

Project Information

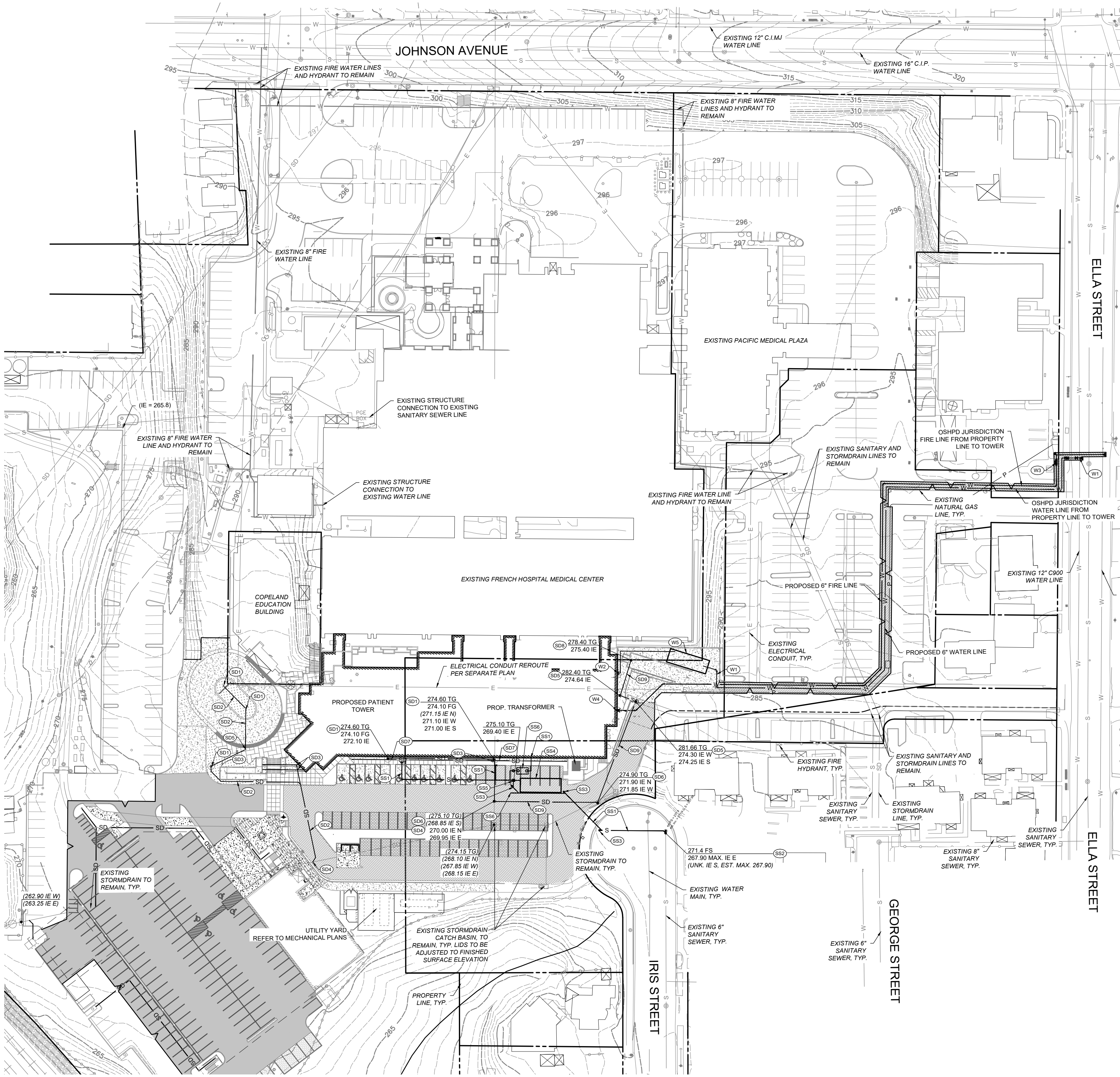
Increment:				Date:	04/17/2020
Project No.:	181067			PIC / AIC:	KM

Dignity Health French Hospital MC - New Patient Tower

Drawing Package
SCHEMATIC DESIGN

Sheet Title
GRADING PLAN

Sheet Number
C101



GENERAL NOTES:

ALL EXISTING UTILITIES SHOWN ARE BASED ON THE BEST KNOWLEDGE AVAILABLE. CONTRACTOR TO POTHOLE ALL POINTS OF CONNECTION AND VERIFY ALL CLEARANCES. MATERIAL DEPTH AND LOCATION SHALL BE IDENTIFIED BY CONTRACTOR. IF THERE ARE ANY DIFFERENCES FROM PLAN WITH ANY OF THESE ITEMS, ENGINEER OF WORK SHALL BE NOTIFIED IMMEDIATELY.

SEE ARCHITECT'S PLAN FOR ADDITIONAL SITE PLAN INFORMATION, INCLUDING PROPOSED FENCING AND LANDSCAPING.

ELECTRIC, DATA, AND GAS UTILITIES BY OTHERS.

SEE LANDSCAPE PLAN FOR TREES TO BE REMOVED AND TREES TO BE RETAINED.

STORM DRAIN CONSTRUCTION NOTES:

- SD1 INSTALL NDS #1200 CB WITH NDS #1280 GRATE OR APPROVED EQUAL.
- SD2 INSTALL 4" PVC STORM DRAIN LINE PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
- SD3 CONNECT PLANTER UNDERDRAIN TO STORMDRAIN
- SD4 CONNECT TO EXISTING STORMDRAIN SYSTEM
- SD5 INSTALL NDS #1200 CB WITH NDS #1220 GRATE OR APPROVED EQUAL.
- SD6 INSTALL NDS #1200 CB WITH NDS #1210 GRATE OR APPROVED EQUAL.
- SD7 INSTALL ROOF DOWNSPOUT OUTFALL TO PLANTER.
- SD8 INSTALL MID STATE CONCRETE 18" X 18" CATCH BASIN PER MANUFACTURERS RECOMMENDATIONS WITH TRAFFIC RATED GRATE.
- SD9 INSTALL 6" PVC STORM DRAIN LINE PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.

SANITARY SEWER CONSTRUCTION NOTES:

- SS1 CONSTRUCT 6" SDR35 SANITARY SEWER LATERAL PER CITY OF SAN LUIS OBISPO STANDARD DETAIL 6810 AND 6020.
- SS2 SEWER POINT OF CONNECTION AT (E) 6" SEWER MAIN.
- SS3 INSTALL SANITARY SEWER CLEANOUT PER CITY OF SAN LUIS OBISPO STANDARD 6710.
- SS4 INSTALL 20,000 GALLON SANITARY SEWER TANK, SEE MECHANICAL PLANS.
- SS5 INSTALL MID STATE CONCRETE DISTRIBUTION BOX TO ACT AS A WASTE DIVERTER
- SS6 INSTALL GREASE INTERCEPTOR PER MECHANICAL PLANS

WATER CONSTRUCTION NOTES:

- W1 INSTALL 4" WATER SERVICE WITH METER PER CITY OF SAN LUIS OBISPO STANDARD DETAIL 6210 AND 6020. SEE MECHANICAL PLANS FOR SIZE FROM METER TO BUILDING. MECHANICAL ENGINEER TO VERIFY SERVICE SIZE PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL ONSITE JOINTS MECHANICALLY RESTRAINED AS NECESSARY.
- W2 SEE MECHANICAL PLANS FOR WATER SERVICE POINT OF CONNECTION AT BUILDING.
- W3 INSTALL 6" FIRE LINE AND BACKFLOW PREVENTER PER CITY OF SAN LUIS OBISPO STANDARD DETAIL 6530, 6420, AND 6020. FIRE SPRINKLER ENGINEER TO VERIFY SERVICE SIZE PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL ONSITE JOINTS MECHANICALLY RESTRAINED.
- W4 FIRE SPRINKLER BUILDING CONNECTION POINT WITH FIRE DEPARTMENT CONNECTION.
- W5 INSTALL 20,000 GALLON WATER TANK, SEE MECHANICAL PLANS.

LEGEND

SD	STORM DRAINAGE
W	WATER SERVICE
G	NATURAL GAS
S	SANITARY SEWER
SD	(E) STORM DRAINAGE
W	(E) WATER SERVICE
S	(E) SANITARY SEWER

N

HORIZONTAL SCALE: 1" = 40'

40 0 40 80

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Engineer of Record:

Agency Approval OSHPD No.:H190224-40-00

Registration

REGISTERED PROFESSIONAL ENGINEER KENNETH B. BROWN C 78390 CIVIL STATE OF CALIFORNIA

PLAN REVIEW SET NOT FOR CONSTRUCTION

Revisions

No.	Date	Description

Project Information

Increment:		Date:	04/17/2020
Project No.:	181067	PIC / AIC:	KM

Dignity Health French Hospital MC - New Patient Tower

Drawing Package

SCHEMATIC DESIGN

Sheet Title

UTILITY PLAN

Sheet Number

C200

SITE CONSTRUCTION NOTES:

1. PROPOSED ASPHALT SECTION.
2. PROPOSED CONCRETE WALKWAY.
3. PROPOSED CURB AND GUTTER.
4. PROPOSED PERMEABLE PAVERS.
5. PROPOSED ADA PARKING STALL.
6. PROPOSED RAMP TO SECOND LEVEL.
7. SAWCUT (E) PAVEMENT. MATCH (E) ELEVATIONS.
8. PROPOSED TRASH ENCLOSURE
9. PROPOSED TREATMENT PLANTER
10. PROPOSED STORMDRAIN PIPE CONNECTED TO EXISTING STORMDRAIN

HORIZONTAL SCALE: 1" = 10'
10 0 10 20

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San Luis Obispo, CA 93401
(805) 545-0010
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PARKING DECK
French Hospital Medical Center
1911 Johnson Avenue
San Luis Obispo, CA

Dignity Health

Job Number: 181474
Drawn By: JMA Ext: 156
Date: 06.20.2020

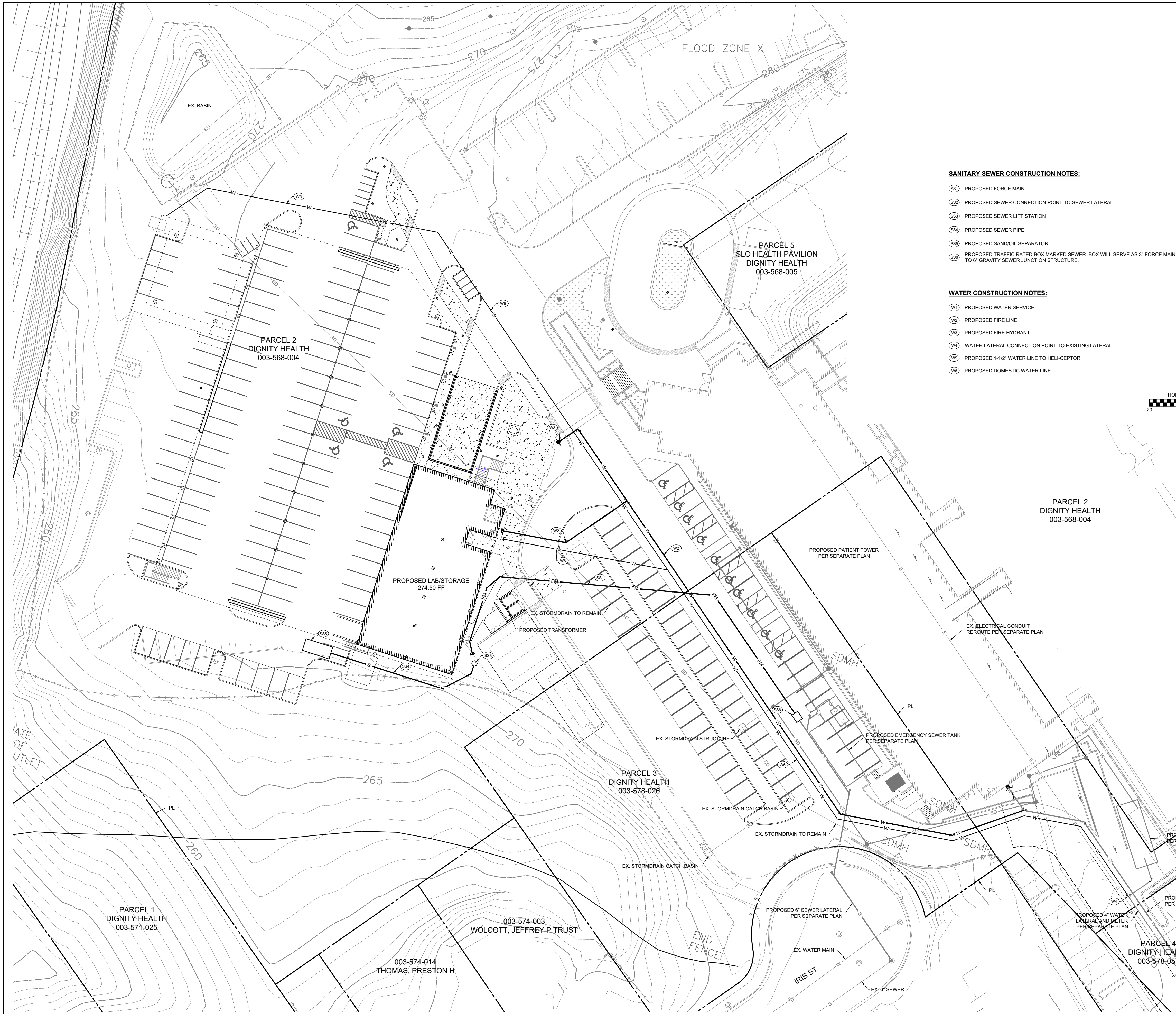
1 ----
2 ----
3 ----
4 ----

Sheet Contents:

GRADING PLAN

Sheet Number:

C-1.1



SANITARY SEWER CONSTRUCTION NOTES:

- SS1 PROPOSED FORCE MAIN.
- SS2 PROPOSED SEWER CONNECTION POINT TO SEWER LATERAL
- SS3 PROPOSED SEWER LIFT STATION
- SS4 PROPOSED SEWER PIPE
- SS5 PROPOSED SAND/OIL SEPARATOR
- SS6 PROPOSED TRAFFIC RATED BOX MARKED SEWER. BOX WILL SERVE AS 3" FORCE MAIN TO 6" GRAVITY SEWER JUNCTION STRUCTURE.

WATER CONSTRUCTION NOTES:

- W1 PROPOSED WATER SERVICE
- W2 PROPOSED FIRE LINE
- W3 PROPOSED FIRE HYDRANT
- W4 WATER LATERAL CONNECTION POINT TO EXISTING LATERAL
- W5 PROPOSED 1-1/2" WATER LINE TO HELI-CEPTOR
- W6 PROPOSED DOMESTIC WATER LINE

N

HORIZONTAL SCALE: 1" = 20'

20 0 20 40

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ENGINEERING, INC.
1413 Monterey Street
San Luis Obispo, CA 93401
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French Hospital Medical Center
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Job Number: 181474
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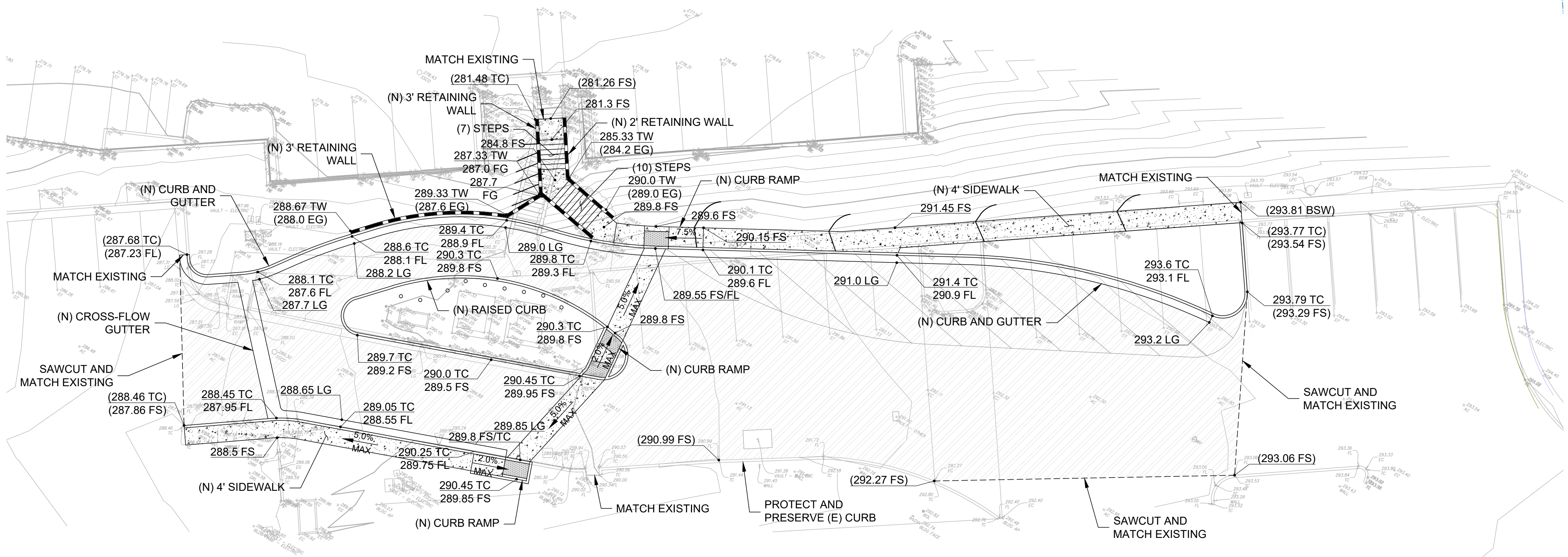
1 ----
2 ----
3 ----
4 ----

Sheet Contents:

UTILITY PLAN

Sheet Number:

C-2.1



LEGEND

PROPOSED ASPHALT CONCRETE (AC) PAVEMENT

PROPOSED CEMENT CONCRETE PAVEMENT

10 0 5 10 20

(IN FEET)

1 INCH = 10 FT.

STUDIO DESIGN GROUP ARCHITECTS, INC

762 Higuera Street, Suite 212
San Luis Obispo, CA 93401

805-541-3848
Fax: 805-541-9260

sdg@sdgarchitects.com

ABOVE GRADE ENGINEERING

245 Higuera Street
San Luis Obispo, CA 93401
(805) 540-5115
abovegradeengineering.com
A California Corporation
Scott Stokes PE # 58256

REGISTERED PROFESSIONAL ENGINEER SCOTT J. STOKES No. 58256 6/30/20 CIVIL STATE OF CALIFORNIA

Key Plan

Agency Approval

Revisions

Project Information

Phase:	DD	Date:	04/24/20
Project No.:	20058	PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MEDICAL CENTER

Drawing Package

SCHEMATIC DESIGN

Sheet Title

ENTRY DRIVE IMPROVEMENTS GRADING AND DRAINAGE PLAN

Sheet Number

Current Revision

C3.0

PROPOSED DRIVEWAY ENHANCEMENTS PLANT LIST

		SIZE	WUCOLS*	OPALS**
	SCREENING TREES			
	FICUS MICROCARPA / INDIAN LAUREL FIG	24" BOX	M	2
A	PINUS CANARIENSIS / CANARY ISLAND PINE	24" BOX	L	4
B	MAGNOLIA GRANDIFLORA / SOUTHERN MAGNOLIA	24" BOX	M	5
	PARKING LOT TREES			
C	KOELREUTERIA PANICULATA / GOLDENRAIN TREE	15 GAL	M	4
D	PISTACIA CHINENSIS / CHINESE PISTACHE	15 GAL	L	1
E	PYRUS CALLERYANA 'BRADFORD' / BRADFORD PEAR	24" BOX	M	4
F	ARBUTUS 'MARINA' / MARINA STRAWBERRY TREE	24" BOX	L	5
	SHRUBS / VINES / PERENNIALS			
G	CALAMAGROSTIS × ACUT. 'KARL FOERSTER' / REED GRASS	5 GAL	M	N/A
	HEMEROCALLIS 'STARBURST RED' / DAYLILY	5 GAL	M	3
H	LOROPETALUM RUBRUM 'HINES PURPLE LEAF' / FRINGE FLOWER	5 GAL	L	5
I	NANDINA DOMESTICA / HEAVENLY BAMBOO	5 GAL	L	1
	ESCALLONIA X EXONIENSIS 'FRADES' / PINK ESCALLONIA	5 GAL	M	3
	MYRICA CALIFORNICA / CALIFORNIA WAX MYRTLE	5 GAL	M	2
J	PHORMIUM TENAX 'FIREBIRD' / NEW ZEALAND FLAX	5 GAL	L	2
K	PITTOSPORUM TENUIFOLIUM 'SILVER SHEEN' / KOHUHU	5 GAL	M	5
L	PLUMBAGO AURICULATA / CAPE PLUMBAGO	5 GAL	L	3
M	RHAPHIOLEPIS INDICA 'JACK EVANS' / PINK INDIA HAWTHORNE	5 GAL	L	4
	GROUNDCOVER			
	COPROSMA KIRKII / KIRK'S COPROSMA	1 GAL	L	1
	ROSMARINUS OFFICINALIS 'PROSTRATA' / TRAILING ROSEMARY	1 GAL	L	6
N	SOLLYA HETEROPHYLLA / AUSTRALIAN BLUEBELLS	1 GAL	L	3
O	TRACHELOSPERMUM JASMINOIDES / STAR JASMINE	1 GAL	M	6

*WUCOLS (WATER USE CLASSIFICATIONS OF LANDSCAPE SPECIES) IS A GUIDE TO HELP IDENTIFY IRRIGATION WATER NEEDS OF PLANT SPECIES. DEVELOPED BY THE UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION, CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2000.

**OPALS (OGREN PLANT-ALLERGY SCALE) IS AN INDEX OF PLANT RATINGS ON A (1) TO (10) SCALE BASED ON ALLERGEN-RELATED FACTORS. A RATING OF (1) REPRESENTS THE MOST ALLERGY-FREE SELECTIONS, AND A RATING OF (10) DENOTES PLANTS THAT CAUSE THE MOST ALLERGIES AS A RESULT OF INHALENT POLLEN, ODOR, AND/OR CONTACT.

WATER CONSERVATION STATEMENT

The conceptual landscape plan, concurrent with the planting and irrigation construction documents, plan installation, related specifications and notes, qualifies this project as one which embraces the following current water conservation technology and methodologies:

1. Utilization of state of the art irrigation controller(s) allowing for precision incremental water scheduling in all hydrozones.
2. Use of drip-type and/or microspray systems only
3. Integrated plant design. Plant palettes have been formed to reflect parallel watering requirements within each hydrozone group.
4. Plants installed with moisture retentive soil amendments, enabling strong root and plant growth, with the use of less water.
5. 3" Deep mulching of all plant basins and planting areas, inhibiting evaporation.
6. Use of low water use plants.

Evergreen and deciduous plants, most requiring low water use have been specifically selected and used relative to the functions they will provide. The proper placement of plantings will offer passive-solar access, wind deflection and screening throughout the seasons. The planting design compliments the site's architecture with respect to scale, textures and color.

CONCEPT NOTES

1. Plant material was chosen for its compatability with the macro/ microclimatic conditions of the region and site; tolerance of wind; tolerance of drought conditions; longevity; screening capabilities; and overall attractiveness.
2. Irrigation system shall be designed for maximum water efficiency and shall include an automatic controller, backflow prevention device, and low-gallonage heads for turf and large ground cover areas. A drip-type system shall be used where appropriate. Trees shall be irrigated on separate bubbler systems.
3. Plant material quantities, narrative specifications, site details, and material definitions will be determined and noted on the construction drawings.
4. Complete tree protection notes will be provided on the Construction Documents.

CUNINGHAM GROUP
Cuningham Group Architecture, Inc.
201 Main St. SE, Suite 325, Minneapolis, MN 55414
www.cuningham.com

OASIS ASSOCIATES
LANDSCAPE ARCHITECTURE + PLANNING

Key Plan

Agency Approval

PRELIMINARY NOT FOR CONSTRUCTION

Revisions

No.	Date	Description

Project Information

Phase:	ARC	Date:	06/25/2020
Project No.:		PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW PATIENT TOWER

Drawing Package

Sheet Title

MODIFIED CAMPUS LANDSCAPE WITH BUILDING ADDITIONS

Sheet Number

L101

Current Revision

PROPOSED PLANT LIST

		SIZE	WUCOLS*	OPALS**
	SCREENING TREES			
A	PINUS CANARIENSIS / CANARY ISLAND PINE	24" BOX	L	4
B	MAGNOLIA GRANDIFLORA / SOUTHERN MAGNOLIA	24" BOX	M	5
	QUERCUS AGRIFOLIA / COAST LIVE OAK	15 GAL	L	9
	PARKING LOT TREES			
C	KOELREUTERIA PANICULATA / GOLDENRAIN TREE	15 GAL	M	4
D	PISTACIA CHINENSIS / CHINESE PISTACHE	15 GAL	L	1
E	PYRUS CALLERYANA 'BRADFORD' / BRADFORD PEAR	24" BOX	M	4
	PEDESTRIAN PLAZA TREES			
F	ARBUTUS 'MARINA' / MARINA STRAWBERRY TREE	24" BOX	L	3
	ACER PALMATUM / JAPANESE MAPLE	24" BOX	M	5
	LAGERSTROEMIA INDICA / CRAPE MYRTLE	24" BOX	L	5
	SHRUBS / VINES / PERENNIALS			
G	ANIGOZANTHOS SPS. / KANGAROO PAW	5 GAL	L	2
H	CALAMAGROSTIS × ACUT. 'KARL FOERSTER' / REED GRASS	5 GAL	M	N/A
	CORDYLINE 'TORBAY DAZZLER' / GRASS PALM	5 GAL	L	3
	DIANELLA TASMANICA 'VARIEGATA' / VARIEGATED FLAX LILY	5 GAL	M	N/A
	FICUS PUMILA / CREEPING FIG	5 GAL	L	2
	HEMEROCALLIS 'STARBURST RED' / DAYLILY	5 GAL	M	3
I	KNIPHOFIA UVARIA / RED HOT POKER	5 GAL	L	4
J	LEUCADENDRON 'SAFARI SUNSET' / CONEBUSH	5 GAL	L	1
K	LOROPETALUM RUBRUM 'HINES PURPLE LEAF' / FRINGE FLOWER	5 GAL	L	5
L	NANDINA DOMESTICA / HEAVENLY BAMBOO	5 GAL	L	1
	ESCALLONIA X EXONIENSIS 'FRADES' / PINK ESCALLONIA	5 GAL	M	3
	MYRICA CALIFORNICA / CALIFORNIA WAX MYRTLE	5 GAL	M	2
M	PHORMIUM TENAX 'FIREBIRD' / NEW ZEALAND FLAX	5 GAL	L	2
N	PITTOSPORUM TENUIFOLIUM 'SILVER SHEEN' / KOHUHU	5 GAL	M	5
O	PLUMBAGO AURICULATA / CAPE PLUMBAGO	5 GAL	L	3
P	ROSA 'FLOWER CARPET' / FLOWER CARPET ROSE	5 GAL	M	5
Q	RHAPHIOLEPIS INDICA 'JACK EVANS' / PINK INDIA HAWTHORNE	5 GAL	L	4
	GROUNDCOVER			
	COPROSMA KIRKII / KIRK'S COPROSMA	1 GAL	L	1
R	ROSMARINUS OFFICINALIS 'PROSTRATA' / TRAILING ROSEMARY	1 GAL	L	6
S	SOLLYA HETEROPHYLLA / AUSTRALIAN BLUEBELLS	1 GAL	L	3
T	TRACHELOSPERMUM JASMINOIDES / STAR JASMINE	1 GAL	M	6

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PARKING GARAGE - OVERALL LANDSCAPE PLAN
SCALE: 1" = 20'

0 10' 20' 30' 40' 60'

KEYNOTE LEGEND

1 ENHANCED PAVING AT VEHICULAR ARRIVAL COURT
2 ENHANCED PAVING AT PEDESTRIAN PLAZA AREA
3 PEDESTRIAN RAMP WITH HANDRAILS
4 GRAND STAIRCASE WITH HANDRAILS
5 TERRACED PLANTERS
6 NOT USED
7 NEW EVERGREEN SCREENING TREES
8 NOT USED
9 NOT USED
10 BENCH, TYP.
11 NOT USED
12 EXISTING MULTI-PURPOSE TRAIL
13 NEW TREE PLANTING, TYP.
14 EXISTING TREES TO REMAIN
15 NOT USED
16 BIKE RACK (QTY. 2, 10 TOTAL SPACES PROVIDED)
17 TABLE TOP STYLE CROSSWALK
18 EXISTING LANDSCAPE TO REMAIN
19 8' TALL GREENSCREEN TRELLIS WITH EVERGREEN VINES

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OASIS ASSOCIATES
LANDSCAPE ARCHITECTURE + PLANNING

Key Plan

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PRELIMINARY NOT FOR CONSTRUCTION

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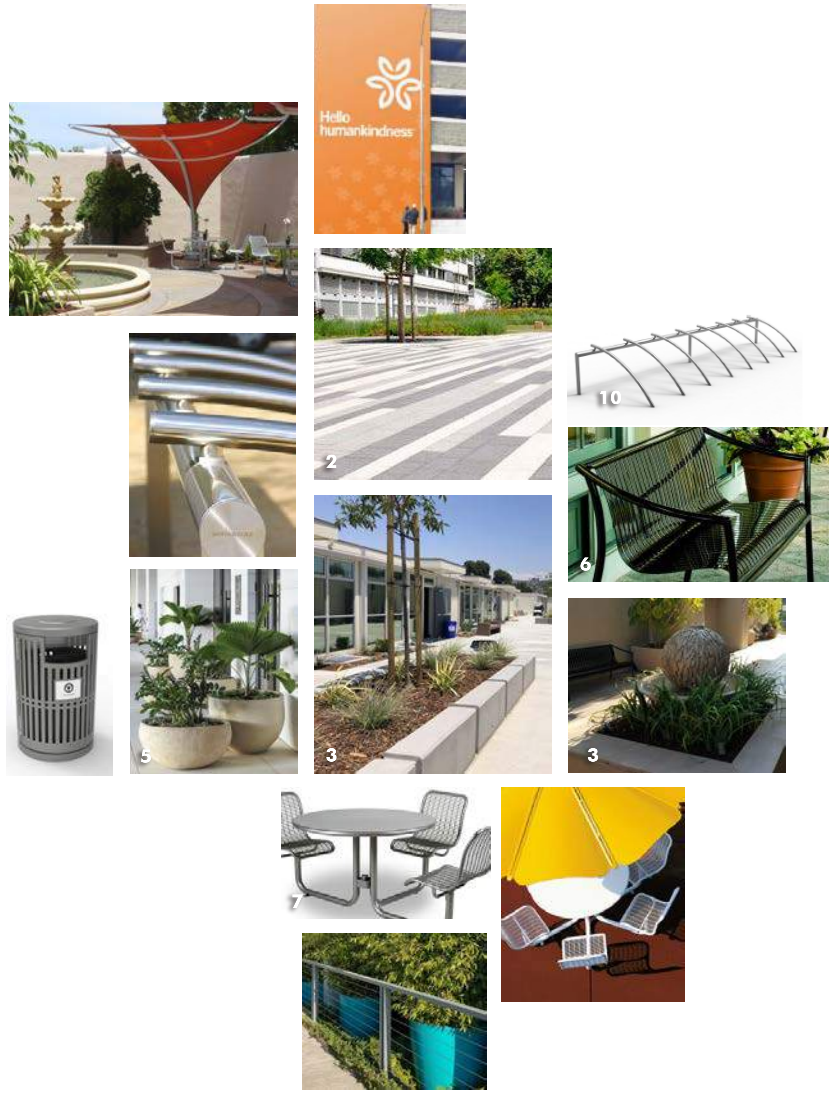
Phase:	ARC	Date:	06/25/2020
Project No.:		PIC / AIC:	

DIGNITY HEALTH FRENCH HOSPITAL MC - NEW PATIENT TOWER

Drawing Package

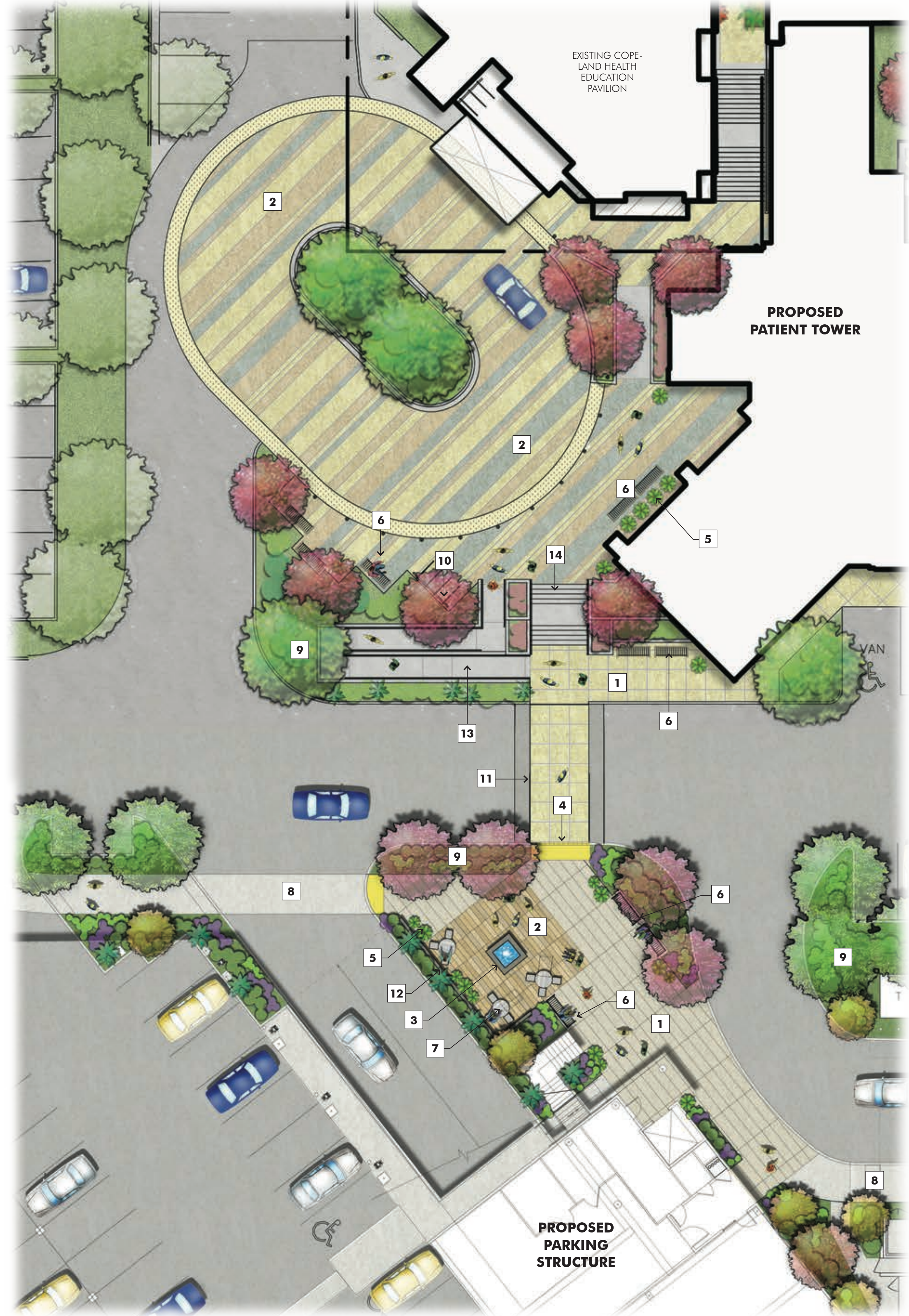
Sheet Title
PARKING STRUCTURE - SITE LANDSCAPE PLAN & PLAZA ENLARGEMENT

Sheet Number: L102
Current Revision



KEYNOTE LEGEND

1 ENHANCED CONCRETE PAVING
2 DECORATIVE PAVERS AT SEATING AREA
3 SELF-CONTAINED, RECIRCULATING WATER FEATURE
4 TRUNCATED DOMES
5 LANDSCAPE POTS, TYP.
6 BENCH, TYP.
7 TABLE SEATING, TYP.
8 EXISTING MULTI-PURPOSE TRAIL
9 NEW TREE PLANTING, TYP.
10 BIKE RACK (QTY. 2, 10 TOTAL SPACES PROVIDED)
11 TABLE TOP STYLE CROSSWALK
12 18" TALL CONCRETE SEATWALL
13 PEDESTRIAN RAMP WITH HANDRAILS
14 GRAND STAIRCASE



PEDESTRIAN PLAZA & CONNECTION TO ARRIVAL COURT - ENLARGEMENT
SCALE: 1" = 10'

CUNINGHAM GROUP
Cuningham Group Architecture, Inc.
201 Main St. SE, Suite 325, Minneapolis, MN 55414
www.cuningham.com

OASIS ASSOCIATES
LANDSCAPE ARCHITECTURE + PLANNING

Key Plan

Agency Approval

PRELIMINARY NOT FOR CONSTRUCTION

Revisions

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DIGNITY HEALTH FRENCH HOSPITAL MC - NEW PATIENT TOWER

Drawing Package

Sheet Title
PEDESTRIAN PLAZA & ARRIVAL COURT CONNECTION ENLARGEMENT

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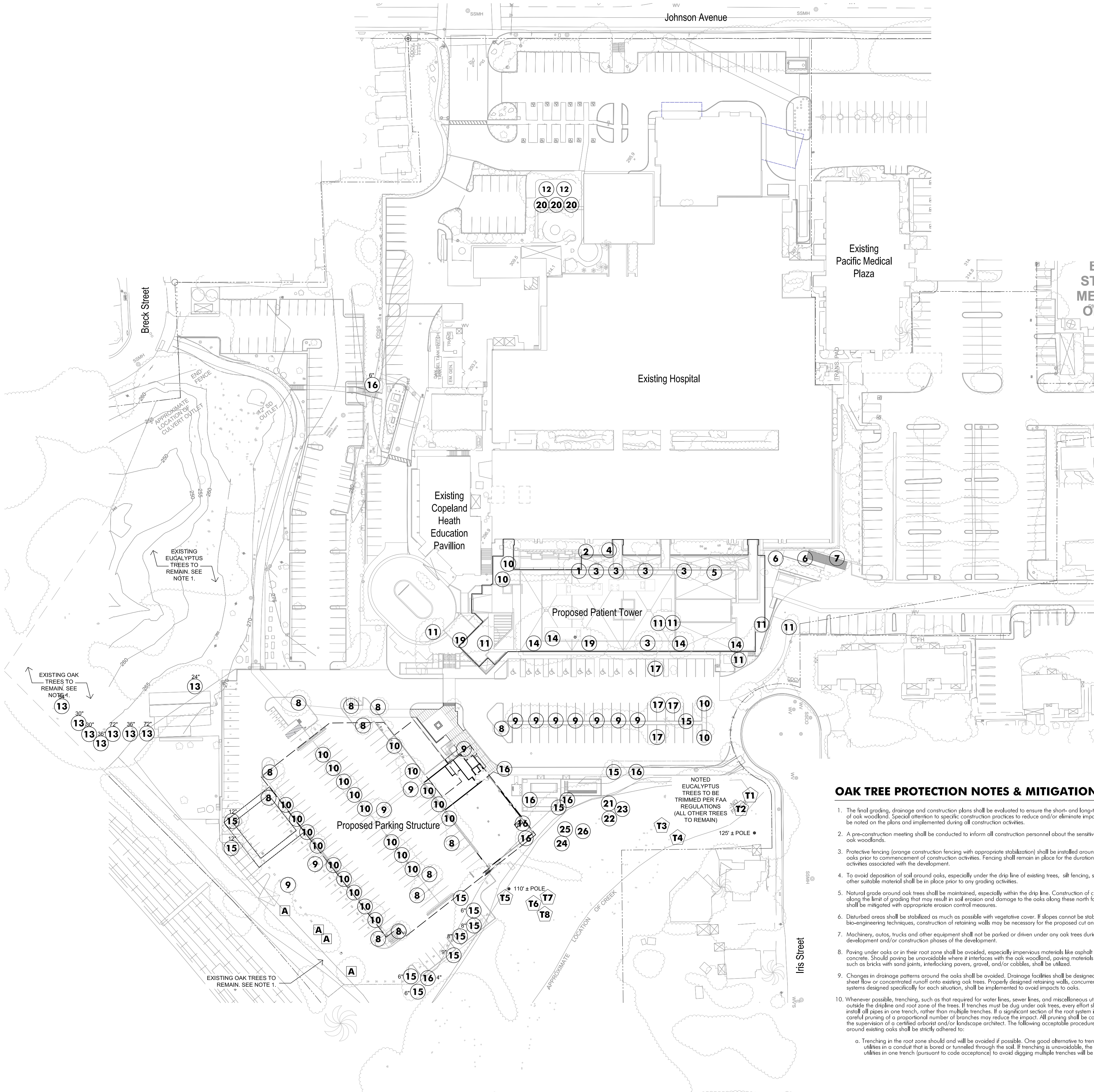

CUNINGHAM GROUP

Cuningham Group Architecture, Inc.
201 Main St. SE, Suite 325, Minneapolis, MN 55414
www.cuningham.com

PROPOSED TREE REMOVAL 1

I.D.	BOTANICAL NAME	COMMON NAME	DBH*	QNTY.
1	Eucalyptus viminalis	MANNA GUM	25"	1
2	Eucalyptus ficifolia	RED FLOWERING GUM	5"	1
3	Schinus molle	CALIFORNIA PEPPER	6"	5
4	Jacaranda mimosiifolia	JACARANDA	6"	1
5	Fraxinus sps.	ASH	12"	1
6	Fraxinus sps.	ASH	18"	2
7	Quercus agrifolia	COAST LIVE OAK	16"	1
8	Cinnamomum camphora	CAMPHOR TREE	8"-14"	12
9	Tristania conferta	BRISBANE BOX	8"	12
10	Platanus x acerifolia	LONDON PLANE	3"	26
11	Prunus cerasifera 'Thundercloud'	PURPLE LEAF PLUM	6"-8"	7
12	Olea europaea	OLIVE	64"	2
13	Eucalyptus globulus	SOUTHERN BLUE GUM	24"-72"	8
			CUT TO THE GROUND	
14	Eucalyptus polyanthemos	SILVER DOLLAR EUCALYPTUS	35"-45"	4
15	Quercus agrifolia	COAST LIVE OAK	8"-10"	12
16	Quercus agrifolia	COAST LIVE OAK	<6"	8
17	Albizia julibrissin	MIMOSA TREE	8"-10"	4
18	Eucalyptus globulus	SOUTHERN BLUE GUM	Varies	-
		PRUNE PER ARBORISTS DIRECTION		
19	Schinus molle	CALIFORNIA PEPPER	30"	2
20	Podocarpus gracilior	FERN PINE	9"	3
21	Eucalyptus globulus	SOUTHERN BLUE GUM	(2) 24"	1
22	Eucalyptus globulus	SOUTHERN BLUE GUM	(3) 24"	1
23	Eucalyptus globulus	SOUTHERN BLUE GUM	30"	1
24	Eucalyptus globulus	SOUTHERN BLUE GUM	(5) 30"	1
25	Eucalyptus globulus	SOUTHERN BLUE GUM	(2) 12"	1
26	Eucalyptus globulus	SOUTHERN BLUE GUM	(2) 12"	1

*TREE DIAMETER AT BREAST HEIGHT.

TREE REMOVAL NOTES

1. Specific trees just outside the area of disturbance, as noted on the plan, to remain at all possible and be protected during construction. City arborist to determine final impact on tree(s) during construction.

PROPOSED TREE TRIMMING T1

I.D.	BOTANICAL NAME	COMMON NAME	HEIGHT	QNTY.	MATBT*
T1	Eucalyptus globulus	SOUTHERN BLUE GUM	100'	1	25'
T2	Eucalyptus globulus	SOUTHERN BLUE GUM	100'	1	25'
T3	Eucalyptus globulus	SOUTHERN BLUE GUM	119'	1	35'
T4	Eucalyptus globulus	SOUTHERN BLUE GUM	126'	1	35'
T5	Eucalyptus globulus	SOUTHERN BLUE GUM	130'	1	35'
T6	Eucalyptus globulus	SOUTHERN BLUE GUM	130'	1	35'
T7	Eucalyptus globulus	SOUTHERN BLUE GUM	130'	1	35'
T8	Eucalyptus globulus	SOUTHERN BLUE GUM	130'	1	35'

*MINIMUM AMOUNT TO BE TRIMMED.

TREES TO REMAIN A

I.D.	BOTANICAL NAME	COMMON NAME	DBH*	QNTY.
A	Quercus agrifolia	COAST LIVE OAK	16"	4

*TREE DIAMETER AT BREAST HEIGHT.
REFER TO PLANTING SPECIFICATIONS FOR TREE PROTECTION MEASURES.

OAK TREE PROTECTION NOTES & MITIGATION CONDITIONS

1. The final grading, drainage and construction plans shall be evaluated to ensure the short- and long-term protection of oak woodland. Special attention to specific construction practices to reduce and/or eliminate impacts to oaks shall be noted on the plans and implemented during all construction activities.
2. A pre-construction meeting shall be conducted to inform all construction personnel about the sensitive nature of the oak woodlands.
3. Protective fencing (orange construction fencing with appropriate stabilization) shall be installed around all on-site oaks prior to commencement of construction activities. Fencing shall remain in place for the duration of construction activities associated with the development.
4. To avoid deposition of soil around oaks, especially under the drip line of existing trees, silt fencing, straw bales, or other suitable material shall be in place prior to any grading activities.
5. Natural grade around oak trees shall be maintained, especially within the drip line. Construction of cut and fill slopes along the limit of grading that may result in soil erosion and damage to the oaks along these north facing slopes, shall be mitigated with appropriate erosion control measures.
6. Disturbed areas shall be stabilized as much as possible with vegetative cover. If slopes cannot be stabilized solely with bio-engineering techniques, construction of retaining walls may be necessary for the proposed cut and fill areas.
7. Machinery, autos, trucks and other equipment shall not be parked or driven under any oak trees during the development and/or construction phases of the development.
8. Paving under oaks or in their root zone shall be avoided, especially impervious materials like asphalt and/or concrete. Should paving be unavoidable where it interfaces with the oak woodland, paving materials that are porous, such as bricks with sand joints, interlocking pavers, gravel, and/or cobbles, shall be utilized.
9. Changes in drainage patterns around the oaks shall be avoided. Drainage facilities shall be designed to eliminate sheet flow or concentrated runoff onto existing oak trees. Properly designed retaining walls, concurrent with drainage systems designed specifically for each situation, shall be implemented to avoid impacts to oaks.
10. Whenever possible, trenching, such as that required for water lines, sewer lines, and miscellaneous utilities, shall be outside the dripline and root zone of the trees. If trenches must be dug under oak trees, every effort shall be made to install all pipes in one trench, rather than multiple trenches. If a significant section of the root system is disrupted, careful pruning of a proportional number of branches may reduce the impact. All pruning shall be conducted under the supervision of a certified arborist and/or landscape architect. The following acceptable procedures for trenching around existing oaks shall be strictly adhered to:
    a. Trenching in the root zone should and will be avoided if possible. One good alternative to trenching is to place utilities in a conduit that is bored or tunneled through the soil. If trenching is unavoidable, the placing of all utilities in one trench (pursuant to code acceptance) to avoid digging multiple trenches will be utilized.
    b. Trenching and other soil disturbances during the summer months, and especially during periods of drought can severely impact oak trees.Prior to encroaching in any root zone, it will be necessary to water the root zone area of the affected trees the length of the trench. This technique will not only help a generally stressed tree, but it will also provide more favorable conditions for the growth of new roots and compensate for the roots that were lost during the disturbance.
    c. Trenching under the canopy of the trees, as well as just outside the dripline (within 5-feet of the dripline) shall be performed by auguring and/or by hand trenching. If roots over one-inch in diameter are encountered, these roots shall be preserved without injury, if possible. No machine trenching will be allowed within 5 feet of the tree's dripline.
    d. When trenching does occur within the root zone, roots shall not be ripped, but shall be cleanly cut along the sides of the trench. Braided remains of the exposed roots shall not be left dangling. Roots shall be cleanly pruned back to 1 to 2 inches of the soil line. If trimming of larger roots is unavoidable, they shall be cleanly cut or sawed. If there is a lateral root, the cut shall be made outside the lateral root, if possible.
    e. All exposed roots shall be covered with wet burlap (or a suitable substitute) and kept moist until the soil is returned.
    f. All topsoil removed during trenching shall be stockpiled in an orderly fashion so that it can be replaced after the utilities have been installed (as it was removed) and tamped down in the same relative soil profile.
    g. After the trench is filled, the area under the dripline shall be irrigated so that water penetrates down to the depth of the bottom of the trench.
    h. All excavated soil shall be replaced and tamped down in the trench so that no fill remains under the dripline of the trees. The grade shall be restored to its pre-construction/undisturbed condition.
    i. No significant change in drainage around the oak trees as a result of the trenching shall occur.
    j. Trenches shall be covered with natural litter collected from the surrounding oak woodland.
11. Pruning of trees, except in cases where root damage requires it or for pruning that must be performed to meet California Department of Forestry (CDF) standards, shall be avoided. In all cases, pruning shall be kept to a minimum and monitored by a qualified arborist and/or landscape architect with knowledge of native oaks and proper pruning procedures.
12. Any and all landscape plans for this development shall preclude irrigation and/or irrigated plantings within the established tree protection zones and/or the drip lines of the oak woodlands.
13. Should individual oak trees be damaged and/or removed due to construction related activities, replacement oak trees shall be required to be planted on the project site. Replacement rates shall reflect land use, ecological conditions and public values. Tree establishment is the final goal and the replacement rate will depend on the size of the replacement stock.

Key Plan

Agency Approval

PRELIMINARY NOT FOR CONSTRUCTION

No.	Revision Date	Description

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DIGNITY HEALTH FRENCH HOSPITAL MC - NEW PATIENT TOWER

Drawing Package

Sheet Title

TREE INVENTORY, REMOVAL AND MODIFICATION PLAN

Sheet Number | Current Revision

L104

ATTACHMENT 2

Visual Impact Assessment for the French Hospital Medical Center Expansion Project

Visual Impact Assessment of the French Hospital Medical Center Expansion Project

San Luis Obispo, California

DECEMBER 2021

PREPARED FOR

City of San Luis Obispo

PREPARED BY

SWCA Environmental Consultants

DRAFT VISUAL IMPACT ASSESSMENT OF THE FRENCH HOSPITAL MEDICAL CENTER EXPANSION PROJECT, SAN LUIS OBISPO, CALIFORNIA

Prepared for

City of San Luis Obispo
Community Development Department
919 Palm Street
San Luis Obispo, CA 93401
Attn: Shawna Scott, Senior Planner

Prepared by

Robert G. Carr
CA. Landscape Architect 3473

SWCA Environmental Consultants
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401
(805) 543-7095
www.swca.com

SWCA Project No. 27640.28

December 2021

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1 INTRODUCTION

This study assesses visual impacts that may result from the proposed expansion of the French Hospital Medical Center located at 1911 Johnson Avenue, San Luis Obispo, California (refer to Figure 1). The purpose of this analysis is to determine if a change in the visual environment would occur, whether that change would be viewed as a positive or negative one, and the degree of any change relative to the existing setting. If the project has the potential to cause visual impacts, this study specifically defines those impacts.

This analysis focuses on the potential for the proposed project components to result in impacts on visual resources as seen from public locations and roadways. The baseline visual condition is analyzed, visual resources are identified, and a baseline scenic character is established. The analysis methodology evaluates the aggregate effect that the project may have on the overall visual character of the project site and surrounding landscape. If a change in character is identified, it is compared to viewers' expected sensitivity, and is reviewed for consistency with applicable City of San Luis Obispo (City) planning policies and regulations. Levels of impact are determined consistent with California Environmental Quality Act (CEQA) definitions and guidelines.

2 PROJECT DESCRIPTION

Along with relevant plans, reports, correspondence and other data, this visual analysis is based on the preliminary project description provided by the City of San Luis Obispo (August 2, 2021) as summarized below.

The proposed project consists of the phased expansion of French Hospital Medical Center campus including the construction of a two-level, 234-space parking structure with 5,800 square feet of future lab and storage space and a 2,000-square-foot helistop (Phase 1), and a four-story 89,775-square-foot patient tower, a 1,800-square-foot generator yard, and various related site improvements (Phase 2). The project includes the reconfiguration of surface parking, addition of bicycle parking spaces, realignment of an existing bicycle path and associated open space easement, tree removal and trimming on- and off-site, landscaping, and exterior lighting. Project construction would result in approximately 3,260 cubic yards of cut/export material and would require 2,370 cubic yards of imported material. Project construction is anticipated to last approximately 3 years.

<u>Project Background</u>

In 1993, the City of San Luis Obispo (City) approved the French Hospital Master Plan (Master Plan) that outlined the ultimate build-out of the Project Site and included facilities to provide a range of medical services and the mitigated negative declaration prepared for the Master Plan (City record number ER 109-93). The plan included the future construction of four buildings in addition to the existing hospital building built in 1972, and a substantial expansion of the parking area on-site. These four buildings included a 35,000-square-foot Copeland Pavilion, a 6,000-square-foot hospital office, a 30,000-square-foot medical arts building, and a 6,000-square-foot hospital expansion building. Build-out of the 1993 Master Plan would result in a total of approximately 231,300 square feet of hospital uses on-site. Proposed additional parking associated with these new facilities included the addition of 365 parking spaces, which would result in a total of 749 parking spaces on-site.

On June 1, 2004, the French Hospital Medical Center was acquired by Dignity Health Corporation. On March 15, 2013, the City approved Administrative Use Permit A 140-11 which amended the 1993 Master Plan to modify the configuration and placement of proposed buildings at French Hospital. The Copeland

Pavilion was redesigned to be 18,000 square feet in size, and the proposed square footage for the proposed hospital expansion building increased to 17,550 square feet and a new 5,450-square-foot emergency room (ER) expansion building was added to the Master Plan. The overall gross area of proposed facilities was less than what was previously analyzed and approved, and the associated transportation and other environmental impacts associated with the amended Master Plan remained generally consistent with what was evaluated under the 2013 Master Plan; therefore, the 2013 Master Plan Amendment was found to be consistent with the analysis of the mitigated negative declaration prepared for the 1993 Master Plan. In 2014 the Master Plan was amended again to accommodate a slightly larger medical arts building square footage, which was also found to be consistent with the analysis of the mitigated negative declaration prepared for the 1993 Master Plan.

In 2016, the City approved another amendment to the French Hospital Master Plan to accommodate a 58,600-square-foot four-story medical arts building and parking garage. While a portion of the approved square footage for new uses in the Master Plan have been constructed with the addition of the Copeland Education Pavilion, the remaining unused approved square footage of the Master Plan was reconfigured to accommodate most of these new uses, resulting in an increase of gross floor area from the approved Master Plan from 231,300 square feet to 248,661 square feet and a reduction in required parking spaces from 749 to 700. The 2016 Master Plan Amendment was found to be consistent with the analysis of the mitigated negative declaration prepared for the 1993 Master Plan. The four-story medical office building included in the 2016 Master Plan Amendment was not constructed and is no longer being proposed as a part of the Master Plan moving forward.

Ever since its acquisition by Dignity Health in 2004, patient care departments within the hospital facilities have been continuously upgraded. Over the past several years of detailed study, planning, and projections of community healthcare needs over the next 50 years, Dignity Health has determined that all remaining approved square footage of the Master Plan should be consolidated into a single 89,775-square-foot patient tower and new parking deck with a helistop. The proposed helistop would serve the recently completed Emergency Department expansion project as well as the proposed Neonatal Intensive Care Unit (NICU).

Project Components

Patient Tower

The proposed 89,775-square-foot Patient Tower building would consist of a four-story building adjacent to the existing Copeland Health Education Building (refer to Figures 4 and 5).

The four-story Patient Tower building height is proposed to be 68 feet above average natural grade. Stair/Elevator penthouses and mechanical screening extend an additional 10 feet as allowed by the Zoning Regulations. The previous master plan approval included a variance of up to 62 feet high for a new medical office building (where the current parking structure is proposed to be located) that was never constructed. The proposed Patient Tower is sited at the rear of the site and substantially set back from adjacent streets. Although the proposed Patient Tower will be taller than the previously approved medical office building it will be constructed on the lower portion of the site to the west of the hospital. Accordingly, the top parapet of the proposed Patient Tower (353.75 feet) will be at a lower elevation than the height of the existing Pacific Medical Plaza building (354.80 feet).

The patient tower building would consist of primarily a stucco color with slate grey horizontal rib accent panels, similar to the adjacent Copeland Health Education Building.

The patient tower building would include roof-mounted heating ventilation and air conditioning equipment, which would be visually screened from view with horizontal metal panels similar to the

Copeland Health Education Building. A new transformer would also be installed at the ground level southeast of the patient tower to provide electricity to the building and would be screened by proposed landscape plantings.

Parking Deck and Helistop

The proposed parking deck would be constructed over an existing surface parking area located on the western side of the project site, adjacent to the existing railroad tracks (refer to Figure 6). The parking deck would be a cast-in-place structure approximately 19 feet in height and would be painted with exterior colors to match those of the existing Copeland Health Education Building and proposed patient tower. The ground level area of the parking deck would include surface level parking, an electrical equipment storage area, a shell space for the future development of a hospital lab, and a pedestrian plaza. The second level of the parking deck would include a parking area and a helistop, which would be located on a platform approximately 8 feet higher than the upper level of the parking deck connected with a staircase and ramps that would provide access to the upper parking deck level. Parking spaces on the ground level of the parking deck would be reconfigured to align with the design and access ramps of the proposed parking deck.

The structure would be equipped with interior and exterior lighting and required helistop lighting. Helistop lighting would operate only during nighttime landings and would be controlled and used by pilots to provide a visual guide.

The proposed helistop would serve the existing Emergency Department and the proposed Neonatal Intensive Care Unit on-site. Helicopters would not be permanently parked on-site, rather, they would fly in, pick-up or drop-off patients, then fly out on an as-needed basis. Based on San Luis Obispo County Emergency Medical Service records, the anticipated flight frequency is approximately four helicopter trips per month. Service records show that only approximately 25 percent of those trips (one trip per month) would occur during nighttime hours.

Generator Yard

Generators would supply backup power to the proposed patient tower and other proposed facilities if electrical power is interrupted. The proposed generator yard would be enclosed by a 10-foot-tall split face block wall facing parking areas and chain link fence along open space areas. The yard would include a trash receptacle area enclosed by a 6-foot-tall split face block wall. The generator yard would be located east of the proposed parking deck and would be designed to match and/or complement the design of the parking deck.

Open Space Easement Modification

The project site currently supports an Open Space Easement for a public bike path which was approved by the City in conjunction with the 2013 Master Plan amendment. The proposed project includes a modification to the existing Open Space Easement to remove 0.11 acres of easement from the south side of Parcel 2 and add 0.17 acres of Open Space Easement to the north side of Parcel 2. This would allow for the construction of the proposed parking deck, generator yard, and additional surface parking spaces.

Tree Removal, Trimming, and Landscape Planting

The project would require removal of existing landscape trees currently located within the proposed footprint of the patient tower, parking deck, generator yard, and realigned site driveway. In addition, a number of tall trees within the immediate project vicinity would need to be pruned to meet Federal Aviation Association (FAA) standards to accommodate the flightpath of helicopters using the proposed helistop. The project proposes to remove and prune trees both on the project site and on adjacent off-site parcels. Overall, the project would result in the removal of ~~119~~ 113 trees, and the pruning of ~~17~~ 8 trees (refer to Figure 9). The trees requiring pruning are part of the existing eucalyptus grove southwest of the project. These trees to be pruned range from approximately 100 feet to 130 feet in height and would need to be reduced a minimum of 25 to 35 feet each to meet FAA safety requirements.

Alternatively, if off-site tree pruning is determined to be infeasible, two 125-foot-tall obstruction light poles are proposed to be located southeast of the parking deck and helistop. If the obstruction light poles are constructed, the project would result in the removal of 107 trees, and the pruning of 8 trees (refer to Figure 10). These trees requiring pruning are also part of the existing eucalyptus grove west of the project. These trees range from approximately 100 feet to 130 feet in height and would need to be reduced a minimum of 25 to 35 feet each to meet FAA safety requirements.

The project would be subject to the City's compensatory tree planting requirements detailed within the City Municipal Code which requires planting of a minimum of one new tree for each tree authorized to be removed when planted on the same property, or two new trees for each tree authorized to be removed when planted off-site. The project includes a landscaping planting plan that includes screening trees, parking lot trees, pedestrian plaza trees, shrubs, vines, perennials, and groundcover plantings (refer to Figure 7).

Site Lighting

The project would include installation of exterior lighting in and around entrances to the patient tower, parking deck, and generator yard, and along main walkways. Light poles in the vicinity of parking areas would be no more than 20 feet tall. Other lighting on-site would include, but not be limited to, bollard pathway lighting around the drop off entry area in front of the main entrances to the Copeland Health Education Pavilion and patient tower wall-mounted lights along the exterior of the patient tower to illuminate the exterior dining area and walkways around the building, LED canopy lights to illuminate the second floor garden of the patient tower, and in-ground LED lights to illuminate building signage.

Helistop Lighting

The helistop structure would include FAA-required lighting. Helistop lighting refers to all sources of light associated with the design and function of the helistop. Helistop lighting would operate only during nighttime landings and would be controlled and used by pilots to provide a visual guide. Pilot controlled approach and delineation lighting would normally be on only during landings and takeoffs.

Based on San Luis Obispo County Emergency Medical Service records, the anticipated projected flight frequency would be approximately four helicopter trips per month. Service records show that only approximately 25 percent of those trips (one trip per month) would occur during the nighttime hours. Preliminary estimates indicate that the amount of time the helipad would be operational for landing, patient care and takeoff would typically range from twenty minutes to one hour, although these times could vary significantly depending upon patient medical or logistic circumstances.

Photometric data provided by the project applicant indicates that at eye level standing on the ground at the property line surrounding the hospital facility, there would be zero footcandles and light trespass, as all light would be directed horizontal and upward from the light fixtures. These fixtures would have cutoff fixtures and would not project light below the horizontal plane. Only viewers at or above the level of the helistop and tower would be able to see the light. The closest neighbors at or above this level would be past Johnson street, over 850 feet away. FEC's engineers state the light dissipates and is unmeasurable past a distance of 320 feet. Preliminary discussions regarding lighting recommend the need for the helistop as follows:

- A helistop beacon on the parking elevator penthouse. The beacon would be green-white-yellow LEDs flashing in sequence.

- Green perimeter lights outlining the Touch Down and Lift-Off (TLOF) area. Perimeter lights would also serve to also outline the landing pad for medical crews moving gurneys. Helipad lights are not meant to illuminate the helipad or broadcast light. These lights by code are designed to go mostly up and not out so that pilots approaching from above can see the lights. If you are above the lights or on the same plane you can see the lights from a distance. Below the elevation of the lights, the point-source of the fixtures would typically not be visible. Photometric data provided by the project applicant indicates that at eye level standing on the ground at the property line of the hospital facility, there would be zero footcandles and light trespass as all light would be directed horizontal and upward from the light fixtures. These fixtures would have a cutoff fixtures and would not project light below the horizontal plane (Refer to Figure 14). Only viewers at or above the level of the helistop and tower would be able to see the light. The closest neighbors at or above this level would be past Johnson street, over 850 feet away. FEC's engineers state the light dissipates and is unmeasurable past 320 feet.

- Red obstruction lights on certain objects (parking lot elevator tower, bed tower corners, etc.).

- A lighted wind cone to provide pilots with wind direction and speed information.

- Gurney ramp footlights (white) that would be separately switched so that they are not activated until after a helicopter lands and are deactivated prior to departure. Footlights would light the ramp surface, however once the aircraft is on the heliport, the lights could be turned off until the patient is ready to be transported to the helicopter.

- One beacon and multiple obstruction lights on the Patient Tower to designate the building and elevator tower corners. These lights are recommended to be on from dusk to dawn, controlled via photocell. These lights are not omni-directional, and are designed to be visible from above.

Helicopter Lights

In addition to the helistop lighting described above, the helicopters themselves would have lighting. In addition to standard aviation lights, the helicopters would have white landing lights that would illuminate the heliport as it is approaching, similar to the landing lights that airplanes use when they are approaching a runway at night. Specifically , each helicopter would be required to have:

- Navigation lights: Red on the left side, green on the right side and white on the tail
- Anti-collision light: Red/white
- Landing light: White on front of the aircraft to light the landing area.

When approaching the helistop it is expected that the helicopter landing lights may be turned on at distances of more than a mile away from the helistop. Information provided by the project applicant indicates that the total duration that helicopter lighting would be in use would be approximately 10 minutes per trip (5 minutes per landing and 5 minutes per takeoff). County Emergency Services data shows that approximately one nighttime helicopter trip per month is expected.

Figure 15 shows the approved flight paths and the relative heights at which helicopters would be along the paths. The project applicant also provided the following explanation of the flight path data:

The numbers shown along the flightpath (varying from 470'-300', height above sea level) are the elevations of the approach surface. The notes in red show the approximate height above grade based on *the contour lines on the City of SLO Parcel Viewer map. The helicopter would approach/depart at or above these heights.*

Additional information provided by the project applicant regarding how much light would be cast on the ground along the flight path approaching the helistop is as follows:

Airbus helicopters provide information on their helicopter landing and search lights combined light intensity: 300 k Candela. They calculated that at 200 feet, the lux value at the ground would be 80 Lux which is similar to an office building hallway illumination. It would be unusual for the pilot to use both landing and search light during a typical landing(which is expected to last approximately 10 minutes total). Pilots may also elect to use night-vision goggles during landings in relatively dark environments in which case neither landing or search lights would be used. This is a pilot decision.

Aviation Obstruction Lighting Poles

If off-site tree pruning is determined to be infeasible, two 125-foot-tall Obstruction Light Poles are proposed to be located southeast of the parking deck and helistop (refer to Figure 8). The poles would be 25-inches diameter at the base, tapering to 7-inches diameter at the tops. The poles would be engineered steel high-mast light poles with a galvanized finish. These light poles would include red LED lights and infrared emitters to be connected to the pilot-controlled lighting system and would be turned on only in the event of a nighttime helicopter landing or takeoff.

Figure 1. Project Vicinity

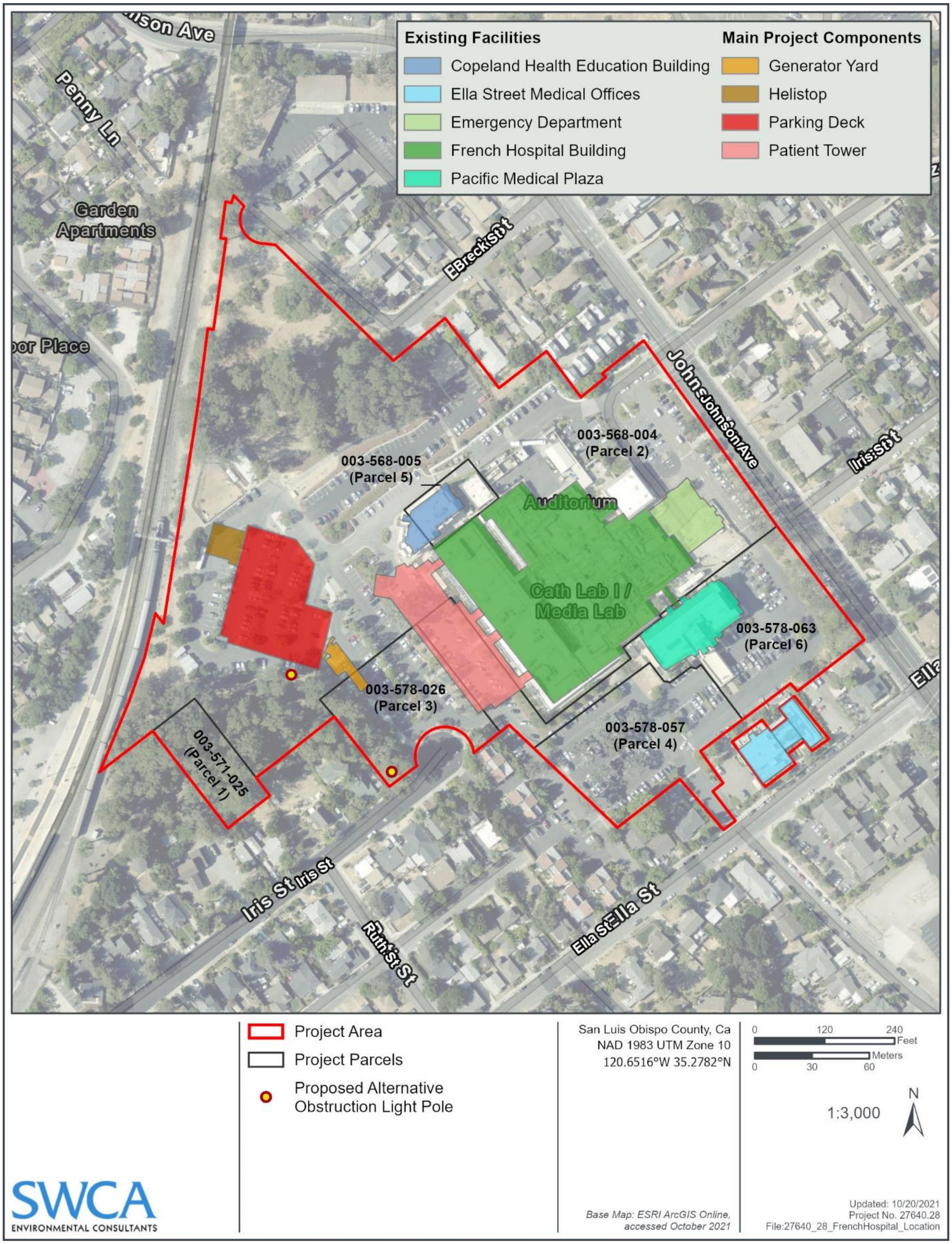
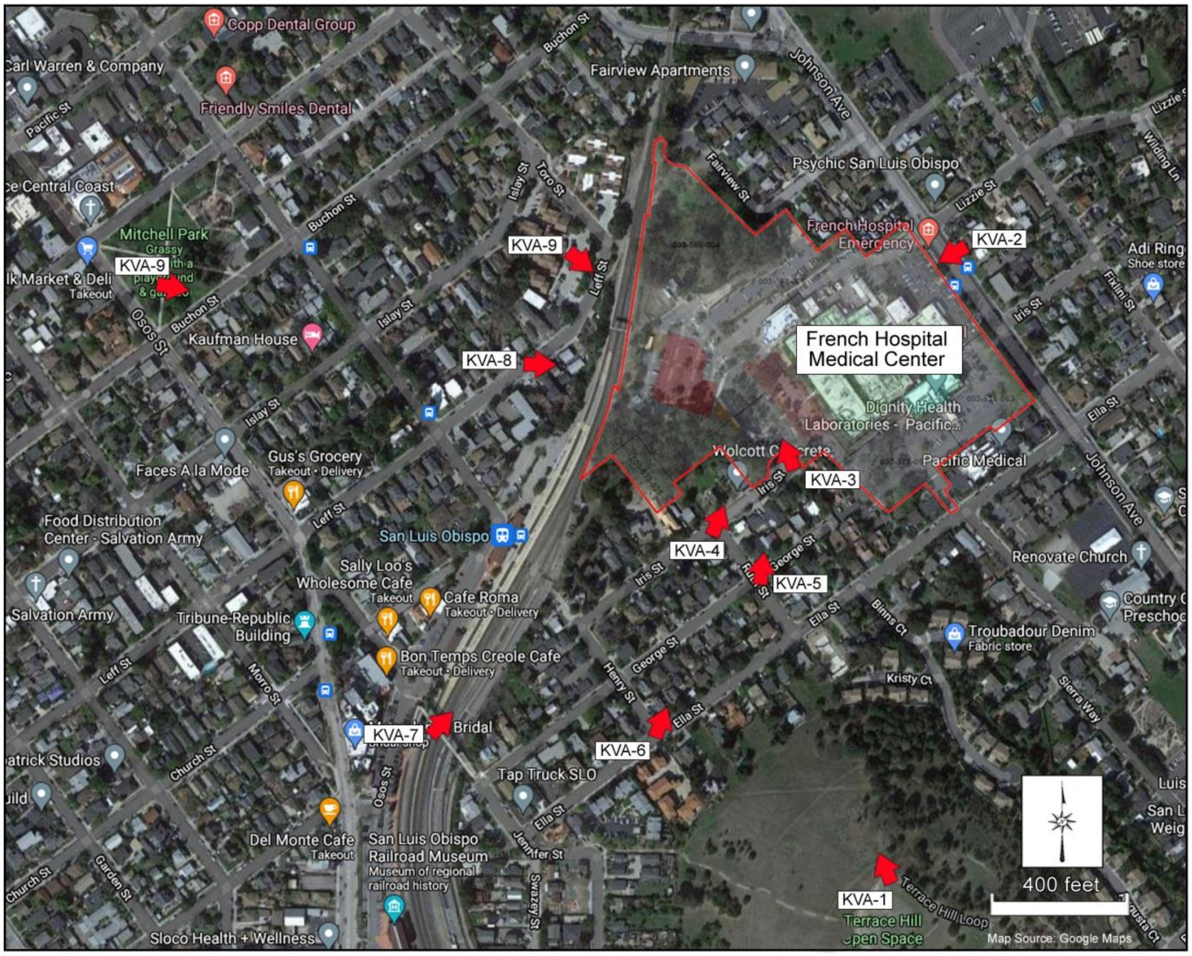


Figure 2. Project Layout



KEY: Location and direction of Key Viewing Area (KVA) and photo-simulation.

Figure 3. Key Viewing Area locations.

Figure 4. Patient Tower Elevations

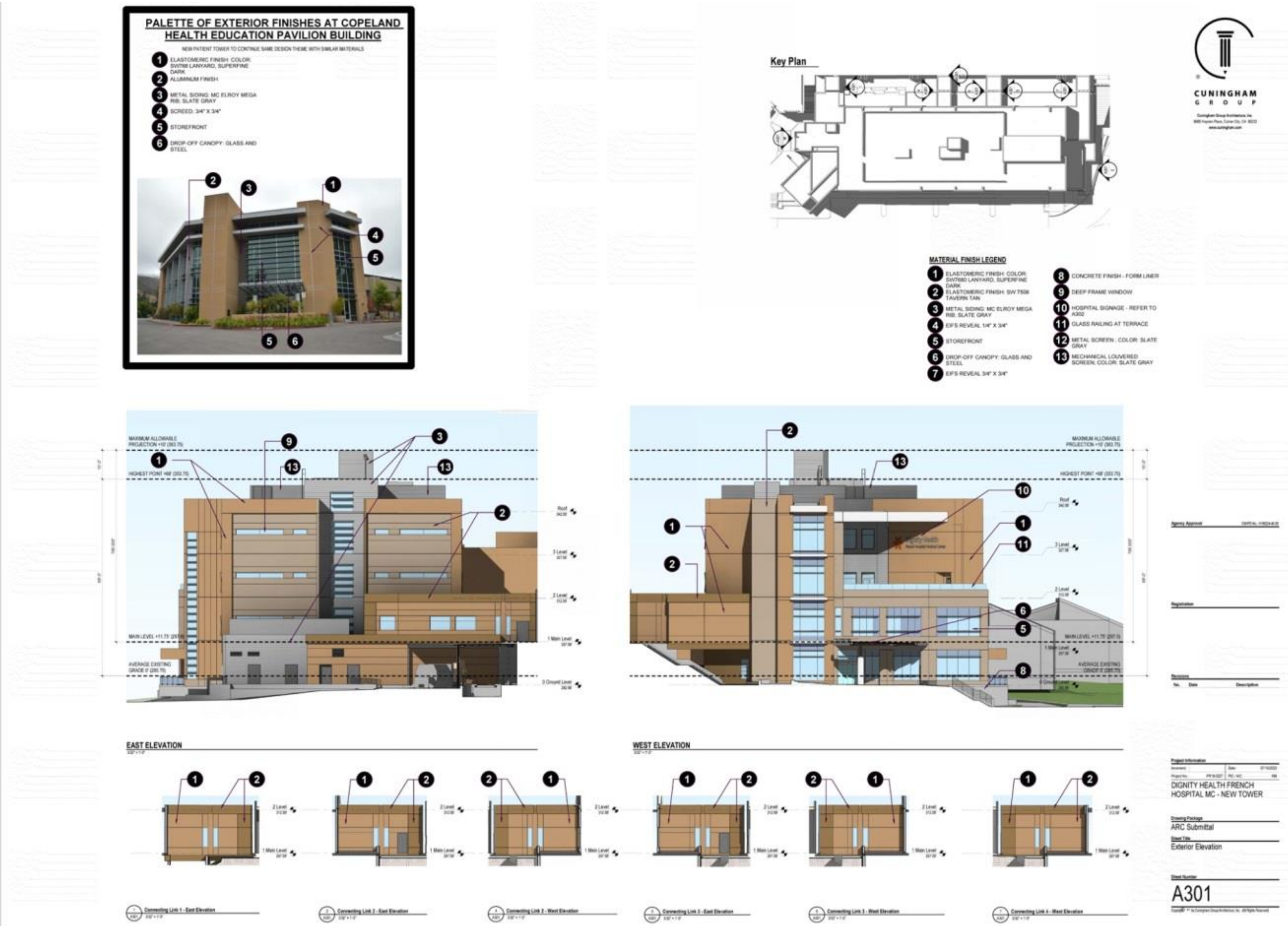


Figure 5. Patient Tower Elevations

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Figure 6. Parking Deck/ Helistop Elevations

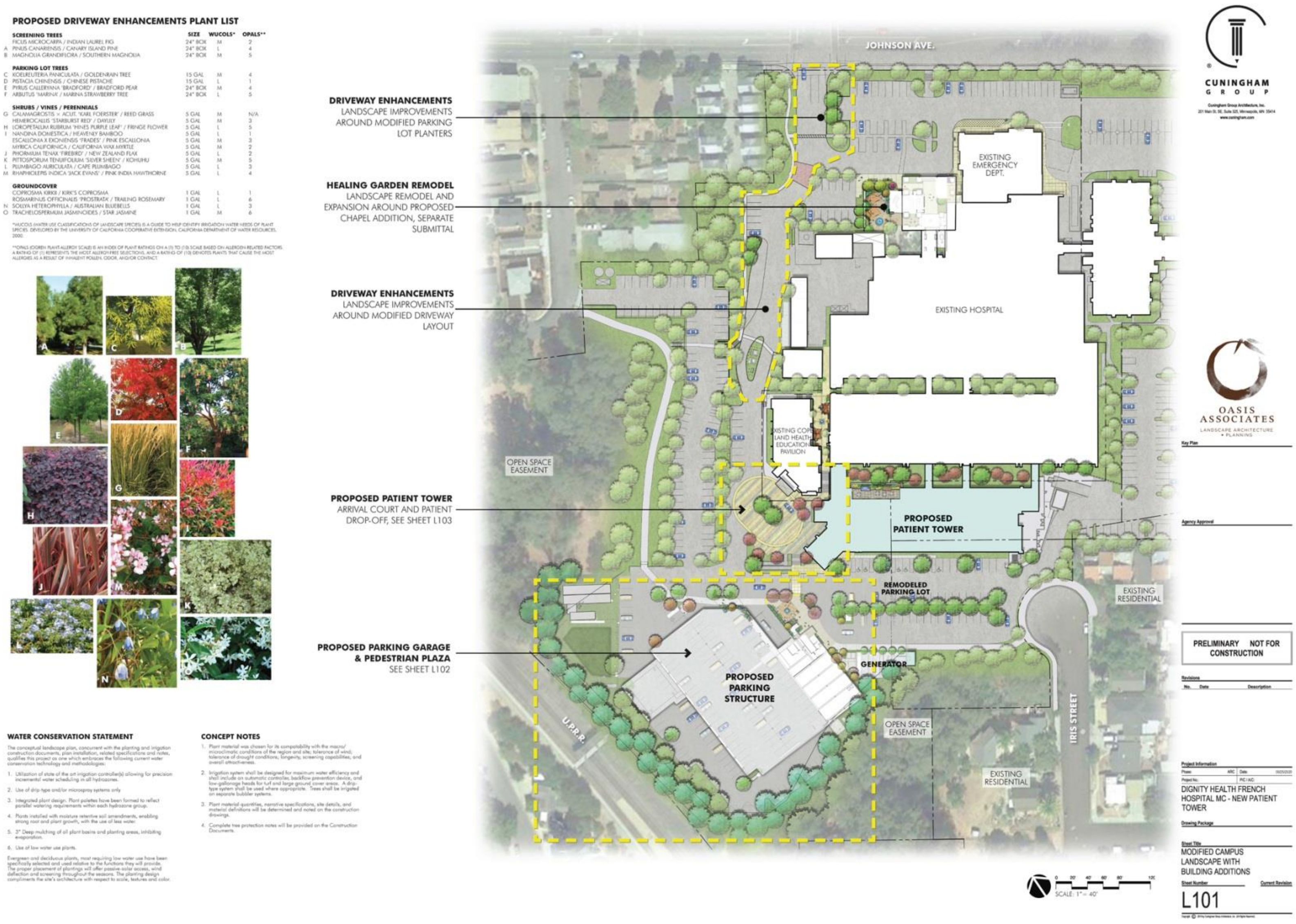


Figure 7. Preliminary Landscape Plan

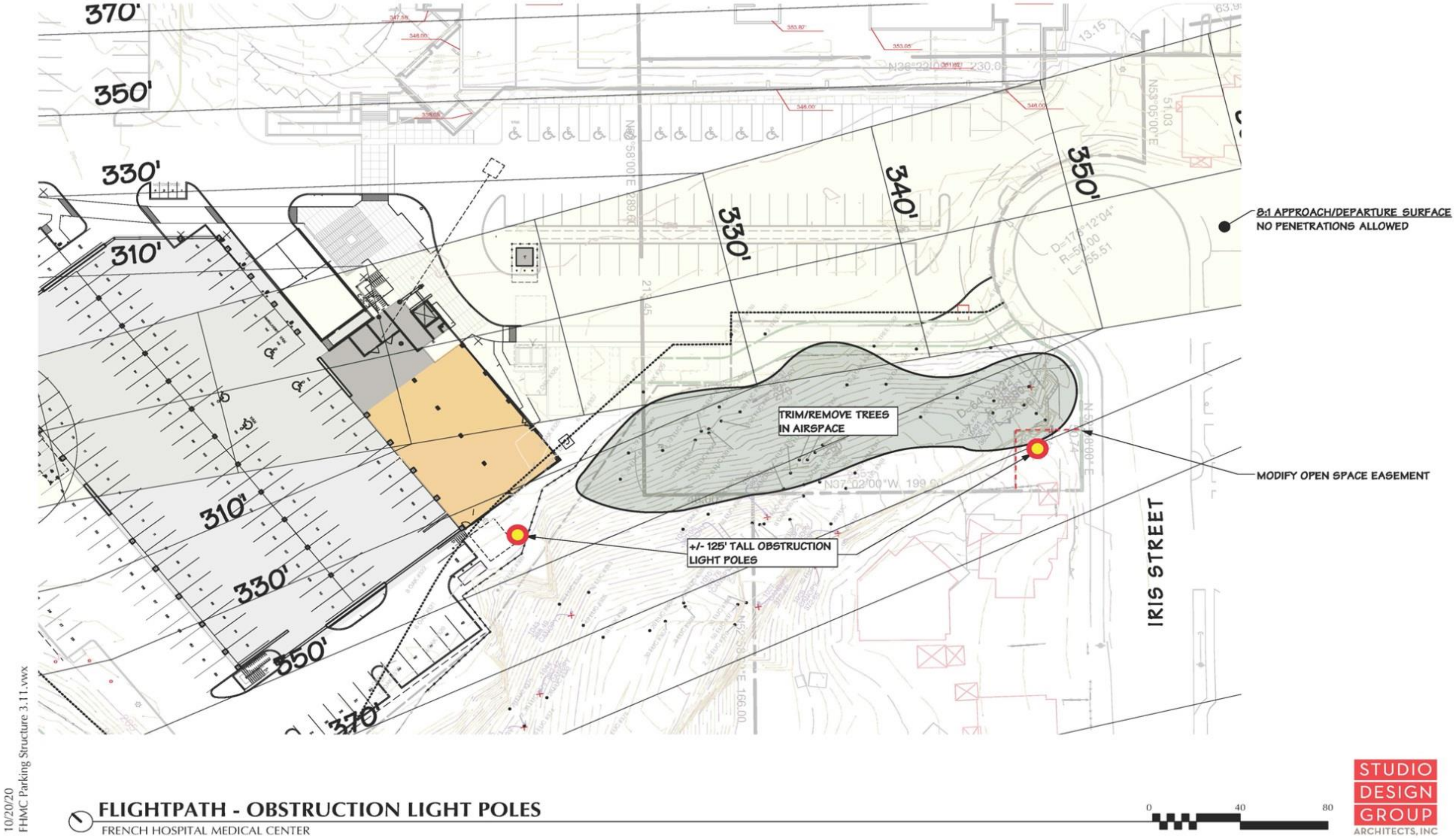
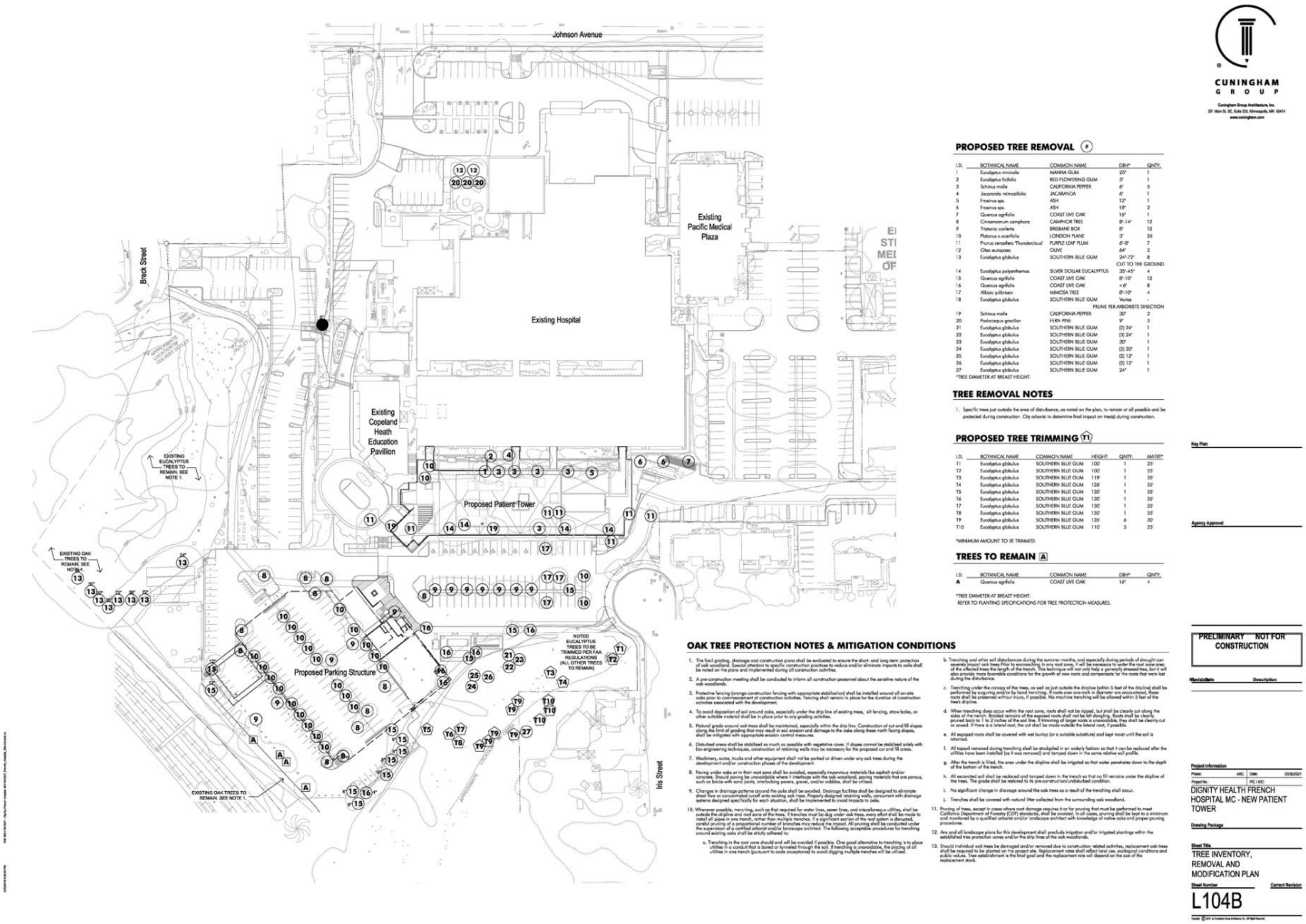


Figure 8. Obstruction Light Poles (Optional)



PROPOSED TREE REMOVAL

I.D.	BOTANICAL NAME	COMMON NAME	DBH*	QNTY.
1	Eucalyptus viminalis	MANNA GUM	25"	1
2	Eucalyptus ficifolia	RED FLOWERING GUM	5"	1
3	Schinus molle	CALIFORNIA PEPPER	6"	5
4	Jacaranda mimosifolia	JACARANDA	6"	1
5	Fraxinus sps.	ASH	12"	1
6	Fraxinus sps.	ASH	18"	2
7	Quercus agrifolia	COAST LIVE OAK	16"	1
8	Cinnamomum camphora	CAMPHOR TREE	8"-14"	12
9	Tristania conferta	BRISBANE BOX	8"	12
10	Platanus x acerifolia	LONDON PLANE	3"	26
11	Prunus cerasifera 'Thundercloud'	PURPLE LEAF PLUM	6"-8"	7
12	Olea europaea	OLIVE	64"	2
13	Eucalyptus globulus	SOUTHERN BLUE GUM	24"-72"	8
			CUT TO THE GROUND	
14	Eucalyptus polyanthemos	SILVER DOLLAR EUCALYPTUS	35"-45"	4
15	Quercus agrifolia	COAST LIVE OAK	8"-10"	12
16	Quercus agrifolia	COAST LIVE OAK	<6"	8
17	Albizia julibrissin	MIMOSA TREE	8"-10"	4
18	Eucalyptus globulus	SOUTHERN BLUE GUM	Varies	-
		PRUNE PER ARBORISTS DIRECTION		
19	Schinus molle	CALIFORNIA PEPPER	30"	2
20	Podocarpus gracilior	FERN PINE	9"	3
21	Eucalyptus globulus	SOUTHERN BLUE GUM	(2) 24"	1
22	Eucalyptus globulus	SOUTHERN BLUE GUM	(3) 24"	1
23	Eucalyptus globulus	SOUTHERN BLUE GUM	30"	1
24	Eucalyptus globulus	SOUTHERN BLUE GUM	(5) 30"	1
25	Eucalyptus globulus	SOUTHERN BLUE GUM	(2) 12"	1
26	Eucalyptus globulus	SOUTHERN BLUE GUM	(2) 12"	1
27	Eucalyptus globulus	SOUTHERN BLUE GUM	24"	1

*TREE DIAMETER AT BREAST HEIGHT.

TREE REMOVAL NOTES

1. Specific trees just outside the area of disturbance, as noted on the plan, to remain at all possible and be protected during construction. City arborist to determine final impact on tree(s) during construction.

PROPOSED TREE TRIMMING

I.D.	BOTANICAL NAME	COMMON NAME	HEIGHT	QNTY.	MATBT*
T1	Eucalyptus globulus	SOUTHERN BLUE GUM	100'	1	25'
T2	Eucalyptus globulus	SOUTHERN BLUE GUM	100'	1	25'
T3	Eucalyptus globulus	SOUTHERN BLUE GUM	119'	1	35'
T4	Eucalyptus globulus	SOUTHERN BLUE GUM	128'	1	35'
T5	Eucalyptus globulus	SOUTHERN BLUE GUM	130'	1	35'
T6	Eucalyptus globulus	SOUTHERN BLUE GUM	130'	1	35'
T7	Eucalyptus globulus	SOUTHERN BLUE GUM	130'	1	35'
T8	Eucalyptus globulus	SOUTHERN BLUE GUM	130'	1	35'
T9	Eucalyptus globulus	SOUTHERN BLUE GUM	135'	6	30'
T10	Eucalyptus globulus	SOUTHERN BLUE GUM	110'	3	25'

*MINIMUM AMOUNT TO BE TRIMMED.

TREES TO REMAIN

I.D.	BOTANICAL NAME	COMMON NAME	DBH*	QNTY.
A	Quercus agrifolia	COAST LIVE OAK	16"	4

*TREE DIAMETER AT BREAST HEIGHT.
REFER TO PLANTING SPECIFICATIONS FOR TREE PROTECTION MEASURES.

Figure 9. Tree Removal Plan – Without Obstruction Light Poles

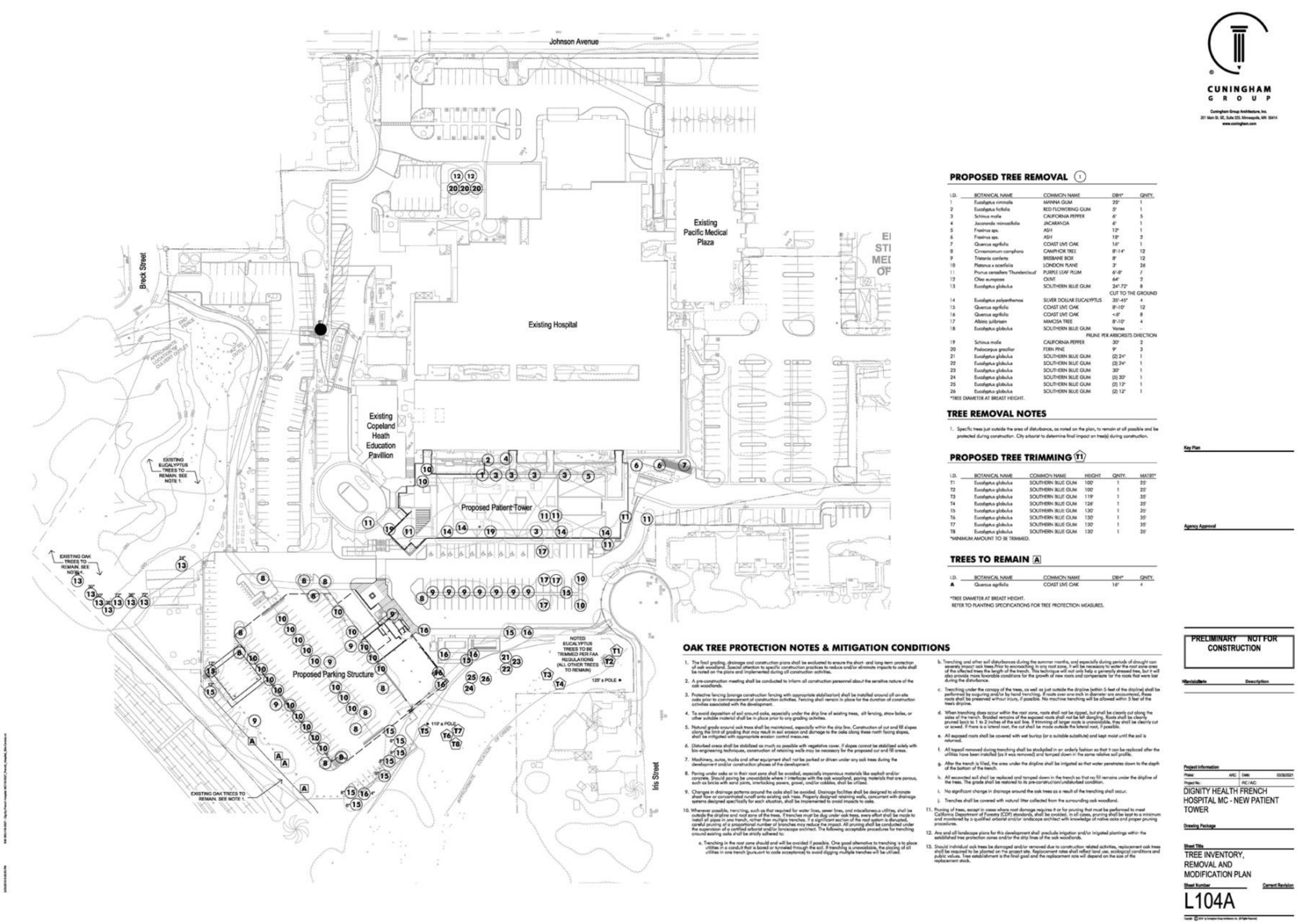


Figure 10. Tree Removal Plan – With Obstruction Light Poles

Figure 11 - Project Renderings

3 PROJECT SETTING

3.1 Regional and Community Context

The French Hospital Medical Center is located in the northeastern portion of the City of San Luis Obispo, just below the foothills of the Santa Lucia Mountains. The City was founded on predominantly undulating topography, with low hillsides rising from drainages and creeks. The overall landform of the City and its surroundings is generally defined by the convergence of the Chorro and the Los Osos Valleys. A series of low, visually distinct mountain peaks, such as Bishop Peak and Cerro San Luis, separate the two valleys and provide a scenic focal point for much of the City. The Santa Lucia Mountains and Irish Hills are the visual limits of this region and are considered the scenic backdrops for much of the City. Development in the region occurs predominantly at the lesser elevations and on the low hills.

The overall development pattern in the project area is an integrated mix of residential single-family, multi-family, commercial and institutional uses. The institutional development is in the form of medical facilities, educational facilities, public health services and churches. This variety of uses results in an established suburban visual character surrounding the project. No single architectural theme is evident in the surrounding area. Existing development in the area is the product of decades of different building styles, zoning policies and aesthetic trends.

The overall topography of the surrounding area tends to slope down from the eastern foothills toward the west. Terrace Hill Open Space, approximately 0.3 mile south of the project rises to an elevation of approximately 500 feet above sea level. Although buildings and development are seen throughout the area, mature vegetation is well-established into the neighborhoods and along the surrounding streets, contributing to a defining aesthetic character and visual continuity. This mature vegetation in the surrounding neighborhoods also tends to limit or filter outward long distance views from many viewing locations. Large stands of eucalyptus trees reaching heights of approximately 130 feet are seen immediately adjacent to the northwest and southwest sides of the project site.

3.2 Project Site

As described in the project description, the overall French Hospital Medical Center campus is approximately 18 acres in area. Existing development on-site consists of the one-story French Hospital building, the three-story Copeland Health Education Building, the approximately 58-foot tall three-story Pacific Medical Plaza to the south of the hospital, and the Ella Street medical condominiums located further to the south. A 1,800 square-foot modular building that serves as a business office is located on the north side of the hospital and surface parking lots surround the buildings along the perimeter of the campus. The topography of the site is nearly flat around the existing buildings on-site, with a steep slope bank between Johnson Avenue and the front parking lot, and another steep slope bank between the rear parking areas and the undeveloped area on the west side of the site.

Landscaping throughout the project site includes a variety of ornamental and native species. Mature trees are seen in the parking lots, adjacent to buildings, and along the site perimeter. Shrubs and ground covers are used throughout the site. The landscaping provides aesthetic value to the site as well as a partial visual screening of the development from the surrounding area. This existing landscaping also provides a visual continuity with the vegetated character of the adjacent neighborhoods.

3.3 Regulatory Setting

In addition to their regulatory application, the following policies, ordinances and goals serve as indicators of potential sensitivity to changes in the visual environment for purposes of assessing visual impacts associated with implementation of the project.

3.4 City of San Luis Obispo

3.4.1 *San Luis Obispo General Plan*

3.4.1.1 CHAPTER 1 - LAND USE ELEMENT

3.4.1.1.1 SECTION 2. CONSERVATION AND DEVELOPMENT OF RESIDENTIAL NEIGHBORHOODS

Policy 2.3.2. Separation and Buffering

The City shall seek to protect Residential areas from incompatible and detrimental non-residential activities and facilities.

2.3.3. Residential Next to Non-residential

In designing development at the boundary between residential and non-residential uses, the City shall make protection of a residential atmosphere the first priority.

3.4.1.2 CONSERVATION AND OPEN SPACE ELEMENT - CHAPTER 6

3.4.1.2.1 9.0. Viewsheds.

Policies

9.1.2. Urban development.

The City will implement the following principle and will encourage other agencies with jurisdiction to do so:

Urban development should reflect its architectural context. This does not necessarily prescribe a specific style, but requires deliberate design choices that acknowledge human scale, natural site features, and neighboring urban development, and that are compatible with historical and architectural resources.

9.1.5. View protection in new development.

The City will include in all environmental review and carefully consider effects of new development, streets and road construction on views and visual quality by applying the Community Design Guidelines, height restrictions, hillside standards, Historical Preservation Program Guidelines and the California Environmental Quality Act and Guidelines.

9.2. Policies

9.2.1. Views to and from public places, including scenic roadways.

The City will preserve and improve views of important scenic resources from public places, and encourage other agencies with jurisdiction to do so. Public places include parks, plazas, the grounds of civic buildings, streets and roads, and publicly accessible open space. In particular, the route segments shown in Figure 11 (COSE) are designated as scenic roadways.

A. Development projects shall not wall off scenic roadways and block views.

B. Utilities, traffic signals, and public and private signs and lights shall not intrude on or clutter views, consistent with safety needs.

C. Where important vistas of distant landscape features occur along streets, street trees shall be clustered to facilitate viewing of the distant features.

D. Development projects, including signs, in the viewshed of a scenic roadway shall be considered “sensitive” and require architectural review.

9.2.2. Views to and from private development.

Projects should incorporate as amenities views from and within private development sites. Private development designs should cause the least view blockage for neighboring property that allows project objectives to be met.

9.2.3. Outdoor lighting.

Outdoor lighting shall avoid: operating at unnecessary locations, levels, and times; spillage to areas not needing or wanting illumination; glare (intense line-of-site contrast); and frequencies (colors) that interfere with astronomical viewing.

9.3. Programs

The City shall do the following to protect and enhance views, and will encourage others to do so, as appropriate:

9.3.6. View blockage along scenic highways.

Determine that view blockage along scenic roadways is a significant impact.

9.3.9. Undergrounding utilities.

Place existing overhead utilities underground, with highest priority for scenic roadways, entries to the city, and historical districts.

3.4.2 *Zoning Regulations*

3.4.2.1 SECTION 3. COMMERCIAL & INDUSTRIAL DEVELOPMENT POLICIES

3.4.2.1.1 Chapter 17.24

OFFICE (O) ZONE – Development Standards

Maximum Building Height - 35 feet.

[Note: Although the Land Use Element defines the maximum building height standard as 35 feet for the Office (O) Zoning designation, the approved 2016 French Hospital Master Plan Amendment allows for a maximum 62 feet building height for the project site]

3.4.2.2 17.70.100 LIGHTING AND NIGHT SKY PRESERVATION

B. Application Requirements.

1. Whenever a person is required to obtain a building permit, electrical permit for outdoor lighting or signage, and/or approval of any development project, the applicant shall, as a part of the application, submit sufficient information to enable the Community Development Department to determine whether the proposed lighting complies with the provisions of this Section. The application shall include the following:

a. A site plan indicating the proposed location of all outdoor lighting fixtures that are not exempted by subsection F of this Section.

b. A description of each illuminating device, fixture, lamp, support, and shield. This description may include, but is not limited to, manufacturer's catalog cuts and drawings (including sections where required), lamp types, and lumen outputs.

c. Photometric plans depicting the location of all light poles and building-mounted lighting fixtures and a maximum 10-foot by 10-foot grid of both the initial and maintained lighting levels on the site, and including impact on adjacent properties.

C. Operational Standards.

1. Outdoor lighting shall be designed, installed, and maintained to prevent nighttime sky light pollution, preserve and enhance visibility of stars, and use energy efficiently by lighting only those areas or objects necessary for safety and security.

2. All outdoor lighting shall conform to the following regulations:

a. Orientation. Outdoor lighting shall be directed downward and away from adjacent properties and public rights-of-way.

b. Light Trespass in Residential Zones. No lighting on private property shall produce an illumination level greater than two maintained horizontal foot-candles at grade on any property within a residential zone except on the site of the light source.

c. Light Intensity on Residential Sites. The maximum light intensity on a residential site shall not exceed a maintained value of 10 foot-candles, when measured at finished grade.

Light Intensity on Non-residential Sites.

(1) General. The maximum light intensity on a nonresidential site, except auto sales lots and sports fields, shall not exceed a maintained value of 10 foot-candles, when measured at finished grade.

F. Exemptions. The following lighting fixtures are exempt from the requirements of this section:

3.Emergency Aviation Lighting. Emergency lighting operated by public agencies or for the purpose of aviation safety.

3.4.3 *Community Design Guidelines – 2010*

3.4.3.1 CHAPTER 1 – INTRODUCTION AND APPLICABILITY

3.4.3.1.1 1.4 - Goals for Design Quality and Character

3.4.3.1.2 *C. Protect natural resources and integrate the natural environment into building and site planning, where appropriate*.

2. Maintain views of hillsides surrounding the city.

3. Maintain the health of the city's creeks through sensitive structure design and site planning near them.

4. Site planning should protect creek resources while providing visual access, and provide pedestrian access along bank tops where consistent with resource protection.

5. Continue urban forest and streetscape landscaping; protect significant existing trees.

6. Control outdoor lighting to provide necessary security, but not spill onto adjacent properties or impair the view of the night sky.

3.4.3.2 CHAPTER 6 - SITE PLANNING AND OTHER DESIGN DETAILS

3.4.3.2.1 6.1 – Miscellaneous Design Details

C. Lighting: Exterior lighting should be designed to be compatible with the architectural and landscape design of the project while preserving the night sky, and not create a nuisance for adjacent and nearby properties.

1. Outdoor lighting fixtures, including lighting for outdoor recreational facilities, shall be cutoff fixtures designed and installed so that no emitted light will break a horizontal plane passing through the lowest point of the fixture.

2. Outdoor lighting shall be fully shielded, recessed, directed downward and not spill onto adjacent properties and public rights-of-way.

4. To achieve the desired lighting level for parking and pedestrian areas, it is preferred to have more, smaller scale lights instead of fewer, overly tall and large lights. Parking lot lights shall be as low in height as possible, and shall not exceed a height of 21 feet from the approved finished grade to the bottom of the fixture.

7. No lighting on private property shall produce an illumination level greater than two maintained horizontal footcandles at grade on any property within a residential zoning district except on the site of the light source.

9. No permanently installed lighting shall blink, flash, rotate or be of unusually high intensity or brightness.

4 VISUAL IMPACT ANALYSIS

The analysis and subsequent determination of impacts is based primarily on a comparison of the project with the visual character and quality of its setting and surrounding vistas. This study also compares the proposed project to the specific visual resource goals of the City. When the stated goals demonstrate that a high degree of value is placed on the visual environment, the standards to which the project is compared are considered equally high. As a result of the project's location relative to surrounding neighborhoods and public roadways, combined with an awareness of scenic quality as reflected in City planning policy, it is anticipated that community and viewer sensitivity to visual changes are moderately high.

4.1 Visual Assessment Methodology

The findings of this study are based on multiple field visits conducted between August and October, 2021, including review of the entire site as well as the surrounding area. Resource inventories were conducted both on foot and from moving vehicles. Existing visual resources and site conditions were photographed and recorded. Assessment of project elements was based on plans and descriptions provided by the City. Planning documents and previous studies relevant to the surrounding area were referenced to gain an understanding of community aesthetic values.

The project site was viewed from potential viewer group locations in the surrounding area. Representative public viewpoints were identified for further analysis, based on dominance of the site within the view, the relationship to visual resources, duration of views, and expected sensitivity of the viewer group. Of those representative viewpoints, Key Viewing Areas (KVAs) were selected that best illustrate the visual changes that would occur as a result of the project (refer to Figure 3).

Photo-simulations were prepared to quantify potential project visibility and to assess related visual effects. Accuracy of the computer-generated photo-simulations was field verified using the known heights and scale of exiting site and context features in combination with selective story-pole placement. The appearance of structures shown in the photo-simulations is based on preliminary designs provided by the project applicant and as identified in the project description.

Existing trees proposed for removal or pruning were identified in the field and their potential visibility considered from each of the Key Viewing Areas. The removal or pruning of these trees was included in the visual assessment and shown as applicable in project photo-simulations.

4.2 Project Visibility

Because of the project's location surrounded by residential and other uses, the potential for visibility of proposed improvements is high. Determining the extent of the proposed project's visibility is a critical step in analyzing its potential visual impacts. Field studies were conducted throughout the community to identify locations from where the proposed project could be reasonably seen. Emphasis was given to public areas and transportation corridors, both vehicular and pedestrian. As a result of the visual inventory analysis ten Key Viewing Areas (KVAs) were selected to represent to extent of project visibility as well as illustrate the appearance of the proposed project as seen from the surrounding community. Locations of these KVAs are listed below in Table 1 and shown on Figure 3. Photo-simulations from these locations can be seen in Figures 16 through 45.

Table 1 Key Viewing Areas (KVAs)

KVA	View Location	Figure Numbers.
KVA-1	From Terrace Hill Open Space looking north	16, 17, 18
KVA-2	From Johnson Avenue looking west	19, 20, 21
KVA-3	From Iris Street cul-de-sac looking north	22, 23, 24
KVA-4	From Ruth Street near Iris Street looking northeast	25, 26, 27
KVA-5	From Ruth Street near George Street looking northeast	28, 29, 30
KVA-6	From Ella Street near Henry Street looking northeast	31, 32, 33
KVA-7	From the Jennifer Street Bridge looking northeast	34, 35, 36
KVA-8	From Leff Street looking east	35, 38, 39
KVA-9	From Leff Street near Toro Stet looking southeast	40, 41, 42
KVA-10	From Mitchell Park looking east	43, 44, 45

4.3 Thresholds of Significance

The determinations of significance of project impacts are based on applicable policies, regulations, goals, and guidelines defined by CEQA and the City of San Luis Obispo. In addition to comparing the project to relevant policies and standards, the aesthetic resources assessment identifies which specific criteria contribute most to the existing quality of each view, and if change would occur to that criteria as a result of the project. If a change in visual condition is identified, this change is analyzed for its potential effect on the existing scenic character. This analysis is combined with the potential number of viewers, their sensitivities and viewing duration in order to determine the overall level of impacts. Specifically, the project would be considered to have a significant effect on the environment if the effects exceed the significance criteria described below.

City of San Luis Obispo planning documents do not contain specific criteria for determining thresholds of significance regarding aesthetic resources. However, in comparing the project to the CEQA Guideline thresholds listed below, substantial consideration was given to the project's consistency with City policies, ordinances, plans, goals and regulations concerning scenic vistas, scenic roadways, visual character, and night lighting. The local goals, policies and guidelines provide a basis for determining levels of potential impact as well as an indication of aesthetic values and sensitivity to visual change.

4.3.1 *California Environmental Quality Act Guidelines*

The State CEQA Guidelines Section 15382 defines a "significant effect" on the environment to mean a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or *aesthetic* significance."

The State CEQA Guidelines and the County Environmental Checklist state that a project would normally be considered to have a significant impact if it would:

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; or
d. Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

4.4 The Project's Effect on Scenic Vistas

Scenic vistas are generally defined as high-quality views displaying good aesthetic and compositional value that can be seen from public viewpoints. If the project substantially degrades the scenic landscape as viewed from public roads or from other public or recreation areas, this would be considered a potentially significant impact on the scenic vista.

Scenic vistas related to the project that are either identified in City planning policy or otherwise meet the quality definition of a scenic vista typically include views of the Morros, the Santa Lucia foothills, and the Irish Hills. Johnson Avenue adjacent to the French Hospital Medical Center is identified as a City Scenic Roadway having Moderate Scenic Value (General Plan Conservation and Open Space Element Chapter 6).

From viewpoints in the immediate vicinity of the project, scenic vistas of the Morros, Santa Lucia foothills and other visual resources are available although are often filtered or obscured by intervening neighborhood development or landscaping. In general, the existing French Hospital Medical Center and related development do not have a substantial negative effect on views of surrounding scenic resources. Because of its somewhat elevated location, views from Johnson Avenue tend to have the greatest visual access to distant scenic vistas such as the Morros and the Santa Lucia Mountains. In the project vicinity, quality sightline views from Johnson Avenue are often seen above the surrounding community, including the French Hospital Medical Center.

<u>The Patient Tower</u>

The largest component of the project, the proposed Patient Tower, would be 68 feet in height (78 feet including the top parapet, at a top elevation of 353.7 feet above sea level). For comparison, the existing structures adjacent to the proposed Patient Tower site include the one-story hospital building (approximately 16 feet tall, 313.6 feet top elevation), the three-story Copeland Health Education Pavilion (approximately 42 feet tall, approximately 337.2 feet top elevation), and the three-story Pacific Medical Plaza building (approximately 48 feet tall, 354.6 feet top elevation).

Although the proposed Patient Tower building itself would be taller than the surrounding structures, it would be constructed at a lower ground elevation south of the existing hospital building, such that the top of the proposed Patient Tower building would actually be slightly lower than the existing Pacific Medical Plaza building.

In spite of its proposed 68 foot height, views to visual resources and scenic vistas such as the Morros and the Santa Lucia foothills would remain intact and would be largely unaffected by the project as seen from most surrounding viewpoints (refer to Key Viewing Areas (KVAs) 1, 6, 7, 8, 9 and 10). The topography of the surrounding area generally rises up to the northeast. As a result, the elevated views from those areas would tend to reduce the perceived height of the project (as is the case with the existing hospital facility) and would allow for greater visual access beyond the project site and of scenic vistas beyond.

The proposed Patient Tower building would be located on a portion of the site somewhat away from surrounding streets and neighborhoods, which would reduce its potential to block distant views. From a few closer viewpoints the Patient Tower would be seen rising up against the open sky (refer to KVAs 2, 3, 4, and 5). Although the Patient Tower would be a relatively tall building, its siting combined with the general orientation of most of the surrounding public views relative to visual resources, it would not substantially affect views of available scenic vistas such as the Morros or the Santa Lucia foothills, or other quality visual resources.

Parking Deck and Helistop

The proposed parking deck and helistop would rise approximately 19 feet above the existing parking lot. Because of its location at the southwestern portion of the site, combined with the substantial amount of neighborhood vegetation and development, the parking deck and helipad would have limited noticeability from the surrounding area (refer to KVAs 1, 6, 7, 8, 9 and 10). The parking deck and helistop would be partially visible from neighborhoods to the southeast such as from Toro Street, Leff Street, and the San Luis Obispo Train Station area. However, from those viewing locations, because of topography, intervening vegetation and development, scenic vistas of the surrounding hills, including the Santa Lucia Foothills would not be affected.

Obstruction Light Poles

If off-site tree pruning is determined to be infeasible, two 125-foot-tall obstruction light poles would be installed at the edge of a large eucalyptus groves southwest of the parking deck and helistop. Some on-site tree removal and pruning would still be required even if the obstruction light poles are constructed. A secondary effect of the obstruction light poles would be the removal of less existing vegetation than the proposed project without poles. With both of the options some of the existing vegetative mass would be reduced, slightly increasing the potential visibility of the poles from certain viewpoints (refer to KVAs 1, 4, 5, and 10). In general, however, the remaining large trees would block or substantially limit visibility of the poles. The proposed light poles would have a thin profile and would occupy a negligible percent of the available visual landscape. As seen from some viewpoints, the light color of the galvanized poles would contrast with the green background of the adjacent trees (refer to KVAs 1,4,5,6,7,10). With implementation of the measure listed below, the optional obstruction light poles would have little to no adverse effect on the surrounding scenic vistas.

Impact 1 **If obstruction light poles are required, their light galvanized metal color would increase their noticeability in the landscape and as seen in the context of the hillside scenic vistas to the east. As a result, obstruction lights would result in an adverse visual impact to the existing scenic vista.**

MM-1 ***If obstruction light poles are required, they shall be colored a muted grey-green to match the foliage of the adjacent eucalyptus grove.***

Residual Impacts – Scenic Vistas

Potential impacts related to scenic vistas would be considered less than significant with implementation of mitigation (MM-1).

4.5 The Project's Effect on Specific Scenic Resources as seen from the State Scenic Highway

This CEQA threshold does not apply because the project is not within the view corridor of any Officially Designated State Scenic Highway.

4.6 The Project's Effect on the Existing Visual Character and Quality of the Site and its Surroundings and Consistency with Applicable Zoning and Other Regulations Governing Scenic Quality

4.6.1 *Visual Character and Quality*

Project related actions would be considered to have a significant impact on the visual character of the site if they altered the area in a way that substantially changed, detracted from, or degraded the visual quality of the site or was inconsistent with City of San Luis Obispo policies regarding visual quality and character. The degree to which that change reflects documented community values and meets viewers' aesthetic expectations is the basis for determining the extent of potential visual impact. Visual contrast and compatibility may be used as a measure of the potential impact that the project may have on the visual quality of the site. If a strong contrast occurred where project features or activities alter and dominate the landscape setting, this would be considered a potentially significant impact on visual character or quality of the site. Project components that are not compatible with the visual context could result in a significant change in the character of the community. Consideration of potential significance includes analysis of visual character elements such as land use and intensity, visual integrity of the landscape type, and other factors.

The existing visual character of the project site and its surroundings is primarily a product of built elements, including typical suburban uses such as residential neighborhoods, commercial, institutional and recreational development. The project site itself is of moderate visual quality, primarily due to its developed character. Existing mature vegetation both on the project site and throughout the surrounding neighborhoods increase the overall visual quality and create visual continuity in the area.

<u>Patient Tower and Parking Deck/Helistop</u>

Increased development of the project site in terms of the new buildings, parking areas other site features would likely not be unexpected to many casual observers. The project's adjacency to the existing hospital and the other medical facilities would add to the public perception that the new buildings and other site features are a logical use for the site.

The proposed patient tower and/or parking deck would be visible to some degree from portions of several nearby streets, including Johnson Avenue, Ella Street, Iris Street, George Street, Leff Street, Toro Street, and others. The project would be seen readily seen from the Terrace Hill Open Space (Refer to KVA 1). The patient tower and parking deck would also have the potential to be seen from various other locations throughout the community, although from the more distant viewpoints the buildings would generally have low noticeability and would visually blend with the larger viewshed (Refer to KVAs 1,2,6,7,8,9,and 10).

Where seen, the project would be visible as an expansion of the existing site development and would be visually compatible with the architectural style of the existing French Hospital Medical Facility. Specifically, the proposed 68-foot height of the patient tower would not an appear out of scale with the existing facilities and would not have an adverse effect on the existing suburban character and context.

Multi-story parking structures are commonly associated with hospital facilities, and the parking deck and helistop would not be uncharacteristic of the existing institutional use. The relatively low profile of the parking deck structure in combination with its proposed location at the western, lower elevation of the site would help visually integrate the structure with the setting.

The project description defines the aesthetic concept of proposed structures as being consistent with the existing buildings on the site. In general, this architectural concept would be visually appropriate and would help unify the appearance of the site. The general scale and massing of the proposed Patient Tower and the Parking Deck/Helistop buildings would be visually appropriate as seen with existing development of the hospital facility. A conceptual planting plan shown in Figure 7 and defined in the project description would help integrate the project into the surrounding neighborhoods.

Although the proposed additional development would increase visual density, the site and the overall hospital facility would remain compatible with the existing visual character and would have minimal effect on the visual quality of the area.

<u>Tree Removal/ Pruning</u>

The project would remove mature trees and other vegetation from the site to accommodate new construction and for aviation safety requirements. In total the project would require the removal of 119 trees and pruning of 17 trees (Refer to Figures 9 and 10). The trees proposed for trimming would be reduced approximately 25 to 35 feet from their estimated average height of 100 to 130 feet above ground. Because these trees would remain in place as members of the larger eucalyptus grove, noticeability of the pruning would be reduced. As seen from most viewpoints, the tree pruning and/or removal would be difficult to distinguish from the remaining grove.

With both of the options some of the existing vegetative mass would be reduced, slightly increasing the potential visibility of the poles from certain viewpoints (Refer to KVAs 1,4,5 and10). The obstruction light poles option discussed below would cause the removal of fewer trees than would be required if no poles were constructed. The visual difference between options regarding tree removal would be not be readily apparent to the casual observer.

<u>Obstruction Light Poles alternative</u>

If off-site tree pruning is not possible, the project would require the placement of two 125 foot tall obstruction light poles along the southern perimeter of the project site (refer to Figure 8). If the obstruction light poles are constructed, the project would result in the removal of 107 trees, and the pruning of 8 trees adjacent to the existing grove of large eucalyptus trees). Although the poles would be seen from certain vantage points in the surrounding area, their thin profiles (25 inches diameter at the base, tapering to 7 inches diameter at the top) and proximity to the large grove of eucalyptus trees reaching approximately 100 to130 feet in height would substantially reduce their noticeability. However, the obstruction light poles would be thin profile and would occupy a negligible percent of the available visual landscape. As seen from some viewing directions, the light color of the galvanized poles would contrast with the colors of the background hills and the adjacent trees (Refer to KVAs 1,4, 5,6,7 and 10). With implementation of the measure listed below, the optional obstruction light poles would have little to no adverse effect on the surrounding scenic vistas.

As seen from some viewpoints, the light color of the galvanized poles would contrast with the green background of the adjacent trees. With implementation of the measure listed below, the optional obstruction light poles would have little to no adverse effect on the surrounding scenic vistas.

Impact 2 **If obstruction light poles are required, their light galvanized metal color would increase their noticeability and visual contrast as seen from the surrounding community. As a result, obstruction lights would result in an adverse visual impact to the existing visual quality and character of the site and its surroundings**

Implementation of mitigation measure MM-1 would also reduce potential impacts related to community visual quality and character.

Residual Impacts – Visual Quality and Character

Potential impacts related to visual quality and character would be considered less than significant with mitigation (MM-1).

4.7 Project Light or Glare Affecting Day or Nighttime Views in the Area

The project would result in a significant impact if it subjected viewers from public areas or residences to a substantial amount of new point-source lighting visibility at night, or if the collective lumination of the project resulted in a noticeable spill-over effect into the nighttime sky, increasing the ambient light over the region.

The existing French Hospital and associated medical facilities include substantial lighting. Parking lot and pedestrian area lighting, external and internal lighting associated with buildings, signage and other uses are seen throughout the facility. Residential street lighting is also found in the adjacent neighborhoods and throughout the surrounding community. Existing night lighting is also present at the San Luis Obispo Train Station approximately 500 feet southwest of the project and sports field lighting is associated with San Luis Obispo High School, approximately 0.3 mile north of the project.

4.7.1 *Project Site Lighting*

As described in the Project Description, the project would include new lighting throughout the site, including exterior lighting in and around entrances to the patient tower, the parking deck, and generator yard, and along main walkways. Light poles in the vicinity of parking areas would be no more than 20 feet tall. Other lighting on-site would include, but not be limited to, bollard pathway lighting around the drop off entry area in front of the main entrances to the Copeland Health Education Pavilion and patient tower, wall-mounted lights along the exterior of the patient tower to illuminate the exterior dining area and walkways around the building, canopy lights to illuminate the second floor garden of the patient tower, and in-ground lights to illuminate building signage.

This project site lighting would be subject to compliance with Zoning Ordinance 17.70.100 *Lighting and Night Sky Preservation*.

Project approval documents will require plans and descriptions of each illuminating device, fixture, lamp, support, and shield, including manufacturer's data, lamp types, lumen outputs and other information. In addition, compliance with the Zoning Regulations will also require the preparation and submittal of photometric plans showing the location of all light poles and building-mounted lighting fixtures and a maximum 10-foot by 10-foot grid of both the initial and maintained lighting levels on the site, and including impact on adjacent properties. Per Zoning Code development standards, the photometric study must demonstrate that project site lighting does not exceed a maintained value of 10 foot-candles, when measured at finished grade.

City of San Luis Obispo Community Design Guidelines Section 6.1.c. requires that new lighting be cutoff fixtures designed and installed so that no emitted light will break a horizontal plane passing through the lowest point of the fixture and that outdoor lighting shall be fully shielded, recessed, directed downward and not spill onto adjacent properties and public rights-of-way. In addition, parking lot lights are required to not exceed a height of 21 feet above the approved finished grade.

The project would introduce new lighting into the project site, inherent with the expansion of the hospital facility. Review of the preliminary project plans and lighting description indicates that proposed lighting, implemented in compliance with Zoning Ordinance 17.70.100 *Lighting and Night Sky Preservation*, and Community Design Guidelines Section 6.1.c, would not result in substantial light or glare nor adversely affect daytime or nighttime views in the area.

4.7.2 *Aviation-Related Lighting*

For the purpose of this study aviation-related lighting refers to all sources of light associated with the design and function of the helistop, including:

- Helicopter landing lights. Operated during helicopter approach and landing. ~~-~~Landing light operation would be a pilot decision but lights are anticipated to be turned on at least 1 mile from the landing site.

- Green perimeter lights that outline the Touch Down and Lift-Off (TLOF) area. Operated only during take-off and landing.

- Red obstruction lights on parking lot elevator tower,~~-~~ patient bed tower corner and patient tower roof~~s, etc~~. Operated only during take-off and landing

- ~~One beacon on the parking deck elevator penthouse. The beacon would be green-white-yellow LEDs flashing in sequence. Operated only during take-off and landing~~

- A lighted wind cone to provide pilots with wind direction and speed information. This wind cone would be located near the northeastern corner of the top floor of the parking deck. Operated only during take-off and landing.

- One beacon and multiple obstruction lights on the Patient Tower, directed upward. These lights would likely~~ be~~ operate~~ting~~ from dusk to dawn, year-round.

- Obstruction Light Poles option - If off-site tree pruning is determined to be infeasible, FAA regulations would require the placement of two 125-foot-tall obstruction light poles along the southern perimeter of the project site. Obstruction Light Poles. These poles would be 125 feet tall and would have red lights on top. The obstruction light poles would be operated only during take-off and landing.

According to Zoning Ordinance 17.70.100 *Lighting and Night Sky Preservation, Section F.3,* emergency aviation lighting associated with the project would be exempt from the requirements of that section. The Section F.3 exemption however does not preclude analysis under the California Environmental Quality Act (CEQA).

The helistop structure would include FAA-required lighting (Refer to Figures 12 and 13). Helistop lighting would operate only during nighttime landings and would be controlled and used by pilots to provide a visual guide. Based on San Luis Obispo County Emergency Medical Service records, the anticipated projected flight frequency is expected to be approximately four helicopter trips per month. County Emergency Service data shows that approximately one nighttime helicopter trip per month is expected. Preliminary estimates indicate that the amount of time the helipad would be operational for landing, patient care and takeoff would typically range from twenty minutes to one hour, although these times could vary significantly depending upon patient medical or logistic circumstances.

In addition to the helistop lighting, the helicopters themselves would have lighting. In addition to helistop lighting, the helicopters themselves would have lighting. Helicopter landing lights would potentially affect the largest area of the community because those lights could be activated from more than a mile out along the approaching flight path (see Figure 15 of Attachment 2, Visual Impact Assessment of the French Hospital Medical Center Expansion Project). According to preliminary project information and applicable FAA regulations, helicopters would have white landing lights (or search lights) that would light the helistop as they are approaching, similar to the landing lights seen on airplanes when they are approaching a runway at night. Assuming the helicopter's landing light would be mounted at a 45-degree down angle, when the helicopter is level, the search light would produce an approximately 70-foot-diameter cone of light on the ground when the helicopter is 200 feet off the ground, and the search light would produce an approximately 35-foot-diameter cone of light when the helicopter is 100 feet off the ground. Helicopter landing and navigation lights would have a combined light intensity of 80 Lux on the ground when the helicopter is 200 feet above the ground and 320 Lux when the helicopter is 100 feet above the ground. However, based on correspondence with an aviation consultant, it would be unusual for a pilot to use both landing and navigation lights during a typical landing. Pilots would likely only use the landing light solely if used at all, which would result in an intensity of 40 Lux at 200 feet above the ground and 160 Lux at 100 feet above the ground.

For context, 1 Lux is equal to 1 lumen per square meter, and 80 Lux is approximately equal to 7.4 foot candles, which is the light intensity of 7.4 lumens per square foot (see Figure 16 below).. Pilots may also elect to use night-vision goggles during landings in relatively dark environments, in which case neither landing nor navigation lights would be used. This would be based on pilot discretion.~~According to preliminary project information, helicopters would have white landing lights that would light the helistop as they are approaching, similar to the landing lights seen on airplanes when they are approaching a runway at night (Refer to Figure 15). The landing lights would be directed toward the heliport itself, not toward nearby residences. When approaching the helistop, it is expected that the helicopter landing lights would be turned on at a distance of over one mile out. Information provided by the project applicant indicates that the total duration that helicopter lighting would be in use would be approximately 10 minutes per trip.~~

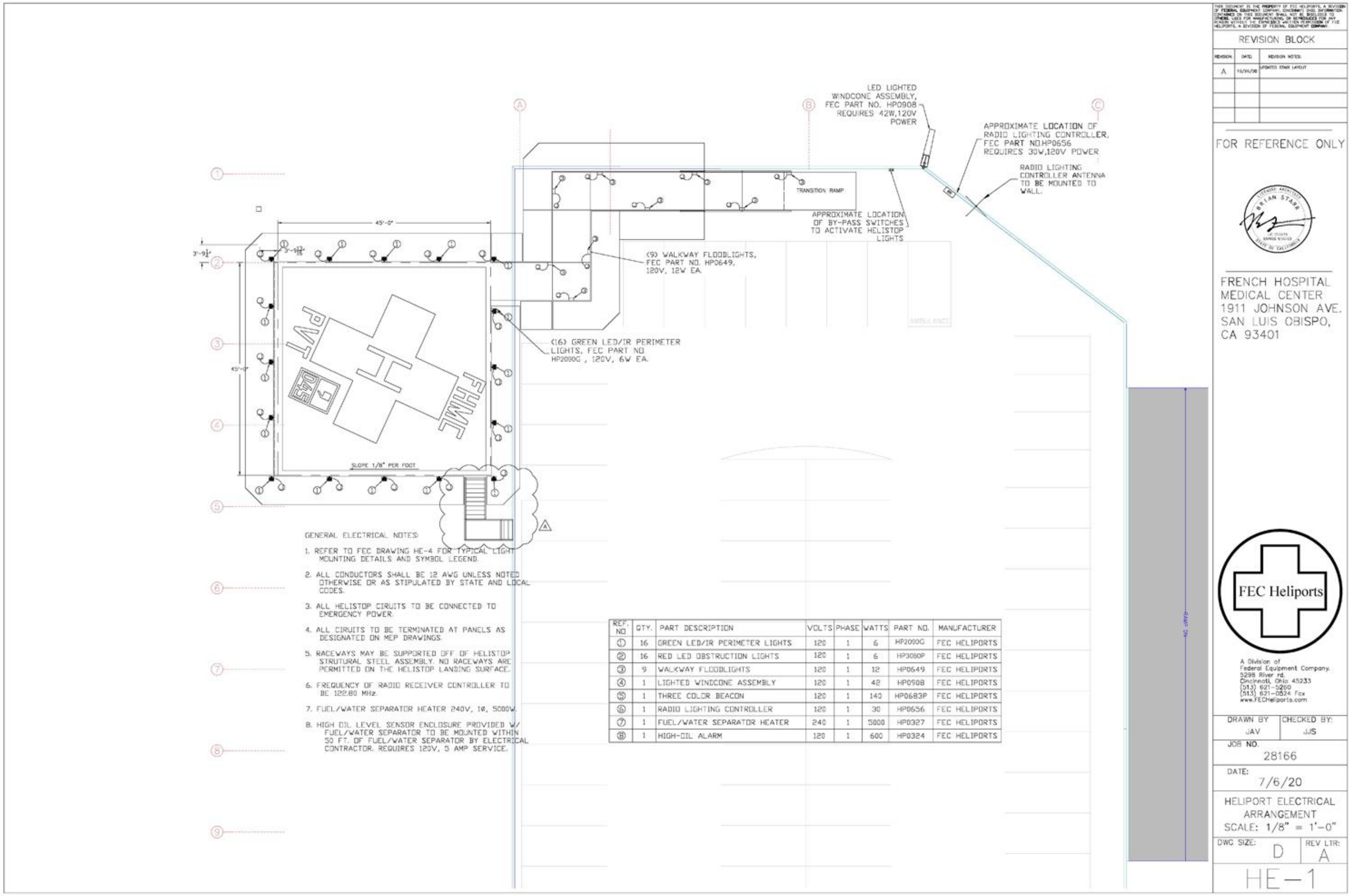
The aviation-related lighting would introduce a substantial amount of new lighting on site. All of the required aviation safety lighting would, by design, be highly noticeable to the helicopter operators. As described, most of these lights would be used for the helistop perimeter and other structure delineation, and would be oriented upward only. This upward orientation would reduce lighting visibility as seen from

~~below-deck levels~~lower vantage points, however certain viewpoints in the surrounding community, particularly to the east and south are at elevations higher than the helistop deck. Other lights such as the obstruction pole lighting and beacon lighting would ~~be omni-directional~~shine in multiple directions.

In general, as seen from much of the surrounding area intervening mature vegetation and development would block or filter direct views of the lighting. Because of wide-ranging viewpoint factors such as elevation, orientation, topography, and intervening development, the extent of aviation lighting visibility within the surrounding community would be varied and dispersed throughout the area. Helicopter landing lights would potentially affect the largest area of the community since those lights could be activated from as much as a mile or more along the approaching flight path.

Although aviation-related lighting would be seen to some degree from much of the surrounding area, the expected low frequency (approximately one nighttime use per month) and short-term duration of helistop operations (estimated between approximately twenty minutes to one hour per visit, and ten minutes for helicopter operations) would substantially reduce the potential adverse effect on the adjacent neighborhood and surrounding community.

As a result, the project would have a less than significant effect on lighting and glare as seen from surrounding public viewpoints.



REF. NO	QTY.	PART DESCRIPTION	VOLTS	PHASE	WATTS	PART NO.	MANUFACTURER
1	16	GREEN LED/IR PERIMETER LIGHTS	120	1	6	HP2090G	FEC HELIPORTS
2	16	RED LED OBSTRUCTION LIGHTS	120	1	6	HP3080P	FEC HELIPORTS
3	9	WALKWAY FLOODLIGHTS	120	1	12	HP0649	FEC HELIPORTS
4	1	LIGHTED WINDCONE ASSEMBLY	120	1	42	HP0908	FEC HELIPORTS
5	1	THREE COLOR BEACON	120	1	140	HP0683P	FEC HELIPORTS
6	1	RADIO LIGHTING CONTROLLER	120	1	30	HP0656	FEC HELIPORTS
7	1	FUEL/WATER SEPARATOR HEATER	240	1	5000	HP0327	FEC HELIPORTS
8	1	HIGH-OIL ALARM	120	1	600	HP0324	FEC HELIPORTS

Figure 12. Preliminary Helistop Lighting Plan

Figure 13. Preliminary Lighting Plan – Buildings

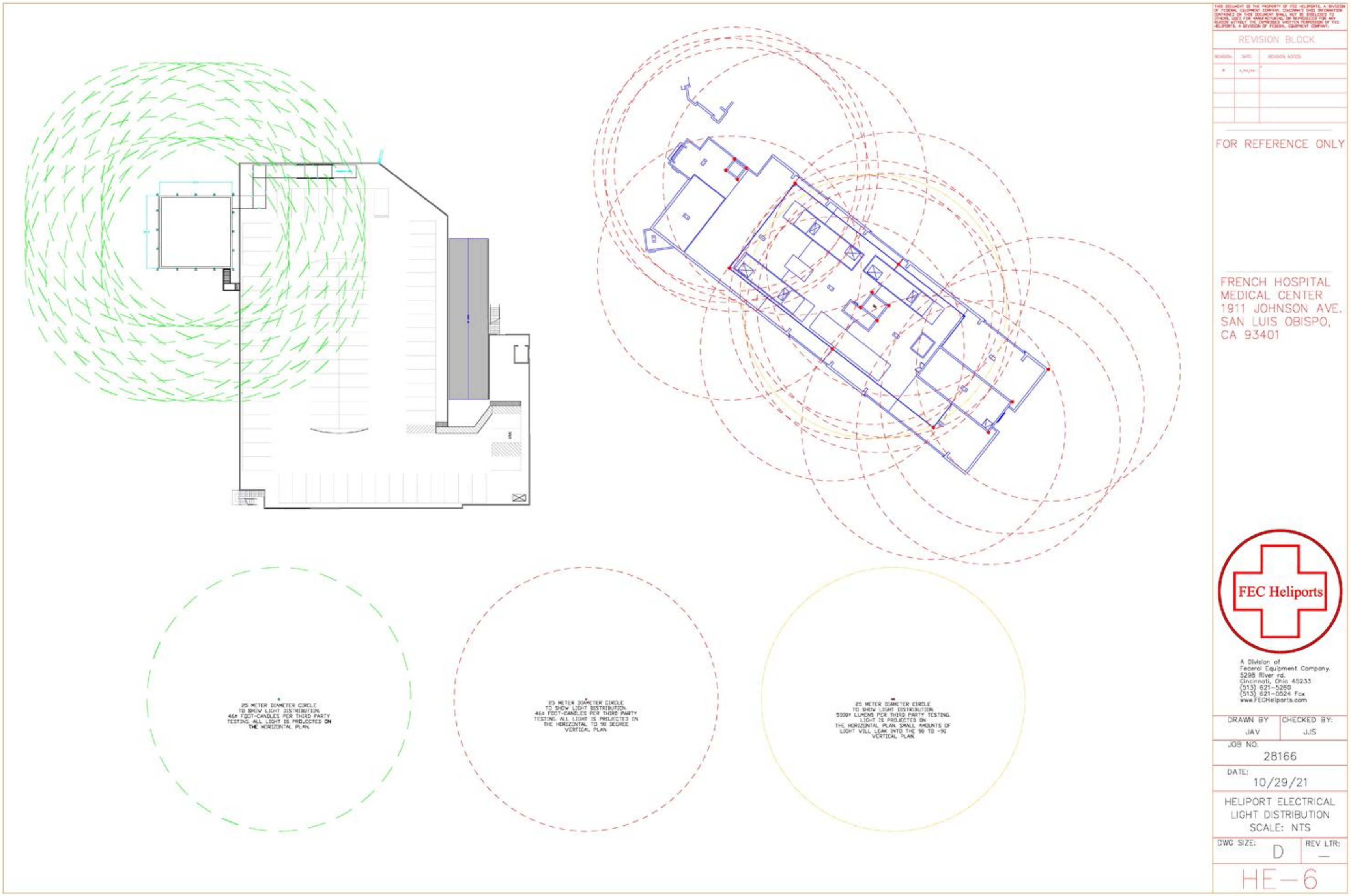


Figure 14. Lighting Distribution Plan

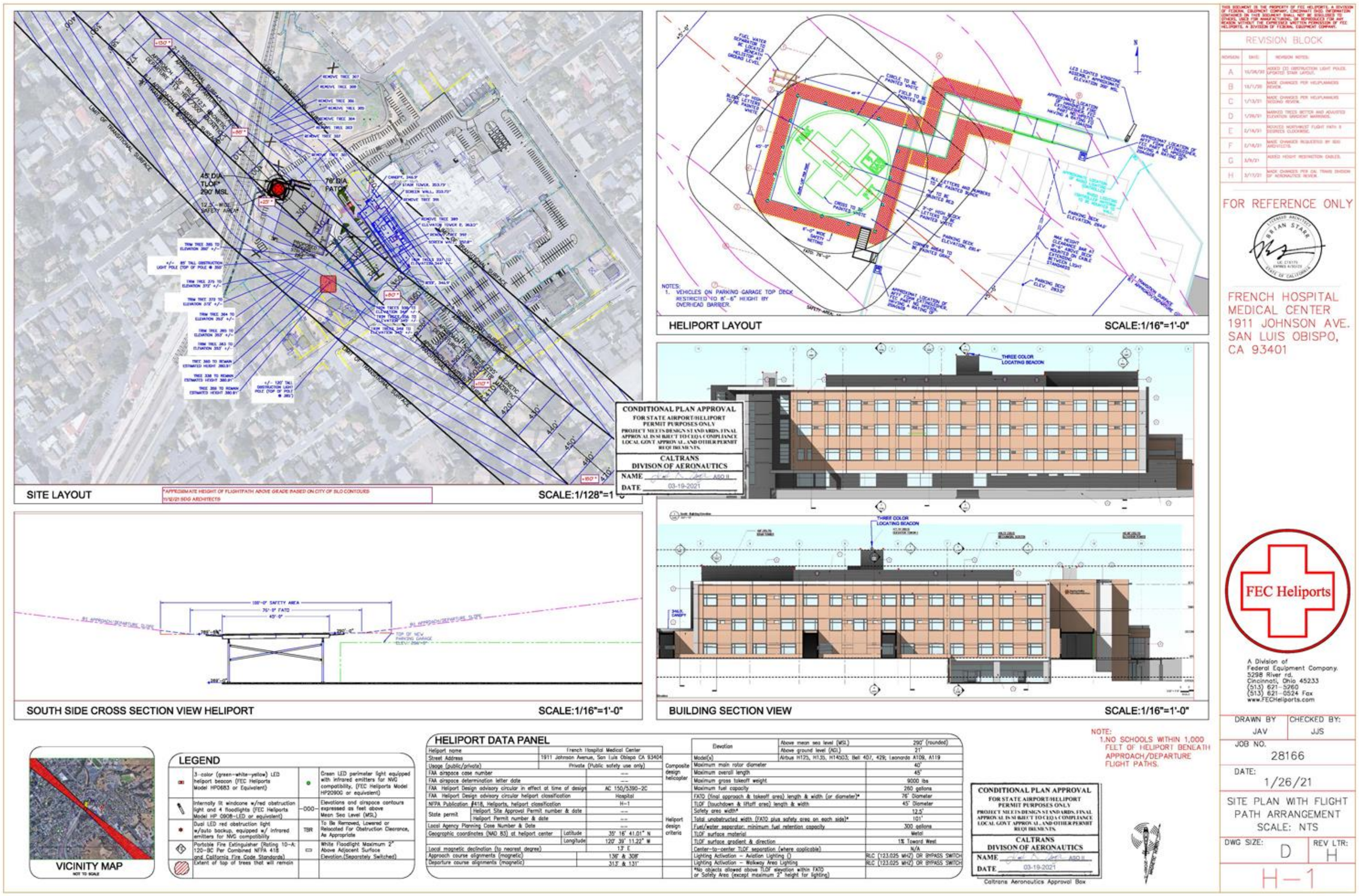


Figure 15. Flight Path Lighting Plan

4.8 Cumulative Impacts

The discussion of cumulative impacts relates to the potential for the project to contribute to an aggregate change in visual quality from the surrounding public viewing areas, taking into consideration existing as well as proposed development.

The City of San Luis Obispo within the project vicinity and surrounding neighborhoods has undergone few substantial visual changes affecting overall scenic quality or character in the last decade. Much of the visible development in the area has been in-fill directed and appears visually compatible with established land use and aesthetic patterns.

Although the project would be seen to some degree from certain areas within the surrounding neighborhoods, its scale, architectural and site design, and landscaping would be visually compatible with the surrounding suburban setting and would likely be consistent with the viewers, expectations for the site.

The French Hospital Medical Center expansion project, in combination with the General Plan, Zoning Regulations, and other City guidelines, would substantially reduce potential visual impacts. These policies, in conjunction with Mitigation Measure MM-1, would ensure that the proposed project's incremental contribution to potential cumulative impacts would be less than significant.

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KVA-1 - From Terrace Hill Open Space looking north

Existing view

Figure 16. Key Viewing Area 1: Existing view of the project site as seen from Terrace Hill Open Space.

KVA-1 - From Terrace Hill Open Space looking north. Simulation of the proposed project

Figure 17. Key Viewing Area 1: Photo-simulation of the project (without obstruction light poles) as seen from Terrace Hill Open Space.

KVA-1 - From Terrace Hill Open Space looking north. Simulation of the project with obstruction light poles

Figure 18. Key Viewing Area 1: Photo-simulation of the project (with obstruction light poles) as seen from Terrace Hill Open Space.

KVA-2 - From Johnson Avenue looking west

Existing view

Figure 19. Key Viewing Area 2: Existing view of the project site as seen from Johnson Avenue.

KVA-2 - From Johnson Avenue looking west

View of the proposed project

Figure 20. Key Viewing Area 2: Photo-simulation of the project (without obstruction light poles) as seen from Johnson Avenue.

KVA-2 - From Johnson Avenue looking west

Simulation of the project with obstruction light poles.
(Note: Poles not visible from this viewpoint)

Figure 21. Key Viewing Area 2: Photo-simulation of the project (with obstruction light poles) as seen from Johnson Avenue.

KVA-3 - From Iris Street cul-de-sac looking north

Existing view

Figure 22. Key Viewing Area 3: Existing view of the project site as seen from the Iris Street cul-de-sac.

KVA-3 - From Iris Street cul-de-sac looking north

Simulation of the proposed project

Figure 23. Key Viewing Area 3: Photo-simulation of the project (without obstruction poles) as seen from the Iris Street cul-de-sac.

KVA-3 - From Iris Street cul-de-sac looking north

Simulation of the project with obstruction light poles.
(Note: Poles not visible from this viewpoint)

Figure 24. Key Viewing Area 3: Photo-simulation of the project (with obstruction poles) as seen from the Iris Street cul-de-sac.

KVA-4 - From Ruth St. near Iris St. looking northeast

Existing view

Figure 25. Key Viewing Area 4: Existing view of the project site as seen from Ruth Street near Iris Street.

KVA-4 - From Ruth St. near Iris St. looking northeast

Simulation of the proposed project

Figure 26. Key Viewing Area 4: Photo-simulation of the project (without obstruction poles) as seen from Ruth Street near Iris Street.

KVA-4 - From Ruth St. near Iris St. looking northeast

Simulation of the project with obstruction light poles

Figure 27. Key Viewing Area 4: Photo-simulation of the project (with obstruction poles) as seen from Ruth Street near Iris Street.

KVA-5 - From Ruth St. near George St. looking northeast

Existing view

Figure 28. Key Viewing Area 5: Existing view of the project site as seen from Ruth Street near George Street.

KVA-5 - From Ruth St. near George St. looking northeast. Simulation of the proposed project

Figure 29. Key Viewing Area 5: Photo-simulation of the project (without obstruction light poles) as seen from Ruth Street near George Street.

KVA-5 - From Ruth St. near George St. looking northeast. Simulation of the project with obstruction light poles

Figure 30. Key Viewing Area 5: Photo-simulation of the project (with obstruction light poles) as seen from Ruth Street near George Street.

KVA-6 - From Ella St. near Henry St. looking northeast. Existing view

Figure 31. Key Viewing Area 6: Existing view of the project site as seen from Henry Street.

KVA-6 - From Ella St. near Henry St. looking northeast.

Simulation of the proposed project

Figure 32. Key Viewing Area 6: Photo-simulation of the project (without obstruction light poles) as seen from Henry Street.

KVA-6 - From Ella St. near Henry St. looking northeast. Simulation of the project with obstruction light poles.

Figure 33. Key Viewing Area 6: Photo-simulation of the project (with obstruction light poles) as seen from Henry Street.

KVA-7 - From the Jennifer Street Bridge looking northeast. Existing view

Figure 34. Key Viewing Area 7: Existing view of the project site as seen from the Jennifer Street Bridge.

KVA-7 - From the Jennifer Street Bridge looking northeast. Simulation of the propsed project

Figure 35. Key Viewing Area 7: Photo-simulation of the project (without obstruction light poles) as seen from the Jennifer Street Bridge.

KVA-7 - From the Jennifer Street Bridge looking northeast. Simulation of the project with obstruction light poles

Figure 36. Key Viewing Area 7: Photo-simulation of the project (with obstruction light poles) as seen from the Jennifer Street Bridge.

KVA-8 - From Leff Street looking east.

Existing view

Figure 37. Key Viewing Area 8: Existing view of the project site as seen from Leff Street.

KVA-8 - From Leff Street looking east.

Simulation of the proposed project

Figure 38. Key Viewing Area 8: Photo-simulation of the project (without obstruction poles)as seen from Leff Street.

KVA-8 - From Leff Street looking east.

Simulation of the proposed project

Figure 39. Key Viewing Area 8: Photo-simulation of the project (with obstruction poles)as seen from Leff Street.

KVA-9 - From Leff Street near Toro Steet looking southeast. Existing view

Figure 40. Key Viewing Area 9: Existing view of the project site as seen from Leff Street near Toro Street.

KVA-9 - From Leff Street near Toro Steet looking southeast.

Simulation of the proposed project

Figure 41. Key Viewing Area 9: Photo-simulation of the project (without obstruction poles) as seen from Leff Street near Toro Street.

KVA-9 - From Leff Street near Toro Steet looking southeast.

Simulation of the project with obstruction light poles.
(Note: Poles not visible from this viewpoint)

Figure 42. Key Viewing Area 9: Photo-simulation of the project (with obstruction poles) as seen from Leff Street near Toro Street.

KVA-10 - From Mitchell Park looking east. Existing view

Figure 43. Key Viewing Area 10: Existing view of the project site as seen from Mitchell Park.

KVA-10 - From Mitchell Park looking east.

Simulation of the proposed project

Figure 44. Key Viewing Area 10: Photo-simulation of the project (without obstruction light poles) as seen from Mitchell Park.

KVA-10 - From Mitchell Park looking east.

Simulation of the project with obstruction light poles

Figure 45. Key Viewing Area 10: Photo-simulation of the project (with obstruction light poles) as seen from Mitchell Park.

ATTACHMENT 3

Air Quality and Greenhouse Gas Impact Assessment for the Proposed French Hospital Medical Center Expansion Project

Air Quality & Greenhouse Gas Impact Assessment

For The Proposed

French Hospital Medical Center Expansion Project

San Luis Obispo, CA

September 2021

Prepared For:

SWCA Environmental Consultants, Inc.
1422 Monterey Street
San Luis Obispo, CA 93401

Prepared By:

AMBIENT
AIR QUALITY & NOISE CONSULTING
75 Higuera Street, Suite 105
San Luis Obispo, CA 93401

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APPENDICES

Appendix A: Emissions Modeling

INTRODUCTION

This report provides an analysis of air quality and greenhouse gas impacts associated with the proposed French Hospital Medical Center Expansion Project (project). This report also provides a summary of existing conditions in the project area and the applicable regulatory framework pertaining to air quality and climate change.

PROPOSED PROJECT SUMMARY

The existing French Hospital Medical Center is located at 1911 Johnson Avenue in the City of San Luis Obispo. The proposed French Hospital Medical Center expansion includes a new 82-bed wing, a lab, a a parking structure, and a helicopter pad. The proposed project's site plan is depicted in Figure 1.

AIR QUALITY

Existing Setting

The project is located in the City of San Luis Obispo, within the South Central Coast Air Basin (SCCAB) and within the jurisdiction of the San Luis Obispo County Air Pollution Control District (SLOAPCD). Air quality in the SCCAB is influenced by a variety of factors, including topography, local and regional meteorology.

Topography

The City of San Luis Obispo is in the coastal plateau. The coastal plateau is about five to ten miles wide and varies in elevation from sea level to about 500 feet. It is bounded on the northeast by the Santa Lucia Mountain Range, which extends almost the entire length of the county. Rising sharply to about 3,000 feet at its northern boundary, the Santa Lucia Range gradually winds southward away from the coast, finally merging into a mass of rugged features on the north side of Cuyama Canyon. Point Buchon juts into the Pacific just south of Morro Bay to form the protective harbor of San Luis Obispo Bay. The Irish Hills are the dominant feature on this knob of land, rising abruptly from the shore to form steep cliffs and generally complex terrain from the Los Osos/Montana de Oro State Park area to Pismo Beach. These headlands have a pronounced influence on local wind flow patterns.

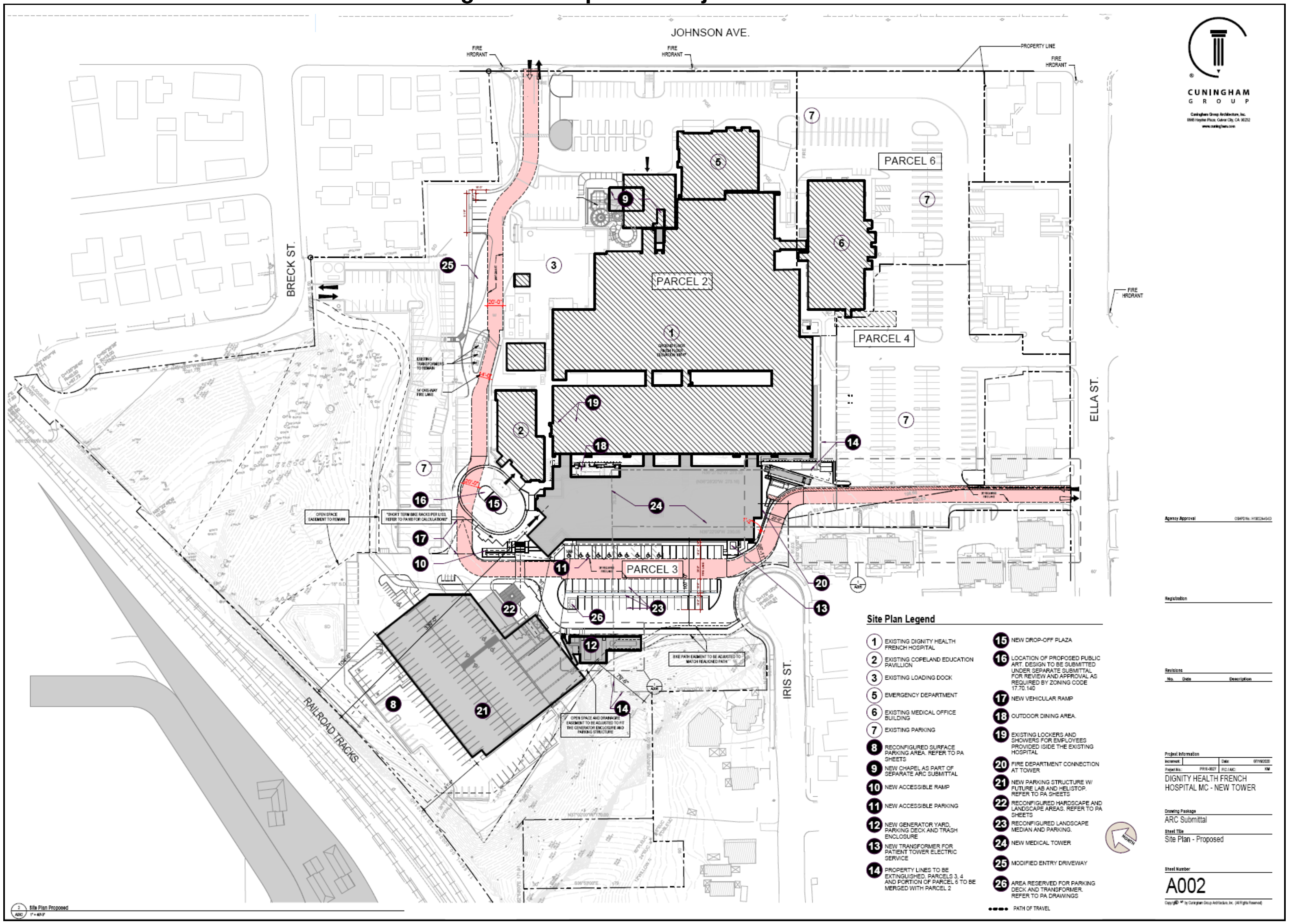
Estuaries are also a notable feature of the coastal areas, occurring wherever flowing streams meet the ocean. Morro Bay contains the region's largest estuary, with a saltwater marsh located on the east side where Chorro and Los Osos creeks enter the bay. This is one of the most significant wetlands remaining on the California coast and has been designated part of the National Estuary Program. It provides nesting habitat for blue herons, cranes and other important types of woodland birds and wildlife. Smaller coastal lagoons and marshes are also scattered along the county's shoreline.

Local and Regional Meteorology

The climate of the county can be generally characterized as Mediterranean, with warm, dry summers and cooler, relatively damp winters. Along the coast, mild temperatures are the rule throughout the year due to the moderating influence of the Pacific Ocean. This effect is diminished inland in proportion to the distance from the ocean or by major intervening terrain features, such as the coastal mountain ranges. As a result, inland areas are characterized by a considerably wider range of temperature conditions. Maximum summer temperatures average about 70 degrees Fahrenheit near the coast, while inland valleys are often in the high 90s. Minimum winter temperatures average from the low 30s along the coast to the low 20s inland (SLOAPCD 2001).

Regional meteorology is largely dominated by a persistent high-pressure area which commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause seasonal changes in the weather patterns of the area. The Pacific High remains generally fixed several hundred miles offshore from May through September, enhancing onshore winds and opposing offshore winds.

Figure 1. Proposed Project Site Plan



Source: Cunningham Group 2021

During spring and early summer, as the onshore breezes pass over the cool water of the ocean, fog and low clouds often form in the marine air layer along the coast. Surface heating in the interior valleys dissipates the marine layer as it moves inland (SLOAPCD 2001).

From November through April the Pacific High tends to migrate southward, allowing northern storms to move across the county. About 90 percent of the total annual rainfall is received during this period. Winter conditions are usually mild, with intermittent periods of precipitation followed by mostly clear days. Rainfall amounts can vary considerably among different regions in the county. In the Coastal Plain, annual rainfall averages 16 to 28 inches, while the Upper Salinas River Valley generally receives about 12 to 20 inches of rain. The Carrizo Plain is the driest area of the county with less than 12 inches of rain in a typical year (SLOAPCD 2001).

Airflow around the county plays an important role in the movement and dispersion of pollutants. The speed and direction of local winds are controlled by the location and strength of the Pacific High-pressure system and other global patterns, by topographical factors, and by circulation patterns resulting from temperature differences between the land and sea. In spring and summer months, when the Pacific High attains its greatest strength, onshore winds from the northwest generally prevail during the day. At night, as the sea breeze dies, weak drainage winds flow down the coastal mountains and valleys to form a light, easterly land breeze (SLOAPCD 2001).

In the Fall, onshore surface winds decline and the marine layer grows shallow, allowing an occasional reversal to a weak offshore flow. This, along with the diurnal alternation of land-sea breeze circulation, can sometimes produce a "sloshing" effect. Under these conditions, pollutants may accumulate over the ocean for a period of one or more days and are subsequently carried back onshore with the return of the sea breeze. Strong inversions can form at this time, "trapping" pollutants near the surface (SLOAPCD 2001).

This effect is intensified when the Pacific High weakens or moves inland to the east. This may produce a "Santa Ana" condition in which air, often pollutant-laden, is transported into the county from the east and southeast. This can occur over a period of several days until the high-pressure system returns to its normal location, breaking the pattern. The breakup of a Santa Ana condition may result in relatively stagnant conditions and a buildup of pollutants offshore. The onset of the typical daytime sea breeze can bring these pollutants back onshore, where they combine with local emissions to cause high pollutant concentrations. Not all occurrences of the "post-Santa Ana" condition lead to high ambient pollutant levels, but it does play an important role in the air pollution meteorology of the county (SLOAPCD 2001).

Atmospheric Stability and Dispersion

Air pollutant concentrations are primarily determined by the amount of pollutant emissions in an area and the degree to which these pollutants are dispersed into the atmosphere. The stability of the atmosphere is one of the key factors affecting pollutant dispersion. Atmospheric stability regulates the amount of vertical and horizontal air exchange or mixing, that can occur within a given air basin. Restricted mixing and low wind speeds are generally associated with a high degree of stability in the atmosphere. These conditions are characteristic of temperature inversions (SLOAPCD 2001).

In the atmosphere, air temperatures normally decrease as altitude increases. At varying distances above the earth's surface, however, a reversal of this gradient can occur. This condition termed an inversion, is simply a warm layer of air above a layer of cooler air, and it has the effect of limiting the vertical dispersion of pollutants. The height of the inversion determines the size of the mixing volume trapped below. Inversion strength or intensity is measured by the thickness of the layer and the difference in temperature between the base and the top of the inversion. The strength of the inversion determines how easily it can be broken by winds or solar heating (SLOAPCD 2001).

Several types of inversions are common to this area. Weak, surface inversions are caused by radiational cooling of air in contact with the cold surface of the earth at night. In valleys and low lying areas, this condition is intensified by the addition of cold air flowing downslope from the hills and pooling on the valley floor. Surface inversions are a common occurrence throughout the county during the winter, particularly on cold mornings when the inversion is strongest. As the morning sun warms the earth and the air near the ground, the inversion lifts, gradually dissipating as the day progresses. During the late spring and early summer months, cool air over the ocean can intrude under the relatively warmer air over land, causing a marine inversion. These inversions can restrict dispersion along the coast, but they are typically shallow and will dissipate with surface heating (SLOAPCD 2001).

In contrast, in the summertime, the presence of the Pacific high-pressure cell can cause the air mass aloft to sink. As the air descends, compressional heating warms it to a temperature higher than the air below. This highly stable atmospheric condition, termed a subsidence inversion, is common to all of coastal California and can act as a nearly impenetrable lid to the vertical mixing of pollutants. The base of the inversion typically ranges from 1000 to 2500 feet above sea level; however, levels as low as 250 feet, among the lowest anywhere in the state, have been recorded on the coastal plateau in San Luis Obispo county. The strength of these inversions makes them difficult to disrupt. Consequently, they can persist for one or more days, causing air stagnation and the buildup of pollutants. Highest or worst-case ozone levels are often associated with the presence of this type of inversion (SLOAPCD 2001).

Criteria Air Pollutants

For the protection of public health and welfare, the Clean Air Act (CAA) required that the United States Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the US EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air without harm to the public's health. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. The CAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail later in this report.

Human Health & Welfare Effects

Common air pollutants and associated adverse health and welfare effects are summarized in Table 1. Within the SCCAB, the air pollutants of primary concern, with regard to human health, include ozone, particulate matter (PM) and carbon monoxide (CO). As depicted in Table 1, exposure to increased pollutant concentrations of ozone, PM and CO can result in various heart and lung ailments, cardiovascular and nervous system impairment, and death.

Table 1. Common Pollutants & Adverse Effects

Pollutant	Human Health & Welfare Effects
Particulate Matter (PM_{10} & $PM_{2.5}$)	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Ozone (O_3)	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Sulfur Dioxide (SO_2)	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel; damage crops and natural vegetation. Impairs visibility. A precursor to acid rain.
Carbon Monoxide (CO)	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	Respiratory irritant; aggravates lung and heart problems. A precursor to ozone and acid rain. Contributes to global warming, and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: ARB 2018

Odors

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

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. The SLOAPCD does not have an individual rule or regulation that specifically addresses odors; however, odors would be applicable to SLOAPCD's Rule 402, Nuisance. Any actions related to odors would be based on citizen complaints to local governments and the SLOAPCD. The SLOAPCD recommends that odor impacts be addressed in a qualitative manner. Such analysis shall determine if the project results in excessive nuisance odors, as defined under the California Code of Regulations, Health & Safety Code Section 41700, air quality public nuisance.

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the Federal Clean Air Act (FCAA) or the California Clean Air Act (CCAA) and are thus not subject to National or State AAQS. TACs are not considered criteria pollutants in that the federal and California Clean Air Acts do not address them specifically through the setting of National or State AAQS. Instead, the U.S. EPA and ARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with District rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

At the state level, the ARB has authority for the regulation of emissions from motor vehicles, fuels, and consumer products. Most recently, Diesel-exhaust particulate matter (DPM) was added to the ARB list of TACs. DPM is the primary TACs of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. The ARB has made the reduction of the public's exposure to DPM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (ARB 2005).

At the local level, air districts have authority over stationary or industrial sources. All projects that require air quality permits from the SLOAPCD are evaluated for TAC emissions. The SLOAPCD limits emissions and public exposure to TACs through a number of programs. The SLOAPCD prioritizes TAC-emitting stationary sources, based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. The SLOAPCD requires a comprehensive health risk assessment for facilities that are classified in the significant-risk category, pursuant to AB 2588. No major existing sources of TACs have been identified in the project area.

Asbestos

Asbestos is the common name for a group of naturally-occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Naturally-occurring asbestos, which was identified as a TAC in 1986 by ARB, is located in many parts of California and is commonly associated with ultramafic rock. The project site is located within an area identified as having a potential for naturally-occurring ultramafic rock and serpentine soils.

Asbestos-containing material may be present in existing structures. The demolition of existing structures may be subject to regulatory requirements for the control of asbestos-containing materials (ACM).

Ambient Air Quality

Air pollutant concentrations are measured at several monitoring stations in the SCCAB. The San Luis Obispo-3220 South Higuera St. is the closest representative monitoring station with sufficient data to meet U.S. EPA and/or ARB criteria for quality assurance. Ambient monitoring data was obtained for the last three years of available measurement data (i.e., 2017 through 2019) and is summarized in Table 2. As depicted, the state and federal $PM_{2.5}$ standards were exceeded for one day in 2018. The state standard for PM_{10} was exceeded on five days in 2017. Measured 8-hour ozone, 1-hour ozone, and NO_2 concentrations did not exceed the state and federal ambient air quality standards in the last three years of monitoring.

Table 2. Summary of Ambient Air Quality Monitoring Data

Pollutant	Monitoring Year		
	2017	2018	2019
Ozone (O_3)(1)			
Maximum concentration (1-hour/8-hour average; ppm)	0.074/0.067	0.062/0.053	0.064/0.060
Number of days state/national 1-hour standard exceeded	0/0	0/0	0/0
Number of days state/national 8-hour standard exceeded	0/0	0/0	0/0
Nitrogen Dioxide (NO_2)(2)			
Maximum concentration (1-hour average; ppb)	32.0	25.0	25.0
Number of days state/national standard exceeded	0/0	0/0	0/0
Suspended Particulate Matter ($PM_{2.5}$)(1)			
Maximum 24-hour concentration (national/state; µg/m3)	25.6/25.6	38.4/38.4	14.8/14.8
Number of days national standard exceeded (measured/calculated)(3)	0/0	1/1	0/0
Suspended Particulate Matter (PM_{10})(1)			
Maximum concentration (national/state; µg/m3)	70.1	46.4	103.7
Number of days state standard exceeded (measured/calculated)(3)	5/NA	0/0	1/0
Number of days national standard exceeded (measured/calculated)(3)	0/0	0/0	0/0

ppm = parts per million by volume, µg/m^3 = micrograms per cubic meter, NA=Not Available
1. Based on ambient concentrations obtained from the San Luis Obispo-3220 South Higuera St. Monitoring Station.
2. Based on ambient concentrations obtained from the Atascadero-Lift Station #5 Monitoring Station.
3. Measured days are those days that an actual measurement was greater than the standard. Calculated days are estimated days that measurement would have exceeded the standard had measurements been collected every day.
Source: ARB 2021

Regulatory Framework

Air quality within the SCCAB is regulated by several jurisdictions including the U.S. EPA, ARB, and the SLOAPCD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation.

Federal

U.S. ENVIRONMENTAL PROTECTION AGENCY

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

FEDERAL CLEAN AIR ACT

The FCAA required the US EPA to establish National Ambient Air Quality Standards (NAAQS or National AAQS), and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 3.

State

CALIFORNIA AIR RESOURCES BOARD

The California Air Resources Board (ARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The CAAQS are summarized in Table 3. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel, and engine used.

CALIFORNIA CLEAN AIR ACT

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO_2, and NO_2 by the earliest practicable date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for the implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

ASSEMBLY BILLS 1807 & 2588 - TOXIC AIR CONTAMINANTS

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

Table 3. Summary of Ambient Air Quality Standards & Attainment Designations

Pollutant	Averaging Time	California Standards**** Concentration	California Standards**** Attainment Status	Federal Standards**** Concentration	Federal Standards**** Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m³)	Non-Attainment	–	Non-Attainment Eastern SLO County - Attainment Western SLO County***
	8 Hour	0.070 ppm (137 μg/m³)		0.070 ppm (137 μg/m³)******	
Respirable Particulate Matter (PM10)	24 Hour	50 μg/m³	Non-Attainment	150 μg/m³	Unclassified*/ Attainment
	Annual Arithmetic Mean	20 μg/m³		–	
Fine Particulate Matter (PM2.5)	24 Hour	No State Standard	Attainment	35 μg/m³	Unclassified*/ Attainment
	Annual Arithmetic Mean	12 μg/m³		12.0 μg/m³ *****	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Unclassified*
	1 Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	Attainment	0.053 ppm (100 μg/m³)	Unclassified*
	1 Hour	0.18 ppm (330 μg/m³)		100 ppb (196 mg/m³)	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	Attainment	0.030 ppm (80 μg/m³)	Unclassified*
	24 Hour	0.04 ppm (105 μg/m³)		0.14 ppm (365 μg/m³)	
	3 Hour	–		0.5 ppm (1300 μg/m³)**	
	1 Hour	0.25 ppm (655 μg/m³)		75 ppb (196 mg/m³)	
Lead*	30 Day Average	1.5 μg/m³	Attainment	–	No Attainment Information
	Calendar Quarter	–		1.5 μg/m³	
	Rolling 3-Month Average*	–		0.15 μg/m³	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.	Attainment	No Federal Standards	
Sulfates	24 Hour	25 μg/m³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Attainment		
Vinyl Chloride*	24 Hour	0.01 ppm (26 μg/m³)	No Attainment Information		

* Unclassified (EPA/Federal definition): Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for that pollutant. ** Secondary Standard

*** San Luis Obispo County has been designated non-attainment east of the -120.4 deg Longitude line, in areas of SLO County that are south of latitude 35.45 degrees, and east of the -120.3 degree Longitude line, in areas of SLO County that are north of latitude 35.45 degrees. Map of non-attainment area is available upon request from the APCD. **** For more information on standards visit:http//ww.arb.ca.gov.research/aaqs/aaqs2.pdf

Attainment (EPA/Federal definition): Any area that meets the national primary or secondary ambient air quality standard for that pollutant. (CA definition): State standard was not exceeded during a three year period. ***** Federal PM2.5 Secondary Standard is 15μg/m³

Non-Attainment (EPA/Federal definition): Any area that does not meet, or contributes to an area that does not meet the national primary or secondary ambient air quality standard for that pollutant. (CA definition): State standard was exceeded at least once during a three year period. ******The 2008 NAAQS for 8hr ozone is 0.075 ppm. The 2015 NAAQS for 8hr ozone is 0.070 ppm. The attainment status shown in this table relates to the 2008 and 2015 NAAQS. SLO County has been designated non-attainment of the 2015 NAAQS. NAAQS is National Ambient Air Quality Standards H:OUTREACH\AttainmentStatus Revised January 29, 2019

Source: SLOAPCD 2020a

IN-USE OFF-ROAD DIESEL VEHICLE REGULATION

On July 26, 2007, the ARB adopted a regulation to reduce diesel particulate matter (PM) and oxides of nitrogen (NOx) emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. The regulation applies to self-propelled diesel-fueled vehicles that cannot be registered and licensed to drive on-road, as well as two-engine vehicles that drive on road, with the limited exception of two-engine sweepers. Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, airport ground support equipment, water well drilling rigs, and two-engine cranes. Such vehicles are used in construction, mining, and industrial operations. The regulation does not apply to stationary equipment or portable equipment such as generators. The off-road vehicle regulation establishes emissions performance requirements, reporting, disclosure, and labeling requirements for off-road vehicles, and limits unnecessary idling.

CALIFORNIA BUILDING CODE

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Code is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

GREEN BUILDING STANDARDS

In essence, green buildings standards are indistinguishable from any other building standards. Both standards are contained in the California Building Code and regulate the construction of new buildings and improvements. The only practical distinction between the two is that whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

AB 32, which mandates the reduction of GHG emissions in California to 1990 levels by 2020, increased the urgency around the adoption of green building standards. In its scoping plan for the implementation of AB 32, ARB identified energy use as the second largest contributor to California's GHG emissions, constituting roughly 25 percent of all such emissions. In recommending a green building strategy as one element of the scoping plan,

The green buildings standards are updated every three years and were most recently updated May 2018. Referred to as the 2019 Building Energy Efficiency Standards, these most recent updates focus on four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to the exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential lighting requirements. The ventilation measures improve indoor air quality, protecting homeowners from air pollution originating from outdoor and indoor sources. Under the newly adopted standards, nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2018). These standards are currently being updated.

Local

COUNTY OF SAN LUIS OBISPO AIR POLLUTION CONTROL DISTRICT

The SLOAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions within the region are maintained. Responsibilities of the SLOAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

CITY OF SAN LUIS OBISPO

The City of San Luis Obispo's General Plan includes numerous policies related to air quality. These policies address emissions generated by mobile and non-mobile sources and land use compatibility. The General Plan includes the following policies related to air quality:

- *Circulation Element - Policy 2.1.5. Long-term Measure*. The City shall support programs that reduce traffic congestion and maintain air quality. If air quality degrades below legal standards or level of service (LOS) standards are exceeded, the City will pursue more stringent measures to achieve its transportation goals.
- *Circulation Element - Policy 4.1.4. New Development*. The City shall require that new development provide bikeways, secure bicycle storage, parking facilities and showers consistent with City plans and development standards. When evaluating transportation impacts, the City shall use a Multimodal Level of Service analysis.
- *Circulation Element - Policy 5.1.3. New Development*. New development shall provide sidewalks and pedestrian paths consistent with City policies, plans, programs and standards. When evaluating transportation impact[s], the City shall use a Multimodal Level of Service analysis.
- *Conservation and Open Space Element - Policy 2.2.2. Health standards*. Air quality should meet State and Federal standards, whichever are more protective, for human health.
- *Conservation and Open Space Element - Policy 2.2.3. No decline*. Air quality should not decline from levels experienced during the early 1990s, when the community's growth capacity was last re-examined.
- *Conservation and Open Space Element - Policy 2.2.4. Promote walking, biking and use of public transit use to reduce dependency on motor vehicles.* City actions shall seek to reduce dependency on gasoline- or diesel powered motor vehicles and to encourage walking, biking and public transit use.

Impact Analysis

Thresholds of Significance

In accordance with Appendix G of the *State CEQA Guidelines,* air quality impacts associated with the proposed project would be considered significant if it would:

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.

To assist in the evaluation of air quality impacts, the SLOAPCD has developed recommended significance thresholds, which are contained in the SLOAPCD's *CEQA Air Quality Handbook* (2012) and the SLOAPCD's *Clarification Memo related to the CEQA Air Quality Handbook* (2017). For the purposes of this analysis, project emissions are considered potentially significant impacts if any of the following SLOAPCD thresholds are exceeded:

Construction Impacts

The threshold criteria established by the SLOAPCD to determine the significance and appropriate mitigation level for a project's short-term construction emissions are presented in Table 4 and discussed, as follows (SLOAPCD 2012):

Table 4. SLOAPCD Thresholds of Significance for Project-Level Construction Impacts

Pollutant	Threshold [1]		
	Daily (lbs/day)	Quarterly Tier 1 (tons)	Quarterly Tier 2 (tons)
Ozone Precursors (ROG + NO_X)	137	2.5	6.3
Diesel Particulate Matter (DPM)	7	0.13	0.32
Fugitive Particulate Matter (PM_{10}), Dust [2]	None	2.5	None

1. Daily and quarterly emissions thresholds are based on the California Health & Safety Code and the ARB Carl Moyer Guidelines.
2. Any project with a grading area greater than 4.0 acres of a worked area can exceed the 2.5 tons PM10 quarterly threshold.
Source: SLOAPCD 2012

ROG and NOx Emissions

Daily: For construction projects exceeding the 137 lbs/day threshold requires Standard Mitigation Measures;

Quarterly – Tier 1: For construction projects exceeding the 2.5 tons/quarter threshold, require Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment. Off-site mitigation may be required if feasible mitigation measures are not implemented, or if no mitigation measures are feasible for the project.

Quarterly – Tier 2: For construction projects exceeding the 6.3 tons/quarter threshold, require Standard Mitigation Measures, BACT, implementation of a Construction Activity Management Plan (CAMP) and off-site mitigation are required.

Diesel Particulate Matter (DPM) Emissions

Daily: For construction projects exceeding the 7 lbs/day threshold, require Standard Mitigation Measures;

Quarterly - Tier 1: For construction projects lasting more than one quarter, exceedance of the 0.13 tons/quarter threshold requires Standard Mitigation Measures, BACT for construction equipment; and,

Quarterly - Tier 2: For construction projects exceeding the 0.32 tons/quarter threshold, require Standard Mitigation Measures, BACT, implementation of a CAMP, and off-site mitigation.

Fugitive Particulate Matter (PM10), Dust Emissions

Quarterly- Tier 1: For construction projects exceeding the 2.5 tons/quarter threshold requires Fugitive PM_{10} Mitigation Measures and may require the implementation of a CAMP.

Operational Impacts

Criteria Air Pollutants

The threshold criteria established by the SLOAPCD to determine the significance and appropriate mitigation level for long-term operational emissions from a project are presented in Table 5. These thresholds do not include emissions associated with permitted stationary sources.

Table 5. SLOAPCD Thresholds of Significance for Project-Level Operational Impacts

Pollutant	Threshold [1]	
	Daily (lbs/day)	Annual (tons/year)
Ozone Precursors (ROG + NO_X)	25	25
Diesel Particulate Matter (DPM)[2]	1.25	None
Fugitive Particulate Matter (PM_{10}), Dust	25	25
CO	550	None

1. *Daily and annual emissions thresholds are based on the California Health & Safety Code Division 26, Part 3, Chapter 10, Section 40918 and the ARB Carl Moyer Guidelines for DPM.*
2. *Applies to on-site emissions. DPM is seldom emitted from individual projects in quantities which lead to local or regional air quality attainment violations. Certain industrial and commercial projects may emit substantial quantities of on-site DPM through the use of stationary and mobile on-site diesel-fueled equipment.*

Source: SLOAPCD 2012

Toxic Air Contaminants

If a project has the potential to emit toxic or hazardous air pollutants, or is located in close proximity to sensitive receptors, impacts may be considered significant due to increased cancer risk for the affected population, even at a very low level of emissions. For the evaluation of new proposed land use projects that generate toxic air contaminants, such as diesel-fueled engines, the SLOAPCD has defined the excess cancer risk significance threshold at 10 in a million.

Localized CO Concentrations

Localized CO concentrations associated with the proposed project would be considered a less-than-significant impact if: (1) Traffic generated by the proposed project would not result in deterioration of signalized intersection level of service (LOS) to LOS E or F; or (2) the project would not contribute additional traffic to a signalized intersection that already operates at LOS of E or F (Caltrans 1996).

Odors

Screening of potential odor impacts is typically recommended for the following two situations:

- Projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate; and
- Residential or other sensitive receptor projects or other projects that may attract people locating near existing odor sources.

If the proposed project would locate receptors and known odor sources within one mile of each other, a full analysis of odor impacts is recommended. Known odor sources of primary concern, as identified by the SLOAPCD include landfills, transfer stations, asphalt batch plants, rendering plants, petroleum refineries, and painting/coating operations, as well as, composting, food processing, wastewater treatment, chemical manufacturing, and feedlot/dairy facilities.

Methodology

Short-term emissions associated with construction activities are largely dependent on the type of development proposed, area of ground disturbance, amount of buildings to be demolished, equipment required, and construction schedules. Emissions associated with the construction of the proposed project were calculated using the California Emissions Estimator Model (CalEEMod), version 2020.4.0 computer program. Project construction is anticipated to occur over an approximately 36-month period beginning in 2022. Based on project-specific information received, approximately 850 tons of material would be exported during demolition. Grading would require the import of approximately 2,370 cubic yards (cy) of material and the export of approximately 3,260 cy of material. Additional construction information, such as activity durations, equipment use, worker vehicle trips, and equipment load factors were not available and were based on default parameters contained in the model. Modeling assumptions and output files are included in Appendix C of this report.

Long-term operational emissions were calculated using the CalEEMod, version 2020.4.0. Energy use included emissions associated with natural gas and electricity use. Mobile-source emissions were based on vehicle trip-generation rates for the proposed project derived from the *French Hospital Update-Trip Generation and Parking 2020 Land Use, Parking Garage Location and Off-Site Staff Parking* prepared by Orosz Engineering Group (2020) and the *Focused Multimodal Transportation Analysis* prepared by Michael Baker International (MBI 2020). Potential reductions in mobile-source emissions were quantified based on estimated reductions in vehicle-miles traveled (VMT) associated with potential traffic demand management (TDM) strategies derived from the French Hospital Medical Center Expansion VMT Assessment prepared by Michael Baker International (MBI 2021). Based on the findings of this VMT Assessment, currently implemented TDM measures achieve reductions in VMT of 6.625 percent. Implementation of the additional recommended TDM measures identified in the report would result in further reductions of approximately 5 to 10 percent, resulting in a combined mitigated reduction in VMT of 11.625 to 16.625 percent. The service population for the proposed project was calculated based on an estimated 82 beds (patients) served by the project. Emission modeling files are provided in Appendix C.

The proposed project would include the installation of two diesel-fueled emergency generators. The specific emergency generators to be installed have not yet been identified. However, based on information provided for representative equipment, it is assumed that each generator would be approximately 800 kW (1,050 horsepower). The emergency generators could result in the emissions of TACs, primarily diesel-exhaust PM (DPM). Emissions of DPM were computed using the CalEEMod computer program assuming operational periods of 8 hours/day and 100 hours/year, based on permit limitations. Emissions of criteria air pollutants are presented for informational purposes, but are not compared to SLOAPCD's operational significance thresholds, per SLOAPCD-recommended guidance. Predicted cancer and non-cancer risks associated with the proposed emergency generators were calculated using a screening-level prioritization calculator in accordance with the Air Toxics "Hot Spots" Program, Facility Prioritization Guidelines. It is important to note that the proposed emergency generators would be subject to SLOAPCD permitting requirements. Compliance with SLOAPCD permitting requirements may include source-specific emission-reduction measures, operational limitations, or other measures sufficient to ensure that operational emissions would not exceed applicable SLOAPCD significance thresholds.

Project Impacts and Mitigation Measures

Impact AQ-A. Conflict with or obstruct implementation of the applicable air quality plan.

SLOAPCD Clean Air Plan

As part of the CCAA, the SLOAPCD is required to develop a plan to achieve and maintain the state ozone standard by the earliest practicable date. The SLOAPCD's 2001 Clean Air Plan (CAP) addresses the attainment and maintenance of state and federal ambient air quality standards. The CAP was adopted by SLOAPCD's on March 26, 2002.

The SLOAPCD's CAP outlines the District's strategies to reduce ozone-precursor pollutants (i.e., ROG and NO_X) from a wide variety of sources. The SLOAPCD's CAP includes a stationary-source control program, which includes control measures for permitted stationary sources; as well as, transportation and land use management strategies to reduce motor vehicle emissions and use. The stationary-source control program is administered by SLOAPCD. Transportation and land use control measures are implemented at the local or regional level, by promoting and facilitating the use of alternative transportation options, increased pedestrian access and accessibility to community services and local destinations, reductions in vehicle miles traveled, and promotion of congestion management efforts. In addition, local jurisdictions also prepare population forecasts, which are used by SLOAPCD to forecast population-related emissions and air quality attainment, including those contained in the SLOAPCD's CAP. As a result, consistency with the SLOAPCD's CAP has been evaluated based on the proposed project's consistency with the land use management strategies and transportation control measures identified in the CAP. This analysis also provides an analysis of regional vehicle miles traveled (VMT) and consistency with regional VMT-reduction efforts. Regional VMT estimates are relied upon for regional air quality planning purposes. Regional VMT and growth projections are used to determine the strategies to be implemented sufficient to reach the emission reduction targets set by the California Air Resources Board through SB 375 which is transportation legislation that supports the broader 2030 emission reduction targets required in SB 32.

Transportation and Land Use Control Measures

The SLOAPCD's CAP includes multiple transportation and land use control measures intended to reduce emissions through reductions in VMT and the promotion of alternative forms of transportation. The control measures applicable to the proposed project are summarized in Table 6. As noted the proposed project would be considered consistent with the SLOAPCD's regional air quality planning efforts.

Projected Population, Employment & VMT Growth

The proposed project includes expansion of an existing medical facility. The project would not result in an increase in residents. The project would, however, result in an increase in employment of approximately 45 jobs. According to the Regional Housing Needs Assessment (RHNA), the City of San Luis Obispo has about 61 percent more jobs than housing units, indicative of a "jobs-rich" community. The City's jobs to housing ratio is estimated to increase from a year 2015 ratio of 1.61 jobs/housing to a ratio of 1.82 jobs/housing by year

2030 (SLOCOG 2019). The proposed project would result in increased employment and would not result in an increase in housing. As a result, the proposed project could exacerbate the jobs-housing imbalance. In addition, the proposed project is projected to result in an overall increase in regional VMT. As a result, a VMT analysis was prepared for this project by Michael Baker International, which included an analysis of project-generated VMT and potential impacts to regional VMT reduction efforts (MBI 2021). Accordingly, exceedance of the City's VMT threshold of 15% below the regional average VMT/service population (SP) would be considered to conflict with regional VMT-reduction efforts and associated reductions in mobile-source emissions accounted for in the SLOAPCD's Clean Air Plan.

Table 6. Project Consistency with SLOAPCD's CAP Transportation and Land Use Control Measures

<table>
<tr><th>Control Measures</th><th>Project Consistency</th></tr>
<tr><td colspan="2">Land Use Planning Strategies</td></tr>
<tr><td>L-3 Balancing Jobs and Housing.
• Within cities and unincorporated communities, the gap between the availability of jobs and housing should be narrowed and should not be allowed to expand.</td><td>Consistent with Mitigation Incorporated. The proposed project is located within the City's urban reserve lines and would not result in the development of residential land uses. The project would, however, result in the creation of approximately 45 new jobs, which would exacerbate the gap between jobs and housing. Implementation of Mitigation Measure GHG-1 would require the preparation of a TDM plan which would include measures for reducing project-generated VMT. Other measures, such as Mitigation Measure GHG-2 would require additional measures to reduce operational emissions, including the installation of bicycle storage in excess of current building code requirements.</td></tr>
<tr><td colspan="2">Transportation Control Measures</td></tr>
<tr><td>T-2B Regional Public Transit Improvements.
• The goal of this measure is to improve transit service and facilities that will promote increased public transit use instead of a private automobile.</td><td rowspan="2">Consistent with Mitigation Incorporated.
• Transit service is provided along Johnson Avenue by SLO Transit via Route 1A/1B.
• The Project site and expansion supports the use of bicycle and pedestrian activity. Sidewalks are provided adjacent to and onto the site. A trail exists along the property that connects Breck Street to Iris Street. The project proposes to maintain the high level of bicycle and pedestrian accommodation.
• Bicycle lanes currently existing along Johnson Avenue. Bicycle accommodations on-site are provided via the shared travel ways and the trail that extends through the site from Breck Street to Iris Street.
• Mitigation Measure GHG-1 would require the preparation of a TDM plan which would include additional measures for reducing project-generated VMT.
• Mitigation Measure GHG-2 would require additional measures to reduce operational emissions, including the installation of bicycle storage in excess of current building code requirements.</td></tr>
<tr><td>T-3 Bicycling and Bikeway Enhancements.
• The goal of this measure is to encourage a modal shift to bicycles through implementation of infrastructure improvements and administrative actions that provide inexpensive commute options and increased safety and convenience for commuters.</td></tr>
<tr><td>T-8 Teleworking, Teleconferencing, and Telelearning.
• The objective of this measure is to reduce the number of trips and miles traveled by employees and students by promoting teleworking, tele-conferencing and telelearning.</td><td>• Consistent with Mitigation. As noted above, existing operations includes numerous measures to reduce employee-related trips. Mitigation Measure GHG-1 would require the preparation of a TDM plan which would include additional measures for reducing project-generated VMT.</td></tr>
</table>

Estimated regional average VMT modeling results, with and without project implementation, are summarized in Table 7. Table 8 presents a summary of project VMT impacts. As depicted, regional average VMT/Service Population (SP) would increase from 20.49 to 20.50 with project implementation. VMT would exceed the significance threshold of 17.42 VMT/SP (15% below the regional average). As a result, this impact would be considered ***potentially significant***.

Table 7. Project VMT Model Results

Category	San Luis Obispo (County) VMT/SP	
	Without Project	With Project
Total VMT	8,083,328	8,087,846
Total Population	280,101*	280,101*
Total Employment	114,304*	114,349**
Service Population	394,405	394,450
VMT/Service Population	20.49	20.50

Regional value obtained from 2019 Regional Transportation Plan (Connecting Communities) Policy Element, Figure 2-2, San Luis Obispo Region by the Numbers, pg 2-6.
Equals regional value plus project anticipated number of employees of 45.
Source: MBI 2021

Table 8. Project VMT Impact Summary

Category	VMT/SP Summary
VMT/SP - With Project	20.50
VMT/SP – Regional Average	20.49
VNT/SP Threshold (15% Below Regional Average)	17.42
Percent Reduction in VMT Required to Reduce to Below Threshold	15.05%

Source: MBI 2021

With the finding of a significant transportation impact, potential mitigation measures have been evaluated. To mitigate this impact, the project would need to identify Transportation Demand Management (TDM) elements to help reduce reliance on auto or provide means by which to either reduce the length of vehicle trips or reduce the number of vehicle trips. Based on the analysis conducted, the project would need to achieve reductions in VMT of 15.05% in order to reduce regional average VMT to below the significance threshold (MBI 2021).

Particulate Matter Report – Implementation of SB 656 Requirements

In July 2005, SLOAPCD adopted the *Particulate Matter Report* (PM Report). The PM Report identifies various measures and strategies to reduce public exposure to PM emitted from a wide variety of sources, including emissions from permitted stationary sources and fugitive sources, such as construction activities. As discussed in Impact AQ-B, uncontrolled fugitive dust generated during construction may result in localized pollutant concentrations that may result in increased nuisance concerns to nearby land uses. Therefore, construction-generated emissions of PM would be considered to have a ***potentially significant*** impact with regard to air quality planning efforts.

Mitigation Measures

Implement Mitigation Measures AQ-1 through AQ-3 (refer to Impact AQ-B) and GHG-1 through GHG-3 (Refer to Impact GHG-A)

Significance After Mitigation

Implementation of Mitigation Measures GHG-1 would require the preparation of a TDM plan, which would include measures to reduce the project's overall VMT. Based on the VMT analysis prepared for the project, estimated reductions in project-related VMT would range from approximately 11.625% at the low end to 16.625% at the high end, depending on the effectiveness of the measures implemented. At the low end, mitigated VMT would still exceed the City's threshold. However, at the high end of this range, mitigated VMT would fall below the City's threshold. If necessary, the TDM plan may include traffic fees to further reduce project-generated VMT to below the City's thresholds. Implementation of Mitigation Measures GHG-2, and

GHG-3 would include additional mitigation measures that would further reduce project-related operational emissions. Together these measures would help to provide consistency with the measures identified in the SLOAPCD's CAP. Implementation of Mitigation Measures AQ-1 through AQ-3 would include SLOAPCD-recommended measures for the control of construction-generated emissions, including emissions of PM. With implementation of SLOAPCD-recommended mitigation measures, the project would not conflict with regional air quality planning efforts. With mitigation, this impact would be considered ***less than significant.***

Impact AQ-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.

Short-term Construction Emissions

Construction-generated emissions are of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact. Construction of the proposed project would result in the temporary generation of emissions associated with site grading and excavation, paving, motor vehicle exhaust associated with construction equipment and worker trips, as well as the movement of construction equipment on unpaved surfaces. Short-term construction emissions would result in increased emissions of ozone-precursor pollutants (i.e., ROG and NO_X) and emissions of PM. Emissions of ozone-precursors would result from the operation of on- and off-road motorized vehicles and equipment. Emissions of airborne PM are largely dependent on the amount of ground disturbance associated with site preparation activities and can result in increased concentrations of PM that can adversely affect nearby sensitive land uses.

Estimated maximum daily and quarterly emissions associated with construction of the proposed project are presented in Table 9 and Table 10, respectively. Construction generated emissions were compared to SLOAPCD's recommended significant thresholds (Daily, Quarterly Tier 1, and Quarterly Tier 2). As depicted in Table 9, maximum daily emissions associated with the construction of the proposed project would total approximately 59.3 lbs/day of ROG+NO_X and 2.6 lbs/day of exhaust PM_{10}. As depicted in Table 10, the maximum quarterly construction-generated emissions would total approximately 1.1 tons/quarter of ROG+NO_X, 0.13 tons/quarter of fugitive PM_{10}, and 0.02 tons/quarter of exhaust PM_{10}.

Table 9. Daily Construction Emissions Without Mitigation

Construction Year	Maximum Daily Emissions (lbs/day)[1]	
	ROG+NO_X	**Exhaust PM_{10}**
2022	59.3	2.6
2023	36.1	1.4
2024	32.0	0.7
Maximum Daily Emissions:	59.3	2.6
SLOAPCD Daily Thresholds:	***137***	***7***
Exceed SLOAPCD Thresholds?	No	No

<u>Maximum Daily Emissions</u>: Assumes that multiple construction activities could potentially occur simultaneously on any given day. To be conservative, exhaust PM_{10} emissions were compared to SLOAPCD's DPM threshold. Totals may not sum due to rounding. Refer to Appendix C for modeling assumptions and results.
1 Maximum daily emissions include on-site and off-site emissions.

Maximum daily and quarterly construction emissions of ROG+NO_X would not exceed SLOAPCD's daily, quarterly Tier 1, or quarterly Tier 2 significance thresholds. Emissions would be largely a result of mobile-source emissions associated with construction vehicle and equipment operations anticipated to occur during the building construction phase. Estimated emissions of fugitive PM and DPM would, likewise, not exceed SLOAPCD's significance thresholds. However, if uncontrolled, fugitive dust and DPM generated during construction may result in localized pollutant concentrations that could exceed ambient air quality standards and result in increased nuisance concerns to nearby land uses. For these reasons, construction-generated emissions would be considered to have a ***potentially significant*** impact.

Table 10. Quarterly Construction Emissions Without Mitigation

Quarter	Maximum Quarterly Emissions (tons)[1]			
	ROG+NO_X	PM_{10}[2]		
		Fugitive	Exhaust	Total
Year 2022 - Quarter 3	0.81	0.09	0.02	0.11
Year 2022 - Quarter 4	0.60	0.02	0.00	0.02
Year 2023 - Quarter 1	0.54	0.02	0.00	0.02
Year 2023 - Quarter 2	0.55	0.02	0.00	0.02
Year 2023 - Quarter 3	0.74	0.13	0.02	0.15
Year 2023 - Quarter 4	0.65	0.02	0.00	0.02
Year 2024 - Quarter 1	1.00	0.02	0.00	0.02
Year 2024 - Quarter 2	1.10	0.02	0.00	0.02
Year 2024 - Quarter 3	0.01	0.00	0.00	0.00
SLOAPCD Quarterly Tier 1/Tier 2 Thresholds (tons/quarter)	**2.5/6.3**	**2.5/None**	**0.13/0.32**	**None**
Maximum Quarterly Emissions:	1.10	0.13	0.02	0.15
Exceeds SLOAPCD Tier 1/Tier 2 Thresholds?	No/No	No/NA	No/No	NA

Maximum Quarterly Emissions: Assumes that facility construction, paving, and application of architectural coatings could potentially occur simultaneously on any given day. To be conservative, total exhaust PM_{10} emissions were compared to SLOAPCD's DPM threshold. Totals may not sum due to rounding. Refer to Appendix C for modeling assumptions and results. NA=Not Applicable
1. Maximum daily emissions include on-site and off-site emissions..

Mitigation Measures

AQ-1: The following SLOAPCD-recommended *Standard Mitigation Measures* shall be implemented to reduce construction generated NO_x, ROG, and DPM.

a. Maintain all construction equipment in proper tune according to manufacturer's specifications;
b. Fuel all off-road and portable diesel-powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
c. Diesel-fueled construction equipment shall meet, at a minimum, ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation. Off-road equipment meeting ARB's Tier 3 and Tier 4 emission standards should be used, to the extent locally available;
d. Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
e. Construction or trucking companies with fleets that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance;
f. All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5-minute idling limit;
g. Diesel idling within 1,000 feet of sensitive receptors is not permitted;
h. To the extent possible, staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
i. Electrify equipment when possible;
j. Substitute gasoline-powered in place of diesel-powered equipment, where possible; and,
k. Use alternative-fueled construction equipment on-site where possible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

AQ-2: The following SLOAPCD-recommended mitigation measures shall be implemented to reduce construction generated fugitive dust. These measures shall be shown on grading and building plans.

a. Reduce the amount of disturbed area where possible.
b. Use water trucks, SLOAPCD-approved dust suppressants (see Section 4.3 in the CEQA Air Quality Handbook), or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the District's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. Please note that since water use is a concern due to drought conditions, the contractor or builder shall consider the use of an APCD-approved dust suppressant where possible to reduce the amount of water used for dust control. For a list of suppressants, see Section 4.3 of the CEQA Air Quality Handbook.
c. All dirt stockpile areas should be sprayed daily or covered with tarps or other dust barriers as needed.
d. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
e. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between the top of load and top of trailer) in accordance with CVC Section 23114.
f. "Track-Out" is defined as sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto any highway or street as described in CVC Section 23113 and California Water Code 13304. To prevent 'track out', designate access points and require all employees, subcontractors, and others to use them. Install and operate a 'track-out prevention device' where vehicles enter and exit unpaved roads onto paved streets. The 'track-out prevention device' can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices need periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified.
g. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities;
h. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established.
i. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the SLOAPCD.
j. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where possible. Roads shall be pre-wetted prior to sweeping when possible.
l. The burning of vegetative material shall be prohibited. Effective February 25, 2000, the APCD prohibited developmental burning of vegetative material within San Luis Obispo County. If you have any questions regarding these requirements, contact the SLOAPCD Engineering & Compliance Division at (805) 781-5912.
m. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20% opacity, and to prevent the transport of dust off-site. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the SLOAPCD Compliance Division prior to the start of any grading, earthwork or demolition.

AQ-3: The following measures shall be implemented to reduce construction emissions from on and off-road construction equipment (NOx, ROG, and DPM) and area sources. These measures shall be shown on grading and building plans:

a. When applicable, portable equipment, 50 horsepower (hp) or greater, used during construction activities shall be registered with the California statewide portable equipment registration program (issued by the California Air Resources Board) or be permitted by the APCD. Such equipment may include power screens, conveyors, internal combustion engines, crushers, portable generators, tub grinders, trammel screens, and portable plants (e.g, aggregate plant, asphalt plant, concrete plant). For more information, contact the SLOAPCD Engineering & Compliance Division at (805) 781-5912.

b. Construction of the proposed project shall use low-VOC content paints not exceeding 50 grams per liter.
c. To the extent locally available, use prefinished building materials or materials that do not require the application of architectural coatings.
d. <u>Idling Restrictions Near Sensitive Receptors for Both On and Off-Road Equipment</u>
    1) Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
    2) Diesel idling within 1,000 feet of sensitive receptors is not permitted;
    3) Use of alternative fueled equipment is recommended whenever possible; and,
    4) Signs that specify the no-idling requirements must be posted and enforced at the construction site.
e. <u>Idling Restrictions for On-road Vehicles</u>
    Section 2485 of Title 13, the California Code of Regulations limits diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicular weight ratings of greater than 10,000 pounds and licensed for operation on highways. It applies to California and non-California based vehicles. In general, the regulation specifies that drivers of said vehicles:
    1) Shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location, except as noted in Subsection (d) of the regulation; and,
    2) Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 100 feet of a restricted area, except as noted in Subsection (d) of the regulation.
    3) Signs must be posted in the designated queuing areas and job sites to remind drivers of the 5-minute idling limit. The specific requirements and exceptions in the regulation can be reviewed at the following web site: www.arb.ca.gov/msprog/truck-idling/2485.pdf.
f. <u>Idling Restrictions for off-Road Equipment</u>
    Off-road diesel equipment shall comply with the 5-minute idling restriction identified in Section 2449(d)(3) of the California Air Resources Board's In-Use Off-Road Diesel regulation: www.arb.ca.gov/regact/2007/ordiesl07/frooal.pdf. Signs shall be posted in the designated queuing areas and job sites to remind off-road equipment operators of the 5-minute idling limit.

<u>Significance After Mitigation</u>

Implementation of Mitigation Measures AQ-1, AQ-2, AQ-3 would include measures to reduce construction-generated emissions of fugitive dust, mobile-source emissions associated with construction vehicles and equipment, and evaporative emissions from architectural coating (e.g. low VOC-emission paint). Together these measures would assist with the compliance of SLOAPCD's 20-percent opacity limit (APCD Rule 401), nuisance rule (APCD Rule 402), and minimize potential nuisance impacts to nearby receptors. Implementation of SLOAPCD-recommended control measures would reduce fugitive emissions by approximately 50 percent, or more. With mitigation, this impact would be considered ***less than significant.***

Long-term Operational Emissions

Long-term operational emissions associated with the proposed project would be predominantly associated with mobile sources. To a lesser extent, emissions associated with area sources, such as landscape maintenance activities, as well as, use of electricity and natural gas would also contribute to increased operational emissions.

Unmitigated operational emissions associated with the proposed project are summarized in Table 11. As depicted, maximum daily operational emissions (excluding the operation of proposed onsite emergency generators) would total approximately 12.9 lbs/day of ROG+NO_X, 30.6 lbs/day of CO, 6.0 lbs/day of fugitive PM_{10}, and 0.3 lbs/day of exhaust PM_{10}. Estimated daily and annual operational emissions would not exceed SLOAPCD's recommended significance thresholds. It is important to note that implementation of mitigation measures GHG-1 through GHG-3 would result in further reductions in operational emissions of criteria air pollutants. These measures would include implementation of a TDM program to reduce project-generated VMT. In addition to the TDM measures already being implemented, the recommended measures to be included in the TDM plan are estimated to result in additional VMT reductions of 5 to 10 percent. Estimated reductions in mobile-source emissions associated with implementation of the TDM program are summarized in Table 12. Because operational emissions would not exceed SLOAPCD significance thresholds, this impact would be considered ***less than significant***.

Table 11. Operational Emissions Without Mitigation

Operational Period/Source	Emissions[1]						
	ROG	NO_X	ROG+NO_X	CO	PM_{10} Fugitive	PM_{10} Exhaust[2]	PM_{10} Total
Daily Emissions (lbs/day)							
Area Source	2.5	0.0	2.5	0.0	0.0	0.0	0.0
Energy Use	0.3	2.6	2.9	2.2	0.0	0.2	0.2
Mobile with Existing TDM Strategies[4]	3.1	4.4	7.5	28.4	6.0	0.1	6.1
Stationary Sources-Emergency Generators [5]	27.6	70.3	97.9	2.9	0.0	2.0	2.0
SLOAPCD Significance Thresholds[6]	**--**	**--**	**25**	**550**	**25**	**1.25[3]**	**--**
Total Project Emissions without Stationary Sources:	5.9	7.0	12.9	30.6	6.0	0.3	6.3
Exceeds SLOAPCD Thresholds?	--	--	No	No	No	No	--
Annual Emissions (tons/year)							
Total Project Emissions	1.2	2.2	3.4	2.0	0.1	0.1	0.2
SLOAPCD Significance Thresholds	--	--	25	--	25	--	--
Exceeds SLOAPCD Thresholds?	--	--	No	--	No	--	--

1. *Emissions quantified using CalEEMod, v2020.4.0. Totals may not sum due to rounding. Refer to Appendix C for modeling output files and assumptions.*
2. *Includes PM exhaust emissions for diesel- and gasoline-fueled vehicles. Emissions associated with stationary sources includes the installation to two emergency generators which would be projected to exceed SLOAPCD's on-site significance threshold of 1.25 lbs/day.*
3. *The SLOAPCD-recommended DPM significance threshold applies to on-site emission sources.*
4. *Includes existing TDM strategies currently implemented, which are estimated to result in reductions in VMT of 6.625% (MBI 2021).*
5. *Assumes the operation of two diesel-fueled 1,050 hp generators 8-hours/day; annual emissions assumes operation up to 100 hours/year for maintenance and testing purposes in accordance with SLOAPCD Rule 431 operational limitations. Permitted stationary source emissions are provided for informational purposes.*
6. *Includes area source, energy use, and mobile-source emissions. Does not include emissions associated with permitted stationary sources.*

Table 12. Operational Mobile-Source Emissions With Proposed TDM Strategies

Operational Period/Source	Daily Emissions (lbs/day)[1]						
	ROG	NO_X	ROG+NO_X	CO	PM_{10} Fugitive	PM_{10} Exhaust[2]	PM_{10} Total
Mobile with Existing TDM Strategies[4]	3.1	4.4	7.5	28.4	6.0	0.1	6.1
Mobile with Existing+Recommended TDM Strategies (Minimum 11.625% Reduction)	2.7	3.9	6.6	25.1	5.3	0.1	5.4
Reduction Compared to Existing:	0.4	0.5	0.9	3.3	0.7	0.0	0.7
Mobile with Existing+Recommended TDM Strategies (Maximum 16.625% Reduction)	2.6	3.7	6.3	23.7	5.0	0.1	5.1
Reduction Compared to Existing:	0.5	0.7	1.2	4.7	1.0	0.0	1.0

1. *Daily emissions quantified using CalEEMod, v2020.4.0. Totals may not sum due to rounding. Refer to Appendix C for modeling output files and assumptions.*
2. *Includes existing TDM strategies currently implemented, which are estimated to result in reductions in VMT of 6.625%. Recommended TDM strategies are estimated to provide additional reductions of 5 to 10 percent in VMT (MBI 2021).*

Impact AQ-C. Expose sensitive receptors to substantial pollutant concentrations.

The proposed project would result in localized increases of pollutant concentrations during project construction and long-term operation. The proposed project's potential contribution to localized air pollutants is discussed, as follows:

Short-Term Construction Activities

Naturally-Occurring Asbestos

Naturally-occurring asbestos (NOA) has been identified as a toxic air contaminant by the ARB. In accordance with ARB Air Toxics Control Measure (ATCM), prior to any grading activities, a geologic evaluation should be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request form, along with a copy of the geologic report, must be filed with the SLOAPCD. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM.

Based on a review of the SLOAPCD's map depicting potential areas of NOA, the project site is located in or near an area that has been identified as having a potential for NOA (refer to Appendix B). There is a potential for NOA to potentially be discovered during the grading process. As a result, this impact would be considered ***potentially significant***.

Asbestos-Containing Materials

Demolition activities can have potential negative air quality impacts, including issues surrounding the proper handling, demolition, and disposal of asbestos-containing material (ACM). ACM could be encountered during the demolition of existing buildings, particularly older structures constructed prior to 1970. Asbestos can also be found in various building products, including (but not limited to) utility pipes/pipelines (transit pipes or insulation on pipes). If a project will involve the disturbance or potential disturbance of ACM, various regulatory requirements may apply, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M-Asbestos NESHAP). These requirements include but are not limited to: 1) notification, within at least 10 business days of activities commencing, to the APCD, 2) an asbestos survey conducted by a Certified Asbestos Consultant, and, 3) applicable removal and disposal requirements of identified ACM.

The proposed project would include the demolition of approximately 2,000 sq.ft. of existing on-site structures. The demolition of existing structures may result in disturbance of ACM. This impact is considered ***potentially significant***.

Lead-Coated Materials

Demolition of structures coated with lead-based paint can have potential negative air quality impacts and may adversely affect the health of nearby individuals. Improper demolition can result in the release of lead-containing particles from the site. Sandblasting or removal of paint by heating with a heat gun can result in significant emissions of lead. In such instances, proper abatement of lead before demolition of these structures must be performed in order to prevent the release of lead from the site. Depending on the removal method, a SLOAPCD permit may be required. The demolition of existing structures may result in the disturbance of lead-containing materials. This impact is considered ***potentially significant***.

Localized PM Concentrations

Fugitive dust emissions would be primarily associated with building demolition, site preparation, grading, and vehicle travel on unpaved and paved surfaces. On-site off-road equipment and trucks would also result in short-term emissions of diesel-exhaust PM, which could contribute to elevated localized concentration at nearby receptors. Uncontrolled emissions of fugitive dust may also contribute to potential increases in nuisance impacts to nearby receptors. For these reasons, localized uncontrolled concentrations of construction-generated PM would be considered to have a ***potentially significant*** impact.

Mitigation Measures

To reduce potential exposure to localized pollutant concentrations associated with construction activities, Mitigation Measure AQ-1 through AQ-3 and the following additional measures shall be implemented:

AQ-4: The following mitigation measures shall be implemented to reduce the disturbance of asbestos and lead. Strategies include but are not limited to the following:

a. Demolition of on-site structures shall comply with the National Emission Standards for Hazardous Air Emissions requirements (NESHAP, 40 CFR, Part 61, Subpart M) for the demolition of existing structures. The SLOAPCD is delegated authority by the Environmental Protection Agency (EPA) to implement the Federal Asbestos NESHAP. Prior to demolition of on-site structures, the SLOAPCD shall be notified, per NESHAP requirements. SLOAPCD notification form and reporting requirements are included in Appendix A. Additional information may be obtained at website URL: http://slocleanair.org/business/asbestos.php.

b. If during the demolition of existing structures, paint is separated from the construction materials (e.g. chemically or physically), the paint waste will be evaluated independently from the building material by a qualified hazardous materials inspector to determine its proper management. All hazardous materials shall be handled and disposed of in accordance with local, state and federal regulations. According to the Department of Toxic Substances Control (DTSC), if the paint is not removed from the building material during demolition (and is not chipping or peeling), the material can be disposed of as construction debris (a non-hazardous waste). The landfill operator will be contacted prior to disposal of building material debris to determine any specific requirements the landfill may have regarding the disposal of lead-based paint materials. The disposal of demolition debris shall comply with any such requirements. Contact the SLOAPCD Enforcement Division at (805) 781-5912 for more information. Approval of a lead work plan and permit may be required. Lead work plans, if required, will need to be submitted to SLOAPCD ten days prior to the start of demolition.

c. Prior to any grading activities, a geologic evaluation shall be conducted to determine if naturally occurring asbestos (NOA) is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the SLOAPCD. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM. These requirements may include but are not limited to:

    1) Development of an Asbestos Dust Mitigation Plan which must be approved by the SLOAPCD before operations begin, and,
    2) Development and approval of an Asbestos Health and Safety Program (required for some projects).

Significance After Mitigation

With the implementation of Mitigation Measure AQ-1 through AQ-3 construction-related emissions, including fugitive dust, would be substantially reduced. Mitigation Measure AQ-4 would ensure compliance with applicable regulatory requirements pertaining to exposure to asbestos and lead-based paints. With mitigation, this impact would be considered ***less than significant.***

Long-term Operations

Localized CO Concentrations

Localized concentrations of CO are of primary concern in areas located near congested roadway intersections. Of particular concern are signalized intersections that are projected to operate at unacceptable levels of service (LOS) E or F (Caltrans 1996). With implementation of the proposed project, signalized intersections primarily affected by the proposed project would operate at LOS D, or better (Michael Baker 2020). As a result, implementation of the proposed project is not anticipated to contribute to localized CO concentrations that would exceed applicable ambient air quality standards. This impact is considered ***less than significant***.

Toxic Air Contaminants

The proposed project would include the installation of two approximately 1,050 horsepower diesel-fueled emergency generators. The specific generators to be installed have not yet been identified. Emissions of primary concern with diesel-fueled engines are predominantly associated with diesel-exhaust particulate matter (DPM). The emergency generators would operate on an occasional basis for routine maintenance and testing and on an emergency basis during electrical outages. Based on the modeling conducted, the emergency generators would emit approximately 25.3 lbs/year of DPM, assuming an operational period of 100 hours/year based on permit limitations. A screening-level health risk assessment was conducted for purposed of evaluating potential acute and chronic health risks associated with the proposed emergency generators. For the nearest off-site receptors, as well as on-site receptors (e.g., patients and staff), operation of the proposed generators would result in a combined cancer risk score of 58.2, which would be considered to have a high potential for cancer risk in excess of SLOAPCD's significance threshold of 10 in one million. It is important to note, however, that the proposed emergency generators would be subject to SLOAPCD permitting requirements for stationary emission sources. The SLOAPCD requires implementation of best available control technology for sources of TACs, sufficient to reduce operational emissions to below applicable thresholds. An authority to construction or a permit to operate would not be issued by the SLOAPCD unless emissions were reduced below applicable thresholds. With compliance with existing regulatory requirements, this impact would be considered ***less than significant.***

Impact AQ-D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

The proposed project would not result in the installation of any equipment or processes that would be considered major odor-emission sources. In addition, no known odor sources are within one mile of the project site. However, construction of the proposed project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel-exhaust, may be considered objectionable by some people. In addition, pavement coatings and architectural coatings used during project construction would also emit temporary odors. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. For these reasons, potential exposure of sensitive receptors to odorous emissions would be considered ***less than significant***.

GREENHOUSE GASES AND CLIMATE CHANGE

Existing Setting

To fully understand global climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the greenhouse gases (GHGs) that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Primary GHGs attributed to global climate change, are discussed, as follows:

- **Carbon Dioxide**. Carbon dioxide (CO_2) is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere (U.S. EPA 2018).

- **Methane**. Methane (CH_4) is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years (U.S. EPA 2018).

- **Nitrous Oxide**. Nitrous oxide (N_2O) is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 114 years (U.S. EPA 2018).

- **Hydrofluorocarbons.** Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 270 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (U.S. EPA 2018).

- **Perfluorocarbons.** Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and non-toxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F1_4). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for PFCs ranges from 2,600 to 50,000 years (U.S. EPA 2018).

- **Nitrogen Trifluoride**. Nitrogen trifluoride (NF_3) is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. Nitrogen trifluoride is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin-film solar cells. It has a global warming potential of 16,100 carbon dioxide equivalents (CO_2e). While NF_3 may have a lower global warming potential than other chemical etchants, it is still a potent GHG. In 2009, NF_3 was listed by California as a high global warming potential GHG to be listed and regulated under Assembly Bill (AB) 32 (Section 38505 Health and Safety Code).

- **Sulfur Hexafluoride**. Sulfur hexafluoride (SF_6) is an inorganic compound that is colorless, odorless, non-toxic, and generally non-flammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (U.S. EPA 2018).

- **Black Carbon**. Black carbon is the strongest light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands) (CCAC 2018, U.S. EPA 2018).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in CO_2e, which weight each gas by its global warming potential (GWP). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. Table 13 provides a summary of the GWP for GHG emissions of typical concern with regard to community development projects, based on a 100-year time horizon. As indicated, Methane traps over 25 times more heat per molecule than CO_2, and N_2O absorbs roughly 298 times more heat per molecule than CO_2. Additional GHG with high GWP includes Nitrogen trifluoride, Sulfur hexafluoride, Perfluorocarbons, and black carbon.

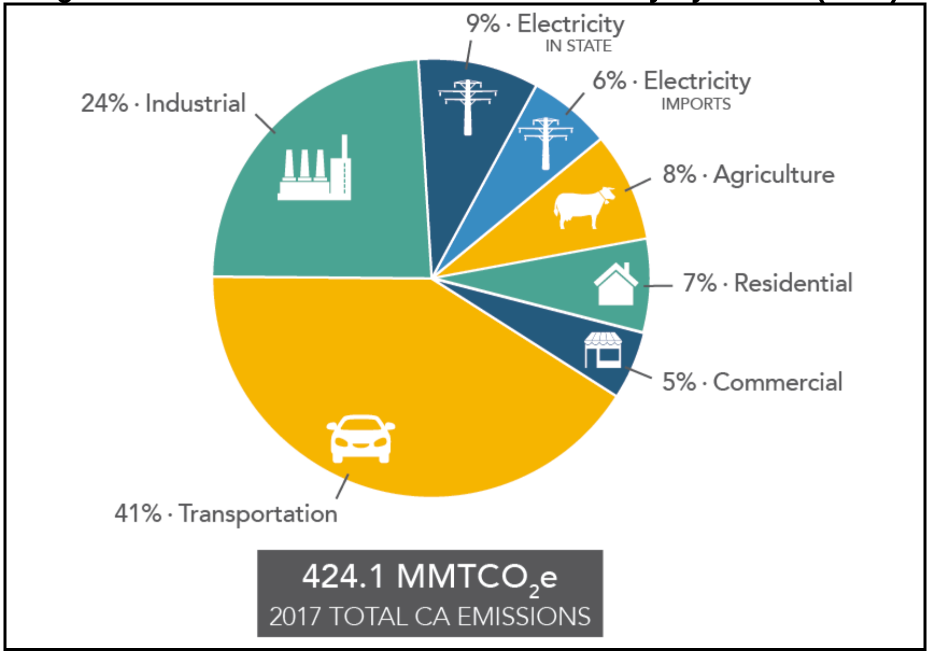
Table 13. Global Warming Potential for Greenhouse Gases

Greenhouse Gas	Global Warming Potential (100-year)
Carbon Dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous Dioxide (N_2O)	298
Based on IPCC GWP values for 100-year time horizon. *Source: IPCC 2007*	

Statewide GHG Emissions

In 2017, GHG emissions within California totaled 424.1 million metric tons (MMT) of CO_2e. GHG emissions, by sector, are summarized in Figure 2. Within California, the transportation sector is the largest contributor, accounting for approximately 41 percent of the total state-wide GHG emissions. Emissions associated with industrial uses are the second-largest contributor, totaling roughly 24 percent. Electricity generation totaled roughly 15 percent. Other major emission sources included commercial uses, residential uses, agriculture, recycling and waste (ARB 2019).

Figure 2. California GHG Emissions Inventory by Sector (2017)



Source: ARB 2019a

City of San Luis Obispo GHG Emissions Inventories

The City has completed a community-wide inventory of GHG emissions for years 2005 and 2016, which are summarized in Table 14. As shown, a majority of the City's emissions are associated with mobile sources. Remaining GHG emissions are predominantly associated with energy use and solid waste generation. In comparison to year 2005 community-wide emissions, year 2016 emissions decreased by a total of approximately 12 percent (City of San Luis Obispo 2020).

Table 14. City of San Luis Obispo GHG Emissions Inventories

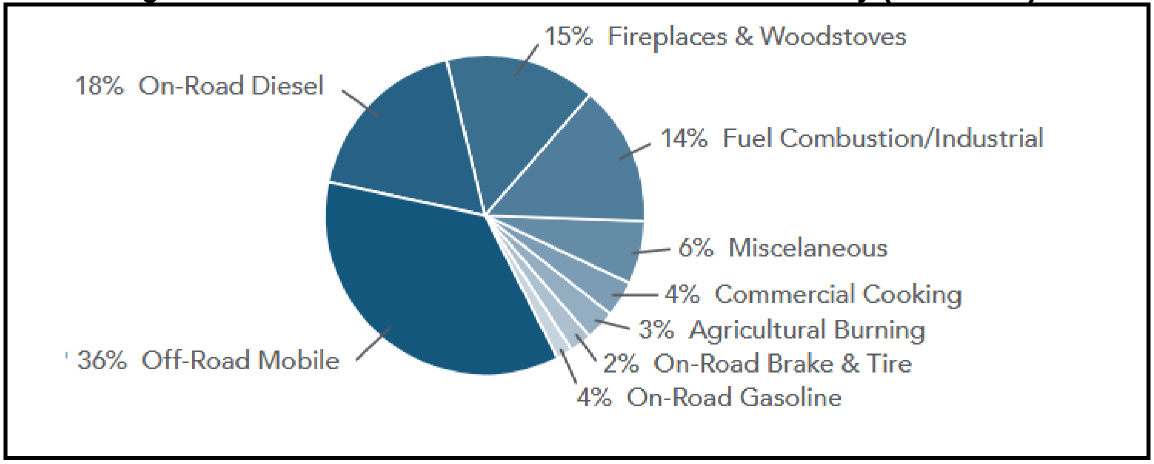
Sector	Year 2005	Year 2016	Percent Change from 2005 to 2016
Transportation	225,390	212,980	-6%
Non-residential Energy	58,050	44,270	-24%
Residential Energy	55,450	39,410	-29%
Solid Waste	47,740	42,630	-11%
Total	386,630	339,290	-12%
Source: City of San Luis Obispo 2020			

Short-Lived Climate Pollutants

Short-lived climate pollutants (SLCPs), such as black carbon, fluorinated gases, and methane also have a dramatic effect on climate change. Though short-lived, these pollutants create a warming influence on the climate that is many times more potent than that of carbon dioxide.

As part of the ARB's efforts to address SLCPs, the ARB has developed a statewide emission inventory for black carbon. The black carbon inventory will help support the implementation of the SLCP Strategy, but it is not part of the State's GHG Inventory that tracks progress towards the State's climate targets. The most recent inventory for year 2013 conditions is depicted in Figure 3. As depicted, off-road mobile sources account for a majority of black carbon emissions totaling roughly 36 percent of the inventory. Other major anthropogenic sources of black carbon include on-road transportation, residential wood burning, fuel combustion, and industrial processes (ARB 2020).

Figure 3. California Black Carbon Emissions Inventory (Year 2013)



Source: ARB 2020

Effects of Global Climate Change

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea-level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of the precipitation. For instance, historical records are depicting an increasing trend toward earlier snowmelt in the Sierra Nevada. This snowpack is a principal supply of water for the state, providing roughly 50 percent of the state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during spring and summer months. Earlier snowmelt would also impact the State's energy resources. Currently, approximately 20 percent of California's electricity comes from hydropower. Early exhaustion of the Sierra snowpack, may force electricity producers to switch to more costly or non-renewable forms of electricity generation during spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. As a result, resultant changes in climate will likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry.

Regulatory Framework

Federal

EXECUTIVE ORDER 13514

Executive Order 13514 is focused on reducing GHGs internally in federal agency missions, programs, and operations. In addition, the executive order directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in Massachusetts v. U.S. EPA, 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the FCAA and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009. On May 7, 2010, the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards was published in the Federal Register.

The U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 MMT and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On August 28, 2012, U.S. EPA and NHTSA issued their joint rule to extend this national program of coordinated GHG and fuel economy standards to model years 2017 through 2025 passenger vehicles.

State

EXECUTIVE ORDER NO. S-3-05

Executive Order S-3-05 (State of California) proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the secretary of CalEPA created a Climate Action Team made up of members from various state agencies and commissions. The Climate Action Team released its first report in March 2006 and continues to release periodic reports on progress. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government, and community actions, as well as through state incentive and regulatory programs.

ASSEMBLY BILL 32 - CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006

AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, NF_3, and SF_6. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

CLIMATE CHANGE SCOPING PLAN

In October 2008, ARB published its *Climate Change Proposed Scoping Plan*, which is the State's plan to achieve GHG reductions in California required by AB 32. This initial Scoping Plan contained the main strategies to be implemented in order to achieve the target emission levels identified in AB 32. The Scoping Plan included ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations were associated with improving emissions standards for light-duty vehicles, implementing the Low Carbon Fuel Standard program, implementation of energy efficiency measures in buildings and appliances, and the widespread development of combined heat and power systems, and developing a renewable portfolio standard for electricity production.

The Scoping Plan states that land use planning and urban growth decisions will play important roles in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. With regard to land use planning, the Scoping Plan expects approximately 5.0 MMT CO_2e will be achieved associated with the implementation of Senate Bill 375, which is discussed further below.

The initial Scoping Plan was first approved by ARB on December 11, 2008, and is updated every five years. The first update of the Scoping Plan was approved by the ARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reaching the 2050 goals., The most recent update released by ARB is the *2017 Climate Change Scoping Plan*, which was released November 2017. The *2017 Climate Change Scoping Plan* incorporates strategies for achieving the 2030 GHG-reduction target established in SB 32 and EO B-30-15. Most notably, the *2017 Climate Change Scoping Plan* encourages zero net increases in GHG emissions. However, the *2017 Climate Change Scoping Plan* recognizes that achieving net zero increases in GHG emissions may not be possible or appropriate for all projects and that the inability of a project to mitigate its GHG emissions to zero would not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA.

The 2022 Climate Change Scoping Plan update is currently being prepared. The 2022 Scoping Plan Update will assess progress towards achieving the SB 32 year 2030 target and will lay out a path to achieve carbon neutrality by mid-century.

SENATE BILL 1078 AND GOVERNOR'S ORDER S-14-08

Senate Bill 1078 (Public Utilities Code Sections 387, 390.1, 399.25 and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order S-14-08, which set the Renewables Portfolio Standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. Executive Order S-14-08 was later superseded by Executive Order S-21-09 on September 15, 2009. Executive Order S-21-09 directed the ARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. Statute SB X1-2 superseded this

Executive Order in 2011, which obligated all California electricity providers, including investor-owned utilities and publicly owned utilities, to obtain at least 33 percent of their energy from renewable electrical generation facilities by 2020.

ARB is required by current law, AB 32 of 2006, to regulate sources of GHGs to meet a state goal of reducing GHG emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050. The California Energy Commission and California Public Utilities Commission serve in advisory roles to help ARB develop the regulations to administer the 33 percent by 2020 requirement. ARB is also authorized to increase the target and accelerate and expand the time frame.

MANDATORY REPORTING OF GHG EMISSIONS

The California Global Warming Solutions Act (AB 32, 2006) requires the reporting of GHGs by major sources to the ARB. Major sources required to report GHG emissions include industrial facilities, suppliers of transportation fuels, natural gas, natural gas liquids, liquefied petroleum gas, and carbon dioxide, operators of petroleum and natural gas systems, and electricity retail providers and marketers.

CAP-AND-TRADE REGULATION

The cap-and-trade regulation is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013, and apply to large electric power plants and large industrial plants. In 2015, fuel distributors, including distributors of heating and transportation fuels, also became subject to the cap-and-trade rules. At that stage, the program will encompass around 360 businesses throughout California and nearly 85 percent of the state's total GHG emissions.

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions and are free to buy and sell allowances on the open market. California held its first auction of GHG allowances on November 14, 2012. California's GHG cap-and-trade system is projected to reduce GHG emissions to 1990 levels by the year 2020 and would achieve an approximate 80 percent reduction from 1990 levels by 2050.

SENATE BILL 32

SB 32 was signed by Governor Brown on September 8, 2016. SB 32 effectively extends California's GHG emission-reduction goals from year 2020 to year 2030. This new emission-reduction target of 40 percent below 1990 levels by 2030 is intended to promote further GHG-reductions in support of the State's ultimate goal of reducing GHG emissions by 80 percent below 1990 levels by 2050. SB 32 also directs the ARB to update the Climate Change Scoping Plan to address this interim 2030 emission-reduction target.

SENATE BILL 97

Senate Bill 97 (SB 97) was enacted in 2007. SB 97 required OPR to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions. Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions.
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions.
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change.
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria.
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply and ways to reduce energy demand, including through the use of efficient transportation alternatives.

As part of the administrative rulemaking process, the California Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010.

SENATE BILL 100

Senate Bill 100 (SB 100) was signed by Governor Jerry Brown on September 10, 2018. SB 100 sets a goal of phasing out all fossil fuels from the state's electricity sector by 2045. SB 100 increases to 60 percent, from 50 percent, how much of California's electricity portfolio must come from renewables by 2030. It establishes a further goal to have an electric grid that is entirely powered by clean energy by 2045, which could include other carbon-free sources, like nuclear power, that are not renewable.

SENATE BILL 375

SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will address land-use allocation in that MPOs regional transportation plan. ARB, in consultation with MPOs, establishes regional reduction targets for GHGs emitted by passenger cars and light trucks for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, funding for transportation projects may be withheld. In 2018, ARB adopted updated SB 375 targets.

CALIFORNIA BUILDING CODE

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Code is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

GREEN BUILDING STANDARDS

In essence, green buildings standards are indistinguishable from any other building standards. Both standards are contained in the California Building Code and regulate the construction of new buildings and improvements. The only practical distinction between the two is that whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

AB 32, which mandates the reduction of GHG emissions in California to 1990 levels by 2020, increased the urgency around the adoption of green building standards. In its scoping plan for the implementation of AB 32, ARB identified energy use as the second largest contributor to California's GHG emissions, constituting roughly 25 percent of all such emissions.

The green buildings standards were most recently updated May 2018. Referred to as the *2019 Building Energy Efficiency Standards*, this most recent update focus on four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to the exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential lighting requirements. The ventilation measures improve indoor air quality, protecting homeowners from air pollution originating from outdoor and indoor sources. Under the newly adopted standards, nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades. The recently updated *2019 Building Energy Efficiency Standards* also require new homes built after January 1, 2020 to be equipped with solar photovoltaic (PV) systems. The solar PV systems are to be sized based on the buildings annual electricity demand, the building square footage, and the climate zone within which the home is located. However, under the *2019 Building Energy Efficiency Standards,* homes may still rely on other energy sources, such as natural gas. Compliance with the *2019 Building Energy Efficiency Standards,* including the solar PV system mandate, residential dwellings will use approximately 50 to 53 percent less energy than those under the 2016 standards. Actual reduction will vary depending on various factors (e.g., building orientation, sun exposure). Non-residential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2019). These standards are currently being updated.

SHORT-LIVED CLIMATE POLLUTANT REDUCTION STRATEGY

In March 2017, the ARB adopted the *Short-Lived Climate Pollutant Reduction Strategy* (*SLCP Strategy*) establishing a path to decrease GHG emissions and displace fossil-based natural gas use. Strategies include avoiding landfill methane emissions by reducing the disposal of organics through edible food recovery, composting, in-vessel digestion, and other processes; and recovering methane from wastewater treatment facilities, and manure methane at dairies, and using the methane as a renewable source of natural gas to fuel vehicles or generate electricity. The *SLCP Strategy* also identifies steps to reduce natural gas leaks from oil and gas wells, pipelines, valves, and pumps to improve safety, avoid energy losses, and reduce methane emissions associated with natural gas use. Lastly, the *SLCP Strategy* also identifies measures that can reduce hydrofluorocarbon (HFC) emissions at national and international levels, in addition to State-level action that includes an incentive program to encourage the use of low-GWP refrigerants, and limitations on the use of high-GWP refrigerants in new refrigeration and air-conditioning equipment (ARB 2017).

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT

The SLOAPCD is a local public agency with the primary mission of realizing and preserving clean air for all county residents and businesses. Responsibilities of the SLOAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by federal and state regulatory requirements.

CITY OF SAN LUIS OBISPO CLIMATE ACTION PLAN

The City of San Luis Obispo Climate Action Plan for Community Recovery (CAP) is a long-range plan to reduce GHG emissions from City government operations and community activities. The CAP will also help achieve multiple community goals such as lowering energy costs, reducing air pollution, supporting local economic development. The CAP was prepared with the goal of achieving carbon neutrality by 2035. The CAP includes measures to reduce community-wide GHG emissions by 45 percent below 1990 levels by 2030 and 66 percent below 1990 levels by 2035, which is consistent with California's goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 (City of San Luis Obispo 2020).

COUNTY OF SAN LUIS OBISPO 2019 REGIONAL TRANSPORTATION PLAN/ SUSTAINABLE COMMUNITIES STRATEGY

The 2019 Regional Transportation Plan (RTP) was adopted by the SLOCOG Board in June 2019. The RTP includes the region's Sustainable Communities' Strategy (SCS), which outlines how the region will meet or exceed its GHG reduction targets as required by SB 375 through the promotion of a variety of transportation demand management & system management tools and techniques to maximize the efficiency of the transportation network. Consistency with the requirement of SB 375 ensures consistency with the GHG-reduction targets set by ARB. The 2019 SCS was found to be consistent with the requirement of SB 375 and is also consistent with the general plans of the region's jurisdictions (SLOCOG 2019).

Impact Analysis

In accordance with Appendix G of the *State CEQA Guidelines,* increased GHG emissions associated with the implementation of the proposed project would be considered significant if it would:

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.

The SLOAPCD has adopted recommended GHG significance thresholds. These thresholds are based on AB 32 GHG emission reduction goals, which take into consideration the emission reduction strategies outlined in ARB's Scoping Plan. Accordingly, if a project complies with a Qualified Greenhouse Gas Reduction Strategy that is specifically applicable to the project, such as the *City of San Luis Obispo Climate Action Plan for Community Recovery,* then the project would be considered to have a less-than-significant impact.

The City of *San Luis Obispo* CAP includes a "Consistency Worksheet", which identifies various measures designed to reduce project-related GHG emissions. The CAP Consistency Worksheet can be used to demonstrate project-level compliance with the CAP.

California Environmental Quality Act (CEQA) Guidelines Section 15183.5(b)(1) establishes criteria to guide the preparation of a "plan for the reduction of greenhouse gas emissions." A City can make findings that its plan is consistent with these guidelines and can use the CEQA document for the Climate Action Plan to allow future environmental review streamlining. The City's CAP has undergone CEQA review and the City has found that the CAP is a qualified GHG emissions reduction strategy consistent with state law. Accordingly, proposed projects that are inconsistent with the City's CAP and recommended significance threshold would be considered to have a potentially significant impact. For non-residential projects, such as the proposed medical center expansion, the City's GHG efficiency threshold is 0.7 $MTCO_2e$/service population ($MTCO_2e$/SP). Project-generated emissions that exceed 0.7 $MTCO_2e$/SP would be considered to have a potentially significant impact (both project-level and cumulative) that could conflict with applicable GHG-reduction plans. For stationary sources, the SLOAPCD-recommended significance threshold is 10,000 $MTCO_2e$/SP. Proposed projects that exceed these thresholds would be considered to have a potentially significant impact. Proposed projects determined to be inconsistent with the City's CAP would also be considered to have a potentially significant impact.

Methodology

Short-term Construction Impacts

Short-term emissions associated with construction activities are largely dependent on the type of development proposed, area of ground disturbance, amount of buildings to be demolished, equipment required, and construction schedules. Emissions associated with the construction of the proposed project were calculated using CalEEMod, version 2020.4.0. Project construction is anticipated to occur over an approximately 36-month period beginning in 2022. Based on project-specific information received, approximately 850 tons of material would be exported during demolition. Grading would require the import of approximately 2,370 cubic yards (cy) of material and the export of approximately 3,260 cy of material. Additional construction information, such as activity durations, equipment use, worker vehicle trips, and equipment load factors were not available and were based on default parameters contained in the model. Modeling assumptions and output files are included in Appendix C of this report.

Long-term Operational Air Quality Impacts

Long-term operational GHG emissions were calculated using the CalEEMod, version 2020.4.0. Energy use included emissions associated with natural gas and electricity use. Mobile-source emissions were based on vehicle trip-generation rates for the proposed project derived from the *French Hospital Update-Trip Generation and Parking 2020 Land Use, Parking Garage Location and Off-Site Staff Parking* prepared by Orosz Engineering Group (2020) and the *Focused Multimodal Transportation Analysis* prepared by Michael Baker International (MBI 2020). Potential reductions in mobile-source emissions were quantified based on estimated reductions in vehicle-miles traveled (VMT) associated with potential traffic demand management (TDM) strategies derived from the French Hospital Medical Center Expansion VMT Assessment prepared by Michael Baker International (MBI 2021). Based on the findings of this analysis, currently implemented TDM measures achieve reductions in VMT of 6.625 percent. Implementation of the additional recommended TDM measures identified in the report would result in further reductions of approximately 5 to 10 percent, resulting in a combined mitigated reduction in VMT of 11.625 to 16.625 percent. The service population for the proposed project was calculated based on an estimated 82 beds (patients) served by the project. Emission modeling files are provided in Appendix C.

Project Impacts and Mitigation Measures

Impact GHG-A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Estimated GHG emissions attributable to future development would be primarily associated with increases of CO_2 from mobile sources. To a lesser extent, other GHG pollutants, such as CH_4 and N_2O, would also be generated. Short-term and long-term GHG emissions associated with the development of the proposed project are discussed in greater detail, as follows:

Short-term Construction GHG Emissions

Estimated increases in GHG emissions associated with the construction of the proposed project are summarized in Table 15. Based on the modeling conducted, construction-related GHG emissions would total approximately 846.7 $MTCO_2e$. Amortized GHG emissions, when averaged over the assumed 25-year life of the project, would total approximately 33.9 $MTCO_2e$/year. There would also be a small amount of GHG emissions from waste generated during construction; however, this amount is speculative. Actual emissions may vary, depending on the final construction schedules, equipment required, and activities conducted. Amortized construction-generated GHG emissions are included in the operational GHG emissions impact discussion provided below.

Table 15. Construction-Generated GHG Emissions Without Mitigation

Construction Year	GHG Emissions ($MTCO_2e$/Year)
2022	178.4
2023	418.3
2024	250.0
Construction Total:	846.7
Amortized Construction Emissions:	33.9
Amortized emissions are quantified based on a minimum 25-year project life. Refer to Appendix C for modeling assumptions and results.	

Long-term Operational GHG Emissions

Estimated long-term increases in GHG emissions associated with the proposed project for buildout year 2025 and future year 2030 are summarized in Table 16. As depicted, operational GHG emissions for the proposed project, with the inclusion of amortized construction GHGs, would total approximately 1,685.9 $MTCO_2e$/year during the initial year of full operation (year 2025) and 1,551.8 $MTCO_2e$/year for operational year 2030. A majority of the operational GHG emissions would be associated with motor vehicles. To a lesser extent, GHG emissions would also be associated with solid waste generation, energy use, and onsite stationary sources. GHG emissions associated with the operation of on-site permitted stationary sources (i.e., backup power generators) would total approximately 80.3 $MTCO_2e$/year and would not exceed SLOAPCD's significance threshold of 10,000 $MTCO_2e$/year.

Based on the modeling conducted and assuming a total service population of 127 individuals (45 employees and 82 patients), the calculated GHG efficiency for the proposed project, without mitigation, would be 13.3 $MTCO_2e$/SP/year in 2025 and 12.2 $MTCO_2e$/SP/year in 2030. The GHG efficiency for the proposed project would exceed the City's significance threshold of 0.7 $MTCO_2e$/SP/year. As a result, this impact is considered ***potentially significant***.

Table 16. Operational GHG Emissions Without Mitigation

Operational Year/Source	GHG Emissions ($MTCO_2e$/Year)	
	Year 2025	Year 2030
Energy Use[1]	663.8	629.7
Motor Vehicles[2]	806.7	711.9
Waste Generation[3]	160.9	160.9
Water	20.6	15.4
Total Operational Emissions:	1,652.0	1,517.9
Amortized Construction Emissions:	33.9	33.9
Total with Amortized Construction Emissions:	1,685.9	1,551.8
Service Population (SP)[4]:	127	127
$MTCO_2e$/SP:	13.3	12.2
GHG Efficiency Significance Threshold:	**0.7**	**0.7**
Exceeds Threshold?	**Yes**	**Yes**
Stationary Sources (Emergency Generators)	80.3	80.3
GHG Efficiency Significance Threshold:	**10,000**	**10,000**
Exceeds Threshold?	No	No

1. Includes natural gas and electricity use. Does not include participation in Central Coast Community Energy, which provides renewable and carbon-free electricity.
2. Based on default fleet mix for non-residential land uses contained in CalEEMod for San Luis Obispo County. Includes 6.625% reduction due to implementation of existing TDM strategies (MBI 2021). Vehicle trip distances were conservatively based on CalEEMod defaults for San Luis Obispo County.
3. Based on an average annual County-wide waste diversion/recycling rate of 67% in 2019.
4. Based on an estimated 45 employees and 82 patients (based on the number of new beds).
Refer to Appendix C for modeling assumptions and results.

Mitigation Measures

GHG-1: The project shall implement a Traffic Demand Management Plan. The plan shall identify the TDM strategies to be implemented and methods for monitoring the effectiveness of the TDM strategies. The TDM program shall be reviewed and approved by City's Transportation Division prior to implementation. The TDM plan shall include strategies and/or payment of traffic mitigation fees sufficient to achieve the City's significance threshold of 15% below the existing County average vehicle miles traveled per service population (VMT/SP) of 17.43 VMT/SP. At a minimum, based on the VMT analysis prepared for this project and in addition to the measures currently implemented, the following strategies shall be implemented (MBI 2021):

a. Provide parking cash-out programs for employees
b. Provide employer-implemented ride-sharing program for employees
c. Implement commute trip-reduction marketing strategies for employees

GHG-2: The following additional mitigation measures shall be implemented to further reduce operational emissions:

a. Provide employee lockers and showers to promote bicycle and pedestrian use. One shower and 5 lockers for every 25 new employees is recommended.
b. Exceed Cal Green standards by 25% for providing on-site bicycle parking: both short-term racks and long-term lockers, or a locked room with standard racks and access limited to bicyclists only.
c. Provide dedicated parking for carpools, vanpools, and/or high-efficiency vehicles to meet or exceed Cal Green Tier 2 .
d. Meet or exceed Cal Green Tier 2 standards for providing EV charging infrastructure.
e. Meet or exceed Cal Green Tier 1 standards for building energy efficiency.

f. Meet or exceed Cal Green Tier 2 standards for utilizing recycled content materials.
g. All built-in appliances shall be Energy Star certified or equivalent.
h. Meet or exceed Cal Green Tier 2 standards for the use of greywater, rainwater or recycled water.
i. Low-flow water fixtures shall be installed.
j. Proposed landscaping shall include water-efficient landscapes and irrigation systems.

GHG-3: A GHG-Reduction Plan shall be prepared for the proposed project. The GHG-Reduction Plan shall include all possible on-site GHG reduction measures sufficient to reduce operational emissions to below the City's threshold of significance of 0.7 $MTCO_2e$/SP/yr. The GHG-reduction plan shall be approved by the City prior to issuance of building construction permits. GHG-reduction measures shall include, but are not limited to, those identified in Mitigation Measure GHG-1 and GHG-2, as well as the following:

a. To the extent possible, install electrically-powered appliances and building mechanical equipment in place of natural-gas fueled equipment.
b. The project shall participate in Central Coast Community Energy.
c. The Project shall provide organic waste pick up and shall provide the appropriate on-site enclosures consistent with the provisions of the City of San Luis Obispo Development Standards for Solid Waste Services.
d. The on-site installation of trees shall be consistent with the City's municipal code requirements

Under CEQA Guidelines Section 15126.4, subdivisions (c)(3) and (c)(4), respectively, a project's GHG emissions can be reduced by off-site measures, including offsets that are not otherwise required and measures that sequester GHGs. In the event that feasible on-site GHG-reduction measures are insufficient to reduce operational GHG emissions to below the City's threshold of significance, off-site mitigation measures may be included. Off-site mitigation measures may include "Direct Reduction Activities" or the purchase of "Carbon Offset Credits" and discussed further, as follows:

Direct Reduction Activities

Directly undertake or fund activities that will reduce or sequester GHG emissions. GHG reduction credits shall achieve GHG emission reductions that are real, permanent, quantifiable, verifiable, enforceable, in accordance with the criteria set forth in the ARB's most recent Process for the Review and Approval of Compliance Offset Protocols in Support of the Cap-and-Trade Regulation (2013). GHG reduction credits shall be undertaken for the specific purpose of reduction project-generated GHG emissions and shall not include reductions that would otherwise be required by law. All Direct Reduction Activities and associated reduction credits shall be confirmed by an independent, qualified third-party.

The "Direct Reduction Activity" shall be registered with a California Air Resources Board (ARB)-approved registry and in compliance with ARB-approved protocols. In accordance with the applicable Registry requirements, the Project applicant (or its designee) will retain an independent, qualified third-party to confirm the GHG emissions reduction or sequestration achieved by the Direct GHG Reduction Activities against the applicable Registry protocol or methodology. The Project applicant (or its designee) will then apply for issuance of carbon credits in accordance with the applicable Registry rules.

Carbon Offsets

Obtain and retire "Carbon Offsets." Carbon Offsets shall achieve GHG reductions that are real, permanent, quantifiable, verifiable, and enforceable, Carbon offsets shall be purchased from ARB-approved registries and shall comply with ARB-approved protocols to ensure that offset credits accurately and reliably represent actual emissions reductions. If the purchase of carbon offsets is selected, offsets shall be purchased according to the City of San Luis Obispo's preference, which is, in order of City preference: (1) within the City of San Luis Obispo; (2) within the SLOAPCD jurisdictional area; (3) within the State of California; then (4) elsewhere in the United States. In the event that a project or program providing offsets to the project applicant loses its accreditation, the project applicant shall comply with the rules and procedures of retiring offsets specific to the registry involved and shall purchase an equivalent number of credits to recoup the loss

Significance After Mitigation

Implementation of Mitigation Measures GHG-1 and GHG-2 would require implementation of numerous measures to reduce long-term operational emissions, including implementation of a TDM plan to reduce project-generated VMT, as well as, on-site measures to reduce operational emissions. Implementation of a TDM plan would reduce and/or offset project-generated VMT and associated emissions by approximately 16.625%. Operational emissions associated with the proposed project, with implementation of Mitigation Measure GHG-2 are summarized in Table 17. With mitigation, operational GHG emissions would be reduced to approximately 11.3 $MTCO_2e$/SP for year 2025 and 10.6 $MTCO_2e$/SP for year 2030. Operational emissions would exceed the City's significant thresholds of 0.7 $MTCO_2e$/SP. Additional reductions of approximately 1,340 $MTCO_2e$/year would be required to reduce project-generated emissions to below the City's significance threshold. Mitigation Measure GHG-3 would require the preparation of a GHG-Reduction Plan which would include additional measures sufficient to reduce project-generated GHG emissions to below the City's significance threshold. With mitigation, this impact would be considered ***less than significant***.

Table 17. Operational GHG Emissions With Mitigation

Operational Year/Source	GHG Emissions ($MTCO_2e$/Year)	
	Year 2025	Year 2030
Energy Use[1]	525.3	525.3
Motor Vehicles[2]	688.2	607.3
Waste Generation[3]	160.9	160.9
Water	20.6	15.4
Total Operational Emissions:	1,395.0	1,308.9
Amortized Construction Emissions:	33.9	33.9
Total with Amortized Construction Emissions:	1,428.9	1,342.8
Service Population (SP)[4]:	127	127
$MTCO_2e$/SP:	11.3	10.6
GHG Efficiency Significance Threshold:	**0.7**	**0.7**
Exceeds Threshold?	**Yes**	**Yes**

1. Includes natural gas use. Assumes participation in Central Coast Community Energy, which provides renewable and carbon-free electricity.
2. Based on default fleet mix for non-residential land uses contained in CalEEMod for San Luis Obispo County. Includes 16.625% reduction with implementation of TDM plan. Vehicle trip distances were conservatively based on CalEEMod defaults for San Luis Obispo County.
3. Based on an average annual County-wide waste diversion/recycling rate of 67% in 2019.
4. Based on an estimated 45 employees and 82 patients (based on the number of new beds).
Refer to Appendix C for modeling assumptions and results.

Impact GHG-B ***Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.***

As noted in Table 17, operational GHG emissions attributable to the proposed project would be primarily associated with mobile sources. Applicable GHG-reduction plans related to reducing operational GHG emissions is the *City of San Luis Obispo CAP* and the *County of San Luis Obispo's Regional Transportation Plan/Sustainable Communities Strategy*. The project's consistency with these plans is discussed in greater detail, as follows:

City of San Luis Obispo Climate Action Plan for Community Recovery

The City's CAP is a long-range plan to reduce GHG emissions from City government operations and community activities within the community. Projects that are consistent with the demographic forecasts and land use assumptions used I the CAP can utilize the City's CEQA GHG Emissions Analysis Compliance Checklist to demonstrate consistency with the CAP's GHG emissions reduction strategy. If deemed consistent, the project would be considered to have a less-than-significant impact. The following provides a discussion of the proposed project's consistency determination with the City's CAP:

Step 1: Consistency with the Demographic Forecasts and Land Use Assumptions.

The demographic forecasts and land use assumptions of the CAP are based on the Land Use and Circulation Elements of the City's 2014 General Plan. If a plan or project is consistent with the existing 2014 General Plan land use and zoning designations of the project site, then the project would be considered consistent with the demographic forecasts and the land uses assumptions of the CAP and can move on to Step 2.

The proposed Project would not include a land use element and/or zoning designation amendment and would not result in increases population. The project would be considered consistent with the demographic forecasts and the land uses assumptions of the CAP. Proceed to Step 2.

Step 2: Consistency with the CEQA GHG Emissions Analysis Compliance Checklist.

The City has prepared a CEQA GHG Emissions Analysis Compliance Checklist for plans and projects to ensure that they are consistent with the measures of the CAP. Project's deemed consistent with the measures identified in the checklist would be considered to have a less-than-significant impact.

The proposed Project's consistency with the City's CAP is summarized in Table 18. As noted and with implementation of proposed mitigation measures, the project would be consistent with the City's CAP. With implementation of recommended mitigation measures, this impact would be considered **less than significant**.

County of San Luis Obispo 2019 Regional Transportation Plan/Sustainable Communities Strategy

The 2019 Regional Transportation Plan (RTP) was adopted by the SLOCOG Board in June 2019. The RTP includes the region's Sustainable Communities' Strategy (SCS), which outlines how the region will meet or exceed its GHG reduction targets as required by SB 375 through the promotion of a variety of transportation demand management & system management tools and techniques to maximize the efficiency of the transportation network. Consistency with the requirement of SB 375 ensures consistency with the GHG-reduction targets set by ARB. The 2019 SCS was found to be consistent with the requirement of SB 375 and is also consistent with the general plans of the region's jurisdictions (SLOCOG 2019).

According to the Regional Housing Needs Assessment, the City of San Luis Obispo has about 61 percent more jobs than housing units, indicative of a "jobs-rich" community. The City's jobs to housing ratio is estimated to increase from a year 2015 ratio of 1.61 jobs/housing to a ratio of 1.82 jobs/housing by year 2030 (RHNA 2019). The proposed project would result in increased employment and would not result in an increase in housing. As a result, the proposed project could exacerbate the jobs-housing imbalance. In addition, the proposed project would result in increased VMT. A VMT analysis was prepared for this project by Michael Baker International, which included an analysis of project-generated VMT and potential impacts to regional VMT reduction efforts (MBI 2021). Accordingly, exceedance of the City's VMT threshold of 15% below the regional average VMT/service population (SP) would be considered to conflict with regional VMT-reduction efforts and associated reductions in mobile-source emissions accounted for in the SLOAPCD's Clean Air Plan.

Estimated regional average VMT modeling results, with and without project implementation, are summarized in Table 7. Table 8 presents a summary of project VMT impacts. As depicted, regional average VMT/SP would increase from 20.49 to 20.50 with project implementation. With project implementation, VMT would exceed the significance threshold of 17.42 VMT/SP (15% below the regional average). As a result, the proposed project would not be consistent with VMT projections upon which the RTP/SCS is based. For this reason, the proposed project could conflict with regional and state-wide GHG-reduction efforts. As a result, this impact would be considered ***potentially significant***.

Table 18. Project Consistency with the City's Climate Action Plan

CAP Measures	Project Consistency
Clean Energy Systems	
Does the Project include an operational commitment to participate in Central Coast Community Energy (formerly Monterey Community Power)?	**Consistent with Mitigation**. A mitigation measure has been included to require an operational commitment to participate in Central Coast Community Energy.
Green Buildings	
Does the Project exclusively include "All-electric buildings"? For the purpose of this checklist, the following	**Consistent with Mitigation**. Medical facilities are exempt from this requirement. However, a mitigation measure has been included to encourage the installation of electrically-powered appliances in place of natural gas to the extent possible. In addition, mitigation has also been included to promote the installation of infrastructure to facilitate the future installation of alternative energy sources, such as the installation of photovoltaic systems over grade level parking.
If the Project/Plan includes a new mixed-fuel building or buildings (plumbed for the use of natural gas as fuel for space heating, water heating, cooking or clothes drying appliances) does that building/those buildings meet or exceed the City's Energy Reach code?	
Connected Community	
Does the Project comply with requirements in the City's Municipal Code with no exceptions, including bicycle parking, bikeway design, and EV charging stations?	**Consistent**. The project, as proposed, complies with existing regulations.
Is the estimated Project-generated Vehicle Miles Traveled (VMT) within the City's adopted thresholds, as confirmed by the City's Transportation Division?	**Consistent with Mitigation**. A mitigation measure has been included to require the preparation of a TDM plan. The TDM plan would include strategies and/or payment of traffic fees sufficient to achieve the City's adopted thresholds. The TDM plan would be required to be approved by the City's Transportation Division.
If "No", does the Project/Plan include VMT mitigation strategies and/or a Transportation Demand Management (TDM) Plan approved by the City's Transportation Division?	
Does the Project demonstrate consistency with the City's Bicycle Transportation Plan (superseded by the adopted Active Transportation Plan)?	**Consistent**. The existing facility includes an existing bicycle path through the project site.
Circular Economy	
Will the Project subscribe all units and/or buildings to organic waste pick up and provide the appropriate on-site enclosures consistent with the provisions of the City of San Luis Obispo Development Standards for Solid Waste Services? Please provide a letter from San Luis Garbage company verifying that the project complies with their standards and requirements for organic waste pick up.	**Consistent with Mitigation**. A mitigation measure has been included to require the Project to provide organic waste pick up and provide the appropriate on-site enclosures consistent with the provisions of the City of San Luis Obispo Development Standards for Solid Waste Services.
Natural Solutions	
Does the Project comply with Municipal Code requirements for trees?	**Consistent**. The project is required to comply with municipal code requirements.

Mitigation Measures

Implement Mitigation Measure GHG-1.

Significance After Mitigation

Implementation of Mitigation Measure GHG-1 would require the preparation of a TDM plan, which would include measures sufficient to reduce the project's overall VMT to below the City's threshold of significance. With mitigation, the project would be considered consistent with the SCS and regional GHG-reduction planning efforts, which have been deemed consistent with State-wide GHG-reduction planning efforts. With mitigation, this impact would be considered ***less than significant.***

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APPENDIX A

EMISSIONS MODELING

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SLO French Hospital Med Ctr Expansion

San Luis Obispo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	89.78	1000sqft	2.60	89,775.00	0
Unenclosed Parking Structure	33.00	1000sqft	0.76	33,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	168.39	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustments.

Land Use - 89.775 KSF Tower, 33.0 KSF Parking Structure/Helistop

Construction Phase - Based on anticipated const schedule provided by applicant and model defaults. Architectural coating to begin ~5 months after building construction begins.

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - Grading based on model defaults

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Trips and VMT - Const vehicle trips based on model defaults and info provided

Demolition - 850 tons of demo debris

Grading - 2370 cy imported and 3260 cy exported during grading phase

Vehicle Trips - Trip gen based on the traffic analysis prepared for this project/model defaults.

Vehicle Emission Factors - Vehicle emissions and fleet mix based on model defaults

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Energy use based on model defaults

Water And Wastewater - Water and waste based on model defaults

Construction Off-road Equipment Mitigation - 50% CE for watering vehicle travel ways, 61% CE for watering disturbed areas, onsite speed limit 15 mph. T3 offroad equipment included for informational purposes

Water Mitigation - Based on 336861 MAWA 209552 ETWU provided. Includes installation of low-flow fixtures.

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps - Based on information provided by the project applicant

Architectural Coating - Based on model defaults

Stationary Sources - Emergency Generators and Fire Pumps EF - Based on specs provided for Cat T4i engine

Mobile Land Use Mitigation - trip reduction calculated separately

Energy Mitigation - Solar not proposed at this time. Will meet current building standards.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	18.00	144.00
tblConstructionPhase	NumDays	18.00	5.00
tblConstructionPhase	PhaseEndDate	10/18/2024	8/1/2024
tblConstructionPhase	PhaseEndDate	8/5/2024	8/1/2024
tblConstructionPhase	PhaseEndDate	9/18/2023	7/26/2023
tblConstructionPhase	PhaseEndDate	9/23/2022	8/28/2023

tblConstructionPhase	PhaseEndDate	10/19/2022	9/7/2022
tblConstructionPhase	PhaseEndDate	10/31/2022	9/14/2023
tblConstructionPhase	PhaseEndDate	8/29/2024	8/2/2023
tblConstructionPhase	PhaseEndDate	9/30/2022	9/2/2022
tblConstructionPhase	PhaseEndDate	10/7/2022	9/4/2023
tblConstructionPhase	PhaseStartDate	9/25/2024	1/15/2024
tblConstructionPhase	PhaseStartDate	9/19/2023	9/15/2023
tblConstructionPhase	PhaseStartDate	11/1/2022	9/8/2022
tblConstructionPhase	PhaseStartDate	8/27/2022	8/1/2023
tblConstructionPhase	PhaseStartDate	10/8/2022	8/28/2022
tblConstructionPhase	PhaseStartDate	10/20/2022	9/5/2023
tblConstructionPhase	PhaseStartDate	8/6/2024	7/27/2023
tblConstructionPhase	PhaseStartDate	9/24/2022	8/27/2022
tblConstructionPhase	PhaseStartDate	10/1/2022	8/29/2023
tblGrading	AcresOfGrading	8.00	14.00
tblGrading	AcresOfGrading	8.00	65.00
tblGrading	AcresOfGrading	7.50	8.00
tblGrading	AcresOfGrading	7.50	12.00
tblGrading	MaterialExported	0.00	3,260.00
tblGrading	MaterialImported	0.00	2,370.00
tblLandUse	LandUseSquareFeet	89,780.00	89,775.00
tblLandUse	LotAcreage	2.06	2.60
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.027
tblProjectCharacteristics	CO2IntensityFactor	203.98	168.39
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.003
tblStationaryGeneratorsPumpsEF	CO_EF	2.60	0.11
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	2.60
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.08
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.08

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,050.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	8.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	100.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1206	1.1130	1.0579	2.0100e-003	0.1044	0.0539	0.1583	0.0457	0.0504	0.0961						178.3594
2023	0.2347	2.1650	2.3299	4.6800e-003	0.1868	0.0970	0.2838	0.0620	0.0911	0.1531						418.3128
2024	1.1871	1.1935	1.4928	2.8200e-003	0.0451	0.0521	0.0973	0.0122	0.0493	0.0615						250.0001
Maximum	**1.1871**	**2.1650**	**2.3299**	**4.6800e-003**	**0.1868**	**0.0970**	**0.2838**	**0.0620**	**0.0911**	**0.1531**						**418.3128**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0506	0.9229	1.1836	2.0100e-003	0.0550	0.0516	0.1066	0.0217	0.0516	0.0732						178.3593
2023	0.1112	2.0827	2.5948	4.6800e-003	0.1136	0.1179	0.2314	0.0352	0.1178	0.1530						418.3125
2024	1.1170	1.2637	1.6258	2.8200e-003	0.0451	0.0770	0.1221	0.0122	0.0769	0.0891						249.9999
Maximum	**1.1170**	**2.0827**	**2.5948**	**4.6800e-003**	**0.1136**	**0.1179**	**0.2314**	**0.0352**	**0.1178**	**0.1530**						**418.3125**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	17.10	4.52	-10.73	0.00	36.45	-21.33	14.70	42.41	-29.07	-1.50	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2022	10-31-2022	0.8054	0.6049
2	11-1-2022	1-31-2023	0.5974	0.5329
3	2-1-2023	4-30-2023	0.5441	0.5105
4	5-1-2023	7-31-2023	0.5483	0.5151
5	8-1-2023	10-31-2023	0.7369	0.6338
6	11-1-2023	1-31-2024	0.6457	0.6226
7	2-1-2024	4-30-2024	1.0272	1.0272
8	5-1-2024	7-31-2024	1.0488	1.0488
9	8-1-2024	9-30-2024	0.0114	0.0114
		Highest	1.0488	1.0488

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4577	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Energy	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						663.7559
Mobile	0.4976	0.7149	4.5561	9.0000e-003	0.9604	8.6300e-003	0.9690	0.2567	8.1100e-003	0.2648						863.8449
Stationary	0.1723	0.4394	0.0186	8.3000e-004		0.0127	0.0127		0.0127	0.0127						80.2477
Waste						0.0000	0.0000		0.0000	0.0000						487.6234
Water						0.0000	0.0000		0.0000	0.0000						20.6128
Total	**1.1803**	**1.6340**	**4.9796**	**0.0127**	**0.9604**	**0.0578**	**1.0181**	**0.2567**	**0.0572**	**0.3139**						**2,116.0889**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4577	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Energy	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						663.7559
Mobile	0.4976	0.7149	4.5561	9.0000e-003	0.9604	8.6300e-003	0.9690	0.2567	8.1100e-003	0.2648						863.8449
Stationary	0.1723	0.4394	0.0186	8.3000e-004		0.0127	0.0127		0.0127	0.0127						80.2477
Waste						0.0000	0.0000		0.0000	0.0000						487.6234
Water						0.0000	0.0000		0.0000	0.0000						16.3872
Total	**1.1803**	**1.6340**	**4.9796**	**0.0127**	**0.9604**	**0.0578**	**1.0181**	**0.2567**	**0.0572**	**0.3139**						**2,111.8633**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition Parking Deck	Demolition	8/1/2022	8/26/2022	5	20	Demo Parking Deck
2	Demolition Tower	Demolition	8/1/2023	8/28/2023	5	20	Demo Tower

3	Site Prep Parking Deck	Site Preparation	8/27/2022	9/2/2022	5	5	Site Prep Patient Tower
4	Site Prep Tower	Site Preparation	8/29/2023	9/4/2023	5	5	Site Prep Tower
5	Grading Parking Deck	Grading	8/28/2022	9/7/2022	5	8	Grading Patient Tower
6	Grading Tower	Grading	9/5/2023	9/14/2023	5	8	Grading Tower
7	Const Parking Deck	Building Construction	9/8/2022	7/26/2023	5	230	Const Parking Deck
8	Const Tower	Building Construction	9/15/2023	8/1/2024	5	230	Const Tower
9	Paving Parking Deck	Paving	7/27/2023	8/2/2023	5	5	Paving Patient Tower
10	Architectural Coating	Architectural Coating	1/15/2024	8/1/2024	5	144	Arch Coating

Acres of Grading (Site Preparation Phase): 8

Acres of Grading (Grading Phase): 14

Acres of Paving: 0.76

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 134,663; Non-Residential Outdoor: 44,888; Striped Parking Area: 1,980 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition Parking Deck	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition Parking Deck	Excavators	3	8.00	158	0.38
Demolition Parking Deck	Rubber Tired Dozers	2	8.00	247	0.40
Site Prep Parking Deck	Excavators	0		158	0.38
Site Prep Parking Deck	Graders	0		187	0.41
Site Prep Parking Deck	Rubber Tired Dozers	3	8.00	247	0.40
Site Prep Parking Deck	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Paving Parking Deck	Cement and Mortar Mixers	2	6.00	9	0.56
Paving Parking Deck	Pavers	1	8.00	130	0.42
Paving Parking Deck	Paving Equipment	2	6.00	132	0.36
Paving Parking Deck	Rollers	2	6.00	80	0.38
Paving Parking Deck	Tractors/Loaders/Backhoes	1	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition Tower	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition Tower	Excavators	3	8.00	158	0.38
Demolition Tower	Rubber Tired Dozers	2	8.00	247	0.40
Demolition Tower	Tractors/Loaders/Backhoes	0		97	0.37
Site Prep Tower	Cranes	0		231	0.29
Site Prep Tower	Forklifts	0		89	0.20
Site Prep Tower	Generator Sets	0		84	0.74
Site Prep Tower	Rubber Tired Dozers	3	8.00	247	0.40
Site Prep Tower	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Prep Tower	Welders	0		46	0.45
Grading Parking Deck	Cement and Mortar Mixers	0		9	0.56
Grading Parking Deck	Excavators	1	8.00	158	0.38
Grading Parking Deck	Graders	1	8.00	187	0.41
Grading Parking Deck	Pavers	0		130	0.42
Grading Parking Deck	Paving Equipment	0		132	0.36
Grading Parking Deck	Rollers	0		80	0.38
Grading Parking Deck	Rubber Tired Dozers	1	8.00	247	0.40
Grading Parking Deck	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Tower	Air Compressors	0		78	0.48
Grading Tower	Excavators	1	8.00	158	0.38
Grading Tower	Graders	1	8.00	187	0.41
Grading Tower	Rubber Tired Dozers	1	8.00	247	0.40
Grading Tower	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Const Tower	Cranes	1	7.00	231	0.29
Const Tower	Forklifts	3	8.00	89	0.20
Const Tower	Generator Sets	1	8.00	84	0.74
Const Tower	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Const Tower	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Const Parking Deck	Cranes	1	7.00	231	0.29
Const Parking Deck	Forklifts	3	8.00	89	0.20
Const Parking Deck	Generator Sets	1	8.00	84	0.74
Const Parking Deck	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Const Parking Deck	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition Parking Deck	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep Parking Deck	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving Parking Deck	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Demolition Tower	6	15.00	0.00	84.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep Tower	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading Parking Deck	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading Tower	6	15.00	0.00	704.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Const Tower	9	43.00	20.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Const Parking Deck	9	43.00	20.00	100.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116						34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**		**0.0124**	**0.0124**		**0.0116**	**0.0116**						**34.2289**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	5.1000e-004	3.9000e-004	4.3000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004						1.1613
Total	**5.1000e-004**	**3.9000e-004**	**4.3000e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**						**1.1613**

3.2 Demolition Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.2500e-003	0.1831	0.2467	3.9000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003						34.2289
Total	**9.2500e-003**	**0.1831**	**0.2467**	**3.9000e-004**		**8.6300e-003**	**8.6300e-003**		**8.6300e-003**	**8.6300e-003**						**34.2289**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	5.1000e-004	3.9000e-004	4.3000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004						1.1613
Total	**5.1000e-004**	**3.9000e-004**	**4.3000e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**						**1.1613**

3.3 Demolition Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3900e-003	0.0000	9.3900e-003	1.4200e-003	0.0000	1.4200e-003						0.0000
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003						34.2301
Total	**0.0227**	**0.2148**	**0.1964**	**3.9000e-004**	**9.3900e-003**	**9.9800e-003**	**0.0194**	**1.4200e-003**	**9.2800e-003**	**0.0107**						**34.2301**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	7.1000e-003	1.3500e-003	3.0000e-005	7.2000e-004	6.0000e-005	7.7000e-004	2.0000e-004	5.0000e-005	2.5000e-004						2.7047
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	4.8000e-004	3.5000e-004	3.9700e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004						1.1323
Total	**5.9000e-004**	**7.4500e-003**	**5.3200e-003**	**4.0000e-005**	**2.1600e-003**	**7.0000e-005**	**2.2200e-003**	**5.8000e-004**	**6.0000e-005**	**6.4000e-004**						**3.8370**

3.3 Demolition Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.6600e-003	0.0000	3.6600e-003	5.5000e-004	0.0000	5.5000e-004						0.0000
Off-Road	9.2500e-003	0.1831	0.2467	3.9000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003						34.2300
Total	**9.2500e-003**	**0.1831**	**0.2467**	**3.9000e-004**	**3.6600e-003**	**8.6300e-003**	**0.0123**	**5.5000e-004**	**8.6300e-003**	**9.1800e-003**						**34.2300**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	7.1000e-003	1.3500e-003	3.0000e-005	7.2000e-004	6.0000e-005	7.7000e-004	2.0000e-004	5.0000e-005	2.5000e-004						2.7047
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	4.8000e-004	3.5000e-004	3.9700e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004						1.1323
Total	**5.9000e-004**	**7.4500e-003**	**5.3200e-003**	**4.0000e-005**	**2.1600e-003**	**7.0000e-005**	**2.2200e-003**	**5.8000e-004**	**6.0000e-005**	**6.4000e-004**						**3.8370**

3.4 Site Prep Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0494	0.0000	0.0494	0.0253	0.0000	0.0253						0.0000
Off-Road	7.9300e-003	0.0827	0.0492	1.0000e-004		4.0300e-003	4.0300e-003		3.7100e-003	3.7100e-003						8.4274
Total	**7.9300e-003**	**0.0827**	**0.0492**	**1.0000e-004**	**0.0494**	**4.0300e-003**	**0.0534**	**0.0253**	**3.7100e-003**	**0.0290**						**8.4274**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.5000e-004	1.2000e-004	1.2900e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004						0.3484
Total	**1.5000e-004**	**1.2000e-004**	**1.2900e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**						**0.3484**

3.4 Site Prep Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0193	0.0000	0.0193	9.8600e-003	0.0000	9.8600e-003						0.0000
Off-Road	2.3300e-003	0.0477	0.0574	1.0000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003						8.4274
Total	**2.3300e-003**	**0.0477**	**0.0574**	**1.0000e-004**	**0.0193**	**2.3700e-003**	**0.0216**	**9.8600e-003**	**2.3700e-003**	**0.0122**						**8.4274**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.5000e-004	1.2000e-004	1.2900e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004						0.3484
Total	**1.5000e-004**	**1.2000e-004**	**1.2900e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**						**0.3484**

3.5 Site Prep Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0515	0.0000	0.0515	0.0255	0.0000	0.0255						0.0000
Off-Road	6.6500e-003	0.0688	0.0456	1.0000e-004		3.1700e-003	3.1700e-003		2.9100e-003	2.9100e-003						8.4303
Total	**6.6500e-003**	**0.0688**	**0.0456**	**1.0000e-004**	**0.0515**	**3.1700e-003**	**0.0547**	**0.0255**	**2.9100e-003**	**0.0284**						**8.4303**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.4000e-004	1.0000e-004	1.1900e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004						0.3397
Total	**1.4000e-004**	**1.0000e-004**	**1.1900e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**						**0.3397**

3.5 Site Prep Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	9.9500e-003	0.0000	9.9500e-003						0.0000
Off-Road	2.3300e-003	0.0477	0.0574	1.0000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003						8.4303
Total	**2.3300e-003**	**0.0477**	**0.0574**	**1.0000e-004**	**0.0201**	**2.3700e-003**	**0.0225**	**9.9500e-003**	**2.3700e-003**	**0.0123**						**8.4303**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.4000e-004	1.0000e-004	1.1900e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004						0.3397
Total	**1.4000e-004**	**1.0000e-004**	**1.1900e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**						**0.3397**

3.6 Grading Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0315	0.0000	0.0315	0.0140	0.0000	0.0140						0.0000
Off-Road	7.7900e-003	0.0834	0.0611	1.2000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003						10.5062
Total	**7.7900e-003**	**0.0834**	**0.0611**	**1.2000e-004**	**0.0315**	**3.7600e-003**	**0.0353**	**0.0140**	**3.4600e-003**	**0.0175**						**10.5062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	2.0000e-004	1.6000e-004	1.7200e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.4645
Total	**2.0000e-004**	**1.6000e-004**	**1.7200e-003**	**0.0000**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**						**0.4645**

3.6 Grading Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0123	0.0000	0.0123	5.4800e-003	0.0000	5.4800e-003						0.0000
Off-Road	2.9100e-003	0.0594	0.0760	1.2000e-004		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003						10.5062
Total	**2.9100e-003**	**0.0594**	**0.0760**	**1.2000e-004**	**0.0123**	**3.0200e-003**	**0.0153**	**5.4800e-003**	**3.0200e-003**	**8.5000e-003**						**10.5062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	2.0000e-004	1.6000e-004	1.7200e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.4645
Total	**2.0000e-004**	**1.6000e-004**	**1.7200e-003**	**0.0000**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**						**0.4645**

3.7 Grading Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0591	0.0000	0.0591	0.0170	0.0000	0.0170						0.0000
Off-Road	6.8400e-003	0.0717	0.0590	1.2000e-004		3.1000e-003	3.1000e-003		2.8500e-003	2.8500e-003						10.5085
Total	**6.8400e-003**	**0.0717**	**0.0590**	**1.2000e-004**	**0.0591**	**3.1000e-003**	**0.0622**	**0.0170**	**2.8500e-003**	**0.0199**						**10.5085**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.5000e-004	0.0595	0.0114	2.2000e-004	6.0100e-003	4.7000e-004	6.4800e-003	1.6500e-003	4.5000e-004	2.1000e-003						22.6675
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.9000e-004	1.4000e-004	1.5900e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.4529
Total	**1.1400e-003**	**0.0597**	**0.0129**	**2.2000e-004**	**6.5900e-003**	**4.7000e-004**	**7.0600e-003**	**1.8000e-003**	**4.5000e-004**	**2.2600e-003**						**23.1205**

3.7 Grading Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0230	0.0000	0.0230	6.6500e-003	0.0000	6.6500e-003						0.0000
Off-Road	2.9100e-003	0.0594	0.0760	1.2000e-004		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003						10.5085
Total	**2.9100e-003**	**0.0594**	**0.0760**	**1.2000e-004**	**0.0230**	**3.0200e-003**	**0.0261**	**6.6500e-003**	**3.0200e-003**	**9.6700e-003**						**10.5085**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.5000e-004	0.0595	0.0114	2.2000e-004	6.0100e-003	4.7000e-004	6.4800e-003	1.6500e-003	4.5000e-004	2.1000e-003						22.6675
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.9000e-004	1.4000e-004	1.5900e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.4529
Total	**1.1400e-003**	**0.0597**	**0.0129**	**2.2000e-004**	**6.5900e-003**	**4.7000e-004**	**7.0600e-003**	**1.8000e-003**	**4.5000e-004**	**2.2600e-003**						**23.1205**

3.8 Const Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0700	0.6402	0.6709	1.1000e-003		0.0332	0.0332		0.0312	0.0312						95.5764
Total	**0.0700**	**0.6402**	**0.6709**	**1.1000e-003**		**0.0332**	**0.0332**		**0.0312**	**0.0312**						**95.5764**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.6200e-003	6.4000e-004	1.0000e-005	3.0000e-004	3.0000e-005	3.4000e-004	8.0000e-005	3.0000e-005	1.1000e-004						1.1946
Vendor	1.5800e-003	0.0405	0.0122	1.3000e-004	3.7300e-003	3.9000e-004	4.1200e-003	1.0800e-003	3.8000e-004	1.4500e-003						12.8025
Worker	5.9900e-003	4.6200e-003	0.0505	1.5000e-004	0.0170	9.0000e-005	0.0171	4.5100e-003	8.0000e-005	4.5900e-003						13.6492
Total	**7.6600e-003**	**0.0488**	**0.0634**	**2.9000e-004**	**0.0210**	**5.1000e-004**	**0.0215**	**5.6700e-003**	**4.9000e-004**	**6.1500e-003**						**27.6463**

3.8 Const Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0276	0.5833	0.7328	1.1000e-003		0.0371	0.0371		0.0371	0.0371						95.5763
Total	**0.0276**	**0.5833**	**0.7328**	**1.1000e-003**		**0.0371**	**0.0371**		**0.0371**	**0.0371**						**95.5763**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.6200e-003	6.4000e-004	1.0000e-005	3.0000e-004	3.0000e-005	3.4000e-004	8.0000e-005	3.0000e-005	1.1000e-004						1.1946
Vendor	1.5800e-003	0.0405	0.0122	1.3000e-004	3.7300e-003	3.9000e-004	4.1200e-003	1.0800e-003	3.8000e-004	1.4500e-003						12.8025
Worker	5.9900e-003	4.6200e-003	0.0505	1.5000e-004	0.0170	9.0000e-005	0.0171	4.5100e-003	8.0000e-005	4.5900e-003						13.6492
Total	**7.6600e-003**	**0.0488**	**0.0634**	**2.9000e-004**	**0.0210**	**5.1000e-004**	**0.0215**	**5.6700e-003**	**4.9000e-004**	**6.1500e-003**						**27.6463**

3.8 Const Parking Deck - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1164	1.0645	1.2021	1.9900e-003		0.0518	0.0518		0.0487	0.0487						172.5557
Total	**0.1164**	**1.0645**	**1.2021**	**1.9900e-003**		**0.0518**	**0.0518**		**0.0487**	**0.0487**						**172.5557**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	5.4400e-003	1.0400e-003	2.0000e-005	5.5000e-004	4.0000e-005	5.9000e-004	1.5000e-004	4.0000e-005	1.9000e-004						2.0719
Vendor	1.7300e-003	0.0612	0.0196	2.2000e-004	6.7300e-003	3.5000e-004	7.0800e-003	1.9400e-003	3.3000e-004	2.2800e-003						22.2993
Worker	0.0101	7.3900e-003	0.0842	2.6000e-004	0.0306	1.5000e-004	0.0308	8.1400e-003	1.4000e-004	8.2800e-003						24.0203
Total	**0.0120**	**0.0740**	**0.1049**	**5.0000e-004**	**0.0379**	**5.4000e-004**	**0.0385**	**0.0102**	**5.1000e-004**	**0.0108**						**48.3915**

3.8 Const Parking Deck - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0499	1.0527	1.3227	1.9900e-003		0.0669	0.0669		0.0669	0.0669						172.5555
Total	**0.0499**	**1.0527**	**1.3227**	**1.9900e-003**		**0.0669**	**0.0669**		**0.0669**	**0.0669**						**172.5555**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	5.4400e-003	1.0400e-003	2.0000e-005	5.5000e-004	4.0000e-005	5.9000e-004	1.5000e-004	4.0000e-005	1.9000e-004						2.0719
Vendor	1.7300e-003	0.0612	0.0196	2.2000e-004	6.7300e-003	3.5000e-004	7.0800e-003	1.9400e-003	3.3000e-004	2.2800e-003						22.2993
Worker	0.0101	7.3900e-003	0.0842	2.6000e-004	0.0306	1.5000e-004	0.0308	8.1400e-003	1.4000e-004	8.2800e-003						24.0203
Total	**0.0120**	**0.0740**	**0.1049**	**5.0000e-004**	**0.0379**	**5.4000e-004**	**0.0385**	**0.0102**	**5.1000e-004**	**0.0108**						**48.3915**

3.9 Const Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0598	0.5466	0.6173	1.0200e-003		0.0266	0.0266		0.0250	0.0250						88.6097
Total	**0.0598**	**0.5466**	**0.6173**	**1.0200e-003**		**0.0266**	**0.0266**		**0.0250**	**0.0250**						**88.6097**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	8.9000e-004	0.0314	0.0101	1.1000e-004	3.4600e-003	1.8000e-004	3.6300e-003	1.0000e-003	1.7000e-004	1.1700e-003						11.4510
Worker	5.2100e-003	3.7900e-003	0.0433	1.3000e-004	0.0157	8.0000e-005	0.0158	4.1800e-003	7.0000e-005	4.2500e-003						12.3347
Total	**6.1000e-003**	**0.0352**	**0.0533**	**2.4000e-004**	**0.0192**	**2.6000e-004**	**0.0194**	**5.1800e-003**	**2.4000e-004**	**5.4200e-003**						**23.7858**

3.9 Const Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0256	0.5406	0.6792	1.0200e-003		0.0343	0.0343		0.0343	0.0343						88.6096
Total	**0.0256**	**0.5406**	**0.6792**	**1.0200e-003**		**0.0343**	**0.0343**		**0.0343**	**0.0343**						**88.6096**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	8.9000e-004	0.0314	0.0101	1.1000e-004	3.4600e-003	1.8000e-004	3.6300e-003	1.0000e-003	1.7000e-004	1.1700e-003						11.4510
Worker	5.2100e-003	3.7900e-003	0.0433	1.3000e-004	0.0157	8.0000e-005	0.0158	4.1800e-003	7.0000e-005	4.2500e-003						12.3347
Total	**6.1000e-003**	**0.0352**	**0.0533**	**2.4000e-004**	**0.0192**	**2.6000e-004**	**0.0194**	**5.1800e-003**	**2.4000e-004**	**5.4200e-003**						**23.7858**

3.9 Const Tower - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1133	1.0352	1.2448	2.0800e-003		0.0472	0.0472		0.0444	0.0444						179.5792
Total	**0.1133**	**1.0352**	**1.2448**	**2.0800e-003**		**0.0472**	**0.0472**		**0.0444**	**0.0444**						**179.5792**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	1.7400e-003	0.0624	0.0200	2.2000e-004	7.0000e-003	3.5000e-004	7.3600e-003	2.0200e-003	3.4000e-004	2.3600e-003						22.8461
Worker	9.9400e-003	6.8500e-003	0.0816	2.6000e-004	0.0319	1.5000e-004	0.0320	8.4700e-003	1.4000e-004	8.6100e-003						24.3917
Total	**0.0117**	**0.0693**	**0.1016**	**4.8000e-004**	**0.0389**	**5.0000e-004**	**0.0394**	**0.0105**	**4.8000e-004**	**0.0110**						**47.2379**

3.9 Const Tower - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0519	1.0954	1.3763	2.0800e-003		0.0696	0.0696		0.0696	0.0696						179.5790
Total	**0.0519**	**1.0954**	**1.3763**	**2.0800e-003**		**0.0696**	**0.0696**		**0.0696**	**0.0696**						**179.5790**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	1.7400e-003	0.0624	0.0200	2.2000e-004	7.0000e-003	3.5000e-004	7.3600e-003	2.0200e-003	3.4000e-004	2.3600e-003						22.8461
Worker	9.9400e-003	6.8500e-003	0.0816	2.6000e-004	0.0319	1.5000e-004	0.0320	8.4700e-003	1.4000e-004	8.6100e-003						24.3917
Total	**0.0117**	**0.0693**	**0.1016**	**4.8000e-004**	**0.0389**	**5.0000e-004**	**0.0394**	**0.0105**	**4.8000e-004**	**0.0110**						**47.2379**

3.10 Paving Parking Deck - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.3000e-003	0.0220	0.0305	5.0000e-005		1.0900e-003	1.0900e-003		1.0100e-003	1.0100e-003						4.1268
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						0.0000
Total	**2.3000e-003**	**0.0220**	**0.0305**	**5.0000e-005**		**1.0900e-003**	**1.0900e-003**		**1.0100e-003**	**1.0100e-003**						**4.1268**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.6000e-004	1.2000e-004	1.3200e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004						0.3774
Total	**1.6000e-004**	**1.2000e-004**	**1.3200e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**						**0.3774**

3.10 Paving Parking Deck - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1000e-003	0.0227	0.0338	5.0000e-005		1.3100e-003	1.3100e-003		1.3100e-003	1.3100e-003						4.1268
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						0.0000
Total	**1.1000e-003**	**0.0227**	**0.0338**	**5.0000e-005**		**1.3100e-003**	**1.3100e-003**		**1.3100e-003**	**1.3100e-003**						**4.1268**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.6000e-004	1.2000e-004	1.3200e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004						0.3774
Total	**1.6000e-004**	**1.2000e-004**	**1.3200e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**						**0.3774**

3.11 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0472					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0130	0.0878	0.1303	2.1000e-004		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003						18.4093
Total	**1.0602**	**0.0878**	**0.1303**	**2.1000e-004**		**4.3900e-003**	**4.3900e-003**		**4.3900e-003**	**4.3900e-003**						**18.4093**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.9400e-003	1.3400e-003	0.0160	5.0000e-005	6.2400e-003	3.0000e-005	6.2700e-003	1.6600e-003	3.0000e-005	1.6800e-003						4.7737
Total	**1.9400e-003**	**1.3400e-003**	**0.0160**	**5.0000e-005**	**6.2400e-003**	**3.0000e-005**	**6.2700e-003**	**1.6600e-003**	**3.0000e-005**	**1.6800e-003**						**4.7737**

3.11 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0472					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	4.2800e-003	0.0977	0.1319	2.1000e-004		6.8500e-003	6.8500e-003		6.8500e-003	6.8500e-003						18.4093
Total	**1.0514**	**0.0977**	**0.1319**	**2.1000e-004**		**6.8500e-003**	**6.8500e-003**		**6.8500e-003**	**6.8500e-003**						**18.4093**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.9400e-003	1.3400e-003	0.0160	5.0000e-005	6.2400e-003	3.0000e-005	6.2700e-003	1.6600e-003	3.0000e-005	1.6800e-003						4.7737
Total	**1.9400e-003**	**1.3400e-003**	**0.0160**	**5.0000e-005**	**6.2400e-003**	**3.0000e-005**	**6.2700e-003**	**1.6600e-003**	**3.0000e-005**	**1.6800e-003**						**4.7737**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4976	0.7149	4.5561	9.0000e-003	0.9604	8.6300e-003	0.9690	0.2567	8.1100e-003	0.2648						863.8449
Unmitigated	0.4976	0.7149	4.5561	9.0000e-003	0.9604	8.6300e-003	0.9690	0.2567	8.1100e-003	0.2648						863.8449

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	962.44	693.10	607.81	2,568,222	2,568,222
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	962.44	693.10	607.81	2,568,222	2,568,222

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	13.00	5.00	5.00	64.90	16.10	19.00	73	25	2
Unenclosed Parking Structure	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hospital	0.492178	0.057147	0.202572	0.146456	0.036760	0.009141	0.008293	0.005994	0.000937	0.000362	0.032672	0.000959	0.006529
Unenclosed Parking Structure	0.492178	0.057147	0.202572	0.146456	0.036760	0.009141	0.008293	0.005994	0.000937	0.000362	0.032672	0.000959	0.006529

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000						138.5108
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						138.5108
NaturalGas Mitigated	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						525.2451
NaturalGas Unmitigated	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						525.2451

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	9.78458e+006	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						525.2451
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total		**0.0528**	**0.4796**	**0.4029**	**2.8800e-003**		**0.0365**	**0.0365**		**0.0365**	**0.0365**						**525.2451**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	9.78458e+006	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						525.2451
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total		**0.0528**	**0.4796**	**0.4029**	**2.8800e-003**		**0.0365**	**0.0365**		**0.0365**	**0.0365**						**525.2451**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.73894e +006				134.0587
Unenclosed Parking Structure	57750				4.4521
Total					**138.5108**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.73894e +006				134.0587
Unenclosed Parking Structure	57750				4.4521
Total					**138.5108**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4577	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Unmitigated	0.4577	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1047					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.3528					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Total	**0.4577**	**2.0000e-005**	**2.0600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**						**4.2800e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1047					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.3528					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Total	**0.4577**	**2.0000e-005**	**2.0600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**						**4.2800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				16.3872
Unmitigated				20.6128

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	11.2656 / 2.14584				20.6128
Unenclosed Parking Structure	0 / 0				0.0000
Total					**20.6128**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	9.01251 / 1.33487				16.3872
Unenclosed Parking Structure	0 / 0				0.0000
Total					**16.3872**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				487.6234
Unmitigated				487.6234

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	969.62				487.6234
Unenclosed Parking Structure	0				0.0000
Total					**487.6234**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	969.62				487.6234
Unenclosed Parking Structure	0				0.0000
Total					**487.6234**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	8	100	1050	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.1723	0.4394	0.0186	8.3000e-004		0.0127	0.0127		0.0127	0.0127						80.2477
Total	**0.1723**	**0.4394**	**0.0186**	**8.3000e-004**		**0.0127**	**0.0127**		**0.0127**	**0.0127**						**80.2477**

11.0 Vegetation

SLO French Hospital Med Ctr Expansion

San Luis Obispo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	89.78	1000sqft	2.60	89,775.00	0
Unenclosed Parking Structure	33.00	1000sqft	0.76	33,000.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 3.2 **Precipitation Freq (Days)** 44

Climate Zone 4 **Operational Year** 2025

Utility Company Pacific Gas and Electric Company

CO2 Intensity (lb/MWhr) 168.39 **CH4 Intensity (lb/MWhr)** 0.027 **N2O Intensity (lb/MWhr)** 0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustments.

Land Use - 89.775 KSF Tower, 33.0 KSF Parking Structure/Helistop

Construction Phase - Based on anticipated const schedule provided by applicant and model defaults. Architectural coating to begin ~5 months after building construction begins.

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - Grading based on model defaults

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Trips and VMT - Const vehicle trips based on model defaults and info provided

Demolition - 850 tons of demo debris

Grading - 2370 cy imported and 3260 cy exported during grading phase

Vehicle Trips - Trip gen based on the traffic analysis prepared for this project/model defaults.

Vehicle Emission Factors - Vehicle emissions and fleet mix based on model defaults

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Energy use based on model defaults

Water And Wastewater - Water and waste based on model defaults

Construction Off-road Equipment Mitigation - 50% CE for watering vehicle travel ways, 61% CE for watering disturbed areas, onsite speed limit 15 mph. T3 offroad equipment included for informational purposes

Water Mitigation - Based on 336861 MAWA 209552 ETWU provided. Includes installation of low-flow fixtures.

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps - Based on information provided by the project applicant

Architectural Coating - Based on model defaults

Stationary Sources - Emergency Generators and Fire Pumps EF - Based on specs provided for Cat T4i engine

Mobile Land Use Mitigation - trip reduction calculated separately

Energy Mitigation - Solar not proposed at this time. Will meet current building standards.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	18.00	144.00
tblConstructionPhase	NumDays	18.00	5.00
tblConstructionPhase	PhaseEndDate	10/18/2024	8/1/2024
tblConstructionPhase	PhaseEndDate	8/5/2024	8/1/2024
tblConstructionPhase	PhaseEndDate	9/18/2023	7/26/2023
tblConstructionPhase	PhaseEndDate	9/23/2022	8/28/2023

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseEndDate	10/19/2022	9/7/2022
tblConstructionPhase	PhaseEndDate	10/31/2022	9/14/2023
tblConstructionPhase	PhaseEndDate	8/29/2024	8/2/2023
tblConstructionPhase	PhaseEndDate	9/30/2022	9/2/2022
tblConstructionPhase	PhaseEndDate	10/7/2022	9/4/2023
tblConstructionPhase	PhaseStartDate	9/25/2024	1/15/2024
tblConstructionPhase	PhaseStartDate	9/19/2023	9/15/2023
tblConstructionPhase	PhaseStartDate	11/1/2022	9/8/2022
tblConstructionPhase	PhaseStartDate	8/27/2022	8/1/2023
tblConstructionPhase	PhaseStartDate	10/8/2022	8/28/2022
tblConstructionPhase	PhaseStartDate	10/20/2022	9/5/2023
tblConstructionPhase	PhaseStartDate	8/6/2024	7/27/2023
tblConstructionPhase	PhaseStartDate	9/24/2022	8/27/2022
tblConstructionPhase	PhaseStartDate	10/1/2022	8/29/2023
tblGrading	AcresOfGrading	8.00	14.00
tblGrading	AcresOfGrading	8.00	65.00
tblGrading	AcresOfGrading	7.50	8.00
tblGrading	AcresOfGrading	7.50	12.00
tblGrading	MaterialExported	0.00	3,260.00
tblGrading	MaterialImported	0.00	2,370.00
tblLandUse	LandUseSquareFeet	89,780.00	89,775.00
tblLandUse	LotAcreage	2.06	2.60
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.027
tblProjectCharacteristics	CO2IntensityFactor	203.98	168.39
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.003
tblStationaryGeneratorsPumpsEF	CO_EF	2.60	0.11
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	2.60
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.08
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.08

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,050.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	8.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	100.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.2301	54.0166	35.9461	0.0705	27.9673	2.5551	30.5223	13.7111	2.3507	16.0617						6,902.7256
2023	3.3093	32.3763	32.9228	0.0856	20.7894	1.4404	22.0563	10.2527	1.3374	11.4182						9,269.7170
2024	16.3736	15.5456	19.5503	0.0371	0.6070	0.6812	1.2882	0.1631	0.6444	0.8075						3,616.6358
Maximum	**16.3736**	**54.0166**	**35.9461**	**0.0856**	**27.9673**	**2.5551**	**30.5223**	**13.7111**	**2.3507**	**16.0617**						**9,269.7170**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.7688	33.9833	42.9263	0.0705	11.1062	1.7034	12.8096	5.4001	1.7032	7.1033						6,902.7256
2023	1.4856	29.2801	39.2951	0.0856	8.2164	1.3945	9.1634	4.0274	1.3942	4.9743						9,269.7170
2024	15.4546	16.4660	21.2795	0.0371	0.6070	1.0056	1.6126	0.1631	1.0052	1.1683						3,616.6358
Maximum	**15.4546**	**33.9833**	**42.9263**	**0.0856**	**11.1062**	**1.7034**	**12.8096**	**5.4001**	**1.7032**	**7.1033**						**9,269.7170**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**24.90**	**21.79**	**-17.06**	**0.00**	**59.63**	**12.26**	**56.21**	**60.25**	**5.30**	**53.17**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.5078	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Energy	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132
Mobile	3.1224	4.0660	26.8732	0.0560	5.9701	0.0523	6.0224	1.5922	0.0492	1.6413						5,917.7487
Stationary	27.5699	70.2975	2.9741	0.1325		2.0278	2.0278		2.0278	2.0278						14,153.2712
Total	**33.4893**	**76.9917**	**32.0675**	**0.2042**	**5.9701**	**2.2799**	**8.2500**	**1.5922**	**2.2767**	**3.8689**						**23,243.5617**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.5078	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Energy	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132
Mobile	3.1224	4.0660	26.8732	0.0560	5.9701	0.0523	6.0224	1.5922	0.0492	1.6413						5,917.7487
Stationary	27.5699	70.2975	2.9741	0.1325		2.0278	2.0278		2.0278	2.0278						14,153.2712
Total	**33.4893**	**76.9917**	**32.0675**	**0.2042**	**5.9701**	**2.2799**	**8.2500**	**1.5922**	**2.2767**	**3.8689**						**23,243.5617**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition Parking Deck	Demolition	8/1/2022	8/26/2022	5	20	Demo Parking Deck
2	Demolition Tower	Demolition	8/1/2023	8/28/2023	5	20	Demo Tower
3	Site Prep Parking Deck	Site Preparation	8/27/2022	9/2/2022	5	5	Site Prep Patient Tower
4	Site Prep Tower	Site Preparation	8/29/2023	9/4/2023	5	5	Site Prep Tower

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Grading Parking Deck	Grading	8/28/2022	9/7/2022	5	8	Grading Patient Tower
6	Grading Tower	Grading	9/5/2023	9/14/2023	5	8	Grading Tower
7	Const Parking Deck	Building Construction	9/8/2022	7/26/2023	5	230	Const Parking Deck
8	Const Tower	Building Construction	9/15/2023	8/1/2024	5	230	Const Tower
9	Paving Parking Deck	Paving	7/27/2023	8/2/2023	5	5	Paving Patient Tower
10	Architectural Coating	Architectural Coating	1/15/2024	8/1/2024	5	144	Arch Coating

Acres of Grading (Site Preparation Phase): 8

Acres of Grading (Grading Phase): 14

Acres of Paving: 0.76

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 134,663; Non-Residential Outdoor: 44,888; Striped Parking Area: 1,980 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition Parking Deck	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition Parking Deck	Excavators	3	8.00	158	0.38
Demolition Parking Deck	Rubber Tired Dozers	2	8.00	247	0.40
Site Prep Parking Deck	Excavators	0		158	0.38
Site Prep Parking Deck	Graders	0		187	0.41
Site Prep Parking Deck	Rubber Tired Dozers	3	8.00	247	0.40
Site Prep Parking Deck	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Paving Parking Deck	Cement and Mortar Mixers	2	6.00	9	0.56
Paving Parking Deck	Pavers	1	8.00	130	0.42
Paving Parking Deck	Paving Equipment	2	6.00	132	0.36
Paving Parking Deck	Rollers	2	6.00	80	0.38
Paving Parking Deck	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition Tower	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition Tower	Excavators	3	8.00	158	0.38

Demolition Tower	Rubber Tired Dozers	2	8.00	247	0.40
Demolition Tower	Tractors/Loaders/Backhoes	0		97	0.37
Site Prep Tower	Cranes	0		231	0.29
Site Prep Tower	Forklifts	0		89	0.20
Site Prep Tower	Generator Sets	0		84	0.74
Site Prep Tower	Rubber Tired Dozers	3	8.00	247	0.40
Site Prep Tower	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Prep Tower	Welders	0		46	0.45
Grading Parking Deck	Cement and Mortar Mixers	0		9	0.56
Grading Parking Deck	Excavators	1	8.00	158	0.38
Grading Parking Deck	Graders	1	8.00	187	0.41
Grading Parking Deck	Pavers	0		130	0.42
Grading Parking Deck	Paving Equipment	0		132	0.36
Grading Parking Deck	Rollers	0		80	0.38
Grading Parking Deck	Rubber Tired Dozers	1	8.00	247	0.40
Grading Parking Deck	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Tower	Air Compressors	0		78	0.48
Grading Tower	Excavators	1	8.00	158	0.38
Grading Tower	Graders	1	8.00	187	0.41
Grading Tower	Rubber Tired Dozers	1	8.00	247	0.40
Grading Tower	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Const Tower	Cranes	1	7.00	231	0.29
Const Tower	Forklifts	3	8.00	89	0.20
Const Tower	Generator Sets	1	8.00	84	0.74
Const Tower	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Const Tower	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Const Parking Deck	Cranes	1	7.00	231	0.29
Const Parking Deck	Forklifts	3	8.00	89	0.20

Const Parking Deck	Generator Sets	1	8.00	84	0.74
Const Parking Deck	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Const Parking Deck	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition Parking Deck	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep Parking Deck	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving Parking Deck	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Demolition Tower	6	15.00	0.00	84.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep Tower	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading Parking Deck	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading Tower	6	15.00	0.00	704.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Const Tower	9	43.00	20.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Const Parking Deck	9	43.00	20.00	100.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553						3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**						**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0506	0.0354	0.4435	1.2900e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400						132.5417
Total	**0.0506**	**0.0354**	**0.4435**	**1.2900e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**						**132.5417**

3.2 Demolition Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9246	18.3130	24.6739	0.0388		0.8627	0.8627		0.8627	0.8627						3,773.092 0
Total	**0.9246**	**18.3130**	**24.6739**	**0.0388**		**0.8627**	**0.8627**		**0.8627**	**0.8627**						**3,773.092 0**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0506	0.0354	0.4435	1.2900e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400						132.5417
Total	**0.0506**	**0.0354**	**0.4435**	**1.2900e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**						**132.5417**

3.3 Demolition Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9388	0.0000	0.9388	0.1422	0.0000	0.1422						0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280						3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.9388**	**0.9975**	**1.9363**	**0.1422**	**0.9280**	**1.0702**						**3,773.2183**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0115	0.6877	0.1347	2.6100e-003	0.0734	5.5600e-003	0.0790	0.0201	5.3100e-003	0.0254						298.0364
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0474	0.0314	0.4090	1.2500e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400						129.2270
Total	**0.0589**	**0.7191**	**0.5436**	**3.8600e-003**	**0.2217**	**6.2700e-003**	**0.2280**	**0.0595**	**5.9700e-003**	**0.0654**						**427.2634**

3.3 Demolition Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3661	0.0000	0.3661	0.0554	0.0000	0.0554						0.0000
Off-Road	0.9246	18.3130	24.6739	0.0388		0.8627	0.8627		0.8627	0.8627						3,773.2183
Total	**0.9246**	**18.3130**	**24.6739**	**0.0388**	**0.3661**	**0.8627**	**1.2289**	**0.0554**	**0.8627**	**0.9182**						**3,773.2183**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0115	0.6877	0.1347	2.6100e-003	0.0734	5.5600e-003	0.0790	0.0201	5.3100e-003	0.0254						298.0364
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0474	0.0314	0.4090	1.2500e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400						129.2270
Total	**0.0589**	**0.7191**	**0.5436**	**3.8600e-003**	**0.2217**	**6.2700e-003**	**0.2280**	**0.0595**	**5.9700e-003**	**0.0654**						**427.2634**

3.4 Site Prep Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.7631	0.0000	19.7631	10.1139	0.0000	10.1139						0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836						3,715.865 5
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.7631**	**1.6126**	**21.3756**	**10.1139**	**1.4836**	**11.5975**						**3,715.865 5**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0607	0.0425	0.5322	1.5500e-003	0.1780	9.0000e-004	0.1789	0.0472	8.3000e-004	0.0480						159.0500
Total	**0.0607**	**0.0425**	**0.5322**	**1.5500e-003**	**0.1780**	**9.0000e-004**	**0.1789**	**0.0472**	**8.3000e-004**	**0.0480**						**159.0500**

3.4 Site Prep Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7076	0.0000	7.7076	3.9444	0.0000	3.9444						0.0000
Off-Road	0.9312	19.0656	22.9600	0.0380		0.9462	0.9462		0.9462	0.9462						3,715.865 5
Total	**0.9312**	**19.0656**	**22.9600**	**0.0380**	**7.7076**	**0.9462**	**8.6538**	**3.9444**	**0.9462**	**4.8906**						**3,715.865 5**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0607	0.0425	0.5322	1.5500e-003	0.1780	9.0000e-004	0.1789	0.0472	8.3000e-004	0.0480						159.0500
Total	**0.0607**	**0.0425**	**0.5322**	**1.5500e-003**	**0.1780**	**9.0000e-004**	**0.1789**	**0.0472**	**8.3000e-004**	**0.0480**						**159.0500**

3.5 Site Prep Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					20.6115	0.0000	20.6115	10.2055	0.0000	10.2055						0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647						3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**20.6115**	**1.2660**	**21.8775**	**10.2055**	**1.1647**	**11.3702**						**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0569	0.0376	0.4908	1.5000e-003	0.1780	8.5000e-004	0.1788	0.0472	7.9000e-004	0.0480						155.0724
Total	**0.0569**	**0.0376**	**0.4908**	**1.5000e-003**	**0.1780**	**8.5000e-004**	**0.1788**	**0.0472**	**7.9000e-004**	**0.0480**						**155.0724**

3.5 Site Prep Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.0385	0.0000	8.0385	3.9802	0.0000	3.9802						0.0000
Off-Road	0.9312	19.0656	22.9600	0.0381		0.9462	0.9462		0.9462	0.9462						3,717.1219
Total	**0.9312**	**19.0656**	**22.9600**	**0.0381**	**8.0385**	**0.9462**	**8.9846**	**3.9802**	**0.9462**	**4.9263**						**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0569	0.0376	0.4908	1.5000e-003	0.1780	8.5000e-004	0.1788	0.0472	7.9000e-004	0.0480						155.0724
Total	**0.0569**	**0.0376**	**0.4908**	**1.5000e-003**	**0.1780**	**8.5000e-004**	**0.1788**	**0.0472**	**7.9000e-004**	**0.0480**						**155.0724**

3.6 Grading Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8780	0.0000	7.8780	3.5106	0.0000	3.5106						0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656						2,895.268 4
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.8780**	**0.9409**	**8.8188**	**3.5106**	**0.8656**	**4.3762**						**2,895.268 4**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0506	0.0354	0.4435	1.2900e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400						132.5417
Total	**0.0506**	**0.0354**	**0.4435**	**1.2900e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**						**132.5417**

3.6 Grading Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0724	0.0000	3.0724	1.3691	0.0000	1.3691						0.0000
Off-Road	0.7263	14.8397	18.9906	0.0297		0.7555	0.7555		0.7555	0.7555						2,895.268 4
Total	**0.7263**	**14.8397**	**18.9906**	**0.0297**	**3.0724**	**0.7555**	**3.8280**	**1.3691**	**0.7555**	**2.1247**						**2,895.268 4**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0506	0.0354	0.4435	1.2900e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400						132.5417
Total	**0.0506**	**0.0354**	**0.4435**	**1.2900e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**						**132.5417**

3.7 Grading Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.7682	0.0000	14.7682	4.2602	0.0000	4.2602						0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129						2,895.918 2
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**14.7682**	**0.7749**	**15.5431**	**4.2602**	**0.7129**	**4.9732**						**2,895.918 2**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2415	14.4090	2.8214	0.0547	1.5386	0.1164	1.6550	0.4217	0.1114	0.5330						6,244.571 8
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0474	0.0314	0.4090	1.2500e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400						129.2270
Total	**0.2889**	**14.4404**	**3.2304**	**0.0559**	**1.6869**	**0.1171**	**1.8040**	**0.4610**	**0.1120**	**0.5730**						**6,373.798 8**

3.7 Grading Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7596	0.0000	5.7596	1.6615	0.0000	1.6615						0.0000
Off-Road	0.7263	14.8397	18.9906	0.0297		0.7555	0.7555		0.7555	0.7555						2,895.918 2
Total	**0.7263**	**14.8397**	**18.9906**	**0.0297**	**5.7596**	**0.7555**	**6.5151**	**1.6615**	**0.7555**	**2.4170**						**2,895.918 2**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2415	14.4090	2.8214	0.0547	1.5386	0.1164	1.6550	0.4217	0.1114	0.5330						6,244.571 8
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0474	0.0314	0.4090	1.2500e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400						129.2270
Total	**0.2889**	**14.4404**	**3.2304**	**0.0559**	**1.6869**	**0.1171**	**1.8040**	**0.4610**	**0.1120**	**0.5730**						**6,373.798 8**

3.8 Const Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612						2,569.632 2
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**						**2,569.632 2**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.1100e-003	0.0856	0.0154	2.8000e-004	7.6000e-003	7.7000e-004	8.3700e-003	2.0800e-003	7.4000e-004	2.8200e-003						32.1138
Vendor	0.0389	0.9594	0.2922	3.0800e-003	0.0929	9.5800e-003	0.1025	0.0268	9.1700e-003	0.0359						344.1242
Worker	0.1451	0.1015	1.2713	3.7000e-003	0.4251	2.1500e-003	0.4273	0.1128	1.9800e-003	0.1147						379.9528
Total	**0.1860**	**1.1465**	**1.5788**	**7.0600e-003**	**0.5256**	**0.0125**	**0.5381**	**0.1416**	**0.0119**	**0.1535**						**756.1908**

3.8 Const Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036						2,569.6322
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**						**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.1100e-003	0.0856	0.0154	2.8000e-004	7.6000e-003	7.7000e-004	8.3700e-003	2.0800e-003	7.4000e-004	2.8200e-003						32.1138
Vendor	0.0389	0.9594	0.2922	3.0800e-003	0.0929	9.5800e-003	0.1025	0.0268	9.1700e-003	0.0359						344.1242
Worker	0.1451	0.1015	1.2713	3.7000e-003	0.4251	2.1500e-003	0.4273	0.1128	1.9800e-003	0.1147						379.9528
Total	**0.1860**	**1.1465**	**1.5788**	**7.0600e-003**	**0.5256**	**0.0125**	**0.5381**	**0.1416**	**0.0119**	**0.1535**						**756.1908**

3.8 Const Parking Deck - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584						2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**						**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1900e-003	0.0712	0.0139	2.7000e-004	7.6000e-003	5.8000e-004	8.1800e-003	2.0800e-003	5.5000e-004	2.6300e-003						30.8526
Vendor	0.0238	0.8013	0.2600	2.9700e-003	0.0929	4.6700e-003	0.0976	0.0268	4.4700e-003	0.0312						331.9340
Worker	0.1359	0.0899	1.1724	3.5900e-003	0.4251	2.0400e-003	0.4271	0.1128	1.8800e-003	0.1146						370.4507
Total	**0.1608**	**0.9624**	**1.4464**	**6.8300e-003**	**0.5256**	**7.2900e-003**	**0.5329**	**0.1416**	**6.9000e-003**	**0.1485**						**733.2373**

3.8 Const Parking Deck - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036						2,570.4061
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**						**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1900e-003	0.0712	0.0139	2.7000e-004	7.6000e-003	5.8000e-004	8.1800e-003	2.0800e-003	5.5000e-004	2.6300e-003						30.8526
Vendor	0.0238	0.8013	0.2600	2.9700e-003	0.0929	4.6700e-003	0.0976	0.0268	4.4700e-003	0.0312						331.9340
Worker	0.1359	0.0899	1.1724	3.5900e-003	0.4251	2.0400e-003	0.4271	0.1128	1.8800e-003	0.1146						370.4507
Total	**0.1608**	**0.9624**	**1.4464**	**6.8300e-003**	**0.5256**	**7.2900e-003**	**0.5329**	**0.1416**	**6.9000e-003**	**0.1485**						**733.2373**

3.9 Const Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584						2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**						**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0238	0.8013	0.2600	2.9700e-003	0.0929	4.6700e-003	0.0976	0.0268	4.4700e-003	0.0312						331.9340
Worker	0.1359	0.0899	1.1724	3.5900e-003	0.4251	2.0400e-003	0.4271	0.1128	1.8800e-003	0.1146						370.4507
Total	**0.1596**	**0.8912**	**1.4324**	**6.5600e-003**	**0.5180**	**6.7100e-003**	**0.5247**	**0.1395**	**6.3500e-003**	**0.1459**						**702.3847**

3.9 Const Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036						2,570.406 1
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**						**2,570.406 1**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0238	0.8013	0.2600	2.9700e-003	0.0929	4.6700e-003	0.0976	0.0268	4.4700e-003	0.0312						331.9340
Worker	0.1359	0.0899	1.1724	3.5900e-003	0.4251	2.0400e-003	0.4271	0.1128	1.8800e-003	0.1146						370.4507
Total	**0.1596**	**0.8912**	**1.4324**	**6.5600e-003**	**0.5180**	**6.7100e-003**	**0.5247**	**0.1395**	**6.3500e-003**	**0.1459**						**702.3847**

3.9 Const Tower - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769						2,570.807 7
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**						**2,570.807 7**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0230	0.7861	0.2550	2.9200e-003	0.0929	4.5900e-003	0.0975	0.0268	4.4000e-003	0.0312						326.8126
Worker	0.1278	0.0801	1.0902	3.4800e-003	0.4251	1.9400e-003	0.4270	0.1128	1.7900e-003	0.1145						361.5070
Total	**0.1507**	**0.8662**	**1.3451**	**6.4000e-003**	**0.5180**	**6.5300e-003**	**0.5246**	**0.1395**	**6.1900e-003**	**0.1457**						**688.3196**

3.9 Const Tower - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0270		0.9036	0.9036		0.9036	0.9036						2,570.807 7
Total	**0.6739**	**14.2261**	**17.8738**	**0.0270**		**0.9036**	**0.9036**		**0.9036**	**0.9036**						**2,570.807 7**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0230	0.7861	0.2550	2.9200e-003	0.0929	4.5900e-003	0.0975	0.0268	4.4000e-003	0.0312						326.8126
Worker	0.1278	0.0801	1.0902	3.4800e-003	0.4251	1.9400e-003	0.4270	0.1128	1.7900e-003	0.1145						361.5070
Total	**0.1507**	**0.8662**	**1.3451**	**6.4000e-003**	**0.5180**	**6.5300e-003**	**0.5246**	**0.1395**	**6.1900e-003**	**0.1457**						**688.3196**

3.10 Paving Parking Deck - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025						1,819.6122
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						0.0000
Total	**0.9181**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**						**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0632	0.0418	0.5453	1.6700e-003	0.1977	9.5000e-004	0.1987	0.0524	8.7000e-004	0.0533						172.3027
Total	**0.0632**	**0.0418**	**0.5453**	**1.6700e-003**	**0.1977**	**9.5000e-004**	**0.1987**	**0.0524**	**8.7000e-004**	**0.0533**						**172.3027**

3.10 Paving Parking Deck - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4389	9.0888	13.5323	0.0189		0.5246	0.5246		0.5246	0.5246						1,819.6122
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						0.0000
Total	**0.4389**	**9.0888**	**13.5323**	**0.0189**		**0.5246**	**0.5246**		**0.5246**	**0.5246**						**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0632	0.0418	0.5453	1.6700e-003	0.1977	9.5000e-004	0.1987	0.0524	8.7000e-004	0.0533						172.3027
Total	**0.0632**	**0.0418**	**0.5453**	**1.6700e-003**	**0.1977**	**9.5000e-004**	**0.1987**	**0.0524**	**8.7000e-004**	**0.0533**						**172.3027**

3.11 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.5438					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609						281.8443
Total	**14.7246**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**						**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0267	0.0168	0.2282	7.3000e-004	0.0890	4.1000e-004	0.0894	0.0236	3.7000e-004	0.0240						75.6643
Total	**0.0267**	**0.0168**	**0.2282**	**7.3000e-004**	**0.0890**	**4.1000e-004**	**0.0894**	**0.0236**	**3.7000e-004**	**0.0240**						**75.6643**

3.11 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.5438					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						281.8443
Total	**14.6033**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**						**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0267	0.0168	0.2282	7.3000e-004	0.0890	4.1000e-004	0.0894	0.0236	3.7000e-004	0.0240						75.6643
Total	**0.0267**	**0.0168**	**0.2282**	**7.3000e-004**	**0.0890**	**4.1000e-004**	**0.0894**	**0.0236**	**3.7000e-004**	**0.0240**						**75.6643**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.1224	4.0660	26.8732	0.0560	5.9701	0.0523	6.0224	1.5922	0.0492	1.6413						5,917.748 7
Unmitigated	3.1224	4.0660	26.8732	0.0560	5.9701	0.0523	6.0224	1.5922	0.0492	1.6413						5,917.748 7

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	962.44	693.10	607.81	2,568,222	2,568,222
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	962.44	693.10	607.81	2,568,222	2,568,222

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	13.00	5.00	5.00	64.90	16.10	19.00	73	25	2
Unenclosed Parking Structure	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hospital	0.492178	0.057147	0.202572	0.146456	0.036760	0.009141	0.008293	0.005994	0.000937	0.000362	0.032672	0.000959	0.006529
Unenclosed Parking Structure	0.492178	0.057147	0.202572	0.146456	0.036760	0.009141	0.008293	0.005994	0.000937	0.000362	0.032672	0.000959	0.006529

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.513 2
NaturalGas Unmitigated	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.513 2

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	26807.1	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total		**0.2891**	**2.6281**	**2.2076**	**0.0158**		**0.1997**	**0.1997**		**0.1997**	**0.1997**						**3,172.5132**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	26.8071	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total		**0.2891**	**2.6281**	**2.2076**	**0.0158**		**0.1997**	**0.1997**		**0.1997**	**0.1997**						**3,172.5132**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5078	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Unmitigated	2.5078	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5738					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	1.9329					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.1500e-003	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Total	**2.5078**	**1.1000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**						**0.0286**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5738					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	1.9329					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.1500e-003	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Total	**2.5078**	**1.1000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**						**0.0286**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Landscaping

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	8	100	1050	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (750 - 9999 HP)	27.5699	70.2975	2.9741	0.1325		2.0278	2.0278		2.0278	2.0278						14,153.27 12
Total	**27.5699**	**70.2975**	**2.9741**	**0.1325**		**2.0278**	**2.0278**		**2.0278**	**2.0278**						**14,153.27 12**

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SLO French Hospital Med Ctr Expansion

San Luis Obispo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	89.78	1000sqft	2.60	89,775.00	0
Unenclosed Parking Structure	33.00	1000sqft	0.76	33,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	168.39	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustments.

Land Use - 89.775 KSF Tower, 33.0 KSF Parking Structure/Helistop

Construction Phase - Based on anticipated const schedule provided by applicant and model defaults. Architectural coating to begin ~5 months after building construction begins.

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - Grading based on model defaults

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Trips and VMT - Const vehicle trips based on model defaults and info provided

Demolition - 850 tons of demo debris

Grading - 2370 cy imported and 3260 cy exported during grading phase

Vehicle Trips - Trip gen based on the traffic analysis prepared for this project/model defaults.

Vehicle Emission Factors - Vehicle emissions and fleet mix based on model defaults

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Energy use based on model defaults

Water And Wastewater - Water and waste based on model defaults

Construction Off-road Equipment Mitigation - 50% CE for watering vehicle travel ways, 61% CE for watering disturbed areas, onsite speed limit 15 mph. T3 offroad equipment included for informational purposes

Water Mitigation - Based on 336861 MAWA 209552 ETWU provided. Includes installation of low-flow fixtures.

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps - Based on information provided by the project applicant

Architectural Coating - Based on model defaults

Stationary Sources - Emergency Generators and Fire Pumps EF - Based on specs provided for Cat T4i engine

Mobile Land Use Mitigation - trip reduction calculated separately

Energy Mitigation - Solar not proposed at this time. Will meet current building standards.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	18.00	144.00
tblConstructionPhase	NumDays	18.00	5.00
tblConstructionPhase	PhaseEndDate	10/18/2024	8/1/2024
tblConstructionPhase	PhaseEndDate	8/5/2024	8/1/2024
tblConstructionPhase	PhaseEndDate	9/18/2023	7/26/2023
tblConstructionPhase	PhaseEndDate	9/23/2022	8/28/2023

tblConstructionPhase	PhaseEndDate	10/19/2022	9/7/2022
tblConstructionPhase	PhaseEndDate	10/31/2022	9/14/2023
tblConstructionPhase	PhaseEndDate	8/29/2024	8/2/2023
tblConstructionPhase	PhaseEndDate	9/30/2022	9/2/2022
tblConstructionPhase	PhaseEndDate	10/7/2022	9/4/2023
tblConstructionPhase	PhaseStartDate	9/25/2024	1/15/2024
tblConstructionPhase	PhaseStartDate	9/19/2023	9/15/2023
tblConstructionPhase	PhaseStartDate	11/1/2022	9/8/2022
tblConstructionPhase	PhaseStartDate	8/27/2022	8/1/2023
tblConstructionPhase	PhaseStartDate	10/8/2022	8/28/2022
tblConstructionPhase	PhaseStartDate	10/20/2022	9/5/2023
tblConstructionPhase	PhaseStartDate	8/6/2024	7/27/2023
tblConstructionPhase	PhaseStartDate	9/24/2022	8/27/2022
tblConstructionPhase	PhaseStartDate	10/1/2022	8/29/2023
tblGrading	AcresOfGrading	8.00	14.00
tblGrading	AcresOfGrading	8.00	65.00
tblGrading	AcresOfGrading	7.50	8.00
tblGrading	AcresOfGrading	7.50	12.00
tblGrading	MaterialExported	0.00	3,260.00
tblGrading	MaterialImported	0.00	2,370.00
tblLandUse	LandUseSquareFeet	89,780.00	89,775.00
tblLandUse	LotAcreage	2.06	2.60
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.027
tblProjectCharacteristics	CO2IntensityFactor	203.98	168.39
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.003
tblStationaryGeneratorsPumpsEF	CO_EF	2.60	0.11
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	2.60
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.08
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.08

tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,050.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	8.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	100.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.2413	54.0271	35.9209	0.0704	27.9673	2.5551	30.5223	13.7111	2.3507	16.0617						6,890.803 5
2023	3.3202	32.7932	32.9021	0.0856	20.7894	1.4404	22.0563	10.2527	1.3374	11.4182						9,269.430 5
2024	16.3896	15.5853	19.5315	0.0369	0.6070	0.6812	1.2882	0.1631	0.6444	0.8075						3,599.388 3
Maximum	**16.3896**	**54.0271**	**35.9209**	**0.0856**	**27.9673**	**2.5551**	**30.5223**	**13.7111**	**2.3507**	**16.0617**						**9,269.430 5**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.7800	33.9938	42.9011	0.0704	11.1062	1.7034	12.8096	5.4001	1.7032	7.1033						6,890.803 5
2023	1.4965	29.6971	39.2744	0.0856	8.2164	1.3946	9.1634	4.0274	1.3942	4.9743						9,269.430 5
2024	15.4706	16.5058	21.2607	0.0369	0.6070	1.0056	1.6126	0.1631	1.0052	1.1683						3,599.388 3
Maximum	**15.4706**	**33.9938**	**42.9011**	**0.0856**	**11.1062**	**1.7034**	**12.8096**	**5.4001**	**1.7032**	**7.1033**						**9,269.430 5**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**24.86**	**21.69**	**-17.07**	**0.00**	**59.63**	**12.26**	**56.21**	**60.25**	**5.30**	**53.17**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.5078	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Energy	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132
Mobile	3.0664	4.3584	28.3816	0.0543	5.9701	0.0523	6.0225	1.5922	0.0492	1.6414						5,745.6009
Stationary	27.5699	70.2975	2.9741	0.1325		2.0278	2.0278		2.0278	2.0278						14,153.2712
Total	**33.4332**	**77.2842**	**33.5759**	**0.2025**	**5.9701**	**2.2799**	**8.2501**	**1.5922**	**2.2768**	**3.8689**						**23,071.4140**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.5078	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Energy	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132
Mobile	3.0664	4.3584	28.3816	0.0543	5.9701	0.0523	6.0225	1.5922	0.0492	1.6414						5,745.6009
Stationary	27.5699	70.2975	2.9741	0.1325		2.0278	2.0278		2.0278	2.0278						14,153.2712
Total	**33.4332**	**77.2842**	**33.5759**	**0.2025**	**5.9701**	**2.2799**	**8.2501**	**1.5922**	**2.2768**	**3.8689**						**23,071.4140**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition Parking Deck	Demolition	8/1/2022	8/26/2022	5	20	Demo Parking Deck
2	Demolition Tower	Demolition	8/1/2023	8/28/2023	5	20	Demo Tower
3	Site Prep Parking Deck	Site Preparation	8/27/2022	9/2/2022	5	5	Site Prep Patient Tower
4	Site Prep Tower	Site Preparation	8/29/2023	9/4/2023	5	5	Site Prep Tower

5	Grading Parking Deck	Grading	8/28/2022	9/7/2022	5	8	Grading Patient Tower
6	Grading Tower	Grading	9/5/2023	9/14/2023	5	8	Grading Tower
7	Const Parking Deck	Building Construction	9/8/2022	7/26/2023	5	230	Const Parking Deck
8	Const Tower	Building Construction	9/15/2023	8/1/2024	5	230	Const Tower
9	Paving Parking Deck	Paving	7/27/2023	8/2/2023	5	5	Paving Patient Tower
10	Architectural Coating	Architectural Coating	1/15/2024	8/1/2024	5	144	Arch Coating

Acres of Grading (Site Preparation Phase): 8

Acres of Grading (Grading Phase): 14

Acres of Paving: 0.76

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 134,663; Non-Residential Outdoor: 44,888; Striped Parking Area: 1,980 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition Parking Deck	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition Parking Deck	Excavators	3	8.00	158	0.38
Demolition Parking Deck	Rubber Tired Dozers	2	8.00	247	0.40
Site Prep Parking Deck	Excavators	0		158	0.38
Site Prep Parking Deck	Graders	0		187	0.41
Site Prep Parking Deck	Rubber Tired Dozers	3	8.00	247	0.40
Site Prep Parking Deck	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Paving Parking Deck	Cement and Mortar Mixers	2	6.00	9	0.56
Paving Parking Deck	Pavers	1	8.00	130	0.42
Paving Parking Deck	Paving Equipment	2	6.00	132	0.36
Paving Parking Deck	Rollers	2	6.00	80	0.38
Paving Parking Deck	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition Tower	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition Tower	Excavators	3	8.00	158	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition Tower	Rubber Tired Dozers	2	8.00	247	0.40
Demolition Tower	Tractors/Loaders/Backhoes	0		97	0.37
Site Prep Tower	Cranes	0		231	0.29
Site Prep Tower	Forklifts	0		89	0.20
Site Prep Tower	Generator Sets	0		84	0.74
Site Prep Tower	Rubber Tired Dozers	3	8.00	247	0.40
Site Prep Tower	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Prep Tower	Welders	0		46	0.45
Grading Parking Deck	Cement and Mortar Mixers	0		9	0.56
Grading Parking Deck	Excavators	1	8.00	158	0.38
Grading Parking Deck	Graders	1	8.00	187	0.41
Grading Parking Deck	Pavers	0		130	0.42
Grading Parking Deck	Paving Equipment	0		132	0.36
Grading Parking Deck	Rollers	0		80	0.38
Grading Parking Deck	Rubber Tired Dozers	1	8.00	247	0.40
Grading Parking Deck	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Tower	Air Compressors	0		78	0.48
Grading Tower	Excavators	1	8.00	158	0.38
Grading Tower	Graders	1	8.00	187	0.41
Grading Tower	Rubber Tired Dozers	1	8.00	247	0.40
Grading Tower	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Const Tower	Cranes	1	7.00	231	0.29
Const Tower	Forklifts	3	8.00	89	0.20
Const Tower	Generator Sets	1	8.00	84	0.74
Const Tower	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Const Tower	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Const Parking Deck	Cranes	1	7.00	231	0.29
Const Parking Deck	Forklifts	3	8.00	89	0.20

Const Parking Deck	Generator Sets	1	8.00	84	0.74
Const Parking Deck	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Const Parking Deck	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition Parking Deck	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep Parking Deck	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving Parking Deck	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Demolition Tower	6	15.00	0.00	84.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep Tower	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading Parking Deck	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading Tower	6	15.00	0.00	704.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Const Tower	9	43.00	20.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Const Parking Deck	9	43.00	20.00	100.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553						3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**						**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0557	0.0402	0.4320	1.2400e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400						127.1225
Total	**0.0557**	**0.0402**	**0.4320**	**1.2400e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**						**127.1225**

3.2 Demolition Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9246	18.3130	24.6739	0.0388		0.8627	0.8627		0.8627	0.8627						3,773.0920
Total	**0.9246**	**18.3130**	**24.6739**	**0.0388**		**0.8627**	**0.8627**		**0.8627**	**0.8627**						**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0557	0.0402	0.4320	1.2400e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400						127.1225
Total	**0.0557**	**0.0402**	**0.4320**	**1.2400e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**						**127.1225**

3.3 Demolition Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9388	0.0000	0.9388	0.1422	0.0000	0.1422						0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280						3,773.218 3
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.9388**	**0.9975**	**1.9363**	**0.1422**	**0.9280**	**1.0702**						**3,773.218 3**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0110	0.7074	0.1367	2.6100e-003	0.0734	5.5700e-003	0.0790	0.0201	5.3200e-003	0.0255						298.2746
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0523	0.0356	0.3993	1.2000e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400						123.9505
Total	**0.0633**	**0.7430**	**0.5359**	**3.8100e-003**	**0.2217**	**6.2800e-003**	**0.2280**	**0.0595**	**5.9800e-003**	**0.0654**						**422.2250**

3.3 Demolition Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3661	0.0000	0.3661	0.0554	0.0000	0.0554						0.0000
Off-Road	0.9246	18.3130	24.6739	0.0388		0.8627	0.8627		0.8627	0.8627						3,773.218 3
Total	**0.9246**	**18.3130**	**24.6739**	**0.0388**	**0.3661**	**0.8627**	**1.2289**	**0.0554**	**0.8627**	**0.9182**						**3,773.218 3**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0110	0.7074	0.1367	2.6100e-003	0.0734	5.5700e-003	0.0790	0.0201	5.3200e-003	0.0255						298.2746
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0523	0.0356	0.3993	1.2000e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400						123.9505
Total	**0.0633**	**0.7430**	**0.5359**	**3.8100e-003**	**0.2217**	**6.2800e-003**	**0.2280**	**0.0595**	**5.9800e-003**	**0.0654**						**422.2250**

3.4 Site Prep Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.7631	0.0000	19.7631	10.1139	0.0000	10.1139						0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836						3,715.865 5
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.7631**	**1.6126**	**21.3756**	**10.1139**	**1.4836**	**11.5975**						**3,715.865 5**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0668	0.0482	0.5184	1.4800e-003	0.1780	9.0000e-004	0.1789	0.0472	8.3000e-004	0.0480						152.5470
Total	**0.0668**	**0.0482**	**0.5184**	**1.4800e-003**	**0.1780**	**9.0000e-004**	**0.1789**	**0.0472**	**8.3000e-004**	**0.0480**						**152.5470**

3.4 Site Prep Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7076	0.0000	7.7076	3.9444	0.0000	3.9444						0.0000
Off-Road	0.9312	19.0656	22.9600	0.0380		0.9462	0.9462		0.9462	0.9462						3,715.865 5
Total	**0.9312**	**19.0656**	**22.9600**	**0.0380**	**7.7076**	**0.9462**	**8.6538**	**3.9444**	**0.9462**	**4.8906**						**3,715.865 5**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0668	0.0482	0.5184	1.4800e-003	0.1780	9.0000e-004	0.1789	0.0472	8.3000e-004	0.0480						152.5470
Total	**0.0668**	**0.0482**	**0.5184**	**1.4800e-003**	**0.1780**	**9.0000e-004**	**0.1789**	**0.0472**	**8.3000e-004**	**0.0480**						**152.5470**

3.5 Site Prep Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					20.6115	0.0000	20.6115	10.2055	0.0000	10.2055						0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647						3,717.121 9
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**20.6115**	**1.2660**	**21.8775**	**10.2055**	**1.1647**	**11.3702**						**3,717.121 9**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0628	0.0427	0.4791	1.4400e-003	0.1780	8.5000e-004	0.1788	0.0472	7.9000e-004	0.0480						148.7406
Total	**0.0628**	**0.0427**	**0.4791**	**1.4400e-003**	**0.1780**	**8.5000e-004**	**0.1788**	**0.0472**	**7.9000e-004**	**0.0480**						**148.7406**

3.5 Site Prep Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.0385	0.0000	8.0385	3.9802	0.0000	3.9802						0.0000
Off-Road	0.9312	19.0656	22.9600	0.0381		0.9462	0.9462		0.9462	0.9462						3,717.1219
Total	**0.9312**	**19.0656**	**22.9600**	**0.0381**	**8.0385**	**0.9462**	**8.9846**	**3.9802**	**0.9462**	**4.9263**						**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0628	0.0427	0.4791	1.4400e-003	0.1780	8.5000e-004	0.1788	0.0472	7.9000e-004	0.0480						148.7406
Total	**0.0628**	**0.0427**	**0.4791**	**1.4400e-003**	**0.1780**	**8.5000e-004**	**0.1788**	**0.0472**	**7.9000e-004**	**0.0480**						**148.7406**

3.6 Grading Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.8780	0.0000	7.8780	3.5106	0.0000	3.5106						0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656						2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.8780**	**0.9409**	**8.8188**	**3.5106**	**0.8656**	**4.3762**						**2,895.2684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0557	0.0402	0.4320	1.2400e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400						127.1225
Total	**0.0557**	**0.0402**	**0.4320**	**1.2400e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**						**127.1225**

3.6 Grading Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0724	0.0000	3.0724	1.3691	0.0000	1.3691						0.0000
Off-Road	0.7263	14.8397	18.9906	0.0297		0.7555	0.7555		0.7555	0.7555						2,895.268 4
Total	**0.7263**	**14.8397**	**18.9906**	**0.0297**	**3.0724**	**0.7555**	**3.8280**	**1.3691**	**0.7555**	**2.1247**						**2,895.268 4**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0557	0.0402	0.4320	1.2400e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400						127.1225
Total	**0.0557**	**0.0402**	**0.4320**	**1.2400e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**						**127.1225**

3.7 Grading Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.7682	0.0000	14.7682	4.2602	0.0000	4.2602						0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129						2,895.918 2
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**14.7682**	**0.7749**	**15.5431**	**4.2602**	**0.7129**	**4.9732**						**2,895.918 2**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2303	14.8217	2.8636	0.0547	1.5386	0.1166	1.6552	0.4217	0.1116	0.5332						6,249.561 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0523	0.0356	0.3993	1.2000e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400						123.9505
Total	**0.2827**	**14.8573**	**3.2628**	**0.0559**	**1.6869**	**0.1173**	**1.8042**	**0.4610**	**0.1122**	**0.5732**						**6,373.512 4**

3.7 Grading Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7596	0.0000	5.7596	1.6615	0.0000	1.6615						0.0000
Off-Road	0.7263	14.8397	18.9906	0.0297		0.7555	0.7555		0.7555	0.7555						2,895.918 2
Total	**0.7263**	**14.8397**	**18.9906**	**0.0297**	**5.7596**	**0.7555**	**6.5151**	**1.6615**	**0.7555**	**2.4170**						**2,895.918 2**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2303	14.8217	2.8636	0.0547	1.5386	0.1166	1.6552	0.4217	0.1116	0.5332						6,249.561 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0523	0.0356	0.3993	1.2000e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400						123.9505
Total	**0.2827**	**14.8573**	**3.2628**	**0.0559**	**1.6869**	**0.1173**	**1.8042**	**0.4610**	**0.1122**	**0.5732**						**6,373.512 4**

3.8 Const Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612						2,569.632 2
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**						**2,569.632 2**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Hauling	2.0700e-003	0.0879	0.0157	2.8000e-004	7.6000e-003	7.7000e-004	8.3700e-003	2.0800e-003	7.4000e-004	2.8200e-003						32.1236
Vendor	0.0386	0.9872	0.3039	3.0800e-003	0.0929	9.6200e-003	0.1025	0.0268	9.2100e-003	0.0360						344.3014
Worker	0.1597	0.1152	1.2385	3.5500e-003	0.4251	2.1500e-003	0.4273	0.1128	1.9800e-003	0.1147						364.4179
Total	**0.2003**	**1.1903**	**1.5580**	**6.9100e-003**	**0.5256**	**0.0125**	**0.5382**	**0.1416**	**0.0119**	**0.1535**						**740.8429**

3.8 Const Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036						2,569.632 2
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**						**2,569.632 2**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0700e-003	0.0879	0.0157	2.8000e-004	7.6000e-003	7.7000e-004	8.3700e-003	2.0800e-003	7.4000e-004	2.8200e-003						32.1236
Vendor	0.0386	0.9872	0.3039	3.0800e-003	0.0929	9.6200e-003	0.1025	0.0268	9.2100e-003	0.0360						344.3014
Worker	0.1597	0.1152	1.2385	3.5500e-003	0.4251	2.1500e-003	0.4273	0.1128	1.9800e-003	0.1147						364.4179
Total	**0.2003**	**1.1903**	**1.5580**	**6.9100e-003**	**0.5256**	**0.0125**	**0.5382**	**0.1416**	**0.0119**	**0.1535**						**740.8429**

3.8 Const Parking Deck - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584						2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**						**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1400e-003	0.0732	0.0142	2.7000e-004	7.6000e-003	5.8000e-004	8.1800e-003	2.0800e-003	5.5000e-004	2.6300e-003						30.8773
Vendor	0.0232	0.8281	0.2701	2.9700e-003	0.0929	4.7000e-003	0.0976	0.0268	4.5000e-003	0.0313						332.4963
Worker	0.1500	0.1021	1.1445	3.4400e-003	0.4251	2.0400e-003	0.4271	0.1128	1.8800e-003	0.1146						355.3247
Total	**0.1743**	**1.0034**	**1.4288**	**6.6800e-003**	**0.5256**	**7.3200e-003**	**0.5330**	**0.1416**	**6.9300e-003**	**0.1485**						**718.6982**

3.8 Const Parking Deck - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036						2,570.4061
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**						**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1400e-003	0.0732	0.0142	2.7000e-004	7.6000e-003	5.8000e-004	8.1800e-003	2.0800e-003	5.5000e-004	2.6300e-003						30.8773
Vendor	0.0232	0.8281	0.2701	2.9700e-003	0.0929	4.7000e-003	0.0976	0.0268	4.5000e-003	0.0313						332.4963
Worker	0.1500	0.1021	1.1445	3.4400e-003	0.4251	2.0400e-003	0.4271	0.1128	1.8800e-003	0.1146						355.3247
Total	**0.1743**	**1.0034**	**1.4288**	**6.6800e-003**	**0.5256**	**7.3200e-003**	**0.5330**	**0.1416**	**6.9300e-003**	**0.1485**						**718.6982**

3.9 Const Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584						2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**						**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0232	0.8281	0.2701	2.9700e-003	0.0929	4.7000e-003	0.0976	0.0268	4.5000e-003	0.0313						332.4963
Worker	0.1500	0.1021	1.1445	3.4400e-003	0.4251	2.0400e-003	0.4271	0.1128	1.8800e-003	0.1146						355.3247
Total	**0.1732**	**0.9302**	**1.4146**	**6.4100e-003**	**0.5180**	**6.7400e-003**	**0.5248**	**0.1395**	**6.3800e-003**	**0.1459**						**687.8209**

3.9 Const Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0269		0.9036	0.9036		0.9036	0.9036						2,570.4061
Total	**0.6739**	**14.2261**	**17.8738**	**0.0269**		**0.9036**	**0.9036**		**0.9036**	**0.9036**						**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0232	0.8281	0.2701	2.9700e-003	0.0929	4.7000e-003	0.0976	0.0268	4.5000e-003	0.0313						332.4963
Worker	0.1500	0.1021	1.1445	3.4400e-003	0.4251	2.0400e-003	0.4271	0.1128	1.8800e-003	0.1146						355.3247
Total	**0.1732**	**0.9302**	**1.4146**	**6.4100e-003**	**0.5180**	**6.7400e-003**	**0.5248**	**0.1395**	**6.3800e-003**	**0.1459**						**687.8209**

3.9 Const Tower - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769						2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**						**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0224	0.8127	0.2650	2.9200e-003	0.0929	4.6200e-003	0.0976	0.0268	4.4200e-003	0.0312						327.3937
Worker	0.1415	0.0910	1.0663	3.3300e-003	0.4251	1.9400e-003	0.4270	0.1128	1.7900e-003	0.1145						346.7641
Total	**0.1638**	**0.9037**	**1.3313**	**6.2500e-003**	**0.5180**	**6.5600e-003**	**0.5246**	**0.1395**	**6.2100e-003**	**0.1457**						**674.1578**

3.9 Const Tower - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6739	14.2261	17.8738	0.0270		0.9036	0.9036		0.9036	0.9036						2,570.8077
Total	**0.6739**	**14.2261**	**17.8738**	**0.0270**		**0.9036**	**0.9036**		**0.9036**	**0.9036**						**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0224	0.8127	0.2650	2.9200e-003	0.0929	4.6200e-003	0.0976	0.0268	4.4200e-003	0.0312						327.3937
Worker	0.1415	0.0910	1.0663	3.3300e-003	0.4251	1.9400e-003	0.4270	0.1128	1.7900e-003	0.1145						346.7641
Total	**0.1638**	**0.9037**	**1.3313**	**6.2500e-003**	**0.5180**	**6.5600e-003**	**0.5246**	**0.1395**	**6.2100e-003**	**0.1457**						**674.1578**

3.10 Paving Parking Deck - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025						1,819.6122
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						0.0000
Total	**0.9181**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**						**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0698	0.0475	0.5323	1.6000e-003	0.1977	9.5000e-004	0.1987	0.0524	8.7000e-004	0.0533						165.2673
Total	**0.0698**	**0.0475**	**0.5323**	**1.6000e-003**	**0.1977**	**9.5000e-004**	**0.1987**	**0.0524**	**8.7000e-004**	**0.0533**						**165.2673**

3.10 Paving Parking Deck - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4389	9.0888	13.5323	0.0189		0.5246	0.5246		0.5246	0.5246						1,819.6122
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						0.0000
Total	**0.4389**	**9.0888**	**13.5323**	**0.0189**		**0.5246**	**0.5246**		**0.5246**	**0.5246**						**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0698	0.0475	0.5323	1.6000e-003	0.1977	9.5000e-004	0.1987	0.0524	8.7000e-004	0.0533						165.2673
Total	**0.0698**	**0.0475**	**0.5323**	**1.6000e-003**	**0.1977**	**9.5000e-004**	**0.1987**	**0.0524**	**8.7000e-004**	**0.0533**						**165.2673**

3.11 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Archit. Coating	14.5438					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609						281.8443
Total	**14.7246**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**						**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0296	0.0190	0.2232	7.0000e-004	0.0890	4.1000e-004	0.0894	0.0236	3.7000e-004	0.0240						72.5785
Total	**0.0296**	**0.0190**	**0.2232**	**7.0000e-004**	**0.0890**	**4.1000e-004**	**0.0894**	**0.0236**	**3.7000e-004**	**0.0240**						**72.5785**

3.11 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.5438					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951						281.8443
Total	**14.6033**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**						**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0296	0.0190	0.2232	7.0000e-004	0.0890	4.1000e-004	0.0894	0.0236	3.7000e-004	0.0240						72.5785
Total	**0.0296**	**0.0190**	**0.2232**	**7.0000e-004**	**0.0890**	**4.1000e-004**	**0.0894**	**0.0236**	**3.7000e-004**	**0.0240**						**72.5785**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.0664	4.3584	28.3816	0.0543	5.9701	0.0523	6.0225	1.5922	0.0492	1.6414						5,745.6009
Unmitigated	3.0664	4.3584	28.3816	0.0543	5.9701	0.0523	6.0225	1.5922	0.0492	1.6414						5,745.6009

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	962.44	693.10	607.81	2,568,222	2,568,222
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	962.44	693.10	607.81	2,568,222	2,568,222

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	13.00	5.00	5.00	64.90	16.10	19.00	73	25	2
Unenclosed Parking Structure	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hospital	0.492178	0.057147	0.202572	0.146456	0.036760	0.009141	0.008293	0.005994	0.000937	0.000362	0.032672	0.000959	0.006529
Unenclosed Parking Structure	0.492178	0.057147	0.202572	0.146456	0.036760	0.009141	0.008293	0.005994	0.000937	0.000362	0.032672	0.000959	0.006529

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132
NaturalGas Unmitigated	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	26807.1	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total		**0.2891**	**2.6281**	**2.2076**	**0.0158**		**0.1997**	**0.1997**		**0.1997**	**0.1997**						**3,172.5132**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	26.8071	0.2891	2.6281	2.2076	0.0158		0.1997	0.1997		0.1997	0.1997						3,172.5132
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total		**0.2891**	**2.6281**	**2.2076**	**0.0158**		**0.1997**	**0.1997**		**0.1997**	**0.1997**						**3,172.5132**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5078	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Unmitigated	2.5078	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5738					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	1.9329					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.1500e-003	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Total	**2.5078**	**1.1000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**						**0.0286**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5738					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	1.9329					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.1500e-003	1.1000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005						0.0286
Total	**2.5078**	**1.1000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**						**0.0286**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Landscaping

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	8	100	1050	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (750 - 9999 HP)	27.5699	70.2975	2.9741	0.1325		2.0278	2.0278		2.0278	2.0278						14,153.2712
Total	**27.5699**	**70.2975**	**2.9741**	**0.1325**		**2.0278**	**2.0278**		**2.0278**	**2.0278**						**14,153.2712**

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SLO French Hospital Med Ctr Expansion

San Luis Obispo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	89.78	1000sqft	2.60	89,775.00	0
Unenclosed Parking Structure	33.00	1000sqft	0.76	33,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	127.09	**CH4 Intensity (lb/MWhr)**	0.021	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustments.

Land Use - 89.775 KSF Tower, 33.0 KSF Parking Structure/Helistop

Construction Phase - Based on anticipated const schedule provided by applicant and model defaults. Architectural coating to begin ~5 months after building construction begins.

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - Grading based on model defaults

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Off-road Equipment - based model defaults

Trips and VMT - Const vehicle trips based on model defaults and info provided

Demolition - 850 tons of demo debris

Grading - 2370 cy imported and 3260 cy exported during grading phase

Vehicle Trips - Trip gen based on the traffic analysis prepared for this project/model defaults.

Vehicle Emission Factors - Vehicle emissions and fleet mix based on model defaults

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Energy use based on model defaults

Water And Wastewater - Water and waste based on model defaults

Construction Off-road Equipment Mitigation - 50% CE for watering vehicle travel ways, 61% CE for watering disturbed areas, onsite speed limit 15 mph. T3 offroad equipment included for informational purposes

Water Mitigation - Based on 336861 MAWA 209552 ETWU provided. Includes installation of low-flow fixtures.

Waste Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps - Based on information provided by the project applicant

Architectural Coating - Based on model defaults

Stationary Sources - Emergency Generators and Fire Pumps EF - Based on specs provided for Cat T4i engine

Mobile Land Use Mitigation - trip reduction calculated separately

Energy Mitigation - Solar not proposed at this time. Will meet current building standards.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblGrading	AcresOfGrading	8.00	14.00
tblGrading	AcresOfGrading	8.00	65.00
tblGrading	AcresOfGrading	7.50	8.00
tblGrading	AcresOfGrading	7.50	12.00
tblGrading	MaterialExported	0.00	3,260.00
tblGrading	MaterialImported	0.00	2,370.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	89,780.00	89,775.00
tblLandUse	LotAcreage	2.06	2.60
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.021
tblProjectCharacteristics	CO2IntensityFactor	203.98	127.09
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.002
tblStationaryGeneratorsPumpsEF	CO_EF	2.60	0.11
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	2.60
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.08
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.08
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,050.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	8.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	100.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1295	1.2977	1.0552	2.2500e-003	0.2238	0.0592	0.2831	0.0895	0.0552	0.1447						202.7968
2023	0.2254	1.9973	2.2955	4.3600e-003	0.0663	0.0919	0.1582	0.0179	0.0865	0.1044						387.1145
2024	1.1841	1.2048	1.4967	2.8100e-003	0.0419	0.0525	0.0944	0.0113	0.0494	0.0607						248.8448
Maximum	**1.1841**	**1.9973**	**2.2955**	**4.3600e-003**	**0.2238**	**0.0919**	**0.2831**	**0.0895**	**0.0865**	**0.1447**						**387.1145**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0515	1.0008	1.2161	2.2500e-003	0.1013	0.0489	0.1502	0.0387	0.0489	0.0876						202.7966
2023	0.1086	1.9766	2.5073	4.3600e-003	0.0663	0.1184	0.1847	0.0179	0.1183	0.1363						387.1141
2024	1.1168	1.2744	1.6418	2.8100e-003	0.0419	0.0766	0.1185	0.0113	0.0766	0.0879						248.8445
Maximum	**1.1168**	**1.9766**	**2.5073**	**4.3600e-003**	**0.1013**	**0.1184**	**0.1847**	**0.0387**	**0.1183**	**0.1363**						**387.1141**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	17.03	5.51	-10.68	0.00	36.91	-19.77	15.37	42.80	-27.63	-0.63	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2022	10-31-2022	1.0131	0.6939
2	11-1-2022	1-31-2023	0.5974	0.5329
3	2-1-2023	4-30-2023	0.5441	0.5105
4	5-1-2023	7-31-2023	0.5612	0.5265
5	8-1-2023	10-31-2023	0.5607	0.5259
6	11-1-2023	1-31-2024	0.5486	0.5254
7	2-1-2024	4-30-2024	0.5132	0.5127
8	5-1-2024	7-31-2024	0.5235	0.5230
9	8-1-2024	9-30-2024	1.2015	1.2049
		Highest	1.2015	1.2049

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4577	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Energy	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						629.7327
Mobile	0.3983	0.4988	3.7188	7.7200e-003	0.9587	6.2600e-003	0.9649	0.2560	5.8800e-003	0.2618						762.4436
Stationary	0.1723	0.4394	0.0186	8.3000e-004		0.0127	0.0127		0.0127	0.0127						80.2477
Waste						0.0000	0.0000		0.0000	0.0000						487.6234
Water						0.0000	0.0000		0.0000	0.0000						19.3162
Total	**1.0810**	**1.4178**	**4.1423**	**0.0114**	**0.9587**	**0.0554**	**1.0141**	**0.2560**	**0.0550**	**0.3110**						**1,979.3678**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4577	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Energy	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						629.7327
Mobile	0.3983	0.4988	3.7188	7.7200e-003	0.9587	6.2600e-003	0.9649	0.2560	5.8800e-003	0.2618						762.4436
Stationary	0.1723	0.4394	0.0186	8.3000e-004		0.0127	0.0127		0.0127	0.0127						80.2477
Waste						0.0000	0.0000		0.0000	0.0000						487.6234
Water						0.0000	0.0000		0.0000	0.0000						15.3752
Total	**1.0810**	**1.4178**	**4.1423**	**0.0114**	**0.9587**	**0.0554**	**1.0141**	**0.2560**	**0.0550**	**0.3110**						**1,975.4269**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition Parking Deck	Demolition	8/1/2022	8/26/2022	5	20	Demo Parking Deck
2	Demolition Tower	Demolition	8/27/2022	9/23/2022	5	20	Demo Tower

3	Site Prep Parking Deck	Site Preparation	9/24/2022	9/30/2022	5	5	Site Prep Patient Tower
4	Site Prep Tower	Site Preparation	10/1/2022	10/7/2022	5	5	Site Prep Tower
5	Grading Parking Deck	Grading	10/8/2022	10/19/2022	5	8	Grading Patient Tower
6	Grading Tower	Grading	10/20/2022	10/31/2022	5	8	Grading Tower
7	Const Parking Deck	Building Construction	11/1/2022	9/18/2023	5	230	Const Parking Deck
8	Const Tower	Building Construction	9/19/2023	8/5/2024	5	230	Const Tower
9	Paving Parking Deck	Paving	8/6/2024	8/29/2024	5	18	Paving Patient Tower
10	Architectural Coating	Architectural Coating	8/30/2024	9/24/2024	5	18	Arch Coating

Acres of Grading (Site Preparation Phase): 8

Acres of Grading (Grading Phase): 14

Acres of Paving: 0.76

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 134,663; Non-Residential Outdoor: 44,888; Striped Parking Area: 1,980 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition Parking Deck	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition Parking Deck	Excavators	3	8.00	158	0.38
Demolition Parking Deck	Rubber Tired Dozers	2	8.00	247	0.40
Site Prep Parking Deck	Excavators	0		158	0.38
Site Prep Parking Deck	Graders	0		187	0.41
Site Prep Parking Deck	Rubber Tired Dozers	3	8.00	247	0.40
Site Prep Parking Deck	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Paving Parking Deck	Cement and Mortar Mixers	2	6.00	9	0.56
Paving Parking Deck	Pavers	1	8.00	130	0.42
Paving Parking Deck	Paving Equipment	2	6.00	132	0.36
Paving Parking Deck	Rollers	2	6.00	80	0.38
Paving Parking Deck	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Demolition Tower	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition Tower	Excavators	3	8.00	158	0.38
Demolition Tower	Rubber Tired Dozers	2	8.00	247	0.40
Demolition Tower	Tractors/Loaders/Backhoes	0		97	0.37
Site Prep Tower	Cranes	0		231	0.29
Site Prep Tower	Forklifts	0		89	0.20
Site Prep Tower	Generator Sets	0		84	0.74
Site Prep Tower	Rubber Tired Dozers	3	8.00	247	0.40
Site Prep Tower	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Prep Tower	Welders	0		46	0.45
Grading Parking Deck	Cement and Mortar Mixers	0		9	0.56
Grading Parking Deck	Excavators	1	8.00	158	0.38
Grading Parking Deck	Graders	1	8.00	187	0.41
Grading Parking Deck	Pavers	0		130	0.42
Grading Parking Deck	Paving Equipment	0		132	0.36
Grading Parking Deck	Rollers	0		80	0.38
Grading Parking Deck	Rubber Tired Dozers	1	8.00	247	0.40
Grading Parking Deck	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading Tower	Air Compressors	0		78	0.48
Grading Tower	Excavators	1	8.00	158	0.38
Grading Tower	Graders	1	8.00	187	0.41
Grading Tower	Rubber Tired Dozers	1	8.00	247	0.40
Grading Tower	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Const Tower	Cranes	1	7.00	231	0.29
Const Tower	Forklifts	3	8.00	89	0.20
Const Tower	Generator Sets	1	8.00	84	0.74
Const Tower	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Const Tower	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Const Parking Deck	Cranes		1	7.00	231	0.29
Const Parking Deck	Forklifts		3	8.00	89	0.20
Const Parking Deck	Generator Sets		1	8.00	84	0.74
Const Parking Deck	Tractors/Loaders/Backhoes		3	7.00	97	0.37
Const Parking Deck	Welders		1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition Parking Deck	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep Parking Deck	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving Parking Deck	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Demolition Tower	6	15.00	0.00	84.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Prep Tower	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading Parking Deck	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading Tower	6	15.00	0.00	704.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Const Tower	9	43.00	20.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Const Parking Deck	9	43.00	20.00	100.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116						34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**		**0.0124**	**0.0124**		**0.0116**	**0.0116**						**34.2289**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	5.1000e-004	3.9000e-004	4.3000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004						1.1613
Total	**5.1000e-004**	**3.9000e-004**	**4.3000e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**						**1.1613**

3.2 Demolition Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.2500e-003	0.1831	0.2467	3.9000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003						34.2289
Total	**9.2500e-003**	**0.1831**	**0.2467**	**3.9000e-004**		**8.6300e-003**	**8.6300e-003**		**8.6300e-003**	**8.6300e-003**						**34.2289**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	5.1000e-004	3.9000e-004	4.3000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004						1.1613
Total	**5.1000e-004**	**3.9000e-004**	**4.3000e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**						**1.1613**

3.3 Demolition Tower - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3900e-003	0.0000	9.3900e-003	1.4200e-003	0.0000	1.4200e-003						0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116						34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**	**9.3900e-003**	**0.0124**	**0.0218**	**1.4200e-003**	**0.0116**	**0.0130**						**34.2289**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	8.5300e-003	1.5000e-003	3.0000e-005	7.2000e-004	7.0000e-005	7.9000e-004	2.0000e-004	7.0000e-005	2.7000e-004						2.8146
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	5.1000e-004	3.9000e-004	4.3000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004						1.1613
Total	**7.1000e-004**	**8.9200e-003**	**5.8000e-003**	**4.0000e-005**	**2.1600e-003**	**8.0000e-005**	**2.2400e-003**	**5.8000e-004**	**8.0000e-005**	**6.6000e-004**						**3.9759**

3.3 Demolition Tower - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.6600e-003	0.0000	3.6600e-003	5.5000e-004	0.0000	5.5000e-004						0.0000
Off-Road	9.2500e-003	0.1831	0.2467	3.9000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003						34.2289
Total	**9.2500e-003**	**0.1831**	**0.2467**	**3.9000e-004**	**3.6600e-003**	**8.6300e-003**	**0.0123**	**5.5000e-004**	**8.6300e-003**	**9.1800e-003**						**34.2289**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	8.5300e-003	1.5000e-003	3.0000e-005	7.2000e-004	7.0000e-005	7.9000e-004	2.0000e-004	7.0000e-005	2.7000e-004						2.8146
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	5.1000e-004	3.9000e-004	4.3000e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004						1.1613
Total	**7.1000e-004**	**8.9200e-003**	**5.8000e-003**	**4.0000e-005**	**2.1600e-003**	**8.0000e-005**	**2.2400e-003**	**5.8000e-004**	**8.0000e-005**	**6.6000e-004**						**3.9759**

3.4 Site Prep Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0494	0.0000	0.0494	0.0253	0.0000	0.0253						0.0000
Off-Road	7.9300e-003	0.0827	0.0492	1.0000e-004		4.0300e-003	4.0300e-003		3.7100e-003	3.7100e-003						8.4274
Total	**7.9300e-003**	**0.0827**	**0.0492**	**1.0000e-004**	**0.0494**	**4.0300e-003**	**0.0534**	**0.0253**	**3.7100e-003**	**0.0290**						**8.4274**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.5000e-004	1.2000e-004	1.2900e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004						0.3484
Total	**1.5000e-004**	**1.2000e-004**	**1.2900e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**						**0.3484**

3.4 Site Prep Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0193	0.0000	0.0193	9.8600e-003	0.0000	9.8600e-003						0.0000
Off-Road	2.3300e-003	0.0477	0.0574	1.0000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003						8.4274
Total	**2.3300e-003**	**0.0477**	**0.0574**	**1.0000e-004**	**0.0193**	**2.3700e-003**	**0.0216**	**9.8600e-003**	**2.3700e-003**	**0.0122**						**8.4274**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.5000e-004	1.2000e-004	1.2900e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004						0.3484
Total	**1.5000e-004**	**1.2000e-004**	**1.2900e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**						**0.3484**

3.5 Site Prep Tower - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0515	0.0000	0.0515	0.0255	0.0000	0.0255						0.0000
Off-Road	7.9300e-003	0.0827	0.0492	1.0000e-004		4.0300e-003	4.0300e-003		3.7100e-003	3.7100e-003						8.4274
Total	**7.9300e-003**	**0.0827**	**0.0492**	**1.0000e-004**	**0.0515**	**4.0300e-003**	**0.0556**	**0.0255**	**3.7100e-003**	**0.0292**						**8.4274**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.5000e-004	1.2000e-004	1.2900e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004						0.3484
Total	**1.5000e-004**	**1.2000e-004**	**1.2900e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**						**0.3484**

3.5 Site Prep Tower - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	9.9500e-003	0.0000	9.9500e-003						0.0000
Off-Road	2.3300e-003	0.0477	0.0574	1.0000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003						8.4274
Total	**2.3300e-003**	**0.0477**	**0.0574**	**1.0000e-004**	**0.0201**	**2.3700e-003**	**0.0225**	**9.9500e-003**	**2.3700e-003**	**0.0123**						**8.4274**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.5000e-004	1.2000e-004	1.2900e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004						0.3484
Total	**1.5000e-004**	**1.2000e-004**	**1.2900e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**						**0.3484**

3.6 Grading Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0315	0.0000	0.0315	0.0140	0.0000	0.0140						0.0000
Off-Road	7.7900e-003	0.0834	0.0611	1.2000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003						10.5062
Total	**7.7900e-003**	**0.0834**	**0.0611**	**1.2000e-004**	**0.0315**	**3.7600e-003**	**0.0353**	**0.0140**	**3.4600e-003**	**0.0175**						**10.5062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	2.0000e-004	1.6000e-004	1.7200e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.4645
Total	**2.0000e-004**	**1.6000e-004**	**1.7200e-003**	**0.0000**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**						**0.4645**

3.6 Grading Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0123	0.0000	0.0123	5.4800e-003	0.0000	5.4800e-003						0.0000
Off-Road	2.9100e-003	0.0594	0.0760	1.2000e-004		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003						10.5062
Total	**2.9100e-003**	**0.0594**	**0.0760**	**1.2000e-004**	**0.0123**	**3.0200e-003**	**0.0153**	**5.4800e-003**	**3.0200e-003**	**8.5000e-003**						**10.5062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	2.0000e-004	1.6000e-004	1.7200e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.4645
Total	**2.0000e-004**	**1.6000e-004**	**1.7200e-003**	**0.0000**	**5.8000e-004**	**0.0000**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**						**0.4645**

3.7 Grading Tower - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0591	0.0000	0.0591	0.0170	0.0000	0.0170						0.0000
Off-Road	7.7900e-003	0.0834	0.0611	1.2000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003						10.5062
Total	**7.7900e-003**	**0.0834**	**0.0611**	**1.2000e-004**	**0.0591**	**3.7600e-003**	**0.0628**	**0.0170**	**3.4600e-003**	**0.0205**						**10.5062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6900e-003	0.0715	0.0126	2.3000e-004	6.0100e-003	6.3000e-004	6.6400e-003	1.6500e-003	6.0000e-004	2.2500e-003						23.5892
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	2.0000e-004	1.6000e-004	1.7200e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.4645
Total	**1.8900e-003**	**0.0717**	**0.0143**	**2.3000e-004**	**6.5900e-003**	**6.3000e-004**	**7.2200e-003**	**1.8000e-003**	**6.0000e-004**	**2.4100e-003**						**24.0537**

3.7 Grading Tower - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0230	0.0000	0.0230	6.6500e-003	0.0000	6.6500e-003						0.0000
Off-Road	2.9100e-003	0.0594	0.0760	1.2000e-004		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003						10.5062
Total	**2.9100e-003**	**0.0594**	**0.0760**	**1.2000e-004**	**0.0230**	**3.0200e-003**	**0.0261**	**6.6500e-003**	**3.0200e-003**	**9.6700e-003**						**10.5062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6900e-003	0.0715	0.0126	2.3000e-004	6.0100e-003	6.3000e-004	6.6400e-003	1.6500e-003	6.0000e-004	2.2500e-003						23.5892
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	2.0000e-004	1.6000e-004	1.7200e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.4645
Total	**1.8900e-003**	**0.0717**	**0.0143**	**2.3000e-004**	**6.5900e-003**	**6.3000e-004**	**7.2200e-003**	**1.8000e-003**	**6.0000e-004**	**2.4100e-003**						**24.0537**

3.8 Const Parking Deck - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0375	0.3435	0.3600	5.9000e-004		0.0178	0.0178		0.0168	0.0168						51.2849
Total	**0.0375**	**0.3435**	**0.3600**	**5.9000e-004**		**0.0178**	**0.0178**		**0.0168**	**0.0168**						**51.2849**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9400e-003	3.4000e-004	1.0000e-005	1.6000e-004	2.0000e-005	1.8000e-004	4.0000e-005	2.0000e-005	6.0000e-005						0.6410
Vendor	8.5000e-004	0.0218	6.5500e-003	7.0000e-005	2.0000e-003	2.1000e-004	2.2100e-003	5.8000e-004	2.0000e-004	7.8000e-004						6.8696
Worker	3.2200e-003	2.4800e-003	0.0271	8.0000e-005	9.1100e-003	5.0000e-005	9.1500e-003	2.4200e-003	4.0000e-005	2.4600e-003						7.3240
Total	**4.1200e-003**	**0.0262**	**0.0340**	**1.6000e-004**	**0.0113**	**2.8000e-004**	**0.0115**	**3.0400e-003**	**2.6000e-004**	**3.3000e-003**						**14.8346**

3.8 Const Parking Deck - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0148	0.3130	0.3932	5.9000e-004		0.0199	0.0199		0.0199	0.0199						51.2848
Total	**0.0148**	**0.3130**	**0.3932**	**5.9000e-004**		**0.0199**	**0.0199**		**0.0199**	**0.0199**						**51.2848**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9400e-003	3.4000e-004	1.0000e-005	1.6000e-004	2.0000e-005	1.8000e-004	4.0000e-005	2.0000e-005	6.0000e-005						0.6410
Vendor	8.5000e-004	0.0218	6.5500e-003	7.0000e-005	2.0000e-003	2.1000e-004	2.2100e-003	5.8000e-004	2.0000e-004	7.8000e-004						6.8696
Worker	3.2200e-003	2.4800e-003	0.0271	8.0000e-005	9.1100e-003	5.0000e-005	9.1500e-003	2.4200e-003	4.0000e-005	2.4600e-003						7.3240
Total	**4.1200e-003**	**0.0262**	**0.0340**	**1.6000e-004**	**0.0113**	**2.8000e-004**	**0.0115**	**3.0400e-003**	**2.6000e-004**	**3.3000e-003**						**14.8346**

3.8 Const Parking Deck - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1463	1.3378	1.5107	2.5100e-003		0.0651	0.0651		0.0612	0.0612						216.8605
Total	**0.1463**	**1.3378**	**1.5107**	**2.5100e-003**		**0.0651**	**0.0651**		**0.0612**	**0.0612**						**216.8605**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	6.8400e-003	1.3000e-003	3.0000e-005	6.9000e-004	5.0000e-005	7.4000e-004	1.9000e-004	5.0000e-005	2.4000e-004						2.6039
Vendor	2.1800e-003	0.0769	0.0247	2.8000e-004	8.4600e-003	4.4000e-004	8.8900e-003	2.4400e-003	4.2000e-004	2.8600e-003						28.0248
Worker	0.0128	9.2800e-003	0.1059	3.2000e-004	0.0385	1.9000e-004	0.0387	0.0102	1.7000e-004	0.0104						30.1877
Total	**0.0150**	**0.0930**	**0.1318**	**6.3000e-004**	**0.0477**	**6.8000e-004**	**0.0483**	**0.0129**	**6.4000e-004**	**0.0135**						**60.8163**

3.8 Const Parking Deck - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0627	1.3230	1.6623	2.5100e-003		0.0840	0.0840		0.0840	0.0840						216.8602
Total	**0.0627**	**1.3230**	**1.6623**	**2.5100e-003**		**0.0840**	**0.0840**		**0.0840**	**0.0840**						**216.8602**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	6.8400e-003	1.3000e-003	3.0000e-005	6.9000e-004	5.0000e-005	7.4000e-004	1.9000e-004	5.0000e-005	2.4000e-004						2.6039
Vendor	2.1800e-003	0.0769	0.0247	2.8000e-004	8.4600e-003	4.4000e-004	8.8900e-003	2.4400e-003	4.2000e-004	2.8600e-003						28.0248
Worker	0.0128	9.2800e-003	0.1059	3.2000e-004	0.0385	1.9000e-004	0.0387	0.0102	1.7000e-004	0.0104						30.1877
Total	**0.0150**	**0.0930**	**0.1318**	**6.3000e-004**	**0.0477**	**6.8000e-004**	**0.0483**	**0.0129**	**6.4000e-004**	**0.0135**						**60.8163**

3.9 Const Tower - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0582	0.5322	0.6010	1.0000e-003		0.0259	0.0259		0.0244	0.0244						86.2778
Total	**0.0582**	**0.5322**	**0.6010**	**1.0000e-003**		**0.0259**	**0.0259**		**0.0244**	**0.0244**						**86.2778**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	8.7000e-004	0.0306	9.8100e-003	1.1000e-004	3.3600e-003	1.7000e-004	3.5400e-003	9.7000e-004	1.7000e-004	1.1400e-003						11.1497
Worker	5.0700e-003	3.6900e-003	0.0421	1.3000e-004	0.0153	8.0000e-005	0.0154	4.0700e-003	7.0000e-005	4.1400e-003						12.0101
Total	**5.9400e-003**	**0.0343**	**0.0519**	**2.4000e-004**	**0.0187**	**2.5000e-004**	**0.0189**	**5.0400e-003**	**2.4000e-004**	**5.2800e-003**						**23.1598**

3.9 Const Tower - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0249	0.5264	0.6613	1.0000e-003		0.0334	0.0334		0.0334	0.0334						86.2777
Total	**0.0249**	**0.5264**	**0.6613**	**1.0000e-003**		**0.0334**	**0.0334**		**0.0334**	**0.0334**						**86.2777**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	8.7000e-004	0.0306	9.8100e-003	1.1000e-004	3.3600e-003	1.7000e-004	3.5400e-003	9.7000e-004	1.7000e-004	1.1400e-003						11.1497
Worker	5.0700e-003	3.6900e-003	0.0421	1.3000e-004	0.0153	8.0000e-005	0.0154	4.0700e-003	7.0000e-005	4.1400e-003						12.0101
Total	**5.9400e-003**	**0.0343**	**0.0519**	**2.4000e-004**	**0.0187**	**2.5000e-004**	**0.0189**	**5.0400e-003**	**2.4000e-004**	**5.2800e-003**						**23.1598**

3.9 Const Tower - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1148	1.0486	1.2610	2.1000e-003		0.0478	0.0478		0.0450	0.0450						181.9114
Total	**0.1148**	**1.0486**	**1.2610**	**2.1000e-003**		**0.0478**	**0.0478**		**0.0450**	**0.0450**						**181.9114**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	1.7600e-003	0.0632	0.0203	2.3000e-004	7.0900e-003	3.6000e-004	7.4500e-003	2.0500e-003	3.4000e-004	2.3900e-003						23.1429
Worker	0.0101	6.9400e-003	0.0827	2.6000e-004	0.0323	1.5000e-004	0.0324	8.5800e-003	1.4000e-004	8.7200e-003						24.7085
Total	**0.0118**	**0.0702**	**0.1030**	**4.9000e-004**	**0.0394**	**5.1000e-004**	**0.0399**	**0.0106**	**4.8000e-004**	**0.0111**						**47.8514**

3.9 Const Tower - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0526	1.1096	1.3942	2.1000e-003		0.0705	0.0705		0.0705	0.0705						181.9112
Total	**0.0526**	**1.1096**	**1.3942**	**2.1000e-003**		**0.0705**	**0.0705**		**0.0705**	**0.0705**						**181.9112**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	1.7600e-003	0.0632	0.0203	2.3000e-004	7.0900e-003	3.6000e-004	7.4500e-003	2.0500e-003	3.4000e-004	2.3900e-003						23.1429
Worker	0.0101	6.9400e-003	0.0827	2.6000e-004	0.0323	1.5000e-004	0.0324	8.5800e-003	1.4000e-004	8.7200e-003						24.7085
Total	**0.0118**	**0.0702**	**0.1030**	**4.9000e-004**	**0.0394**	**5.1000e-004**	**0.0399**	**0.0106**	**4.8000e-004**	**0.0111**						**47.8514**

3.10 Paving Parking Deck - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9300e-003	0.0745	0.1100	1.7000e-004		3.5900e-003	3.5900e-003		3.3200e-003	3.3200e-003						14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						0.0000
Total	**7.9300e-003**	**0.0745**	**0.1100**	**1.7000e-004**		**3.5900e-003**	**3.5900e-003**		**3.3200e-003**	**3.3200e-003**						**14.8581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	5.4000e-004	3.7000e-004	4.4400e-003	1.0000e-005	1.7300e-003	1.0000e-005	1.7400e-003	4.6000e-004	1.0000e-005	4.7000e-004						1.3260
Total	**5.4000e-004**	**3.7000e-004**	**4.4400e-003**	**1.0000e-005**	**1.7300e-003**	**1.0000e-005**	**1.7400e-003**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**						**1.3260**

3.10 Paving Parking Deck - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.9500e-003	0.0818	0.1218	1.7000e-004		4.7200e-003	4.7200e-003		4.7200e-003	4.7200e-003						14.8581
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						0.0000
Total	**3.9500e-003**	**0.0818**	**0.1218**	**1.7000e-004**		**4.7200e-003**	**4.7200e-003**		**4.7200e-003**	**4.7200e-003**						**14.8581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	5.4000e-004	3.7000e-004	4.4400e-003	1.0000e-005	1.7300e-003	1.0000e-005	1.7400e-003	4.6000e-004	1.0000e-005	4.7000e-004						1.3260
Total	**5.4000e-004**	**3.7000e-004**	**4.4400e-003**	**1.0000e-005**	**1.7300e-003**	**1.0000e-005**	**1.7400e-003**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**						**1.3260**

3.11 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0472					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004						2.3012
Total	**1.0488**	**0.0110**	**0.0163**	**3.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**						**2.3012**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	2.4000e-004	1.7000e-004	2.0000e-003	1.0000e-005	7.8000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004						0.5967
Total	**2.4000e-004**	**1.7000e-004**	**2.0000e-003**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**7.8000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**						**0.5967**

3.11 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0472					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	5.3000e-004	0.0122	0.0165	3.0000e-005		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004						2.3012
Total	**1.0477**	**0.0122**	**0.0165**	**3.0000e-005**		**8.6000e-004**	**8.6000e-004**		**8.6000e-004**	**8.6000e-004**						**2.3012**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	2.4000e-004	1.7000e-004	2.0000e-003	1.0000e-005	7.8000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004						0.5967
Total	**2.4000e-004**	**1.7000e-004**	**2.0000e-003**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**7.8000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**						**0.5967**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3983	0.4988	3.7188	7.7200e-003	0.9587	6.2600e-003	0.9649	0.2560	5.8800e-003	0.2618						762.4436
Unmitigated	0.3983	0.4988	3.7188	7.7200e-003	0.9587	6.2600e-003	0.9649	0.2560	5.8800e-003	0.2618						762.4436

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	962.44	693.10	607.81	2,568,222	2,568,222
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	962.44	693.10	607.81	2,568,222	2,568,222

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	13.00	5.00	5.00	64.90	16.10	19.00	73	25	2
Unenclosed Parking Structure	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hospital	0.516135	0.058853	0.199929	0.136792	0.029532	0.007795	0.008341	0.005917	0.000885	0.000346	0.029869	0.000792	0.004814
Unenclosed Parking Structure	0.516135	0.058853	0.199929	0.136792	0.029532	0.007795	0.008341	0.005917	0.000885	0.000346	0.029869	0.000792	0.004814

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000						104.4876
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						104.4876
NaturalGas Mitigated	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						525.2451
NaturalGas Unmitigated	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						525.2451

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	9.78458e +006	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						525.2451
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total		**0.0528**	**0.4796**	**0.4029**	**2.8800e-003**		**0.0365**	**0.0365**		**0.0365**	**0.0365**						**525.2451**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	9.78458e +006	0.0528	0.4796	0.4029	2.8800e-003		0.0365	0.0365		0.0365	0.0365						525.2451
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total		**0.0528**	**0.4796**	**0.4029**	**2.8800e-003**		**0.0365**	**0.0365**		**0.0365**	**0.0365**						**525.2451**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.73894e +006				101.1291
Unenclosed Parking Structure	57750				3.3585
Total					**104.4876**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	1.73894e +006				101.1291
Unenclosed Parking Structure	57750				3.3585
Total					**104.4876**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4577	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Unmitigated	0.4577	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1047					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.3528					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Total	**0.4577**	**2.0000e-005**	**2.0600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**						**4.2800e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1047					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.3528					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						4.2800e-003
Total	**0.4577**	**2.0000e-005**	**2.0600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**						**4.2800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				15.3752
Unmitigated				19.3162

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	11.2656 / 2.14584				19.3162
Unenclosed Parking Structure	0 / 0				0.0000
Total					**19.3162**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	9.01251 / 1.33487				15.3752
Unenclosed Parking Structure	0 / 0				0.0000
Total					**15.3752**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				487.6234
Unmitigated				487.6234

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	969.62				487.6234
Unenclosed Parking Structure	0				0.0000
Total					**487.6234**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	969.62				487.6234
Unenclosed Parking Structure	0				0.0000
Total					**487.6234**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	8	100	1050	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.1723	0.4394	0.0186	8.3000e-004		0.0127	0.0127		0.0127	0.0127						80.2477
Total	**0.1723**	**0.4394**	**0.0186**	**8.3000e-004**		**0.0127**	**0.0127**		**0.0127**	**0.0127**						**80.2477**

11.0 Vegetation

Name

Prioritization Calculator

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Facility:	French Hospital Expansion Project
Unit and Process#	GenSet #1
Operating Hours hr/yr	100.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	2.91E+01	3.78E+00	0.00E+00	2.91E+01
100≤R<250	**0.250**	7.28E+00	9.45E-01	0.00E+00	7.28E+00
250≤R<500	**0.040**	1.16E+00	1.51E-01	0.00E+00	1.16E+00
500≤R<1000	**0.011**	3.20E-01	4.16E-02	0.00E+00	3.20E-01
1000≤R<1500	**0.003**	8.73E-02	1.13E-02	0.00E+00	8.73E-02
1500≤R<2000	**0.002**	5.82E-02	7.56E-03	0.00E+00	5.82E-02
2000<R	**0.001**	2.91E-02	3.78E-03	0.00E+00	2.91E-02

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

GenSet #1

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	1.26E+01	1.26E-01	1.26E-01	2.91E+01	3.78E+00	0.00E+00
				Totals	**2.91E+01**	**3.78E+00**	**0.00E+00**

Name | **Prioritization Calculator**

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.						
Facility:	French Hospital Expansion Project						
Unit and Process#	GenSet #2						
Operating Hours hr/yr	100.00						
Receptor Proximity and Proximity Factors	**Cancer Score**	**Chronic Score**	**Acute Score**	**Max Score**	Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.		
0< R<100 1.000	2.91E+01	3.78E+00	0.00E+00	2.91E+01			
100≤R<250 0.250	7.28E+00	9.45E-01	0.00E+00	7.28E+00			
250≤R<500 0.040	1.16E+00	1.51E-01	0.00E+00	1.16E+00			
500≤R<1000 0.011	3.20E-01	4.16E-02	0.00E+00	3.20E-01			
1000≤R<1500 0.003	8.73E-02	1.13E-02	0.00E+00	8.73E-02			
1500≤R<2000 0.002	5.82E-02	7.56E-03	0.00E+00	5.82E-02			
2000<R 0.001	2.91E-02	3.78E-03	0.00E+00	2.91E-02			
GenSet #2	Enter the unit's CAS# of the substances emitted and their amounts.				Prioritzation score for each substance generated below. Totals on last row.		
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	1.26E+01	1.26E-01	1.26E-01	2.91E+01	3.78E+00	0.00E+00
				Totals	**2.91E+01**	**3.78E+00**	**0.00E+00**

Receptor Proximity and Proximity Factors		GenSet #1 Max Score	GenSet #2 Max Score	Total Max Score
0< R<100	**1.000**	2.91E+01	2.91E+01	5.82E+01
100≤R<250	**0.250**	7.28E+00	7.28E+00	1.46E+01
250≤R<500	**0.040**	1.16E+00	1.16E+00	2.33E+00
500≤R<1000	**0.011**	3.20E-01	3.20E-01	6.40E-01
1000≤R<1500	**0.003**	8.73E-02	8.73E-02	1.75E-01
1500≤R<2000	**0.002**	5.82E-02	5.82E-02	1.16E-01
2000<R	**0.001**	2.91E-02	2.91E-02	5.82E-02

CALEEMOD - QUARTERLY EMISSIONS

				ROG+NOX (TONS/QUARTER)			
QUARTER	START		END	UNMITIGATED	MITIGATED	THRESHOLD	EXCEEDS
1	8/1/2022		10/31/2022	0.81	0.61	2.5	NO
2	11/1/2022		1/31/2023	0.60	0.53	2.5	NO
3	2/1/2023		4/30/2023	0.54	0.51	2.5	NO
4	5/1/2023		7/31/2023	0.55	0.52	2.5	NO
5	8/1/2023		10/31/2023	0.74	0.63	2.5	NO
6	11/1/2023		1/31/2024	0.65	0.62	2.5	NO
7	2/1/2024		4/30/2024	1.00	1.03	2.5	NO
8	5/1/2024		7/31/2024	1.10	1.05	2.5	NO
9	8/1/2024		9/30/2024	0.01	0.01	2.5	NO

				PM_{10}					
				DAILY			QUARTERLY		
QUARTER	START	END	#DAYS	Fugitive	Exhaust	Total	Fugitive	Exhaust	Total
1	8/1/2022	10/31/2022					0.09	0.02	0.11
DEMO PARKING DECK			6	0.15	1.24	1.39	0.00045	0.000093	0.0008618
SITE PREP PARKING DECK			5	19.9411	1.6135	21.5546	0.04985275	0.016087482	0.017389174
GRADING PARKING DECK			8	8.0263	0.94165	8.96795	0.0321052	0.003778983	0.004222335
CONST PARKING DECK			38	0.5256	0.8215	1.3471	0.0099864	0.00021589	0.000553321
2	11/1/2022	1/31/2023					0.02	0.00	0.02
CONST PARKING DECK			66	0.5256	0.70699	1.23259	0.0173448	0.000185797	0.000435714
3	2/1/2023	4/30/2023					0.02	0.00	0.02
CONST PARKING DECK			66	0.5256	0.70699	1.23259	0.0173448	0.000185797	0.000435714
4	5/1/2023	7/31/2023					0.02	0.00	0.02
CONST PARKING DECK			60	0.5256	0.70699	1.23259	0.015768	0.000185797	0.000435714
PAVING PARKING			3	0.1977	0.43665	0.63435	0.00029655	4.31629E-05	0.000138494
5	8/1/2023	10/31/2023					0.13	0.02	0.15
PAVING PARKING			2	0.1977	0.43665	0.63435	0.0001977	4.31629E-05	0.000138494
DEMO TOWER			5	1.1605	0.9975	2.158	0.00290125	0.000578799	0.001076303
SITE PREP TOWER			5	20.7895	1.26685	22.05635	0.05197375	0.013168589	0.013971043
GRADING TOWER			8	16.4551	0.892	17.3471	0.0658204	0.007338975	0.007736807
CONST TOWER			32	0.518	0.70641	1.22441	0.008288	0.00018296	0.000432468
6	11/1/2023	1/31/2024					0.02	0.00	0.02
CONST TOWER			66	0.518	0.70641	1.22441	0.017094	0.00018296	0.000432468
ARCH COATING			12	0.089	0.06131	0.15031	0.000534	2.7283E-06	4.60775E-06
7	2/1/2024	4/30/2024					0.02	0.00	0.02
CONST TOWER			66	0.518	0.61983	1.13783	0.017094	0.000160536	0.000352631
ARCH COATING			66	0.089	0.06131	0.15031	0.002937	2.7283E-06	4.60775E-06
8	5/1/2024	7/31/2024					0.02	0.00	0.02
CONST TOWER			65	0.518	0.61983	1.13783	0.016835	0.000160536	0.000352631
ARCH COATING			65	0.089	0.06131	0.15031	0.0028925	2.7283E-06	4.60775E-06
9	8/1/2024	9/30/2024					0.00	0.00	0.00
CONST TOWER			1	0.518	0.61983	1.13783	0.000259	0.000160536	0.000352631
ARCH COATING			1	0.089	0.06131	0.15031	0.0000445	2.7283E-06	4.60775E-06
						HIGHEST	0.13	0.02	0.15
						THRESHOLD	2.5	0.13/0.32	None
						EXCEEDS THRESHOLD		No/No	NA

TDM Strategies Reductions

Operational Period/Source	Emissions[1]						
	ROG	NO_X	ROG+NO_X	CO	PM_{10}		
					Fugitive	Exhaust[2]	Total
Daily Emissions (lbs/day)							
Mobile with Existing TDM Strategies	2.894625	4.1085	7.003125	26.5185	5.6025	0.093375	5.695875
Mobile with Existing+Recommended TDM Strategies (Minimum 11.625% Reduction)	2.739625	3.8885	6.628125	25.0985	5.3025	0.088375	5.390875
Mobile with Existing+Recommended TDM Strategies (Maximum 16.625% Reduction)	2.584625	3.6685	6.253125	23.6785	5.0025	0.083375	5.085875
Annual Emissions (tons/year)							
Total Project Emissions	1.2	2.2	3.4	2.3	0.2	0.1	0.3
Reduction for Mobile with Existing TDM Strategies	0.032966	0.04736213	0.08032813	0.30184163	0.0636265	0.00057174	0.06419625
Total Project Emissions with Existing TDM Strategies	1.2	2.2	3.3	2.0	0.1	0.1	0.2
Annual Emissions (tons/year)							
Total Project Emissions	1.2	2.2	3.4	2.3	0.2	0.1	0.3
Reduction for Mobile with Existing+Recommended TDM Strategies (Minimum 11.625% Reduction)	0.057846	0.08310713	0.14095313	0.52964663	0.1116465	0.00100324	0.11264625
Total	1.1	2.1	3.3	1.8	0.1	0.1	0.2
Annual Emissions (tons/year)							
Total Project Emissions	1.2	2.2	3.4	2.3	0.2	0.1	0.3
Reduction for Mobile with Existing+Recommended TDM Strategies (Maximum 16.625% Reduction)	0.082726	0.11885213	0.20157813	0.75745163	0.1596665	0.00143474	0.16109625
Total	1.1	2.1	3.2	1.5	0.0	0.1	0.1

ATTACHMENT 4

Biological Resources Assessment for the Dignity Health French Hospital Medical Center Master Plan Helistop Flightpath Obstruction Eucalyptus Tree Removal and Topping

David Wolff Environmental, LLC
P.O. Box 7019
Los Osos, CA 93402
DavidW.Enviro@gmail.com
(805)235-5223

March 31, 2021

Ariana Melendez, Project Architect
Studio Design Group Architects, Inc.
762 Higuera Street, Suite 212
San Luis Obispo, CA 93401

SUBJECT: Biological Resources Assessment for the Dignity Health French Hospital Medical Center Master Plan Helistop Flightpath Obstruction Eucalyptus Tree Removal and Topping, City of San Luis Obispo, CA

Dear Ariana:

David Wolff Environmental (DWE) is pleased to submit this Biological Resources Assessment focused on the eucalyptus tree removal and topping to eliminate flight path obstructions for the proposed helistop component of the proposed French Hospital Patient Tower, Chapel and Parking Structure/Helistop projects.

1.0 INTRODUCTION AND PURPOSE

The proposed project under the French Hospital Master Plan includes a single four-story Patient Tower Expansion, a new 1,000 square foot Chapel to be constructed within the existing Entry Portico (under separate ARC submittal), and a new parking deck with a helistop. The helistop will serve the recently completed Emergency Department expansion and future Neonatal Intensive Care Unit (NICU) in the proposed Patient Tower.

DWE Principal Ecologist David Wolff reviewed available background data, conducted biological resources field surveys of the proposed project, and consulted with regulatory agency personnel. The purpose of this biological resources assessment is to document existing conditions of the proposed project site and to evaluate the potential for any direct or indirect significant impacts on biological or riparian resources, or adverse effects on any rare, threatened, or endangered plant or wildlife species (special-status species).

2.0 PROJECT DESCRIPTION

The proposed project under the French Hospital Master Plan includes a single four-story Patient Tower Expansion, a new 1,000 square foot Chapel to be constructed within the existing Entry Portico (under separate ARC submittal), and a new parking deck with a helistop. All proposed project construction will occur within the existing developed French Hospital campus. The project evaluation for Federal Aviation Administration (FAA) flight path obstructions to the helistop for incoming and departing helicopters determined the requirement for removal or topping of several eucalyptus trees to remove the flightpath obstructions in two areas of the hospital adjacent lands.

Two reports were prepared by Greenvale Tree Company Certified Arborist Chris Stier (both dated October 28, 2020) that evaluated the eucalyptus trees within the FAA flightpath obstruction areas and provided recommendations on removal or topping of the trees to clear the flightpath. As a result of the report recommendations, nine eucalyptus trees in poor health will be removed in an adjacent uplands to the northwest of the parking lot at the rear of the developed French Hospital campus. The clearing of the flightpath obstructions in the stand of eucalyptus trees in the ravine to the south of the French Hospital campus will require removal of six trees at the top of the ravine, and the topping of nine trees lower on the ravine slopes. Tree removals will include cutting the trees and leaving the stumps in place to minimize ground disturbance. Project tree removals and topping within the adjacent ravine will be done by hand (climbing, chain saw, and slash removal) with no mechanized equipment operated in the ravine.

3.0 METHODS

DWE Principal Ecologist David Wolff conducted a field reconnaissance surveys with the project team in 2020, with the California Department of Fish and Wildlife (CDFW) Warden Jason Chance and City Biologist Freddy Otte on February 24, 2021 to review jurisdictional limits, and to assess habitat conditions in the ravine on March 17, 2021. The March 17th surveys were conducted by Mr. Wolff walking the proposed project site recording plant and wildlife species observed and general site characteristics in the eucalyptus ravine. The purpose of the field surveys was to document existing conditions in terms of habitat for plant and wildlife species, suitability for special-status species, the potential to support wetland and/or riparian habitats, and/or waters of the U.S./State. The Central Coast Water Board was contacted to determine if the proposed tree removal/topping activities in the ravine would require any approvals under their jurisdiction over waters of the State.

DWE Principal Ecologist David Wolff reviewed the available background information and aerial photography, conducted the field surveys as described above, and is the primary author and principal in charge of report preparation. The survey data collected on plant and wildlife species and conclusions presented in this biological resources assessment are based on the methods and field reconnaissance surveys conducted over the project site as described above.

4.0 Existing Conditions and Regulatory Setting

This section established the existing conditions of the proposed project site and regulatory setting for eucalyptus removal adjacent to the developed French Hospital campus.

4.1 BIOLOGICAL RESOURCES EXISTING CONDITIONS

The proposed project four-story Patient Tower Expansion, 1,000 square foot Chapel to be constructed within the existing Entry Portico, and a new parking deck with a helistop all will be within the developed French Hospital campus. There is minimal landscape vegetation within the developed areas that is mostly just around the fringe of the parking areas. As such, the proposed project areas support little to no habitat values even for common wildlife adapted to the urban developed setting.

The small stand of nine eucalyptus trees on the arborist characterized northwest side of the existing parking lot are at the top of the slope above the railroad tracks. The arborist report suggests these trees are in poor health and recommends removal as opposed to topping. These trees are adjacent to the parking lot and construction trailer as shown in Photos 1 and 2 in attached Figure 1 Representative Photographs. The relatively small non-native eucalyptus trees are not in any habitat or woodland context and support only minimal habitat values for locally common wildlife accustomed to the developed urban environment such as raccoons, opossum, skunk, rodents, and birds.

The arborist characterized southwest stand of eucalyptus in the ravine are much larger trees along edge of the parking lot and up and down the steep slopes of the ravine. The six removals are located at the top of the ravine adjacent to the landscape buffer of the parking lot. The nine eucalyptus trees to be topped are further down the ravine slope near but not in the flowline of the ravine (see Section 4.2 below). The overstory vegetation in the ravine are eucalyptus trees, with an understory of native scattered coast live oak trees and saplings, large toyon shrubs, poison oak, non-native canary palms, and a thicket of arroyo willow at the head of the ravine next to Iris Street sidewalk. The ground cover has a dense layer of eucalyptus leaf and bark debris precluding most herbaceous vegetation except for a patchy cover of sourgrass. See Figure 1 Photos 3, 4, and 5. The stand of non-native eucalyptus trees and scattering of native trees and shrubs in the ravine is an isolated patch of woody habitat from the Iris Street cul de sac west to the railroad tracks that is otherwise surrounded by the hospital and residential development and are not a part of any connected habitat corridor or native woodland context. As such it only supports only minimal habitat values for locally common wildlife accustomed to the developed urban environment such as raccoons, opossum, skunk, rodents, and birds. During the March 17, 2021 DWE field survey birds observed included chestnut-backed chickadee, bushtit, scrub jay, Audubon's warbler, and red-shouldered hawk. No special-status plant or wildlife species are expected in the eucalyptus dominated isolated remnant habitat within the surrounding residential and institutional urban development.

4.2 REGULATORY SETTING

The "eucalyptus ravine" along the south side of the French Hospital campus has a City of San Luis Obispo designated open space overlay. A remnant above ground intermittent drainage flowline runs at the bottom of the steep sloped ravine entering from an underground culvert (approximately 5' diameter) below the Iris Street cul de sac and exiting back underground through a culvert at the railroad tracks. A small flow along the bottom of the ravine was observed during the March 17, 2021 DWE field survey. There was no evidence (scour or drift lines of debris) that flows would reach beyond the ravine bottom up onto the steep slopes. See Figure 1 Photos 6, 7, and 8.

The U.S. Army Corps of Engineers (Corps) may exert jurisdiction under Section 404 of the Clean Water Act over the drainage flowline of the intermittent drainage. However, the Corps only regulates the discharge of dredged or fill material into waters of the U.S. that would not be the case for this project as described in Section 2.0 above for the tree topping close to but not within the drainage flowline. As defined in the *Code of Federal Regulations 323.2 Definitions:*

> *(e)(1) Except as specified in paragraph (e)(3) of this section, the term fill material means material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of a water of the United States. (2) Examples of such fill material include, but are not limited to: rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States. (3) The term fill material does not include trash or garbage.*

Based on the project description of activities outside of the ravine flowline and Corps regulatory definition of "fill material," no regulatory compliance or permit from the Corps is needed as there would be no fill of waters of the U.S. as part of the proposed project.

The Central Coast Regional Water Quality Control Board (RWQCB) may exert jurisdiction over waste discharge activities in waters of the State including riparian habitat as part of federal Clean Water Act Section 401 authority, or the California Porter-Cologne Water Quality Control Act absent any Federal jurisdiction. The Central Coast RWQCB was contacted to determine if any of the proposed project activities, particularly the eucalyptus removal/topping within the ravine, would require any regulatory compliance for the proposed project. The RWQCB determined that they would not exert any regulatory compliance requirements for the project as proposed that is documented in correspondences attached as Exhibit 1.

The CDFW regulates the alteration of the bed, bank, or channel of a river, stream or lake where it could substantially affect a fish or wildlife resource under Section 1600 *et. seq*. of the Fish and Game Code of California. CDFW jurisdiction typically extends to the top of bank of a creek or outside edge of riparian vegetation whichever is furthest. The project team met with CDFW Warden Jason Chance to evaluate CDFW's jurisdiction over the drainage and ravine where the eucalyptus removal and topping would occur. Warden Chance suggested the limits of CDFW jurisdiction would extend to the top of the ravine (top of "bank") as the extent of riparian habitat given the scattering of native coast live oak trees that under some circumstances may be associated with riparian habitat. As such, the project proponent as part of the project will submit a Streambed Alteration Agreement Notification for the eucalyptus removal and topping in the ravine in accordance with CDFW 1600 procedures as recommended by Warden Chance.

The CDFW Fish and Game Code of California Sections 3503 and 3503.1 (raptors specifically) prohibits the destruction of active nests of birds. Active bird's nests must be avoided from destruction and protected from nest failure during project activities as there is no permit available for destruction of an active nest.

5.0 PROJECT IMPACTS AND RECOMMENDED MITIGATION MEASURES

IMPACT 1: NESTING BIRDS

The intent of the project schedule is to conduct the eucalyptus tree removal/topping outside the nesting season for birds if feasible. However, the eucalyptus removal and topping in both the north and south flightpath obstruction zones during the nesting season for birds could result in the destruction of active bird's nests. As noted above, destruction of active nests is prohibited by the Fish and Game Code of California Sections 3503 and 3503.1 (raptors specifically). As such, this could be considered a potentially significant impact.

The following recommended mitigation measure would avoid destruction or disturbance of active nests, thereby reducing the potentially significant impacts to a less than significant level.

MM BIO-1: *Eucalyptus tree removal and topping shall be conducted between September 1 and January 31 outside of the nesting season for birds to the extent feasible. If vegetation and/or tree removal is planned for the bird nesting season (February 1 to August 31), then preconstruction nesting bird surveys shall be conducted within the ravine and north eucalyptus removal area by a qualified biologist to determine if any active nests would be impacted by project construction. If no active nests are found to be impacted, then no further mitigation shall be required.*

If any active nests are found that would be impacted by construction, then the nest sites shall be avoided with the establishment of a non-disturbance buffer zone around active nests as determined by a qualified biologist. Nest sites shall be avoided and protected within the non-disturbance buffer zone until the adults and young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist. As such, avoiding destruction or disturbance of an active nest would reduce potential impacts on nesting birds to a less-than-significant level.

IMPACT 2: NATIVE VEGETATION IMPACT/REMOVAL

The eucalyptus removal and topping in the ravine could result in the incidental impact on native oak trees or saplings and large toyon shrubs from falling tree removal debris and slash removal. This could be considered a potentially significant impact on the remaining native vegetation in the ravine that might otherwise thrive from the additional light after the eucalyptus removal and topping.

The following recommended mitigation measure would avoid destruction or disturbance of native trees and shrubs, thereby reducing the potentially significant impacts to a less than significant level.

MM BIO-2: *Oak trees and saplings, and toyon shrubs shall be identified in the ravine work zone and marked with highly visible flagging or fencing and protected from destruction during the eucalyptus removal topping activities.*

6.0 CONCLUSIONS

Based on the findings described above establishing the existing conditions of biological resources and regulatory setting within the project site, and incorporation of the recommended mitigation measures, implementation of the proposed project would not result in any substantial adverse effects on biological, botanical, or riparian habitat resources. Therefore, with mitigation measures incorporated into the project, direct and indirect project impacts on biological resources would be considered to be less than significant.

Thank you for the opportunity to provide biological resources consulting services for this project.

Very truly yours,

David K. Wolff
DWE Principal Ecologist

ATTACHMENTS:

FIGURE 1 – REPRESENTATIVE PHOTOGRAPHS

EXHIBIT 1 – RWQCB "NO PERMIT REQUIRED" CORRESPONDENCES

Photo 1: View southwest at eucalyptus removal "north" area (arrow) around construction trailer at the edge of the parking lot. **4/17/2021**

Photo 2: View southwest at eucalyptus removal "north" area around construction trailer at the edge of the parking lot and top of slope above railroad tracks. **4/17/2021**

Photo 3: View east at "south" area eucalyptus removals and coast live oak understory at top of the ravine slope along parking lot. **4/17/2021**

Photo 4: View east at "south" area eucalyptus removals and coast live oak understory at top of the ravine slope along parking lot. **4/17/2021**

Photo 5: View south at "south" area eucalyptus topping area. Understory toyon shrubs, canary palm, poison oak, and sourgrass ground cover. **4/17/2021**

Photo 6: View southeast at culvert outfall (arrow) below the Iris Street cul de sac to the drainage flowline at the bottom of the eucalyptus dominated ravine. **4/17/2021**

Photo 7: View east (upstream) at drainage flowline (arrows) at the bottom of the eucalyptus dominated ravine with canary palm. **4/17/2021**

Photo 8: View southwest at drainage exiting the ravine underground through a culvert under the railroad tracks (arrow). **4/17/2021**

FIGURE 1– REPRESENTATIVE PHOTOGRAPHS

Exhibit 1 - RWQCB "No Permit Required" Correspondence

From:	davidw.enviro@gmail.com
To:	"Hammer, Phillip@Waterboards"
Cc:	Ariana Melendez
Subject:	RE: French Hospital Heliport Eucalyptus Removal
Date:	Wednesday, March 17, 2021 4:54:50 PM

Greetings Phil,
The basis of your finding is correct.
Thank you very much for your expeditious review of our request.

David K. Wolff, Owner, Principal Ecologist
David Wolff Environmental, LLC
P.O. Box 7019
Los Osos, CA 93402
(805) 235-5223
DavidW.Enviro@gmail.com

From: Hammer, Phillip@Waterboards <Phillip.Hammer@waterboards.ca.gov>
Sent: Wednesday, March 17, 2021 2:10 PM
To: davidw.enviro@gmail.com
Subject: RE: French Hospital Heliport Eucalyptus Removal

David,
Thanks for checking in on these types of projects. We decline to regulate this project for the following reasons, based on the information provided:

- No work, fill, or structures will occur in the drainage;
- Trees lower on the slope will only be trimmed;
- Only three non-native trees will be removed, which are located at the top of slope, with roots left in place.

-Phil

From: davidw.enviro@gmail.com <davidw.enviro@gmail.com>
Sent: Monday, March 15, 2021 2:12 PM
To: Hammer, Phillip@Waterboards <Phillip.Hammer@waterboards.ca.gov>
Subject: French Hospital Heliport Eucalyptus Removal

EXTERNAL:

Greetings Phil,
I am working for the architect firm for a French Hospital project that includes a heliport on one of the new buildings to be constructed. They have identified a flight path that requires eucalyptus removal and topping on steep slopes well above a remnant narrow above ground drainage. The drainage enters at the Iris Street cul de sac and exits under the railroad tracks. Attached aerial and arborist report for your review.

No work, fill, structures, etc. will be placed in the narrow drainage at the bottom of the slope. Work will be done by “hand” by climbing trees to be topped lower on the slope, removals are high on the slope close to the parking lot. Removals will be cutting down to a stump leaving the roots in place to minimize ground disturbance. I suggest calling this eucalyptus well above the active channel “riparian habitat” is a stretch.

However, FYI we had a field meeting with CDFW Warden Jason Chance. He suggested the top of the steep slopes are “top of bank” and submitting a SAA Notification for the record in case interested public call during the work on the slopes.

So, is there any regulatory compliance from the Water Board needed for this activity?
Thanks in advance for your help.

David K. Wolff, Owner, Principal Ecologist
David Wolff Environmental, LLC
P.O. Box 7019
Los Osos, CA 93402
(805) 235-5223
DavidW.Enviro@gmail.com

ATTACHMENT 5

Energy Impact Assessment for the Proposed French Hospital Medical Center Expansion Project

Energy Impact Assessment

For The Proposed

French Hospital Medical Center Expansion Project

San Luis Obispo, CA

September 2021

Prepared For:

SWCA Environmental
Consultants, Inc.
1422 Monterey Street
San Luis Obispo, CA 93401

Prepared By:

AMBIENT
AIR QUALITY & NOISE CONSULTING

75 Higuera Street, Suite 105
San Luis Obispo, CA 93401

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APPENDICES

Appendix A: Energy Modeling

INTRODUCTION

This report provides an analysis of potential energy impacts associated with the proposed French Hospital Medical Center Expansion Project. This report also provides a summary of existing conditions in the project area and the applicable regulatory framework pertaining to energy.

PROJECT DESCRIPTION

The existing French Hospital Medical Center is located at 1911 Johnson Avenue in the City of San Luis Obispo. The proposed French Hospital Medical Center expansion includes a new 82-bed wing, a lab, a parking structure, and a helicopter pad. The proposed project's site plan is depicted in Figure 1.

ENERGY FUNDAMENTALS

Energy use is typically associated with transportation, construction, and the operation of land uses. Transportation energy use is generally categorized by direct and indirect energy. Direct energy relates to energy consumption by vehicle propulsion. Indirect energy relates to the long-term indirect energy consumption of equipment, such as maintenance activities. Energy is also consumed by construction and routine operation and maintenance of land use. Construction energy relates to a direct one-time energy expenditure primarily associated with the consumption of fuel use to operate construction equipment. Energy-related to land use is normally associated with direct energy consumption for heating, ventilation, and air conditioning of buildings.

EXISTING SETTING

The climate of the county can be generally characterized as Mediterranean, with warm, dry summers and cooler, relatively damp winters. Along the coast, mild temperatures are the rule throughout the year due to the moderating influence of the Pacific Ocean. This effect is diminished inland in proportion to the distance from the ocean or by major intervening terrain features, such as the coastal mountain ranges. As a result, inland areas are characterized by a considerably wider range of temperature conditions. Maximum summer temperatures average about 70 degrees Fahrenheit near the coast, while inland valleys are often in the high 90s. Minimum winter temperatures average from the low 30s along the coast to the low 20s inland (SLOAPCD 2001, WRCC 2020).

Energy Resources

Energy sources for the City of San Luis Obispo are served primarily by Pacific Gas & Electric (PG&E) and Central Coast Community Energy (3CE). Energy resources are derived from a mix of resources, including natural gas, nuclear, fossil fuels, hydropower, solar, and wind. The primary use of energy is for electricity to operate buildings. Energy use is discussed in greater detail, as follows:

Electricity

Pacific Gas & Electric

The breakdown of PG&E's power mix is shown in Figure 2. As shown, PG&E energy generation was supplied from approximately 29% of renewable energy sources (i.e., biomass and waste, geothermal, small hydroelectric, solar, and wind), 27% of large hydroelectric sources, and 44% of nuclear sources. Participation in PG&E as an electricity provider is mandatory.

Figure 1. Project Site Plan

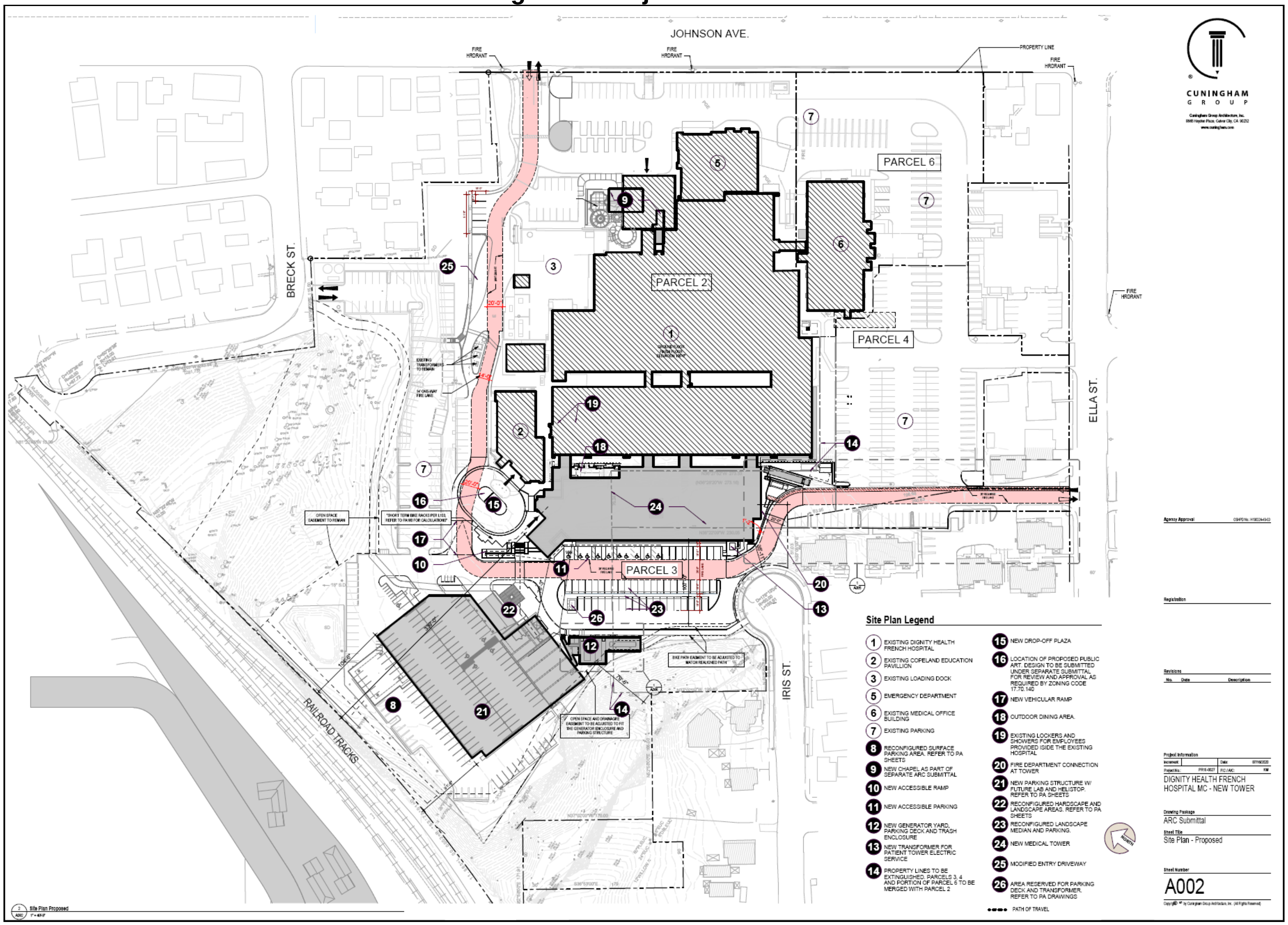
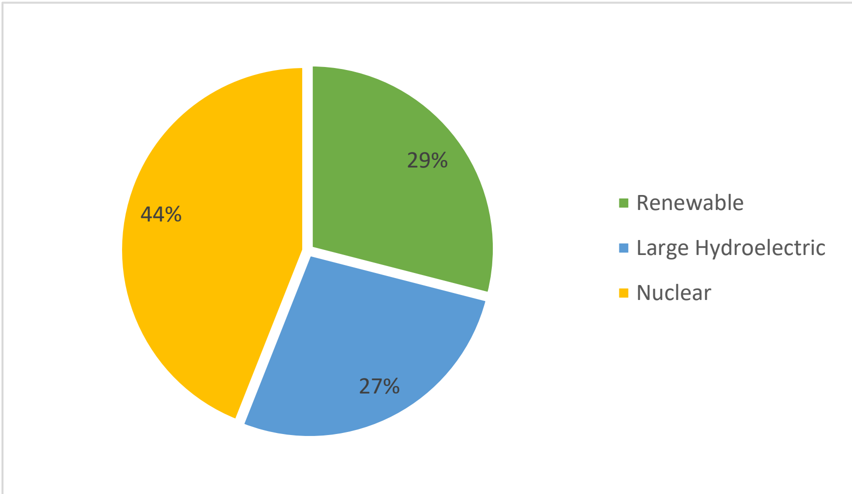


Figure 2. Pacific Gas & Electric 2019 Power Content Label



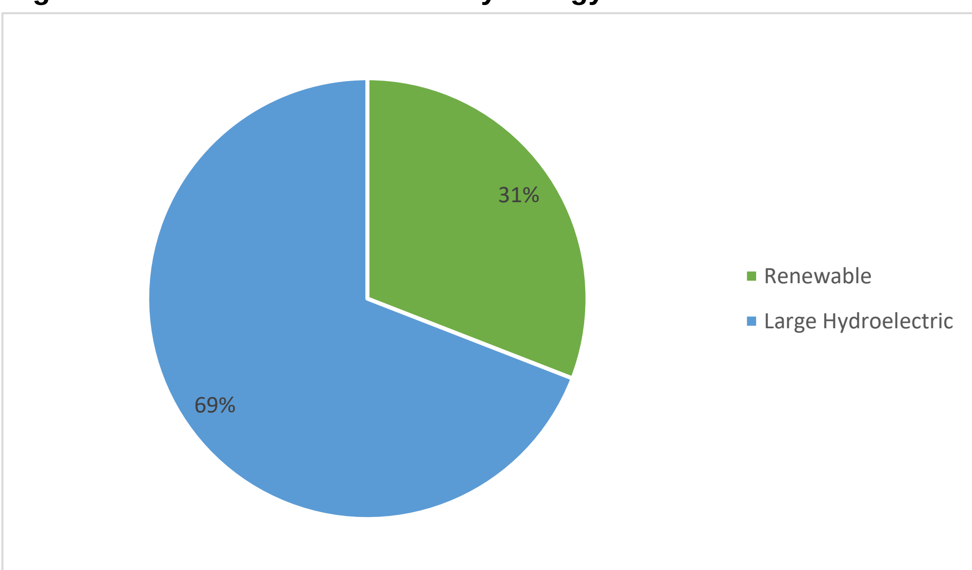
Source: PG&E 2020a

Central Coast Community Energy

Central Coast Community Energy (3CE) is a locally-controlled public agency supplying clean and renewable electricity for residents and businesses in Monterey, San Benito, parts of San Luis Obispo, Santa Barbara and Santa Cruz Counties. 3CE is based on a local energy model called Community Choice Energy that partners with the local utility (i.e., PG&E) which continues to provide consolidated billing, electricity transmission and distribution, customer service and grid maintenance services. 3CE provides customers with a choice for clean and renewable energy, and community reinvestment through rate benefits and local GHG reducing energy programs for residential, commercial and agricultural customers. Participation in 3CE as an electricity provider is voluntary (3CE 2021).

3CE power mix is depicted in Figure 3. As shown, 3CE energy generation was supplied from approximately 31% of renewable energy sources (i.e., biomass and waste, geothermal, small hydroelectric, solar, and wind) and 69% of large hydroelectric sources.

Figure 3. Central Coast Community Energy 2019 Power Content Label



Source: 3CE 2020

Natural Gas

Natural gas services in the City of San Luis Obispo are provided by PG&E and Southern California Gas Company (SoCalGas). PG&E's natural gas system encompasses approximately 70,000 square miles in Northern and Central California. Natural gas throughput provided by PG&E totals approximately 2.6 billion cubic feet per day (PG&E 2020b). SoCalGas's natural gas system encompasses approximately 20,000 square miles in southern and central California (SoCalGas 2020). Natural gas throughput provided by SoCalGas totals approximately 2.8 billion cubic feet per day (SoCalGas 2013).

Regulatory Framework

Federal

Regulations for Greenhouse Gas Emissions from Passenger Cars and Trucks and Corporate Average Fuel Economy Standards

In October 2012, the United States Environmental Protection Agency (U.S. EPA) and National Highway Traffic Safety Administration (NHSTA), on behalf of the United States Department of Transportation (U.S. DOT), issued final rules to further reduce greenhouse gas (GHG) emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond. NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg) limiting vehicle emissions to 163 grams of carbon dioxide (CO_2) per mile for the fleet of cars and light-duty trucks by the model year 2025.

In January 2017, U.S. EPA Administrator Gina McCarthy signed a Final Determination to maintain the current GHG emissions standards for the model year 2022-2025 vehicles. However, on March 15, 2017, U.S. EPA Administrator Scott Pruitt and U.S. DOT Secretary Elaine Chao announced that U.S. EPA intends to reconsider the Final Determination. On April 2, 2018, U.S. EPA Administrator Scott Pruitt officially withdrew the January 2017 Final Determination, citing information that suggests that these current standards may be too stringent due to changes in key assumptions since the January 2017 Determination. According to the U.S. EPA, these key assumptions include gasoline prices and overly optimistic consumer acceptance of advanced technology vehicles. The April 2, 2018 notice is not U.S. EPA's final agency action. The U.S. EPA intends to initiate rulemaking to adopt new standards. Until that rulemaking has been completed, the current standards remain in effect. (U.S. EPA 2017, U.S. EPA 2018).

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the United States would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the NHSTA, which is part of the U.S. DOT, is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The CAFE program, administered by U.S. EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. U.S. EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the U.S. DOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the Act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

State

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The Act established a state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Public Utilities Commission (CPUC) regulates privately-owned utilities in the energy, rail, telecommunications, and water fields.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), CEC and the California Air Resource Board (CARB) prepared and adopted a joint agency report in 2003, Reducing California's Petroleum Dependence. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita vehicle miles traveled (VMT) (CARB 2003). Further, in response to the CEC's 2003 and 2005 Integrated Energy Policy Reports, Governor Davis directed CEC to take the lead in developing a long-term plan to increase alternative fuel use. A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand by 2020.

Senate Bill 1078: California Renewables Portfolio Standard Program

Senate Bill (SB) 1078 (Public Utilities Code Sections 387, 390.1, 399.25 and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. This SB will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order (EO) S-14-08, which set the Renewables Portfolio Standard (RPS) target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. EO S-14-08 was later superseded by EO S-21-09 on September 15, 2009. EO S-21-09 directed the CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. Statute SB X1-2 superseded this EO in 2011, which obligated all California electricity providers, including investor-owned utilities and publicly owned utilities, to obtain at least 33 percent of their energy from renewable electrical generation facilities by 2020.

Senate Bill 350: Clean Energy and Pollution Prevention Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Energy Action Plan

The first Energy Action Plan (EAP) emerged in 2003 from a crisis atmosphere in California's energy markets. The State's three major energy policy agencies (CEC, CPUC, and the Consumer Power and Conservation Financing Authority [established under deregulation and now defunct]) came together to develop one high-level, coherent approach to meeting California's electricity and natural gas needs. It was the first time that energy policy agencies formally collaborated to define a common vision and set of strategies to address California's future energy needs and emphasize the importance of the impacts of energy policy on the California environment.

In the October 2005 EAP II, CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues, and research and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statues of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels (SAF) Plan in partnership with CARB and in consultation with other state, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing significant degradation of public health and environmental quality.

Executive Order S-06-06

EO S-06-06, signed on April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The EO also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- increase environmentally- and economically-sustainable energy production from organic waste;
- encourage the development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications;
- create jobs and stimulate economic development, especially in rural regions of the state; and
- reduce fire danger, improve air and water quality, and reduce waste.

In 2019, 2.87 percent of the total electrical system power in California was derived from biomass (CEC 2020).

California Building Code

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

Green Building Standards

In essence, green buildings standards are indistinguishable from any other building standards, are contained in the CBC, and regulate the construction of new buildings and improvements. Whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

The green buildings standards were updated in May 2018. Referred to as the 2019 Building Energy Efficiency Standards, these updates focus on four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to the exterior and vice versa), residential and nonresidential ventilation requirements, and non-residential lighting requirements. Under the newly adopted standards, nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (CEC 2018).

Assembly Bill 32, Climate Change Scoping Plan and Update

In October 2008, CARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. This initial Scoping Plan contained the main strategies to be implemented in order to achieve the target emission levels identified in AB 32. The Scoping Plan included CARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations were associated with improving emissions standards for light-duty vehicles, implementing the Low Carbon Fuel Standard program, implementation of energy efficiency measures in buildings and appliances, and the widespread development of combined heat and power systems, and developing a renewable portfolio standard for electricity production.

The initial Scoping Plan was first approved by CARB on December 11, 2008, and is updated every five years. The first update of the Scoping Plan was approved by the CARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reach the 2050 goals (CARB 2014). The most recent update released by CARB is the 2017 Climate Change Scoping Plan, which was released in November 2017. The measures identified in the 2017 Climate Change Scoping Plan have the co-benefit of increasing energy efficiency and reducing California's dependency on fossil fuels.

Senate Bill 375

SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will address land use allocation in that MPOs regional transportation plan (RTP). CARB, in consultation with MPOs, establishes regional reduction targets for GHGs emitted by passenger cars and light trucks for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, funding for transportation projects may be withheld.

Executive Order B-48-18: Zero Emission Vehicles

In January 2018, Governor Brown signed EO B-48-18 which required all State entities to work with the private sector to put at least 5-million zero-emission vehicles on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 zero-emissions chargers by 2025. In addition, State entities are also required to continue to partner with local and regional governments to streamline the installation of zero-emission vehicle infrastructure. Additionally, all State entities are to support and recommend policies and actions to expand infrastructure in homes, through the Low-Carbon Fuel Standard.

Senate Bill 32 and Assembly Bill 197 of 2016

SB 32 was signed by Governor Brown on September 8, 2016. SB 32 effectively extends California's GHG emission-reduction goals from year 2020 to year 2030. This new emission-reduction target of 40 percent below 1990 levels by 2030 is intended to promote further GHG-reductions in support of the State's ultimate goal of reducing GHG emissions by 80 percent below 1990 levels by 2050. SB 32 also directs the CARB to update the Climate Change Scoping Plan to address this interim 2030 emission-reduction target. Achievement of these goals will have the co-benefit of increasing energy efficiency and reducing California's dependency on fossil fuels.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires a battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB 2016).

Local

City of San Luis Obispo Climate Action Plan for Community Recovery

The City of San Luis Obispo Climate Action Plan for Community Recovery (CAP) is a long-range plan to reduce GHG emissions from City government operations and community activities. The CAP will also help achieve multiple community goals such as lowering energy costs, reducing air pollution, supporting local economic development. The CAP was prepared with the goal of achieving carbon neutrality by 2035. The CAP includes measures to reduce community-wide GHG emissions by 45 percent below 1990 levels by 2030 and 66 percent below 1990 levels by 2035, which is consistent with California's goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 (City of San Luis Obispo 2020).

City of San Luis Obispo Clean Energy Choice Program for New Buildings

The City's Clean Energy Choice Program for New Buildings encourages clean, efficient, and cost effective all-electric new buildings through incentives and local amendments to the California Energy Code. When paired with cost comparable modern electric appliances and carbon-free electricity from Central Coast Community Energy (formerly Monterey Bay Community Power), all-electric new buildings are operationally greenhouse gas emissions-free and cost effective.

There are several exemptions to the Clean Energy Choice Program for New Buildings, including any building permit application submitted prior to September 1, 2020, or new buildings that are located in a subdivision where the final map was recorded before September 1, 2020. In addition, natural gas plumbing and appliances in commercial kitchens are exempt, as are emergency generators and other uses of natural gas required for public health and safety.

City of San Luis Obispo General Plan

The Energy section of the City of San Luis Obispo General Plan Conservation and Open Space Element includes various goals and policies pertaining to energy use. Applicable General Plan goals include the following:

- Goal 4.2. Sustainable Energy Use. Increase use of sustainable energy sources such as solar, wind and thermal energy, and reduce reliance on non-sustainable energy sources to the extent possible with available technology and resources.
- Goal 4.4.4. Solar Access. Encourage the provision for and protection of solar access.

IMPACT ANALYSIS

Thresholds of Significance

In accordance with Appendix F and G of the California Environmental Quality Act (CEQA) Guidelines, energy use impacts associated with the proposed project would be considered significant if it would:

a) Result in the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; or

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

The CEQA Guidelines, Appendix F, requires environmental analyses to include a discussion of potential energy impacts associated with a proposed project. Where necessary, CEQA requires that mitigation measures be incorporated to reduce the inefficient, wasteful or unnecessary consumption of energy. The State CEQA Guidelines, however, do not establish criteria that define inefficient, wasteful or unnecessary consumption. Compliance with the State's building standards for energy efficiency would result in decreased energy consumption for proposed buildings. However, compliance with building codes may not adequately address all potential energy impacts associated with project construction and operation. As a result, this analysis includes an evaluation of electricity and natural gas usage requirements associated with future development, as well as, energy requirements associated with the use of on-road and off-road vehicles. The degree to which the proposed project would comply with existing energy standards, as well as, applicable regulatory requirements and policies related to energy conservation was also taken into consideration for the evaluation of project-related energy impacts.

Methodology

Construction Impacts

Regarding energy use (e.g., fuel use) during construction, it is assumed that only diesel fuel would be used in construction equipment. On-road vehicles for hauling materials and worker commute trips assumed a mix of diesel and gasoline fuel use. Construction schedules, equipment numbers, horsepower ratings, and load factors were used to calculate construction-related fuel use, based on default assumptions contained in the California Emissions Estimator Model (CalEEMod). Fuel use was quantified for construction of the parking deck and patient tower and associated structures.

Operational Impacts

Energy use associated with the long-term operation of the proposed project would include electricity and natural gas consumption for onsite operations and fuel use for vehicle trips to and from the project site. Building energy use was estimated using CalEEMod, version 2020.4.0. Energy use was calculated for opening year 2025 and future year 2030 conditions. Transportation fuel-use estimates were calculated by applying average fuel usage rates per vehicle mile to VMT associated with the proposed project, derived from CalEEMod. Annual energy usage was quantified based on CalEEMod default assumptions for PG&E, including compliance with renewable portfolio standards. Average fuel usage rates by vehicle class, fuel type (e.g., diesel, gasoline, electric, and natural gas), and calendar year were obtained from San Luis Obispo County's emissions inventory derived from ARB's Emissions Factors (EMFAC) 2017 computer model.

Project Impacts and Mitigation Measures

Impact A.	Would the project result in the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

Implementation of the proposed project would increase electricity, diesel, gasoline, and natural gas consumption associated with construction activities, as well as long-term operational activities. Energy consumption associated with short-term construction and long-term operational activities are discussed in greater detail, as follows:

Construction-Related Energy Consumption

Energy consumption would occur during construction, including fuel use associated with the on-site operation of off-road equipment and vehicles traveling to and from the construction site. Fuel use would be predominantly associated with the use of off-road equipment, worker commute trips to and from the site, and haul truck trips.

Table 1 summarizes the levels of energy consumption associated with project construction. As depicted, construction of the parking deck and associated improvements would consume an estimated 30,396 gallons of diesel fuel and approximately 5,623 gallons of gasoline. Construction of the patient tower and associated improvements would consume an estimated 34,062 gallons of diesel fuel and approximately 6,263 gallons of gasoline. In total construction activities would consume approximately 64,458 gallons of diesel fuel and approximately 11,886 gallons of gasoline, which would equate to a total consumption of approximately 10,285 million British thermal units (MMBTU).

Construction equipment use and associated energy consumption would be typical of that commonly associated with the construction of new land uses. As a result, project construction would not be anticipated to require the use of construction equipment that would be less energy efficient than those commonly used for the construction of similar facilities. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes in accordance with current regulatory requirements. Furthermore, with mitigation, on-site construction equipment may include the use of alternatively-fueled vehicles (e.g., natural gas) where feasible. Energy use associated with construction of the proposed project would be temporary and would not be anticipated to result in the need for additional capacity, nor would construction be anticipated to result in increased peak-period demands for electricity. As a result, the construction of proposed project would not result in an inefficient, wasteful, or unnecessary consumption of energy. As a result, impacts are considered **less than significant with mitigation incorporated**.

Table 1. Construction Energy Consumption

Source	Total Fuel Use (gallons)		Total MMBTU
	Diesel	Gasoline	
Parking Deck (Years 2022-2023)			
Off-Road Equipment Use (Diesel)	28,989		3,983
On-Road Vehicles (Diesel)	1,407		193
On-Road Vehicles (Gasoline)		5,623	677
Total:	30,396	5,623	4,852
Patient Tower (Years 2023-2024)			
Off-Road Equipment Use (Diesel)	29,821		4,097
On-Road Vehicles (Diesel)	4,241		583
On-Road Vehicles (Gasoline)		6,263	754
Total:	34,062	6,263	5,433
Total All Construction Activities:	**64,458**	**11,886**	**10,285**

MMBTU = Million British thermal units
Fuel use was calculated based, in part, on default construction schedules, equipment uses, and vehicle trips identified for the construction of similar land uses contained in the CalEEMod output files prepared for the air quality analysis conducted for this project. Refer to Appendix A for modeling assumptions and results.

Operational Mobile-Source Energy Consumption

Operational mobile-source energy consumption would be primarily associated with vehicle trips to and from the project. Energy use associated with vehicle trips are discussed in greater detail, as follows:

Opening Year 2025 Conditions

Fuel use for opening year conditions are summarized in Table 2. With the inclusion of currently implemented TDM strategies, the vehicle trips associated with the proposed land uses would consume an annual estimated 19,476 gallons of diesel and 99,151 gallons of gasoline. Estimated total fuel usage would equate to the consumption of an estimated 14,607 MMBTU. The inclusion of recommended TDM strategies would result in additional reductions in commute-related VMT of approximately 5 to 10 percent. With the inclusion of the proposed TDM strategies, overall energy consumption associated with fuel usage would range from approximately 14,542 to 14,882 MMBTU, depending on the effectiveness of the TDM strategies implemented.

Table 2. Operational Fuel Consumption – Year 2025

Source	Annual Fuel Use (gallons)[1]		Annual MMBTU	
With Current TDM Strategies				
On-Road Vehicles (Diesel)	19,476		2,676	
On-Road Vehicles (Gasoline)	99,151		11,931	
Total:			14,607	
With Current & Recommended TDM Strategies				
Effectiveness Range:	***Low***	***High***	***Low***	***High***
On-Road Vehicles (Diesel)	19,476	19,476	2,676	2,676
On-Road Vehicles (Gasoline)	98,615	98,116	11,867	11,807
Total:			14,542	14,482

MMBTU = Million British thermal units

1. Fuel use was calculated based, in part, on project trip generation rates derived from the traffic analysis for the project and VMT calculated using default travel assumptions derived from CalEEMod. Refer to Appendix A for modeling assumptions and results.
2. Current TDM strategies already implemented are estimated to provide 6.625% reduction in VMT based on the traffic analysis prepared for this project.
3. Recommended TDM strategies are estimated to provide reductions in VMT ranging from a low of 11.625% to a high of 16.625%, with the inclusion of existing TDM strategies. Derived from the traffic analysis prepared for this project.

Future Year 2030 Conditions

Fuel use for opening year conditions are summarized in Table 3. With the inclusion of currently implemented TDM strategies, the vehicle trips associated with the proposed land uses would consume an annual estimated 17,408 gallons of diesel and 91,564 gallons of gasoline. Estimated total fuel usage would equate to the consumption of an estimated 13,410 MMBTU. The inclusion of recommended TDM strategies would result in additional reductions in commute-related VMT of approximately 5 to 10 percent. With the inclusion of the proposed TDM strategies, overall energy consumption associated with fuel usage would range from approximately 13,295 to 13,350 MMBTU, depending on the effectiveness of the TDM strategies implemented.

Table 3. Operational Fuel Consumption – Year 2025

Source	Annual Fuel Use (gallons)[1]		Annual MMBTU	
With Current TDM Strategies				
On-Road Vehicles (Diesel)	17,408		2,392	
On-Road Vehicles (Gasoline)	91,564		11,018	
		Total:	13,410	
With Current & Recommended TDM Strategies				
Effectiveness Range:	***Low***	***High***	***Low***	***High***
On-Road Vehicles (Diesel)	17,408	17,408	2,392	2,392
On-Road Vehicles (Gasoline)	91069	90608	10,959	10,903
		Total:	13,350	13,295

MMBTU = Million British thermal units

1. Fuel use was calculated based, in part, on project trip generation rates derived from the traffic analysis for the project and VMT calculated using default travel assumptions derived from CalEEMod. Refer to Appendix A for modeling assumptions and results.
2. Current TDM strategies already implemented are estimated to provide 6.625% reduction in VMT based on the traffic analysis prepared for this project.
3. Recommended TDM strategies are estimated to provide reductions in VMT ranging from a low of 11.625% to a high of 16.625%, with the inclusion of existing TDM strategies. Derived from the traffic analysis prepared for this project.

The development of increasingly efficient automobile engines would result in increased energy efficiency and energy conservation. Implementation of Greenhouse Gas Mitigation Measures GHG-1 and GHG-2 would require implementation of additional trip-reduction measures and TDM strategies that would further reduce project-related VMT and associated energy use. These measures, as well as potentially other measures, would be incorporated into the GHG-reduction plan to be prepared for the project, as required by Mitigation Measure GHG-3. Mitigation Measures GHG-1, GHG-2 and GHG-3 are identified below.

Mitigation Measures

GHG-1: The project shall implement a Traffic Demand Management Plan. The plan shall identify the TDM strategies to be implemented and methods for monitoring the effectiveness of the TDM strategies. The TDM program shall be reviewed and approved by City's Transportation Division prior to implementation. The TDM plan shall include strategies and/or payment of traffic mitigation fees sufficient to achieve the City's significance threshold of 15% below the existing County average vehicle miles traveled per service population (VMT/SP) of 17.43 VMT/SP. At a minimum, based on the VMT analysis prepared for this project and in addition to the measures currently implemented, the following strategies shall be implemented (MBI 2021):

a. Provide parking cash-out programs for employees
b. Provide employer-implemented ride-sharing program for employees
c. Implement commute trip-reduction marketing strategies for employees

GHG-2: The following additional mitigation measures shall be implemented to further reduce operational emissions:

a. Provide employee lockers and showers to promote bicycle and pedestrian use. One shower and 5 lockers for every 25 new employees is recommended.
b. Exceed Cal Green standards by 25% for providing on-site bicycle parking: both short-term racks and long-term lockers, or a locked room with standard racks and access limited to bicyclists only.
c. Provide dedicated parking for carpools, vanpools, and/or high-efficiency vehicles to meet or exceed Cal Green Tier 2 .
d. Meet or exceed Cal Green Tier 2 standards for providing EV charging infrastructure.
e. Meet or exceed Cal Green Tier 1 standards for building energy efficiency.
f. Meet or exceed Cal Green Tier 2 standards for utilizing recycled content materials.
g. All built-in appliances shall be Energy Star certified or equivalent.
h. Meet or exceed Cal Green Tier 2 standards for the use of greywater, rainwater or recycled water.
i. Low-flow water fixtures shall be installed.
j. Proposed landscaping shall include water-efficient landscapes and irrigation systems.

GHG-3: A GHG-Reduction Plan shall be prepared for the proposed project. The GHG-Reduction Plan shall include all possible on-site GHG reduction measures sufficient to reduce operational emissions to below the City's threshold of significance of 0.7 $MTCO_2e$/SP/yr. The GHG-reduction plan shall be approved by the City prior to issuance of building construction permits. GHG-reduction measures shall include, but are not limited to, those identified in Mitigation Measure GHG-1 and GHG-2, as well as the following:

a. To the extent possible, install electrically-powered appliances and building mechanical equipment in place of natural-gas fueled equipment.
b. The project shall participate in Central Coast Community Energy.
c. The Project shall provide organic waste pick up and shall provide the appropriate on-site enclosures consistent with the provisions of the City of San Luis Obispo Development Standards for Solid Waste Services.
d. The on-site installation of trees shall be consistent with the City's municipal code requirements

With implementation of recommended mitigation measures, the proposed project would not result in increased fuel usage that would be considered unnecessary, inefficient, or wasteful. This impact would be considered **less than significant with mitigation incorporated**.

Operational On-Site Energy Consumption

The proposed project would result in increased electricity and natural gas consumption associated with the long-term on-site operations. Estimated electricity, water, and natural gas consumption associated with the proposed project are summarized in Table 4. As depicted, the proposed project would result in the annual consumption of approximately 1,738,940 kilowatt hours (kWh) of electricity, 36,216 kWh of water, and 9,784,580 kilo British thermal units (kBTU) of natural gas. In total, the proposed project would consume approximately 19,130 MMBTU per year. The project would be subject to energy conservation requirements in the CEC (Title 24, Part 6, of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings) and the California Green Building Standards Code (CALGreen) (Title 24, Part 11 of the California Code of Regulations). Proposed mitigation measures related to energy conservation, including those identified in Mitigation Measure GHG-2, would result in reductions in energy use beyond current building code requirements. Adherence to building code requirements, and implementation of recommended mitigation measures would ensure that the project would not result in wasteful and inefficient use of non-renewable resources due to building operation. For this reason, this impact would be considered **less than significant with mitigation incorporated**.

Table 4. Operational Electricity, Water, and Natural Gas Consumption

Source	Annual Energy Use	Annual MMBTU
Electricity (kWh)	1,738,940	5,933
Water (kWh)	36,216	3,412
Natural Gas Use (kBTU)	9,784,580	9,785
	Total:	19,130

MMBTU = Million British thermal units; kWh = Kilowatt hour; kBTU = Kilo British thermal unit
Represents energy consumption anticipated to occur for opening year 2025 and future year 2030 conditions. Includes compliance with exiting building code requirements and implementation of energy-reducing mitigation measures.

Impact B. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The project would be required to be in full compliance with California building code requirements, including applicable green building standards and building energy efficiency standards. Furthermore, implementation of recommended mitigation measures and compliance with the City's Clean Energy Choice Program for New Buildings would further reduce energy usage. Mitigation measures would also be required to reduce water and natural gas use, as well as, participation in Central Coast Community Energy for electricity use. Compliance with these mitigation measures would ensure the conservation and preservation of energy resources by increasing energy efficiency of buildings, appliances, and buildings to the use of alternative forms of energy. For these reasons, potential impacts associated with conflict with a state or local plan for renewable energy or energy efficiency would be **less than significant with mitigation incorporated**.

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Energy Use Summary

Construction Energy Use

	Gallons	Annual MMBTU
Parking Deck		
Off-Road Equipment Fuel (Diesel)	28,989	3,983
On-Road Vehicle Fuel (Gasoline)	5,623	677
On-Road Vehicle Fuel (Diesel)	1,407	193
Subtotal:		4,852
Patient Tower		
Off-Road Equipment Fuel (Diesel)	29,821	4,097
On-Road Vehicle Fuel (Gasoline)	6,263	754
On-Road Vehicle Fuel (Diesel)	4,241	583
Subtotal:		5,433
Total All Construction:		10,286

Operational Fuel Use	**YEAR 2025**		**YEAR 2030**	
	Gallons	**Annual MMBTU**	**Gallons**	**Annual MMBTU**
Mobile Fuel (Diesel)	19,476	2,676	2,675,590,739	2,676
Mobile Fuel (Gasoline)	99,775	12,006	12,006,200,049	11,867
Total:		14,682		14,542

Operational Electricity & Natural Gas Use	**YEAR 2025**		**YEAR 2030**	
	Annual Energy	**Annual MMBTU**	**Annual Energy**	**Annual MMBTU**
Electricity (kWh/yr, MMBTU)	1,738,940	5,933	1,738,940	5,933
Water Use, Treatment & Conveyance (kWh/Yr, MMBTU)	36,216	124	36,216	124
Natural Gas (kBTU/yr, MMBTU)	9,784,580	9,785	9,784,580	9,785
Total:		15,841		15,841

Construction Equipment Fuel Use - Parking Deck

OFF-ROAD EQUIPMENT FUEL USE

Primary Construction Activity	Activity Duration (Days)	Equipment Type	Size (hp)	Number of Pieces	Hours of Daily Use/Piece of Equipment	Total Days of Use	Load Factor	Fuel Usage Rate (g/bhph)	Total Fuel Diesel (Gallons)
Demolition	20	Concrete/Industrial Saws	81	1	8	20	0.73	0.05	473
		Excavators	158	3	8	20	0.38	0.05	1441
		Rubber Tired Dozers	247	2	8	20	0.40	0.05	1581
Site Preparation	5	Tractors/Loaders/Backhoes	97	4	8	5	0.37	0.05	287
		Rubber Tired Dozers	247	3	8	5	0.40	0.05	593
Grading	8	Excavators	158	1	8	8	0.38	0.05	192
		Graders	187	1	8	8	0.41	0.05	245
		Rubber Tired Dozers	247	1	8	8	0.40	0.05	316
		Tractors/Loaders/Backhoes	97	3	8	8	0.37	0.05	345
Building Construction	230	Cranes	231	1	7	230	0.29	0.05	5393
		Forklifts	89	3	8	230	0.20	0.05	4913
		Generator Sets	84	1	8	230	0.74	0.05	5719
		Tractors/Loaders/Backhoes	97	3	7	230	0.37	0.05	8667
		Welders	46	1	8	230	0.45	0.05	1904
Paving	5	Pavers	130	1	8	5	0.42	0.05	109
		Cement/Mortar Mixers	9	2	6	5			
		Paving Equipment	132	2	6	5	0.36	0.05	143
		Rollers	80	2	6	5	0.38	0.05	91
		Tractors/Loaders/Backhoes	97	1	8	5	0.37	0.05	72

Equipment usage assumptions based on default assumptions contained in CalEEMod.

Total Diesel Fuel Use (Gallons):	28989
Number of Construction Years:	2.75
Average Diesel Fuel Use/Year:	10541
BTU/Gallon:	137381
BTU:	3982522148
MMBTU:	3983

Construction Equipment Fuel Use - Patient Tower

OFF-ROAD EQUIPMENT FUEL USE

Primary Construction Activity	Activity Duration (Days)	Equipment Type	Size (hp)	Number of Pieces	Hours of Daily Use/Piece of Equipment	Total Days of Use	Load Factor	Fuel Usage Rate (g/bhph)	Total Fuel Diesel (Gallons)
Demolition	20	Concrete/Industrial Saws	81	1	8	20	0.73	0.05	473
		Excavators	158	3	8	20	0.38	0.05	1441
		Rubber Tired Dozers	247	2	8	20	0.40	0.05	1581
Site Preparation	5	Tractors/Loaders/Backhoes	97	4	8	5	0.37	0.05	287
		Rubber Tired Dozers	247	3	8	5	0.40	0.05	593
Grading	8	Excavators	158	1	8	8	0.38	0.05	192
		Graders	187	1	8	8	0.41	0.05	245
		Rubber Tired Dozers	247	1	8	8	0.40	0.05	316
		Tractors/Loaders/Backhoes	97	3	8	8	0.37	0.05	345
Building Construction	230	Cranes	231	1	7	230	0.29	0.05	5393
		Forklifts	89	3	8	230	0.20	0.05	4913
		Generator Sets	84	1	8	230	0.74	0.05	5719
		Tractors/Loaders/Backhoes	97	3	7	230	0.37	0.05	8667
		Welders	46	1	8	230	0.45	0.05	1904
Arch Coating	144	Air Compressor	78	1	6	144	0.37	0.05	1247

Equipment usage assumptions based on default assumptions contained in CalEEMod.

Total Diesel Fuel Use (Gallons):	29821
Number of Construction Years:	2.75
Average Diesel Fuel Use/Year:	10844
BTU/Gallon:	137381
BTU:	4096824788
MMBTU:	4097

Construction Fuel Use - Parking Deck: On-Road Vehicles

Activity	Demo	Site Prep	Grading	Building	Paving	Arch Coating	Total	LDA	LDT1	LDT2	MDV	HDV
Days	20	5	8	230	5							
Worker Trips	15	18	15	43	20							
Miles/Trip	13	13	13	13	13							
Total VMT	3900	1170	1560	128570	1300		136500	45500	45500	45500	0	0
Vendor Trips	0	0	0	20	0							
Miles/Trip	5	5	5	5	5							
Total VMT	0	0	0	23000	0		23000	0	0	0	23000	0
Haul Trips	0	0	0	100	0							
Miles/Trip	20	20	20	20	20							
Total VMT	0	0	0	2000	0		2000	0	0	0	0	2000

	Annual VMT	Gallons/Mile*	Gallons	BTU/gallon**	BTU	MMBTU
HDT	2000	0.20597703	412	137381	56594662	56.59
LDA	45500	0.03572748	1626	120333	195613360	195.61
LDT1	45500	0.04287086	1951	120333	234724468	234.72
LDT2	45500	0.04498047	2047	120333	246274882	246.27
MDV	23000	0.04325264	995	137381	136668100	136.67

**Gallons per mile based on year 2021 conditions for San Luis Obispo County. Derived from Emfac2021 Emissions Inventory.*

***Energy coefficient derived from US EIA.*

https://www.eia.gov/energyexplained/index.php?page=about_energy_units

EMFAC2021 Fuel Rate Calculation	Fuel Consumption (1000 Gallons/Day)*		VMT (Miles/Day)**		
	Diesel	Gasoline	Diesel	Gasoline	TOTAL
LDA	0.846814	142.4046	35334.37674	3985856.39	4021190.767
LDT1	0.014122	22.21011	344.5752587	518070.051	518414.6263
LDT2	0.363186	96.81145	11023.99165	2152299.704	2163323.696
MDV	2.284433	88.59601	52816.03307	1616192.427	1669008.46
HDT***	7.704346	0.032063	37403.90788	102.1230284	37506.03091
Total	11.212901	350.054233	136922.8846	8272520.695	8409443.58
Percent of Total			1.63%	98.37%	
LDA-Miles/Gallon	41.72625481	27.98966038			
LDA-Gallons/Mile	0.023965726	0.035727479			
LDT1-Miles/Gallon	24.39989086	23.32586606			
LDT1-Gallons/Mile	0.04098379	0.042870863			
LDT2-Miles/Gallon	30.35356993	22.23187137			
LDT2-Gallons/Mile	0.032945054	0.044980469			
MDV-Miles/Gallon	23.11997466	18.24227103			
MDV-Gallons/Mile	0.043252643	0.054817736			
HDT-Miles/Gallon	4.854910187	0.000313964			
HDT-Gallons/Mile	0.205977034	3185.074023			

**Fuel consumptions derived from EMFAC2017 (v1.0.2) for year 2021 conditIons.*

***VMT derived from EMFAC2017 (v1.0.2) for year 2021 conditions.*

****HDT diesel engine T7 CAIRP construction, T7 single construction, T7 tractor construction. HDT gasoline engine T7IS.*

Fuel consumption and VMT based on the San Luis Obispo County.

Construction Fuel Use - Patient Tower: On-Road Vehicles

Activity	Demo	Site Prep	Grading	Building	Paving	Arch Coating	Total	LDA	LDT1	LDT2	MDV	HDV
Days	20	5	8	230	0	144						
Worker Trips	15	18	15	43	0	9						
Miles/Trip	13	13	13	13	13	13						
Total VMT	3900	1170	1560	128570	0	16848	152048	50682.67	50682.67	50682.67	0	0
Vendor Trips	0	0	0	20	0	0						
Miles/Trip	5	5	5	5	5	5						
Total VMT	0	0	0	23000	0	0	23000	0	0	0	23000	0
Haul Trips	84	0	704	0	0	0						
Miles/Trip	20	20	20	20	20	20						
Total VMT	1680	0	14080	0	0	0	15760	0	0	0	0	15760

	Annual VMT	Gallons/Mile*	Gallons	BTU/gallon**	BTU	MMBTU
HDT	15760	0.20597703	3246	137381	445965935	445.97
LDA	50683	0.03572748	1811	120333	217894653	217.89
LDT1	50683	0.04287086	2173	120333	261460703	261.46
LDT2	50683	0.04498047	2280	120333	274326764	274.33
MDV	23000	0.04325264	995	137381	136668100	136.67

**Gallons per mile based on year 2021 conditions for San Luis Obispo County. Derived from Emfac2021 Emissions Inventory.*

***Energy coefficient derived from US EIA.*

https://www.eia.gov/energyexplained/index.php?page=about_energy_units

EMFAC2021 Fuel Rate Calculation	Fuel Consumption (1000 Gallons/Day)*		VMT (Miles/Day)**		
	Diesel	Gasoline	Diesel	Gasoline	TOTAL
LDA	0.846814	142.4046	35334.37674	3985856.39	4021190.767
LDT1	0.014122	22.21011	344.5752587	518070.051	518414.6263
LDT2	0.363186	96.81145	11023.99165	2152299.704	2163323.696
MDV	2.284433	88.59601	52816.03307	1616192.427	1669008.46
HDT***	7.704346	0.032063	37403.90788	102.1230284	37506.03091
Total	11.212901	350.054233	136922.8846	8272520.695	8409443.58
Percent of Total			1.63%	98.37%	
LDA-Miles/Gallon	41.72625481	27.98966038			
LDA-Gallons/Mile	0.023965726	0.035727479			
LDT1-Miles/Gallon	24.39989086	23.32586606			
LDT1-Gallons/Mile	0.04098379	0.042870863			
LDT2-Miles/Gallon	30.35356993	22.23187137			
LDT2-Gallons/Mile	0.032945054	0.044980469			
MDV-Miles/Gallon	23.11997466	18.24227103			
MDV-Gallons/Mile	0.043252643	0.054817736			
HDT-Miles/Gallon	4.854910187	0.000313964			
HDT-Gallons/Mile	0.205977034	3185.074023			

**Fuel consumptions derived from EMFAC2017 (v1.0.2) for year 2021 conditIons.*

***VMT derived from EMFAC2017 (v1.0.2) for year 2021 conditions.*

****HDT diesel engine T7 CAIRP construction, T7 single construction, T7 tractor construction. HDT gasoline engine T7IS.*

Fuel consumption and VMT based on the San Luis Obispo County.

Operational Fuel Use - Proposed Project Year 2025 Unmitigated

LAND USE	Total Annual VMT
PROPOSED PROJECT	2,568,222

	VMT	Gallons/Mile*	Gallons	BTU/gallon**	BTU	Without TDM MMBTU	With Current TDM MMBTU	With Current and Recommended TDM Low MMBTU	With Current and Recommended TDM High MMBTU
Diesel	198878	0.09792762	19476	137381	2675590739	2675.6	2,676	2,676	2,676
Gasoline	2369344	0.04211073	99775	120333	12006200049	12006.2	11,931	11,867	11,807
					Total:	*14681.8*	*14606.8*	*14542.2*	*14482.2*

**Gallons per mile based on year 2025 conditions for San Luis Obispo County. Derived from 2021 Emissions Inventory.*

**Energy coefficient derived from US EIA.

https://www.eia.gov/energyexplained/index.php?page=about_energy_units

Fuel Use (Gallons)	Without TDM	With Current TDM	With Current and Recommended TDM Low	With Current and Recommended TDM High
Diesel	19,476	19,476	19,476	19,476
Gasoline	99,775	99,151	98,615	98,116
Total:	119,250	118,627	118,091	117,592

EMFAC2017 Fuel Rate Calculation	Fuel Consumption (1000 Gallons/Day)* Diesel	Fuel Consumption (1000 Gallons/Day)* Gasoline	VMT (Miles/Day)** Diesel	VMT (Miles/Day)** Gasoline
All Other Buses	0.261761034		2227.723736	
LDA				
LDA	0.594093315	134.7962821	25172.88793	4042132.398
LDT1				
LDT1	0.008337095	18.69318072	203.4386091	456760.8838
LDT2				
LDT2	0.378678983	99.08674763	11911.51985	2367770.886
LHD1				
LHD1	15.31492557	22.8362392	242693.0884	214025.8281
LHD2				
LHD2	7.636005075	3.220300625	99175.82122	27243.99279
MCY		1.110668513		43541.62387
MDV				
MDV	1.999585853	82.74867689	47108.53297	1607108.138
MH				
MH	0.714971323	2.825391747	6718.201454	12463.48207
Motor Coach	0.443374819		2461.521675	
OBUS		1.508323205		7107.36844
PTO	1.220920421		6048.307551	
SBUS				
SBUS	0.652713227	0.333354201	5347.450034	3260.551429
T6 CAIRP Class 4	0.001838336		16.54302778	
T6 CAIRP Class 5	0.002527656		22.73279864	
T6 CAIRP Class 6	0.006457264		58.9917319	
T6 CAIRP Class 7	0.038062962		374.040943	
T6 Instate Delivery Class 4	0.406561875		3353.405226	
T6 Instate Delivery Class 5	0.255326241		2114.787061	
T6 Instate Delivery Class 6	0.621289958		5171.331879	
T6 Instate Delivery Class 7	0.227120032		1924.932524	
T6 Instate Other Class 4	1.482816032		12720.22281	
T6 Instate Other Class 5	3.936833834		33812.45039	
T6 Instate Other Class 6	2.166038144		18633.10032	
T6 Instate Other Class 7	1.784000295		15668.63748	
T6 Instate Tractor Class 6	0.052746044		451.531952	
T6 Instate Tractor Class 7	0.535466031		4934.688879	
T6 OOS Class 4	0.002039052		18.57040801	
T6 OOS Class 5	0.002802636		25.47526038	
T6 OOS Class 6	0.007173592		66.56758425	
T6 OOS Class 7	0.048871934		484.0291135	
T6 Public Class 4	0.053280517		408.4289489	
T6 Public Class 5	0.204498714		1593.9805	
T6 Public Class 6	0.145512589		1122.764826	
T6 Public Class 7	0.471788078		3709.829453	
T6 Utility Class 5	0.102246181		908.9682459	
T6 Utility Class 6	0.019258944		171.7536991	
T6 Utility Class 7	0.026529971		238.2786242	
T6TS		3.140355837		14867.08907
T7 CAIRP Class 8	5.840083393		36182.96682	
T7 NNOOS Class 8	6.789254644		43282.47289	
T7 NOOS Class 8	2.526493121		15723.75357	
T7 Other Port Class 8	1.485835773		8885.307169	
T7 Public Class 8	1.650251517		8640.596646	
T7 Single Concrete/Transit Mix Class 8	0.531323074		3157.455545	
T7 Single Dump Class 8	1.491423864		8626.653759	
T7 Single Other Class 8	3.042114501		18007.65124	
T7 SWCV Class 8	1.723640162		4324.734022	
T7 Tractor Class 8	4.586740357		28157.21962	
T7 Utility Class 8	0.124502122		725.1726164	
T7IS		0.013493446		48.59251807
UBUS				
UBUS	0.695761658	0.153937253	5653.61381	1116.360887

Total	72.31387782	370.4669514	738442.1349	8797447.196	9535889.33
Percent of Total			7.74%	92.26%	
Miles/Gallon	10.21162406	23.74691498			
Gallons/Mile	0.097927616	0.042110733			

*Fuel consumptions derived from EMFAC2021.

**VMT derived from EMFAC2021.

Fuel consumption and VMT based on the San Luis Obispo County.

Operational Fuel Use - Proposed Project Year 2030 Unmitigated

LAND USE	Total Annual VMT
PROPOSED PROJECT	2,568,222

	VMT	Gallons/Mile*	Gallons	BTU/gallon**	BTU	Without TDM MMBTU	With Current TDM MMBTU	With Current and Recommended TDM Low MMBTU	With Current and Recommended TDM High MMBTU
Diesel	173775	0.10017764	17408	137381	2391582509	2,392	2,392	2,392	2,392
Gasoline	2394447	0.03848078	92140	120333	11087505293	11,088	11,018	10,959	10,903
					Total	*13,479*	*13,410*	*13,350*	*13,295*

**Gallons per mile based on year 2030 conditions for San Luis Obispo County. Derived from 2021 Emissions Inventory.*
**Energy coefficient derived from US EIA.
https://www.eia.gov/energyexplained/index.php?page=about_energy_units

Fuel Use (Gallons)	Without TDM	With Current TDM	Low	High
Diesel	17,408	17,408	17,408	17,408
Gasoline	92,140	91,564	91,069	90,608
Total	109,549	108,973	108,477	108,017

EMFAC2017 Fuel Rate Calculation	Fuel Consumption (1000 Gallons/Day)* Diesel	Fuel Consumption (1000 Gallons/Day)* Gasoline	VMT (Miles/Day)** Diesel	VMT (Miles/Day)** Gasoline
All Other Buses	0.258555512		2298.914477	
LDA	0.292441302	124.9137733	12893.87861	4066987.165
LDT1	0.000482818	14.76657951	12.53401984	386119.3244
LDT2	0.342784081	95.90087373	11410.61277	2479668.975
LHD1	11.38251486	18.29888583	181039.8123	182904.1597
LHD2	5.962138203	2.494852104	78770.55625	22220.33412
MCY		0.97873604		39148.39963
MDV	1.448096452	73.20946115	35367.3425	1536771.466
MH	0.567003846	1.917648121	5325.133214	8466.658705
Motor Coach	0.432778927		2531.507111	
OBUS		0.929618707		4510.040117
PTO	1.122905262		5914.767936	
SBUS	0.584517078	0.333296083	4960.570754	3302.562495
T6 CAIRP Class 4	0.001687895		15.72280528	
T6 CAIRP Class 5	0.002339793		21.73425366	
T6 CAIRP Class 6	0.00588523		55.36169124	
T6 CAIRP Class 7	0.035931858		376.3269033	
T6 Instate Delivery Class 4	0.389992959		3318.143171	
T6 Instate Delivery Class 5	0.245466386		2093.440477	
T6 Instate Delivery Class 6	0.597815524		5116.733988	
T6 Instate Delivery Class 7	0.235691044		2013.011132	
T6 Instate Other Class 4	1.405486421		12416.06183	
T6 Instate Other Class 5	3.757569087		33163.77049	
T6 Instate Other Class 6	2.064242136		18271.77262	
T6 Instate Other Class 7	1.768926738		15715.65234	
T6 Instate Tractor Class 6	0.048607354		434.7849031	
T6 Instate Tractor Class 7	0.543550048		5145.887908	
T6 OOS Class 4	0.002051136		20.11069905	
T6 OOS Class 5	0.002828395		27.5882627	
T6 OOS Class 6	0.007235939		72.08891977	
T6 OOS Class 7	0.048745227		524.1760885	
T6 Public Class 4	0.048363381		385.2069713	
T6 Public Class 5	0.187012237		1497.964634	
T6 Public Class 6	0.131290815		1058.175323	
T6 Public Class 7	0.419642332		3451.414554	
T6 Utility Class 5	0.087640876		799.6098498	
T6 Utility Class 6	0.016505561		150.9564201	
T6 Utility Class 7	0.022399112		206.5209271	
T6TS		2.589001305		12908.94257
T7 CAIRP Class 8	5.503206752		37094.61879	
T7 NNOOS Class 8	6.678283539		47846.86069	
T7 NOOS Class 8	2.506949985		17381.91459	
T7 Other Port Class 8	1.54033134		9995.931192	
T7 Public Class 8	1.479706388		8109.449171	
T7 Single Concrete/Transit Mix Class 8	0.445907263		2791.74285	
T7 Single Dump Class 8	1.355669299		8085.092225	
T7 Single Other Class 8	3.011005851		18287.49661	
T7 SWCV Class 8	1.386799877		3672.195409	
T7 Tractor Class 8	4.667064543		30025.56341	
T7 Utility Class 8	0.113985129		681.0547425	
T7IS		0.00907047		37.21737838
UBUS	0.412824089	0.140446118	3751.535472	1117.622559

	Diesel	Gasoline	Diesel	Gasoline	
Total	63.57285988	336.4822425	634601.3023	8744162.868	9378764.17
Percent of Total			6.77%	93.23%	
Miles/Gallon	9.982267646	25.98699653			
Gallons/Mile	0.100177639	0.038480784			

*Fuel consumptions derived from EMFAC2021.
**VMT derived from EMFAC2021.
Fuel consumption and VMT based on the San Luis Obispo County.

Operational Electricity & Natural Gas Use Mitigated

	kWh/yr	MWh/Yr	BTU/kWh*	BTU	MMBTU
Electricity	1738940	1739	3412	5933263280	5933

*Energy coefficient derived from US EIA.
https://www.eia.gov/energyexplained/index.php?page=about_energy_units

	kBTU/yr			BTU	MMBTU
Natural Gas	9784580			9784580000	9785

*Energy coefficient derived from US EIA.
https://www.eia.gov/energyexplained/index.php?page=about_energy_units

Water Energy Use Year 2025 Mitigated

	WATER USE*	ELECTRIC INTENSITY FACTORS		ANNUAL ELECTRIC USE (kWh/Yr)		
	MGAL/YR	INDOOR	OUTDOOR	INDOOR	OUTDOOR	TOTAL
ANNUAL INDOOR WATER USE	9.01	3500		31544		36,216
ANNUAL OUTDOOR WATER USE	1.33		3500		4672	

*Based on estimated water use derived from CalEEMod.

**Energy coefficient derived from US EIA.

https://www.eia.gov/energyexplained/index.php?page=about_energy_units

BTU/kWh**	3412
BTU:	123568412
MMBTU:	123.57

ATTACHMENT 6

French Hospital Preliminary Stormwater Control Plan
Hydrology Analysis

1413 Monterey St.
San Luis Obispo, CA 93401

www.ashleyvance.com

Date: 4/27/2020

To: Hal Hannula
City of San Luis Obispo
Public Works Department

Project: French Hospital

Job #: 181067 and 181474

Subject: Preliminary Stormwater Control Plan Hydrology Analysis

Comments:

This Project is part of the build out of French Hospital and will include the addition of a new parking deck and a new medical facility building, and will include the regrading of parking lots.

The new improvements will drain to an existing onsite stormwater basin that was designed to attenuate the peak runoff rate for the full build out of the hospital.

This site will result in over 22,000 square feet of impervious surface and as a result is subject to performance requirements 1 through 4, however this site is located in WMZ 3 and is not required to retain the 95^{th} event.

Performance requirement 1 will be met through the use of pervious pavers to reduce impervious surface onsite.

Performance requirement 2 requires that the site treats the runoff from the 85^{th} percentile storm. This will be met through the use of pervious pavers as well as treatment planters. Downspouts will outlet to raised planters. These planters will consist of 6" of ponding depth, over 2' of planting soil over 1' of gravel. These planters will have an underdrain that will remove the treated runoff and direct it to the onsite basin.

Parking stalls will be constructed of pervious pavers. These pavers will have a gravel section beneath them that will store the runoff in the void space, allowing the runoff directed to them from the drive aisles to percolate back into the native ground, these areas will not have an underdrain and the gravel will be sized to store the 85^{th} percentile volume.

This project is exempt from Performance requirement 3 due to its location in WMZ 3.

Performance requirement 4 is already addressed through the use of the existing stormwater basin.

As this project moves forward, exhibits showing each DMA, and the BMP they drain to will be shown. Calculations sizing each BMP will be included.

Regards,

Kathleen Allwine

Kathleen Allwine, PE.
(805) 545-0010 x.165

ATTACHMENT 7

Noise Impact Assessment for the
Proposed French Hospital Medical Center Expansion Project

NOISE IMPACT ASSESSMENT

FOR THE PROPOSED

FRENCH HOSPITAL MEDICAL CENTER EXPANSION PROJECT
SAN LUIS OBISPO, CA

SEPTEMBER 2021

PREPARED FOR:

SWCA Environmental
Consultants, Inc.
1422 Monterey Street
San Luis Obispo, CA 93401

PREPARED BY:

AMBIENT
AIR QUALITY & NOISE CONSULTING

75 HIGUERA STREET, SUITE 105
SAN LUIS OBISPO, CA 93401

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APPENDICES

Appendix A: Noise Modeling & Support Documentation

INTRODUCTION

This report provides an analysis of noise and groundborne vibration impacts associated with the proposed French Hospital Expansion Project (project). This report also provides a summary of existing conditions in the project area and the applicable regulatory framework. This analysis was prepared based, in part, on the noise impact assessment prepared by 45dB Acoustics (April 9, 2020).

PROPOSED PROJECT SUMMARY

The existing French Hospital Medical Center is located at 1911 Johnson Avenue in the City of San Luis Obispo. The proposed French Hospital Medical Center expansion includes a new 82-bed wing, a lab, a parking structure, and a helicopter pad. The proposed project's site plan is depicted in Figure 1.

ACOUSTIC FUNDAMENTALS

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound, as described in more detail below, is mechanical energy transmitted in the form of a wave because of a disturbance or vibration.

Amplitude

Amplitude is the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3-dB change in amplitude as the minimum audible difference perceptible to the average person.

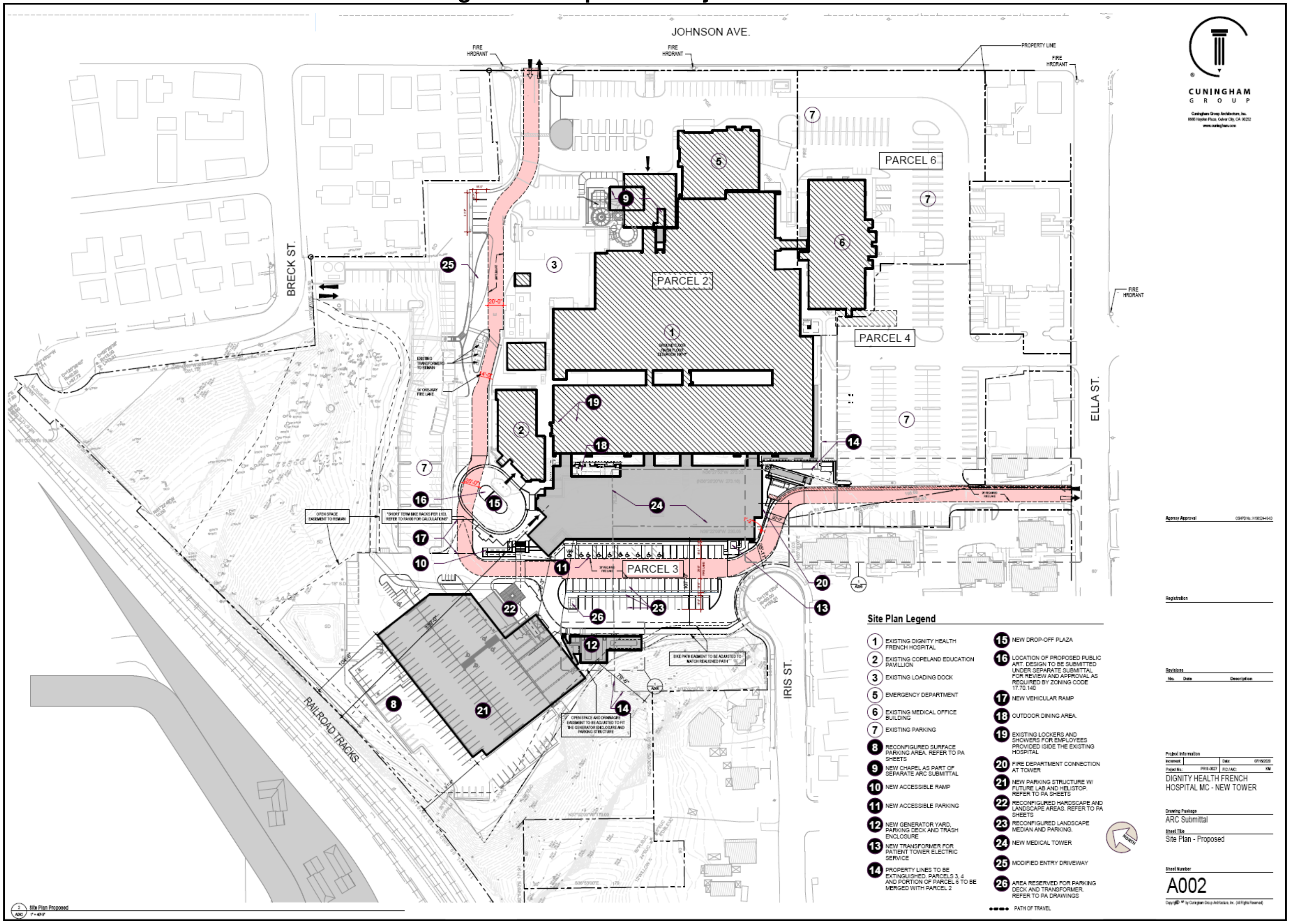
Frequency

Frequency is the number of fluctuations in the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. Sound waves below 16 Hz or above 20,000 Hz cannot be heard at all, and the ear is more sensitive to sound in the higher portion of this range than in the lower. To approximate this sensitivity, the environmental sound is usually measured in A-weighted decibels (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA. Common community noise sources and noise levels are depicted in Figure 2.

Addition of Decibels

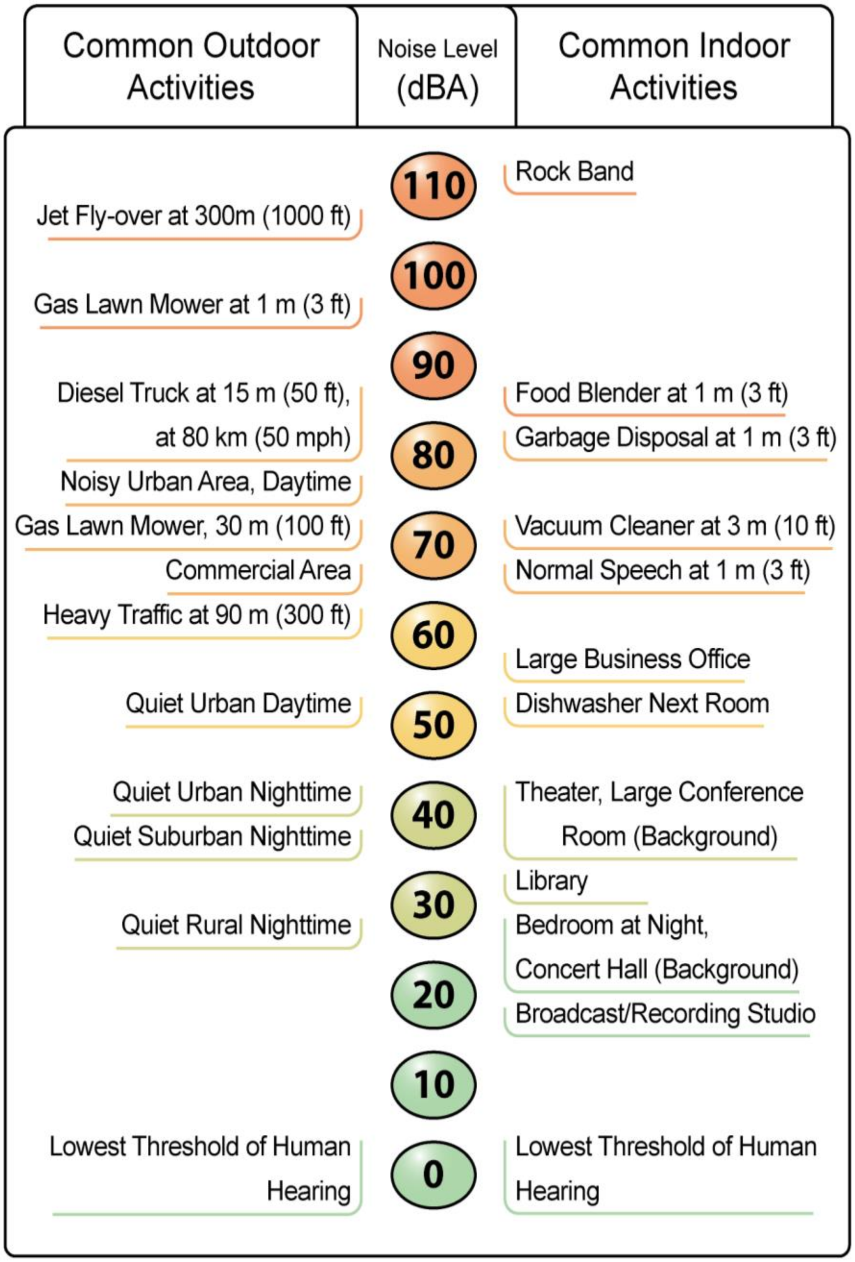
Because decibels are logarithmic units, sound levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces a sound level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

Figure 1. Proposed Project Site Plan



Source: Cunningham Group 2021

Figure 2. Typical Community Noise Levels



Source: Caltrans 2018

Sound Propagation & Attenuation

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path, and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, depending on ground surface characteristics. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water,), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between a line source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation for soft surfaces results in an overall attenuation rate of 4.5 dB per doubling of distance from a line source.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in an approximate 5 dB of noise reduction. Taller barriers provide increased noise reduction.

Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound-pressure level in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz, and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies, which is referred to as the "A-weighted" sound level (expressed in units of dBA). The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-weighted noise scale. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with environmental noise.

The intensity of environmental noise fluctuates over time, and several descriptors of time-averaged noise levels are typically used. For the evaluation of environmental noise, the most commonly used descriptors are L_{eq}, L_{dn}, and CNEL. The energy-equivalent noise level, L_{eq}, is a measure of the average energy content (intensity) of noise over any given period. Many communities use 24-hour descriptors of noise levels to regulate noise. The day-night average noise level, L_{dn}, is the 24-hour average of the noise intensity, with a 10-dBA "penalty" added for nighttime noise (10 p.m. to 7 a.m.) to account for the greater sensitivity to noise during this period. CNEL, the community equivalent noise level, is similar to L_{dn} but adds an additional 5-dBA penalty for evening noise (7 p.m. to 10 p.m.) Common noise descriptors are summarized in Table 1.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

Table 1. Common Acoustical Terms and Descriptors

Descriptor	Definition
Decibel (dB)	A unit-less measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to referenced sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
Energy Equivalent Noise Level (L_{eq})	The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.
Minimum Noise Level (Lmin)	The minimum instantaneous noise level during a specific period of time.
Maximum Noise Level (L_{max})	The maximum instantaneous noise level during a specific period of time.
Day-Night Average Noise Level (DNL or L_{dn})	The 24-hour L_{eq} with a 10 dBA "penalty" for noise events that occur during the noise-sensitive hours between 10:00 p.m. and 7:00 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours to account for increased sensitivity to noise during these hours.
Community Noise Equivalent Level (CNEL)	The CNEL is similar to the L_{dn} described above, but with an additional 5 dBA "penalty" added to noise events that occur between the hours of 7:00 p.m. to 10:00 p.m. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated L_{dn}.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted: the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans;
- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference;
- A change in a level of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 5 dB is typically considered substantial;
- A 10-dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on Human Activities

The extent to which environmental noise is deemed to result in increased levels of annoyance, activity interference, and sleep disruption varies greatly from individual to individual depending on various factors, including the loudness or suddenness of the noise, the information value of the noise (e.g., aircraft overflights, child crying, fire alarm), and an individual's sleep state and sleep habits. Over time, adaptation to noise events and increased levels of noise may also occur. In terms of land use compatibility, environmental noise is often evaluated in terms of the potential for noise events to result in increased levels of annoyance, sleep disruption, or interference with speech communication, activities, and learning.

Speech Communication

For most noise-sensitive land uses, an interior noise level of 45 dB L_{eq} is typically identified for the protection of speech communication in order to provide for 100-percent intelligibility of speech sounds. Assuming an average 20-dB reduction in sound level between outdoors and indoors (which is an average amount of sound attenuation that assumes windows are closed), this interior noise level would equate to an exterior noise level of 65 dBA L_{eq}. For outdoor voice communication, an exterior noise level of 60 dBA L_{eq} allows normal conversation at distances up to 2 meters with 95 percent sentence intelligibility (U.S. EPA 1974.) Based on this information, speech interference begins to become a problem when steady noise levels reach approximately 60 to 65 dBA.

Annoyance & Sleep Disruption

With regard to potential increases in annoyance, activity interference, and sleep disruption, land use compatibility determinations are typically based on the use of the cumulative noise exposure metrics (i.e., CNEL or L_{dn}). Perhaps the most comprehensive and widely accepted evaluation of the relationship between noise exposure and the extent of annoyance was one originally developed by Theodore J. Schultz in 1978. In 1978 the research findings of Theodore J. Schultz provided support for L_{dn} as the descriptor for environmental noise. Research conducted by Schultz identified a correlation between the cumulative noise exposure metric and individuals who were highly annoyed by transportation noise. The Schultz curve, expressing this correlation, became a basis for noise standards. When expressed graphically, this relationship is typically referred to as the Schultz curve. The Schultz curve indicates that approximately 13 percent of the population is highly annoyed at a noise level of 65 dBA L_{dn}. It also indicates that the percent of people describing themselves as being highly annoyed accelerates smoothly between 55 and 70 dBA L_{dn}. A noise level of 65 dBA L_{dn} is a commonly referenced dividing point between lower and higher rates of people describing themselves as being highly annoyed.

The Schultz curve and associated research became the basis for many of the noise criteria subsequently established for federal, state, and local entities. Most federal and state of California regulations and policies related to transportation noise sources establish a noise level of 65 dBA CNEL/L_{dn} as the basic limit of acceptable noise exposure for residential and other noise-sensitive land uses. For instance, with respect to aircraft noise, both the Federal Aviation Administration (FAA) and the State of California have identified a noise level of 65 dBA L_{dn} as the dividing point between normally compatible and normally incompatible residential land use generally applied for the determination of land use compatibility. For noise-sensitive land uses exposed to aircraft noise, noise levels in excess of 65 dBA CNEL/L_{dn} are typically considered to result in a potentially significant increase in levels of annoyance.

Allowing for an average exterior-to-interior noise reduction of 20 dB, an exterior noise level of 65 dBA CNEL/L_{dn} would equate to an interior noise level of 45 dBA CNEL/L_{dn}. An interior noise level of 45 dB CNEL/L_{dn} is generally considered sufficient to protect against activity interference at most noise-sensitive land uses, including residential dwellings, and would also be sufficient to protect against sleep interference (U.S. EPA, 1974.) Within California, the California Building Code establishes a noise level of 45 dBA CNEL as the maximum acceptable interior noise level for residential uses (other than detached single-family dwellings). Use of the 45 dBA CNEL/L_{dn} threshold is further supported by recommendations provided in the State of California Office of Planning and Research's *General Plan Guidelines* (2017), which recommend an interior noise level of 45 dB CNEL/L_{dn} as the maximum allowable interior noise level sufficient to permit "normal residential activity".

The cumulative noise exposure metric is currently the only noise metric for which there is a substantial body of research data and regulatory guidance defining the relationship between noise exposure, people's reactions, and land use compatibility. However, when evaluating environmental noise impacts involving intermittent noise events, such as aircraft overflights and train passbys, the use of cumulative noise metrics may not provide a thorough understanding of the resultant impact. The general public often finds it difficult to understand the relationship between intermittent noise events and cumulative noise exposure metrics. In such instances, supplemental use of single-event noise metrics, such as the SEL descriptor, may be helpful as a means of increasing public understanding regarding the relationship between these metrics and the extent of the resultant noise impact.

Although the use of supplemental noise descriptors can provide increased understanding of intermittent noise events and relationship to the cumulative noise metrics, current environmental regulations do not identify quantitative criteria, metrics, or computation methods pertaining to single-event noise exposure for determination of land use compatibility. However, with regard to aircraft noise exposure, Federal Interagency Committee on Aviation Noise (FICAN) has provided non-regulatory guidance for estimating the expected percent of awakenings that may result from single aircraft noise events. For example, at an indoor sound exposure of SEL 80 dBA, the FICAN data indicates that approximately 10 percent of exposed individuals would be awakened. Although some estimates of the percentage of people expected to be awakened when exposed to specific single-event noise levels inside a home have been provided, no quantitative determination as to what frequency of awakening would be acceptable has been made by Federal, State or local entities. Although no quantitative thresholds have yet been identified with regard to single-event noise exposure, the indication from several studies is that the noise threshold for significant occurrence of sleep disruption is higher than for speech interference.

EXISTING SETTING

Noise-Sensitive Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. Noise-sensitive land uses in the project vicinity consist predominantly of residential land uses. The nearest residential land uses are generally located to the south and west of the project site.

Ambient Noise Environment

To document the existing noise environment in the project vicinity, continuous long-term (i.e., 24 hour) noise measurements were conducted by 45dB from 13 December through 14 December 2018 at nearby residential sensitive receivers. Measurements were conducted using four 'Piccolo' Type 2 sound level meters, field-calibrated with a Brüel&Kjær 4231 Type 1 calibrator. All measurements were made at the standard receiver height of 1.3m Above Ground Level (AGL). Noise measurement locations are depicted in Figure 3. Measured noise levels are depicted graphically in Figure 4 and summarized in Table 2.

Table 2. Noise Measurement Data

Measurement Location	Major Noise Sources	Measured Noise Levels	
		Average-Hourly (dBA Leq)	Average-Daily (dBA CNEL)
02: Street side of parking lot at SLCUSD at Fixlini St., north of Lizzie St.	Residential traffic, San Luis Unified School District parking lot.	45 - 67	56.3
05: Westernmost parking lot boundary of French Hospital, just east of UPRR tracks.	French Hospital parking lot traffic, distant Johnson Ave. traffic, and occasional train pass-bys	47 - 67	53.9
06: Empty, treed lot SW of Fairview St. at Breck St., just east of UPRR tracks.	Johnson Avenue traffic and occasional train pass-bys	46 - 69	57.8
07: Front entrance/yard of 1545 Lizzie St.	Residential Traffic	46 - 69	56.2

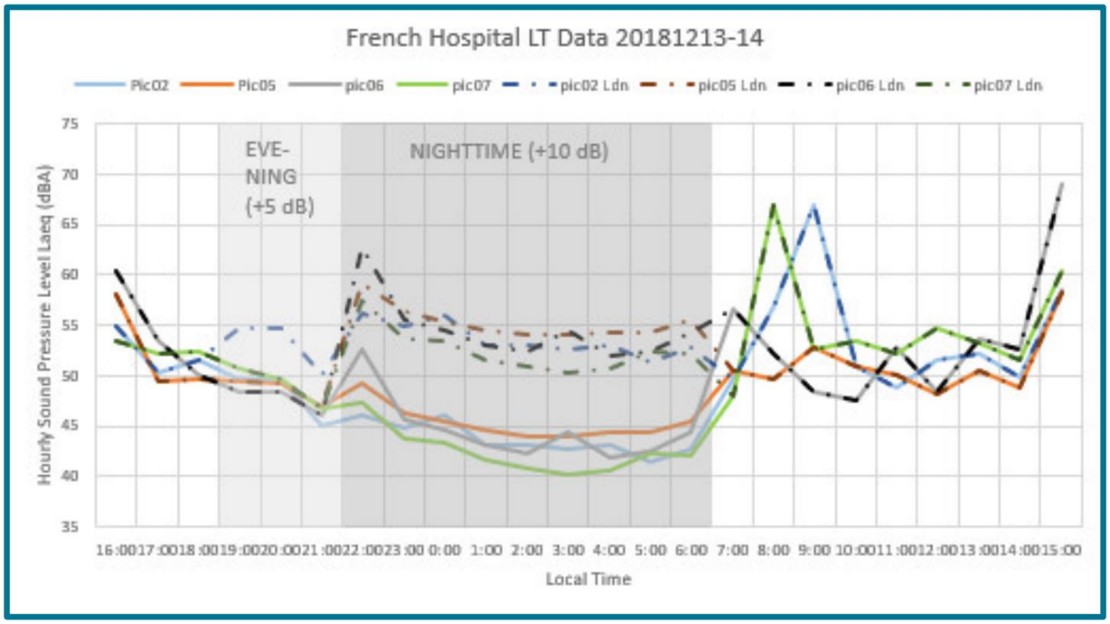
Source: 45dB Acoustics 2021

As noted in Table 2, measured average hourly noise levels in the project area generally range from a nighttime low of 45 dBA L_{eq} to a daytime high of 69 dBA L_{eq}. Measured average-daily noise levels ranged from approximately 54 to 58 dBA CNEL . Noise levels are predominantly influenced by vehicle traffic on area roadways and parking lots, as well as, occasional train pass-bys (45dB Acoustics 2020).

Figure 3. Long-term (24-hour) Noise Measurement Locations

Source: 45dB Acoustics 2021

Figure 4. Noise Measurement Data



Source: 45dB Acoustics 2021

Groundborne Vibration

No major existing sources of groundborne vibration were identified in the project area. Vehicle traffic on area roadways, particularly heavy-duty trucks, can result in increased groundborne vibration. However, groundborne vibration levels associated with vehicle traffic is typically considered minor and would not exceed applicable criteria at the project site boundaries.

REGULATORY FRAMEWORK

Noise

City of San Luis Obispo General Plan

The City's General Plan Noise Element sets noise exposure standards for the determination of land use compatibility for new noise-sensitive land uses and establishes performance standards for new transportation and non-transportation noise sources. The City's noise standards for transportation noise sources are summarized in Table 3. As depicted in Table 3, the noise standard for transportation noise sources ranges from an exterior level of 60 to 70 dBA CNEL/L_{dn}, depending on the land use. Interior noise standards for new transportation noise sources range from 35 to 45 dBA CNEL/L_{dn}.

The City's General Plan noise standards for non-transportation noise sources are summarized in Table 4. With regard to new non-transportation noise sources, the City's average-hourly noise standards are 50 dBA L_{eq} during the daytime hours (7 a.m. to 10 p.m.) and 45 dBA L_{eq} during the nighttime hours (10 p.m. to 7 a.m.) Instantaneous noise level standards are 70 dBA L_{max} during the daytime hours and 65 dBA L_{max} during the nighttime hours. Impulsive noise sources, such as hammering, are limited to 65 dBA L_{max} during the daytime hours and 60 dBA L_{max} during the nighttime hours. (City of San Luis Obispo 1996).

City of San Luis Obispo Municipal Code

The City's Noise Control Ordinance is contained in Municipal Code, Chapter 9.12. Section 9.12.050 and specifies noise standards for various categories of land use. The City's municipal code standards apply to existing noise sources, as well as, construction activities.

The City's maximum allowable noise levels for short-term operation of mobile equipment and long-term operation of stationary equipment at residential properties are summarized in Tables 5 and 6. These standards applied at the property line of the receiving residential land uses for construction activities that utilize noise-generating mobile or stationary equipment. Accordingly, maximum sound levels from mobile equipment are limited to 75 dBA at single-family residential, 80 dBA at multi-family residential, and 85 dBA for mixed residential/commercial land uses. Except for emergency repair of public service utilities, or where an exception is issued by the City, construction activities are typically limited to between the hours of 7:00 a.m. and 7:00 p.m., and prohibited on Sundays and holidays. For instantaneous noise events, the City also limits interior noise levels at noise-sensitive land uses to 60 dBA L_{max}.

Table 3. City of San Luis Obispo General Plan Maximum Noise Exposure for Noise-Sensitive Uses Due to Transportation Noise Sources

Land Use	Outdoor Activity Areas (CNEL/L_{dn})[1,2]	Interior Spaces	
		CNEL/L_{dn}[2]	L_{eq}[3]
Residences, hotels, motels, hospitals, nursing homes	60	45	--
Theaters, auditoriums, music halls	--	--	35
Churches, meeting halls, office building, mortuaries	60	--	45
Schools, libraries, museums	--	--	45
Neighborhood parks	65	--	--
Playgrounds	70	--	--

1. If the location of outdoor activity areas is not shown, the outdoor noise standard shall apply at the property line of the receiving land use.
2. Ldn (day-night average level) is the energy-averaged sound level measured over a 24-hour period, with a 10-dB penalty assigned to noise events occurring between 10:00 PM and 7:00 AM and a 5-dB penalty assigned to noise events occurring between 7:00 PM and 10 PM.
3. Leq (equivalent sound level) is the constant or single sound level containing the same total energy as a time-varying sound, over a certain time. If the location of outdoor activity areas is not shown, the outdoor noise standard shall apply at the property line of the receiving land use.

Source: City of San Luis Obispo 1996

Table 4. City of San Luis Obispo General Plan Maximum Noise Exposure for Noise-Sensitive Uses Due to Stationary Noise Sources

Duration	Day (7 a.m. to 10 p.m.)	Night (10 p.m. to 7 a.m.)
Hourly (dBA L_{eq}) [1,2]	50	45
Maximum (dBA L_{max}) [1,2]	70	65
Impulsive (dBA L_{max}) [1,3]	65	60

1. As determined at the property line of the receiver. When determining the effectiveness of noise mitigation measures, the standards may; be applied on the receptor side of noise barriers or other property-line noise mitigation measures.
2. Sound level measurements shall be made with slow meter response.
3. Sound level measurements shall be made with fast meter response.

Source: City of San Luis Obispo 1996

Table 5. City of San Luis Obispo Municipal Code Maximum Noise Levels for Nonscheduled, Intermittent, Short-Term Operation (Less than 10 Days) of Mobile Equipment at Residential Properties

Zoning Category	Time Period	Noise Level (dBA)
Single-Family Residential	Daily 7:00 AM to 7:00 PM, except Sundays and legal holidays	75
Multi-Family Residential		80
Mixed Residential/Commercial		85
Single-Family Residential	7:00 PM to 7:00 AM, all day Sunday and legal holidays	60
Multi-Family Residential		65
Mixed Residential/Commercial		70

Source: City of San Luis Obispo 2021

Table 6. City of San Luis Obispo Municipal Code Maximum Noise Levels for Repetitively Scheduled, Relatively Long-Term Operation (10 Days or More) of Stationary Equipment at Residential Properties

Zoning Category	Time Period	Noise Level (dBA)
Single-Family Residential	Daily 7:00 AM to 7:00 PM, except Sundays and legal holidays	60
Multi-Family Residential		65
Mixed Residential/Commercial		70
Single-Family Residential	7:00 PM to 7:00 AM, all day Sunday and legal holidays	50
Multi-Family Residential		55
Mixed Residential/Commercial		60

Source: City of San Luis Obispo 2021

Groundborne Vibration

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of amplitude and frequency. A person's perception of the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating. Vibration can be measured in terms of acceleration, velocity, or displacement. Measurements in terms of velocity are expressed as peak particle velocity (PPV) with units of inches per second (in/sec).

There are no federal, state, or local regulatory standards for groundborne vibration. However, the California Department of Transportation (Caltrans) has developed vibration criteria based on potential structural damage risks and human annoyance. Caltrans-recommended criteria for the evaluation of groundborne vibration levels, with regard to structural damage and human annoyance, are summarized in Table 7. The criteria apply to continuous vibration sources, which include vehicle traffic and most construction activities. All damage criteria for buildings are in terms of ground motion at the buildings' foundations. No allowance is included for the amplifying effects of structural components (Caltrans 2020).

As indicated in Table 7, the threshold at which there is a risk to normal structures from continuous events is 0.3 in/sec PPV for older residential structures and 0.5 in/sec PPV for newer building construction. With regard to human perception, vibration levels would begin to become distinctly perceptible at levels of 0.04 in/sec PPV for continuous events. Continuous vibration levels are considered potentially annoying for people in buildings at levels of 0.2 in/sec PPV.

Table 7
Summary of Groundborne Vibration Levels and Potential Effects

Vibration Level (in/sec ppv)	Human Reaction	Effect on Buildings
0.006 - 0.019	Threshold of perception; possibility of intrusion.	Vibrations unlikely to cause damage of any type.
0.08	Vibrations readily perceptible.	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected.
0.10	Level at which continuous vibrations begin to annoy people.	Virtually no risk of "architectural" damage to normal buildings.
0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relatively short periods of vibrations).	Threshold at which there is a risk of "architectural" damage to fragile buildings.
0.3 - 0.6	Vibrations become distinctly perceptible at 0.04 in/sec ppv and considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges.	Potential risk of "architectural" damage may occur at levels above 0.3 in/sec ppv for older residential structures and above 0.5 in/sec ppv for newer structures.

The vibration levels are based on peak particle velocity in the vertical direction for continuous vibration sources, which includes most construction activities.
Source: Caltrans 2020

IMPACT ANALYSIS

Standards of Significance

Criteria for determining the significance of noise impacts were developed based on information contained in the California Environmental Quality Act (CEQA) Guidelines (Appendix G). According to those guidelines, a project may have a significant effect on the environment if it would result in the following conditions:

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

b) Generation of excessive groundborne vibration or groundborne noise levels; or

c) 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 private-use airport, that exposes people residing or working in the project area to excessive noise levels.

The nearest commercial use airport is the San Luis Obispo County Airport, which is generally located approximately 3.5 miles south of the campus. Implementation of the proposed project would not affect airport operations, nor would implementation of the proposed Master Plan result in the development or relocation of any noise-sensitive land uses in proximity to an airport or airstrip. As a result, implementation of the proposed Master Plan would not result in increased exposure of individuals to excessive aircraft noise levels associated with the existing airport. In addition, there are no existing private airstrips located within two miles of the campus. For these reasons, noise impacts associated with exposure to aircraft noise levels were identified as being less than significant or having no impact and will not be further discussed in this report.

Significance thresholds used in this analysis are discussed in greater detail, as follows:

- Short-term Exposure to Construction-Generated Noise — According to the City of San Luis Obispo Municipal Code, areas consisting of single-family residential uses should be limited to a maximum construction-generated noise level of 75 dBA during the daytime hours (7:00 a.m. to 7:00 p.m.) and 60 dBA during the nighttime hours (7:00 p.m. to 7:00 a.m.) Project-generated construction noise levels that would exceed these limits at nearby noise-sensitive land uses would be considered to have a potentially significant impact.
- Long-term Exposure to Project-Generated Noise — Long-term operational noise impacts would be considered significant if the proposed project would result in a significant increase in ambient noise levels that would exceed applicable City of San Luis Obispo's noise standards for transportation and stationary sources (refer to Tables 4 and 5, respectively). Significant increases in noise levels are defined as an increase of 5 dBA or more.
- Groundborne Vibration — Groundborne vibration levels would be considered significant if predicted short-term construction or long-term operational groundborne vibration levels attributable to the proposed project would exceed the commonly recommended criteria for structural damage and human annoyance of 0.2 in/sec ppv (Tables 10) at nearby existing or proposed onsite structures.

Methodology

Short-term noise impacts associated with construction activities were analyzed based on typical construction equipment noise levels and distances to the nearest noise-sensitive land uses. Noise levels were predicted based on an average noise-attenuation rate of 6 dB per doubling of distance from the source. Stationary sources noise levels were predicted based on representative noise levels for similar equipment and assuming an average noise-attenuation rate of 6 dB per doubling of distance from the source. Traffic noise levels were calculated using the Federal Highway Administration (FHWA) roadway noise prediction model (FHWA-RD-77-108) based on California vehicle reference noise levels and traffic data obtained from the traffic analysis prepared for this project. Additional input data included day/night percentages of autos, medium and heavy trucks, vehicle speeds, ground attenuation factors, and roadway widths. The project's contribution to traffic noise levels along area roadways was determined by comparing the predicted noise levels with and without project-generated traffic.

Helicopter noise levels were calculated using the SoundPLAN noise model based on flight path information provided for the proposed helipad (Heliplanners 2019). Representative noise levels for an Airbus H135 were used for takeoff, flyover, and approach. Helicopter operations were distributed over a 24-hour period for calculation of average-daily operational noise levels. Seventy percent of flights were assumed to occur during daytime hours (i.e. 7:00 a.m. to 7:00 p.m.); fifteen percent of flights during evening hours (i.e. 7:00 p.m. to 10:00 p.m.); and fifteen percent of flights during nighttime hours (i.e. 10:00 p.m. to 7:00 a.m.). Modeling was based on a total of approximately fifty flights per year, averaging approximately four flights per month (45dB Acoustics 2020).

Impacts and Mitigation Measures

Impact Noise-A:	***Generation of a substantial temporary or permanent increase in ambient noise levels in the project vicinity in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.***

Exposure to Construction Noise

Construction noise typically occurs intermittently and varies depending upon the nature or phase (e.g., demolition/land clearing, grading and excavation, erection) of construction. Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Although noise ranges were found to be similar for all construction phases, the initial site preparation phase tends to involve the most equipment. As noted in Table 8, noise levels generated by individual pieces of construction equipment typically range from approximately 77 to 90 dBA L_{max} at 50 feet. Typical operating cycles may involve 2 minutes of full power, followed by 3 or 4 minutes at lower settings. Average-hourly noise levels associated with construction equipment generally range from approximately 72 to 82 dBA L_{eq} at 50 feet (FHWA 2008).

Noise from localized point sources, such as construction sites, typically decreases by approximately 6 to 7.5 dBA with each doubling of distance from source to receptor. Assuming a minimum noise attenuation rate of 6 dB per doubling of distance from the source and the equipment noise levels noted above, construction-related noise levels could reach 75 dBA L_{eq} at approximately 120 feet. Instantaneous noise levels could reach 75 dBA L_{max} at 295 feet. Depending on the construction activities conducted, equipment used, hours of use, and distance to nearby noise-sensitive land uses, construction-generated noise levels may exceed applicable noise standards.

Based on the exterior noise levels noted above and assuming an average exterior-to-interior noise reduction of 25 dBA, predicted interior noise levels of noise-sensitive buildings (e.g., classrooms, offices) located within approximately 200 feet of construction sites could potentially exceed the commonly applied interior noise standard of 45 dBA L_{eq}. With regard to residential land uses, noise levels associated with construction activities occurring during the more noise-sensitive evening and nighttime hours (i.e., 7:00 p.m. to 7:00 a.m.) are also of increased concern. Because exterior ambient noise levels typically decrease during the evening and nighttime hours, as community activities (e.g., commercial activities, vehicle traffic) decrease, construction activities performed during these more noise-sensitive periods of the day can result in increased annoyance and potential sleep disruption for occupants of nearby residential dwellings.

Table 8. Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA at 50 feet)	
	L_{max}	L_{eq}
Backhoes	78	74
Bulldozers	82	78
Compressors	78	74
Cranes	81	73
Concrete Pump Truck	81	74
Drill Rigs	79	72
Dump Trucks	77	73
Excavator	81	77
Generator	81	78
Gradall	83	79
Grader	85	81
Hydraulic Break Rams	90	80
Front End Loaders	79	75
Pneumatic Tools	85	82
Pumps	81	78
Rollers	80	73
Scrapers	84	80
Tractor	84	80
Based on measured instantaneous noise levels (L_{max}), average equipment usage rates, and calculated average-hourly (Leq) noise levels derived from the FHWA Road Construction Noise Model (FHWA 2008)		

Mitigation Measures

Noise-1: The following measures shall be implemented to reduce short-term construction noise impacts:

a. Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the hours of 7 a.m. and 7 p.m., Monday through Saturday, where possible. Construction activities would be prohibited on Sundays and legal holidays.
b. Construction equipment shall be properly maintained and equipped with exhaust mufflers and engine shrouds in accordance with manufacturers' recommendations.
c. Construction equipment staging areas shall be located at the furthest distance possible from nearby noise-sensitive land uses.
d. Stationary noise sources such as generators or pumps shall be located at the furthest distance possible from noise sensitive uses.
e. No less than one week prior to the start of construction activities at a particular location, notification shall be provided to nearby noise-sensitive land uses (e.g., residences) that are located within 200 feet of the construction site.

Significance after Mitigation

Mitigation Measure Noise-1 would limit the periods during which construction activities would occur when in the vicinity of nearby noise-sensitive land uses. Additional measures would also be required to further reduce the potential for noise exposure, including the use of alternatively powered equipment, exhaust mufflers, engine shrouds, and equipment enclosures for activities located in the vicinity of noise-sensitive uses. Implementation of these noise-reduction features can reduce construction noise levels by approximately 10 dBA, or more. With mitigation and given that construction would be short-term, this impact would be considered ***less than significant.***

Exposure to Increased Stationary Source Noise

Noise sources commonly associated with proposed future facilities would include occasional parking lot activities (e.g., opening and closing of vehicle doors, people talking), and use of onsite building equipment, such as HVAC systems, boilers, and power generators. Noise levels associated with these noise sources are discussed separately, as follows:

Vehicle Parking Lot

The proposed project includes the construction of an 82-space parking structure. Based on a conservative assumption that all parking spaces would to be accessed over a one-hour period, predicted noise levels at the nearest residential land use would be less than 29 dBA Leq, or less. Predicted operational noise levels would not exceed the City's noise standards and would be largely masked by ambient noise conditions. As a result, this impact would be considered ***less than significant***.

Building Mechanical Equipment

The proposed patient tower would result in increased stationary source noise levels, primarily associated with building mechanical equipment (e.g., heating ventilation and air handling/cooling systems). Detailed information regarding the equipment to be installed is not yet available. However, based on noise measurement data for similar commercial-use air handling and cooling systems, operational noise levels would be approximately 78 dBA at 3 feet. Building equipment, such as HVAC systems and boilers, would be located within the interior of the structure or on the rooftop and shielded from direct public exposure. The rooftop mechanical equipment area would be located approximately 68 feet above ground level and enclosed by an approximate 10 foot high barrier.

The nearest noise-sensitive land use is a residential dwelling located approximately 50 feet south of the proposed patient tower. Based on this distance and the operational noise levels noted above, predicted operational noise levels at this nearest residence would be approximately 43 dBA L_{eq}, or less. Predicted operational noise levels would not exceed the City's noise standards and would be largely masked by ambient noise conditions. As a result, this impact would be considered ***less than significant***.

Emergency Back-up Power Generators

Two emergency generators are proposed within the proposed exterior mechanical yard. The operation of emergency generators is typically limited to occasional maintenance and testing, which typically occurs monthly for periods of approximately five to ten minutes. During emergency use, the generators may run for an indefinite period. Based on representative noise data provided by the generator manufacturer operational noise levels for each generator would be approximately 76-81 dBA at 23 feet. The proposed mechanical yard would be enclosed by a 10-foot concrete masonry unit (concrete block) wall, which would reduce noise levels by approximately 8 dBA.

The nearest noise-sensitive location is an existing residential dwelling located approximately 135 feet to the south. Based on this distance, the operational noise levels noted above, and assuming that the generators were to run continuously over a one-hour period, the highest predicted noise levels at this nearest residence would be 59 dBA L_{eq}. These operational conditions would be predominantly limited to periods of emergency use. During normal maintenance and testing periods, during which generator operations would typically occur for periods of approximately 5-10 minutes during the daytime hours, predicted noise levels at the nearest residential land use would be less than 45 dBA L_{eq}. The use of back-up power generators for emergency purposes is exempt from the City's noise ordinance requirements. Nonetheless, given that predicted operational noise levels during routine maintenance and testing periods could potentially exceed the City's noise standards, this impact would be considered ***potentially significant***.

Mitigation Measures

Noise-2: Backup power generators shall be enclosed within a fully-enclosed sound-attenuated container in accordance with manufacturer recommendations.

Significance after Mitigation

Mitigation Measure Noise-2 would require backup power generators to be enclosed within a sound-attenuated container in accordance with manufacturer recommendations. Based on representative data for similar generators/enclosures, predicted operational noise levels would be reduced to approximately 75 dBA at 23 feet. With mitigation, predicted operational noise levels at the nearest residential land use would be reduced to approximately 50 dBA L_{eq}. Operational noise levels associated with routine maintenance and testing activities would not be projected to exceed the City's daytime or nighttime noise standards of 50 and 45 dBA L_{eq}, respectively. With mitigation, this impact would be considered ***less than significant***.

Exposure to Increased Roadway Traffic Noise

Implementation of the proposed project would result in increased traffic volumes on some area roadways. The increase in traffic volumes resulting from implementation of the proposed project would, therefore, contribute to predicted increases in traffic noise levels. Predicted changes in traffic noise levels in comparison to existing and future cumulative conditions are discussed separately, as follows:

Predicted existing traffic noise levels and increases associated with implementation of the proposed project are summarized in Table 9. As depicted, implementation of the proposed project would result in predicted increases in traffic noise levels of approximately 0.3 dBA, or less, along primarily affected area roadway segments. As noted earlier in this report, perceptible changes in ambient noise levels do not typically occur at levels below 3 dBA. Based on the modeling conducted, implementation of the proposed project would not result in a significant increase in traffic noise levels at nearby noise-sensitive land uses. As a result, predicted increases in traffic noise levels associated with implementation of the proposed Master Plan would is considered ***less than significant***.

Table 9. Predicted Increases in Traffic Noise Levels - Existing Conditions

Roadway	Predicted CNEL, 50 Feet from Near-Travel Lane Centerline		Predicted Change	Significant Increase?
	Without Project	With Project		
Johnson Avenue, San Luis Drive to Ella Street	65.2	65.5	0.3	No
Johnson Avenue, Ella Street to Bishop Street	64.8	65.0	0.2	No
Johnson Avenue, Bishop Street to Sydney Street	64.9	65.1	0.2	No
Johnson Avenue, Sydney Street to Laurel Lane	64.5	64.7	0.2	No
Traffic noise levels were calculated using the FHWA roadway noise prediction model (FHWA-RD-77-108) based on data obtained from the traffic analysis prepared for this project.				

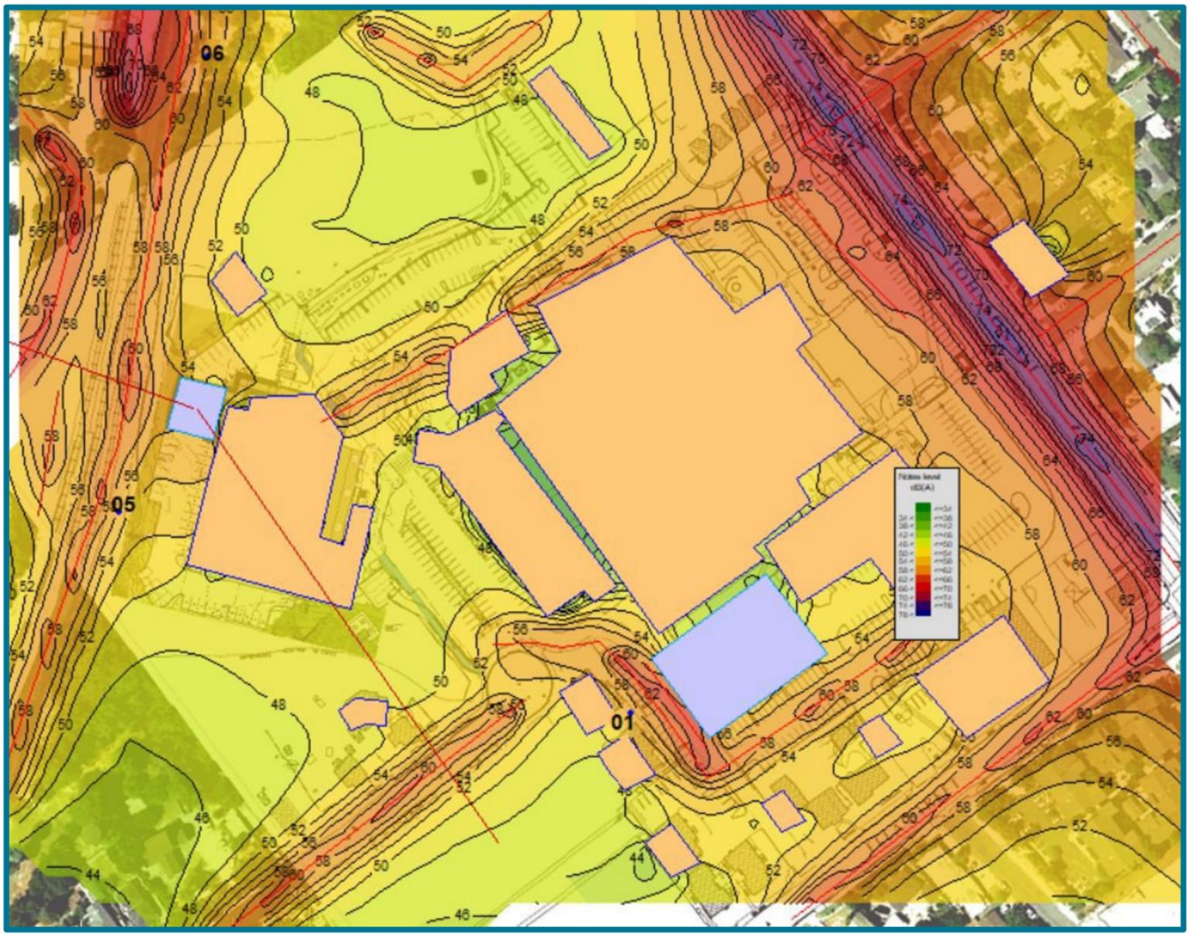
Exposure to Helicopter Noise

Helicopters produce a unique sound that is easily recognizable. While modern light- and medium-weight civil helicopters are much quieter than older helicopters and much quieter than heavy military helicopters they are often the focus of much community concern.

Helicopter noise levels were calculated using the SoundPLAN noise model based on flight path information provided for the proposed helipad (Heliplanners 2019). Representative noise levels for an Airbus H135 were used for takeoff, flyover, and approach. Helicopter operations were distributed over a 24-hour period for calculation of average-daily operational noise levels. Seventy percent of flights were assumed to occur during daytime hours (i.e. 7:00 a.m. to 7:00 p.m.); fifteen percent of flights during evening hours (i.e. 7:00 p.m. to 10:00 p.m.); and fifteen percent of flights during nighttime hours (i.e. 10:00 p.m. to 7:00 a.m.). Modeling was based on a total of approximately fifty flights per year, averaging approximately four flights per month (45dB Acoustics 2020).

Predicted existing average-daily noise levels with helicopter operations are depicted in Figure 5. Predicted increases in existing noise levels are summarized in Table 10 (45dB Acoustics 2020). Based on the modeling conducted and in comparison to existing average-daily noise levels, the proposed helipad would result in an estimated increase in average-daily noise levels of approximately 1 dBA CNEL at residences located nearest the proposed helipad. Predicted increases in noise levels at other nearby noise-sensitive land uses would be negligible. Noise associated with helicopter flights would be detectable at nearby noise-sensitive land uses, including residential land uses located near the flight path, for short-periods of time (e.g., minutes). However, in comparison to existing ambient noise conditions, short-term noise levels would not be uncharacteristic of similar existing noise events that occur in the project area, such as train pass-bys. For this reason and given that exposure to helicopter noise would be intermittent and short-term and would not result in a significant increase in average-daily noise levels, this impact would be considered ***less than significant***.

Figure 5. Predicted Existing Average-Daily Noise Levels with Helicopter Operations



Source: 45dB Acoustics 2020

Table 10. Predicted Increases in Ambient Noise Levels with Helicopter Operations

Location	Average Daily Noise Levels (dBA CNEL)			Average Hourly Noise Levels (dBA L_{eq})		
	Existing	Existing Plus Helicopter	Increase with Helicopter	Existing	Existing Plus Helicopter	Increase with Helicopter
01	56	56	None	55	55	0.1
05	54	55	1	53	54	1
06	58	58	None	54	54	None
08	57	57	None	55	55	None

Refer to Figure 5 for noise-prediction locations.
Source: 45dB Acoustics 2020

Impact Noise-B:	Generation of excessive groundborne vibration or groundborne noise levels.

No major stationary sources of groundborne vibration were identified in the project area that would result in the long-term exposure of proposed onsite land uses to unacceptable levels of ground vibration. In addition, the proposed project would not involve the use of any major equipment or processes that would result in potentially significant levels of ground vibration that would exceed these standards at nearby existing land uses. However, construction activities associated with the proposed project would require the use of various tractors, trucks, and jackhammers that could result in intermittent increases in groundborne vibration levels. The use of major groundborne vibration-generating construction equipment/processes (i.e., blasting, pile driving) is not anticipated to be required for construction of future onsite land uses.

Groundborne vibration levels commonly associated with construction equipment are summarized in Table 11. As identified, groundborne vibration levels generated by construction equipment would be approximately 0.09 in/sec ppv, or less, at 25 feet. Predicted groundborne vibration levels would not be anticipated to exceed the minimum recommended criteria for structural damage or human annoyance (0.2 in/sec ppv) at nearby land uses. As a result, short-term groundborne vibration impacts would be considered ***less than significant***.

Table 11. Representative Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity at 25 Feet (In/Sec)
Large Bulldozers	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozers	0.003
Source: FTA 2006, Caltrans 2013	

Impact Noise-C:	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 private-use airport, that exposes people residing or working in the project area to excessive noise levels.

The proposed project is not located within the vicinity of a private airstrip or airport land use plan, or within two miles of a public or private-use airport. The nearest airport is San Luis Obispo Regional Airport, which is located approximately 2.3 miles south of the project site. ***No Impact***.

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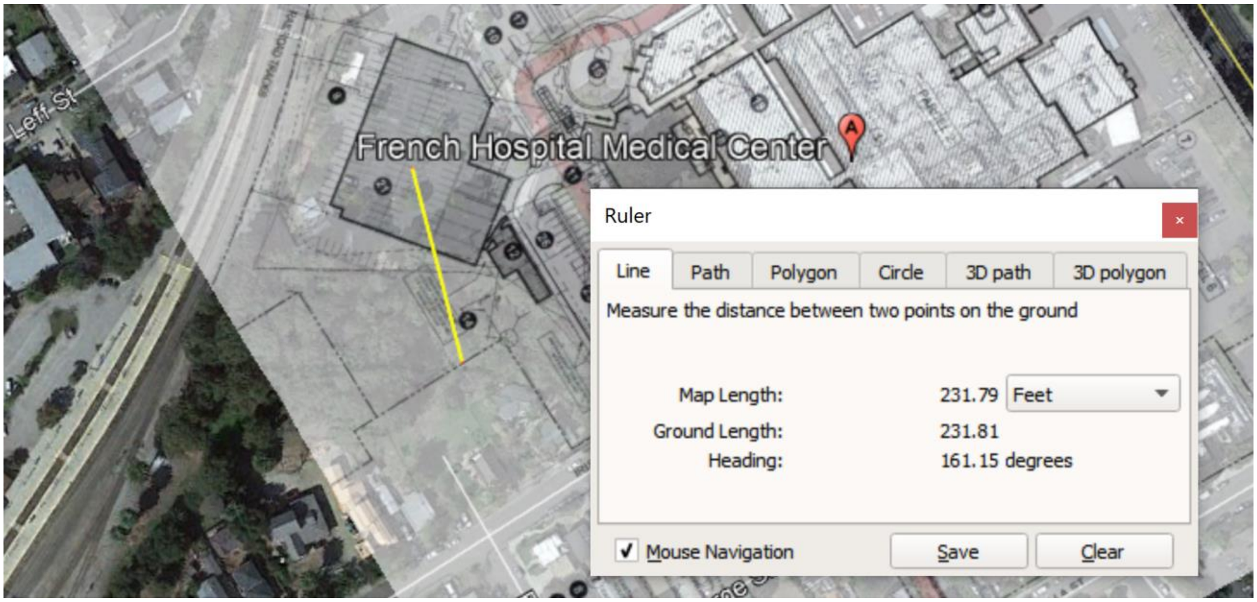
APPENDIX A

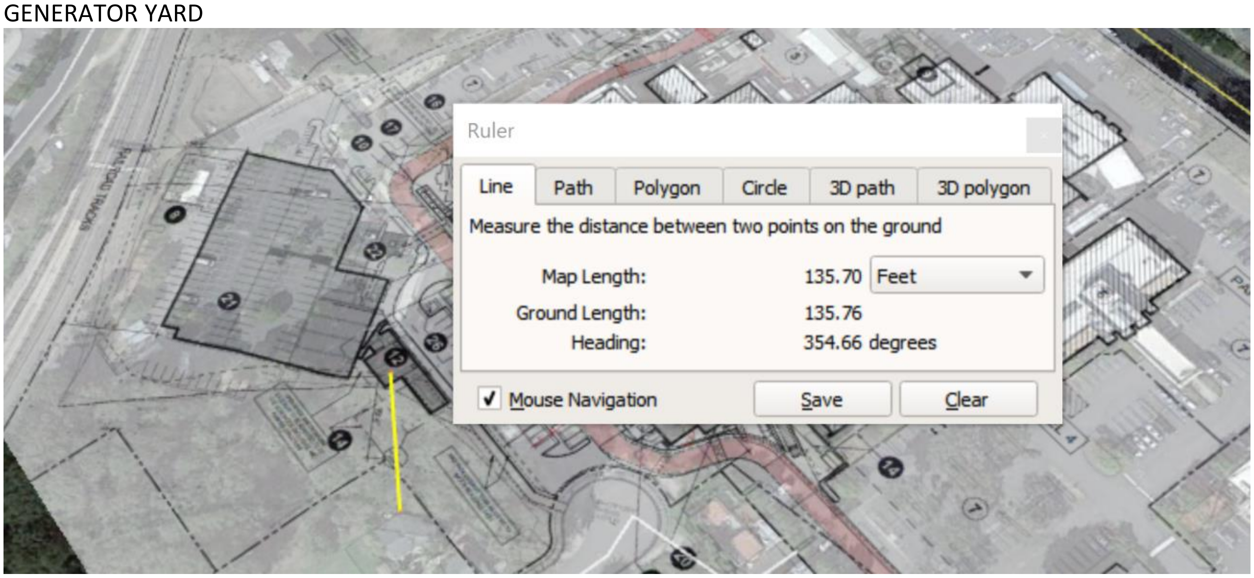
Noise Modeling & Support Documentation

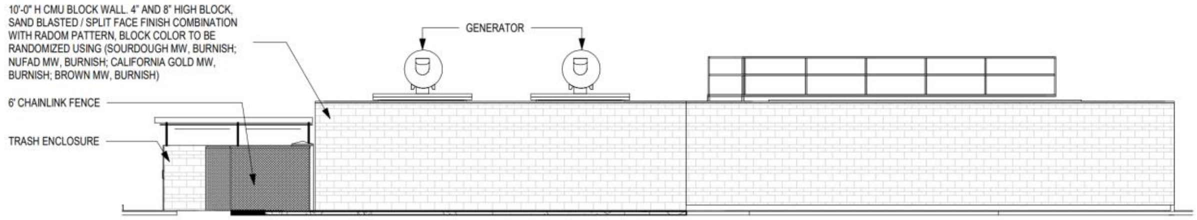
DISTANCES TO NEARBY RESIDENTIAL LAND USES

PARKING STRUCTURE

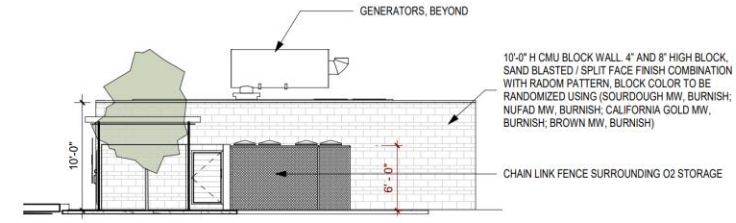


GENERATOR YARD

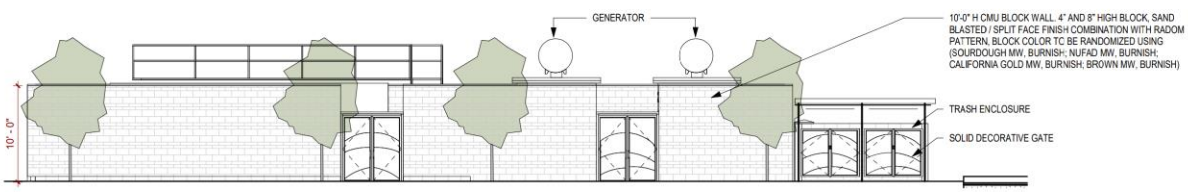




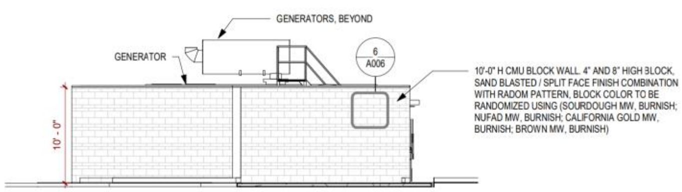
4 A006 **Generator Yard - South Elevation**
1/8" = 1'-0"



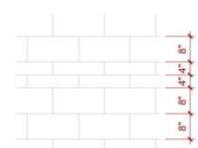
5 A006 **Generator Yard - West Elevation**
1/8" = 1'-0"



2 A006 **Generator Yard - North Elevation**
1/8" = 1'-0"



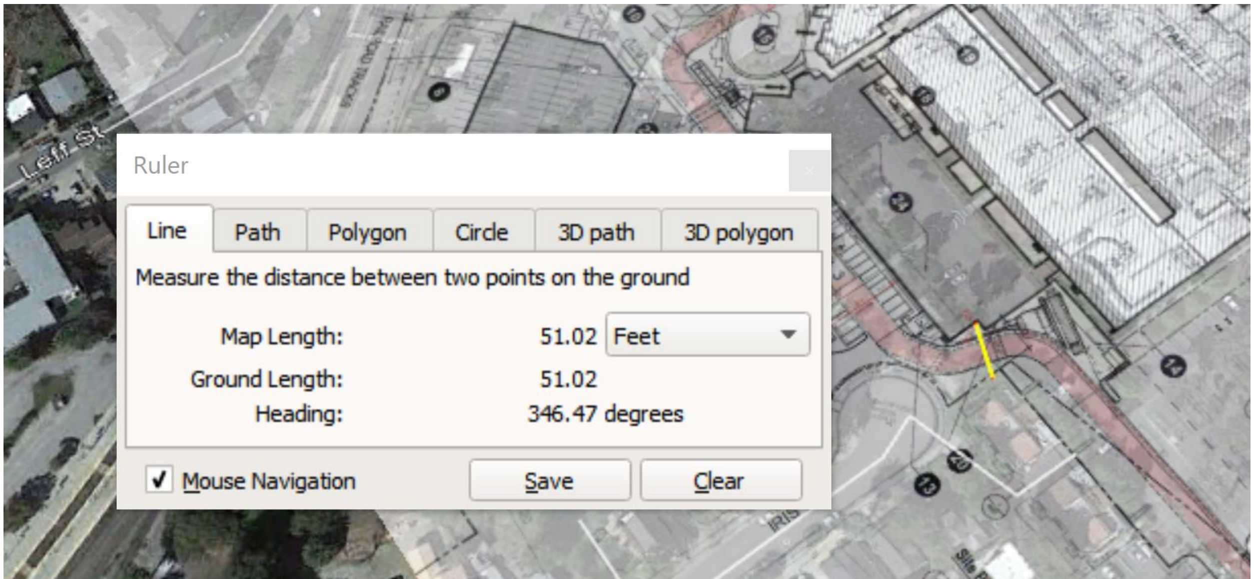
3 A006 **Generator Yard - East Elevation**
1/8" = 1'-0"

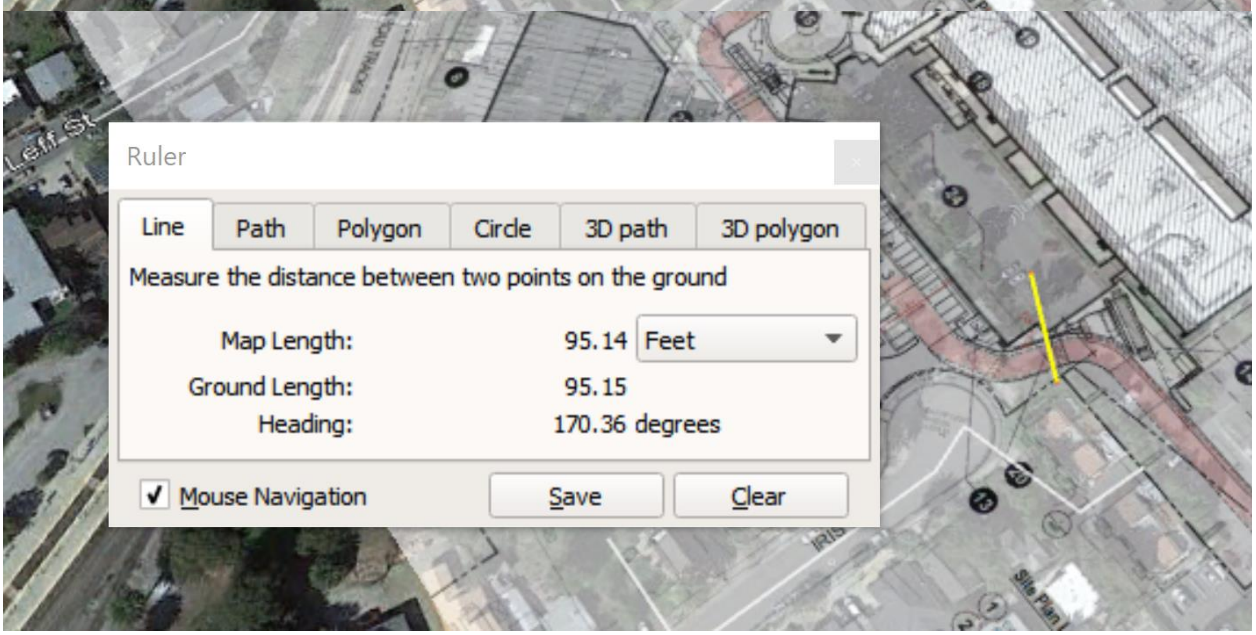


6 A006 **02 Gen Yard - East Elevation - Callout 1**
1/2" = 1'-0"

WALL: 10 FT CMU
SOUND LEVEL: 76 DBA @ 7 METERS (Caterpillar 2021)

ROOFTOP MECHANICAL EQUIPMENT





ROOF HEIGHT: 68 FT

ROOF TOP MECHANICAL SCREEN HEIGHT: 10 FT

SCENARIO/ROADWAY SEGMENTS		SPEED (MPH)	VOLUME (ADT)	DISTANCE TO CNEL CONTOURS (FEET)			CNEL AT 50 FEET
				70	65	60	
EXISTING CONDITIONS							
JOHNSON AVE	SAN LUIS DR - ELLA ST	35	19,300	0	81.7	166.5	65.2
JOHNSON AVE	ELLA ST - BISHOP ST	35	17,900	0	78.3	158.7	64.8
JOHNSON AVE	BISHOP ST - SYDNEY ST	35	15,200	0	67.4	141	64.9
JOHNSON AVE	SYDNEY ST - LAUREL LN	35	13,700	0	63.2	131.7	64.5
EXISTING PLUS PROJECT							
JOHNSON AVE	SAN LUIS DR - ELLA ST	35	20,700	0	85.1	174.2	65.5
JOHNSON AVE	ELLA ST - BISHOP ST	35	18,500	0	79.8	162.1	65.0
JOHNSON AVE	BISHOP ST - SYDNEY ST	35	15,800	0	69	144.6	65.1
JOHNSON AVE	SYDNEY ST - LAUREL LN	35	14,300	0	64.9	135.5	64.7
EXISTING PLUS PROJECT							**CHANGE**
JOHNSON AVE	SAN LUIS DR - ELLA ST						0.3
JOHNSON AVE	ELLA ST - BISHOP ST						0.1
JOHNSON AVE	BISHOP ST - SYDNEY ST						0.2
JOHNSON AVE	SYDNEY ST - LAUREL LN						0.2

ATTACHMENT 8

Focused Multimodal Transportation Analysis – French Hospital Medical Center

Michael Baker
INTERNATIONAL

FOCUSED MULTIMODAL TRANSPORTATION ANALYSIS
French Hospital Medical Center

1911 Johnson Avenue
San Luis Obispo, California

Prepared for:
City of San Luis Obispo

FINAL August 5, 2020

3536 Concours, Suite 100, Ontario, CA 91764
Office: 909.974.4908
Contact: CDietrich@mbakerintl.com
JN 179280

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1 EXECUTIVE SUMMARY

1.1 PROJECT DESCRIPTION

The existing French Hospital Medical Center currently exists at 1911 Johnson Avenue in the City of San Luis Obispo. The purpose of this study is to document the projected traffic conditions associated with the proposed French Hospital Medical Center expansion including a new 82-bed wing, a chapel, a lab, and a parking structure.

1.2 STUDY SCENARIOS

The study scenarios are listed below. The With Project scenario include full Buildout of the project site.

- Existing Year 2020
- Existing Year 2020 With Project

1.3 RESULTS SUMMARY

This study analyzes the projected traffic conditions associated with the proposed French Hospital Medical Center expansion. This traffic impact study has been prepared in accordance with the City of San Luis Obispo *Multimodal Transportation Impact Study Guidelines (June 2020, 2nd Edition).* The scope of this traffic study was coordinated with City staff. The proposed project is projected to generate 1,876 daily trips which includes 155 AM Peak Hour trips and 159 PM Peak Hour trips during a typical weekday.

Traffic operations analysis was conducted to determine the existing and projected operations based on the *Highway Capacity Manual*, 6th Edition (*HCM*), published by the Transportation Research Board in 2016. Analysis was conducted for the following locations:

1) Johnson Avenue and Lizzie Street/Hospital Driveway – PM Peak Hour – Auto, Bicycle, & Pedestrian
2) Johnson Avenue and Ella Street – PM Peak Hour – Auto, Bicycle, & Pedestrian
3) Johnson Avenue and Sydney Street – AM Peak Hour – Pedestrian Crosswalk

Existing Year 2020 With Project Impacts

Impact #1 – Under the Existing Year 2020 With Project conditions, a project impact is projected to occur at the intersection of Johnson Avenue and Lizzie Street/Hospital Driveway.

Existing Year 2020 With Project Mitigation

Mitigation #1 – Modify traffic signal at the intersection Johnson Avenue and Lizzie Street/Hospital Driveway to provide eastbound (Hospital Driveway) and westbound (Lizzie Street) split phasing and to increase the cycle length to 115 seconds. A change in cycle length is also anticipated along the Johnson Avenue corridor to maintain coordination.

General Plan Consistency

The existing configuration of Johnson Avenue is consistent with the City's General Plan.

CEQA VMT Assessment

The VMT assessment for the proposed project is contained in a separate document.

2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The existing French Hospital Medical Center currently exists at 1911 Johnson Avenue in the City of San Luis Obispo. The purpose of this study is to document the projected traffic conditions associated with the proposed French Hospital Medical Center expansion including a new 82-bed wing, a chapel, a lab, and a parking structure. **Exhibit 2-1** shows the project location within the region.

EXHIBIT 2-1: PROJECT LOCATION

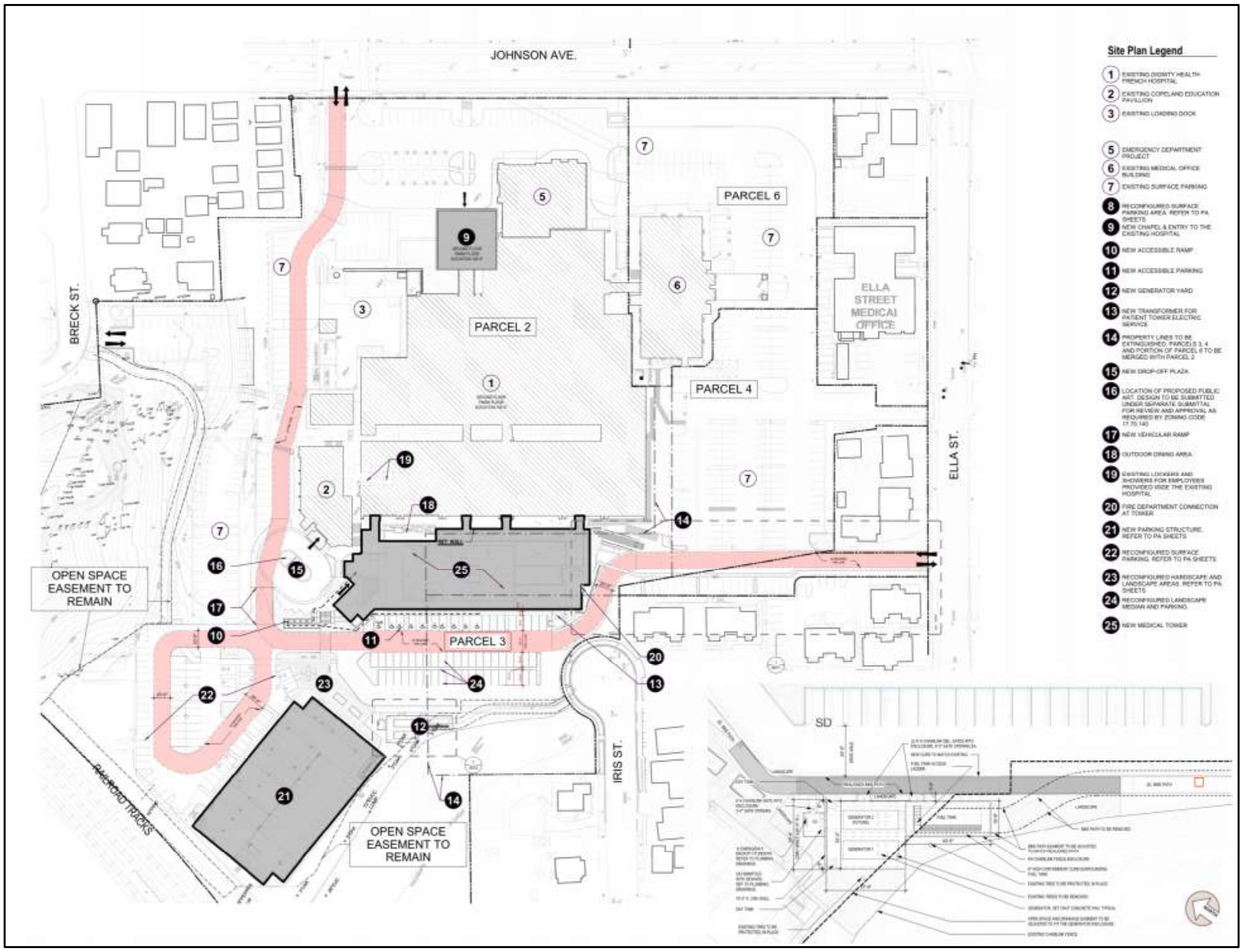
2.2 AREA LAND USES

The land uses immediately near the project are generally residential in nature. Additionally, San Luis Obispo High School is located to the north of the site and various medical and community health services are located to the southeast along Johnson Avenue.

2.3 SITE PLAN

The project site plan is shown in **Exhibit 2-2**. The new chapel would be located at the front of the existing building nearest Johnson Avenue while the room expansion wing and parking structure are proposed on the back side of the existing facility.

EXHIBIT 2-2: SITE PLAN



2.4 PROPOSED ACCESS & INTERNAL CIRCULATION

Primary access to the site is provided at the signalized intersection of Johnson Avenue and Lizzie Street/Hospital Driveway. Additional vehicular access is also provided at a stop-controlled intersection along Ella Street and at an actuated gated driveway with vehicular access along Breck Street. A driveway exists at the Iris Street cul-de-sac, however it is gated thus restricting daily vehicular access. The Iris Street access point can be used for emergency vehicular access. New site access points are NOT proposed as part of the expansion.

Bicycle and pedestrian access to the site is provided at the following locations:

- Lizzie Street/Hospital Driveway signalized intersection
- Ella Street stop-controlled intersection
- Multi-use trail access along Breck Street
- Stair access along Johnson Avenue
- Multi-use trail access at Iris Street cul-de-sac

The hospital is located at the center of the site with parking and internal circulation provided surrounding the hospital. Some site parking will be relocated from the location of the proposed wing on the southwest side of the building to the proposed parking structure.

3 ENVIRONMENTAL SETTING & AREA PLANS

3.1 ENVIRONMENTAL SETTING

3.1.1 Surrounding Roadway Network

The characteristics of the roadway system near the project site are described below:

Johnson Avenue is a four-lane roadway with a center two-way left turn lane within the project vicinity in the City of San Luis Obispo. It travels northwest to southeast from Philips Lane to the north to Orcutt Road to the south. It measures approximately 2.5 miles and varies from a two-lane road with one travel lane in each direction to a four-lane road with two travel lanes in each direction. Under the City of San Luis Obispo General Plan Circulation Element, a majority of Johnson Avenue is classified as a Residential Arterial roadway. A segment of Johnson Avenue within the downtown area is classified as an Arterial roadway. The posted speed limit varies from 25 to 35 mph.

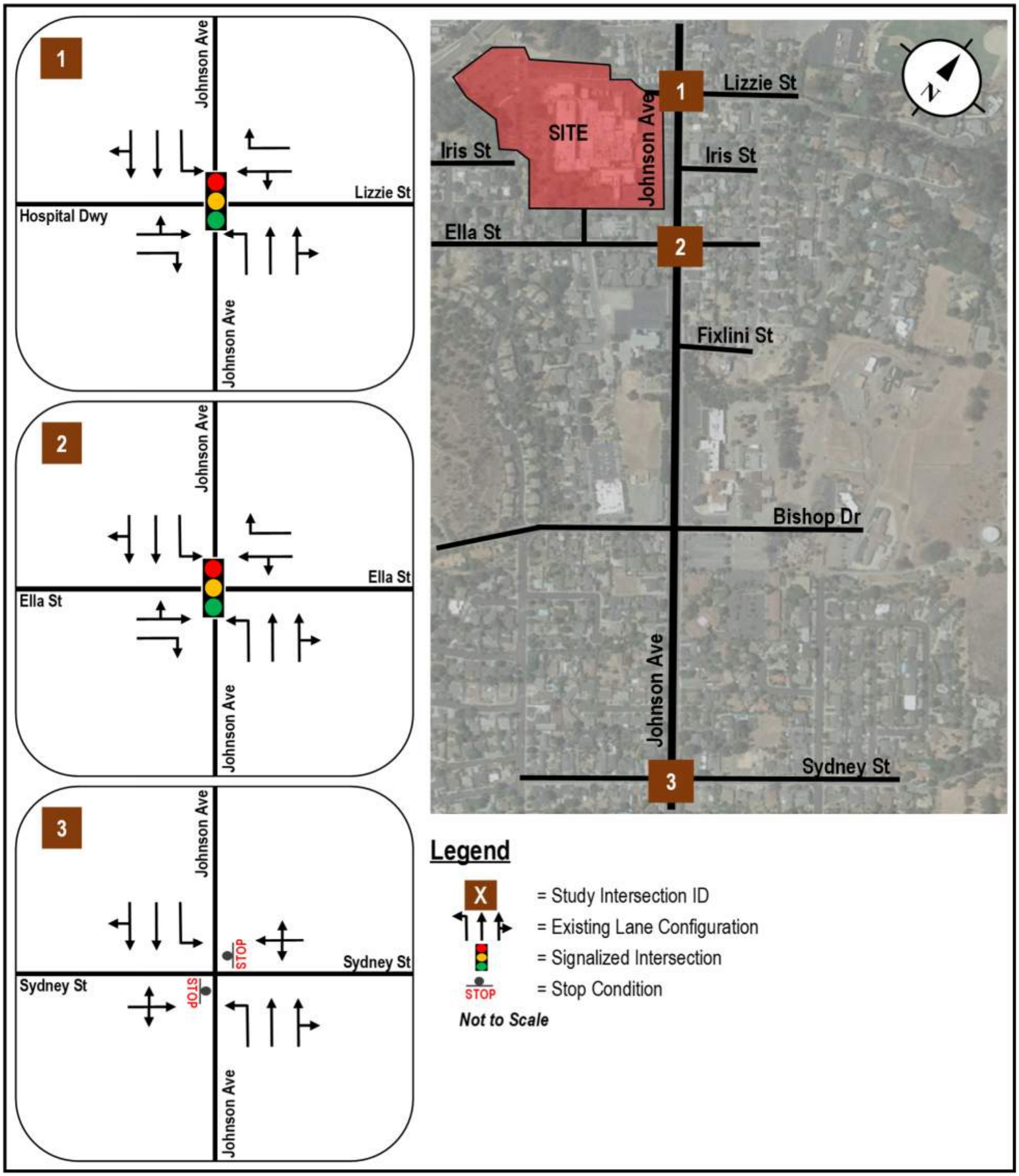
Lizzie Street is a two-lane undivided roadway within the City of San Luis Obispo. It extends southwest to northeast, from Johnson Avenue to its eastern terminus past Wilding Lane. It measures approximately 0.25 miles with one travel lane in each direction. Under the City of San Luis Obispo General Plan Circulation Element, Lizzie Street is classified as Residential Local roadway. There is no posted speed limit along the road, however, the General Plan suggests a speed limit of 25 mph.

Ella Street is a two-lane undivided roadway within the City of San Luis Obispo. It travels southwest to northeast, from Jennifer Street to Fixlini Street. It measures approximately 0.45 miles with one travel lane in each direction. Under the City of San Luis Obispo General Plan Circulation Element, Ella Street is classified as a Residential Local roadway. The posted speed limit is 25 mph throughout.

Sydney Street is a two-lane undivided roadway within the City of San Luis Obispo. It extends southwest to northeast, from Helena Street to its eastern terminus past Parkland Terrace. It measures approximately, 0.58 miles with one travel lane in each direction. Under the City of San Luis Obispo General Plan Circulation Element, Sydney Street is classified as a Residential Local roadway. There is no posted speed limit along the road, however, the General Plan suggests a speed limit of 25 mph.

Exhibit 3-1 shows the Existing study intersection lane geometry.

EXHIBIT 3-1: EXISTING INTERSECTION LANE CONFIGURATIONS



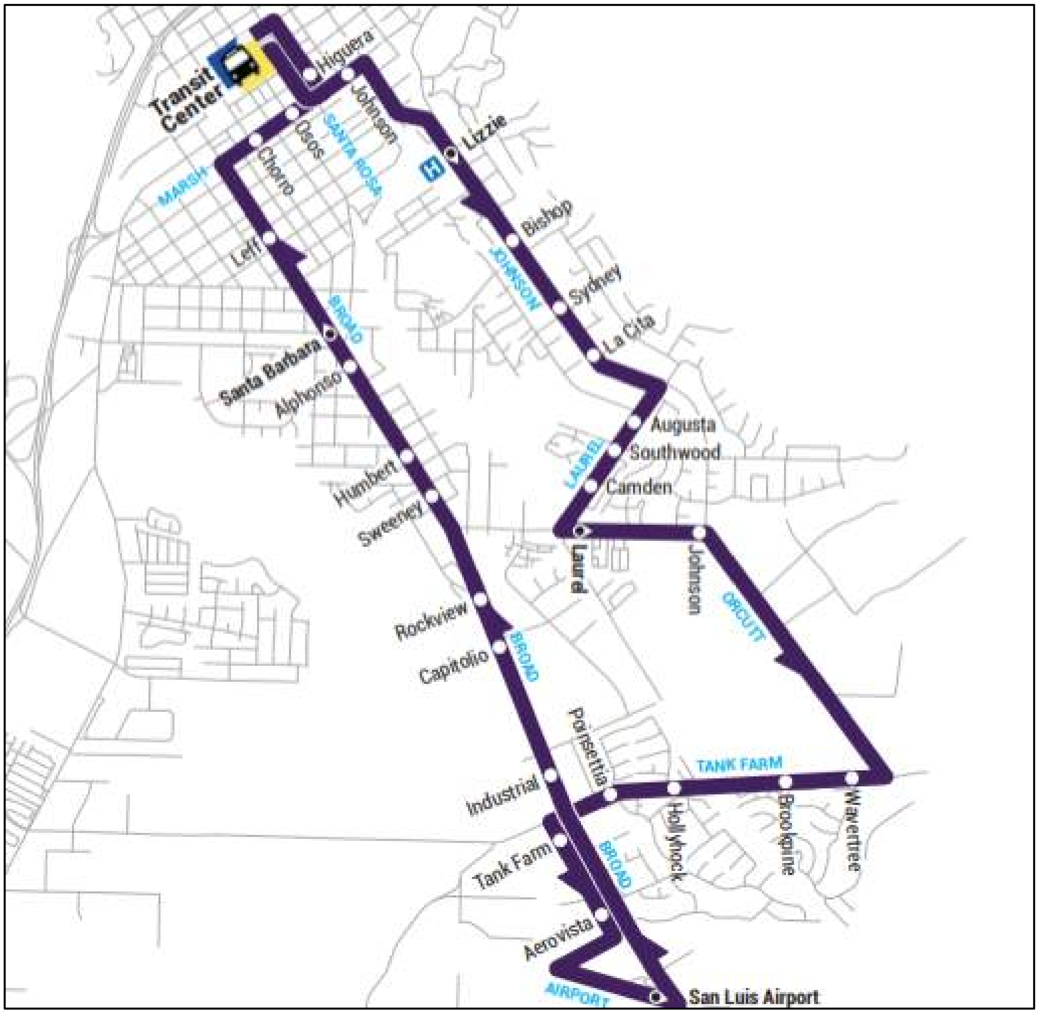
3.1.2 Pedestrian & Bicycle Facilities

Along Johnson Avenue, Class II bicycle lanes and non-buffered sidewalk are provided in both directions of travel. Marked crosswalks are provided on all legs of the signalized intersection of Johnson Avenue and Lizzie Street/Hospital Driveway. Marked crosswalks are provided on 3 of the 4 legs at the intersection of Johnson Avenue and Ella Street, with the missing crosswalk located on the west leg of Ella Street. A single marked yellow school crossing crosswalk exists on Johnson Avenue on the south side of Sydney Street. Flashing beacons (non-actuated) are provided at the crosswalk.

3.1.3 Transit Service

Transit service is provided along Johnson Avenue by SLO Transit via Route 1A/1B as shown in **Exhibit 3-2**.

EXHIBIT 3-2: AREA TRANSIT SERVICE MAP

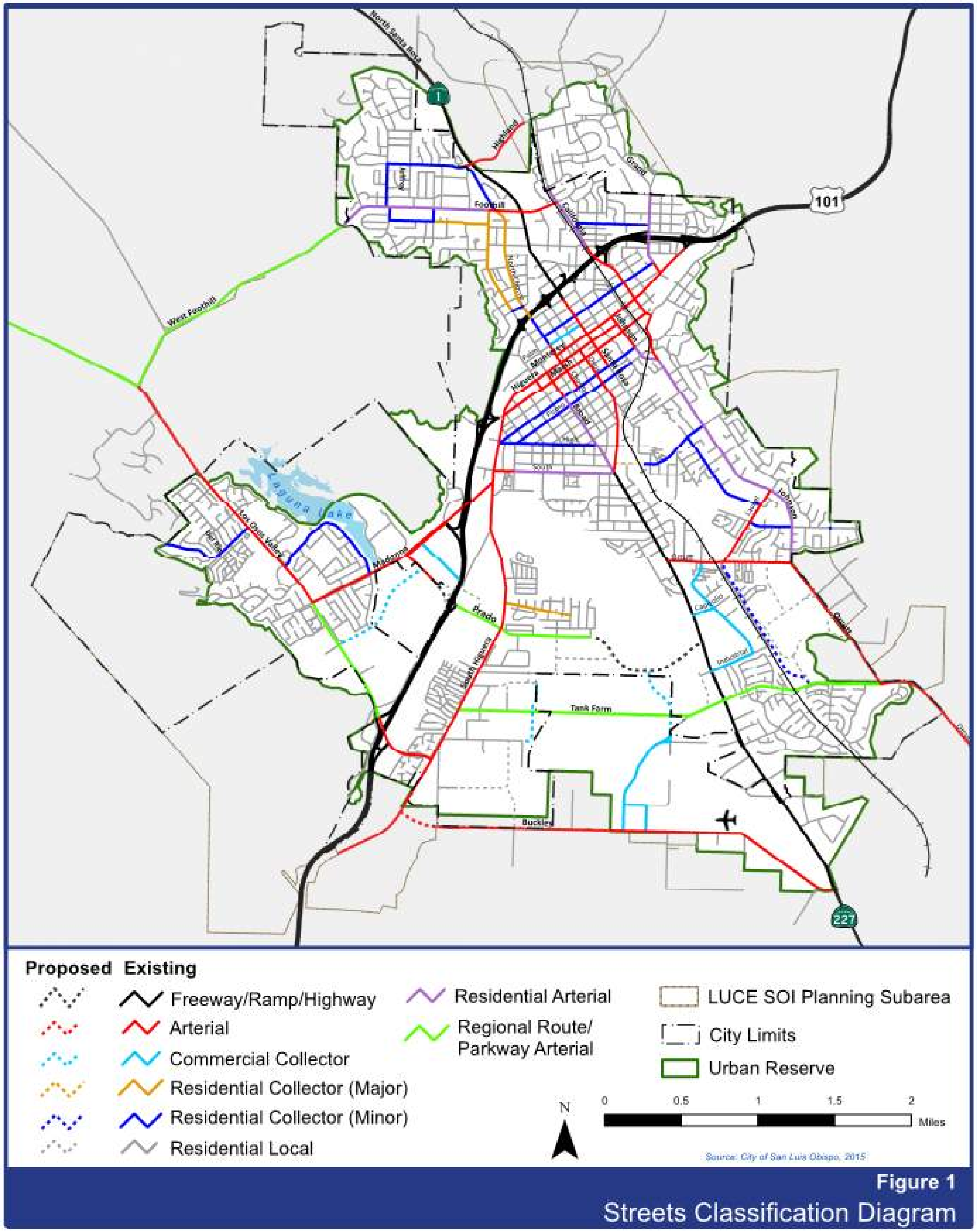


Source: https://www.slocity.org/home/showdocument?id=23128

3.2 AREA PLANS

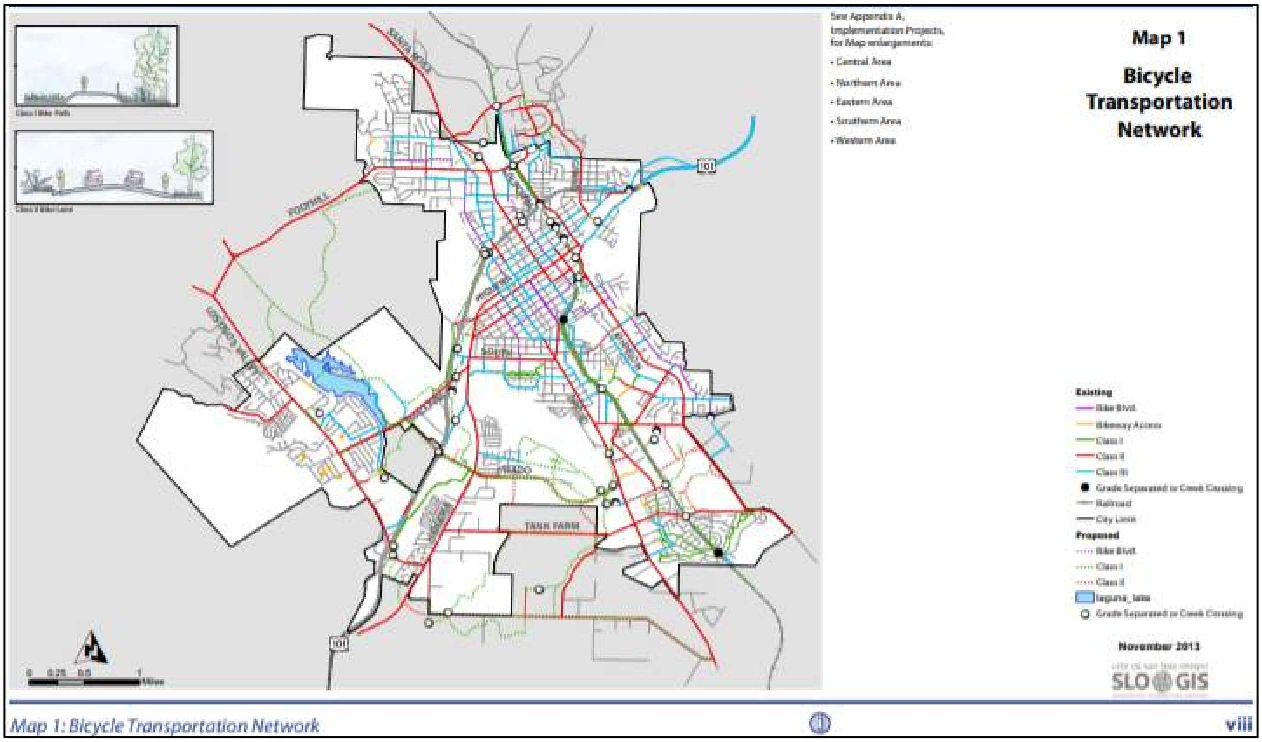
The City of San Luis Obispo General Plan Circulation Element (Adopted December 9, 2014 and amended October 24, 2017) lists Johnson Avenue as residential arterial as shown in **Exhibit 3-3**. Per the General Plan, residential arterials are bordered by residential property where preservation of neighborhood character is as important as providing for traffic flow and where speeds should be controlled.

EXHIBIT 3-3: CITY OF SAN LUIS OBISPO CIRCULATION ELEMENT STREET CLASSIFICATION DIAGRAM



Bicycle lanes exist along Johnson Avenue. As shown in the City of San Luis Obispo Bicycle Transportation Plan (November 5, 2013) (**Exhibit 3-4**), Class II lanes are shown along the corridor.

EXHIBIT 3-4: CITY OF SAN LUIS OBISPO BICYCLE TRANSPORTATION PLAN



4 OPERATIONS ANALYSIS APPROACH

4.1 ANALYSIS SCENARIOS

The study scenarios are listed below. The With Project scenario includes full Buildout of the project site.

- Existing Year 2020
- Existing Year 2020 With Project

4.2 STUDY FACILITIES

Three (3) study intersections were evaluated during as listed and shown in **Table 4-1** and **Exhibit 4-1**. The school crosswalk at the intersection of Johnson Avenue and Sydney Street was analyzed during the AM Peak Hour only, which coincides with the school peak.

TABLE 4-1: STUDY INTERSECTIONS

ID	Study Intersection	Traffic Control	Analysis Period	Mode
1	Johnson Avenue and Lizzie	Signalized	PM Peak Hour	Vehicle, Bicycle, Pedestrian
2	Johnson Avenue and Ella Street	Signalized	PM Peak Hour	Vehicle, Bicycle, Pedestrian
3	Johnson Avenue and Sydney Street	Stop-Controlled	AM Peak Hour	Pedestrian

EXHIBIT 4-1: PROJECT STUDY INTERSECTIONS

4.3 ASSUMPTIONS, METHODOLOGIES, AND LOCAL THRESHOLDS OF SIGNIFICANCE

In accordance with City's guidelines, the traffic operations analysis conducted to determine the existing and projected capacity was based on the *Highway Capacity Manual*, 6th Edition (*HCM*), published by the Transportation Research Board in 2016. Using the *HCM* methodology, results are typically presented as a Level of Service (LOS). LOS is a qualitative measure that describes traffic operational conditions provided by a transportation facility. It can range from LOS A (free-flow conditions) through LOS F (severely congested conditions). The *HCM* analysis methodology describes the operation of an intersection using a range of Level of Service from LOS A to LOS F, based on the corresponding average stopped delay experienced per vehicle as shown in **Table 4-2**. Additional measures of effectiveness include vehicle delay, volume-to-capacity ratio (v/c), and queue length.

TABLE 4-2: HCM INTERSECTION LEVEL OF SERVICE & DELAY THRESHOLDS

Level of Service	Signalized Intersection Average Delay (seconds/vehicle)	Two-Way Stop-Controlled & All-Way Stop-Controlled (seconds/vehicle)
LOS A	$x \leq 10$	$x \leq 10$
LOS B	$10 < x \leq 20$	$10 < x \leq 15$
LOS C	$20 < x \leq 35$	$15 < x \leq 25$
LOS D	$35 < x \leq 55$	$25 < x \leq 35$
LOS E	$55 < x \leq 80$	$35 < x \leq 50$
LOS F	$80 < x$	$50 < x$

Note: If the volume-to-capacity ratio (v/c) > 1.0, LOS = F.
Source: Highway Capacity Manual, 6th Edition.

Level of Service is based on the average stopped delay per vehicle for the overall intersection (all movements) for signalized intersections and all-way stop-controlled intersections. For one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

The computer software program called *Synchro* (version 10) was used to analyze the Lizzie Street/Hospital Driveway and Ella Street study intersections with Johnson Avenue. *HCM* 6th Edition methodology results were obtained from Synchro output. *HCS7* software was utilized to evaluate the pedestrian crosswalk at the intersection of Johnson Avenue and Sydney Street.

4.3.1 Thresholds of Significance

The City's thresholds of significance have been referenced in this evaluation. **Table 4-3** summarizes the relevant thresholds of significance for this project while **Table 4-4** details the minimum LOS standards.

TABLE 4-3: PROJECT THRESHOLDS OF SIGNIFICANCE

Location Type	Mode	Threshold of Significance
Signalized Intersections	Vehicles	A. Project traffic causes minimum LOS standards to be exceeded or further degrades already exceeded LOS standards and the V/C ratio is increased by .01 or more. B. Project causes or exacerbates 95th percentile turning movement queues exceeding available turn pocket capacity by one car length (25') or more and presents a contextually significant safety hazard. C. Project proposes roadway geometry changes that cause minimum LOS standards to be exceeded or further degrades already exceeded LOS standards for the overall intersection or individual lane groups.
Intersections	Bicycles & Pedestrians	A. Project traffic causes minimum LOS standards to be exceeded. B. Project proposes modifications to roadway geometry that causes minimum LOS standards to be exceeded or conflicts with engineering best practices for design of safe intersection and driveway crossings. C. Project-related traffic or geometric modifications further degrades already exceeded LOS standards and there is contextual significance to the impact. Contextual significance may be evaluated qualitatively, and can generally be interpreted as a project-related action that results in a negative change to the bicycle/pedestrian environment that is likely to be noticeable to the average user. (i.e. a decrease in the effective buffer width between motor vehicle and bicyclists/pedestrians, addition of traffic adjacent to a bicycle/pedestrian facility that would be noticeable during a typical walk/bike trip, significant increases in crossing delays, etc.)

TABLE 4-4: GENERAL PLAN MINIMUM LOS STANDARDS

Travel Mode	LOS Objective	Minimum LOS Standard
Bicycle [1]	B	D
Pedestrian [2]	B	C
Transit [3]	C	Baseline LOS or LOS D, whichever is lower
Vehicle	C	E (Downtown), D (All Other Routes)

Notes:

(1) Bicycle LOS objectives & standards only apply to routes identified in the City's adopted Bicycle Transportation Plan.

(2) Exceptions to minimum pedestrian LOS objectives & standards may apply when its determined that sidewalks are not consistent with neighborhood character including topography, street design and existing density.

(3) Transit LOS objectives & standards only apply to routes identified in the City's Short Range Transit Plan.

Table 4-5 summarizes the analysis locations, analysis time periods, and relevant measures of effectiveness.

TABLE 4-5: MEASURES OF EFFECTIVENESS BY STUDY INTERSECTION

Intersection	Auto LOS		Auto V/C		Bike LOS		Ped LOS		Auto Queuing	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Johnson Ave & Lizzie St / Hospital Driveway	--	✓	--	✓	--	✓	--	✓	--	✓
Johnson Ave & Ella St	--	✓	--	✓	--	✓	--	✓	--	✓
Johnson Ave & Sydney St	--	--	--	--	--	--	✓	--	--	--

4.4 CITY COORDINATION

Coordination was conducted with City staff regarding the traffic volume development process. Concurrence on the traffic volume was obtained from the City on July 15, 2020.

5 BASELINE ANALYSIS (EXISTING)

5.1 INTERSECTION & ROADWAY VOLUMES

Year 2018 intersection turning movement count data and Year 2018 48-hour segment data were utilized to establish the Existing Year 2020 traffic volumes (vehicles, bicycles, and pedestrians). Year 2018 data was grown by a factor of 1.4% (linear, per year) to determine the Year 2020 volumes. The 1.4% growth rate was calculated by comparing Year 2016 and Year 2018 historic data in the area. Traffic count data is contained in **Appendix A**. **Exhibit 5-1** shows the Existing Year 2020 Peak Hour vehicular traffic volumes while **Appendix B** contains the bicycle and pedestrian volumes. **Table 5-1** summarizes the average daily traffic (ADT) volumes (vehicular) which were calculated by averaging two days of segment data from Year 2016 and applying the 1.4% per year growth rate and traffic volume development worksheets are contained in **Appendix B**.

EXHIBIT 5-1: EXISTING YEAR 2020 PEAK HOUR TRAFFIC VOLUMES (VEHICLES)

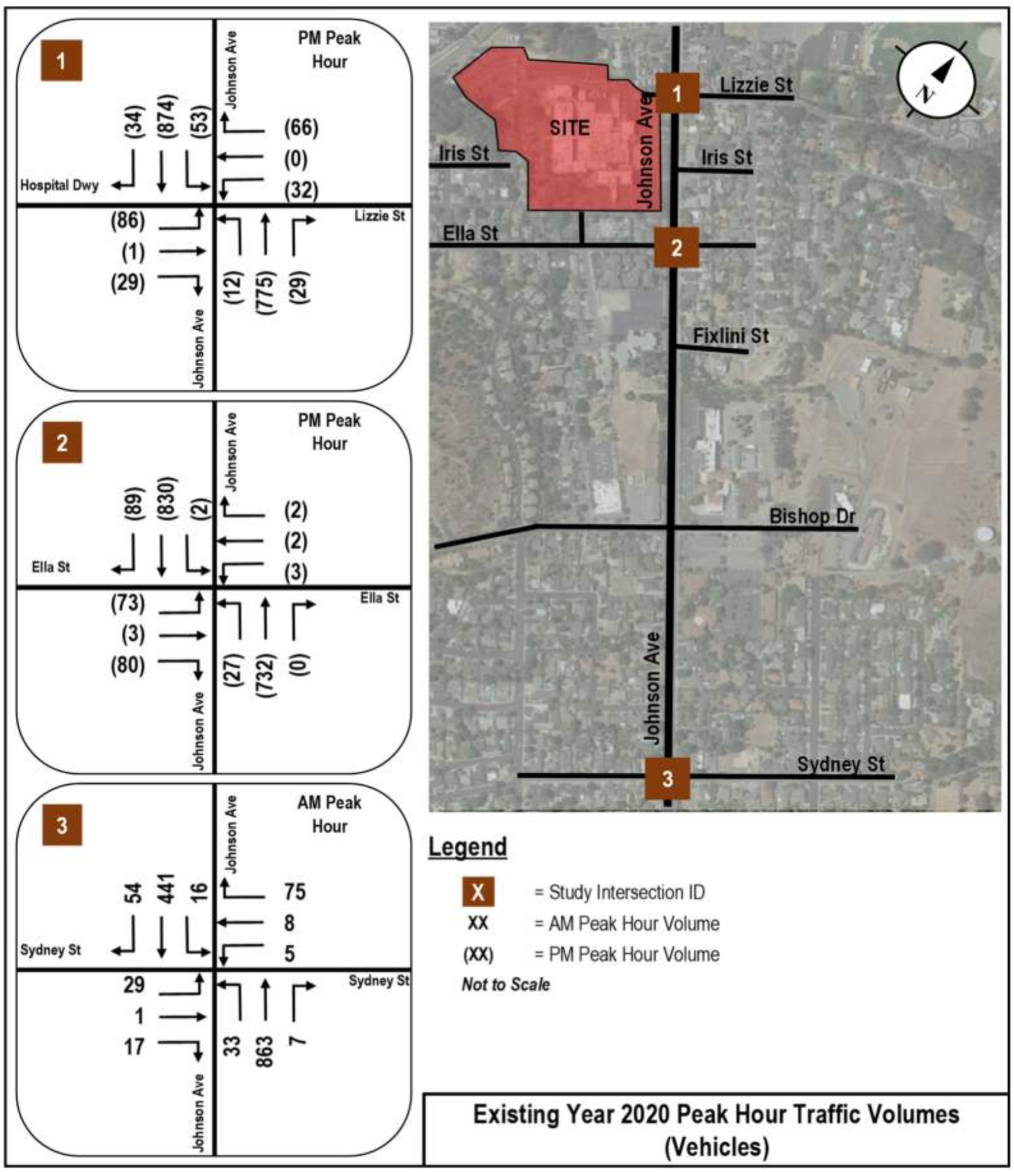


TABLE 5-1: EXISTING YEAR 2020 ADTS

	Segment	Direction	Year 2018 ADT Count Data			Background Growth (2 Years)	Existing Year 2020 ADT
			10/23/2018	10/24/2018	Average		
1	Johnson Ave between San Luis Dr & Ella St	Northbound	9,160	9,246	9,200	259	9,500
		Southbound	9,420	9,558	9,500	268	9,800
	Total		***18,580***	***18,804***	***18,700***	***527***	***19,300***
2	Johnson Ave between Ella St & Bishop St	Northbound	8,234	8,311	8,300	234	8,500
		Southbound	8,999	9,212	9,100	257	9,400
	Total		***17,233***	***17,523***	***17,400***	***491***	***17,900***
3	Johnson Ave between Bishop St & Sydney St	Northbound	6,964	6994	7,000	197	7,200
		Southbound	7,704	7841	7,800	220	8,000
	Total		***14,668***	***14,835***	***14,800***	***417***	***15,200***
4	Johnson Ave between Sydney St & Laurel Ln	Northbound	6,454	6,440	6,400	180	6,600
		Southbound	6,893	6,969	6,900	195	7,100
	Total		***13,347***	***13,409***	***13,400***	***375***	***13,700***

5.2 LOS ANALYSIS

5.2.1 Intersection (Auto, Bike, Ped)

Synchro software was utilized to obtain the *HCM* 6th Edition LOS, delay, and v/c results for the Existing Year 2020 condition. **Table 2-2** summarizes Existing PM Peak Hour overall LOS for the study intersections while **Table 5-3** summarizes the v/c by movement and the maximum at each intersection. The analysis results at the Johnson Avenue intersections with Lizzie Street/Hospital Driveway and Ella Street show that vehicular operations are currently LOS D or better and bicycle and pedestrian operations are currently LOS C or better. Detailed analysis sheets for the Existing condition are contained in **Appendix C**.

TABLE 5-2: EXISTING YEAR 2020 PEAK HOUR INTERSECTION LOS AND DELAY

Intersection-Node [Traffic Control]			Vehicular		Bicycle	Pedestrian
			PM Peak Hour		PM Peak Hour	PM Peak Hour
			LOS	Delay	LOS (1)	LOS (1)
1	Johnson Ave & Lizzie St / Hospital Driveway	[Signal]	C	25.4	B/B/C/C	C/C/B/B
2	Johnson Ave & Ella St	[Signal]	D	35.4	B/B/C/C	C/C/B/B

(1) Northbound / Southbound / Eastbound / Westbound

TABLE 5-3: EXISTING YEAR 2020 PEAK HOUR INTERSECTION V/C

Intersection-Node [Traffic Control]			Direction / Movement		Vehicular PM Peak Hour V/C
1	Johnson Ave & Lizzie St / Hospital Driveway	[Signal]	Eastbound	Left-Through	1.37
				Right	0.08
			Westbound	Left-Through	0.54
				Right	0.20
			Northbound	Left	0.12
				Through-Right	0.60
			Southbound	Left	0.23
				Through-Right	0.52
			Maximum		***1.37***
2	Johnson Ave & Ella St	[Signal]	Eastbound	Left-Through	1.57
				Right	0.25
			Westbound	Left-Through	0.14
				Right	0.01
			Northbound	Left	0.77
				Through-Right	0.45
			Southbound	Left	0.52
				Through Right	0.54
			Maximum		***1.57***

The crosswalk operations were evaluated at the intersection of Johnson Avenue and Sydney Street during the AM Peak Hour. The results of this analysis are summarized in **Table 5-4**. As shown, currently the crosswalk operates at LOS C.

TABLE 5-4: EXISTING YEAR 2020 PEAK HOUR CROSSWALK ANALYSIS RESULTS

Intersection-Node [Traffic Control]			Pedestrian AM Peak Hour LOS
3	Johnson Ave & Sydney St Crosswalk across Johnson Ave on South Leg	[Stop-Controlled]	C

5.3 INTERSECTION QUEUEING

The Synchro 95th Percentile queue lengths (in feet) are summarized in **Table 5-5** along with the available turn lane pocket lengths. Detailed analysis sheets for the Existing condition are contained in **Appendix C**. As shown, all queues are currently accommodated within the available turn pocket storage.

TABLE 5-5: EXISTING YEAR 2020 PEAK HOUR INTERSECTION QUEUE LENGTHS

Intersection-Node [Traffic Control]			Direction / Movement		Available Storage (feet)	Vehicular PM Peak Hour 95th Percentile Queue Length
1	Johnson Ave & Lizzie St / Hospital Driveway	[Signal]	Eastbound	Right	90	1
			Westbound	Right	50	29
			Northbound	Left	110	20
			Southbound	Left	90	69
2	Johnson Ave & Ella St	[Signal]	Eastbound	Right	75	9
			Westbound	Right	75	0
			Northbound	Left	100	46
			Southbound	Left	100	3

6 PROJECT ANALYSIS

6.1 PROJECT TRAFFIC GENERATION BY MODE

6.1.1 Vehicles

The number of Project site trips was estimated using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* (10th Edition). Based on the proposed site plans, improvements include a new patient tower, chapel, laboratory, and parking structure. **Table 6-1** shows the ITE trip generation rates used for this analysis. **Table 6-2** shows the estimated trips generated by the project.

TABLE 6-1: TRIP GENERATION RATES

Land Use	ITE Code	Variable	Daily		Weekday AM Peak Hour		Weekday PM Peak Hour	
			Rate	In : Out	Rate	In : Out	Rate	In : Out
Hospital	610	Beds	22.32 / Bed	50% : 50%	1.84 / Bed	72% : 28%	1.89 / Bed	28% : 72%
Hospital	610	ksf	10.72 / ksf	50% : 50%	0.89 / ksf	68% : 32%	0.97 / ksf	32% : 68%

Notes:
Source: ITE Trip Generation Manual, 10th Edition
Weekday peak hour of adjacent street
ksf = Thousand square feet

TABLE 6-2: SITE TRIP GENERATION

Land Use	ITE Code	Intensity		Rate								
				Daily Trips			Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
				Total	Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound
Hospital	610	82	Beds	1,830	915	915	151	109	42	155	43	112
Chapel	560	1.0	ksf	0	0	0	0	0	0	0	0	0
Hospital Lab	610	4.3	ksf	46	23	23	4	3	1	4	1	3
Parking Structure	--	136	spaces	0	0	0	0	0	0	0	0	0
Total	**--**	**--**	**--**	**1,876**	**938**	**938**	**155**	**112**	**43**	**159**	**44**	**115**

Notes:
1) Source: ITE Trip Generation Manual, 10th Edition
2) ksf = Thousand square feet
3) Chapel assumed to generate 0 trips since it is a supporting use of the existing facility.
4) Parking Structure assumed to generate 0 trips since it is not a trip generator.

A total of 1,876 daily trips are expected to be added due to the proposed hospital expansion. The proposed chapel and parking structure are not expected to generate additional trips. The chapel is considered a supporting use of the existing facility and is not the primary generator of trips. Similarly, the parking structure does not generate any additional trips to the site.

6.1.2 Bicycles

The Peak Hour Project generated bicycle volumes at each of the study intersections were estimated using a process where the existing bicycles volumes are utilized to forecast the projected project bicycle volumes based on a ratio of anticipated use expansion. Volume forecasts focused on the site analysis intersections and not a complete estimate of all bike traffic entering/exiting at other access points. The volume development process was as follows:

1) Utilized the existing bicycle traffic entering/exiting the hospital site at the intersection of Johnson Avenue and Lizzie Street/Hospital Driveway since this is the main intersection that provides access to the site and had the highest bicycle volume under Existing conditions.
2) Calculated a ratio of existing to project as follows:

Scenario	Number of Beds	Ratio of Proposed to Existing
Existing	98	N/A
Proposed Project	82	= 82 / 98 = 0.84 (Rounded to a 1.0 factor to be conservative)

3) Applied the growth factor of 1.0 to the existing Peak Hour bicycle volumes entering/exiting at the Johnson Avenue and Lizzie Street/Hospital Driveway intersection to estimate the projected project only bicycle volumes, thus bicycle volumes entering/exiting the site double when compared to the Existing condition.
4) Assumed that the project only bicycle volumes at Johnson Avenue and Lizzie Street/Hospital Driveway would continue through along Johnson Avenue and therefore applied the project only bicycle volumes to the through movements at the Johnson Avenue intersections with Ella Street and Sydney Street.
5) No adjustments or reductions were made to the vehicular volumes.

Table 6-3 summarizes the Peak Hour Project bicycle volumes.

TABLE 6-3: PEAK HOUR PROJECT BICYCLE VOLUMES

Intersection		Leg/Approach/Direction			Year 2018 Count Data		Background Growth		Existing Year 2020		Project Only	
					AM	PM	AM	PM	AM	PM	AM	PM
1	Johnson Ave & Lizzie St / Hospital Driveway	Hospital Driveway	Eastbound	Left	7	1	0	0	7	1	7	1
				Through	2	0	0	0	2	0	2	0
				Right	0	0	0	0	0	0	0	0
		Lizzie St	Westbound	Through	0	0	0	0	0	0	0	0
		Johnson Ave	Northbound	Left	0	1	0	0	0	1	0	1
2	Johnson Ave & Ella St	Johnson Ave	Northbound	Through	20	5	1	0	21	5	0	1
		Johnson Ave	Southbound	Through	0	3	0	0	0	3	0	0
3	Johnson Ave & Sydney St	Johnson Ave	Northbound	Through	9	2	0	0	9	2	0	1
		Johnson Ave	Southbound	Through	0	7	0	0	0	7	0	0

6.1.3 Pedestrians

The Peak Hour Project generated pedestrian volumes at each of the study intersections were estimated using a process where the existing pedestrian volumes were utilized to forecast the projected project pedestrian volumes based on a ratio of anticipated use expansion. The process was as follows:

1) Utilized the existing pedestrian count data at the intersection of Johnson Avenue and Lizzie Street/Hospital Driveway since this is the main intersection that provides access to the site and had the highest pedestrian volume. The pedestrian data was collected by pedestrian movements rather than as entering/exiting site traffic.
2) Calculated the percentage of pedestrian volumes that occurred at the intersection of Johnson Avenue and Lizzie Street/Hospital Driveway as compared to the total number of vehicles, bicycles, and pedestrians processed at the intersection during each of the peak hours.
3) Estimated the number of Project generated pedestrians at the intersection of Johnson Avenue and Lizzie Street/Hospital Driveway by applying the percentage to the total number of Project vehicles, bicycles, and pedestrians at the intersection.
4) Distributed the Peak Hour Project pedestrian volumes to the appropriate pedestrian movements at each of the study intersections.
5) No adjustments or reductions were made to the vehicular volumes.

Table 6-4 summarizes the Peak Hour Project pedestrian calculations while **Table 6-5** summaries the distribution of the pedestrian volumes at each of the study intersections.

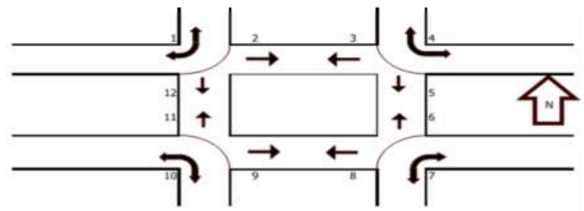
TABLE 6-4: PEAK HOUR PROJECT PEDESTRIAN VOLUME CALCULATIONS

	Mode	Existing Year 2018 Condition at Johnson/Lizzie Intersection		Project Only Estimate
		Volume	Pedestrian Percentage	Volume
AM Peak Hour	Vehicles	3,515	--	139
	Pedestrians	20	0.56%	1
	Bicycles	37	--	9
	Total	**3,572**	**--**	**149**
PM Peak Hour	Vehicles	1,941	--	142
	Pedestrians	24	1.21%	2
	Bicycles	15	--	2
	Total	**1,980**	**--**	**146**

TABLE 6-5: PEAK HOUR PROJECT PEDESTRIAN VOLUMES

Intersection / Direction			Year 2018 Count Data		Background Growth		Project Only Volumes	
			AM	PM	AM	PM	AM	PM
1	Lizzie St @ Johnson Ave	1	1	1	0	0		
		2	5	3	0	0		
		3	0	5	0	0		
		4	0	4	0	0		
		5	0	1	0	0		1
		6	7	4	0	0		
		7	0	0	0	0		
		8	3	1	0	0		1
		9	1	1	0	0		
		10	0	0	0	0	1	1
		11	1	3	0	0		
		12	2	1	0	0		
2	Ella St @ Johnson Ave	1	N/A	2	0	0		
		2	N/A	0	0	0		
		3	N/A	0	0	0		
		4	N/A	0	0	0		
		5	N/A	0	0	0		
		6	N/A	0	0	0		
		7	N/A	1	0	0		
		8	N/A	0	0	0		
		9	N/A	1	0	0		
		10	N/A	0	0	0		
		11	N/A	0	0	0		
		12	N/A	0	0	0	1	1

Intersection / Direction			Year 2018 Count Data		Background Growth		Project Only Volumes	
			AM	PM	AM	PM	AM	PM
3	Sydney St @ Johnson Ave	1	4	N/A	0	0		
		2	1	N/A	0	0		
		3	0	N/A	0	0		
		4	0	N/A	0	0		
		5	3	N/A	0	0		
		6	1	N/A	0	0		
		7	0	N/A	0	0		
		8	15	N/A	0	0		
		9	2	N/A	0	0		
		10	0	N/A	0	0		
		11	2	N/A	0	0		
		12	0	N/A	0	0	1	1



6.2 PROJECT TRIP DISTRIBUTION & ASSIGNMENT

The project trip distribution was based on existing traffic patterns and the regional community access. Based on the available roadway network and the existing traffic count data, the projected trip distribution directs the majority of the project site traffic to the north via Johnson Avenue. The area of the City in which the site is located is separated by the Union Pacific railroad tracks, limiting access to the site. To the north Johnson Avenue provides access to the rest of the community and adequate access to US-101. To the south, only Orcutt Road and Tank Farm Road cross the railroad tracks providing access to the rest of the community. The forecast trip percent distribution for the proposed project is as follows:

- Johnson Avenue to the North = 70%
- Lizzie Street to the East = 1%
- Ella Street to the West = 1%
- Johnson Avenue to the South = 28%

The trip assignment focuses on the primary routes likely to be utilized when accessing the facility (Johnson Avenue, Lizzie Street, and Ella Street). There is an additional access point to the site along Breck Street, however it is controlled by an automatic gate arm. Trips were not assigned to the Breck Street access point in an effort to be conservative. Additionally, the Iris Street cul-de-sac is closed to vehicular traffic, however, is still accessible to bicyclists and pedestrians. For the purposes of this study, the projected hospital expansion vehicular trips were assigned to the site access points at Lizzie Street and Ella Street.

Exhibit 6-1 shows the forecast trip percent distribution of the proposed project within the study area, including trip assignment percentages at each intersection. **Exhibit 6-2** shows the corresponding forecast assignment of AM and PM Peak Hour project generated trips. **Table 6-6** shows the Project Only ADTs.

EXHIBIT 6-1: PROJECT TRAFFIC DISTRIBUTION AND ASSIGNMENT PERCENTAGES

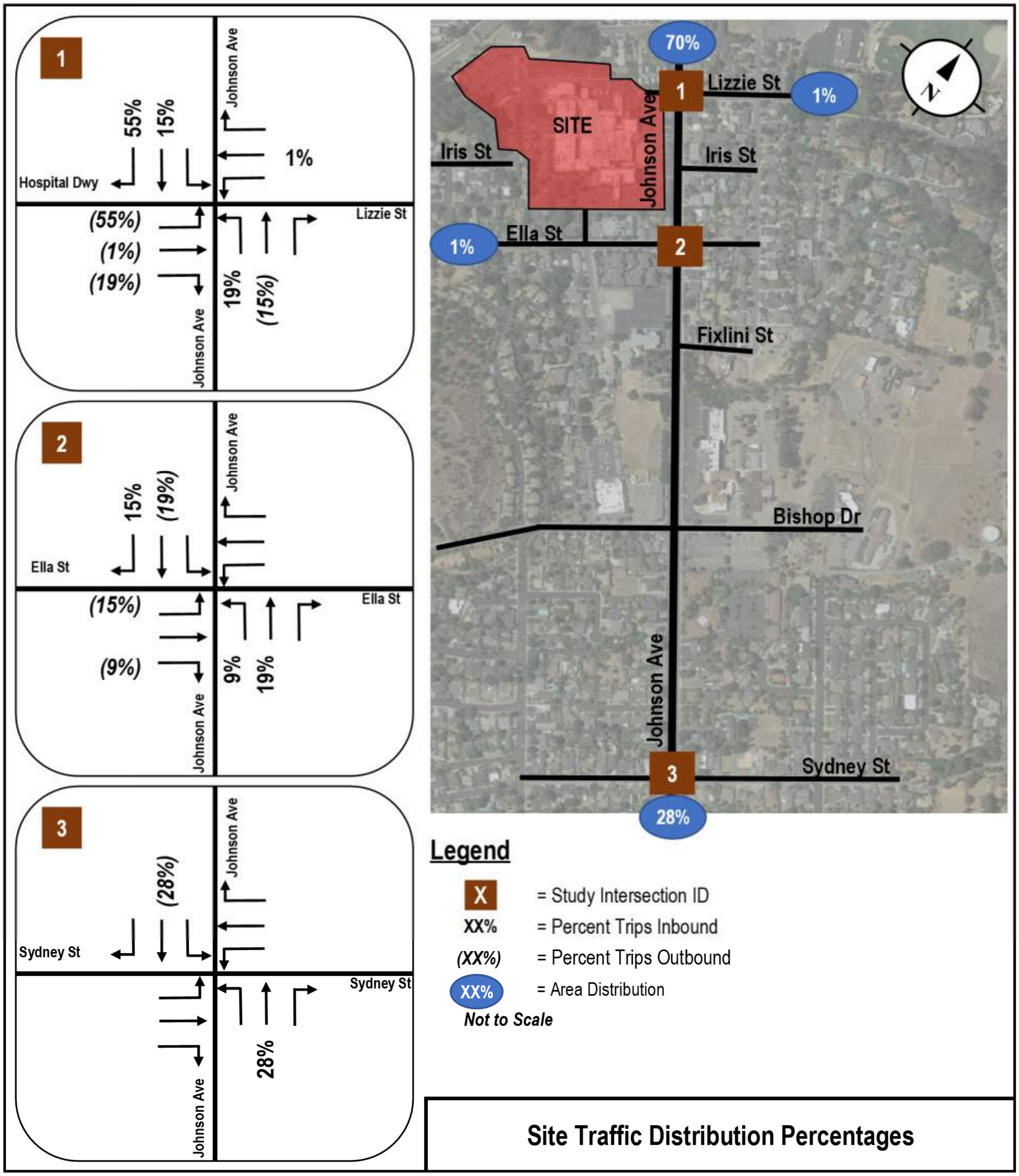


EXHIBIT 6-2: PROJECT TRAFFIC PEAK HOUR TRIP ASSIGNMENT (VEHICLES)

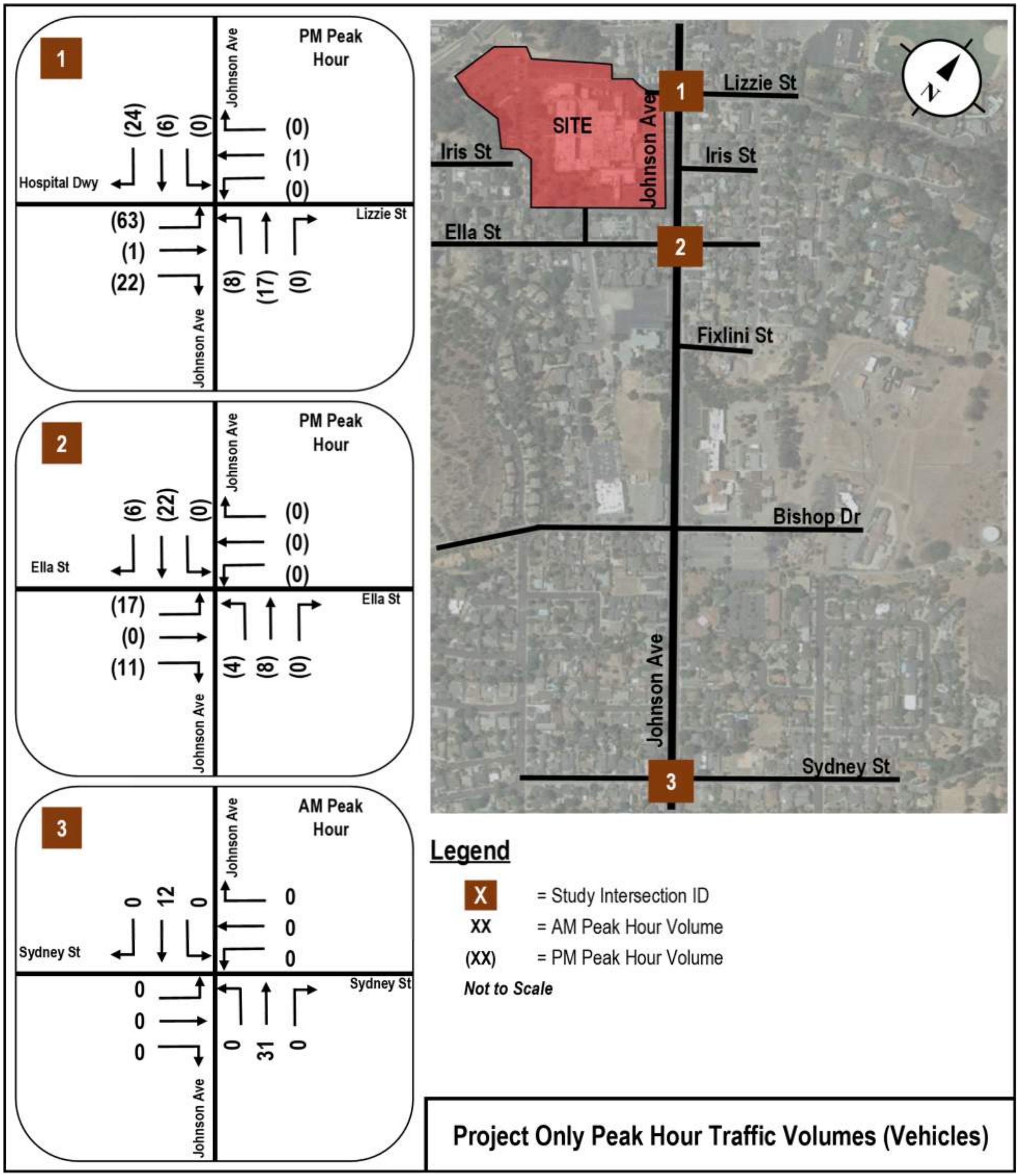


TABLE 6-6: PROJECT ONLY ADTS

Segment		Direction	Project Only ADTs
1	Johnson Ave between San Luis Dr & Ella St	Northbound	657
		Southbound	657
Total			**1,314**
2	Johnson Ave between Ella St & Bishop St	Northbound	263
		Southbound	263
Total			**526**
3	Johnson Ave between Bishop St & Sydney St	Northbound	263
		Southbound	263
Total			**526**
4	Johnson Ave between Sydney St & Laurel Ln	Northbound	263
		Southbound	263
Total			**526**

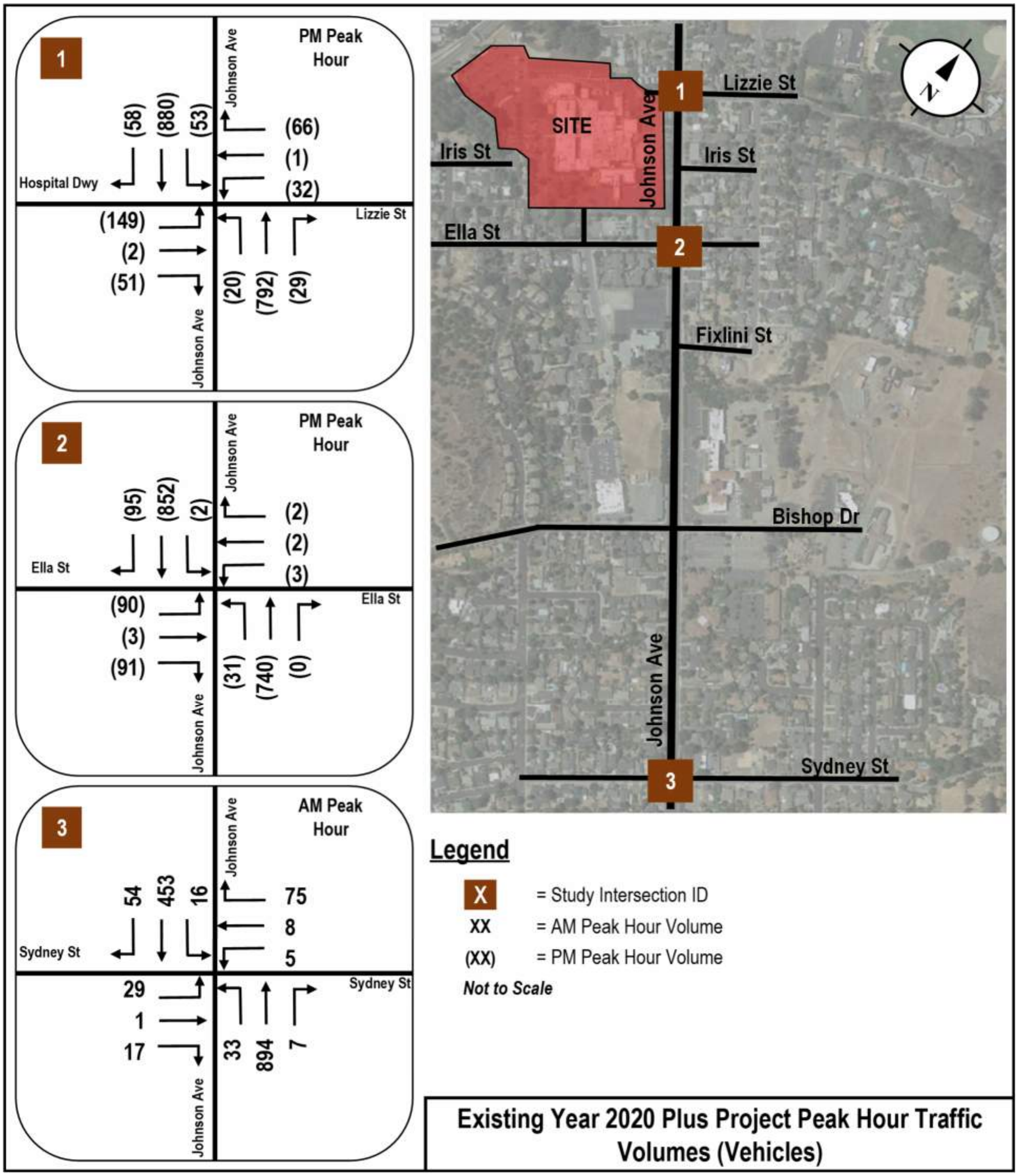
6.3 EXISTING + PROJECT INTERSECTION & ROADWAY VOLUMES

The Existing Year 2020 traffic volumes and the Project Only traffic volumes were combined to estimate the Existing Year 2020 Plus Project traffic volumes. ADTs are summarized in **Table 6-7.** **Exhibit 6-3** shows the vehicular volumes while the tables in **Appendix B** summarize the bicycle and pedestrian volumes for this condition.

TABLE 6-7: EXISTING YEAR 2020 PLUS PROJECT ADTS

Segment		Direction	Existing Year 2020	Project Only	Existing Year 2020 Plus Project
1	Johnson Ave between San Luis Dr & Ella St	Northbound	9,500	657	10,200
		Southbound	9,800	657	10,500
Total			**19,300**	**1,314**	**20,700**
2	Johnson Ave between Ella St & Bishop St	Northbound	8,500	263	8,800
		Southbound	9,400	263	9,700
Total			**17,900**	**526**	**18,500**
3	Johnson Ave between Bishop St & Sydney St	Northbound	7,200	263	7,500
		Southbound	8,000	263	8,300
Total			**15,200**	**526**	**15,800**
4	Johnson Ave between Sydney St & Laurel Ln	Northbound	6,600	263	6,900
		Southbound	7,100	263	7,400
Total			**13,700**	**526**	**14,300**

EXHIBIT 6-3: EXISTING YEAR 2020 PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES (VEHICLES)



6.4 LOS ANALYSIS

6.4.1 Intersection (Auto, Bike, Ped)

Synchro software was utilized to obtain the *HCM* 6th Edition LOS, delay, and v/c results for the Existing Year 2020 Plus Project condition. **Table 6-8** summarizes Existing PM Peak Hour overall LOS for the study intersections while **Table 6-9** summarizes the v/c by movement and the maximum at each intersection. The analysis results show that the intersection of Johnson Avenue and Lizzie Street/Hospital Driveway is projected to degrade to LOS E during the PM Peak Hour under the Existing Plus Project condition, thus resulting in a project impact. The intersection of Johnson Avenue and Ella Street is projected to continue to meet the minimum LOS under With Project condition. Detailed analysis sheets for the Existing Plus Project condition are contained in **Appendix D**.

TABLE 6-8: EXISTING YEAR 2020 PLUS PROJECT PEAK HOUR INTERSECTION LOS AND DELAY

Intersection-Node [Traffic Control]			Existing				Existing + Project				Impact?
			Vehicular		Bicycle	Pedestrian	Vehicular		Bicycle	Pedestrian	
			PM Peak Hour		PM Peak Hour	PM Peak Hour	PM Peak Hour		PM Peak Hour	PM Peak Hour	
			LOS	Delay	LOS (1)	LOS (1)	LOS	Delay	LOS (1)	LOS (1)	
1	Johnson Ave & Lizzie St / Hospital Driveway	[Signal]	C	25.4	B/B/C/C	C/C/B/B	**E**	**63.6**	B/B/C/C	C/C/B/B	**Yes**
2	Johnson Ave & Ella St	[Signal]	D	35.4	B/B/C/C	C/C/B/B	D	47.9	B/B/C/C	C/C/B/B	No

(1) Northbound / Southbound / Eastbound / Westbound

TABLE 6-9: EXISTING YEAR 2020 PLUS PROJECT PEAK HOUR INTERSECTION V/C

Intersection-Node [Traffic Control]			Direction / Movement		Existing Vehicular PM Peak Hour V/C	Existing + Project Vehicular PM Peak Hour V/C	Impact?
1	Johnson Ave & Lizzie St / Hospital Driveway	[Signal]	Eastbound	Left-Through	1.37	2.39	N/A – LOS does not exceed minimum LOS under Existing Conditions
				Right	0.08	0.15	
			Westbound	Left-Through	0.54	0.56	
				Right	0.20	0.20	
			Northbound	Left	0.12	0.14	
				Through-Right	0.60	0.62	
			Southbound	Left	0.23	0.23	
				Through-Right	0.52	0.58	
			Maximum		***1.37***	***2.39***	
2	Johnson Ave & Ella St	[Signal]	Eastbound	Left-Through	1.57	1.91	N/A – LOS does not exceed minimum LOS under Existing Conditions
				Right	0.25	0.29	
			Westbound	Left-Through	0.14	0.14	
				Right	0.01	0.01	
			Northbound	Left	0.77	0.80	
				Through-Right	0.45	0.46	
			Southbound	Left	0.52	0.52	
				Through Right	0.54	0.56	
			Maximum		***1.57***	***1.91***	

The crosswalk operations were evaluated at the intersection of Johnson Avenue and Sydney Street during the AM Peak Hour. The results of this analysis are summarized in **Table 5-4**. As shown, the crosswalk is projected to continue to operate at LOS C under the Existing Plus Project condition, and thus no project impact is projected.

TABLE 6-10: EXISTING YEAR 2020 PLUS PROJECT PEAK HOUR CROSSWALK ANALYSIS RESULTS

Intersection-Node [Traffic Control]			Existing Pedestrian AM Peak Hour LOS	Existing + Project Pedestrian AM Peak Hour LOS	Impact?
3	Johnson Ave & Sydney St Crosswalk across Johnson Ave on East Leg	[Stop-Controlled]	C	C	No

6.5 INTERSECTION QUEUEING

The Synchro 95th Percentile queue lengths (in feet) are summarized in **Table 6-11** along with the available turn lane pocket lengths. Detailed analysis sheets for the Existing Plus Project condition are contained in **Appendix D**.

TABLE 6-11: EXISTING YEAR 2020 PLUS PROJECT PEAK HOUR INTERSECTION QUEUE LENGTHS

Intersection-Node [Traffic Control]			Direction / Movement		Available Storage (feet)	Existing Vehicular PM Peak Hour 95th Percentile Queue Length	Existing + Project Vehicular PM Peak Hour 95th Percentile Queue Length	Estimated Change (feet)	Impact?
1	Johnson Ave & Lizzie St / Hospital Driveway	[Signal]	Eastbound	Right	90	1	20	+19	No
			Westbound	Right	50	29	29	0	No
			Northbound	Left	110	20	32	+12	No
			Southbound	Left	90	69	69	0	No
2	Johnson Ave & Ella St	[Signal]	Eastbound	Right	75	9	15	+6	No
			Westbound	Right	75	0	0	0	No
			Northbound	Left	100	46	50	+4	No
			Southbound	Left	100	3	3	0	No

6.6 IMPACT ANALYSIS

The analysis results show the following impacts:

Impact #1 – Johnson Avenue and Lizzie Street/Hospital Driveway during the Existing Plus Project PM Peak Hour

The following mitigation was developed to address the projected project impact:

Mitigation #1 – Modify traffic signal at the intersection Johnson Avenue and Lizzie Street/Hospital Driveway to provide eastbound (hospital driveway) and westbound (Lizzie Street) split phasing and to increase the cycle length to 115 seconds. A change in cycle length is also anticipated along the Johnson Avenue corridor, including at the Ella Street intersection, to maintain coordination.

The With Mitigation analysis results are summarized in **Table 6-12**. The Synchro 95th Percentile queue lengths (in feet) are summarized in **Table 6-13** along with the available turn lane pocket lengths. Detailed analysis sheets for the Existing Plus Project Plus Mitigation condition are contained in **Appendix E**.

TABLE 6-12: EXISTING YEAR 2020 PEAK HOUR INTERSECTION LOS AND DELAY – WITH MITIGATION

Intersection-Node [Traffic Control]			Existing				Existing + Project				Existing + Project + Mitigation			
			Vehicular		Bicycle	Pedestrian	Vehicular		Bicycle	Pedestrian	Vehicular		Bicycle	Pedestrian
			PM Peak Hour		PM Peak Hour	PM Peak Hour	PM Peak Hour		PM Peak Hour	PM Peak Hour	PM Peak Hour		PM Peak Hour	PM Peak Hour
			LOS	Delay	LOS (1)	LOS (1)	LOS	Delay	LOS (1)	LOS (1)	LOS	Delay	LOS (1)	LOS (1)
1	Johnson Ave & Lizzie St / Hospital Driveway	[Signal]	C	25.4	B/B/C/C	C/C/B/B	**E**	**63.6**	B/B/C/C	C/C/B/B	D	45.4	B/B/C/C	C/C/B/B
2	Johnson Ave & Ella St	[Signal]	D	35.4	B/B/C/C	C/C/B/B	D	47.9	B/B/C/C	C/C/B/B	D	54.7	B/B/C/C	C/C/B/B

(1) Northbound / Southbound / Eastbound / Westbound

TABLE 6-13: EXISTING YEAR 2020 PEAK HOUR INTERSECTION QUEUE LENGTHS – WITH MITIGATION

Intersection-Node [Traffic Control]			Direction / Movement		Available Storage (feet)	Existing	Existing + Project	Existing + Project + Mitigation
						Vehicular	Vehicular	Vehicular
						PM Peak Hour	PM Peak Hour	PM Peak Hour
						95th Percentile Queue Length	95th Percentile Queue Length	95th Percentile Queue Length
1	Johnson Ave & Lizzie St / Hospital Driveway	[Signal]	Eastbound	Right	90	1	20	0
			Westbound	Right	50	29	29	11
			Northbound	Left	110	20	32	32
			Southbound	Left	90	69	69	79
2	Johnson Ave & Ella St	[Signal]	Eastbound	Right	75	9	15	15
			Westbound	Right	75	0	0	0
			Northbound	Left	100	46	50	56
			Southbound	Left	100	3	3	4

7 OPERATIONS ANALYSIS CONCLUSIONS AND RECOMMENDATIONS

Analysis was conducted for the Existing Year 2020 and Existing Year 2020 Plus Project conditions at the following locations:

1) Johnson Avenue and Lizzie Street/Hospital Driveway – PM Peak Hour – Auto, Bicycle, & Pedestrian
2) Johnson Avenue and Ella Street – PM Peak Hour – Auto, Bicycle, & Pedestrian
3) Johnson Avenue and Sydney Street – AM Peak Hour – Pedestrian Crosswalk

Existing Year 2020 With Project Impacts

Impact #1 – Under the Existing Year 2020 With Project conditions, a project impact is projected to occur at the intersection of Johnson Avenue and Lizzie Street/Hospital Driveway.

Existing Year 2020 With Project Mitigation

Mitigation #1 – Modify traffic signal at the intersection Johnson Avenue and Lizzie Street/Hospital Driveway to provide eastbound (hospital driveway) and westbound (Lizzie Street) split phasing and to increase the cycle length to 115 seconds. A change in cycle length is also anticipated along the Johnson Avenue corridor to maintain coordination.

TABLE 7-1: MITIGATION SUMMARY

Intersection		Mode	Peak Hour	Without Project LOS / Delay	With Project LOS / Delay	Recommended Mitigation	With Mitigation LOS / Delay
Existing With Project Conditions							
1	Johnson Ave & Lizzie St / Hospital Driveway	Vehicular	PM	C / 25.4	**E / 63.6**	Modify traffic signal at the intersection Johnson Avenue and Lizzie Street/Hospital Driveway to provide eastbound (hospital driveway) and westbound (Lizzie Street) split phasing and to increase the cycle length to 115 seconds. A change in cycle length is also anticipated along the Johnson Avenue corridor to maintain coordination.	D / 45.4

General Plan Consistency

The existing configuration of Johnson Avenue is consistent with the City's General Plan.

CEQA VMT Assessment

The VMT assessment for the proposed project is contained in a separate document.

Michael Baker
INTERNATIONAL

Appendix A:
Traffic Count Data

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PEAK HOUR ITM SUMMARY

#068B Johnson Ave & Lizzie St

LOCATION#:	068B	QTD PROJ#:	2018229	AM PEAK:	730 AM
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018	MD PEAK:	1145 AM
EAST / WEST:	Lizzie St	VICINITY:	SLO	PM PEAK:	415 PM

Johnson Ave

Lizzie St

SOUTHBOUND LANES

LN	0	2	1
AM	115 (0)	670	116 (0)
MD	63 (0)	615	50 (0)
PM	34 (0)	850	52 (0)
TOTAL	212 (0)	2135	218 (0)

EASTBOUND LANES

LN	AM	MD	PM	TOTAL
0.5	20 (0)	66 (0)	86 (0)	172 (0)
0.5	3	2	1	6
1	7 (0)	27 (0)	29 (0)	63 (0)

SIGNALIZED

WESTBOUND LANES

TOTAL	PM	MD	AM	LN
232 (0)	64 (0)	71 (0)	97 (0)	1
4	0	2	2	1
105 (0)	18 (0)	18 (0)	56 (0)	0

Lizzie St

Johnson Ave

TOTAL	50 (0)	2327	139 (0)
PM	12 (0)	754	28 (0)
MD	17 (0)	643	14 (0)
AM	21 (0)	930	97 (0)
LN	1	2	0

NORTHBOUND LANES

QUALITY TRAFFIC DATA, LLC

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	11:30 AM	TO	1:30 PM
PM COUNT	3:15 PM	TO	5:15 PM

VEHICLE TURNING MOVEMENT COUNT

#068B Johnson Ave & Lizzie St - AM PEAK

LOCATION#:	068B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Lizzie St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	TOTALS
LANES:	1	2	0	0	1	2	0	0	0.5	0.5	1	0	0	1	1	0	
7:00 AM	3	94	7	0	4	73	12	0	6	0	1	0	0	0	6	0	206
7:15 AM	1	151	9	0	17	86	12	0	7	0	0	0	0	0	6	0	289
7:30 AM	3	250	28	0	36	121	18	0	5	1	0	0	12	0	24	0	498
7:45 AM	6	266	61	0	56	206	37	0	5	1	3	0	32	0	43	0	716
8:00 AM	9	194	4	0	12	172	29	0	4	0	2	0	12	2	20	0	460
8:15 AM	3	220	4	0	12	171	31	0	6	1	2	0	0	0	10	0	460
8:30 AM	7	213	3	0	9	165	24	0	2	0	3	0	7	0	11	0	444
8:45 AM	9	208	6	0	21	135	32	0	8	0	3	0	8	0	12	0	442

VOLUME STATS:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	
TOTAL:	41	1596	122	0	167	1129	195	0	43	3	14	0	71	2	132	0	3515
P.H.V: [1]	21	930	97	0	116	670	115	0	20	3	7	0	56	2	97	0	2134
P.H.F: [2]		0.787				0.753				0.833				0.517			0.745

(1) Peak Hour Volume (Peak Hour Begins At 730 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

VEHICLE TURNING MOVEMENT COUNT

#068B Johnson Ave & Lizzie St - MD PEAK

LOCATION#:	068B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Lizzie St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	TOTALS
LANES:	1	2	0	0	1	2	0	0	0.5	0.5	1	0	0	1	1	0	
11:30 AM	5	129	2	0	13	133	14	0	17	1	8	0	3	0	10	0	335
11:45 AM	3	184	6	0	16	149	10	0	16	2	4	0	13	0	17	0	420
12:00 PM	4	160	3	0	15	163	19	0	20	0	9	0	4	1	20	0	418
12:15 PM	6	148	4	0	11	147	20	0	16	0	8	0	1	0	16	0	377
12:30 PM	4	151	1	0	8	156	14	0	14	0	6	0	0	1	18	0	373
12:45 PM	7	133	1	0	6	145	13	0	14	0	4	0	3	0	13	0	339
1:00 PM	4	128	5	0	11	115	17	0	12	1	9	0	3	1	11	0	317
1:15 PM	1	146	3	0	12	148	15	0	9	0	3	0	0	0	8	0	345

VOLUME STATS:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	
TOTAL:	34	1179	25	0	92	1156	122	0	118	4	51	0	27	3	113	0	2924
P.H.V: [1]	17	643	14	0	50	615	63	0	66	2	27	0	18	2	71	0	1588
P.H.F: [2]		0.873				0.924				0.819				0.758			0.945

(1) Peak Hour Volume (Peak Hour Begins At 1145 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

VEHICLE TURNING MOVEMENT COUNT

#068B Johnson Ave & Lizzie St - PM PEAK

LOCATION#:	068B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Lizzie St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	TOTALS
LANES:	1	2	0	0	1	2	0	0	0.5	0.5	1	0	0	1	1	0	
3:15 PM	6	151	14	0	28	254	19	0	19	0	4	0	39	1	41	0	576
3:30 PM	6	183	6	0	11	185	11	0	14	0	6	0	6	0	9	0	437
3:45 PM	6	168	4	0	24	181	18	0	18	0	2	0	6	0	12	0	439
4:00 PM	2	153	6	0	25	198	10	0	25	0	4	0	11	0	30	0	464
4:15 PM	2	172	6	0	14	200	15	0	18	0	10	0	6	0	15	0	458
4:30 PM	3	162	8	0	17	202	7	0	18	0	9	0	11	0	13	0	450
4:45 PM	4	184	7	0	6	208	7	0	20	1	7	0	6	0	15	0	465
5:00 PM	3	236	7	0	15	240	5	0	30	0	3	0	8	0	21	0	568

VOLUME STATS:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	
TOTAL:	32	1409	58	0	140	1668	92	0	162	1	45	0	93	1	156	0	3857
P.H.V: 1	12	754	28	0	52	850	34	0	86	1	29	0	31	0	64	0	1941
P.H.F: 2	0.807				0.900				0.879				0.819				0.854

(1) Peak Hour Volume (Peak Hour Begins At 415 PM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

PEDESTRIAN TURNING MOVEMENT COUNT

#068B Johnson Ave & Lizzie St - AM PEAK

LOCATION#:	068B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Lizzie St	VICINITY:	SLO

DIRECTION:	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
7:00 AM	0	1	1	1	1	4	0	1	0	0	2	0	11
7:15 AM	0	2	0	0	0	0	0	0	0	0	2	0	4
7:30 AM	0	2	0	0	0	4	0	0	1	0	1	0	8
7:45 AM	0	3	0	0	0	3	0	0	0	0	0	1	7
8:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
8:15 AM	1	0	0	0	0	0	0	1	0	0	0	1	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	2
8:45 AM	0	2	0	0	1	1	0	0	0	2	3	1	10

VOLUME STATS:	1	2	3	4	5	6	7	8	9	10	11	12	
TOTAL:	1	10	1	1	2	12	0	4	1	2	8	5	47

QUALITY TRAFFIC DATA, LLC

PEDESTRIAN TURNING MOVEMENT COUNT

#068B Johnson Ave & Lizzie St - MD PEAK

LOCATION#:	068B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Lizzie St	VICINITY:	SLO

DIRECTION:	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
11:30 AM	0	0	0	2	0	1	0	0	0	0	0	1	4
11:45 AM	0	0	0	0	0	1	0	0	1	0	0	2	4
12:00 PM	0	0	1	0	0	1	0	0	1	0	0	2	5
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	3
12:30 PM	0	0	0	0	1	1	0	0	0	1	0	2	5
12:45 PM	0	0	0	0	0	0	1	0	2	0	2	1	6
1:00 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
1:15 PM	0	1	0	0	0	1	2	0	0	1	0	2	7

VOLUME STATS:	1	2	3	4	5	6	7	8	9	10	11	12	
TOTAL:	0	1	1	2	3	5	3	0	4	2	3	13	37

QUALITY TRAFFIC DATA, LLC

PEDESTRIAN TURNING MOVEMENT COUNT

#068B Johnson Ave & Lizzie St - PM PEAK

LOCATION#:	068B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Lizzie St	VICINITY:	SLO

DIRECTION:	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
3:15 PM	0	0	10	4	4	2	2	0	1	0	0	2	25
3:30 PM	0	0	0	1	0	3	0	0	0	0	2	3	9
3:45 PM	0	0	1	0	0	0	0	0	0	0	0	1	2
4:00 PM	0	0	1	1	0	0	0	0	0	0	1	0	3
4:15 PM	0	1	2	2	0	0	0	0	0	0	1	0	6
4:30 PM	0	0	2	2	0	0	0	0	0	0	1	0	5
4:45 PM	0	0	0	0	1	4	0	0	1	0	1	0	7
5:00 PM	1	2	1	0	0	0	0	1	0	0	0	1	6

VOLUME STATS:	1	2	3	4	5	6	7	8	9	10	11	12	
TOTAL:	1	3	17	10	5	9	2	1	2	0	6	7	63

QUALITY TRAFFIC DATA, LLC

BICYCLE TURNING MOVEMENT COUNT

#068B Johnson Ave & Lizzie St - AM PEAK

LOCATION#:	068B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Lizzie St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	2	0	1	2	0	0.5	0.5	1	0	1	1	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
7:15 AM	0	2	0	0	0	0	1	1	0	0	0	0	4
7:30 AM	0	5	0	0	0	0	2	0	0	0	0	0	7
7:45 AM	0	7	0	0	0	0	5	2	0	0	0	2	16
8:00 AM	0	7	0	0	1	0	0	0	0	0	0	1	9
8:15 AM	0	4	0	0	0	0	0	0	0	0	0	1	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	3

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	26	0	0	2	0	8	3	0	0	0	7	46
P.H.V: 1	0	23	0	0	1	0	7	2	0	0	0	4	37
P.H.F: 2		0.821			0.250			0.321			0.500		0.578

(1) Peak Hour Volume (Peak Hour Begins At 730 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

BICYCLE TURNING MOVEMENT COUNT

#068B Johnson Ave & Lizzie St - MD PEAK

LOCATION#:	068B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Lizzie St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	2	0	1	2	0	0.5	0.5	1	0	1	1	
11:30 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
11:45 AM	0	6	0	0	2	0	1	0	0	0	0	1	10
12:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	0	3	1	0	1	0	0	0	1	0	0	0	6
12:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	5
1:00 PM	0	4	0	1	0	0	0	0	0	0	0	1	6
1:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	18	1	1	9	0	1	0	1	0	0	3	34
P.H.V: [1]	0	10	1	1	4	0	0	0	1	0	0	2	19
P.H.F: [2]		0.688			0.625			0.250			0.500		0.792

(1) Peak Hour Volume (Peak Hour Begins At 1230 PM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

BICYCLE TURNING MOVEMENT COUNT

#068B Johnson Ave & Lizzie St - PM PEAK

LOCATION#:	068B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Lizzie St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	2	0	1	2	0	0.5	0.5	1	0	1	1	
3:15 PM	0	0	0	0	1	0	0	0	0	0	0	1	2
3:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	3
3:45 PM	0	0	0	0	5	0	0	0	0	0	0	0	5
4:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	1	0	1	0	0	0	0	0	2
4:30 PM	1	2	0	0	3	0	0	0	0	0	0	1	7
4:45 PM	0	3	0	0	1	0	0	0	0	0	0	1	5
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	1	6	0	0	15	0	1	0	0	0	0	4	27
P.H.V: 1	1	5	0	0	7	0	1	0	0	0	0	2	16
P.H.F: 2		0.500			0.583			0.250			0.500		0.571

(1) Peak Hour Volume (Peak Hour Begins At 400 PM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

PEAK HOUR ITM SUMMARY

#069B Johnson Ave & Ella St

LOCATION#:	069B	QTD PROJ#:	2018229	AM PEAK:	730 AM
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018	MD PEAK:	1145 AM
EAST / WEST:	Ella St	VICINITY:	SLO	PM PEAK:	415 PM

Johnson Ave

Ella St

SOUTHBOUND LANES

LN	0	2	1
AM	49 (0)	688	2 (0)
MD	77 (7)	577	0 (0)
PM	85 (2)	807	2 (0)
TOTAL	211 (9)	2072	4 (0)

EASTBOUND LANES

LN	AM	MD	PM	TOTAL
0.5	72 (0)	75 (0)	71 (0)	218 (0)
0.5	0	0	3	3
1	8 (32)	27 (20)	22 (55)	57 (107)

SIGNALIZED

WESTBOUND LANES

TOTAL	PM	MD	AM	LN
1 (11)	0 (2)	1 (3)	0 (6)	1
2	2	0	0	0.5
12 (0)	3 (0)	3 (0)	6 (0)	0.5

Ella St

Johnson Ave

TOTAL	97 (0)	2270	4 (3)
PM	26 (0)	712	0 (0)
MD	32 (0)	582	2 (2)
AM	39 (0)	976	2 (1)
LN	1	2	0

NORTHBOUND LANES

QUALITY TRAFFIC DATA, LLC

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	11:30 AM	TO	1:30 PM
PM COUNT	3:15 PM	TO	5:15 PM

VEHICLE TURNING MOVEMENT COUNT

#069B Johnson Ave & Ella St - AM PEAK

LOCATION#:	069B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Ella St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	TOTALS
LANES:	1	2	0	0	1	2	0	0	0.5	0.5	1	0	0.5	0.5	1	0	
7:00 AM	6	89	0	0	0	65	6	2	18	0	2	1	0	0	0	0	189
7:15 AM	5	140	0	0	1	83	6	0	14	0	5	1	2	0	0	3	260
7:30 AM	10	285	0	0	0	116	10	0	14	0	7	4	2	0	0	2	450
7:45 AM	17	302	0	0	2	224	11	0	20	0	1	9	2	0	0	2	590
8:00 AM	9	184	1	0	0	189	16	0	20	0	0	8	1	0	0	1	429
8:15 AM	3	205	1	1	0	159	12	0	18	0	0	11	1	0	0	1	412
8:30 AM	12	208	0	0	0	160	15	1	15	0	0	9	0	0	0	0	420
8:45 AM	15	197	0	0	0	142	8	0	18	0	0	7	0	0	1	1	389

VOLUME STATS:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	
TOTAL:	77	1610	2	1	3	1138	84	3	137	0	15	50	8	0	1	10	3139
P.H.V: [1]	39	976	2	1	2	688	49	0	72	0	8	32	6	0	0	6	1881
P.H.F: [2]	0.798				0.780				0.933				0.750				0.797

(1) Peak Hour Volume (Peak Hour Begins At 730 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

VEHICLE TURNING MOVEMENT COUNT

#069B Johnson Ave & Ella St - MD PEAK

LOCATION#:	069B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Ella St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	TOTALS
LANES:	1	2	0	0	1	2	0	0	0.5	0.5	1	0	0.5	0.5	1	0	
11:30 AM	9	111	0	0	0	124	14	2	19	0	10	8	2	0	1	0	300
11:45 AM	9	167	2	1	0	138	20	3	21	0	5	6	1	0	0	1	374
12:00 PM	6	148	0	1	0	163	23	1	20	0	13	4	1	0	1	1	382
12:15 PM	8	132	0	0	0	138	20	1	16	0	3	6	1	0	0	1	326
12:30 PM	9	135	0	0	0	138	14	2	18	0	6	4	0	0	0	0	326
12:45 PM	7	125	1	0	0	128	16	2	11	0	5	7	0	0	0	0	302
1:00 PM	3	115	0	0	0	119	9	0	21	0	3	6	0	0	1	0	277
1:15 PM	9	125	1	0	0	133	22	1	21	0	11	4	0	1	0	0	328

VOLUME STATS:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	
TOTAL:	60	1058	4	2	0	1081	138	12	147	0	56	45	5	1	3	3	2615
P.H.V: [1]	32	582	2	2	0	577	77	7	75	0	27	20	3	0	1	3	1408
P.H.F: [2]		0.863				0.884				0.824				0.583			0.921

(1) Peak Hour Volume (Peak Hour Begins At 1145 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

VEHICLE TURNING MOVEMENT COUNT

#069B Johnson Ave & Ella St - PM PEAK

LOCATION#:	069B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Ella St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	TOTALS
LANES:	1	2	0	0	1	2	0	0	0.5	0.5	1	0	0.5	0.5	1	0	
3:15 PM	6	150	0	0	0	277	16	1	18	0	5	10	11	0	0	0	494
3:30 PM	7	175	0	0	0	176	11	1	17	0	5	12	1	1	0	0	406
3:45 PM	5	164	0	0	0	169	19	0	19	0	6	6	0	0	0	0	388
4:00 PM	9	136	0	0	1	185	13	0	20	0	4	11	1	0	1	0	381
4:15 PM	6	158	0	0	1	197	25	0	15	0	3	8	0	1	0	0	414
4:30 PM	5	162	0	0	1	194	20	1	12	0	5	18	1	0	0	0	419
4:45 PM	8	177	0	0	0	190	20	1	21	0	4	9	1	0	0	0	431
5:00 PM	7	215	0	0	0	226	20	0	23	3	10	20	1	1	0	2	528

VOLUME STATS:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	
TOTAL:	53	1337	0	0	3	1614	144	4	145	3	42	94	16	3	1	2	3461
P.H.V: (1)	26	712	0	0	2	807	85	2	71	3	22	55	3	2	0	2	1792
P.H.F: (2)	0.831				0.911				0.674				0.438				0.848

(1) Peak Hour Volume (Peak Hour Begins At 415 PM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

PEDESTRIAN TURNING MOVEMENT COUNT

#069B Johnson Ave & Ella St - AM PEAK

LOCATION#:	069B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Ella St	VICINITY:	SLO

DIRECTION:	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
7:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	3	0	0	0	4	0	0	0	0	0	0	7
7:45 AM	1	1	0	0	0	1	1	0	0	0	0	0	4
8:00 AM	1	0	0	0	0	0	0	0	2	2	0	0	5
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	1	0	0	0	0	0	0	1	0	0	0	0	2
8:45 AM	1	0	0	0	2	1	0	0	0	0	0	0	4

VOLUME STATS:	1	2	3	4	5	6	7	8	9	10	11	12	
TOTAL:	6	4	0	0	3	6	1	1	3	2	0	0	26

QUALITY TRAFFIC DATA, LLC

PEDESTRIAN TURNING MOVEMENT COUNT

#069B Johnson Ave & Ella St - MD PEAK

LOCATION#:	069B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Ella St	VICINITY:	SLO

DIRECTION:	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
11:30 AM	1	0	0	0	0	0	1	0	0	1	0	0	3
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM	0	0	1	0	0	3	0	0	0	0	0	0	4
12:15 PM	1	0	1	0	0	1	0	0	0	0	0	0	3
12:30 PM	1	0	0	0	0	0	0	0	2	1	0	0	4
12:45 PM	0	0	0	0	1	0	1	0	1	1	0	0	4
1:00 PM	1	2	0	0	2	0	0	0	0	0	0	0	5
1:15 PM	4	0	0	0	0	1	1	0	0	0	0	0	6

VOLUME STATS:	1	2	3	4	5	6	7	8	9	10	11	12	
TOTAL:	8	2	2	0	3	5	3	0	3	3	0	0	29

QUALITY TRAFFIC DATA, LLC

PEDESTRIAN TURNING MOVEMENT COUNT

#069B Johnson Ave & Ella St - PM PEAK

LOCATION#:	069B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Ella St	VICINITY:	SLO

DIRECTION:	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
3:15 PM	1	0	0	0	2	1	0	0	0	1	0	0	5
3:30 PM	2	1	0	0	0	3	0	0	0	0	0	0	6
3:45 PM	1	0	0	0	0	1	0	0	0	0	0	0	2
4:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
4:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1

VOLUME STATS:	1	2	3	4	5	6	7	8	9	10	11	12	
TOTAL:	6	1	1	0	2	6	1	0	1	1	0	0	19

QUALITY TRAFFIC DATA, LLC

BICYCLE TURNING MOVEMENT COUNT

#069B Johnson Ave & Ella St - AM PEAK

LOCATION#:	069B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Ella St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	2	0	1	2	0	0.5	0.5	1	0.5	0.5	1	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
7:45 AM	0	8	1	0	0	0	0	0	0	0	0	0	9
8:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
8:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	24	1	0	0	0	0	0	0	0	0	0	25
P.H.V: 1	0	20	1	0	0	0	0	0	0	0	0	0	21
P.H.F: 2		0.583			0.000			0.000			0.000		0.583

(1) Peak Hour Volume (Peak Hour Begins At 730 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

BICYCLE TURNING MOVEMENT COUNT

#069B Johnson Ave & Ella St - MD PEAK

LOCATION#:	069B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Ella St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	2	0	1	2	0	0.5	0.5	1	0.5	0.5	1	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	6	0	0	0	0	0	0	0	0	0	0	6
12:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
12:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
12:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
1:00 PM	1	3	0	0	0	0	0	0	0	0	0	0	4
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	1	15	0	0	2	0	0	0	0	0	0	0	18
P.H.V: 1	0	10	0	0	2	0	0	0	0	0	0	0	12
P.H.F: 2		0.417			0.250			0.000			0.000		0.500

(1) Peak Hour Volume (Peak Hour Begins At 1145 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

BICYCLE TURNING MOVEMENT COUNT

#069B Johnson Ave & Ella St - PM PEAK

LOCATION#:	069B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Ella St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	2	0	1	2	0	0.5	0.5	1	0.5	0.5	1	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	3	0	0	1	0	0	0	0	0	0	0	4
4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	1	0	0	0	0	0	2	0	3

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	6	0	0	7	0	0	0	0	0	3	0	16
P.H.V: 1	0	5	0	0	3	0	0	0	0	0	2	0	10
P.H.F: 2		0.417			0.750			0.000			0.250		0.625

(1) Peak Hour Volume (Peak Hour Begins At 415 PM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

PEAK HOUR ITM SUMMARY

#071B Johnson Ave & Sydney St

LOCATION#:	071B	QTD PROJ#:	2018229	AM PEAK:	730 AM
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018	MD PEAK:	1130 AM
EAST / WEST:	Sydney St	VICINITY:	SLO	PM PEAK:	430 PM

Johnson Ave

SOUTHBOUND LANES

LN	0	2	1
AM	53 (0)	429	16 (0)
MD	25 (0)	496	29 (0)
PM	38 (0)	814	58 (0)
TOTAL	116 (0)	1739	103 (0)

Sydney St

EASTBOUND LANES

LN	AM	MD	PM	TOTAL
0	28 (0)	13 (0)	22 (0)	63 (0)
1	1	1	4	6
0	17 (0)	3 (0)	12 (0)	32 (0)

2-WAY STOP (E/W)

WESTBOUND LANES

TOTAL	PM	MD	AM	LN
124 (0)	19 (0)	32 (0)	73 (0)	0
11	1	2	8	1
24 (0)	10 (0)	10 (0)	5 (0)	0

Sydney St

TOTAL	57 (0)	1777	31 (0)
PM	18 (0)	529	11 (0)
MD	7 (0)	409	13 (0)
AM	32 (0)	839	7 (0)
LN	1	2	0

NORTHBOUND LANES

Johnson Ave

QUALITY TRAFFIC DATA, LLC

AM COUNT	7:00 AM	TO	9:00 AM
MD COUNT	11:30 AM	TO	1:30 PM
PM COUNT	4:00 PM	TO	6:00 PM

VEHICLE TURNING MOVEMENT COUNT

#071B Johnson Ave & Sydney St - AM PEAK

LOCATION#:	071B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Sydney St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	TOTALS
LANES:	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
7:00 AM	0	83	0	0	4	41	2	0	1	0	2	0	1	1	10	0	145
7:15 AM	6	135	1	0	3	49	3	0	3	0	0	0	0	2	8	0	210
7:30 AM	4	243	2	0	5	80	10	0	9	1	3	0	2	0	15	0	374
7:45 AM	3	278	1	0	3	153	8	0	7	0	5	0	0	0	19	0	477
8:00 AM	7	147	1	0	5	103	16	0	5	0	0	0	2	2	20	0	308
8:15 AM	18	171	3	0	3	93	19	0	7	0	9	0	1	6	19	0	349
8:30 AM	2	133	1	0	8	115	7	0	9	0	1	0	2	0	12	0	290
8:45 AM	1	163	3	0	7	93	2	0	7	0	2	0	0	0	16	0	294

VOLUME STATS:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	
TOTAL:	41	1353	12	0	38	727	67	0	48	1	22	0	8	11	119	0	2447
P.H.V: (1)	32	839	7	0	16	429	53	0	28	1	17	0	5	8	73	0	1508
P.H.F: (2)		0.778				0.759				0.719				0.827			0.790

(1) Peak Hour Volume (Peak Hour Begins At 730 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

VEHICLE TURNING MOVEMENT COUNT

#071B Johnson Ave & Sydney St - MD PEAK

LOCATION#:	071B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Sydney St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	TOTALS
LANES:	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
11:30 AM	2	90	3	0	5	120	5	0	3	0	1	0	0	0	9	0	238
11:45 AM	1	117	3	0	3	128	4	0	5	0	0	0	4	1	9	0	275
12:00 PM	2	100	4	0	14	140	7	0	0	1	1	0	2	1	4	0	276
12:15 PM	2	102	3	0	7	108	9	0	5	0	1	0	4	0	10	0	251
12:30 PM	2	87	6	0	10	107	6	0	6	0	1	0	2	0	8	0	235
12:45 PM	1	104	0	0	6	98	7	0	3	0	4	0	2	1	5	0	231
1:00 PM	0	95	1	0	3	96	7	0	1	0	1	0	2	0	12	0	218
1:15 PM	1	103	3	0	9	96	5	0	4	0	0	0	2	0	9	0	232

VOLUME STATS:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	
TOTAL:	11	798	23	0	57	893	50	0	27	1	9	0	18	3	66	0	1956
P.H.V: (1)	7	409	13	0	29	496	25	0	13	1	3	0	10	2	32	0	1040
P.H.F: (2)		0.886				0.854				0.708				0.786			0.942

(1) Peak Hour Volume (Peak Hour Begins At 1130 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

VEHICLE TURNING MOVEMENT COUNT

#071B Johnson Ave & Sydney St - PM PEAK

LOCATION#:	071B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Sydney St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	TOTALS
LANES:	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
4:00 PM	4	103	2	0	10	172	5	0	6	1	1	0	0	2	5	0	311
4:15 PM	2	95	0	0	11	176	10	0	1	0	4	0	1	0	10	0	310
4:30 PM	2	108	5	0	19	204	7	0	8	0	4	0	2	0	4	0	363
4:45 PM	4	118	0	0	14	181	9	0	4	2	2	0	6	1	7	0	348
5:00 PM	5	154	5	0	8	232	13	0	4	1	2	0	0	0	5	0	429
5:15 PM	7	149	1	0	17	197	9	0	6	1	4	0	1	0	3	0	395
5:30 PM	2	113	3	0	11	153	10	0	5	0	1	0	2	0	5	0	305
5:45 PM	0	117	5	0	13	123	9	0	2	0	1	0	3	0	10	0	283

VOLUME STATS:	NL	NT	NR	NRTOR	SL	ST	SR	SRTOR	EL	ET	ER	ERTOR	WL	WT	WR	WRTOR	
TOTAL:	26	957	21	0	103	1438	72	0	36	5	19	0	15	3	49	0	2744
P.H.V: (1)	18	529	11	0	58	814	38	0	22	4	12	0	9	1	19	0	1535
P.H.F: (2)	0.851				0.899				0.792				0.518				0.895

(1) Peak Hour Volume (Peak Hour Begins At 430 PM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

PEDESTRIAN TURNING MOVEMENT COUNT

#071B Johnson Ave & Sydney St - AM PEAK

LOCATION#:	071B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Sydney St	VICINITY:	SLO

DIRECTION:	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
7:15 AM	2	0	0	2	0	2	0	0	0	0	0	0	6
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	1	0	0	0	0	0	0	2	0	0	0	0	3
8:00 AM	3	0	0	0	1	0	0	9	1	0	1	0	15
8:15 AM	0	0	0	0	2	1	0	4	1	0	1	0	9
8:30 AM	0	0	0	1	1	0	0	1	0	0	2	0	5
8:45 AM	0	0	0	0	0	0	2	0	0	0	0	0	2

VOLUME STATS:	1	2	3	4	5	6	7	8	9	10	11	12	
TOTAL:	6	1	0	3	4	3	3	16	2	0	4	0	42

QUALITY TRAFFIC DATA, LLC

PEDESTRIAN TURNING MOVEMENT COUNT

#071B Johnson Ave & Sydney St - MD PEAK

LOCATION#:	071B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Sydney St	VICINITY:	SLO

DIRECTION:	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
11:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM	0	0	0	0	0	0	0	0	1	0	0	2	3
12:15 PM	2	0	0	0	0	0	0	0	0	0	0	1	3
12:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
12:45 PM	1	0	0	0	0	0	0	1	0	0	0	0	2
1:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	1	2	3	4	5	6	7	8	9	10	11	12	
TOTAL:	3	0	0	0	0	1	0	2	1	0	1	3	11

QUALITY TRAFFIC DATA, LLC

PEDESTRIAN TURNING MOVEMENT COUNT

#071B Johnson Ave & Sydney St - PM PEAK

LOCATION#:	071B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Sydney St	VICINITY:	SLO

DIRECTION:	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	2	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	2
4:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	2
5:00 PM	0	0	1	0	1	0	0	0	0	0	5	0	7
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	1	2
5:30 PM	0	0	0	0	0	0	2	0	0	0	0	2	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	5	5

VOLUME STATS:	1	2	3	4	5	6	7	8	9	10	11	12	
TOTAL:	0	0	1	0	2	0	2	0	1	0	7	12	25

QUALITY TRAFFIC DATA, LLC

BICYCLE TURNING MOVEMENT COUNT

#071B Johnson Ave & Sydney St - AM PEAK

LOCATION#:	071B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Sydney St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	2	0	1	2	0	0	1	0	0	1	0	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	4	0	0	0	2	0	0	0	0	0	0	6
7:45 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	0	12	0	0	1	3	0	0	0	0	0	0	16
P.H.V: 1	0	10	0	0	0	3	0	0	0	0	0	0	13
P.H.F: 2		0.625			0.375			0.000			0.000		0.542

(1) Peak Hour Volume (Peak Hour Begins At 715 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

BICYCLE TURNING MOVEMENT COUNT

#071B Johnson Ave & Sydney St - MD PEAK

LOCATION#:	071B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Sydney St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	2	0	1	2	0	0	1	0	0	1	0	
11:30 AM	0	3	0	0	2	0	0	0	0	0	0	0	5
11:45 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
12:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	1	0	0	1	0	0	0	0	0	0	1	0	3
12:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
1:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	

VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	1	12	0	1	3	0	0	0	0	0	1	0	18
P.H.V: [1]	1	6	0	1	3	0	0	0	0	0	1	0	12
P.H.F: [2]		0.583			0.500			0.000			0.250		0.600

(1) Peak Hour Volume (Peak Hour Begins At 1130 AM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

BICYCLE TURNING MOVEMENT COUNT

#071B Johnson Ave & Sydney St - PM PEAK

LOCATION#:	071B	QTD PROJ#:	2018229
NORTH / SOUTH:	Johnson Ave	DATE:	Tuesday, October 23, 2018
EAST / WEST:	Sydney St	VICINITY:	SLO

DIRECTION:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTALS
LANES:	1	2	0	1	2	0	0	1	0	0	1	0	
4:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	2
4:30 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	3	0	0	0	0	0	0	0	4
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	

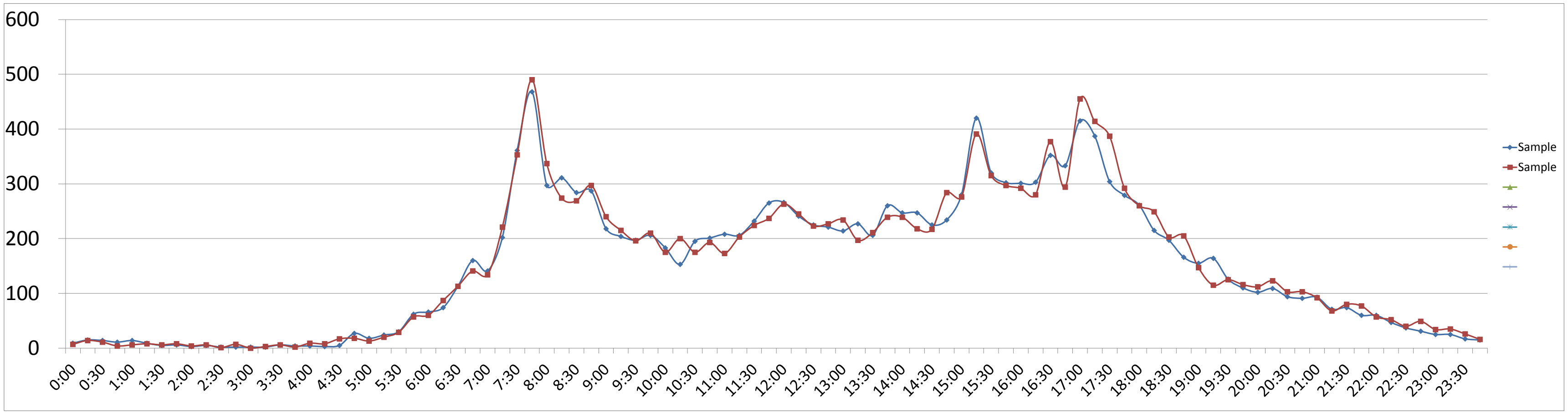
VOLUME STATS:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
TOTAL:	1	2	0	0	10	0	0	0	0	0	0	0	13
P.H.V: 1	1	2	0	0	8	0	0	0	0	0	0	0	11
P.H.F: 2		0.750			0.667			0.000			0.000		0.688

(1) Peak Hour Volume (Peak Hour Begins At 400 PM)
(2) Peak Hour Factor (directional aggregate)

QUALITY TRAFFIC DATA, LLC

Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 090A	GPS COORDINATES:	35.27598, -120.64779
ON STREET:	Johnson Ave	START DATE:	Tuesday, October 23, 2018
CROSS STREETS:	between Bishop St and Sydney St (n/o Smith St)	VICINITY:	San Luis Obispo



QUALITY TRAFFIC DATA, LLC
Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 090A	GPS COORDINATES:	35.27598, -120.64779
ON STREET:	Johnson Ave	START DATE:	Tuesday, October 23, 2018
CROSS STREETS:	between Bishop St and Sydney St (n/o Smith St)	VICINITY:	San Luis Obispo

AM COUNTS								PM COUNTS							
	NB		SB		EB	WB			NB		SB		EB	WB	
00:00	1		8					12:00	105		161				
00:15	5		10					12:15	117		124				
00:30	5		9					12:30	101		124				
00:45	4	*15*	7	*34*			*49*	12:45	111	*434*	110	*519*			*953*
01:00	4		10					13:00	108		106				
01:15	1		8					13:15	117		110				
01:30	2		3					13:30	100		106				
01:45	1	*8*	5	*26*			*34*	13:45	139	*464*	121	*443*			*907*
02:00	0		3					14:00	106		141				
02:15	3		2					14:15	116		131				
02:30	2		0					14:30	106		119				
02:45	2	*7*	0	*5*			*12*	14:45	117	*445*	117	*508*			*953*
03:00	1		1					15:00	134		146				
03:15	1		1					15:15	139		281				
03:30	3		3					15:30	139		181				
03:45	3	*8*	1	*6*			*14*	15:45	133	*545*	169	*777*			*1322*
04:00	3		1					16:00	114		187				
04:15	1		2					16:15	107		196				
04:30	4		1					16:30	121		231				
04:45	16	*24*	11	*15*			*39*	16:45	129	*471*	204	*818*			*1289*
05:00	8		10					17:00	162		253				
05:15	11		13					17:15	161		226				
05:30	20		10					17:30	121		183				
05:45	37	*76*	25	*58*			*134*	17:45	131	*575*	148	*810*			*1385*
06:00	35		31					18:00	111		150				
06:15	36		38					18:15	71		144				
06:30	67		46					18:30	86		111				
06:45	95	*233*	65	*180*			*413*	18:45	78	*346*	88	*493*			*839*
07:00	94		47					19:00	65		90				
07:15	146		56					19:15	65		99				
07:30	266		95					19:30	57		69				
07:45	304	*810*	164	*362*			*1172*	19:45	48	*235*	62	*320*			*555*
08:00	173		124					20:00	38		64				
08:15	197		114					20:15	40		69				
08:30	154		130					20:30	32		62				
08:45	185	*709*	102	*470*			*1179*	20:45	38	*148*	53	*248*			*396*
09:00	123		95					21:00	30		63				
09:15	108		96					21:15	18		53				
09:30	100		97					21:30	29		45				
09:45	117	*448*	89	*377*			*825*	21:45	19	*96*	41	*202*			*298*
10:00	100		83					22:00	21		39				
10:15	76		77					22:15	15		32				
10:30	90		105					22:30	18		19				
10:45	98	*364*	103	*368*			*732*	22:45	12	*66*	19	*109*			*175*
11:00	85		123					23:00	7		18				
11:15	91		115					23:15	12		13				
11:30	102		130					23:30	4		13				
11:45	131	*409*	134	*502*			*911*	23:45	5	*28*	10	*54*			*82*
TOTALS:		**3111**		**2403**			**5514**	**TOTALS:**		**3853**		**5301**			**9154**

SPLIT	56.4%	43.6%	**37.6 %**	**SPLIT**	42.1%	57.9%	**62.4 %**
PEAK HOUR	07:30	11:30	**07:30**	PEAK HOUR	17:00	16:30	**16:30**
PH VOLUME	940	549	**1437**	PH VOLUME	575	914	**1487**
PHF	0.77	0.85	**0.77**	PHF	0.87	0.90	**0.90**

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
6964	7704			**14668**

QUALITY TRAFFIC DATA, LLC
Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 090A	GPS COORDINATES:	35.27598, -120.64779
ON STREET:	Johnson Ave	START DATE:	Wednesday, October 24, 2018
CROSS STREETS:	between Bishop St and Sydney St (n/o Smith St)	VICINITY:	San Luis Obispo

AM COUNTS

	NB		SB		EB		WB		
00:00	1		6						
00:15	4		10						
00:30	5		6						
00:45	1	*11*	3	*25*					*36*
01:00	5		1						
01:15	5		3						
01:30	1		5						
01:45	2	*13*	6	*15*					*28*
02:00	0		4						
02:15	1		5						
02:30	1		0						
02:45	3	*5*	4	*13*					*18*
03:00	0		0						
03:15	1		2						
03:30	4		2						
03:45	2	*7*	0	*4*					*11*
04:00	7		2						
04:15	3		5						
04:30	7		10						
04:45	15	*32*	3	*20*					*52*
05:00	7		6						
05:15	10		10						
05:30	19		10						
05:45	31	*67*	26	*52*					*119*
06:00	33		27						
06:15	44		43						
06:30	62		51						
06:45	81	*220*	60	*181*					*401*
07:00	94		40						
07:15	165		56						
07:30	261		92						
07:45	321	*841*	169	*357*					*1198*
08:00	179		158						
08:15	167		107						
08:30	162		107						
08:45	171	*679*	126	*498*					*1177*
09:00	130		110						
09:15	108		107						
09:30	108		88						
09:45	115	*461*	95	*400*					*861*
10:00	80		95						
10:15	87		113						
10:30	81		94						
10:45	99	*347*	94	*396*					*743*
11:00	80		93						
11:15	98		105						
11:30	108		116						
11:45	118	*404*	119	*433*					*837*
TOTALS:		**3087**		**2394**					**5481**

PM COUNTS

	NB		SB		EB		WB		
12:00	117		146						
12:15	107		138						
12:30	109		114						
12:45	109	*442*	118	*516*					*958*
13:00	103		131						
13:15	86		111						
13:30	116		95						
13:45	124	*429*	115	*452*					*881*
14:00	91		148						
14:15	93		125						
14:30	99		118						
14:45	130	*413*	154	*545*					*958*
15:00	120		156						
15:15	121		270						
15:30	125		190						
15:45	129	*495*	168	*784*					*1279*
16:00	110		182						
16:15	102		178						
16:30	131		246						
16:45	126	*469*	168	*774*					*1243*
17:00	173		282						
17:15	167		247						
17:30	174		213						
17:45	148	*662*	144	*886*					*1548*
18:00	105		155						
18:15	93		156						
18:30	87		116						
18:45	103	*388*	102	*529*					*917*
19:00	49		98						
19:15	49		66						
19:30	57		68						
19:45	52	*207*	64	*296*					*503*
20:00	45		67						
20:15	49		74						
20:30	41		62						
20:45	39	*174*	64	*267*					*441*
21:00	28		64						
21:15	20		48						
21:30	29		51						
21:45	32	*109*	45	*208*					*317*
22:00	21		36						
22:15	22		30						
22:30	11		29						
22:45	18	*72*	31	*126*					*198*
23:00	19		15						
23:15	10		25						
23:30	11		15						
23:45	7	*47*	9	*64*					*111*
TOTALS:		**3907**		**5447**					**9354**

	NB	SB	EB	WB	Total
SPLIT	56.3%	43.7%			**36.9%**
PEAK HOUR	07:30	07:45			**07:30**
PH VOLUME	928	541			**1454**
PHF	0.72	0.80			**0.74**

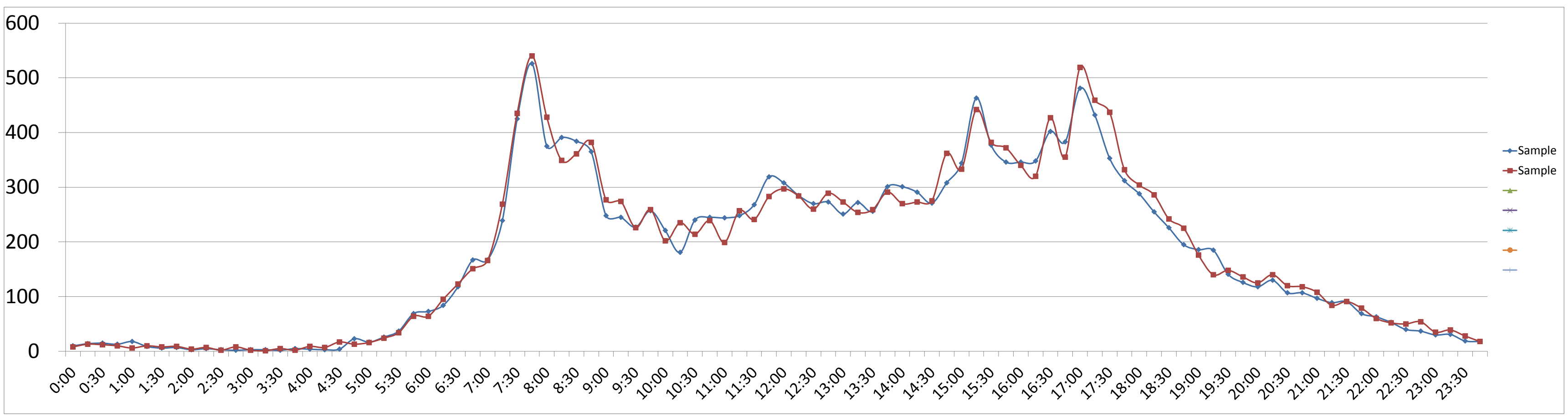
	NB	SB	EB	WB	Total
SPLIT	41.8%	58.2%			**63.1%**
PEAK HOUR	17:00	16:30			**16:45**
PH VOLUME	662	943			**1550**
PHF	0.99	0.84			**0.85**

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
6994	7841			**14835**

QUALITY TRAFFIC DATA, LLC
Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

QTD PROJ/LOC #:	2018229 - 089A	GPS COORDINATES:	35.27598, -120.64779
ON STREET:	Johnson Ave	START DATE:	Tuesday, October 23, 2018
CROSS STREETS:	between Ella St and Bishop St	VICINITY:	San Luis Obispo



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Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 089A	GPS COORDINATES:	35.27598, -120.64779
ON STREET:	Johnson Ave	START DATE:	Tuesday, October 23, 2018
CROSS STREETS:	between Ella St and Bishop St	VICINITY:	San Luis Obispo

AM COUNTS	NB		SB		EB		WB			PM COUNTS	NB		SB		EB		WB		
00:00	1		9							12:00	132		176						
00:15	5		9							12:15	142		143						
00:30	5		10							12:30	132		138						
00:45	4	*15*	9	*37*					*52*	12:45	127	*533*	146	*603*					*1136*
01:00	6		12							13:00	123		128						
01:15	1		8							13:15	128		144						
01:30	2		4							13:30	113		143						
01:45	2	*11*	5	*29*					*40*	13:45	156	*520*	145	*560*					*1080*
02:00	0		3							14:00	128		173						
02:15	3		2							14:15	135		156						
02:30	2		1							14:30	122		149						
02:45	2	*7*	0	*6*					*13*	14:45	149	*534*	159	*637*					*1171*
03:00	2		1							15:00	184		160						
03:15	1		2							15:15	152		311						
03:30	1		1							15:30	181		196						
03:45	4	*8*	1	*5*					*13*	15:45	157	*674*	189	*856*					*1530*
04:00	3		1							16:00	148		198						
04:15	1		2							16:15	142		206						
04:30	3		1							16:30	167		235						
04:45	13	*20*	10	*14*					*34*	16:45	168	*625*	215	*854*					*1479*
05:00	8		9							17:00	225		256						
05:15	13		13							17:15	186		246						
05:30	25		12							17:30	147		206						
05:45	42	*88*	27	*61*					*149*	17:45	152	*710*	160	*868*					*1578*
06:00	41		32							18:00	130		158						
06:15	43		41							18:15	94		161						
06:30	67		51							18:30	100		126						
06:45	94	*245*	73	*197*					*442*	18:45	90	*414*	105	*550*					*964*
07:00	100		67							19:00	77		109						
07:15	153		86							19:15	68		117						
07:30	300		125							19:30	69		72						
07:45	303	*856*	223	*501*					*1357*	19:45	56	*270*	70	*368*					*638*
08:00	180		195							20:00	45		73						
08:15	220		171							20:15	48		82						
08:30	209		175							20:30	40		67						
08:45	210	*819*	155	*696*					*1515*	20:45	50	*183*	57	*279*					*462*
09:00	135		113							21:00	32		65						
09:15	122		123							21:15	28		61						
09:30	117		110							21:30	32		59						
09:45	136	*510*	121	*467*					*977*	21:45	23	*115*	46	*231*					*346*
10:00	121		100							22:00	22		41						
10:15	91		90							22:15	19		34						
10:30	123		117							22:30	18		22						
10:45	124	*459*	121	*428*					*887*	22:45	14	*73*	23	*120*					*193*
11:00	111		133							23:00	10		20						
11:15	112		136							23:15	13		18						
11:30	123		145							23:30	5		14						
11:45	166	*512*	153	*567*					*1079*	23:45	5	*33*	13	*65*					*98*
TOTALS:		3550		3008					6558	TOTALS:		4684		5991					10675

	NB	SB	EB	WB	Total		NB	SB	EB	WB	Total
SPLIT	54.1%	45.9%			38.1%	SPLIT	43.9%	56.1%			61.9%
PEAK HOUR	07:30	07:45			07:30	PEAK HOUR	16:30	16:30			16:30
PH VOLUME	1003	764			1717	PH VOLUME	746	952			1698
PHF	0.83	0.86			0.82	PHF	0.87	0.93			0.88

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
8234	8999			17233

QUALITY TRAFFIC DATA, LLC
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Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 089A	GPS COORDINATES:	35.27598, -120.64779
ON STREET:	Johnson Ave	START DATE:	Wednesday, October 24, 2018
CROSS STREETS:	between Ella St and Bishop St	VICINITY:	San Luis Obispo

AM COUNTS

	NB		SB		EB	WB	
00:00	1		7				
00:15	3		10				
00:30	5		7				
00:45	3	*12*	7	*31*			*43*
01:00	5		1				
01:15	5		5				
01:30	3		5				
01:45	2	*15*	7	*18*			*33*
02:00	0		4				
02:15	1		6				
02:30	1		1				
02:45	4	*6*	4	*15*			*21*
03:00	2		0				
03:15	0		1				
03:30	3		2				
03:45	2	*7*	0	*3*			*10*
04:00	7		2				
04:15	3		4				
04:30	7		10				
04:45	10	*27*	3	*19*			*46*
05:00	10		6				
05:15	14		10				
05:30	23		11				
05:45	37	*84*	27	*54*			*138*
06:00	35		29				
06:15	52		43				
06:30	62		61				
06:45	71	*220*	80	*213*			*433*
07:00	98		68				
07:15	177		92				
07:30	301		134				
07:45	319	*895*	221	*515*			*1410*
08:00	196		232				
08:15	192		157				
08:30	203		158				
08:45	204	*795*	178	*725*			*1520*
09:00	148		129				
09:15	131		143				
09:30	118		108				
09:45	137	*534*	122	*502*			*1036*
10:00	91		111				
10:15	107		128				
10:30	99		115				
10:45	119	*416*	120	*474*			*890*
11:00	100		99				
11:15	125		132				
11:30	124		117				
11:45	144	*493*	139	*487*			*980*
TOTALS:		**3504**		**3056**			**6560**

PM COUNTS

	NB		SB		EB	WB	
12:00	136		161				
12:15	125		159				
12:30	120		140				
12:45	139	*520*	150	*610*			*1130*
13:00	117		156				
13:15	107		147				
13:30	136		123				
13:45	152	*512*	139	*565*			*1077*
14:00	102		168				
14:15	122		151				
14:30	130		145				
14:45	171	*525*	191	*655*			*1180*
15:00	160		173				
15:15	150		292				
15:30	153		229				
15:45	173	*636*	199	*893*			*1529*
16:00	147		193				
16:15	132		188				
16:30	168		259				
16:45	161	*608*	194	*834*			*1442*
17:00	240		279				
17:15	199		260				
17:30	214		223				
17:45	177	*830*	155	*917*			*1747*
18:00	130		174				
18:15	114		172				
18:30	105		137				
18:45	111	*460*	114	*597*			*1057*
19:00	66		110				
19:15	60		80				
19:30	72		76				
19:45	62	*260*	74	*340*			*600*
20:00	50		75				
20:15	60		80				
20:30	51		69				
20:45	41	*202*	77	*301*			*503*
21:00	38		70				
21:15	24		60				
21:30	32		59				
21:45	33	*127*	46	*235*			*362*
22:00	20		40				
22:15	21		31				
22:30	15		35				
22:45	20	*76*	34	*140*			*216*
23:00	19		16				
23:15	12		27				
23:30	13		15				
23:45	7	*51*	11	*69*			*120*
TOTALS:		**4807**		**6156**			**10963**

	NB	SB	Total		NB	SB	Total
SPLIT	53.4%	46.6%	**37.4%**	**SPLIT**	43.8%	56.2%	**62.6%**
PEAK HOUR	07:30	07:45	**07:30**	PEAK HOUR	17:00	16:30	**16:45**
PH VOLUME	1008	768	**1752**	PH VOLUME	830	992	**1770**
PHF	0.79	0.83	**0.81**	PHF	0.90	0.89	**0.85**

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
8311	9212			**17523**

QUALITY TRAFFIC DATA, LLC
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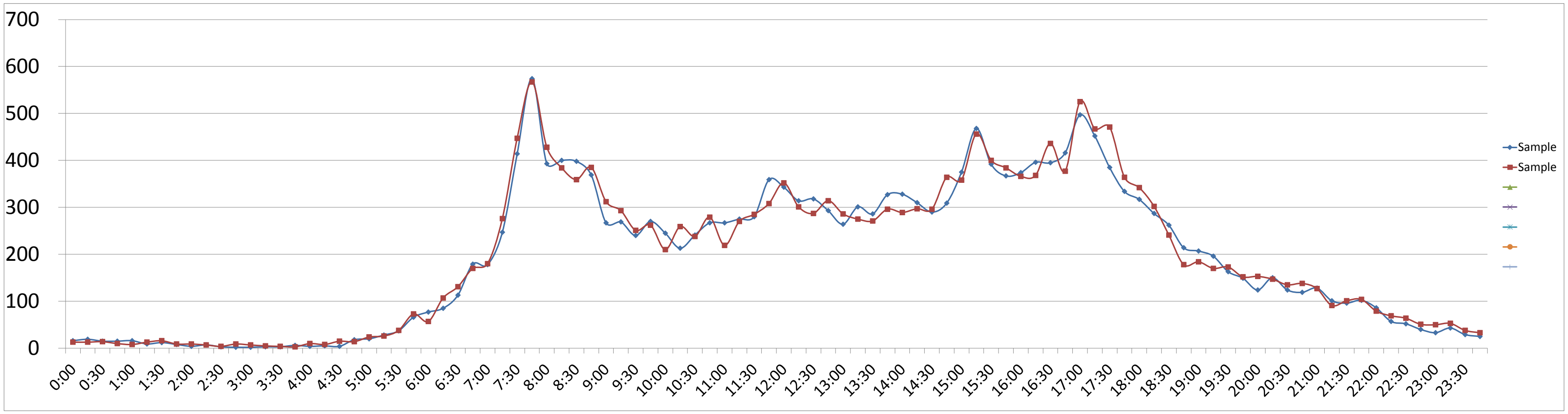
Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 088A	GPS COORDINATES:	35.27868, -120.65022
ON STREET:	Johnson Ave	START DATE:	Tuesday, October 23, 2018
CROSS STREETS:	between San Luis Dr and Ella St (s/o Lizzie St)	VICINITY:	San Luis Obispo



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Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 088A	GPS COORDINATES:	35.27868, -120.65022
ON STREET:	Johnson Ave	START DATE:	Tuesday, October 23, 2018
CROSS STREETS:	between San Luis Dr and Ella St (s/o Lizzie St)	VICINITY:	San Luis Obispo

AM COUNTS	NB		SB		EB		WB			PM COUNTS	NB		SB		EB		WB		
00:00	3		13							12:00	167		176						
00:15	6		13							12:15	158		156						
00:30	2		13							12:30	156		162						
00:45	4	*15*	11	*50*					*65*	12:45	141	*622*	152	*646*					*1268*
01:00	5		11							13:00	137		127						
01:15	1		8							13:15	150		151						
01:30	7		5							13:30	129		157						
01:45	2	*15*	6	*30*					*45*	13:45	162	*578*	165	*600*					*1178*
02:00	1		3							14:00	151		177						
02:15	4		3							14:15	155		155						
02:30	2		1							14:30	148		142						
02:45	2	*9*	0	*7*					*16*	14:45	147	*601*	162	*636*					*1237*
03:00	2		0							15:00	211		164						
03:15	1		2							15:15	171		297						
03:30	1		2							15:30	195		197						
03:45	4	*8*	2	*6*					*14*	15:45	178	*755*	189	*847*					*1602*
04:00	2		2							16:00	161		213						
04:15	3		2							16:15	180		216						
04:30	3		1							16:30	173		222						
04:45	11	*19*	7	*12*					*31*	16:45	195	*709*	221	*872*					*1581*
05:00	12		8							17:00	246		251						
05:15	15		13							17:15	201		251						
05:30	24		13							17:30	170		215						
05:45	37	*88*	29	*63*					*151*	17:45	147	*764*	187	*904*					*1668*
06:00	43		34							18:00	146		171						
06:15	45		40							18:15	112		175						
06:30	64		49							18:30	121		141						
06:45	101	*253*	78	*201*					*454*	18:45	102	*481*	112	*599*					*1080*
07:00	104		74							19:00	88		119						
07:15	161		86							19:15	70		126						
07:30	281		133							19:30	77		86						
07:45	333	*879*	241	*534*					*1413*	19:45	71	*306*	78	*409*					*715*
08:00	207		186							20:00	45		79						
08:15	227		173							20:15	54		96						
08:30	223		175							20:30	49		75						
08:45	223	*880*	146	*680*					*1560*	20:45	47	*195*	72	*322*					*517*
09:00	139		128							21:00	39		89						
09:15	140		129							21:15	28		73						
09:30	142		98							21:30	38		58						
09:45	151	*572*	119	*474*					*1046*	21:45	42	*147*	60	*280*					*427*
10:00	140		105							22:00	34		52						
10:15	120		93							22:15	24		33						
10:30	127		114							22:30	28		24						
10:45	140	*527*	127	*439*					*966*	22:45	14	*100*	26	*135*					*235*
11:00	125		142							23:00	13		20						
11:15	133		142							23:15	15		28						
11:30	136		144							23:30	12		17						
11:45	193	*587*	166	*594*					*1181*	23:45	10	*50*	15	*80*					*130*
TOTALS:		**3852**		**3090**					**6942**	**TOTALS:**		**5308**		**6330**					**11638**

	NB	SB	EB	WB	Total		NB	SB	EB	WB	Total
SPLIT	55.5%	44.5%			**37.4%**	**SPLIT**	45.6%	54.4%			**62.6%**
PEAK HOUR	07:30	07:45			**07:30**	PEAK HOUR	16:30	16:30			**16:30**
PH VOLUME	1048	775			**1781**	PH VOLUME	815	945			**1760**
PHF	0.79	0.80			**0.78**	PHF	0.87	0.94			**0.89**

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
9160	9420			**18580**

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Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 088A	GPS COORDINATES:	35.27868, -120.65022
ON STREET:	Johnson Ave	START DATE:	Wednesday, October 24, 2018
CROSS STREETS:	between San Luis Dr and Ella St (s/o Lizzie St)	VICINITY:	San Luis Obispo

AM COUNTS

	NB		SB		EB	WB	
00:00	3		10				
00:15	3		10				
00:30	5		9				
00:45	3	*14*	7	*36*			*50*
01:00	6		2				
01:15	3		10				
01:30	8		8				
01:45	2	*19*	7	*27*			*46*
02:00	4		5				
02:15	1		6				
02:30	1		3				
02:45	4	*10*	5	*19*			*29*
03:00	3		4				
03:15	2		3				
03:30	3		1				
03:45	3	*11*	0	*8*			*19*
04:00	9		1				
04:15	3		5				
04:30	6		9				
04:45	10	*28*	4	*19*			*47*
05:00	16		8				
05:15	17		9				
05:30	27		11				
05:45	40	*100*	33	*61*			*161*
06:00	28		29				
06:15	58		49				
06:30	64		67				
06:45	79	*229*	91	*236*			*465*
07:00	111		69				
07:15	176		100				
07:30	304		143				
07:45	351	*942*	216	*528*			*1470*
08:00	209		219				
08:15	208		176				
08:30	209		150				
08:45	221	*847*	164	*709*			*1556*
09:00	182		130				
09:15	146		147				
09:30	139		112				
09:45	142	*609*	120	*509*			*1118*
10:00	96		114				
10:15	131		128				
10:30	124		114				
10:45	146	*497*	133	*489*			*986*
11:00	111		108				
11:15	139		131				
11:30	153		132				
11:45	161	*564*	147	*518*			*1082*
TOTALS:		**3870**		**3159**			**7029**

PM COUNTS

	NB		SB		EB	WB	
12:00	167		185				
12:15	142		159				
12:30	150		137				
12:45	149	*608*	165	*646*			*1254*
13:00	129		157				
13:15	126		149				
13:30	149		122				
13:45	157	*561*	139	*567*			*1128*
14:00	123		166				
14:15	136		161				
14:30	143		153				
14:45	179	*581*	185	*665*			*1246*
15:00	187		171				
15:15	164		292				
15:30	176		224				
15:45	186	*713*	198	*885*			*1598*
16:00	173		193				
16:15	167		201				
16:30	175		261				
16:45	164	*679*	213	*868*			*1547*
17:00	253		272				
17:15	212		255				
17:30	239		232				
17:45	189	*893*	175	*934*			*1827*
18:00	158		184				
18:15	123		179				
18:30	97		144				
18:45	133	*511*	45	*552*			*1063*
19:00	71		113				
19:15	77		93				
19:30	76		97				
19:45	71	*295*	81	*384*			*679*
20:00	59		94				
20:15	68		79				
20:30	53		82				
20:45	47	*227*	91	*346*			*573*
21:00	41		86				
21:15	25		66				
21:30	30		71				
21:45	41	*137*	63	*286*			*423*
22:00	31		48				
22:15	29		40				
22:30	19		45				
22:45	19	*98*	32	*165*			*263*
23:00	23		27				
23:15	16		37				
23:30	21		17				
23:45	13	*73*	20	*101*			*174*
TOTALS:		**5376**		**6399**			**11775**

	AM NB	AM SB	AM Total		PM NB	PM SB	PM Total
SPLIT	55.1%	44.9%	**37.4%**	**SPLIT**	45.7%	54.3%	**62.6%**
PEAK HOUR	07:30	07:45	**07:30**	PEAK HOUR	17:00	16:30	**16:45**
PH VOLUME	1072	761	**1826**	PH VOLUME	893	1001	**1840**
PHF	0.76	0.87	**0.81**	PHF	0.93	0.92	**0.88**

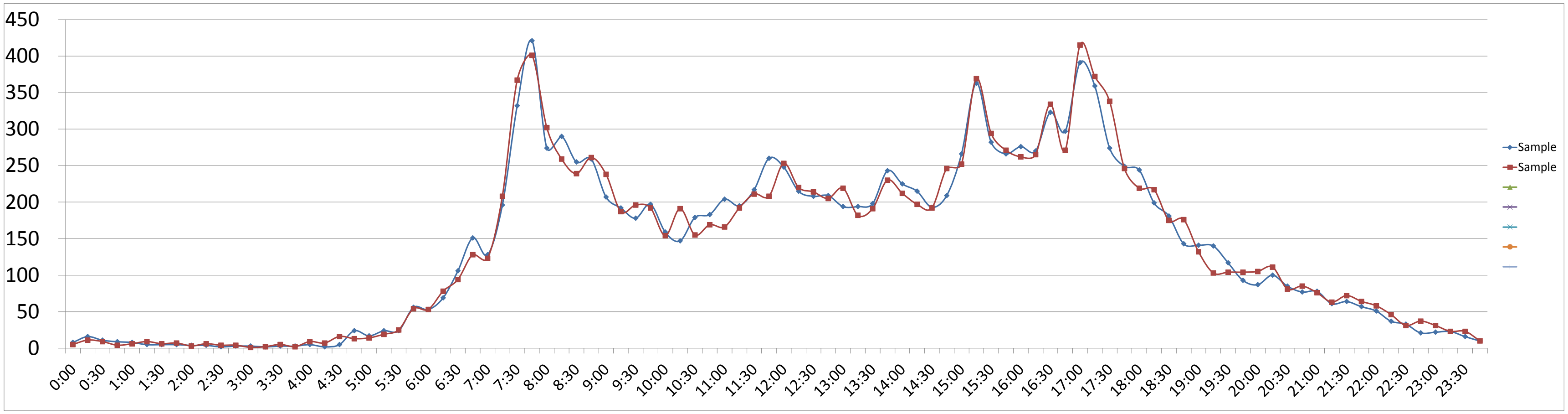
DAY'S TOTAL

NB	SB	EB	WB	TOTAL
9246	9558			**18804**

QUALITY TRAFFIC DATA, LLC
Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 091A	GPS COORDINATES:	35.2697, -120.64222
ON STREET:	Johnson Ave	START DATE:	Tuesday, October 23, 2018
CROSS STREETS:	between Sydney St and Laurel Ln (s/o La Cita Ct)	VICINITY:	San Luis Obispo



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ON STREET:	Johnson Ave	START DATE:	Tuesday, October 23, 2018
CROSS STREETS:	between Sydney St and Laurel Ln (s/o La Cita Ct)	VICINITY:	San Luis Obispo

AM COUNTS	NB		SB		EB		WB			PM COUNTS	NB		SB		EB		WB		
00:00	1		7							12:00	105		143						
00:15	7		9							12:15	105		110						
00:30	3		8							12:30	100		108						
00:45	4	*15*	5	*29*					*44*	12:45	100	*410*	109	*470*					*880*
01:00	2		6							13:00	93		101						
01:15	0		5							13:15	107		87						
01:30	2		3							13:30	95		103						
01:45	1	*5*	4	*18*					*23*	13:45	134	*429*	109	*400*					*829*
02:00	0		4							14:00	98		127						
02:15	3		1							14:15	106		109						
02:30	2		0							14:30	96		97						
02:45	2	*7*	1	*6*					*13*	14:45	107	*407*	102	*435*					*842*
03:00	2		1							15:00	133		133						
03:15	1		1							15:15	121		242						
03:30	1		2							15:30	114		168						
03:45	2	*6*	1	*5*					*11*	15:45	119	*487*	147	*690*					*1177*
04:00	3		2							16:00	111		165						
04:15	1		1							16:15	97		173						
04:30	4		1							16:30	113		210						
04:45	14	*22*	10	*14*					*36*	16:45	119	*440*	178	*726*					*1166*
05:00	6		11							17:00	164		227						
05:15	11		13							17:15	157		202						
05:30	16		8							17:30	118		156						
05:45	33	*66*	23	*55*					*121*	17:45	122	*561*	127	*712*					*1273*
06:00	22		31							18:00	105		139						
06:15	30		39							18:15	70		129						
06:30	67		39							18:30	76		105						
06:45	92	*211*	59	*168*					*379*	18:45	74	*325*	69	*442*					*767*
07:00	87		41							19:00	62		79						
07:15	147		49							19:15	63		77						
07:30	249		83							19:30	53		64						
07:45	265	*748*	156	*329*					*1077*	19:45	42	*220*	51	*271*					*491*
08:00	163		111							20:00	36		51						
08:15	187		103							20:15	37		63						
08:30	143		112							20:30	30		55						
08:45	157	*650*	102	*428*					*1078*	20:45	28	*131*	49	*218*					*349*
09:00	118		89							21:00	28		50						
09:15	99		93							21:15	17		44						
09:30	98		80							21:30	27		37						
09:45	110	*425*	87	*349*					*774*	21:45	17	*89*	40	*171*					*260*
10:00	80		79							22:00	16		35						
10:15	75		72							22:15	12		25						
10:30	84		95							22:30	16		17						
10:45	91	*330*	92	*338*					*668*	22:45	10	*54*	11	*88*					*142*
11:00	84		120							23:00	7		15						
11:15	83		112							23:15	10		13						
11:30	98		119							23:30	3		13						
11:45	126	*391*	134	*485*					*876*	23:45	5	*25*	5	*46*					*71*
TOTALS:		**2876**		**2224**					**5100**	TOTALS:		**3578**		**4669**					**8247**

	NB	SB	EB	WB	Total		NB	SB	EB	WB	Total
SPLIT	56.4%	43.6%			**38.2 %**	**SPLIT**	43.4%	56.6%			**61.8 %**
PEAK HOUR	07:30	11:15			**07:30**	PEAK HOUR	17:00	16:30			**16:30**
PH VOLUME	864	508			**1317**	PH VOLUME	561	817			**1370**
PHF	0.82	0.89			**0.78**	PHF	0.85	0.90			**0.88**

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
6454	6893			**13347**

QUALITY TRAFFIC DATA, LLC
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Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2018229 - 091A	GPS COORDINATES:	35.2697, -120.64222
ON STREET:	Johnson Ave	START DATE:	Wednesday, October 24, 2018
CROSS STREETS:	between Sydney St and Laurel Ln (s/o La Cita Ct)	VICINITY:	San Luis Obispo

AM COUNTS

	NB		SB		EB	WB	
00:00	0		5				
00:15	4		7				
00:30	5		4				
00:45	1	*10*	3	*19*			*29*
01:00	5		1				
01:15	6		3				
01:30	1		5				
01:45	2	*14*	5	*14*			*28*
02:00	0		3				
02:15	1		5				
02:30	3		1				
02:45	2	*6*	2	*11*			*17*
03:00	0		1				
03:15	1		1				
03:30	3		2				
03:45	2	*6*	0	*4*			*10*
04:00	7		2				
04:15	3		4				
04:30	7		9				
04:45	9	*26*	4	*19*			*45*
05:00	7		7				
05:15	9		10				
05:30	16		9				
05:45	26	*58*	28	*54*			*112*
06:00	25		28				
06:15	43		35				
06:30	51		43				
06:45	73	*192*	55	*161*			*353*
07:00	87		36				
07:15	156		52				
07:30	272		95				
07:45	255	*770*	146	*329*			*1099*
08:00	162		140				
08:15	158		101				
08:30	149		90				
08:45	147	*616*	114	*445*			*1061*
09:00	131		107				
09:15	95		92				
09:30	99		97				
09:45	101	*426*	91	*387*			*813*
10:00	73		81				
10:15	83		108				
10:30	69		86				
10:45	81	*306*	88	*363*			*669*
11:00	74		92				
11:15	89		103				
11:30	101		110				
11:45	106	*370*	102	*407*			*777*
TOTALS:		**2800**		**2213**			**5013**

PM COUNTS

	NB		SB		EB	WB	
12:00	111		142				
12:15	103		117				
12:30	99		115				
12:45	102	*415*	103	*477*			*892*
13:00	97		122				
13:15	77		105				
13:30	106		85				
13:45	123	*403*	107	*419*			*822*
14:00	87		125				
14:15	81		116				
14:30	93		99				
14:45	119	*380*	127	*467*			*847*
15:00	121		131				
15:15	115		254				
15:30	118		176				
15:45	126	*480*	145	*706*			*1186*
16:00	104		158				
16:15	89		176				
16:30	120		214				
16:45	123	*436*	148	*696*			*1132*
17:00	168		247				
17:15	166		206				
17:30	162		176				
17:45	125	*621*	121	*750*			*1371*
18:00	96		123				
18:15	91		126				
18:30	74		101				
18:45	93	*354*	83	*433*			*787*
19:00	46		86				
19:15	49		54				
19:30	49		55				
19:45	44	*188*	60	*255*			*443*
20:00	47		58				
20:15	43		68				
20:30	35		46				
20:45	34	*159*	51	*223*			*382*
21:00	26		50				
21:15	23		40				
21:30	30		42				
21:45	25	*104*	39	*171*			*275*
22:00	22		36				
22:15	18		28				
22:30	7		24				
22:45	18	*65*	19	*107*			*172*
23:00	14		17				
23:15	6		17				
23:30	10		13				
23:45	5	*35*	5	*52*			*87*
TOTALS:		**3640**		**4756**			**8396**

	NB	SB	Total		NB	SB	Total
SPLIT	55.9%	44.1%	**37.4%**	**SPLIT**	43.4%	56.6%	**62.6%**
PEAK HOUR	07:30	07:30	**07:30**	PEAK HOUR	17:00	16:30	**16:45**
PH VOLUME	847	482	**1329**	PH VOLUME	621	815	**1396**
PHF	0.78	0.83	**0.83**	PHF	0.98	0.82	**0.84**

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
6440	6969			**13409**

QUALITY TRAFFIC DATA, LLC
Phone: 877-852-4355 Fax: 877-877-3698 Info@QualityTrafficData.com

Michael Baker
INTERNATIONAL

Appendix B:
Traffic Volume Development Worksheets

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SLO FMHC Vehicle Volume Development																				
Intersection / Leg / Approach / Direction					DATA				GROWTH		EXISTING						PROJECT		EXISTING + PROJECT	
					Count Data				Rate	Years	Unbalanced		Balance Adjustment		Existing Year 2020					
					2/23/2016		10/23/2018		1.4%	2										
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Lizzie St @ Johnson Ave	Lizzie St	Eastbound	Left		84	43	86		0		86				86		63		149
				Through		3	3	1		0		1				1		1		2
				Right		29	14	29		0		29				29		22		51
				RTOR		--	0	0		0		0				0		0		0
		Lizzie St	Westbound	Left		58	71	31		1		32				32		0		32
				Through		0	2	0		0		0				0		1		1
				Right		97	132	64		2		66				66		0		66
				RTOR		--	0	0		0		0				0		0		0
		Johnson Ave	Northbound	Left		9	41	12		0		12				12		8		20
				Through		659	1596	754		21		775				775		17		792
				Right		41	122	28		1		29				29		0		29
				RTOR		--	0	0		0		0				0		0		0
		Johnson Ave	Southbound	Left		108	167	52		1		53				53		0		53
				Through		732	1129	850		24		874				874		6		880
				Right		52	195	34		0		34				34		24		58
				RTOR		--	0	0		0		0				0		0		0
Total					0	1872	3515	1941	0	50	0	1991	0	0	0	1991	0	142	0	2133
Start Time					--	3:15-4:15	7:30-8:30	4:15-5:15	--	--	--	--	--	--	--	--	--	--	--	--
2	Ella St @ Johnson Ave	Ella St	Eastbound	Left		91		71		2		73				73		17		90
				Through		0		3		0		3				3		0		3
				Right		60		22		1		23				23		11		34
				RTOR		--		55		2		57				57		0		57
		Ella St	Westbound	Left		5		3		0		3				3		0		3
				Through		2		2		0		2				2		0		2
				Right		4		0		0		0				0		0		0
				RTOR		--		2		0		2				2		0		2
		Johnson Ave	Northbound	Left		34		26		1		27				27		4		31
				Through		728		712		20		732				732		8		740
				Right		7		0		0		0				0		0		0
				RTOR		--		0		0		0				0		0		0
		Johnson Ave	Southbound	Left		2		2		0		2				2		0		2
				Through		696		807		23		830				830		22		852
				Right		104		85		2		87				87		6		93
				RTOR		--		2		0		2				2		0		2
Total					0	1733	0	1792	0	51	0	1843	0	0	0	1843	0	68	0	1911
Start Time					--	4:15-5:15	--	4:15-5:15	--	--	--	--	--	--	--	--	--	--	--	--
3	Sydney St @ Johnson Ave	Sydney St	Eastbound	Left	20		28		1		29				29		0		29	
				Through	2		1		0		1				1		0		1	
				Right	16		17		0		17				17		0		17	
				RTOR	--		0		0		0				0		0		0	
		Sydney St	Westbound	Left	5		5		0		5				5		0		5	
				Through	10		8		0		8				8		0		8	
				Right	44		73		2		75				75		0		75	
				RTOR	--		0		0		0				0		0		0	
		Johnson Ave	Northbound	Left	26		32		1		33				33		0		33	
				Through	844		839		24		863				863		31		894	
				Right	3		7		0		7				7		0		7	
				RTOR	--		0		0		0				0		0		0	
		Johnson Ave	Southbound	Left	12		16		0		16				16		0		16	
				Through	443		429		12		441				441		12		453	
				Right	58		53		1		54				54		0		54	
				RTOR	--		0		0		0				0		0		0	
Total					1483	0	1508	0	41	0	1549	0	0	0	1549	0	43	0	1592	0
Start Time					7:30-8:30	--	7:30-8:30	--	--	--	--	--	--	--	--	--	--	--	--	--

SLO FMHC Bicycle Volume Development																				
Intersection / Leg / Approach / Direction					DATA				ACKGROUND GROWT		EXISTING		PROJECT ONLY GROWTH		EXISTING + PROJECT					
					Count Data				Rate	# of Years			Factor (Proposed beds/Existing Beds)		Unbalanced		Balance Adjustment		Existing + Project Year 2020	
					2/23/2016		10/23/2018		1.4%	2			1.00							
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Lizzie St @ Johnson Ave	Lizzie St	Eastbound	Left		1	7	1	0	0	7	1	7	1	14	2			14	2
				Through		0	2	0	0	0	2	0	2	0	4	0			4	0
				Right		0	0	0	0	0	0	0	0	0	0	0			0	0
		Lizzie St	Westbound	Left		0	0	0	0	0	0	0			0	0			0	0
				Through		3	0	0	0	0	0	0	0	0	0	0			0	0
				Right		0	4	2	0	0	4	2			4	2			4	2
		Johnson Ave	Northbound	Left		0	0	1	0	0	0	1	0	1	0	2			0	2
				Through		2	23	5	1	0	24	5			24	5			24	5
				Right		0	0	0	0	0	0	0			0	0			0	0
		Johnson Ave	Southbound	Left		1	0	0	0	0	0	0			0	0			0	0
				Through		2	1	6	0	0	1	6			1	6			1	6
				Right		1	0	0	0	0	0	0	0	0	0	0			0	0
Total					0	10	37	15	1	0	38	15	9	2	47	17	0	0	47	17
Start Time					--	3:15-4:15	7:30-8:30	4:15-5:15	--	--	--	--	--	--	--	--	--	--	--	--
2	Ella St @ Johnson Ave	Ella St	Eastbound	Left		0	0	0	0	0	0	0			0	0			0	0
				Through		0	0	0	0	0	0	0			0	0			0	0
				Right		0	0	0	0	0	0	0			0	0			0	0
		Ella St	Westbound	Left		0	0	0	0	0	0	0			0	0			0	0
				Through		0	0	2	0	0	0	2			0	2			0	2
				Right		0	0	0	0	0	0	0			0	0			0	0
		Johnson Ave	Northbound	Left		0	0	0	0	0	0	0			0	0			0	0
				Through		2	20	5	1	0	21	5	0	1	21	6			21	6
				Right		0	1	0	0	0	1	0			1	0			1	0
		Johnson Ave	Southbound	Left		0	0	0	0	0	0	0			0	0			0	0
				Through		9	0	3	0	0	0	3	0	0	0	3			0	3
				Right		1	0	0	0	0	0	0			0	0			0	0
Total					0	12	21	10	1	0	22	10	0	1	22	11	0	0	22	11
Start Time					--	4:15-5:15	7:30-8:30	4:15-5:15	--	--	--	--	--	--	--	--	--	--	--	--
3	Sydney St @ Johnson Ave	Sydney S	Eastbound	Left	0		0	0	0	0	0	0			0	0			0	0
				Through	0		0	0	0	0	0	0			0	0			0	0
				Right	0		0	0	0	0	0	0			0	0			0	0
		Sydney S	Westbound	Left	0		0	0	0	0	0	0			0	0			0	0
				Through	0		0	0	0	0	0	0			0	0			0	0
				Right	0		0	0	0	0	0	0			0	0			0	0
		Johnson Ave	Northbound	Left	0		0	1	0	0	0	1			0	1			0	1
				Through	8		9	2	0	0	9	2	0	1	9	3			9	3
				Right	0		0	0	0	0	0	0			0	0			0	0
		Johnson Ave	Southbound	Left	0		0	0	0	0	0	0			0	0			0	0
				Through	1		0	7	0	0	0	7	0	0	0	7			0	7
				Right	0		3	0	0	0	3	0			3	0			3	0
Total					9	0	12	10	0	0	12	10	0	1	12	11	0	0	12	11
Start Time					7:30-8:30	--	7:30-8:30	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1) Growth only applied to inbound and outbound AM/PM bike traffic at Lizzie & Johnson. Trips balanced throughout other intersections

Pedestrian Volume Estimate - Project Trips

PM Peak Hour	Existing 2018 Total		Project Only Total Estimate
	Volume	Percentage	Volume
Vehicles - V	1941	--	142
Pedestrians - P	24	1.21%	**2**
Bicycles - B	15		2
Total - T	1980		**146**

AM Peak Hour	Existing 2018 Total		Project Only Total Estimate
	Volume	Percentage	Volume
Vehicles - V	3515	--	139
Pedestrians - P	20	0.56%	**1**
Bicycles - B	37		9
Total - T	3572		**149**

Note: Calculations based on Lizzie St and Johnson Ave Intersection counts.

SLO FMHC Pedestrian Volume Development																		
Intersection		Direction	DATA				BACKGROUND GROWTH		EXISTING		PROJECT ONLY GROWTH		EXISTING + PROJECT					
			Count Data				Rate	# of Years					Unbalanced		Balance Adjustment		Existing Year 2020 + Project	
			2/23/2016		10/23/2018		1.4%	2										
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Lizzie St @ Johnson Ave	1		0	1	1	0	0		1				1				1
		2		4	5	3	0	0		3				3				3
		3		10	0	5	0	0		5				5				5
		4		1	0	4	0	0		4				4				4
		5		2	0	1	0	0		1		1		2				2
		6		3	7	4	0	0		4				4				4
		7		0	0	0	0	0		0				0				0
		8		1	3	1	0	0		1		1		2				2
		9		4	1	1	0	0		1				1				1
		10		0	0	0	0	0		0	1	1		1				1
		11		0	1	3	0	0		3				3				3
		12		3	2	1	0	0		1				1				1
Total			0	28	20	24	0	0	0	24	1	3	0	27	0	0	0	27
Start Time			--	3:15-4:15	7:30-8:30	4:15-5:15	--	--	--	--	--	--	--	--	--	--	--	--
2	Ella St @ Johnson Ave	1		2		2	0	0		2				2				2
		2		2		0	0	0		0				0				0
		3		2		0	0	0		0				0				0
		4		0		0	0	0		0				0				0
		5		4		0	0	0		0				0				0
		6		3		0	0	0		0				0				0
		7		0		1	0	0		1				1				1
		8		2		0	0	0		0				0				0
		9		0		1	0	0		1				1				1
		10		0		0	0	0		0				0				0
		11		1		0	0	0		0				0				0
		12		4		0	0	0		0	1	1		1				1
Total			0	20	0	4	0	0	0	4	1	1	0	5	0	0	0	5
Start Time			--	4:15-5:15	--	4:15-5:15	--	--	--	--	--	--	--	--	--	--	--	--
3	Sydney St @ Johnson Ave	1	2		4		0	0	4				4				4	
		2	0		1		0	0	1				1				1	
		3	0		0		0	0	0				0				0	
		4	0		0		0	0	0				0				0	
		5	2		3		0	0	3				3				3	
		6	0		1		0	0	1				1				1	
		7	1		0		0	0	0				0				0	
		8	0		15		0	0	15				15				15	
		9	4		2		0	0	2				2				2	
		10	2		0		0	0	0				0				0	
		11	3		2		0	0	2				2				2	
		12	3		0		0	0	0		1	1	1				1	
Total			17	0	28	0	0	0	28	0	1	1	29	0	0	0	29	0
Start Time			7:30-8:30	--	7:30-8:30	--	--	--	--	--	--	--	--	--	--	--	--	--

ADT Volume Development

Segment		Direction	DATA			GROWTH		EXISTING	PROJECT	EXISTING +PROJECT
			Count Data		Average ADT 2018 (Rounded)	Rate	# of Years	Existing Year 2020 ADT (Rounded)	Project Generated ADT	Existing Year 2020 + Project ADT (Rounded)
			10/23/2018	10/24/2018		1.4%	2			
1	Between San Luis Dr & Ella St	Northbound	9160	9246	9,200	259		9,500	657	10,200
		Southbound	9420	9558	9,500	268		9,800	657	10,500
Total			**18580**	**18804**	**18,700**	**527**		**19,300**	**1,314**	**20,700**
2	Between Ella St & Bishop St	Northbound	8234	8311	8,300	234		8,500	263	8,800
		Southbound	8999	9212	9,100	257		9,400	263	9,700
Total			**17233**	**17523**	**17,400**	**491**		**17,900**	**526**	**18,500**
3	Between Bishop St & Sydney St	Northbound	6964	6994	7,000	197		7,200	263	7,500
		Southbound	7704	7841	7,800	220		8,000	263	8,300
Total			**14668**	**14835**	**14,800**	**417**		**15,200**	**526**	**15,800**
4	Between Sydney St & Laurel Ln	Northbound	6454	6440	6,400	180		6,600	263	6,900
		Southbound	6893	6969	6,900	195		7,100	263	7,400
Total			**13347**	**13409**	**13,400**	**375**		**13,700**	**526**	**14,300**

Michael Baker
INTERNATIONAL

Appendix C:
Existing Condition Analysis Worksheets

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	775	29	53	874	34	86	1	29	32	0	66
Future Volume (vph)	12	775	29	53	874	34	86	1	29	32	0	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	110		0	90		0	0		90	0		50
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99	0.99		1.00	0.98
Frt		0.995			0.994				0.850			0.850
Flt Protected	0.950			0.950				0.953			0.950	
Satd. Flow (prot)	1770	3517	0	1770	3513	0	0	1775	1583	0	1770	1583
Flt Permitted	0.950			0.950				0.700			0.693	
Satd. Flow (perm)	1770	3517	0	1770	3513	0	0	1292	1561	0	1288	1549
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			5				76			80
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		714			640			307			354	
Travel Time (s)		13.9			12.5			7.0			8.0	
Confl. Peds. (#/hr)			5			4	8		2	2		8
Confl. Bikes (#/hr)			5			6						
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.88	0.88	0.88	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	15	957	36	59	971	38	98	1	33	39	0	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	993	0	59	1009	0	0	99	33	0	39	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	51	106		51	106		51	106	51	51	106	51
Trailing Detector (ft)	1	1		1	1		1	1	1	1	1	1
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4		4	8		8
Detector Phase	5	2		1	6		4	4	4	8	8	8
Switch Phase												

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	20.0	4.0		18.0	4.0		24.0	24.0	24.0	21.0	21.0	21.0
Minimum Split (s)	25.0	25.0		23.0	25.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	25.0	47.0		23.0	45.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	25.0%	47.0%		23.0%	45.0%		30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Maximum Green (s)	20.0	42.0		18.0	40.0		25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	5.0		2.0	5.0		3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min		None	C-Min		None	None	None	None	None	None
Walk Time (s)		4.0			4.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		16.0			16.0		20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)		5			4		2	2	2	8	8	8
Act Effct Green (s)	20.0	54.2		18.0	67.6			24.2	24.2		23.6	23.6
Actuated g/C Ratio	0.20	0.54		0.18	0.68			0.24	0.24		0.24	0.24
v/c Ratio	0.04	0.52		0.19	0.42			0.32	0.08		0.13	0.19
Control Delay	45.4	12.0		36.6	12.3			34.4	0.5		30.9	8.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	45.4	12.0		36.6	12.3			34.4	0.5		30.9	8.1
LOS	D	B		D	B			C	A		C	A
Approach Delay		12.5			13.7			25.9			15.6	
Approach LOS		B			B			C			B	
90th %ile Green (s)	20.0	42.0		18.0	40.0		25.0	25.0	25.0	25.0	25.0	25.0
90th %ile Term Code	Max	Coord		Max	Coord		Ped	Ped	Ped	Ped	Ped	Ped
70th %ile Green (s)	0.0	43.0		18.0	66.0		24.0	24.0	24.0	24.0	24.0	24.0
70th %ile Term Code	Skip	Coord		Min	Coord		Min	Min	Min	Hold	Hold	Hold
50th %ile Green (s)	0.0	43.0		18.0	66.0		24.0	24.0	24.0	24.0	24.0	24.0
50th %ile Term Code	Skip	Coord		Min	Coord		Min	Min	Min	Hold	Hold	Hold
30th %ile Green (s)	0.0	43.0		18.0	66.0		24.0	24.0	24.0	24.0	24.0	24.0
30th %ile Term Code	Skip	Coord		Min	Coord		Min	Min	Min	Hold	Hold	Hold
10th %ile Green (s)	0.0	95.0		0.0	95.0		0.0	0.0	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Coord		Skip	Coord		Skip	Skip	Skip	Skip	Skip	Skip
Stops (vph)	14	250		45	436			69	0		25	12
Fuel Used(gal)	0	8		1	10			1	0		0	0
CO Emissions (g/hr)	19	559		68	682			84	5		30	25
NOx Emissions (g/hr)	4	109		13	133			16	1		6	5
VOC Emissions (g/hr)	5	130		16	158			19	1		7	6
Dilemma Vehicles (#)	0	50		0	38			0	0		0	0
Queue Length 50th (ft)	9	272		32	144			52	0		20	0
Queue Length 95th (ft)	m20	m116		69	354			96	1		43	29
Internal Link Dist (ft)		634			560			227			274	
Turn Bay Length (ft)	110			90					90			50
Base Capacity (vph)	354	1908		318	2376			323	447		322	447

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.04	0.52		0.19	0.42			0.31	0.07		0.12	0.18

Intersection Summary	
Area Type: Other	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 76.1%	ICU Level of Service D
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 81: Lizzie & Johnson

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	12	775	29	53	874	34	86	1	29	32	0	66
Future Volume (veh/h)	12	775	29	53	874	34	86	1	29	32	0	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	957	36	59	971	38	98	1	33	39	0	80
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.88	0.88	0.88	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	1587	60	258	1852	72	72	0	392	72	0	392
Arrive On Green	0.14	0.91	0.91	0.15	0.53	0.53	0.25	0.25	0.25	0.25	0.00	0.25
Sat Flow, veh/h	1781	3488	131	1781	3482	136	0	2	1570	0	0	1570
Grp Volume(v), veh/h	15	488	505	59	496	513	99	0	33	39	0	80
Grp Sat Flow(s),veh/h/ln	1781	1777	1842	1781	1777	1841	2	0	1570	0	0	1570
Q Serve(g_s), s	0.7	5.5	5.5	2.9	18.1	18.1	0.0	0.0	1.6	0.0	0.0	4.0
Cycle Q Clear(g_c), s	0.7	5.5	5.5	2.9	18.1	18.1	25.0	0.0	1.6	25.0	0.0	4.0
Prop In Lane	1.00		0.07	1.00		0.07	0.99		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	808	838	258	945	979	72	0	392	72	0	392
V/C Ratio(X)	0.12	0.60	0.60	0.23	0.52	0.52	1.37	0.00	0.08	0.54	0.00	0.20
Avail Cap(c_a), veh/h	356	808	838	321	945	979	72	0	392	72	0	392
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.77	0.77	0.77	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.6	2.7	2.7	37.8	15.2	15.2	49.9	0.0	28.7	50.0	0.0	29.6
Incr Delay (d2), s/veh	0.1	2.9	2.8	0.1	1.6	1.5	234.5	0.0	0.1	8.0	0.0	0.3
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	0.3	1.7	1.7	1.3	7.2	7.5	6.5	0.0	0.6	1.1	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	5.6	5.5	37.9	16.8	16.7	284.4	0.0	28.8	58.0	0.0	29.9
LnGrp LOS	D	A	A	D	B	B	F	A	C	E	A	C
Approach Vol, veh/h		1008			1068			132			119	
Approach Delay, s/veh		6.1			17.9			220.5			39.1	
Approach LOS		A			B			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.5	50.5		30.0	11.8	58.2		30.0
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	18.0	42.0		25.0	20.0	40.0		25.0
Max Q Clear Time (g_c+I1), s	4.9	7.5		27.0	2.7	20.1		27.0
Green Ext Time (p_c), s	0.1	15.1		0.0	0.0	11.3		0.0

Intersection Summary			
HCM 6th Ctrl Delay			25.4
HCM 6th LOS			C

Approach	NB	SB	NE	SW
Crosswalk Length (ft)	61.3	62.7	36.0	36.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	5	5	3	3
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	2	6	4	8
Effective Walk Time (s)	8.0	8.0	9.0	9.0
Right Corner Size A (ft)	6.0	6.0	6.0	6.0
Right Corner Size B (ft)	6.0	6.0	6.0	6.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	36.00	36.00	36.00	36.00
Ped. Left-Right Flow Rate (p/h)	1	5	1	4
Ped. Right-Left Flow Rate (p/h)	1	3	3	1
Ped. R. Sidewalk Flow Rate (p/h)	0	1	0	4
Veh. Perm. L. Flow in Walk (v/h)	0	0	86	32
Veh. Perm. R. Flow in Walk (v/h)	29	34	29	66
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	35	35	30	30
Right Corner Area per Ped (sq.ft)	4591.4	2476.1	5365.3	1887.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	5340.7	1325.2	1735.0	1524.2
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	42.3	42.3	41.4	41.4
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.77	2.81	2.13	2.06
Pedestrian Crosswalk LOS	C	C	B	B

Approach	NB	SB	NE	SW
Bicycle Flow Rate (bike/h)	6	6	1	2
Total Flow Rate (veh/h)	1008	1068	132	119
Effct. Green for Bike (s)	54.2	67.6	24.2	23.6
Cross Street Width (ft)	36.1	36.0	61.3	62.7
Through Lanes Number	2	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	1084	1352	484	472
Bicycle Delay (s/bike)	10.5	5.3	28.7	29.2
Bicycle Compliance	Fair	Good	Fair	Fair
Bicycle LOS Score	1.66	1.71	2.72	2.72
Bicycle LOS	B	B	C	C

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	27	732	0	2	830	89	73	3	80	3	2	2
Future Volume (vph)	27	732	0	2	830	89	73	3	80	3	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		0	0		75	0		75
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00				0.99		1.00	0.99
Frt					0.985				0.850			0.850
Flt Protected	0.950			0.950				0.954			0.972	
Satd. Flow (prot)	1770	3539	0	1770	3478	0	0	1777	1583	0	1811	1583
Flt Permitted	0.950			0.950				0.131				
Satd. Flow (perm)	1770	3539	0	1770	3478	0	0	244	1562	0	1862	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10				131			131
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		509			714			393			345	
Travel Time (s)		9.9			13.9			8.9			7.8	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)			5			3						2
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.67	0.67	0.67	0.44	0.44	0.44
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	33	882	0	2	912	98	109	4	119	7	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	882	0	2	1010	0	0	113	119	0	12	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1	1	1	1	1
Detector Template	Left	Thru		Left	Thru		Left		Right	Left		Right
Leading Detector (ft)	51	106		51	106		51	51	51	51	51	51
Trailing Detector (ft)	1	1		1	1		1	1	1	1	1	1
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4		4	8		8
Detector Phase	5	2		1	6		4	4	4	8	8	8
Switch Phase												

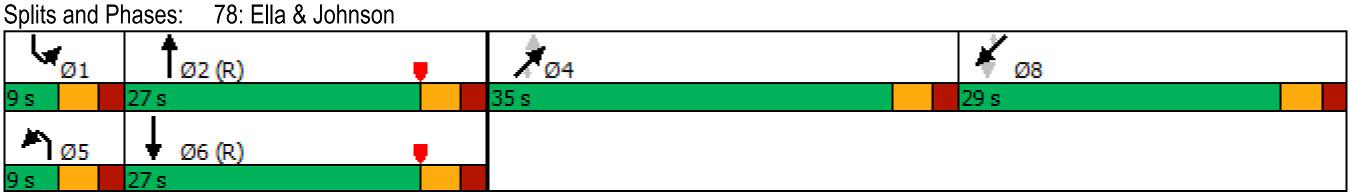
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	24.0		9.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	9.0	27.0		9.0	27.0		35.0	35.0	35.0	29.0	29.0	29.0
Total Split (%)	9.0%	27.0%		9.0%	27.0%		35.0%	35.0%	35.0%	29.0%	29.0%	29.0%
Maximum Green (s)	4.0	22.0		4.0	22.0		30.0	30.0	30.0	24.0	24.0	24.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	7.5		2.0	7.5		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min		None	C-Min		None	None	None	None	None	None
Walk Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)		15.0			15.0		20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)		0			0		1	1	1	0	0	0
Act Effct Green (s)	6.5	53.5		4.7	48.0			30.0	30.0		5.5	5.5
Actuated g/C Ratio	0.06	0.54		0.05	0.48			0.30	0.30		0.06	0.06
v/c Ratio	0.29	0.47		0.02	0.60			1.55	0.21		0.12	0.02
Control Delay	50.4	17.2		63.5	16.2			332.5	4.9		47.0	0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	50.4	17.2		63.5	16.2			332.5	4.9		47.0	0.0
LOS	D	B		E	B			F	A		D	A
Approach Delay		18.4			16.3			164.5			33.2	
Approach LOS		B			B			F			C	
90th %ile Green (s)	8.7	38.1		5.2	34.6		30.0	30.0	30.0	6.7	6.7	6.7
90th %ile Term Code	Gap	Coord		Gap	Coord		Max	Max	Max	Gap	Gap	Gap
70th %ile Green (s)	7.4	49.3		0.0	36.9		30.0	30.0	30.0	5.7	5.7	5.7
70th %ile Term Code	Gap	Coord		Skip	Coord		Max	Max	Max	Gap	Gap	Gap
50th %ile Green (s)	6.4	60.0		0.0	48.6		30.0	30.0	30.0	0.0	0.0	0.0
50th %ile Term Code	Gap	Coord		Skip	Coord		Max	Max	Max	Skip	Skip	Skip
30th %ile Green (s)	0.0	60.0		0.0	60.0		30.0	30.0	30.0	0.0	0.0	0.0
30th %ile Term Code	Skip	Coord		Skip	Coord		Max	Max	Max	Skip	Skip	Skip
10th %ile Green (s)	0.0	60.0		0.0	60.0		30.0	30.0	30.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Coord		Skip	Coord		Max	Max	Max	Skip	Skip	Skip
Stops (vph)	26	449		3	518			51	9		5	0
Fuel Used(gal)	1	13		0	12			6	0		0	0
CO Emissions (g/hr)	51	914		4	816			396	26		6	0
NOx Emissions (g/hr)	10	178		1	159			77	5		1	0
VOC Emissions (g/hr)	12	212		1	189			92	6		1	0
Dilemma Vehicles (#)	0	37		0	63			0	0		0	0
Queue Length 50th (ft)	21	145		1	240			~102	0		7	0
Queue Length 95th (ft)	46	274		m3	132			#146	9		12	0
Internal Link Dist (ft)		429			634			313			265	
Turn Bay Length (ft)	100			100					75			75
Base Capacity (vph)	114	1892		83	1675			73	560		446	474

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.29	0.47		0.02	0.60			1.55	0.21		0.03	0.01

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.55
Intersection Signal Delay: 33.1 Intersection LOS: C
Intersection Capacity Utilization 48.0% ICU Level of Service A
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 78: Ella & Johnson



Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	27	732	0	2	830	89	73	3	80	3	2	2
Future Volume (veh/h)	27	732	0	2	830	89	73	3	80	3	2	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	882	0	2	912	98	109	4	119	7	5	5
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.67	0.67	0.67	0.44	0.44	0.44
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	1947	0	4	1698	182	71	1	475	57	27	469
Arrive On Green	0.02	0.55	0.00	0.00	0.53	0.53	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3647	0	1781	3229	347	0	5	1583	0	89	1562
Grp Volume(v), veh/h	33	882	0	2	502	508	113	0	119	12	0	5
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1799	5	0	1583	89	0	1562
Q Serve(g_s), s	1.8	14.9	0.0	0.1	18.7	18.7	0.0	0.0	5.7	0.0	0.0	0.2
Cycle Q Clear(g_c), s	1.8	14.9	0.0	0.1	18.7	18.7	30.0	0.0	5.7	30.0	0.0	0.2
Prop In Lane	1.00		0.00	1.00		0.19	0.96		1.00	0.58		1.00
Lane Grp Cap(c), veh/h	43	1947	0	4	935	946	72	0	475	84	0	469
V/C Ratio(X)	0.77	0.45	0.00	0.52	0.54	0.54	1.57	0.00	0.25	0.14	0.00	0.01
Avail Cap(c_a), veh/h	71	1947	0	71	935	946	72	0	475	84	0	469
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	1.00	0.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.5	13.6	0.0	49.8	15.7	15.7	49.4	0.0	26.5	28.7	0.0	24.6
Incr Delay (d2), s/veh	10.4	0.8	0.0	32.1	2.0	2.0	311.7	0.0	0.1	0.3	0.0	0.0
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	0.9	5.8	0.0	0.1	7.6	7.7	8.0	0.0	2.1	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	14.4	0.0	82.0	17.7	17.6	361.1	0.0	26.6	29.0	0.0	24.6
LnGrp LOS	E	B	A	F	B	B	F	A	C	C	A	C
Approach Vol, veh/h		915			1012			232			17	
Approach Delay, s/veh		16.0			17.8			189.5			27.7	
Approach LOS		B			B			F			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	59.8		35.0	7.4	57.6		35.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	22.0		30.0	4.0	22.0		24.0				
Max Q Clear Time (g_c+I1), s	2.1	16.9		32.0	3.8	20.7		32.0				
Green Ext Time (p_c), s	0.0	4.2		0.0	0.0	1.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			35.4									
HCM 6th LOS			D									

Approach	NB	SB	NE	SW
Crosswalk Length (ft)	61.6	61.4	36.1	35.9
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	5	5	3	3
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	4	8	6	2
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	1	2	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	73	3
Veh. Perm. R. Flow in Walk (v/h)	0	87	80	2
Veh. RTOR Flow in Walk (v/h)	0	2	57	2
85th percentile speed (mph)	35	35	30	30
Right Corner Area per Ped (sq.ft)	36450.0	36450.0	72837.5	0.0
Right Corner Quality of Service	A	A	A	-
Ped. Circulation Area (sq.ft)	0.2	0.0	0.0	0.0
Crosswalk Circulation Code	F	-	-	-
Pedestrian Delay (s/p)	50.0	50.0	50.0	50.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.76	2.77	2.26	1.97
Pedestrian Crosswalk LOS	C	C	B	B

Approach	NB	SB	NE	SW
Bicycle Flow Rate (bike/h)	5	3	0	2
Total Flow Rate (veh/h)	915	1012	232	17
Effct. Green for Bike (s)	53.5	48.0	30.0	5.5
Cross Street Width (ft)	35.9	36.1	61.6	61.4
Through Lanes Number	2	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	1070	960	600	110
Bicycle Delay (s/bike)	10.8	13.5	24.5	44.7
Bicycle Compliance	Fair	Fair	Fair	Poor
Bicycle LOS Score	1.58	1.66	2.88	2.53
Bicycle LOS	B	B	C	C

Michael Baker
INTERNATIONAL

Appendix D:
Existing + Project Analysis Worksheets

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	20	792	29	53	880	58	149	2	51	32	1	66
Future Volume (vph)	20	792	29	53	880	58	149	2	51	32	1	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	110		0	90		0	0		90	0		50
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99	0.98		1.00	0.98
Frt		0.995			0.991				0.850			0.850
Flt Protected	0.950			0.950				0.953			0.954	
Satd. Flow (prot)	1770	3517	0	1770	3500	0	0	1775	1583	0	1777	1583
Flt Permitted	0.950			0.950				0.699			0.690	
Satd. Flow (perm)	1770	3517	0	1770	3500	0	0	1290	1559	0	1282	1549
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			8				76			80
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		714			640			307			354	
Travel Time (s)		13.9			12.5			7.0			8.0	
Confl. Peds. (#/hr)			6			4	8		3	3		8
Confl. Bikes (#/hr)			5			6						
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.88	0.88	0.88	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	25	978	36	59	978	64	169	2	58	39	1	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	1014	0	59	1042	0	0	171	58	0	40	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	51	106		51	106		51	106	51	51	106	51
Trailing Detector (ft)	1	1		1	1		1	1	1	1	1	1
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4		4	8		8
Detector Phase	5	2		1	6		4	4	4	8	8	8
Switch Phase												

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	20.0	4.0		18.0	4.0		24.0	24.0	24.0	21.0	21.0	21.0
Minimum Split (s)	25.0	25.0		23.0	25.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	25.0	47.0		23.0	45.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	25.0%	47.0%		23.0%	45.0%		30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Maximum Green (s)	20.0	42.0		18.0	40.0		25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	5.0		2.0	5.0		3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min		None	C-Min		None	None	None	None	None	None
Walk Time (s)		4.0			4.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		16.0			16.0		20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)		5			4		2	2	2	8	8	8
Act Effct Green (s)	20.0	47.4		18.0	55.8			24.2	24.2		24.2	24.2
Actuated g/C Ratio	0.20	0.47		0.18	0.56			0.24	0.24		0.24	0.24
v/c Ratio	0.07	0.61		0.19	0.53			0.55	0.13		0.13	0.18
Control Delay	45.0	14.0		36.6	17.8			40.7	5.3		30.9	8.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	45.0	14.0		36.6	17.8			40.7	5.3		30.9	8.1
LOS	D	B		D	B			D	A		C	A
Approach Delay		14.7			18.8			31.8			15.7	
Approach LOS		B			B			C			B	
90th %ile Green (s)	20.0	42.0		18.0	40.0		25.0	25.0	25.0	25.0	25.0	25.0
90th %ile Term Code	Max	Coord		Max	Coord		Max	Max	Max	Ped	Ped	Ped
70th %ile Green (s)	20.0	43.0		18.0	41.0		24.0	24.0	24.0	24.0	24.0	24.0
70th %ile Term Code	Min	Coord		Min	Coord		Min	Min	Min	Hold	Hold	Hold
50th %ile Green (s)	0.0	43.0		18.0	66.0		24.0	24.0	24.0	24.0	24.0	24.0
50th %ile Term Code	Skip	Coord		Min	Coord		Min	Min	Min	Hold	Hold	Hold
30th %ile Green (s)	0.0	43.0		18.0	66.0		24.0	24.0	24.0	24.0	24.0	24.0
30th %ile Term Code	Skip	Coord		Min	Coord		Min	Min	Min	Hold	Hold	Hold
10th %ile Green (s)	0.0	66.0		0.0	66.0		24.0	24.0	24.0	24.0	24.0	24.0
10th %ile Term Code	Skip	Coord		Skip	Coord		Min	Min	Min	Hold	Hold	Hold
Stops (vph)	22	388		45	590			131	6		26	12
Fuel Used(gal)	0	9		1	12			2	0		0	0
CO Emissions (g/hr)	32	663		68	851			163	15		31	25
NOx Emissions (g/hr)	6	129		13	166			32	3		6	5
VOC Emissions (g/hr)	7	154		16	197			38	3		7	6
Dilemma Vehicles (#)	0	55		0	47			0	0		0	0
Queue Length 50th (ft)	16	283		32	150			96	0		20	0
Queue Length 95th (ft)	m32	m124		69	369			159	20		43	29
Internal Link Dist (ft)		634			560			227			274	
Turn Bay Length (ft)	110			90					90			50
Base Capacity (vph)	354	1669		318	1956			322	446		320	447

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.07	0.61		0.19	0.53			0.53	0.13		0.13	0.18

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 77.1%	ICU Level of Service D
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 81: Lizzie & Johnson

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	792	29	53	880	58	149	2	51	32	1	66
Future Volume (veh/h)	20	792	29	53	880	58	149	2	51	32	1	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	978	36	59	978	64	169	2	58	39	1	80
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.88	0.88	0.88	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	1588	58	258	1689	111	72	0	392	71	1	392
Arrive On Green	0.20	0.91	0.91	0.15	0.50	0.50	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	3491	128	1781	3379	221	0	0	1570	0	4	1570
Grp Volume(v), veh/h	25	498	516	59	514	528	171	0	58	40	0	80
Grp Sat Flow(s),veh/h/ln	1781	1777	1842	1781	1777	1823	0	0	1570	4	0	1570
Q Serve(g_s), s	1.2	5.7	5.7	2.9	20.4	20.4	0.0	0.0	2.9	0.0	0.0	4.0
Cycle Q Clear(g_c), s	1.2	5.7	5.7	2.9	20.4	20.4	25.0	0.0	2.9	25.0	0.0	4.0
Prop In Lane	1.00		0.07	1.00		0.12	0.99		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	178	808	838	258	888	911	72	0	392	72	0	392
V/C Ratio(X)	0.14	0.62	0.62	0.23	0.58	0.58	2.39	0.00	0.15	0.56	0.00	0.20
Avail Cap(c_a), veh/h	356	808	838	321	888	911	72	0	392	72	0	392
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.77	0.77	0.77	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	2.7	2.7	37.8	17.6	17.6	50.0	0.0	29.2	49.4	0.0	29.6
Incr Delay (d2), s/veh	0.1	3.1	3.0	0.1	2.1	2.1	665.6	0.0	0.2	9.0	0.0	0.3
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	0.5	1.7	1.8	1.3	8.3	8.5	15.0	0.0	1.1	1.2	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	5.8	5.7	37.9	19.7	19.7	715.6	0.0	29.4	58.4	0.0	29.9
LnGrp LOS	D	A	A	D	B	B	F	A	C	E	A	C
Approach Vol, veh/h		1039			1101			229			120	
Approach Delay, s/veh		6.5			20.7			541.8			39.4	
Approach LOS		A			C			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.5	50.5		30.0	15.0	55.0		30.0
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	18.0	42.0		25.0	20.0	40.0		25.0
Max Q Clear Time (g_c+I1), s	4.9	7.7		27.0	3.2	22.4		27.0
Green Ext Time (p_c), s	0.1	15.5		0.0	0.0	10.7		0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.6
HCM 6th LOS	E

Approach	NB	SB	NE	SW
Crosswalk Length (ft)	61.3	62.7	36.0	36.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	5	5	3	3
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	2	6	4	8
Effective Walk Time (s)	8.0	8.0	9.0	9.0
Right Corner Size A (ft)	6.0	6.0	6.0	6.0
Right Corner Size B (ft)	6.0	6.0	6.0	6.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	36.00	36.00	36.00	36.00
Ped. Left-Right Flow Rate (p/h)	1	5	1	4
Ped. Right-Left Flow Rate (p/h)	2	3	3	2
Ped. R. Sidewalk Flow Rate (p/h)	0	1	1	4
Veh. Perm. L. Flow in Walk (v/h)	0	0	149	32
Veh. Perm. R. Flow in Walk (v/h)	29	58	51	66
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	35	35	30	30
Right Corner Area per Ped (sq.ft)	3565.2	2476.1	4024.0	1779.6
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	3559.7	1249.1	899.9	1270.2
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	42.3	42.3	41.4	41.4
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.79	2.84	2.26	2.06
Pedestrian Crosswalk LOS	C	C	B	B

Approach	NB	SB	NE	SW
Bicycle Flow Rate (bike/h)	7	6	2	2
Total Flow Rate (veh/h)	1039	1101	229	120
Effct. Green for Bike (s)	47.4	55.8	24.2	24.2
Cross Street Width (ft)	36.1	36.0	61.3	62.7
Through Lanes Number	2	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	948	1116	484	484
Bicycle Delay (s/bike)	13.9	9.8	28.8	28.8
Bicycle Compliance	Fair	Good	Fair	Fair
Bicycle LOS Score	1.68	1.73	2.88	2.72
Bicycle LOS	B	B	C	C

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	31	740	0	2	852	95	90	3	91	3	2	2
Future Volume (vph)	31	740	0	2	852	95	90	3	91	3	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		0	0		75	0		75
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00				0.99		1.00	0.99
Frt					0.985				0.850			0.850
Flt Protected	0.950			0.950				0.954			0.972	
Satd. Flow (prot)	1770	3539	0	1770	3477	0	0	1777	1583	0	1811	1583
Flt Permitted	0.950			0.950				0.131				
Satd. Flow (perm)	1770	3539	0	1770	3477	0	0	244	1562	0	1862	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11				136			131
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		509			714			393			345	
Travel Time (s)		9.9			13.9			8.9			7.8	
Confl. Peds. (#/hr)						1			1	1		
Confl. Bikes (#/hr)			6			3						2
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.67	0.67	0.67	0.44	0.44	0.44
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	37	892	0	2	936	104	134	4	136	7	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	892	0	2	1040	0	0	138	136	0	12	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1	1	1	1	1
Detector Template	Left	Thru		Left	Thru		Left		Right	Left		Right
Leading Detector (ft)	51	106		51	106		51	51	51	51	51	51
Trailing Detector (ft)	1	1		1	1		1	1	1	1	1	1
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4		4	8		8
Detector Phase	5	2		1	6		4	4	4	8	8	8
Switch Phase												

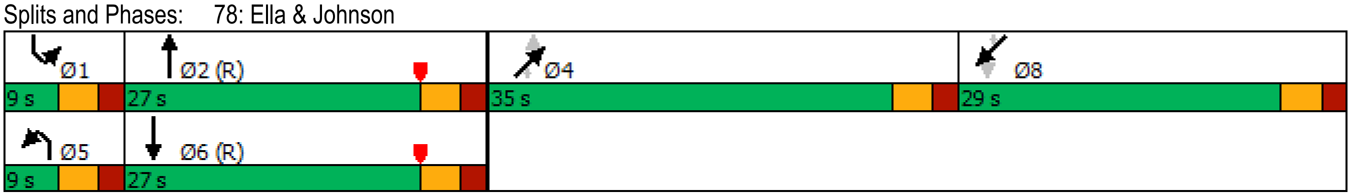
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	24.0		9.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	9.0	27.0		9.0	27.0		35.0	35.0	35.0	29.0	29.0	29.0
Total Split (%)	9.0%	27.0%		9.0%	27.0%		35.0%	35.0%	35.0%	29.0%	29.0%	29.0%
Maximum Green (s)	4.0	22.0		4.0	22.0		30.0	30.0	30.0	24.0	24.0	24.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	7.5		2.0	7.5		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min		None	C-Min		None	None	None	None	None	None
Walk Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)		15.0			15.0		20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)		0			0		1	1	1	0	0	0
Act Effct Green (s)	6.7	53.5		4.7	47.8			30.0	30.0		5.5	5.5
Actuated g/C Ratio	0.07	0.54		0.05	0.48			0.30	0.30		0.06	0.06
v/c Ratio	0.31	0.47		0.02	0.62			1.89	0.24		0.12	0.02
Control Delay	50.6	17.3		67.0	14.4			472.6	5.8		47.0	0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	50.6	17.3		67.0	14.4			472.6	5.8		47.0	0.0
LOS	D	B		E	B			F	A		D	A
Approach Delay		18.6			14.5			240.9			33.2	
Approach LOS		B			B			F			C	
90th %ile Green (s)	9.1	38.1		5.2	34.2		30.0	30.0	30.0	6.7	6.7	6.7
90th %ile Term Code	Gap	Coord		Gap	Coord		Max	Max	Max	Gap	Gap	Gap
70th %ile Green (s)	7.7	49.3		0.0	36.6		30.0	30.0	30.0	5.7	5.7	5.7
70th %ile Term Code	Gap	Coord		Skip	Coord		Max	Max	Max	Gap	Gap	Gap
50th %ile Green (s)	6.7	60.0		0.0	48.3		30.0	30.0	30.0	0.0	0.0	0.0
50th %ile Term Code	Gap	Coord		Skip	Coord		Max	Max	Max	Skip	Skip	Skip
30th %ile Green (s)	0.0	60.0		0.0	60.0		30.0	30.0	30.0	0.0	0.0	0.0
30th %ile Term Code	Skip	Coord		Skip	Coord		Max	Max	Max	Skip	Skip	Skip
10th %ile Green (s)	0.0	60.0		0.0	60.0		30.0	30.0	30.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Coord		Skip	Coord		Max	Max	Max	Skip	Skip	Skip
Stops (vph)	30	455		4	422			61	12		5	0
Fuel Used(gal)	1	13		0	11			9	0		0	0
CO Emissions (g/hr)	58	926		5	756			662	32		6	0
NOx Emissions (g/hr)	11	180		1	147			129	6		1	0
VOC Emissions (g/hr)	14	215		1	175			153	7		1	0
Dilemma Vehicles (#)	0	37		0	68			0	0		0	0
Queue Length 50th (ft)	23	148		1	252			~135	0		7	0
Queue Length 95th (ft)	50	278		m3	#162			#178	15		12	0
Internal Link Dist (ft)		429			634			313			265	
Turn Bay Length (ft)	100			100					75			75
Base Capacity (vph)	119	1892		83	1668			73	563		446	474

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.31	0.47		0.02	0.62			1.89	0.24		0.03	0.01

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.89
Intersection Signal Delay: 43.7 Intersection LOS: D
Intersection Capacity Utilization 49.5% ICU Level of Service A
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 78: Ella & Johnson



Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	31	740	0	2	852	95	90	3	91	3	2	2
Future Volume (veh/h)	31	740	0	2	852	95	90	3	91	3	2	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	892	0	2	936	104	134	4	136	7	5	5
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.67	0.67	0.67	0.44	0.44	0.44
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	1947	0	4	1685	187	71	1	475	57	27	469
Arrive On Green	0.03	0.55	0.00	0.00	0.52	0.52	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3647	0	1781	3216	357	0	4	1583	0	89	1562
Grp Volume(v), veh/h	37	892	0	2	517	523	138	0	136	12	0	5
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1796	4	0	1583	89	0	1562
Q Serve(g_s), s	2.1	15.2	0.0	0.1	19.5	19.6	0.0	0.0	6.6	0.0	0.0	0.2
Cycle Q Clear(g_c), s	2.1	15.2	0.0	0.1	19.5	19.6	30.0	0.0	6.6	30.0	0.0	0.2
Prop In Lane	1.00		0.00	1.00		0.20	0.97		1.00	0.58		1.00
Lane Grp Cap(c), veh/h	47	1947	0	4	931	941	72	0	475	84	0	469
V/C Ratio(X)	0.80	0.46	0.00	0.52	0.56	0.56	1.91	0.00	0.29	0.14	0.00	0.01
Avail Cap(c_a), veh/h	71	1947	0	71	931	941	72	0	475	84	0	469
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	1.00	0.00	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.4	13.6	0.0	49.8	16.0	16.0	49.5	0.0	26.8	28.7	0.0	24.6
Incr Delay (d2), s/veh	15.0	0.8	0.0	30.2	2.0	2.0	458.5	0.0	0.1	0.3	0.0	0.0
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	1.1	5.8	0.0	0.1	7.9	8.0	11.0	0.0	2.5	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	14.4	0.0	80.1	18.0	18.0	508.1	0.0	26.9	29.0	0.0	24.6
LnGrp LOS	E	B	A	F	B	B	F	A	C	C	A	C
Approach Vol, veh/h		929			1042			274			17	
Approach Delay, s/veh		16.4			18.1			269.2			27.7	
Approach LOS		B			B			F			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	59.8		35.0	7.6	57.4		35.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	22.0		30.0	4.0	22.0		24.0				
Max Q Clear Time (g_c+I1), s	2.1	17.2		32.0	4.1	21.6		32.0				
Green Ext Time (p_c), s	0.0	4.1		0.0	0.0	0.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			47.9									
HCM 6th LOS			D									

Approach	NB	SB	NE	SW
Crosswalk Length (ft)	61.6	61.4	36.1	35.9
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	5	5	3	3
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	4	8	6	2
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	1	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	1	2	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	90	3
Veh. Perm. R. Flow in Walk (v/h)	0	95	91	2
Veh. RTOR Flow in Walk (v/h)	0	2	57	2
85th percentile speed (mph)	35	35	30	30
Right Corner Area per Ped (sq.ft)	36450.0	24279.2	36418.8	0.0
Right Corner Quality of Service	A	A	A	-
Ped. Circulation Area (sq.ft)	0.2	0.0	0.3	0.0
Crosswalk Circulation Code	F	-	F	-
Pedestrian Delay (s/p)	50.0	50.0	50.0	50.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.77	2.79	2.30	1.97
Pedestrian Crosswalk LOS	C	C	B	B

Approach	NB	SB	NE	SW
Bicycle Flow Rate (bike/h)	6	3	0	2
Total Flow Rate (veh/h)	929	1042	274	17
Effct. Green for Bike (s)	53.5	47.8	30.0	5.5
Cross Street Width (ft)	35.9	36.1	61.6	61.4
Through Lanes Number	2	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	1070	956	600	110
Bicycle Delay (s/bike)	10.8	13.6	24.5	44.7
Bicycle Compliance	Fair	Fair	Fair	Poor
Bicycle LOS Score	1.59	1.69	2.95	2.53
Bicycle LOS	B	B	C	C

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Michael Baker
INTERNATIONAL

Appendix E:
Existing + Project + Mitigation Analysis Worksheets

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Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	20	792	29	53	880	58	149	2	51	32	1	66
Future Volume (vph)	20	792	29	53	880	58	149	2	51	32	1	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	110		0	90		0	0		90	0		50
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99	0.98		1.00	0.98
Frt		0.995			0.991				0.850			0.850
Flt Protected	0.950			0.950				0.953			0.954	
Satd. Flow (prot)	1770	3516	0	1770	3498	0	0	1775	1583	0	1777	1583
Flt Permitted	0.950			0.950				0.953			0.954	
Satd. Flow (perm)	1770	3516	0	1770	3498	0	0	1757	1558	0	1771	1547
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			5				114			114
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		714			640			307			354	
Travel Time (s)		13.9			12.5			7.0			8.0	
Confl. Peds. (#/hr)			6			4	8		3	3		8
Confl. Bikes (#/hr)			5			6						
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.88	0.88	0.88	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	25	978	36	59	978	64	169	2	58	39	1	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	1014	0	59	1042	0	0	171	58	0	40	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	51	106		51	106		51	106	51	51	106	51
Trailing Detector (ft)	1	1		1	1		1	1	1	1	1	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases									4			8
Detector Phase	5	2		1	6		4	4	4	8	8	8
Switch Phase												

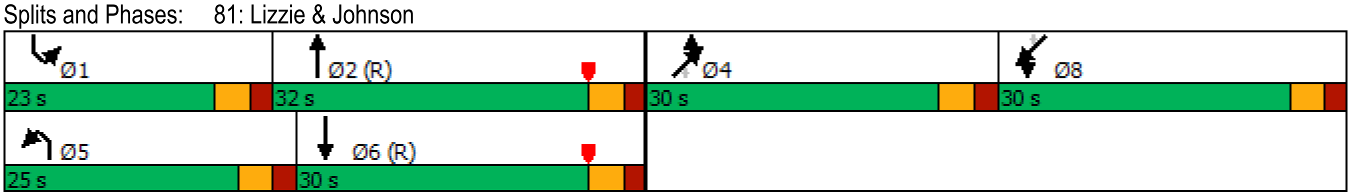
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	20.0	4.0		18.0	4.0		24.0	24.0	24.0	21.0	21.0	21.0
Minimum Split (s)	25.0	25.0		23.0	25.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	25.0	32.0		23.0	30.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	21.7%	27.8%		20.0%	26.1%		26.1%	26.1%	26.1%	26.1%	26.1%	26.1%
Maximum Green (s)	20.0	27.0		18.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	5.0		2.0	5.0		3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min		None	C-Min		None	None	None	None	None	None
Walk Time (s)		4.0			4.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		16.0			16.0		20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)		5			4		2	2	2	8	8	8
Act Effct Green (s)	20.0	40.8		18.0	49.2			24.2	24.2		21.8	21.8
Actuated g/C Ratio	0.17	0.35		0.16	0.43			0.21	0.21		0.19	0.19
v/c Ratio	0.08	0.81		0.21	0.70			0.46	0.14		0.12	0.21
Control Delay	43.6	36.2		44.7	34.4			44.2	0.7		39.1	3.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	43.6	36.2		44.7	34.4			44.2	0.7		39.1	3.9
LOS	D	D		D	C			D	A		D	A
Approach Delay		36.4			34.9			33.2			15.7	
Approach LOS		D			C			C			B	
90th %ile Green (s)	20.0	27.0		18.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0
90th %ile Term Code	Max	Coord		Max	Coord		Ped	Ped	Ped	Ped	Ped	Ped
70th %ile Green (s)	20.0	32.0		18.0	30.0		24.0	24.0	24.0	21.0	21.0	21.0
70th %ile Term Code	Min	Coord		Min	Coord		Min	Min	Min	Min	Min	Min
50th %ile Green (s)	0.0	32.0		18.0	55.0		24.0	24.0	24.0	21.0	21.0	21.0
50th %ile Term Code	Skip	Coord		Min	Coord		Min	Min	Min	Min	Min	Min
30th %ile Green (s)	0.0	32.0		18.0	55.0		24.0	24.0	24.0	21.0	21.0	21.0
30th %ile Term Code	Skip	Coord		Min	Coord		Min	Min	Min	Min	Min	Min
10th %ile Green (s)	0.0	81.0		0.0	81.0		24.0	24.0	24.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Coord		Skip	Coord		Min	Min	Min	Skip	Skip	Skip
Stops (vph)	14	606		46	591			128	0		27	4
Fuel Used(gal)	0	15		1	15			2	0		1	0
CO Emissions (g/hr)	27	1037		75	1073			169	9		35	18
NOx Emissions (g/hr)	5	202		15	209			33	2		7	3
VOC Emissions (g/hr)	6	240		17	249			39	2		8	4
Dilemma Vehicles (#)	0	27		0	35			0	0		0	0
Queue Length 50th (ft)	11	~428		39	291			112	0		25	0
Queue Length 95th (ft)	m32	m#466		79	#672			175	0		49	11
Internal Link Dist (ft)		634			560			227			274	
Turn Bay Length (ft)	110			90					90			50
Base Capacity (vph)	307	1249		277	1499			385	427		386	425

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.08	0.81		0.21	0.70			0.44	0.14		0.10	0.19

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 34.4 Intersection LOS: C
Intersection Capacity Utilization 77.1% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 81: Lizzie & Johnson



Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	792	29	53	880	58	149	2	51	32	1	66
Future Volume (veh/h)	20	792	29	53	880	58	149	2	51	32	1	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	978	36	59	978	64	169	2	58	39	1	80
Peak Hour Factor	0.81	0.81	0.81	0.90	0.90	0.90	0.88	0.88	0.88	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	1048	39	236	1140	75	369	4	328	319	8	287
Arrive On Green	0.19	0.60	0.60	0.13	0.34	0.34	0.21	0.21	0.21	0.18	0.18	0.18
Sat Flow, veh/h	1781	3490	128	1781	3378	221	1761	21	1567	1739	45	1564
Grp Volume(v), veh/h	25	498	516	59	514	528	171	0	58	40	0	80
Grp Sat Flow(s),veh/h/ln	1781	1777	1842	1781	1777	1822	1782	0	1567	1783	0	1564
Q Serve(g_s), s	1.3	29.3	29.3	3.4	31.1	31.1	9.6	0.0	3.5	2.2	0.0	5.1
Cycle Q Clear(g_c), s	1.3	29.3	29.3	3.4	31.1	31.1	9.6	0.0	3.5	2.2	0.0	5.1
Prop In Lane	1.00		0.07	1.00		0.12	0.99		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	170	534	553	236	600	615	374	0	328	327	0	287
V/C Ratio(X)	0.15	0.93	0.93	0.25	0.86	0.86	0.46	0.00	0.18	0.12	0.00	0.28
Avail Cap(c_a), veh/h	310	534	553	279	600	615	387	0	341	388	0	340
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.77	0.77	0.77	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.6	21.9	21.9	44.7	35.5	35.5	39.7	0.0	37.3	39.2	0.0	40.4
Incr Delay (d2), s/veh	0.1	23.9	23.3	0.2	11.8	11.6	0.9	0.0	0.3	0.2	0.0	0.5
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	0.6	10.9	11.3	1.5	15.0	15.4	4.3	0.0	1.4	1.0	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	45.8	45.2	44.9	47.3	47.1	40.6	0.0	37.6	39.4	0.0	40.9
LnGrp LOS	D	D	D	D	D	D	D	A	D	D	A	D
Approach Vol, veh/h		1039			1101			229			120	
Approach Delay, s/veh		45.4			47.1			39.8			40.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.3	39.5		29.1	16.0	43.8		26.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	18.0	27.0		25.0	20.0	25.0		25.0				
Max Q Clear Time (g_c+I1), s	5.4	31.3		11.6	3.3	33.1		7.1				
Green Ext Time (p_c), s	0.1	0.0		1.0	0.0	0.0		0.4				

Intersection Summary			
HCM 6th Ctrl Delay			45.4
HCM 6th LOS			D

Approach	NB	SB	NE	SW
Crosswalk Length (ft)	61.3	62.7	36.0	36.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	5	5	3	3
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	2	6	4	8
Effective Walk Time (s)	8.0	8.0	9.0	9.0
Right Corner Size A (ft)	6.0	6.0	6.0	6.0
Right Corner Size B (ft)	6.0	6.0	6.0	6.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	36.00	36.00	36.00	36.00
Ped. Left-Right Flow Rate (p/h)	1	5	1	4
Ped. Right-Left Flow Rate (p/h)	2	3	3	2
Ped. R. Sidewalk Flow Rate (p/h)	0	1	1	4
Veh. Perm. L. Flow in Walk (v/h)	0	0	149	32
Veh. Perm. R. Flow in Walk (v/h)	29	58	51	66
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	35	35	30	30
Right Corner Area per Ped (sq.ft)	3559.0	2473.3	4019.3	1775.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	3062.5	1061.9	526.2	1020.8
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	49.8	49.8	48.9	48.9
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.79	2.84	2.27	2.07
Pedestrian Crosswalk LOS	C	C	B	B

Approach	NB	SB	NE	SW
Bicycle Flow Rate (bike/h)	7	6	2	2
Total Flow Rate (veh/h)	1039	1101	229	120
Effct. Green for Bike (s)	40.8	49.2	24.2	21.8
Cross Street Width (ft)	36.1	36.0	61.3	62.7
Through Lanes Number	2	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	710	856	421	379
Bicycle Delay (s/bike)	24.0	18.9	35.9	37.8
Bicycle Compliance	Fair	Fair	Poor	Poor
Bicycle LOS Score	1.68	1.73	2.88	2.72
Bicycle LOS	B	B	C	C

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	31	740	0	2	852	95	90	3	91	3	2	2
Future Volume (vph)	31	740	0	2	852	95	90	3	91	3	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		0	0		75	0		75
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00				0.99		1.00	0.99
Frt					0.985				0.850			0.850
Flt Protected	0.950			0.950				0.954			0.972	
Satd. Flow (prot)	1770	3539	0	1770	3477	0	0	1777	1583	0	1811	1583
Flt Permitted	0.950			0.950				0.134				
Satd. Flow (perm)	1770	3539	0	1770	3477	0	0	250	1562	0	1861	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11				136			114
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		509			714			393			345	
Travel Time (s)		9.9			13.9			8.9			7.8	
Confl. Peds. (#/hr)						1			1	1		
Confl. Bikes (#/hr)			6			3						2
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.67	0.67	0.67	0.44	0.44	0.44
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	37	892	0	2	936	104	134	4	136	7	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	892	0	2	1040	0	0	138	136	0	12	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1	1	1	1	1
Detector Template	Left	Thru		Left	Thru		Left		Right	Left		Right
Leading Detector (ft)	51	106		51	106		51	51	51	51	51	51
Trailing Detector (ft)	1	1		1	1		1	1	1	1	1	1
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4		4	8		8
Detector Phase	5	2		1	6		4	4	4	8	8	8
Switch Phase												

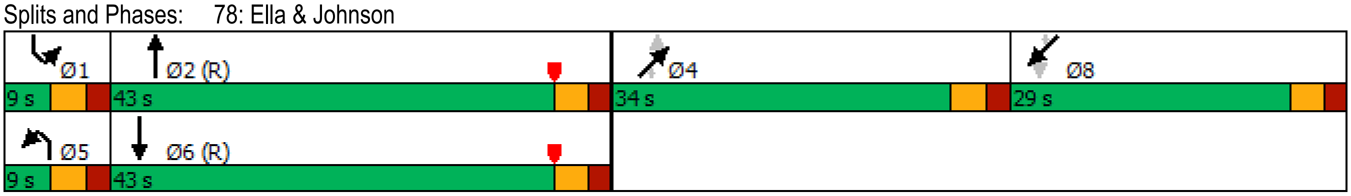
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	24.0		9.0	24.0		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	9.0	43.0		9.0	43.0		34.0	34.0	34.0	29.0	29.0	29.0
Total Split (%)	7.8%	37.4%		7.8%	37.4%		29.6%	29.6%	29.6%	25.2%	25.2%	25.2%
Maximum Green (s)	4.0	38.0		4.0	38.0		29.0	29.0	29.0	24.0	24.0	24.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.0	7.5		2.0	7.5		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min		None	C-Min		None	None	None	None	None	None
Walk Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)		15.0			15.0		20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)		0			0		1	1	1	0	0	0
Act Effct Green (s)	7.2	68.9		4.7	60.8			29.5	29.5		5.6	5.6
Actuated g/C Ratio	0.06	0.60		0.04	0.53			0.26	0.26		0.05	0.05
v/c Ratio	0.34	0.42		0.03	0.56			2.16	0.27		0.13	0.03
Control Delay	59.3	14.5		55.5	24.4			592.5	7.2		55.2	0.5
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	59.3	14.5		55.5	24.4			592.5	7.2		55.2	0.5
LOS	E	B		E	C			F	A		E	A
Approach Delay		16.2			24.5			302.0			39.1	
Approach LOS		B			C			F			D	
90th %ile Green (s)	9.6	53.9		5.2	49.5		29.0	29.0	29.0	6.9	6.9	6.9
90th %ile Term Code	Gap	Coord		Gap	Coord		Max	Max	Max	Gap	Gap	Gap
70th %ile Green (s)	8.3	65.1		0.0	51.8		29.0	29.0	29.0	5.9	5.9	5.9
70th %ile Term Code	Gap	Coord		Skip	Coord		Max	Max	Max	Gap	Gap	Gap
50th %ile Green (s)	7.1	76.0		0.0	63.9		29.0	29.0	29.0	0.0	0.0	0.0
50th %ile Term Code	Gap	Coord		Skip	Coord		Max	Max	Max	Skip	Skip	Skip
30th %ile Green (s)	6.0	76.0		0.0	65.0		29.0	29.0	29.0	0.0	0.0	0.0
30th %ile Term Code	Gap	Coord		Skip	Coord		Max	Max	Max	Skip	Skip	Skip
10th %ile Green (s)	0.0	73.6		0.0	73.6		31.4	31.4	31.4	0.0	0.0	0.0
10th %ile Term Code	Skip	Coord		Skip	Coord		Max	Max	Max	Skip	Skip	Skip
Stops (vph)	30	390		3	366			59	12		5	0
Fuel Used(gal)	1	12		0	12			12	0		0	0
CO Emissions (g/hr)	62	868		4	862			818	33		7	0
NOx Emissions (g/hr)	12	169		1	168			159	7		1	0
VOC Emissions (g/hr)	14	201		1	200			190	8		2	0
Dilemma Vehicles (#)	0	32		0	96			0	0		0	0
Queue Length 50th (ft)	27	143		2	70			~164	0		9	0
Queue Length 95th (ft)	56	268		m4	358			#206	15		14	0
Internal Link Dist (ft)		429			634			313			265	
Turn Bay Length (ft)	100			100					75			75
Base Capacity (vph)	110	2120		72	1842			64	501		388	415

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.34	0.42		0.03	0.56			2.16	0.27		0.03	0.01

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.16
Intersection Signal Delay: 54.8 Intersection LOS: D
Intersection Capacity Utilization 49.5% ICU Level of Service A
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 78: Ella & Johnson



Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	31	740	0	2	852	95	90	3	91	3	2	2
Future Volume (veh/h)	31	740	0	2	852	95	90	3	91	3	2	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	892	0	2	936	104	134	4	136	7	5	5
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.67	0.67	0.67	0.44	0.44	0.44
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	2186	0	4	1901	211	62	1	399	50	23	394
Arrive On Green	0.03	0.62	0.00	0.00	0.59	0.59	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	3647	0	1781	3216	357	0	4	1583	0	92	1561
Grp Volume(v), veh/h	37	892	0	2	517	523	138	0	136	12	0	5
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1796	4	0	1583	92	0	1561
Q Serve(g_s), s	2.4	14.8	0.0	0.1	19.3	19.3	0.0	0.0	8.1	0.0	0.0	0.3
Cycle Q Clear(g_c), s	2.4	14.8	0.0	0.1	19.3	19.3	29.0	0.0	8.1	29.0	0.0	0.3
Prop In Lane	1.00		0.00	1.00		0.20	0.97		1.00	0.58		1.00
Lane Grp Cap(c), veh/h	47	2186	0	4	1050	1062	63	0	399	73	0	394
V/C Ratio(X)	0.79	0.41	0.00	0.52	0.49	0.49	2.20	0.00	0.34	0.16	0.00	0.01
Avail Cap(c_a), veh/h	62	2186	0	62	1050	1062	63	0	399	73	0	394
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	1.00	0.00	0.69	0.69	0.69	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.7	11.4	0.0	57.3	13.6	13.6	57.1	0.0	35.2	35.7	0.0	32.3
Incr Delay (d2), s/veh	28.4	0.6	0.0	25.3	1.1	1.1	589.2	0.0	0.2	0.4	0.0	0.0
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	1.4	5.6	0.0	0.1	7.6	7.7	12.1	0.0	3.1	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.0	11.9	0.0	82.7	14.7	14.7	646.2	0.0	35.4	36.1	0.0	32.3
LnGrp LOS	F	B	A	F	B	B	F	A	D	D	A	C
Approach Vol, veh/h		929			1042			274			17	
Approach Delay, s/veh		14.8			14.8			343.0			34.9	
Approach LOS		B			B			F			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	75.8		34.0	8.0	73.0		34.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	38.0		29.0	4.0	38.0		24.0				
Max Q Clear Time (g_c+I1), s	2.1	16.8		31.0	4.4	21.3		31.0				
Green Ext Time (p_c), s	0.0	15.1		0.0	0.0	13.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			54.7									
HCM 6th LOS			D									

Approach	NB	SB	NE	SW
Crosswalk Length (ft)	61.6	61.4	36.1	35.9
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	5	5	3	3
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	4	8	6	2
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	1	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	1	2	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	90	3
Veh. Perm. R. Flow in Walk (v/h)	0	95	91	2
Veh. RTOR Flow in Walk (v/h)	0	2	57	2
85th percentile speed (mph)	35	35	30	30
Right Corner Area per Ped (sq.ft)	36450.0	24276.0	36414.1	0.0
Right Corner Quality of Service	A	A	A	-
Ped. Circulation Area (sq.ft)	0.2	0.0	0.3	0.0
Crosswalk Circulation Code	F	-	F	-
Pedestrian Delay (s/p)	57.5	57.5	57.5	57.5
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.78	2.79	2.31	1.97
Pedestrian Crosswalk LOS	C	C	B	B

Approach	NB	SB	NE	SW
Bicycle Flow Rate (bike/h)	6	3	0	2
Total Flow Rate (veh/h)	929	1042	274	17
Effct. Green for Bike (s)	68.9	60.8	29.5	5.6
Cross Street Width (ft)	35.9	36.1	61.6	61.4
Through Lanes Number	2	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	1198	1057	513	97
Bicycle Delay (s/bike)	9.3	12.8	31.8	52.1
Bicycle Compliance	Good	Fair	Poor	Poor
Bicycle LOS Score	1.59	1.69	2.95	2.53
Bicycle LOS	B	B	C	C

ATTACHMENT 9

French Hospital Medical Expansion
VMT Assessment Technical Memorandum

We Make a Difference

TECHNICAL MEMORANDUM

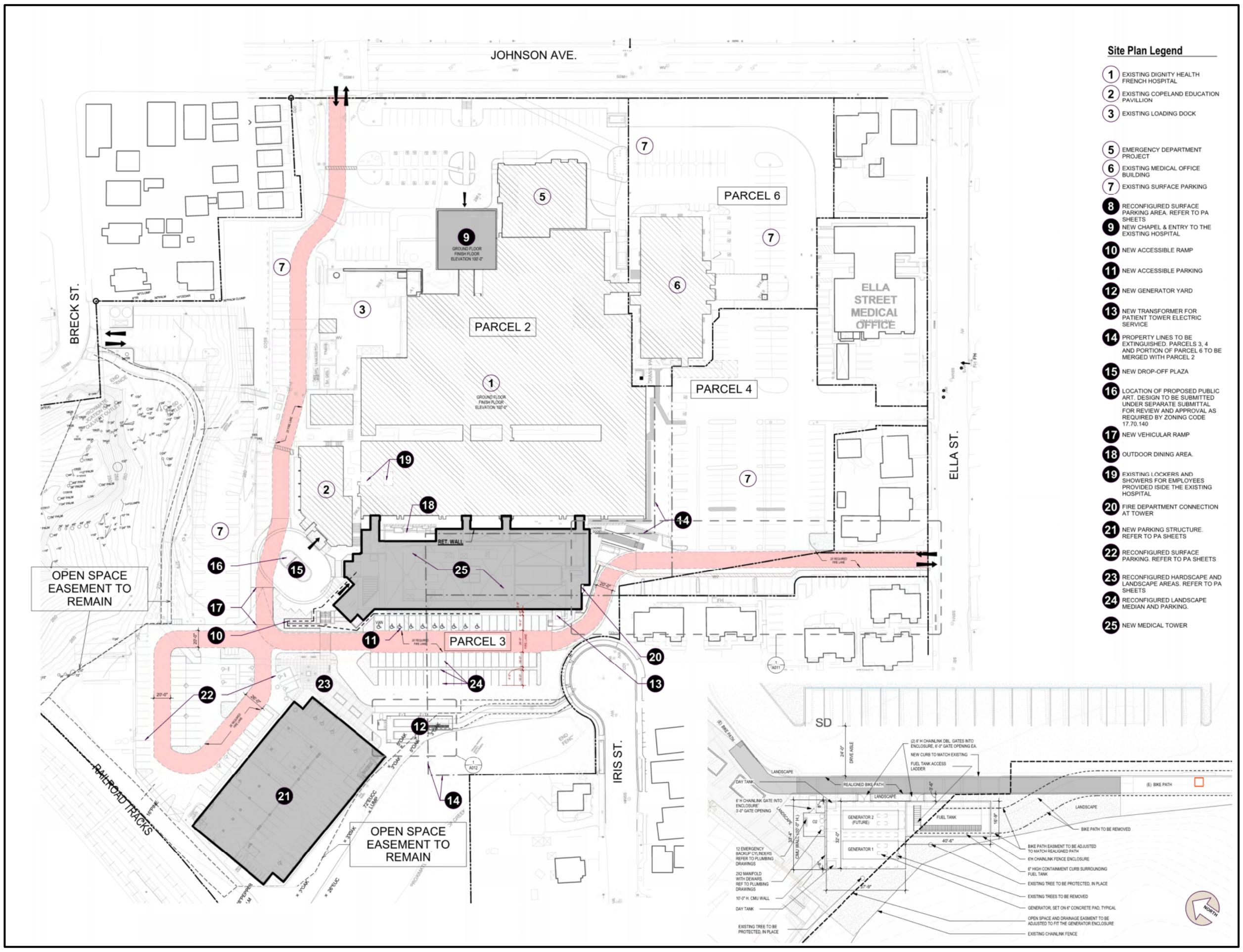
To:	Jennifer Rice, City of San Luis Obispo
From:	Carla Dietrich, Michael Baker International
CC:	Tom Tracy, Michael Baker International
Date:	April 8, 2021 (Final, Updated from February 4, 2021)
Subject:	French Hospital Medical Center Expansion VMT Assessment

Introduction

The purpose of this memorandum is to document a VMT assessment for the proposed French Hospital Medical Center expansion project (Project) located in the City of San Luis Obispo, California. A separate Focused Multimodal Transportation Study has also been prepared for this project. The existing French Hospital Medical Center currently exists at 1911 Johnson Avenue in the City of San Luis Obispo. The proposed French Hospital Medical Center expansion includes a new 82-bed wing, a chapel, a lab, and a parking structure. This memorandum has been prepared to support the Transportation component of the California Environmental Quality Act (CEQA) process. **Exhibit 1** shows the location of the project and **Exhibit 2** shows the conceptual site plan.

Exhibit 1: Project Location

Exhibit 2: Site Plan



Analysis Guidelines

The City of San Luis Obispo *Multimodal Transportation Impact Study Guidelines* (June 2020, 2nd Edition) (*City Guidelines*) and the Governor's Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA,* December 2018 *(Technical Advisory)* have been utilized in the development of this analysis.

Screening Criteria

Per *City Guidelines* and *Technical Advisory,* land use projects that meet the screening thresholds identified in **Table 1** are assumed to result in a less-than-significant transportation impact under CEQA and do not require a detailed quantitative VMT assessment. ***The project does not meet any of the Screening Criteria for land use projects which would allow a determination of a less-than-significant impact on VMT, thus a project-specific VMT assessment is required.***

Table 1: Screening Criteria for Land Use Projects Exempt from VMT Analysis

Project Type	OPR Recommended Threshold	Project Evaluation	Result
Small Development Projects	Projects anticipated to generate < 110 daily vehicle trips (11 peak hour vehicle trips) may be assumed to cause a less-than-significant impact, unless substantial evidence indicates that a project would generate a potentially significant level of VMT or create inconsistency with the SLOCOG RTP Sustainable Communities Strategy (SCS).	Project is anticipated to generate 1,876 daily trips.	Does Not Meet Criteria
Medium-Sized Residential & Employment-Based (Office, Business Park, Industrial, etc.) Development Projects	Map-based screening may be used for projects that generate <100 peak hour vehicle trips. Baseline VMT per capita/employee heat maps are developed based on data from the SLO TDM, showing existing average Residential and Work VMT for each area of the City. Where proposed projects that generate <100 peak hour trips are located within areas of the map with existing VMT at least 10% below adopted thresholds, and are generally similar to existing uses within that area (i.e. density, mix of uses, access to multimodal transportation), these projects can be assumed to cause a less-than-significant transportation impacts.	Project is anticipated to generate 155 AM Peak Hour trips and 159 PM Peak Hour trips.	Does Not Meet Criteria
Local Serving Retail & Public Facilities	Retail development projects with ≤ 50,000 sqft. gross floor area with reasonable justification that uses will be local-serving may be assumed to cause a less-than-significant impact. Similarly, local-serving public facilities, such as Police and Fire Stations, libraries, neighborhood parks without sporting fields, etc., may be assumed to cause a less-than-significant impact.	Project does not include local serving retail or public facilities.	Does Not Meet Criteria
Affordable Housing	Adding affordable housing in infill locations generally improves jobs-housing balance, in turn shortening commutes and reducing VMT. A project consisting of a high percentage of affordable housing (>50%) may be assumed to cause a less-than- significant impact on VMT if located within a low-VMT area per the City's VMT screening maps (see Appendix A) or where supporting evidence is provided that demonstrates low VMT-generating characteristics of similar affordable housing sites within the City.	Project does not include any residential housing.	Does Not Meet Criteria
Transit-Oriented Development	Per CEQA Guidelines, residential, retail, office and mixed-use projects that are located within a ½ mile of an existing major transit stop or an existing stop along a high- quality transit corridor may be assumed to cause a less-than-significant impact on VMT (see Note below). If project-specific or location-specific information indicates that the project would still generate significant levels of VMT, focused VMT analysis may still be required. No locations within the City of San Luis Obispo currently meet these transit servicelevels.	No locations within the City of San Luis Obispo currently meet these transit service levels.	Does Not Meet Criteria
Notes: 1. A "major transit stop" is defined as a site containing an existing rail station, a ferry terminal serviced by bus or rail transit, or the intersection of two or more major bus routes with a frequency of 15 minutes or less during commute periods. A "high-quality transit corridor" refers to a corridor with fixed-route bus service with frequencies of 1 minutes or less during peak commute hours.			

VMT Threshold of Significance

Table 2 shows the thresholds of significance per the *City Guidelines.* The "Other Development Projects" category was chosen as the appropriate category for the medical facility expansion based on coordination with City staff. The threshold identified for this category is developed on a case-by-case basis. Based on available guidance and coordination with City staff, it was determined that the appropriate threshold for this project is based on VMT/service population (SP), specifically **15% below the existing regional (County) average VMT per service population, or 17.43 VMT per service population**. Service population is defined as the combination of employee and residential trips produced (P) or attracted (A) within the region.

Table 2: VMT Thresholds of Significance

Project Type	Evaluation Criteria	Threshold[1]
Residential	15% below baseline Regional (County) average Residential VMT per capita. Applies to single-family, multi-family and mobile homes.	14.25 VMT per capita
Office / Business Park / Industrial / Warehousing / Manufacturing	15% below existing Regional (County) average Work VMT per employee.	12.45 VMT per employee
Retail / Hotel / School	Net increase in total Regional (County) VMT. Small local-serving retail may be presumed to cause less- than-significant impacts. Larger, regional-serving retail will require quantitative analysis using the SLO TDM and project-specific information, such as market studies or analysis of anticipated customer travel behavior.	No set threshold, increase in total VMT would trigger impact
Mixed-Use	Evaluate each component of a mixed-use project independently, applying significance threshold for each land use type. Alternately, the City may choose to analyze VMT for only the dominant use. Analysis should take credit for internal capture between uses.	Apply Residential, Office & Retail Thresholds above
Redevelopment Projects	Where a development replaces an existing VMT- generating land use, if the replacement total VMT leads to a net overall decrease in VMT, the project is assumed to have a less-than-significant impact. If net new VMT exceeds the existing land use, apply the thresholds described above.	No set threshold
Other Development Projects	City may apply adopted residential, office or retail VMT thresholds to other development projects that have predominant operating characteristics similar to those uses. Alternately, City may use more location-specific information to develop specific thresholds for other land use types. In doing so, analysis should consider the information described in the CEQA Guidelines (Section 15064.7) on the development of thresholds of significance.	No set threshold. Evaluated on case-by-case basis based on OPR guidance

Notes: 1. Quantitative thresholds will be updated as required with subsequent updates to the City Travel Demand Model and/or per revisions to CEQA Guidelines or OPR Technical Advisory on VMT analysis.

Project Level VMT Assessment

Michael Baker enlisted the assistance of Translutions to conduct project specific travel demand modeling for the Project using the City's Travel Demand Model (SLO TDM). The model was provided by the City for use on this project in August 2020. The Project is located within TAZ 212. The model was run by adding the area of expansion to the existing TAZ (90,000 square feet of hospital use). The modeling and calculations were conducted consistent to the methodology included in *Appendix B: SLO TDM Technical Guide - Calculating VMT (Cambridge Systematics)* of the *City of San Luis Obispo Multimodal Transportation Impact Study Guidelines, 2nd Edition* (June 2020).

The Baseline (Year 2016) travel demand model results are shown in **Table 3** and a summary of the findings are shown in **Table 4**. The results show that the Project VMT per service population of 20.50 is greater than the significance threshold (17.42 VMT per service population), and is 100.05% of the Average Regional VMT (20.49 VMT per service population) therefore ***the project is anticipated to result in a significant transportation impact.***

Table 3: Project VMT Model Results

Category	San Luis Obispo (County) VMT per Service Population	
	No Project	With Project
Total P VMT	8,083,328	8,087,846
Total A VMT	8,083,328	8,087,846
Total PA VMT	**8,083,328**	**8,087,846**
Total Population	280,101 *	280,101 *
Total Employment	114,304 *	114,349 **
Service Population	**394,405**	**394,450**
VMT / Service Population	**20.49**	**20.50**

** Regional value obtained from 2019 Regional Transportation Plan (Connecting Communities) Policy Element, Figure 2-2: San Luis Obispo Region by the Numbers; pg 2-6.*

*** Equals regional value plus Project anticipated number of employees (45).*

Table 4: Project VMT Impact Summary

Category	VMT per Service Population Summary
VMT per Service Population (With Project)	20.50
VMT per Service Population (Regional Average)	20.49
VMT per Service Population Threshold (15% Below Regional Average)	17.42
Percentage Reduction in VMT Required to Shift Project to Below Threshold	**15.05%**

Mitigation Measures

With the finding of a significant transportation impact, potential mitigation measures are evaluated under this section. To mitigate the impact, the project would need to identify Transportation Demand Management (TDM) elements to help reduce reliance on auto or provide means by which to either reduce the length of vehicle trips or reduce the number of vehicle trips.

Attachment 1 contains a list of potential VMT mitigation measures. The mitigation measures and their potential impact evaluated in this analysis are a combination of the *City Guidelines*, the California Air Pollution Control Officers Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures* (August 2010), and the Western Riverside Council of Governments (WRCOG) *SB 743 Implementation TDM Strategy Assessment* (Fehr & Peers, February 26, 2019).

The list of TDM strategies that are relevant to development projects and evaluated in terms of the French Hospital Medical Center expansion project are shown in **Table 5**. Each of the TDM strategies were evaluated in terms of its potential applicability to the proposed Project in an attempt to mitigate the VMT impact identified, as summarized in **Table 6.** In some cases the mitigation measures identified are currently in place, as shown in each of the tables. Also, the analysis includes the consideration of low-level implementation and high-level implementation. High-level implementation includes regular monitoring to ensure the efficacy of the TDM strategies including a determination of adequacy and adjustments to the program if the actual level of trip reduction is determined to be insufficient.

Table 5: Evaluation of Potential TDM Strategies

<table>
<tr><th colspan="2" rowspan="2">TDM Strategy</th><th rowspan="2">Evaluation</th><th colspan="2">Applicability to the Proposed Project</th></tr>
<tr><th>Low-Level</th><th>High-Level</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">Provide pedestrian network improvements</td><td rowspan="2">Orienting the project towards transit, bicycle, and pedestrian facilities could result in a 0.25% - 0.50% reduction in VMT. The Project site and expansion supports the use of bicycle and pedestrian activity. Sidewalks are provided adjacent to and onto the site. A trail exists along the property that connects Breck Street to Iris Street. The project proposes to maintain the high level of bicycle and pedestrian accommodation.</td><td colspan="2">Applicable – A VMT reduction is in place given the existing robust bicycle and pedestrian network (TDM Measure Currently in Place)</td></tr>
<tr><td>0.25%</td><td>0.25%</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">Provide traffic calming measures and low-stress bicycle network improvements</td><td rowspan="2">Implementing traffic calming is anticipated to result in a 0.25% - 1.00% reduction in VMT. Bicycle lanes currently existing along Johnson Avenue. Bicycle accommodations on-site are provided via the shared travel ways and the trail that extends through the site from Breck Street to Iris Street. The expansion traffic will benefit from this condition.</td><td colspan="2">Applicable – A VMT reduction is in place given the measures provided (TDM Measure Currently in Place)</td></tr>
<tr><td>0.25%</td><td>0.25%</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Provide bicycle parking</td><td rowspan="2">Providing bicycle parking is anticipated to result in a 0.625% reduction in VMT for non-residential projects. It is recommended that the hospital expansion project provide dedicated bicycle parking on-site.</td><td colspan="2">Applicable – A VMT reduction is in place given existing conditions (TDM Measure Currently in Place)</td></tr>
<tr><td>0.625%</td><td>0.625%</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Locate project near transit</td><td rowspan="2">Locating a project near transit is anticipated to result in a 0.5% - 24.6% VMT reduction. Transit service is provided along Johnson Avenue by SLO Transit via Route 1A/1B.</td><td colspan="2">Applicable – A reduction in VMT is in place due to the proximity to transit (TDM Measure Currently in Place)</td></tr>
<tr><td>5%</td><td>5%</td></tr>
</table>

TDM Strategy		Evaluation	Applicability to the Proposed Project	
			Low-Level	**High-Level**
5	Increase transit service frequency and speed	**Increasing transit service frequency/speed is projected to result in a 0.02% - 2.5% reduction in VMT.** This type of measure requires regional or local agency implementation and coordination to provide transit beyond what is currently available and thus it is not applicable for individual development projects.	Not Applicable 0%	0%
6	Provide parking or roadway pricing or cash-out programs	**Providing employee parking cash-out programs is anticipated to result 0.6% - 7.7% commute VMT reduction.** This strategy allows the employer to provide employees with a choice of forgoing subsidized/free parking for a cash payment equivalent to the cost of the parking space. Potential VMT reduction values are based on jurisdictional size.	Applicable – A reduction in VMT is projected based on implementation (Additional TDM Measure Recommended) 3.5%	3.5%
7	Implement car-sharing program	**Implementing a car-sharing program is projected to result in a 0.4% - 0.7% reduction in VMT.** The nature of the project would be a candidate for a car-sharing program between employees that work the same shift. However, this type of measure requires private market support as well as regional or local agency implementation and coordination. Thus, it is not applicable for individual development projects unless an established program is in place.	Not Applicable 0%	0%
8	Encourage telecommuting and alternative work schedules	Telecommuting programs are employment-based strategies. Given the service nature of the hospital, telecommuting options would be limited to administrative tasks such as billing or scheduling, which would have limited impact.	Not Applicable 0%	0%
9	Provide ride-sharing programs	**Implementing employment-based ride-sharing strategies is projected to result in a 1% - 15% commute VMT reduction.** CAPCOA page 253 (TRT-11 and TRT-12) indicates that a low range % VMT reduction would occur with a low implementation/small employer while a high range % VMT reduction would occur with a high implementation/large employer. Ride-sharing programs work best in conditions where work schedules are fixed and regular. Swapping shifts and the requirement for doctors to visit admitted patients at various times would limit the VMT reduction. While some benefit from a ride-sharing program can get anticipated, the nature and locale would likely result in a lower level of VMT reduction.	Applicable – A total 1% reduction given the nature and location of the land use (TDM Measure Currently in Place [0.5% reduction]; Additional TDM Measure Recommended identified with a slight expansion of the existing activities [0.5% reduction]) 1%	Applicable – A total 2.5% reduction given the nature and location of the land use (TDM Measure Currently in Place [0.5% reduction]; Additional TDM Measure Recommended identified through an expansion of the existing activities to include regular monitoring to ensure TDM strategy efficacy [2% reduction]) 2.5%
10	Implement commute trip reduction marketing	**Implementing Commute Trip Reduction Marketing is projected to result in a 4% - 5% reduction in commute vehicle trips with full-scale employer support.** Implementing commute trip reduction strategies without a complementary marketing effort results in a lower VMT reduction.	Applicable – A 1% reduction in VMT is anticipated with a moderate marketing efforts (Additional TDM Measure Recommended) 1%	Applicable – A 4% reduction in VMT is anticipated with full implementation of a robust marketing effort (Additional TDM Measure Recommended) 4%

TDM Strategy		Evaluation	Applicability to the Proposed Project	
			Low-Level	High-Level
11	Increase diversity of land uses	**Increasing the mix of uses within a project could result in a 9% - 30% reduction in VMT.** Since the project is an expansion of the existing building and existing use, adding a mix of uses would create inconsistency.	Not Applicable	
12	Land Use Mix	Incorporating a mix of land uses to increase access to common goods and services has the potential to reduce VMT, however the project is an expansion of an existing use and the goal of the project is to accommodate the medical uses.	Not Applicable	
13	Relocate Project	Locating the project in a lower-VMT area of the City is a potential mitigation, however the Project is an expansion of an existing use and relocation of the hospital or separation of services is not feasible.	Not Applicable	

Table 6: Mitigation Summary

Category		VMT Summary	
		Low-Level	High-Level
Percentage Reduction in VMT Required to Shift Project to Below Threshold		**-15.05%**	
TDM Measures Currently in Place	Locate project near transit	-5%	-5%
	Provide bicycle parking	-0.625%	-0.625%
	Provide pedestrian network improvements	-0.25%	-0.25%
	Provide traffic calming measures and low-stress bicycle network improvements	-0.25%	-0.25%
	Employer-implemented ride-sharing program (existing measures)	-0.5%	-0.5%
	Subtotal	***-6.625%***	***-6.625%***
Additional TDM Measures Recommended	Provide parking cash-out programs	-3.5%	-3.5%
	Employer-implemented ride-sharing program (expansion of existing measures)	-0.5%	-2.5%
	Implement commute trip reduction marketing strategies	-1%	-4%
	Subtotal	***-5.000%***	***-10%***
Mitigation Summary	TDM Measures Currently in Place	-6.625%	-6.625%
	Additional TDM Measures Recommended	-5%	-10%
	Total Reduction Achieved	**-11.625%**	**-16.625%**
	Remaining Unmitigated Impact	**3.425%**	**--**
Finding: VMT reduction impact does not achieve the required 15.05% reduction in VMT per service population under the low-level implementation scenario, however, the VMT reduction impact is projected to be achieved under the high-level implementation scenario.			

An alternative to TDM programs is the establishment of mitigation fee programs and mitigation banks/exchanges for projects that are unable to fully mitigate their VMT impacts. These programs would fund a pool of projects that would improve VMT at a regional level. However, VMT fee programs and mitigation banks have not yet been implemented and are currently not a mitigation option for this project. Additionally, there is the potential to directly fund and implement transportation improvements or measures that reduce VMT, such as funding off-site pedestrian/bicycle infrastructure, or increasing transit service frequency to/from the hospital through either private shuttle service or working with SLO Transit to increase their service frequencies. Other types of improvements that reduce VMT beyond those mentioned above may also be considered. **Based on this analysis, the Project is unable to mitigate the VMT impacts through TDM alone under the low-level scenario, and without further actions to reduce VMT, the transportation impact is identified as significant and unmitigated. However, as identified under the high-level scenario, the Project is able to mitigate the VMT impacts through TDM strategies with regular monitoring to ensure efficacy of the program.**

Conclusions

The VMT evaluation of the French Hospital Medical Center located in the City of San Luis Obispo shows that the project does not meet the screening criteria and thus a VMT assessment was required. Evaluation of the project TAZ and the VMT per service population demonstrated that the project TAZ does not meet the VMT threshold of 85% of the VMT per service population. As such, the project will result in a significant transportation impact. **While implementing additional TDM strategies under the low-level scenario at the French Hospital Medical Center would partially mitigate this impact, the applicable TDM measures alone are unable to satisfy the required change in VMT to meet the threshold. However, with the high-level implementation scenario including a regular monitoring program, the project's transportation impact has been identified as mitigated.**

Attachment 1 – Potential VMT Mitigation Measures

Reduction Measure	Implementation Lead	Effectiveness	Source	Scale/Magnitude
Orient the project toward transit, bicycle, and pedestrian facilities	Applicant	0.25 – 0.5% reduction in VMT	CAPCOA page 179, LUT-7	Within Project
Locate the project in an area of the region that already exhibits low VMT	Applicant	10-65% VMT reduction	CAPCOA page 159, LUT-2	Site specific
Shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services	Employer	0.3 – 13.4% commute VMT reduction	CAPCOA page 227, TRT-3	Based on size of development
Limit or eliminate parking supply	Applicant	5 – 12.5% vehicle miles travelled (VMT) reduction	CAPCOA page 207, PDT-1	Within Project
Unbundle parking costs	Applicant	2.6 – 13% VMT reduction	CAPCOA page 210, PDT-2	Within Project
Provide parking or roadway pricing or cash-out programs	Applicant/ landlord / company	0.1 – 19.7% commute VMT reduction, cash- out: 0.6 – 7.7% commute VMT reduction	CAPCOA page 261, TRT-14 and 15	Varies, potentially high
Provide Bike Parking in Non-Residential Projects	Applicant	0.625% reduction in VMT	CAPCOA page 202, SDT-6	Within Project
Provide Bike Parking with Multi-Unit Residential Projects	Applicant	Not Quantified	CAPCOA page 204, SDT-7	Within Project
Incorporate affordable housing into the project	Applicant	Not Quantified		Within Project
Locate the project near transit	Applicant	0.5 – 24.6% VMT reduction	CAPCOA page 171, LUT-5	Site specific
Increase project density	Applicant	0.8 – 30.0% VMT reduction	CAPCOA page 155, LUT-1	Within Project
Increase the mix of uses within the project or within the project's surroundings	Applicant	9-30% VMT reduction	CAPCOA page 162, LUT-3	Within Project
Increase connectivity and/or intersection density on the project site	Applicant	Not Quantified		Within Project
Integrate Affordable and Below Market Rate Housing	Applicant	0.04 – 1.20% VMT reduction	CAPCOA page 176, LUT-6	Within Project
Locate Project near Bike Path/Bike Lane	Applicant	0.625% reduction in VMT	CAPCOA page 181, LUT-8	Site specific
Incorporate Bike Lane Street Design (on-site)	Applicant	1% increase in share of workers commuting by bicycle (for each additional mile of bike lanes per square mile)	CAPCOA page 200, SDT-5	Within Project
Increase access to common goods and services, such as groceries, schools, and daycare	Local Agency	2% Trip Reduction		Based on location
Implement or provide access to a commute reduction program	Applicant/ landlord / company	1.0 – 6.2% commute VMT Reduction	CAPCOA page 210, TRT-1	
Providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms	Applicant/ landlord / company	Not quantified	CAPCOA page 244, TRT-8	
Implement Commute Trip Reduction Marketing	Applicant/ landlord / company	4-5% commute vehicle trips reduced with full- scale employer support	CAPCOA page 240, TRT-7	Within Project
Tolling new lanes to encourage carpools and fund transit improvements	Caltrans	Strong effect on travel patterns		Very large scale undertaking
Converting existing general purpose lanes to HOV or HOT lanes	Caltrans	Tolling effect		Very large scale undertaking

Reduction Measure	Implementation Lead	Effectiveness	Source	Scale/Magnitude
Implementing Intelligent Transportation Systems (ITS) strategies to improve passenger throughput on existing lanes	Caltrans, Local Agency, LA County DPW	0 - 45% reduction in GHG emissions	CAPCOA page 291, RPT-2	High dependent on affected roadways
Implement Commute Trip Reduction Program – Required Implementation/Monitoring	Employer	4.2 – 21.0% commute VMT reduction	CAPCOA page 223, TRT-2	Within Project
Provide transit passes. [to Metro services]	Employer	Not quantified		
Providing telework options	Employer	0.07 – 5.50% commute VMT	CAPCOA page 236, TRT-6	Low scale
Providing employee transportation coordinators at employment sites	Employer	Not Quantified		Within Project
Providing a guaranteed ride home service to users of non-auto modes	Employer	Not Quantified		Within Project
Provide car-sharing, bike sharing, and ride-sharing programs	Employer or franchise through local agency	1 – 15% commute VMT reduction	CAPCOA page 253, TRT-11 and TRT-12	
Implement Car-Sharing Program	Employer or franchise through local agency	0.4 – 0.7% VMT reduction and therefore 0.4 – 0.7% reduction in GHG emissions	CAPCOA page 245, TRT-9	Likely beyond the site area to be effective
Increase access to common goods and services, such as groceries, schools, and daycare	Local Agency	2% Trip Reduction		Based on location
Incorporate neighborhood electric vehicle network	Local Agency	0.5-12.7% VMT reduction	CAPCOA page 194, SDT-3	Potentially very large scale to be effective
Provide Pedestrian Network Improvements	Local Agency	0 - 2% VMT reduction	CAPCOA page 186, SDT-1	Dependent on affected area
Provide traffic calming	Local Agency	0.25 – 1.00% VMT reduction and therefore 0.25 – 1.00% reduction in GHG emissions	CAPCOA page 190, SDT-2	Generally low, and localized
Implement Market Price Public Parking (On-Street)	Local Agency	2.8 – 5.5% VMT reduction	CAPCOA page 213, PDT-3	Likely on adjacent roadways
Reduction Measures on a Programmatic Level				
Expand Transit Network	Metro and other Transit Agencies	0.1 – 8.2% vehicle miles travelled (VMT) reduction	CAPCOA page 276, TST-3	Very High
Increase Transit Service Frequency/Speed	Metro and other Transit Agencies	0.02 – 2.5% VMT reduction	CAPCOA page 280, TST-4	Purchase of new vehicles or more vehicles run
Provide a Bus Rapid Transit System	Metro and other Transit Agencies	0.02 – 3.2% VMT reduction	CAPCOA page 270, TST-1	High, if new system
Providing incentives or subsidies that increase the use of modes other than single-occupancy vehicle	Metro and other Agencies	0.3 – 20.0% commute VMT reduction	CAPCOA page 230, TRT-4	
Improve or increase access to transit.	Local Agency in coordination with Metro	Not quantified	CAPCOA page 275, TST-2	Small investments in pedestrian and bicycle connections, may include park and ride improvements
Implementing or funding off-site travel demand management	Various including Metro	Not Quantified		Variable
Increase Destination Accessibility	Metro and other Transport. Agencies	6.7 – 20% VMT reduction	CAPCOA page 167, LUT-4	Site specific
Deploy management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes	Local Agency	Not Quantified		Likely on adjacent roadways
Create Urban Non-Motorized Zones	Local Agency	0.01 – 0.2% annual VMT reduction		Likely on adjacent roadways

Source: *Analysis of VMT Mitigation Measures Pursuant to SB 743* (February 23, 2018, Prepared by Iteris, Inc. for Metro)

ATTACHMENT 10

County of San Luis Obispo Emergency Services Helicopter Use Records Correspondence

Subject: RE: French Hospital Heliport Info
Date: Monday, April 16, 2018 at 1:35:43 PM Pacific Daylight Time
From: Vince Pierucci
To: Brian Starr
CC: Ariana and Allen Melendez, alan.iftiniuk_DignityHealth.org, julia.fogelson_dignityhealth.org
Attachments: helicopter use_scrubbed data.pdf

Good Afternoon,

First, I apologize for the delay. I had hoped for having this data to you by the end of last week. However, being short staffed required me to triage my activities.

Nevertheless, please see attached regarding the now scrubbed data.

This data is reflective of all helicopter use that either went to SVRMC or SLO Airport.

Additionally, here is some data regarding weights and rotor diameters for nearby aircraft:

The CHP operates an Airbus H125:

Main rotor diameter - 35'
Overall length - 45'
Max weight - 6,173 LB

CALSTAR operates an Airbus H135:

Main rotor diameter - 34'
Overall length - 40'
Max weight - 6,570 LB

A consideration should also be that CAL FIRE & Ventura Co Fire is in the process of purchasing Sikorsky S70i Firehawk helicopters which are considerably larger:

Main rotor 54'
Overall length - 65'
Max weight - 23,500 LB

I'm still trying to gather data for military aircraft.

I'll share that once I get it.

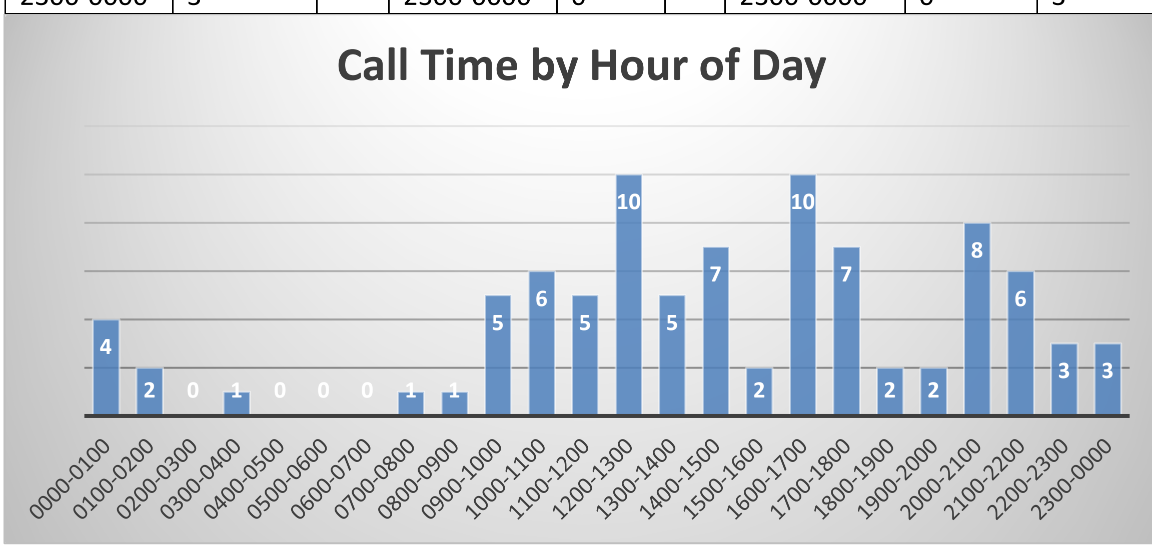
Thanks

Vince

From: Brian Starr <brian@sdgarchitects.com>
Sent: Sunday, April 15, 2018 7:22 PM
To: Vince Pierucci <VPierucci@co.slo.ca.us>

YEAR	2016	2017	2018
SVRMC	15	18	4
SLO Airport	35	17	1
TOTAL	50	35	5
FHMC Specific	18 – From French/No receiving	7 – From French/No receiving	N/A

2016			2017			2018 YTD		Total
0000-0100	1		0000-0100	3		0000-0100	0	4
0100-0200	1		0100-0200	1		0100-0200	0	2
0200-0300	0		0200-0300	0		0200-0300	0	0
0300-0400	1		0300-0400	0		0300-0400	0	1
0400-0500	0		0400-0500	0		0400-0500	0	0
0500-0600	0		0500-0600	0		0500-0600	0	0
0600-0700	0		0600-0700	0		0600-0700	0	0
0700-0800	0		0700-0800	1		0700-0800	0	1
0800-0900	1		0800-0900	0		0800-0900	0	1
0900-1000	5		0900-1000	0		0900-1000	0	5
1000-1100	5		1000-1100	1		1000-1100	0	6
1100-1200	3		1100-1200	2		1100-1200	0	5
1200-1300	4		1200-1300	4		1200-1300	2	10
1300-1400	1		1300-1400	4		1300-1400	0	5
1400-1500	5		1400-1500	2		1400-1500	0	7
1500-1600	0		1500-1600	1		1500-1600	1	2
1600-1700	8		1600-1700	2		1600-1700	0	10
1700-1800	2		1700-1800	5		1700-1800	0	7
1800-1900	0		1800-1900	1		1800-1900	1	2
1900-2000	1		1900-2000	1		1900-2000	0	2
2000-2100	4		2000-2100	3		2000-2100	1	8
2100-2200	3		2100-2200	3		2100-2200	0	6
2200-2300	2		2200-2300	1		2200-2300	0	3
2300-0000	3		2300-0000	0		2300-0000	0	3



ATTACHMENT 11

Email Correspondence Regarding
French Hospital Medical Center Expansion Energy Savings

From: Scott, Shawna
To: Cassidy Williams; Emily Creel
Subject: FW: FHMC - mitigation agreement
Date: Thursday, February 10, 2022 3:31:29 PM
Attachments: image001.png
image002.png
image003.jpg
image004.jpg

EXTERNAL: This email originated from outside SWCA. Please use caution when replying.

From: Ariana Melendez <ariana@sdgarchitects.com>
Sent: Thursday, February 10, 2022 2:03 PM
To: Scott, Shawna <sscott@slocity.org>
Cc: Brian Starr <brian@sdgarchitects.com>; Rebecca Campbell <rebecca.campbell@commonspirit.org>
Subject: RE: FHMC - mitigation agreement

This message is from an **External Source**. Use caution when deciding to open attachments, click links, or respond.

Hi Shawna,

See below for the requested information on items 2 and 3. Please note that in the CAP checklist, we listed saving slightly lower than those listed on his tables due to the fact the design is still being finalized.

We'll provide more information on the PV system by mid next week.

Thank you,

Ariana Melendez
Project Architect

Studio Design Group Architects, Inc.
762 Higuera Street, Suite 212
San Luis Obispo, CA 93401
805-541-3848 (office) ext. 9
ariana@sdgarchitects.com

http://www.sdgarchitects.com

From: Marlin Addison <marlin.addison@gmail.com>
Organization: M.S. Addison and Associates, LLC
Reply-To: <marlin.addison@gmail.com>
Date: Thursday, February 10, 2022 at 10:22 AM
To: 'Ariana Melendez' <ariana@sdgarchitects.com>
Cc: Michael Blasingim <mblasingim@laytonconstruction.com>, Kevin McQuaid <kmcquaid@cuningham.com>, Rebecca Campbell <rebecca.campbell@commonspirit.org>
Subject: RE: FHMC environmental review

Ariana,
As per our conversation earlier this morning, the following is intended to provide supporting documentation that addresses both items you identified in your email bleow: (1) Energy Savings and (2) Reach Code Consistency.

Table 1 below summarizes CA Title24 TDV (Time-Dependent Valuation) energy use as predicted by the EUI model for FHMC (full buildout case). Since FHMC is not governed by Title24, the "Standard Design Building" case (i.e., the baseline) is defined as per 2019 CalGreen's "Section 305 [OSHPD 1]" which requires the Proposed Design Building to meet (Tier1) or exceed (TIER2) the latest edition of "Savings By Design, Healthcare Modeling Procedures". 2016 is the latest edition of that publication and was used for this work.

Table 1 reports that the Proposed Design Building saves 15% electric, 38% gas and 21% total TDV energy. In my Fri 1/28/2022 1:22 PM (MST) email, I reported less savings, i.e., 14%, 35% and 19% respectively, reflecting more conservative reheat-related control sequences.

Figure 1 and Figure 2 below are the TDV reports from the eQUEST/DOE-2.3 EUI energy model used for this work. The eQUEST/DOE-2.3 TDV reports in Figures 1 and 2 are the source of the numbers reported in Table 1.

Please let me know if this provides what you need and if you have any questions.
Marlin Addison

Figure 1: TDV Energy for French Hospital Medical Center Standard Design Building (full buildout)

Figure 2: TDV Energy for French Hospital Medical Center Proposed Design Building (full buildout)

ATTACHMENT 12

Updated San Luis Obispo Climate Action Plan for Community Recovery Consistency Analysis Technical Memorandum

75 Higuera Street, Suite 105
San Luis Obispo, CA 93401
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TECHNICAL MEMORANDUM

Date:	February 24, 2022
To:	Cassidy Williams, Project Environmental Planner – APM SWCA Environmental Consultants 1422 Monterey Street, Suite B-C 200 San Luis Obispo, CA 93401
From:	Kurt Legleiter, Principal
Subject:	**French Hospital Medical Center Expansion Project – Updated San Luis Obispo Climate Action Plan for Community Recovery Consistency Analysis**

INTRODUCTION

This memorandum provides an updated analysis of greenhouse gas (GHG) impacts for the proposed French Hospital Medical Center Expansion Project (project), located in San Luis Obispo, California. Supportive documentation for this analysis has been included in Attachment A of this report.

PROPOSED PROJECT SUMMARY

The existing French Hospital Medical Center is located at 1911 Johnson Avenue in the City of San Luis Obispo. The proposed French Hospital Medical Center expansion includes a new 82-bed wing, a lab, a parking structure, and a helicopter pad. The proposed project's site plan is depicted in Figure 1.

IMPACT ASSESSMENT

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, increased GHG emissions associated with the implementation of the proposed project would be considered significant if the project would:

a) Generate GHG 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 GHGs.

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In accordance with CEQA Guidelines Sections 15064(h) and 1513.5(b)(2), projects that are determined to be consistent with a qualified GHG-reduction plan would be considered to have a less-than-significant impact on the environment, would not conflict with GHG-reduction planning efforts, and would not require additional GHG emissions analysis or mitigation.

On August 18, 2020, the City of San Luis Obispo adopted the *Climate Action Plan for Community Recovery* (CAP), which is a long-range plan to reduce GHG emissions from City government operations and community activities. The CAP will also help achieve multiple community goals such as lowering energy costs, reducing air pollution, supporting local economic development. The CAP includes measures to reduce community-wide GHG emissions by 45 percent below 1990 levels by 2030 and 66 percent below 1990 levels by 2035, which is consistent with California's goal of reducing GHG emissions to 40 percent below 1990 levels by 2030. The City's CAP has undergone CEQA review and the City has found that the CAP is a qualified GHG emissions reduction strategy consistent with state law. Accordingly, this analysis tiers from the environmental analysis prepared for the City's adopted CAP, pursuant to CEQA Guidelines Section 15183.5.

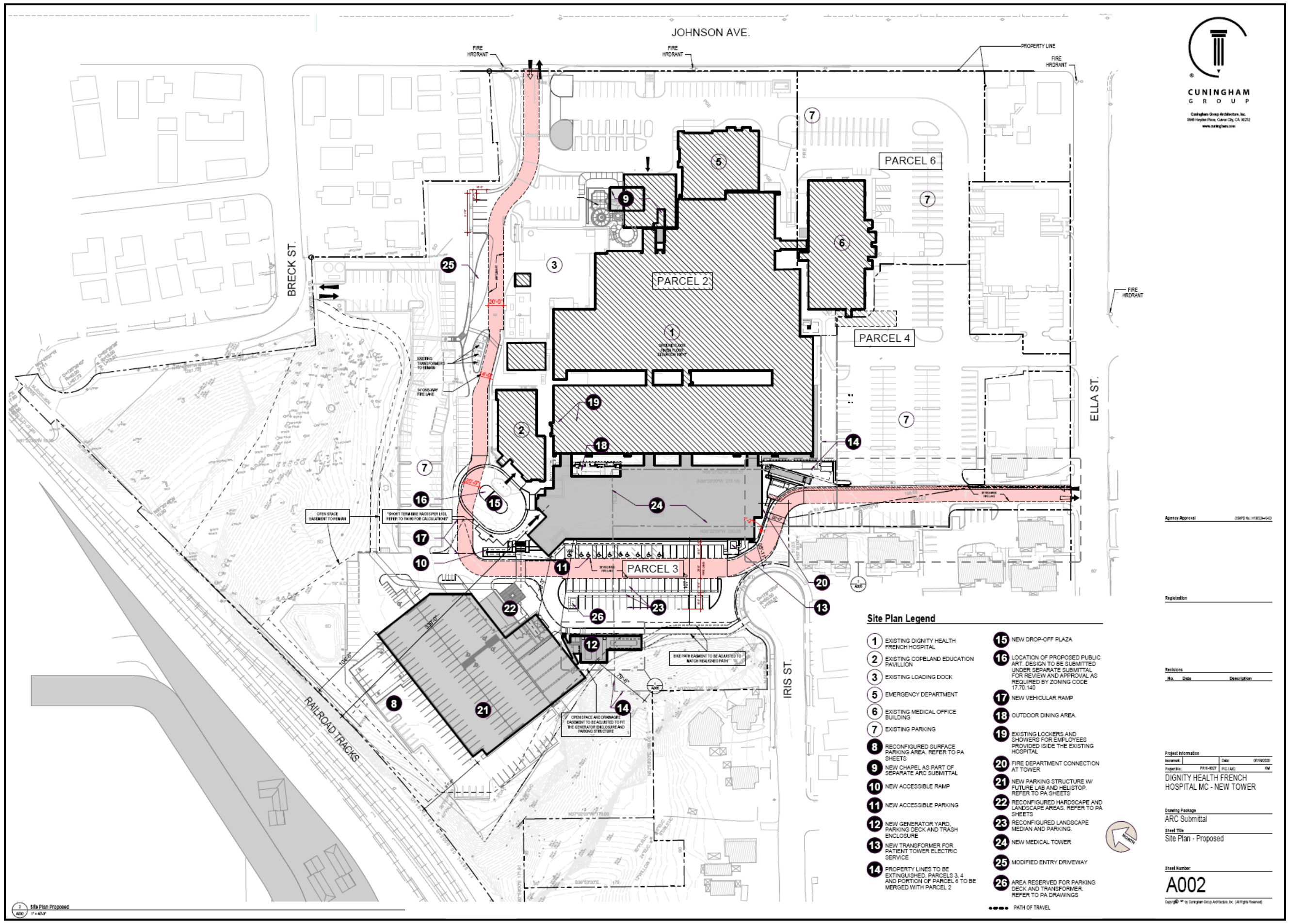
To assist in the determination of project consistency with the CAP, the CAP contains a *CEQA GHG Emissions Consistency Checklist* (Checklist). Projects that are determined to be consistent with applicable regulatory requirements and GHG-reduction measures identified in the Checklist would be considered consistent with the City's CAP and, as such, would be considered to have a less-than-significant impact, and would not be required to conduct additional GHG analysis.[1]

Impact Analysis

Project consistency with applicable regulatory requirements and GHG-reduction measures identified in the City's CAP Checklist are summarized in Table 1. As depicted and with implementation of proposed mitigation measures, the proposed project would be consistent with applicable regulatory requirements and GHG-reduction measures identified in the CAP. As a result, the proposed project would be considered to have a less-than-significant impact on the environment and would not conflict with applicable GHG-reduction planning efforts. As a result, additional analysis of GHG emissions would not be required for this project.

[1] City of San Luis Obispo. August 18, 2020. *Climate Action Plan for Community Recovery*. Available at website url: https://www.slocity.org/government/department-directory/city-administration/office-of-sustainability/climate-action/climate-action-plan-1949.

Figure 1. Proposed Project Site Plan



Source: Cunningham Group 2021

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Table 1. Project Consistency with City of San Luis Obispo Climate Action Plan Compliance Checklist

Regulation	Requirements	Project/Plan Compliance	Project Consistency/Explanation
Section I. Land Use Consistency			
Does the project include a land use element and/or zoning designation amendment? If "No", proceed to Section II – CAP Measures Consistency. If "Yes", proceed to question 1b.		Yes ☐ No ☒ N/A ☐	**Consistent.** The project does not involve a land use element and/or zoning designation amendment (Proceed to Section II).
Section II. CAP Foundational Actions			
Pillar 1: Lead by Example.		Yes ☐ No ☐ N/A ☒	**Not Applicable**. Pertains to municipal operations of the City of San Luis Obispo.
Pillar 2: Clean Energy Systems.			
Climate Action Plan Volume II, Energy 1.1	2. Does the Project/Plan include an operational commitment to participate in Monterey Bay Community Power?	Yes ☒ No ☐ N/A ☐	**Consistent.** The project site currently uses Central Coast Community Energy (C3E, formerly Monterey Bay Community Power) as their electricity provider. The proposed project would continue to use C3E as their electricity provider.[2]
Pillar 3: Green Buildings			
Clean Energy Choice Program for New Buildings Municipal Code Section 15.04.110	3. Does the Project/Plan exclusively include "All electric buildings"? For the purpose of this checklist, the following definitions and exemptions apply: All-electric building. A new building that has no natural gas plumbing installed within the building and that uses electricity as the source of energy for all space heating, water heating, cooking appliances, and clothes drying appliances. An All-Electric Building may be plumbed for the use of natural gas as fuel for appliances in a commercial kitchen.	Yes ☐ No ☐ N/A ☒	**Not Applicable.** Hospitals and medical centers are exempt from requirements to be "all electric buildings." However, the project includes various measures to reduce GHG emissions associated with energy use. Specifically, based on information provided by the project applicant, the project has been designed to achieve a 19 percent total energy savings over the 2019 CalGreen baseline. In addition, a solar photovoltaic (PV) system is proposed to be installed over grade-level on-site parking. The PV system will provide an estimated 560 kilowatt-hours (kWh) of electricity annually.[2]

[2] Based on correspondence between the project applicant team and SWCA Environmental Consultants, January-February 2022.

Table 1. Project Consistency with City of San Luis Obispo Climate Action Plan Compliance Checklist

Regulation	Requirements	Project/Plan Compliance	Project Consistency/Explanation
	Specific exemptions to the requirements for all -electric buildings include: • Commercial kitchens • The extension of natural gas infrastructure into an industrial building for the purpose of supporting manufacturing processes (i.e. not including space conditioning). • Accessory Dwelling Units that are attached to an existing single-family home. Essential Service Buildings including, but not limited to, public facilities, hospitals, medical centers and emergency operations centers. • Temporary buildings. • Gas line connections used exclusively for emergency generators. • Any buildings or building components exempt from the California Energy Code. • Residential subdivisions in process of permitting or constructing initial public improvements for any phase of a final map recorded prior to January 1, 2020, unless compliance is required by an existing Development Agreement. If the proposed project falls into an above exemption category, what measures are applicants taking to reduce on-site fossil fuel consumption to the maximum extent feasible? If not applicable (N/A), explain why this action is not relevant.		With these design features, as well as, proposed mitigation measures, the project would reduce on-site fossil fuel consumption to the maximum extent feasible.

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Table 1. Project Consistency with City of San Luis Obispo Climate Action Plan Compliance Checklist

Regulation	Requirements	Project/Plan Compliance	Project Consistency/Explanation
	4. If the Project/Plan includes a new mixed-fuel building or buildings (plumbed for the use of natural gas as fuel for space heating, water heating, cooking or clothes drying appliances) does that building/those buildings meet or exceed the City's Energy Reach code?	Yes ☒ No ☐ N/A ☐	**Consistent.** The project would propose a mixed-fuel building and would install a 360-kilowatt direct current (kW DC) solar PV system on-site. The project applicant team has provided an analysis of the proposed Patient Tower's anticipated energy efficiency prepared by a qualified energy analyst (refer to Attachment A of this report). Based on the analysis provided, project building(s) would comply with the performance standards set forth in the City Energy Reach Code. The project would be conditioned to demonstrate full compliance with the standards set forth by the City's Energy Reach Code prior to Building Permit issuance.
Pillar 4: Connected Community			
Municipal Code Chapter 17.72	5. Does the Project/Plan comply with requirements in the City's Municipal Code with no exceptions, including bicycle parking, bikeway design, and EV charging stations?	Yes ☒ No ☐ N/A ☐	**Consistent.** The project has also been designed to comply with LEED building standards for on-site bicycle parking facilities and the City's municipal code requirements. In addition, Mitigation Measure ENG-2 would require the installation of bicycle storage and electric vehicle charging stations in excess of current building standards.
Multimodal Transportation Impact Study Guidelines	6a. Is the estimated Project/Plan-generated Vehicle Miles Traveled (VMT) within the City's adopted thresholds, as confirmed by the City's Transportation Division?	Yes ☐ No ☒ N/A ☐	**Consistent.** Project-generated VMT would not be within the City's adopted thresholds. Mitigation Measure ENG-1 would, however, require the preparation of a Traffic Demand Management (TDM) Plan. The TDM Plan would identify strategies and/or payment of traffic mitigation fees sufficient to reduce project-generated VMT sufficient to achieve the City's significance threshold of 15% below the existing County average vehicle miles traveled per service population (VMT/SP) of 17.43 VMT/SP. At a minimum, based on the VMT analysis prepared for

Table 1. Project Consistency with City of San Luis Obispo Climate Action Plan Compliance Checklist

Regulation	Requirements	Project/Plan Compliance	Project Consistency/Explanation
			this project and in addition to the measures currently implemented, the following strategies, or equivalent measures that achieve 17.43 VMT or less as approved by the City Public Works Transportation Division, shall be implemented (MBI 2021): 1. Provide parking cash-out programs for employees; 2. Provide employer-implemented ride-sharing program for employees; and, 3. Implement commute trip-reduction marketing strategies for employees. The IS/MND also includes additional mitigation measures that would require provision of dedicated parking for vanpools, exceedance of Cal Green on-site bicycle parking standards by 25%, and provision of employee lockers and showers to promote bicycle and pedestrian use (ENG-2). Lastly, mitigation measure TR-1 requires the project applicant to coordinate with City Public Works staff to provide funding for off-site pedestrian/bicycle/ transit infrastructure if project VMT per employee cannot be reduced to at or below the City's threshold of 17.43 VMT per service population with the other measures identified.

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Table 1. Project Consistency with City of San Luis Obispo Climate Action Plan Compliance Checklist

Regulation	Requirements	Project/Plan Compliance	Project Consistency/Explanation
	6b. If "No", does the Project/Plan include VMT mitigation strategies and/or a Transportation Demand Management (TDM) Plan approved by the City's Transportation Division? Please explain. TDM components may include, but are not limited to: • Telecommuting • Car Sharing • Shuttle Service • Carpools • Vanpools • Bicycle Parking Facilities • Participate in Rideshare's Back-n-Forth Club • Transit Subsidies • Off-Site Sustainable Transportation Infrastructure Improvements	Yes ☒ No ☐ N/A ☐	**Consistent with Mitigation.** Refer to Question 6a, above.
Bicycle Transportation Plan	7. Does the Project/Plan demonstrate consistency with the City's Bicycle Transportation Plan?	Yes ☒ No ☐ N/A ☐	**Consistent**. The existing bike path located on the project site would be retained and portions of the existing path would be realigned to ensure on-site/off-site connectivity. In addition, the project has also been designed to comply with LEED building standards for on-site bicycle parking facilities.

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Table 1. Project Consistency with City of San Luis Obispo Climate Action Plan Compliance Checklist

Regulation	Requirements	Project/Plan Compliance	Project Consistency/Explanation
Pillar 5: Circular Economy			
Development Standards for Solid Waste Services	8. Will the Project/Plan subscribe all units and/or buildings to organic waste pick up and provide the appropriate on-site enclosures consistent with the provisions of the City of San Luis Obispo Development Standards for Solid Waste Services? Please provide a letter from San Luis Garbage company verifying that the project complies with their standards and requirements for organic waste pick up.	Yes ☒ No ☐ N/A ☐	**Consistent**. The project currently utilizes San Luis Garbage company for waste collection/services and would continue to do so with project implementation. The project has been designed to include solid waste receptacles and enclosures throughout the site and a compactor located parallel to the loading dock. Based on a letter by the operations manager, San Luis Garbage Company has reviewed the preliminary site plan for compatibility with their vehicles and have approved the plan.[2] Compliance with all waste and organic waste removal standards would be verified prior to building permit issuance.
Pillar 6: Natural Solutions			
Municipal Code Chapter 12.24	9. Does the Project/Plan comply with Municipal Code requirements for trees?	Yes ☒ No ☐ N/A ☐	**Consistent**. The project would be subject to the City's compensatory tree planting policy which requires planting a minimum of one new tree for each tree authorized to be removed when planted on-site or two new trees for each tree authorized to be removed when planted on a different property or within the public right-of-way (off site). The project includes a landscaping planting plan that includes screening trees, parking lot trees, pedestrian plaza trees, shrubs, vines, perennials, and groundcover plantings. In approving the project application for tree removal, the proposed landscaping plan would be evaluated for consistency with the compensatory planting policy and city engineering standards as set forth in the Municipal Code. Compliance with all tree removal and replacement planting standards would be verified prior to building permit issuance.

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ATTACHMENT A
SUPPORTIVE DOCUMENTATION

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805.226.2727
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Building Title 24 Energy Use

From: Marlin Addison <marlin.addison@gmail.com>
Organization: M.S. Addison and Associates, LLC
Reply-To: <marlin.addison@gmail.com>
Date: Thursday, February 10, 2022 at 10:22 AM
To: 'Ariana Melendez' <ariana@sdgarchitects.com>
Cc: Michael Blasingim <mblasingim@laytonconstruction.com>, Kevin McQuaid <kmcquaid@cuningham.com>, Rebecca Campbell <rebecca.campbell@commonspirit.org>
Subject: RE: FHMC environmental review

Ariana,
As per our conversation earlier this morning, the following is intended to provide supporting documentation that addresses both items you identified in your email bleow: (1) Energy Savings and (2) Reach Code Consistency.

Table 1 below summarizes CA Title24 TDV (Time-Dependent Valuation) energy use as predicted by the EUI model for FHMC (full buildout case). Since FHMC is not governed by Title24, the "Standard Design Building" case (i.e., the baseline) is defined as per 2019 CalGreen's "Section 305 [OSHPD 1]" which requires the Proposed Design Building to meet (Tier1) or exceed (TIER2) the latest edition of "Savings By Design, Healthcare Modeling Procedures". 2016 is the latest edition of that publication and was used for this work.

Table 1 reports that the Proposed Design Building saves 15% electric, 38% gas and 21% total TDV energy. In my Fri 1/28/2022 1:22 PM (MST) email, I reported less savings, i.e., 14%, 35% and 19% respectively, reflecting more conservative reheat-related control sequences.

Figure 1 and Figure 2 below are the TDV reports from the eQUEST/DOE-2.3 EUI energy model used for this work. The eQUEST/DOE-2.3 TDV reports in Figures 1 and 2 are the source of the numbers reported in Table 1.

Please let me know if this provides what you need and if you have any questions.
Marlin Addison

M.S. Addison and Associates, LLC
Building Performance Simulation
480-766-1052 cell, 480-968-2040 ofc
marlin.addison@gmail.com

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San Luis Obispo, CA 93401
805.226.2727
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Table 1: TDV Energy for French Hospital Medical Center (full buildout)

	Electric TDV-MBTU	Natural Gas TDV-MBTU	Total TDV-MBTU
Standard Design Building	66,777.6	19,727.8	86,505.4
Proposed Design Building	56,570.2	12,159.1	68,729.3
% TDV Savings	15%	38%	21%

Figure 1: TDV Energy for French Hospital Medical Center Standard Design Building (full buildout)

```
FHMC                                                                    DOE-2.3-50h    1/12/2022    10:47:03  B

REPORT- TDV1 TDV Energy Performance Summary                                           WEATHER FILE- CZ05SANTA-MARI
------------------------------------------------------------------------------------------------------------------

                          TASK     MISC     SPACE    SPACE    HEAT     PUMPS    VENT     REFRIG   HT PUMP  DOMEST   EXT
               LIGHTS    LIGHTS    EQUIP   HEATING  COOLING  REJECT   & AUX    FANS    DISPLAY  SUPPLEM  HOT WTR  USAGE
              -------   -------  -------  -------  -------  -------  -------  -------  -------  -------  -------  -------

EM1  ELECTRICITY
    TDV-MBTU  14586.2       0.0  24479.5      0.0  10424.8      0.0    803.4  16483.7      0.0      0.0      0.0      0.0

FM1  NATURAL-GAS
    TDV-MBTU      0.0       0.0    643.8  16339.8      0.0      0.0      0.0      0.0      0.0      0.0   2744.2      0.0
              =======   =======  =======  =======  =======  =======  =======  =======  =======  =======  =======  =======

    TDV-MBTU  14586.2       0.0  25123.4  16339.8  10424.8      0.0    803.4  16483.7      0.0      0.0   2744.2      0.0
```

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Figure 2: TDV Energy for French Hospital Medical Center Proposed Design Building (full buildout)

FHMC DOE-2.3-50h 1/12/2022 10:43:29 BI

REPORT- TDV1 TDV Energy Performance Summary WEATHER FILE- CZ05SANTA-MARI

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE
EM1 ELECTRICITY												
TDV-MBTU	7026.8	0.0	24479.5	141.7	8140.7	0.0	776.6	16004.8	0.0	0.0	0.0	0.0
FM1 NATURAL-GAS												
TDV-MBTU	0.0	0.0	643.8	8760.3	0.0	0.0	0.0	0.0	0.0	0.0	2755.0	0.0
TDV-MBTU	7026.8	0.0	25123.4	8902.0	8140.7	0.0	776.6	16004.8	0.0	0.0	2755.0	0.0

APPLICANT-PREPARED CEQA GHG EMISSIONS ANALSIS COMPLIANCE CHECKLIST

CEQA GHG EMISSIONS ANALYSIS COMPLIANCE CHECKLIST

CLIMATE ACTION PLAN CONSISTENCY CHECKLIST FOR New Development

The City of San Luis Obispo has prepared a Climate Action Plan (CAP) that establishes 2030 greenhouse gas emissions (GHG) targets and a communitywide goal of carbon neutrality by 2035 and provides foundational actions to establish a trajectory towards achieving that goal. The CAP includes specific actions to achieve the short-term communitywide emissions reduction targets of 45 percent below 1990 levels by 2030 and 66 percent below 1990 levels by 2035. This is consistent with California's goal of reducing GHG emissions to 40 percent below 1990 levels (Senate Bill 32) by 2030 and provides substantial progress towards achieving the state's long-term GHG reduction goal of carbon neutrality (Executive Order B-55-18). The City Council, City staff, and community will continue to develop an approach to the long-term aspirational goal of carbon neutrality.

Over the years, new City programs have been implemented while others have evolved. Plans from a range of departments have been executed and updated. Per the 2020 SLO CAP, the CAP will be updated every four years with annual reviews of progress on implementation of specific CAP foundational actions. The City Office of Sustainability is updating the City's progress towards GHG reductions in 2019 to align with the next major CAP update milestone year.

Pursuant to CEQA Guidelines Section 15183.5, a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances. In order for the 2020 SLO CAP to be considered a qualified GHG reduction strategy and provide for CEQA streamlining of GHG analysis for future development the CAP it must identify those measures that are applicable to new development. The 2020 SLO CAP includes measures that are applicable to existing developments, municipal government operations, as well as voluntary and mandatory measures to be applied to new development for public and private projects. Mandatory GHG reduction programs that are applicable to new development are summarized in the following California Environmental Quality Act (CEQA) GHG Emissions Compliance Checklist (referred to herein as the CEQA GHG Checklist). This CEQA GHG Checklist identifies applicable regulations, applicability, requirements, and monitoring and reporting required by regulations. The purpose of the CEQA GHG Checklist is to assist with determining project consistency with the CAP and other applicable sustainability-focused regulations and provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to the CEQA.

This CEQA GHG Checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that new development is consistent with CAP assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects or plans that are consistent with the CAP as determined through the use of this CEQA GHG Checklist may rely on the CAP Initial Study-Negative Declaration GHG emissions analysis

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for the respective project- and cumulative-level GHG emissions impacts analysis. Projects that are identified as not consistent with the CAP through the use of this CEQA GHG Checklist must prepare a project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions compared to the SLO CEQA GHG Threshold(s) and incorporation of the CAP foundational actions in this CEQA GHG Checklist to the extent feasible.

Cumulative GHG emissions associated with construction from a land use development project are generally orders of magnitude lower than the operational emissions from a project, because construction emissions are generally short in duration compared to the project's overall lifetime, and thus can be assessed qualitatively as part of related CEQA GHG emissions analysis. However, some projects may have long construction periods or entail large quantities of cut and fill that could result in construction-related GHG emissions that may be considered significant. Thus, the City retains the discretion on a project-by-project basis to consider whether a project's construction-related GHG emissions could be cumulatively considerable and require more detailed quantitative CEQA GHG emissions analysis and respective mitigation.

This CEQA GHG Checklist may be periodically updated to incorporate new GHG reduction techniques, to comply with later amendments to the CAP, or to reflect changes in other sustainability-focused local, State, or federal laws, regulations, ordinances, and programs. At a minimum, this CEQA GHG Checklist will be updated every four years consistent with CAP update timing.

APPLICATION SUBMITTAL REQUIREMENTS

The CEQA GHG Checklist is required to accompany the City's Environmental Determination Application Checklist for all projects and plans subject to CEQA review, whether supported by private or government (local of State) funding, proposed within the City limits. The CEQA GHG Checklist is designed to assist the applicant in identifying the minimum CAP and other applicable sustainability-focused requirements specific to a proposed project or plan. However, it may be necessary to supplement the completed CEQA GHG Checklist with supporting materials, calculations, or certifications to demonstrate compliance with CAP and other applicable sustainability-focused requirements. If not already committed to clearly as part of the CEQA project description, in the CEQA GHG Checklist will be included in the respective project or plan conditions of approval.

GENERAL PROJECT INFORMATION

Contact Information

Project or Plan Name: French Hospital Medical Center - New Patient Tower, Parking Deck & Helistop

Address: 1911 Johnson Ave, San Luis Obispo, CA 93401

Applicant Name and Co.: Dignity Health French Hospital. Representative: SDG Architects Inc.

Contact Phone: 805-541-3848 | **Contact Email:** brian@sdgarchitects.com

Was a consultant retained to complete this checklist? Yes☐ No☒
If Yes, complete the following:

Consultant Name: ______________________ | Contact Phone: ______________________

Company Name: ______________________ | Contact Email: ______________________

Project Information

What is the size of the project site or plan area (acres)?
Gross: 17.7 acres (including Parcels 1-6)
Net: ______________________

Identify all applicable proposed land uses:

☐ Residential (indicate # of single-family dwelling units):
____

☐ Residential (indicate # of multi-family dwelling units):
____

☒ Commercial (indicate total square footage, gross and net):
87,879 s.f. Patient Tower; 5,800 s.f. Lab shell/storage; 2,000 s.f. Helistop; 234-space parking deck

☐ Industrial (indicate total square footage, gross and net):
____

☐ Agricultural (indicate total acreage, gross and net):
____

☐ Other (describe):
____

Project description. This description should be consistent with the project description that will be used for the CEQA document. The description may be attached to the GHG Checklist if there are space constraints.

Proposed new 4-story, 87,879 s.f. Patient Tower addition to the existing French Hospital Medical Center. Tower includes a total of 82 patient beds, lobby, dining/kitchen and imaging department. Project also includes a proposed new parking deck over surface parking, helistop and shell space for future lab.

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COMPLIANCE CHECKLIST TABLE

LAND USE CONSISTENCY			
Regulation	**Requirements**	**Project/Plan Compliance**	**Explanation**
General Plan	1a. Does the project include a land use element and/or zoning designation amendment? If "No", proceed to Section II – CAP Measures Consistency. If "Yes", proceed to question 1b.	Yes☐ No☒ N/A☐	
General Plan	1b. Does the land use element and/or zoning designation amendment result in an equivalent or less GHG-intensive project when compared to the existing designations? If "Yes", attach to this checklist the estimated project emissions under both existing and proposed designation(s) for comparison. Compare the maximum buildout of the existing designation and the maximum buildout of the proposed designation. If the proposed project is determined to result in an equivalent or less GHG-intensive project when compared to the existing designations, proceed to Step 2 of the checklist.	Yes☐ No☐ N/A☐	
	If "No" the applicant must prepare a project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions compared to the SLO CEQA GHG Threshold(s) and incorporation of the CAP foundational actions in this CEQA GHG Checklist to the extent feasible.		

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CAP FOUNDATIONAL ACTIONS CONSISTENCY			
Pillar 1: Lead by Example			
The foundational actions of this pillar pertain exclusively to municipal operations of the City of San Luis Obispo. In order to display consistency with the Climate Action Plan for the purposes of CEQA, applicants must complete the questions for pillars two through six.			
Pillar 2: Clean Energy Systems			
Regulation	**Requirements**	**Project/Plan Compliance**	**Explanation**
Climate Action Plan Volume II, Energy 1.1	2. Does the Project/Plan include an operational commitment to participate in Monterey Bay Community Power?	Yes☒ No☐ N/A☐	
Pillar 3: Green Buildings			
Regulation	**Requirements**	**Project/Plan Compliance**	**Explanation**
Clean Energy Choice Program for New Buildings Municipal Code Section 15.04.110	3. Does the Project/Plan exclusively include "All-electric buildings"? For the purpose of this checklist, the following definitions and exemptions apply: *All-electric building*. A new building that has no natural gas plumbing installed within the building and that uses electricity as the source of energy for all space heating, water heating, cooking appliances, and clothes drying appliances. An All-Electric Building may be plumbed for the use of natural gas as fuel for appliances in a commercial kitchen.	Yes☐ No☐ N/A☒	Hospitals and medical centers are exempt

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	Specific exemptions to the requirements for all-electric buildings include: • Commercial kitchens • The extension of natural gas infrastructure into an industrial building for the purpose of supporting manufacturing processes (i.e. not including space conditioning). • Accessory Dwelling Units that are attached to an existing single-family home. Essential Service Buildings including, but not limited to, public facilities, hospitals, medical centers and emergency operations centers. • Temporary buildings. • Gas line connections used exclusively for emergency generators. • Any buildings or building components exempt from the California Energy Code. • Residential subdivisions in process of permitting or constructing initial public improvements for any phase of a final map recorded prior to January 1, 2020, unless compliance is required by an existing Development Agreement. If the proposed project falls into an above exemption category, what measures are applicants taking to reduce onside fossil fuel consumption to the maximum extent feasible? If not applicable (N/A), explain why this action is not relevant.		Refer to attachment for measures.

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Clean Energy Choice Program for New Buildings Municipal Code Section 15.04.110	4. If the Project/Plan includes a new mixed-fuel building or buildings (plumbed for the use of natural gas as fuel for space heating, water heating, cooking or clothes drying appliances) does that building/those buildings meet or exceed the City's Energy Reach code?	Yes☒ No☐ N/A☐	
Pillar 4: Connected Community			
Regulation	**Requirements**	**Project/Plan Compliance**	**Explanation**
Municipal Code Chapter 17.72	5. Does the Project/Plan comply with requirements in the City's Municipal Code with no exceptions, including bicycle parking, bikeway design, and EV charging stations?	Yes☒ No☐ N/A☐	
Multimodal Transportation Impact Study Guidelines	6a. Is the estimated Project/Plan-generated Vehicle Miles Traveled (VMT) within the City's adopted thresholds, as confirmed by the City's Transportation Division?	Yes☒ No☐ N/A☐	
Multimodal Transportation Impact Study Guidelines	6b. If "No", does the Project/Plan include VMT mitigation strategies and/or a Transportation Demand Management (TDM) Plan approved by the City's Transportation Division? Please explain. TDM components may include, but are not limited to: • Telecommuting • Car Sharing	Yes☐ No☐ N/A☐	

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	• Shuttle Service • Carpools • Vanpools • Bicycle Parking Facilities • Participate in Rideshare's Back n Forth Club • Transit Subsidies • Off-Site Sustainable Transportation Infrastructure Improvements		
Bicycle Transportation Plan	7. Does the Project/Plan demonstrate consistency with the City's Bicycle Transportation Plan[1]?	Yes☒ No☐ N/A☐	
Pillar 5: Circular Economy			
Regulation	**Requirements**	**Project/Plan Compliance**	**Explanation**
Development Standards for Solid Waste Services	8. Will the Project/Plan subscribe all units and/or buildings to organic waste pick up and provide the appropriate on-site enclosures consistent with the provisions of the City of San Luis Obispo Development Standards for Solid Waste Services? Please provide a letter from San Luis Garbage company verifying that the project complies with their standards and requirements for organic waste pick up.	Yes☒ No☐ N/A☐	
Pillar 6: Natural Solutions			

[1] The City is set to adopt an Active Transportation Plan (ATP) in October of 2020 which will effectively update and replace the current Bicycle Transportation Plan. Upon adoption, the ATP will become the new regulation with which compliance is required for the purposes of this checklist.

Regulation	Requirements	Project/Plan Compliance	Explanation
Municipal Code Chapter 12.24	9. Does the Project/Plan comply with Municipal Code requirements for trees?	Yes☒ No☐ N/A☐	

FHMC Patient Tower/Parking Deck/Helistop 1/31/22
ARCH-01610-2019

CAP Checklist Pillar 3: Essential Service Buildings including but not limited to, public facilities, hospitals, medical centers and emergency operations centers are exempt from the requirements for all-electric.

The facility is taking the following measures to reduce fossil fuel consumption:

- The facility is working on a comprehensive PV panel installation over grade level parking. Ameresco has agreed to execute and finance the renewable energy power purchase agreement with Dignity Health. The project is planned for 2023/2024.

- The facility has hired Energy Technology Consultant (ETC) Marlin Addison of MS Addision & Associates to review the Patient Tower energy usage and functionality, and to confirm the project meets Dignity's goals for energy savings. In addition to being the ETC for the project, Marlin Addision is a Clinical Associate Professor at Arizona State University who is one of principal developers of the building energy modeling tool that is used for 60-70% of building modeling in North America (eQUEST).

- The Patient Tower MEP and energy consultant team has designed the systems to achieve a 19% total energy savings over the 2019 CalGreen baseline (as per CalGreen Section 305), which exceeds the 305.1.1 CALGreen Tier 1 requirement for energy usage by 19% and exceeds the 305.1.2 CALGreen Tier 2 requirement for energy usage (15% less than Tier 1) by 4% (i.e., 19%). This 19% total energy savings results from a ~14% reduction in electric use and a ~35% reduction in natural gas use.

- Utilizing all-electric for the water and space heating would be infeasible for the project due to OSHPD requirements for the systems. The mechanical loads are higher in hospitals than for standard commercial or residential buildings due to the required filters and number of air changes per hour which relate directly to life safety. The hospital is also providing for 100% outside air, exceeding code for health and safety, in consideration for the current pandemic and future needs of the hospital. OSHPD projects are required to provide backup generators for essential services on electrical power. Shifting the water and space heating building system loads onto the electrical system would result in a significant increase in electrical infrastructure, the required backup generator size and corresponding diesel fuel storage on site.