Appendix A
Supporting Air Quality Data

Existing Operational CalEEMod Output

1499 Bayshore IS/MND Existing

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	361.5	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - From PGE Construction Electricity_Water Calcs spreadsheet

Land Use - From PD

Construction Phase - Existing Operations only

Off-road Equipment - Existing Operations only

Off-road Equipment - from data request

Off-road Equipment - from data request

Off-road Equipment - Existing Operations only

Off-road Equipment - Existing Operations only

Off-road Equipment - Existing Operations only

Trips and VMT - Existing Operations only

Demolition - Existing Operations only

Grading - Existing Operations only

Vehicle Trips - Existing Operations only - 480 daily vehicle trips / 45 (1000sf) = 10.67 trip rate

Energy Use - Existing Operations only

Land Use Change -

Sequestration - Existing Operations only

Water And Wastewater - Existing Operations only

Solid Waste - Existing Operations only

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	4.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	PhaseEndDate	6/28/2018	5/31/2018
tblConstructionPhase	PhaseEndDate	7/4/2018	6/28/2018
tblConstructionPhase	PhaseEndDate	4/10/2019	7/4/2018
tblConstructionPhase	PhaseEndDate	1/15/2020	4/10/2019
tblConstructionPhase	PhaseEndDate	10/21/2020	1/15/2020
tblConstructionPhase	PhaseEndDate	7/28/2021	10/21/2020
tblGrading	AcresOfGrading	1.50	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
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tblOffRoadEquipment	UsageHours	6.00	0.00
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tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	361.5
tblTripsAndVMT	HaulingTripNumber	205.00	0.00
tblTripsAndVMT	VendorTripNumber	7.00	0.00
tblTripsAndVMT	VendorTripNumber	7.00	0.00
tblTripsAndVMT	VendorTripNumber	7.00	0.00
tblTripsAndVMT	VendorTripNumber	7.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	14.00	0.00
tblTripsAndVMT	WorkerTripNumber	14.00	0.00
tblTripsAndVMT	WorkerTripNumber	14.00	0.00
tblTripsAndVMT	WorkerTripNumber	14.00	0.00
tblVehicleTrips	ST_TR	2.46	10.67
tblVehicleTrips	SU_TR	1.05	10.67
tblVehicleTrips	WD_TR	11.03	10.67

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.1993	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.6000e-004
Energy	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003	0.0000	138.5061	138.5061	8.2800e-003	2.3800e-003	139.4221
Mobile	0.1494	0.4872	1.7049	4.9900e-003	0.4253	6.5800e-003	0.4319	0.1143	6.2100e-003	0.1205	0.0000	455.0996	455.0996	0.0181	0.0000	455.5519
Waste						0.0000	0.0000		0.0000	0.0000	8.4952	0.0000	8.4952	0.5021	0.0000	21.0464
Water						0.0000	0.0000		0.0000	0.0000	2.5374	9.9096	12.4470	0.2614	6.3200e-003	20.8651
Total	**0.3533**	**0.5298**	**1.7411**	**5.2500e-003**	**0.4253**	**9.8200e-003**	**0.4352**	**0.1143**	**9.4500e-003**	**0.1237**	**11.0326**	**603.5161**	**614.5487**	**0.7898**	**8.7000e-003**	**636.8864**

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	0.1993	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.60E-04
Energy	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003	0.0000	138.5061	138.5061	8.2800e-003	2.3800e-003	139.4221

Mobile	0.1494	0.4872	1.7049	4.9900e-003	0.4253	6.5800e-003	0.4319	0.1143	6.2100e-003	0.1205	0.0000	455.0996	455.0996	0.0181	0.0000	455.5519
Waste						0.0000	0.0000		0.0000	0.0000	8.4952	0.0000	8.4952	0.5021	0.0000	21.0464
Water						0.0000	0.0000		0.0000	0.0000	2.5374	9.9096	12.4470	0.2614	6.3200e-003	20.8651
Total	**0.3533**	**0.5298**	**1.7411**	**5.2500e-003**	**0.4253**	**9.8200e-003**	**0.4352**	**0.1143**	**9.4500e-003**	**0.1237**	**11.0326**	**603.5161**	**614.5487**	**0.7898**	**8.7000e-003**	**636.8864**

	ROG	NOx	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**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	0.0000
Vegetation Land Change	0.0000
Total	**0.0000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization and Demolition	Demolition	6/1/2018	5/31/2018	5	0	
2	Excavation and Foundations	Grading	6/29/2018	6/28/2018	5	0	
3	Superstructure	Building Construction	7/5/2018	7/4/2018	5	0	
4	Facade	Building Construction	4/11/2019	4/10/2019	5	0	
5	Interior Fit Out	Building Construction	1/16/2020	1/15/2020	5	0	

6	Site Improvements	Building Construction	10/22/2020	10/21/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Mobilization and Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Mobilization and Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Excavation and Foundations	Graders	0	0.00	187	0.41
Excavation and Foundations	Rubber Tired Dozers	0	0.00	247	0.40
Excavation and Foundations	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Superstructure	Cranes	0	0.00	231	0.29
Superstructure	Forklifts	0	0.00	89	0.20
Superstructure	Generator Sets	0	0.00	84	0.74
Superstructure	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Superstructure	Welders	0	0.00	46	0.45
Facade	Cranes	0	0.00	231	0.29
Facade	Forklifts	0	0.00	89	0.20
Facade	Generator Sets	0	0.00	84	0.74
Facade	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Facade	Welders	0	0.00	46	0.45
Interior Fit Out	Cranes	0	0.00	231	0.29
Interior Fit Out	Forklifts	0	0.00	89	0.20
Interior Fit Out	Generator Sets	0	0.00	84	0.74
Interior Fit Out	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Interior Fit Out	Welders	0	0.00	46	0.45

Site Improvements	Cranes	0	0.00	231	0.29
Site Improvements	Forklifts	0	0.00	89	0.20
Site Improvements	Generator Sets	0	0.00	84	0.74
Site Improvements	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Improvements	Welders	0	0.00	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
Mobilization and Demolition	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Excavation and Foundations	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Superstructure	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Facade	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Interior Fit Out	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Improvements	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Mobilization and Demolition - 2018

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Excavation and Foundations - 2018

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Superstructure - 2018

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Facade - 2019

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Interior Fit Out - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Site Improvements - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.1494	0.4872	1.7049	4.9900e-003	0.4253	6.5800e-003	0.4319	0.1143	6.2100e-003	0.1205	0.0000	455.0996	455.0996	0.0181	0.0000	455.5519

Unmitigated	0.1494	0.4872	1.7049	4.9900e-003	0.4253	6.5800e-003	0.4319	0.1143	6.2100e-003	0.1205	0.0000	455.0996	455.0996	0.0181	0.0000	455.5519

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	480.15	480.15	480.15	1,147,440	1,147,440
Total	480.15	480.15	480.15	1,147,440	1,147,440

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.508680	0.049272	0.242166	0.132717	0.018469	0.006106	0.019850	0.006168	0.003703	0.003432	0.008335	0.000401	0.000701

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	92.0876	92.0876	7.3900e-003	1.5300e-003	92.7278

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	92.0876	92.0876	7.3900e-003	1.5300e-003	92.7278
NaturalGas Mitigated	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003	0.0000	46.4185	46.4185	8.9000e-004	8.5000e-004	46.6944
NaturalGas Unmitigated	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003	0.0000	46.4185	46.4185	8.9000e-004	8.5000e-004	46.6944

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					
General Office Building	869850	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003	0.0000	46.4185	46.4185	8.9000e-004	8.5000e-004	46.6944
Total		**4.6900e-003**	**0.0426**	**0.0358**	**2.6000e-004**		**3.2400e-003**	**3.2400e-003**		**3.2400e-003**	**3.2400e-003**	**0.0000**	**46.4185**	**46.4185**	**8.9000e-004**	**8.5000e-004**	**46.6944**

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					
General Office Building	869850	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003	0.0000	46.4185	46.4185	8.9000e-004	8.5000e-004	46.6944
Total		**4.6900e-003**	**0.0426**	**0.0358**	**2.6000e-004**		**3.2400e-003**	**3.2400e-003**		**3.2400e-003**	**3.2400e-003**	**0.0000**	**46.4185**	**46.4185**	**8.9000e-004**	**8.5000e-004**	**46.6944**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	561600	92.0876	7.3900e-003	1.5300e-003	92.7278
Total		**92.0876**	**7.3900e-003**	**1.5300e-003**	**92.7278**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	561600	92.0876	7.3900e-003	1.5300e-003	92.7278
Total		**92.0876**	**7.3900e-003**	**1.5300e-003**	**92.7278**

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	0.1993	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.6000e-004
Unmitigated	0.1993	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.6000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0235					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1758					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.6000e-004
Total	**0.1993**	**0.0000**	**4.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.0000e-004**	**8.0000e-004**	**0.0000**	**0.0000**	**8.6000e-004**

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	0.0235					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1758					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.6000e-004
Total	**0.1993**	**0.0000**	**4.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.0000e-004**	**8.0000e-004**	**0.0000**	**0.0000**	**8.6000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	12.4470	0.2614	6.3200e-003	20.8651
Unmitigated	12.4470	0.2614	6.3200e-003	20.8651

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	7.99802 / 4.90201	12.4470	0.2614	6.3200e-003	20.8651
Total		**12.4470**	**0.2614**	**6.3200e-003**	**20.8651**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	7.99802 / 4.90201	12.4470	0.2614	6.3200e-003	20.8651
Total		**12.4470**	**0.2614**	**6.3200e-003**	**20.8651**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.4952	0.5021	0.0000	21.0464
Unmitigated	8.4952	0.5021	0.0000	21.0464

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
Total		**8.4952**	**0.5021**	**0.0000**	**21.0464**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
Total		**8.4952**	**0.5021**	**0.0000**	**21.0464**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Wetlands	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Construction CalEEMod Output

1499 Bayshore Highway Project

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking Structure	118.00	Space	0.73	137,400.00	0
High Turnover (Sit Down Restaurant)	2.90	1000sqft	0.15	2,900.00	0
Hotel	404.00	Room	1.44	270,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - rooms, gsf, and parking spaces provided by applicant; lot acreage assumed to be proportional to gsf

Construction Phase - start and end dates provided by applicant

Off-road Equipment - equipment, quantity, hp, and hours/day provided by client. trucks with trips provided assumed to be off-site and not included here.

Off-road Equipment - equipment, quantity, hp, and hours/day provided by client. trucks with trips provided assumed to be off-site and not included here.

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Off-road Equipment - equipment, quantity, hp, and hours/day provided by client. trucks with trips provided assumed to be off-site and not included here.

Trips and VMT - worker trips/day provided by applicant, calculated using schedule; vendor trips includes consideration of on-site trucks; vendor trips and hauling trips provided by applicant; trip length assumed to be distance from site to Livermore site

Grading - project site acreage

Construction Off-road Equipment Mitigation - Level 3 DPFs per Laura's direction

Stationary Sources - Emergency Generators and Fire Pumps - Conservative assumption of 700 HP generator; assuming 15 mins per week of testing = 13 hrs per year

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstructionPhase	NumDays	20.00	50.00
tblConstructionPhase	NumDays	6.00	106.00
tblConstructionPhase	NumDays	220.00	135.00
tblConstructionPhase	NumDays	10.00	137.00
tblConstructionPhase	NumDays	220.00	358.00
tblConstructionPhase	NumDays	3.00	84.00
tblGrading	AcresOfGrading	0.00	2.19
tblGrading	MaterialImported	0.00	5,706.00
tblLandUse	LandUseSquareFeet	47,200.00	137,400.00
tblLandUse	LandUseSquareFeet	586,608.00	270,000.00
tblLandUse	LotAcreage	1.06	0.73
tblLandUse	LotAcreage	0.07	0.15
tblLandUse	LotAcreage	13.47	1.44
tblOffRoadEquipment	HorsePower	97.00	300.00
tblOffRoadEquipment	HorsePower	221.00	400.00
tblOffRoadEquipment	HorsePower	231.00	400.00
tblOffRoadEquipment	HorsePower	158.00	300.00
tblOffRoadEquipment	HorsePower	158.00	300.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	700.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.25
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	13.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00

tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripNumber	534.00	1,000.00
tblTripsAndVMT	HaulingTripNumber	713.00	1,250.00
tblTripsAndVMT	HaulingTripNumber	0.00	240.00
tblTripsAndVMT	VendorTripLength	7.30	346.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripLength	7.30	20.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	67.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	67.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	5.00	60.00
tblTripsAndVMT	WorkerTripNumber	15.00	100.00
tblTripsAndVMT	WorkerTripNumber	172.00	400.00
tblTripsAndVMT	WorkerTripNumber	34.00	0.00
tblTripsAndVMT	WorkerTripNumber	172.00	600.00
tblTripsAndVMT	WorkerTripNumber	5.00	400.00
tblVehicleTrips	ST_TR	158.37	96.60
tblVehicleTrips	ST_TR	8.19	8.40
tblVehicleTrips	SU_TR	131.84	96.40
tblVehicleTrips	SU_TR	5.95	8.40
tblVehicleTrips	WD_TR	127.15	96.40
tblVehicleTrips	WD_TR	8.17	8.40

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					
2019	0.5857	2.1871	1.7704	7.4100e-003	0.3531	0.0471	0.4002	0.0879	0.0435	0.1315	0.0000	699.1050	699.1050	0.1048	0.0000	701.7258
2020	1.3648	0.4120	2.0560	7.8200e-003	0.7980	8.0300e-003	0.8060	0.2125	7.4200e-003	0.2199	0.0000	711.2160	711.2160	0.0215	0.0000	711.7524
2021	0.0759	0.0992	0.5444	2.1500e-003	0.2310	2.0700e-003	0.2331	0.0615	1.9100e-003	0.0634	0.0000	195.3632	195.3632	5.6500e-003	0.0000	195.5044
Maximum	**1.3648**	**2.1871**	**2.0560**	**7.8200e-003**	**0.7980**	**0.0471**	**0.8060**	**0.2125**	**0.0435**	**0.2199**	**0.0000**	**711.2160**	**711.2160**	**0.1048**	**0.0000**	**711.7524**

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					
2019	0.5857	2.1871	1.7704	7.4100e-003	0.3531	0.0130	0.3661	0.0879	0.0122	0.1001	0.0000	699.1048	699.1048	0.1048	0.0000	701.7256
2020	1.3648	0.4120	2.0560	7.8200e-003	0.7980	8.0300e-003	0.8060	0.2125	7.4200e-003	0.2199	0.0000	711.2160	711.2160	0.0215	0.0000	711.7524
2021	0.0759	0.0992	0.5444	2.1500e-003	0.2310	2.0700e-003	0.2331	0.0615	1.9100e-003	0.0634	0.0000	195.3632	195.3632	5.6500e-003	0.0000	195.5044
Maximum	**1.3648**	**2.1871**	**2.0560**	**7.8200e-003**	**0.7980**	**0.0130**	**0.8060**	**0.2125**	**0.0122**	**0.2199**	**0.0000**	**711.2160**	**711.2160**	**0.1048**	**0.0000**	**711.7524**

	ROG	NOx	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**	**59.65**	**2.37**	**0.00**	**59.36**	**7.56**	**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	**3-4-2019**	**6-3-2019**	0.7892	0.7892

2	**6-4-2019**	**9-3-2019**	1.0430	1.0430
3	**9-4-2019**	**12-3-2019**	0.6337	0.6337
4	**12-4-2019**	**3-3-2020**	0.8905	0.8905
5	**3-4-2020**	**6-3-2020**	0.7173	0.7173
6	**6-4-2020**	**9-3-2020**	0.1018	0.1018
7	**9-4-2020**	**12-3-2020**	0.2542	0.2542
8	**12-4-2020**	**3-3-2021**	0.2259	0.2259
9	**3-4-2021**	**6-3-2021**	0.0597	0.0597
		Highest	1.0430	1.0430

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	1.2203	4.0000e-005	4.8400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3800e-003	9.3800e-003	2.0000e-005	0.0000	0.0100
Energy	0.0558	0.5071	0.4260	3.0400e-003		0.0385	0.0385		0.0385	0.0385	0.0000	1,288.1509	1,288.1509	0.0439	0.0170	1,294.3157
Mobile	0.8291	2.4050	8.6875	0.0277	2.5105	0.0242	2.5347	0.6746	0.0226	0.6972	0.0000	2,532.2236	2,532.2236	0.0955	0.0000	2,534.6112
Stationary	7.4700e-003	0.0209	0.0190	4.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	3.4653	3.4653	4.9000e-004	0.0000	3.4774
Waste						0.0000	0.0000		0.0000	0.0000	51.9048	0.0000	51.9048	3.0675	0.0000	128.5919
Water						0.0000	0.0000		0.0000	0.0000	3.5305	18.7341	22.2646	0.3635	8.7400e-003	33.9551
Total	**2.1127**	**2.9330**	**9.1374**	**0.0308**	**2.5105**	**0.0638**	**2.5744**	**0.6746**	**0.0622**	**0.7369**	**55.4353**	**3,842.5833**	**3,898.0186**	**3.5709**	**0.0258**	**3,994.9614**

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	1.2203	4.0000e-005	4.8400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3800e-003	9.3800e-003	2.0000e-005	0.0000	0.0100
Energy	0.0558	0.5071	0.4260	3.0400e-003		0.0385	0.0385		0.0385	0.0385	0.0000	1,288.1509	1,288.1509	0.0439	0.0170	1,294.3157
Mobile	0.8291	2.4050	8.6875	0.0277	2.5105	0.0242	2.5347	0.6746	0.0226	0.6972	0.0000	2,532.2236	2,532.2236	0.0955	0.0000	2,534.6112
Stationary	7.4700e-003	0.0209	0.0190	4.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	3.4653	3.4653	4.9000e-004	0.0000	3.4774
Waste						0.0000	0.0000		0.0000	0.0000	51.9048	0.0000	51.9048	3.0675	0.0000	128.5919
Water						0.0000	0.0000		0.0000	0.0000	3.5305	18.7341	22.2646	0.3635	8.7400e-003	33.9551
Total	**2.1127**	**2.9330**	**9.1374**	**0.0308**	**2.5105**	**0.0638**	**2.5744**	**0.6746**	**0.0622**	**0.7369**	**55.4353**	**3,842.5833**	**3,898.0186**	**3.5709**	**0.0258**	**3,994.96**

	ROG	NOx	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	Mobilization and Demolition	Demolition	3/4/2019	5/10/2019	5	50	
2	Excavation, Foundations, Underground MEP and Slab-On	Grading	5/13/2019	10/7/2019	5	106	
3	Superstructure	Building Construction	8/23/2019	2/27/2020	5	135	
4	Facade	Architectural Coating	11/13/2019	5/21/2020	5	137	
5	Interior Fit-Out	Building Construction	12/13/2019	4/27/2021	5	358	
6	Site Improvements	Site Preparation	10/2/2020	1/27/2021	5	84	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.73

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 409,350; Non-Residential Outdoor: 136,450; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Mobilization and Demolition	Excavators	2	8.00	300	0.38
Mobilization and Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Mobilization and Demolition	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Excavation, Foundations, Underground MEP and Slab-On Grade	Bore/Drill Rigs	2	4.00	400	0.50
Excavation, Foundations, Underground MEP and Slab-On Grade	Cranes	2	4.00	400	0.29
Excavation, Foundations, Underground MEP and Slab-On Grade	Excavators	2	4.00	300	0.38
Excavation, Foundations, Underground MEP and Slab-On Grade	Graders	0	8.00	187	0.41
Excavation, Foundations, Underground MEP and Slab-On Grade	Rubber Tired Dozers	0	8.00	247	0.40
Excavation, Foundations, Underground MEP and Slab-On Grade	Scrapers	0	8.00	367	0.48
Excavation, Foundations, Underground MEP and Slab-On Grade	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Superstructure	Cranes	0	8.00	231	0.29
Superstructure	Cranes	0	8.00	231	0.29
Superstructure	Forklifts	0	7.00	89	0.20
Superstructure	Generator Sets	0	8.00	84	0.74
Superstructure	Graders	0	8.00	187	0.41
Superstructure	Rubber Tired Dozers	0	8.00	247	0.40
Superstructure	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Superstructure	Welders	0	8.00	46	0.45
Facade	Air Compressors	0	6.00	78	0.48
Facade	Cranes	0	8.00	231	0.29
Facade	Forklifts	0	7.00	89	0.20
Facade	Generator Sets	0	8.00	84	0.74
Facade	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Facade	Welders	0	8.00	46	0.45
Interior Fit-Out	Cement and Mortar Mixers	0	8.00	9	0.56

Interior Fit-Out	Cranes	0	8.00	231	0.29
Interior Fit-Out	Forklifts	0	7.00	89	0.20
Interior Fit-Out	Generator Sets	0	8.00	84	0.74
Interior Fit-Out	Pavers	0	8.00	130	0.42
Interior Fit-Out	Paving Equipment	0	8.00	132	0.36
Interior Fit-Out	Rollers	0	8.00	80	0.38
Interior Fit-Out	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Interior Fit-Out	Welders	0	8.00	46	0.45
Site Improvements	Air Compressors	0	6.00	78	0.48
Site Improvements	Graders	0	8.00	187	0.41
Site Improvements	Scrapers	0	8.00	367	0.48
Site Improvements	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Site Improvements	Tractors/Loaders/Backhoes	2	2.00	300	0.37

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
Mobilization and Demolition	2	60.00	0.00	1,000.00	10.80	7.30	47.00	LD_Mix	HDT_Mix	HHDT
Excavation, Foundations	6	100.00	1.00	1,250.00	10.80	346.00	47.00	LD_Mix	HDT_Mix	HHDT
Superstructure	0	400.00	1.00	0.00	10.80	50.00	47.00	LD_Mix	HDT_Mix	HHDT
Facade	0	0.00	4.00	0.00	10.80	7.30	47.00	LD_Mix	HDT_Mix	HHDT
Interior Fit-Out	0	600.00	4.00	0.00	10.80	7.30	47.00	LD_Mix	HDT_Mix	HHDT
Site Improvements	2	400.00	1.00	240.00	10.80	20.00	47.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use DPF for Construction Equipment

3.2 Mobilization and Demolition - 2019

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					0.0578	0.0000	0.0578	8.7500e-003	0.0000	8.7500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0163	0.1789	0.1119	4.9000e-004		5.8100e-003	5.8100e-003		5.3500e-003	5.3500e-003	0.0000	43.8887	43.8887	0.0139	0.0000	44.2359
Total	**0.0163**	**0.1789**	**0.1119**	**4.9000e-004**	**0.0578**	**5.8100e-003**	**0.0636**	**8.7500e-003**	**5.3500e-003**	**0.0141**	**0.0000**	**43.8887**	**43.8887**	**0.0139**	**0.0000**	**44.2359**

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	0.0104	0.3497	0.1399	9.3000e-004	0.0196	1.5600e-003	0.0212	5.3900e-003	1.4900e-003	6.8900e-003	0.0000	94.9857	94.9857	0.0115	0.0000	95.2738
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4400e-003	3.1200e-003	0.0322	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1400e-003	7.0000e-005	3.2100e-003	0.0000	10.1555	10.1555	2.2000e-004	0.0000	10.1609
Total	**0.0148**	**0.3528**	**0.1721**	**1.0400e-003**	**0.0315**	**1.6400e-003**	**0.0331**	**8.5300e-003**	**1.5600e-003**	**0.0101**	**0.0000**	**105.1412**	**105.1412**	**0.0117**	**0.0000**	**105.4348**

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					0.0578	0.0000	0.0578	8.7500e-003	0.0000	8.7500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0163	0.1789	0.1119	4.9000e-004		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	43.8887	43.8887	0.0139	0.0000	44.2358
Total	**0.0163**	**0.1789**	**0.1119**	**4.9000e-004**	**0.0578**	**8.7000e-004**	**0.0587**	**8.7500e-003**	**8.0000e-004**	**9.5500e-003**	**0.0000**	**43.8887**	**43.8887**	**0.0139**	**0.0000**	**44.2358**

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	0.0104	0.3497	0.1399	9.3000e-004	0.0196	1.5600e-003	0.0212	5.3900e-003	1.4900e-003	6.8900e-003	0.0000	94.9857	94.9857	0.0115	0.0000	95.2738
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4400e-003	3.1200e-003	0.0322	1.1000e-004	0.0118	8.0000e-005	0.0119	3.1400e-003	7.0000e-005	3.2100e-003	0.0000	10.1555	10.1555	2.2000e-004	0.0000	10.1609
Total	**0.0148**	**0.3528**	**0.1721**	**1.0400e-003**	**0.0315**	**1.6400e-003**	**0.0331**	**8.5300e-003**	**1.5600e-003**	**0.0101**	**0.0000**	**105.1412**	**105.1412**	**0.0117**	**0.0000**	**105.4348**

3.3 Excavation, Foundations, Underground MEP and Slab-On

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					1.4800e-003	0.0000	1.4800e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0793	0.9455	0.6340	1.9500e-003		0.0339	0.0339		0.0312	0.0312	0.0000	174.9548	174.9548	0.0554	0.0000	176.3387
Total	**0.0793**	**0.9455**	**0.6340**	**1.9500e-003**	**1.4800e-003**	**0.0339**	**0.0354**	**1.7000e-004**	**0.0312**	**0.0313**	**0.0000**	**174.9548**	**174.9548**	**0.0554**	**0.0000**	**176.3387**

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	0.0130	0.4371	0.1749	1.1600e-003	0.0246	1.9500e-003	0.0265	6.7400e-003	1.8700e-003	8.6100e-003	0.0000	118.7322	118.7322	0.0144	0.0000	119.0923
Vendor	7.7700e-003	0.1777	0.0670	5.9000e-004	0.0163	2.0500e-003	0.0184	4.7100e-003	1.9600e-003	6.6700e-003	0.0000	58.0925	58.0925	4.5900e-003	0.0000	58.2071
Worker	0.0157	0.0110	0.1137	4.0000e-004	0.0417	2.7000e-004	0.0420	0.0111	2.5000e-004	0.0114	0.0000	35.8827	35.8827	7.7000e-004	0.0000	35.9019
Total	**0.0364**	**0.6259**	**0.3556**	**2.1500e-003**	**0.0826**	**4.2700e-003**	**0.0868**	**0.0226**	**4.0800e-003**	**0.0266**	**0.0000**	**212.7074**	**212.7074**	**0.0198**	**0.0000**	**213.2013**

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					1.4800e-003	0.0000	1.4800e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0793	0.9455	0.6340	1.9500e-003		4.7200e-003	4.7200e-003		4.3400e-003	4.3400e-003	0.0000	174.9546	174.9546	0.0554	0.0000	176.3385
Total	**0.0793**	**0.9455**	**0.6340**	**1.9500e-003**	**1.4800e-003**	**4.7200e-003**	**6.2000e-003**	**1.7000e-004**	**4.3400e-003**	**4.5100e-003**	**0.0000**	**174.9546**	**174.9546**	**0.0554**	**0.0000**	**176.3385**

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	0.0130	0.4371	0.1749	1.1600e-003	0.0246	1.9500e-003	0.0265	6.7400e-003	1.8700e-003	8.6100e-003	0.0000	118.7322	118.7322	0.0144	0.0000	119.0923
Vendor	7.7700e-003	0.1777	0.0670	5.9000e-004	0.0163	2.0500e-003	0.0184	4.7100e-003	1.9600e-003	6.6700e-003	0.0000	58.0925	58.0925	4.5900e-003	0.0000	58.2071
Worker	0.0157	0.0110	0.1137	4.0000e-004	0.0417	2.7000e-004	0.0420	0.0111	2.5000e-004	0.0114	0.0000	35.8827	35.8827	7.7000e-004	0.0000	35.9019
Total	**0.0364**	**0.6259**	**0.3556**	**2.1500e-003**	**0.0826**	**4.2700e-003**	**0.0868**	**0.0226**	**4.0800e-003**	**0.0266**	**0.0000**	**212.7074**	**212.7074**	**0.0198**	**0.0000**	**213.2013**

3.4 Superstructure - 2019

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0500e-003	0.0248	9.4000e-003	8.0000e-005	2.0700e-003	2.6000e-004	2.3300e-003	6.0000e-004	2.5000e-004	8.5000e-004	0.0000	7.5126	7.5126	6.0000e-004	0.0000	7.5277
Worker	0.0550	0.0387	0.3991	1.3900e-003	0.1464	9.4000e-004	0.1474	0.0390	8.7000e-004	0.0398	0.0000	125.9280	125.9280	2.7000e-003	0.0000	125.9954

Total	**0.0561**	**0.0636**	**0.4085**	**1.4700e-003**	**0.1485**	**1.2000e-003**	**0.1497**	**0.0396**	**1.1200e-003**	**0.0407**	**0.0000**	**133.4406**	**133.4406**	**3.3000e-003**	**0.0000**	**133.5231**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0500e-003	0.0248	9.4000e-003	8.0000e-005	2.0700e-003	2.6000e-004	2.3300e-003	6.0000e-004	2.5000e-004	8.5000e-004	0.0000	7.5126	7.5126	6.0000e-004	0.0000	7.5277
Worker	0.0550	0.0387	0.3991	1.3900e-003	0.1464	9.4000e-004	0.1474	0.0390	8.7000e-004	0.0398	0.0000	125.9280	125.9280	2.7000e-003	0.0000	125.9954
Total	**0.0561**	**0.0636**	**0.4085**	**1.4700e-003**	**0.1485**	**1.2000e-003**	**0.1497**	**0.0396**	**1.1200e-003**	**0.0407**	**0.0000**	**133.4406**	**133.4406**	**3.3000e-003**	**0.0000**	**133.5231**

3.4 Superstructure - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8000e-004	9.8200e-003	4.0300e-003	3.0000e-005	9.3000e-004	8.0000e-005	1.0100e-003	2.7000e-004	7.0000e-005	3.4000e-004	0.0000	3.3552	3.3552	2.7000e-004	0.0000	3.3620
Worker	0.0229	0.0155	0.1635	6.1000e-004	0.0661	4.2000e-004	0.0665	0.0176	3.8000e-004	0.0180	0.0000	55.0645	55.0645	1.0700e-003	0.0000	55.0913
Total	**0.0233**	**0.0253**	**0.1675**	**6.4000e-004**	**0.0671**	**5.0000e-004**	**0.0676**	**0.0179**	**4.5000e-004**	**0.0183**	**0.0000**	**58.4197**	**58.4197**	**1.3400e-003**	**0.0000**	**58.4533**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8000e-004	9.8200e-003	4.0300e-003	3.0000e-005	9.3000e-004	8.0000e-005	1.0100e-003	2.7000e-004	7.0000e-005	3.4000e-004	0.0000	3.3552	3.3552	2.7000e-004	0.0000	3.3620
Worker	0.0229	0.0155	0.1635	6.1000e-004	0.0661	4.2000e-004	0.0665	0.0176	3.8000e-004	0.0180	0.0000	55.0645	55.0645	1.0700e-003	0.0000	55.0913
Total	**0.0233**	**0.0253**	**0.1675**	**6.4000e-004**	**0.0671**	**5.0000e-004**	**0.0676**	**0.0179**	**4.5000e-004**	**0.0183**	**0.0000**	**58.4197**	**58.4197**	**1.3400e-003**	**0.0000**	**58.4533**

3.5 Facade - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3709					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3709**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-004	8.9400e-003	3.4300e-003	2.0000e-005	4.6000e-004	6.0000e-005	5.2000e-004	1.3000e-004	6.0000e-005	1.9000e-004	0.0000	1.8725	1.8725	1.7000e-004	0.0000	1.8767
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.3000e-004**	**8.9400e-003**	**3.4300e-003**	**2.0000e-005**	**4.6000e-004**	**6.0000e-005**	**5.2000e-004**	**1.3000e-004**	**6.0000e-005**	**1.9000e-004**	**0.0000**	**1.8725**	**1.8725**	**1.7000e-004**	**0.0000**	**1.8767**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3709					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.3709**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-004	8.9400e-003	3.4300e-003	2.0000e-005	4.6000e-004	6.0000e-005	5.2000e-004	1.3000e-004	6.0000e-005	1.9000e-004	0.0000	1.8725	1.8725	1.7000e-004	0.0000	1.8767
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.3000e-004**	**8.9400e-003**	**3.4300e-003**	**2.0000e-005**	**4.6000e-004**	**6.0000e-005**	**5.2000e-004**	**1.3000e-004**	**6.0000e-005**	**1.9000e-004**	**0.0000**	**1.8725**	**1.8725**	**1.7000e-004**	**0.0000**	**1.8767**

3.5 Facade - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0808					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0808**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9000e-004	0.0237	9.4200e-003	5.0000e-005	1.3300e-003	1.2000e-004	1.4500e-003	3.8000e-004	1.1000e-004	5.0000e-004	0.0000	5.4059	5.4059	4.7000e-004	0.0000	5.4176
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**7.9000e-004**	**0.0237**	**9.4200e-003**	**5.0000e-005**	**1.3300e-003**	**1.2000e-004**	**1.4500e-003**	**3.8000e-004**	**1.1000e-004**	**5.0000e-004**	**0.0000**	**5.4059**	**5.4059**	**4.7000e-004**	**0.0000**	**5.4176**

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	1.0808					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0808**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9000e-004	0.0237	9.4200e-003	5.0000e-005	1.3300e-003	1.2000e-004	1.4500e-003	3.8000e-004	1.1000e-004	5.0000e-004	0.0000	5.4059	5.4059	4.7000e-004	0.0000	5.4176
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.9000e-004**	**0.0237**	**9.4200e-003**	**5.0000e-005**	**1.3300e-003**	**1.2000e-004**	**1.4500e-003**	**3.8000e-004**	**1.1000e-004**	**5.0000e-004**	**0.0000**	**5.4059**	**5.4059**	**4.7000e-004**	**0.0000**	**5.4176**

3.6 Interior Fit-Out - 2019

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	3.3200e-003	1.2700e-003	1.0000e-005	1.7000e-004	2.0000e-005	1.9000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.6955	0.6955	6.0000e-005	0.0000	0.6971
Worker	0.0115	8.1200e-003	0.0837	2.9000e-004	0.0307	2.0000e-004	0.0309	8.1700e-003	1.8000e-004	8.3500e-003	0.0000	26.4043	26.4043	5.7000e-004	0.0000	26.4184
Total	**0.0117**	**0.0114**	**0.0850**	**3.0000e-004**	**0.0309**	**2.2000e-004**	**0.0311**	**8.2200e-003**	**2.0000e-004**	**8.4200e-003**	**0.0000**	**27.0998**	**27.0998**	**6.3000e-004**	**0.0000**	**27.1154**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	3.3200e-003	1.2700e-003	1.0000e-005	1.7000e-004	2.0000e-005	1.9000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.6955	0.6955	6.0000e-005	0.0000	0.6971
Worker	0.0115	8.1200e-003	0.0837	2.9000e-004	0.0307	2.0000e-004	0.0309	8.1700e-003	1.8000e-004	8.3500e-003	0.0000	26.4043	26.4043	5.7000e-004	0.0000	26.4184
Total	**0.0117**	**0.0114**	**0.0850**	**3.0000e-004**	**0.0309**	**2.2000e-004**	**0.0311**	**8.2200e-003**	**2.0000e-004**	**8.4200e-003**	**0.0000**	**27.0998**	**27.0998**	**6.3000e-004**	**0.0000**	**27.1154**

3.6 Interior Fit-Out - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0300e-003	0.0608	0.0242	1.4000e-004	3.4200e-003	3.0000e-004	3.7200e-003	9.9000e-004	2.9000e-004	1.2800e-003	0.0000	13.8857	13.8857	1.2100e-003	0.0000	13.9158
Worker	0.2143	0.1453	1.5296	5.6900e-003	0.6188	3.8900e-003	0.6227	0.1647	3.5800e-003	0.1682	0.0000	515.2459	515.2459	0.0101	0.0000	515.4971
Total	**0.2164**	**0.2060**	**1.5538**	**5.8300e-003**	**0.6222**	**4.1900e-003**	**0.6264**	**0.1657**	**3.8700e-003**	**0.1695**	**0.0000**	**529.1316**	**529.1316**	**0.0113**	**0.0000**	**529.4129**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0300e-003	0.0608	0.0242	1.4000e-004	3.4200e-003	3.0000e-004	3.7200e-003	9.9000e-004	2.9000e-004	1.2800e-003	0.0000	13.8857	13.8857	1.2100e-003	0.0000	13.9158
Worker	0.2143	0.1453	1.5296	5.6900e-003	0.6188	3.8900e-003	0.6227	0.1647	3.5800e-003	0.1682	0.0000	515.2459	515.2459	0.0101	0.0000	515.4971
Total	**0.2164**	**0.2060**	**1.5538**	**5.8300e-003**	**0.6222**	**4.1900e-003**	**0.6264**	**0.1657**	**3.8700e-003**	**0.1695**	**0.0000**	**529.1316**	**529.1316**	**0.0113**	**0.0000**	**529.4129**

3.6 Interior Fit-Out - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3000e-004	0.0173	7.4200e-003	4.0000e-005	1.0800e-003	4.0000e-005	1.1200e-003	3.1000e-004	4.0000e-005	3.5000e-004	0.0000	4.3443	4.3443	3.8000e-004	0.0000	4.3537
Worker	0.0635	0.0413	0.4475	1.7400e-003	0.1960	1.1900e-003	0.1972	0.0522	1.1000e-003	0.0533	0.0000	157.4205	157.4205	2.8600e-003	0.0000	157.4919

Total	**0.0640**	**0.0586**	**0.4549**	**1.7800e-003**	**0.1971**	**1.2300e-003**	**0.1983**	**0.0525**	**1.1400e-003**	**0.0536**	**0.0000**	**161.7647**	**161.7647**	**3.2400e-003**	**0.0000**	**161.8456**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3000e-004	0.0173	7.4200e-003	4.0000e-005	1.0800e-003	4.0000e-005	1.1200e-003	3.1000e-004	4.0000e-005	3.5000e-004	0.0000	4.3443	4.3443	3.8000e-004	0.0000	4.3537
Worker	0.0635	0.0413	0.4475	1.7400e-003	0.1960	1.1900e-003	0.1972	0.0522	1.1000e-003	0.0533	0.0000	157.4205	157.4205	2.8600e-003	0.0000	157.4919
Total	**0.0640**	**0.0586**	**0.4549**	**1.7800e-003**	**0.1971**	**1.2300e-003**	**0.1983**	**0.0525**	**1.1400e-003**	**0.0536**	**0.0000**	**161.7647**	**161.7647**	**3.2400e-003**	**0.0000**	**161.8456**

3.7 Site Improvements - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1600e-003	0.0662	0.0432	1.5000e-004		2.3200e-003	2.3200e-003		2.1400e-003	2.1400e-003	0.0000	13.5135	13.5135	4.3700e-003	0.0000	13.6228
Total	**6.1600e-003**	**0.0662**	**0.0432**	**1.5000e-004**	**0.0000**	**2.3200e-003**	**2.3200e-003**	**0.0000**	**2.1400e-003**	**2.1400e-003**	**0.0000**	**13.5135**	**13.5135**	**4.3700e-003**	**0.0000**	**13.6228**

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	1.7100e-003	0.0596	0.0262	1.7000e-004	4.4500e-003	2.1000e-004	4.6600e-003	1.2000e-003	2.0000e-004	1.4000e-003	0.0000	17.3771	17.3771	2.1700e-003	0.0000	17.4315
Vendor	2.6000e-004	7.1700e-003	2.9100e-003	2.0000e-005	5.8000e-004	5.0000e-005	6.3000e-004	1.7000e-004	5.0000e-005	2.1000e-004	0.0000	2.1495	2.1495	1.8000e-004	0.0000	2.1539
Worker	0.0355	0.0240	0.2530	9.4000e-004	0.1023	6.4000e-004	0.1030	0.0272	5.9000e-004	0.0278	0.0000	85.2188	85.2188	1.6600e-003	0.0000	85.2603
Total	**0.0374**	**0.0908**	**0.2821**	**1.1300e-003**	**0.1074**	**9.0000e-004**	**0.1083**	**0.0286**	**8.4000e-004**	**0.0294**	**0.0000**	**104.7454**	**104.7454**	**4.0100e-003**	**0.0000**	**104.8457**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1600e-003	0.0662	0.0432	1.5000e-004		2.3200e-003	2.3200e-003		2.1400e-003	2.1400e-003	0.0000	13.5135	13.5135	4.3700e-003	0.0000	13.6228
Total	**6.1600e-003**	**0.0662**	**0.0432**	**1.5000e-004**	**0.0000**	**2.3200e-003**	**2.3200e-003**	**0.0000**	**2.1400e-003**	**2.1400e-003**	**0.0000**	**13.5135**	**13.5135**	**4.3700e-003**	**0.0000**	**13.6228**

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	1.7100e-003	0.0596	0.0262	1.7000e-004	4.4500e-003	2.1000e-004	4.6600e-003	1.2000e-003	2.0000e-004	1.4000e-003	0.0000	17.3771	17.3771	2.1700e-003	0.0000	17.4315
Vendor	2.6000e-004	7.1700e-003	2.9100e-003	2.0000e-005	5.8000e-004	5.0000e-005	6.3000e-004	1.7000e-004	5.0000e-005	2.1000e-004	0.0000	2.1495	2.1495	1.8000e-004	0.0000	2.1539
Worker	0.0355	0.0240	0.2530	9.4000e-004	0.1023	6.4000e-004	0.1030	0.0272	5.9000e-004	0.0278	0.0000	85.2188	85.2188	1.6600e-003	0.0000	85.2603
Total	**0.0374**	**0.0908**	**0.2821**	**1.1300e-003**	**0.1074**	**9.0000e-004**	**0.1083**	**0.0286**	**8.4000e-004**	**0.0294**	**0.0000**	**104.7454**	**104.7454**	**4.0100e-003**	**0.0000**	**104.8457**

3.7 Site Improvements - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6700e-003	0.0165	0.0125	5.0000e-005		6.0000e-004	6.0000e-004		5.5000e-004	5.5000e-004	0.0000	3.9590	3.9590	1.2800e-003	0.0000	3.9911
Total	**1.6700e-003**	**0.0165**	**0.0125**	**5.0000e-005**	**0.0000**	**6.0000e-004**	**6.0000e-004**	**0.0000**	**5.5000e-004**	**5.5000e-004**	**0.0000**	**3.9590**	**3.9590**	**1.2800e-003**	**0.0000**	**3.9911**

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	4.8000e-004	0.0160	7.9400e-003	5.0000e-005	3.8100e-003	6.0000e-005	3.8700e-003	9.7000e-004	5.0000e-005	1.0200e-003	0.0000	4.9947	4.9947	6.4000e-004	0.0000	5.0108
Vendor	6.0000e-005	1.8300e-003	8.2000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.7000e-004	5.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6208	0.6208	5.0000e-005	0.0000	0.6221
Worker	9.6900e-003	6.3000e-003	0.0683	2.7000e-004	0.0299	1.8000e-004	0.0301	7.9600e-003	1.7000e-004	8.1300e-003	0.0000	24.0240	24.0240	4.4000e-004	0.0000	24.0349
Total	**0.0102**	**0.0241**	**0.0771**	**3.3000e-004**	**0.0339**	**2.5000e-004**	**0.0341**	**8.9800e-003**	**2.3000e-004**	**9.2000e-003**	**0.0000**	**29.6395**	**29.6395**	**1.1300e-003**	**0.0000**	**29.6678**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6700e-003	0.0165	0.0125	5.0000e-005		6.0000e-004	6.0000e-004		5.5000e-004	5.5000e-004	0.0000	3.9590	3.9590	1.2800e-003	0.0000	3.9910
Total	**1.6700e-003**	**0.0165**	**0.0125**	**5.0000e-005**	**0.0000**	**6.0000e-004**	**6.0000e-004**	**0.0000**	**5.5000e-004**	**5.5000e-004**	**0.0000**	**3.9590**	**3.9590**	**1.2800e-003**	**0.0000**	**3.9910**

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	4.8000e-004	0.0160	7.9400e-003	5.0000e-005	3.8100e-003	6.0000e-005	3.8700e-003	9.7000e-004	5.0000e-005	1.0200e-003	0.0000	4.9947	4.9947	6.4000e-004	0.0000	5.0108
Vendor	6.0000e-005	1.8300e-003	8.2000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.7000e-004	5.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6208	0.6208	5.0000e-005	0.0000	0.6221
Worker	9.6900e-003	6.3000e-003	0.0683	2.7000e-004	0.0299	1.8000e-004	0.0301	7.9600e-003	1.7000e-004	8.1300e-003	0.0000	24.0240	24.0240	4.4000e-004	0.0000	24.0349
Total	**0.0102**	**0.0241**	**0.0771**	**3.3000e-004**	**0.0339**	**2.5000e-004**	**0.0341**	**8.9800e-003**	**2.3000e-004**	**9.2000e-003**	**0.0000**	**29.6395**	**29.6395**	**1.1300e-003**	**0.0000**	**29.6678**

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	0.8291	2.4050	8.6875	0.0277	2.5105	0.0242	2.5347	0.6746	0.0226	0.6972	0.0000	2,532.2236	2,532.2236	0.0955	0.0000	2,534.6112
Unmitigated	0.8291	2.4050	8.6875	0.0277	2.5105	0.0242	2.5347	0.6746	0.0226	0.6972	0.0000	2,532.2236	2,532.2236	0.0955	0.0000	2,534.6112

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	279.56	280.14	279.56	324,460	324,460
Hotel	3,393.60	3,393.60	3393.60	6,447,605	6,447,605
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	3,673.16	3,673.74	3,673.16	6,772,065	6,772,065

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
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Unenclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Hotel	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Unenclosed Parking Structure	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	736.1201	736.1201	0.0333	6.8900e-003	739.0044
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	736.1201	736.1201	0.0333	6.8900e-003	739.0044
NaturalGas Mitigated	0.0558	0.5071	0.4260	3.0400e-003		0.0385	0.0385		0.0385	0.0385	0.0000	552.0309	552.0309	0.0106	0.0101	555.3113
NaturalGas Unmitigated	0.0558	0.5071	0.4260	3.0400e-003		0.0385	0.0385		0.0385	0.0385	0.0000	552.0309	552.0309	0.0106	0.0101	555.3113

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					
High Turnover (Sit Down Restaurant)	486968	2.6300e-003	0.0239	0.0201	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9865	25.9865	5.0000e-004	4.8000e-004	26.1409
Hotel	9.8577e+006	0.0532	0.4832	0.4059	2.9000e-003		0.0367	0.0367		0.0367	0.0367	0.0000	526.0444	526.0444	0.0101	9.6400e-003	529.1704
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0558**	**0.5071**	**0.4260**	**3.0400e-003**		**0.0385**	**0.0385**		**0.0385**	**0.0385**	**0.0000**	**552.0309**	**552.0309**	**0.0106**	**0.0101**	**555.3113**

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					
High Turnover (Sit Down Restaurant)	486968	2.6300e-003	0.0239	0.0201	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9865	25.9865	5.0000e-004	4.8000e-004	26.1409
Hotel	9.8577e+006	0.0532	0.4832	0.4059	2.9000e-003		0.0367	0.0367		0.0367	0.0367	0.0000	526.0444	526.0444	0.0101	9.6400e-003	529.1704
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0558**	**0.5071**	**0.4260**	**3.0400e-003**		**0.0385**	**0.0385**		**0.0385**	**0.0385**	**0.0000**	**552.0309**	**552.0309**	**0.0106**	**0.0101**	**555.3113**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	84042	24.4488	1.1100e-003	2.3000e-004	24.5446
Hotel	2.2059e+006	641.7216	0.0290	6.0000e-003	644.2361
Unenclosed Parking Structure	240450	69.9497	3.1600e-003	6.5000e-004	70.2238
Total		**736.1200**	**0.0333**	**6.8800e-003**	**739.0044**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	84042	24.4488	1.1100e-003	2.3000e-004	24.5446
Hotel	2.2059e+006	641.7216	0.0290	6.0000e-003	644.2361
Unenclosed Parking Structure	240450	69.9497	3.1600e-003	6.5000e-004	70.2238
Total		**736.1200**	**0.0333**	**6.8800e-003**	**739.0044**

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	1.2203	4.0000e-005	4.8400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3800e-003	9.3800e-003	2.0000e-005	0.0000	0.0100
Unmitigated	1.2203	4.0000e-005	4.8400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3800e-003	9.3800e-003	2.0000e-005	0.0000	0.0100

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	0.1452					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.5000e-004	4.0000e-005	4.8400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3800e-003	9.3800e-003	2.0000e-005	0.0000	0.0100
Total	**1.2203**	**4.0000e-005**	**4.8400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.3800e-003**	**9.3800e-003**	**2.0000e-005**	**0.0000**	**0.0100**

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	0.1452					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	4.5000e-004	4.0000e-005	4.8400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3800e-003	9.3800e-003	2.0000e-005	0.0000	0.0100
Total	**1.2203**	**4.0000e-005**	**4.8400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.3800e-003**	**9.3800e-003**	**2.0000e-005**	**0.0000**	**0.0100**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	22.2646	0.3635	8.7400e-003	33.9551
Unmitigated	22.2646	0.3635	8.7400e-003	33.9551

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	0.880248 / 0.056186	1.7221	0.0288	6.9000e-004	2.6466
Hotel	10.2482 / 1.13869	20.5426	0.3347	8.0500e-003	31.3085
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**22.2646**	**0.3635**	**8.7400e-003**	**33.9551**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	0.880248 / 0.056186	1.7221	0.0288	6.9000e-004	2.6466
Hotel	10.2482 / 1.13869	20.5426	0.3347	8.0500e-003	31.3085
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**22.2646**	**0.3635**	**8.7400e-003**	**33.9551**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	51.9048	3.0675	0.0000	128.5919
Unmitigated	51.9048	3.0675	0.0000	128.5919

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	34.51	7.0052	0.4140	0.0000	17.3551
Hotel	221.19	44.8996	2.6535	0.0000	111.2368
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**51.9048**	**3.0675**	**0.0000**	**128.5919**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	34.51	7.0052	0.4140	0.0000	17.3551
Hotel	221.19	44.8996	2.6535	0.0000	111.2368
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		**51.9048**	**3.0675**	**0.0000**	**128.5919**

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	1	0.25	13	700	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 (600 - 750 HP)	7.4700e-003	0.0209	0.0190	4.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	3.4653	3.4653	4.9000e-004	0.0000	3.4774
Total	**7.4700e-003**	**0.0209**	**0.0190**	**4.0000e-005**		**1.1000e-003**	**1.1000e-003**		**1.1000e-003**	**1.1000e-003**	**0.0000**	**3.4653**	**3.4653**	**4.9000e-004**	**0.0000**	**3.4774**

11.0 Vegetation

Unmitigated

	Offroad + Vendor (ONSITE)						Offsite Onroad (DPM = Haul; PM2.5 = Haul + Worker)					
	2019		2020		2021		2019		2020		2021	
	DPM	PM2.5 Ex	DPM	PM2.5 Ex	DPM	PM2.5 Ex	DPM	PM2.5 Ex	DPM	PM2.5 Ex	DPM	PM2.5 Ex
Mobilization/Demolition	0.01	0.01					0.00	0.00				
Excavation, Foundation	0.03	0.03					0.00	0.00				
Superstructure	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
Façade	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
Interior Fit-Out	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Improvements			0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

Mitigated

	Offroad + Vendor (ONSITE)						Offsite Onroad (DPM = Haul; PM2.5 = Haul + Worker)					
	2019		2020		2021		2019		2020		2021	
	DPM	PM2.5 Ex	DPM	PM2.5 Ex	DPM	PM2.5 Ex	DPM	PM2.5 Ex	DPM	PM2.5 Ex	DPM	PM2.5 Ex
Mobilization/Demolition	0.00	0.00					0.00	0.00				
Excavation, Foundation	0.01	0.01					0.00	0.00				
Superstructure	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
Façade	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
Interior Fit-Out	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Improvements			0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

1499 Bayshore Highway Project - San Mateo County, Summer

1499 Bayshore Highway Project

San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking Structure	118.00	Space	0.73	137,400.00	0
High Turnover (Sit Down Restaurant)	2.90	1000sqft	0.15	2,900.00	0
Hotel	404.00	Room	1.44	270,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - rooms, gsf, and parking spaces provided by applicant; lot acreage assumed to be proportional to gsf

Construction Phase - start and end dates provided by applicant

Off-road Equipment - equipment, quantity, hp, and hours/day provided by client. trucks with trips provided assumed to be off-site and not included here.

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Off-road Equipment - equipment, quantity, hp, and hours/day provided by client. trucks with trips provided assumed to be off-site and not included here.

Trips and VMT - worker trips/day provided by applicant, calculated using schedule; vendor trips includes consideration of on-site trucks; vendor trips and hauling trips provided by applicant; trip length assumed to be distance from site to Livermore site

Grading - project site acreage

Construction Off-road Equipment Mitigation - Level 3 DPFs per Laura's direction

Stationary Sources - Emergency Generators and Fire Pumps - Conservative assumption of 700 HP generator; assuming 15 mins per week of testing = 13 hrs per year

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstructionPhase	NumDays	20.00	50.00
tblConstructionPhase	NumDays	6.00	106.00
tblConstructionPhase	NumDays	220.00	135.00
tblConstructionPhase	NumDays	10.00	137.00
tblConstructionPhase	NumDays	220.00	358.00
tblConstructionPhase	NumDays	3.00	84.00
tblGrading	AcresOfGrading	0.00	2.19
tblGrading	MaterialImported	0.00	5,706.00
tblLandUse	LandUseSquareFeet	47,200.00	137,400.00
tblLandUse	LandUseSquareFeet	586,608.00	270,000.00
tblLandUse	LotAcreage	1.06	0.73
tblLandUse	LotAcreage	0.07	0.15
tblLandUse	LotAcreage	13.47	1.44
tblOffRoadEquipment	HorsePower	97.00	300.00
tblOffRoadEquipment	HorsePower	221.00	400.00
tblOffRoadEquipment	HorsePower	231.00	400.00
tblOffRoadEquipment	HorsePower	158.00	300.00
tblOffRoadEquipment	HorsePower	158.00	300.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	700.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.25
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	13.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00

tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripLength	20.00	47.00
tblTripsAndVMT	HaulingTripNumber	534.00	1,000.00
tblTripsAndVMT	HaulingTripNumber	713.00	1,250.00
tblTripsAndVMT	HaulingTripNumber	0.00	240.00
tblTripsAndVMT	VendorTripLength	7.30	346.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripLength	7.30	20.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	67.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	67.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	5.00	60.00
tblTripsAndVMT	WorkerTripNumber	15.00	100.00
tblTripsAndVMT	WorkerTripNumber	172.00	400.00
tblTripsAndVMT	WorkerTripNumber	34.00	0.00
tblTripsAndVMT	WorkerTripNumber	172.00	600.00
tblTripsAndVMT	WorkerTripNumber	5.00	400.00
tblVehicleTrips	ST_TR	158.37	96.60
tblVehicleTrips	ST_TR	8.19	8.40
tblVehicleTrips	SU_TR	131.84	96.40
tblVehicleTrips	SU_TR	5.95	8.40
tblVehicleTrips	WD_TR	127.15	96.40
tblVehicleTrips	WD_TR	8.17	8.40

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					
2019	24.2364	30.4887	28.1248	0.1112	8.3148	0.7453	8.3779	2.2077	0.6886	2.2663	0.0000	11,461.3584	11,461.3584	1.6442	0.0000	11,502.4628
2020	23.9879	6.1143	23.1005	0.0886	8.4027	0.1312	8.5338	2.2303	0.1211	2.3514	0.0000	8,910.9200	8,910.9200	0.3863	0.0000	8,920.5778
2021	2.8083	5.4259	21.5743	0.0857	8.6804	0.1179	8.7983	2.2984	0.1088	2.4072	0.0000	8,626.2717	8,626.2717	0.3725	0.0000	8,635.5847
Maximum	**24.2364**	**30.4887**	**28.1248**	**0.1112**	**8.6804**	**0.7453**	**8.7983**	**2.2984**	**0.6886**	**2.4072**	**0.0000**	**11,461.3584**	**11,461.3584**	**1.6442**	**0.0000**	**11,502.4628**

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					
2019	24.2364	30.4887	28.1248	0.1112	8.3148	0.1951	8.3779	2.2077	0.1825	2.2663	0.0000	11,461.3584	11,461.3584	1.6442	0.0000	11,502.4628
2020	23.9879	6.1143	23.1005	0.0886	8.4027	0.1312	8.5338	2.2303	0.1211	2.3514	0.0000	8,910.9200	8,910.9200	0.3863	0.0000	8,920.5778
2021	2.8083	5.4259	21.5743	0.0857	8.6804	0.1179	8.7983	2.2984	0.1088	2.4072	0.0000	8,626.2717	8,626.2717	0.3725	0.0000	8,635.5847
Maximum	**24.2364**	**30.4887**	**28.1248**	**0.1112**	**8.6804**	**0.1951**	**8.7983**	**2.2984**	**0.1825**	**2.4072**	**0.0000**	**11,461.3584**	**11,461.3584**	**1.6442**	**0.0000**	**11,502.4628**

	ROG	NOx	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**	**55.33**	**0.00**	**0.00**	**55.11**	**0.00**	**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	6.6892	4.9000e-004	0.0538	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1149	0.1149	3.1000e-004		0.1225
Energy	0.3056	2.7786	2.3340	0.0167		0.2112	0.2112		0.2112	0.2112		3,334.3007	3,334.3007	0.0639	0.0611	3,354.1148
Mobile	5.0566	12.6063	47.6564	0.1597	14.3851	0.1328	14.5179	3.8519	0.1240	3.9758		16,099.4328	16,099.4328	0.5766		16,113.8484
Stationary	0.2872	0.8027	0.7323	1.3800e-003		0.0423	0.0423		0.0423	0.0423		146.9150	146.9150	0.0206		147.4299
Total	**12.3386**	**16.1880**	**50.7765**	**0.1778**	**14.3851**	**0.3864**	**14.7715**	**3.8519**	**0.3776**	**4.2294**		**19,580.7634**	**19,580.7634**	**0.6614**	**0.0611**	**19,615.5156**

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	6.6892	4.9000e-004	0.0538	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1149	0.1149	3.1000e-004		0.1225
Energy	0.3056	2.7786	2.3340	0.0167		0.2112	0.2112		0.2112	0.2112		3,334.3007	3,334.3007	0.0639	0.0611	3,354.1148
Mobile	5.0566	12.6063	47.6564	0.1597	14.3851	0.1328	14.5179	3.8519	0.1240	3.9758		16,099.4328	16,099.4328	0.5766		16,113.8484
Stationary	0.2872	0.8027	0.7323	1.3800e-003		0.0423	0.0423		0.0423	0.0423		146.9150	146.9150	0.0206		147.4299
Total	**12.3386**	**16.1880**	**50.7765**	**0.1778**	**14.3851**	**0.3864**	**14.7715**	**3.8519**	**0.3776**	**4.2294**		**19,580.7634**	**19,580.7634**	**0.6614**	**0.0611**	**19,615.5156**

	ROG	NOx	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	Mobilization and Demolition	Demolition	3/4/2019	5/10/2019	5	50	
2	Excavation, Foundations, Underground MEP and Slab-On	Grading	5/13/2019	10/7/2019	5	106	
3	Superstructure	Building Construction	8/23/2019	2/27/2020	5	135	
4	Facade	Architectural Coating	11/13/2019	5/21/2020	5	137	
5	Interior Fit-Out	Building Construction	12/13/2019	4/27/2021	5	358	
6	Site Improvements	Site Preparation	10/2/2020	1/27/2021	5	84	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.73

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 409,350; Non-Residential Outdoor: 136,450; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Mobilization and Demolition	Excavators	2	8.00	300	0.38
Mobilization and Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Mobilization and Demolition	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Excavation, Foundations, Underground MEP and Slab-On Grade	Bore/Drill Rigs	2	4.00	400	0.50
Excavation, Foundations, Underground MEP and Slab-On Grade	Cranes	2	4.00	400	0.29
Excavation, Foundations, Underground MEP and Slab-On Grade	Excavators	2	4.00	300	0.38
Excavation, Foundations, Underground MEP and Slab-On Grade	Graders	0	8.00	187	0.41
Excavation, Foundations, Underground MEP and Slab-On Grade	Rubber Tired Dozers	0	8.00	247	0.40
Excavation, Foundations, Underground MEP and Slab-On Grade	Scrapers	0	8.00	367	0.48
Excavation, Foundations, Underground MEP and Slab-On Grade	Tractors/Loaders/Backhoes	0	7.00	97	0.37

Superstructure	Cranes	0	8.00	231	0.29
Superstructure	Cranes	0	8.00	231	0.29
Superstructure	Forklifts	0	7.00	89	0.20
Superstructure	Generator Sets	0	8.00	84	0.74
Superstructure	Graders	0	8.00	187	0.41
Superstructure	Rubber Tired Dozers	0	8.00	247	0.40
Superstructure	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Superstructure	Welders	0	8.00	46	0.45
Facade	Air Compressors	0	6.00	78	0.48
Facade	Cranes	0	8.00	231	0.29
Facade	Forklifts	0	7.00	89	0.20
Facade	Generator Sets	0	8.00	84	0.74
Facade	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Facade	Welders	0	8.00	46	0.45
Interior Fit-Out	Cement and Mortar Mixers	0	8.00	9	0.56
Interior Fit-Out	Cranes	0	8.00	231	0.29
Interior Fit-Out	Forklifts	0	7.00	89	0.20
Interior Fit-Out	Generator Sets	0	8.00	84	0.74
Interior Fit-Out	Pavers	0	8.00	130	0.42
Interior Fit-Out	Paving Equipment	0	8.00	132	0.36
Interior Fit-Out	Rollers	0	8.00	80	0.38
Interior Fit-Out	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Interior Fit-Out	Welders	0	8.00	46	0.45
Site Improvements	Air Compressors	0	6.00	78	0.48
Site Improvements	Graders	0	8.00	187	0.41
Site Improvements	Scrapers	0	8.00	367	0.48
Site Improvements	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Site Improvements	Tractors/Loaders/Backhoes	2	2.00	300	0.37

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
Mobilization and Demolition	2	60.00	0.00	1,000.00	10.80	7.30	47.00	LD_Mix	HDT_Mix	HHDT
Excavation, Foundations	6	100.00	1.00	1,250.00	10.80	346.00	47.00	LD_Mix	HDT_Mix	HHDT
Superstructure	0	400.00	1.00	0.00	10.80	50.00	47.00	LD_Mix	HDT_Mix	HHDT
Facade	0	0.00	4.00	0.00	10.80	7.30	47.00	LD_Mix	HDT_Mix	HHDT
Interior Fit-Out	0	600.00	4.00	0.00	10.80	7.30	47.00	LD_Mix	HDT_Mix	HHDT
Site Improvements	2	400.00	1.00	240.00	10.80	20.00	47.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use DPF for Construction Equipment

3.2 Mobilization and Demolition - 2019

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					2.3111	0.0000	2.3111	0.3499	0.0000	0.3499			0.0000			0.0000
Off-Road	0.6518	7.1572	4.4776	0.0196		0.2324	0.2324		0.2138	0.2138		1,935.1617	1,935.1617	0.6123		1,950.4683
Total	**0.6518**	**7.1572**	**4.4776**	**0.0196**	**2.3111**	**0.2324**	**2.5435**	**0.3499**	**0.2138**	**0.5637**		**1,935.1617**	**1,935.1617**	**0.6123**		**1,950.4683**

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	0.4130	13.5501	5.6153	0.0372	0.8154	0.0621	0.8776	0.2231	0.0594	0.2825		4,196.3356	4,196.3356	0.5075		4,209.0241
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1791	0.1101	1.3642	4.7700e-003	0.4929	3.0300e-003	0.4959	0.1307	2.7900e-003	0.1335		475.3909	475.3909	0.0101		475.6424
Total	**0.5920**	**13.6602**	**6.9795**	**0.0420**	**1.3083**	**0.0652**	**1.3735**	**0.3538**	**0.0622**	**0.4161**		**4,671.7265**	**4,671.7265**	**0.5176**		**4,684.6665**

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					2.3111	0.0000	2.3111	0.3499	0.0000	0.3499			0.0000			0.0000
Off-Road	0.6518	7.1572	4.4776	0.0196		0.0349	0.0349		0.0321	0.0321	0.0000	1,935.1617	1,935.1617	0.6123		1,950.4683
Total	**0.6518**	**7.1572**	**4.4776**	**0.0196**	**2.3111**	**0.0349**	**2.3460**	**0.3499**	**0.0321**	**0.3820**	**0.0000**	**1,935.1617**	**1,935.1617**	**0.6123**		**1,950.4683**

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	0.4130	13.5501	5.6153	0.0372	0.8154	0.0621	0.8776	0.2231	0.0594	0.2825		4,196.3356	4,196.3356	0.5075		4,209.0241
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1791	0.1101	1.3642	4.7700e-003	0.4929	3.0300e-003	0.4959	0.1307	2.7900e-003	0.1335		475.3909	475.3909	0.0101		475.6424

Total	**0.5920**	**13.6602**	**6.9795**	**0.0420**	**1.3083**	**0.0652**	**1.3735**	**0.3538**	**0.0622**	**0.4161**		**4,671.7265**	**4,671.7265**	**0.5176**		**4,684.6665**

3.3 Excavation, Foundations, Underground MEP and Slab-On

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					0.0280	0.0000	0.0280	3.2900e-003	0.0000	3.2900e-003			0.0000			0.0000
Off-Road	1.4957	17.8398	11.9620	0.0368		0.6392	0.6392		0.5880	0.5880		3,638.7673	3,638.7673	1.1513		3,667.5490
Total	**1.4957**	**17.8398**	**11.9620**	**0.0368**	**0.0280**	**0.6392**	**0.6672**	**3.2900e-003**	**0.5880**	**0.5913**		**3,638.7673**	**3,638.7673**	**1.1513**		**3,667.5490**

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	0.2435	7.9894	3.3109	0.0220	0.4808	0.0366	0.5174	0.1315	0.0351	0.1666		2,474.2545	2,474.2545	0.2993		2,481.7359
Vendor	0.1465	3.2254	1.2809	0.0111	0.3187	0.0386	0.3573	0.0916	0.0369	0.1285		1,208.4404	1,208.4404	0.0955		1,210.8288
Worker	0.2984	0.1836	2.2737	7.9500e-003	0.8215	5.0500e-003	0.8265	0.2179	4.6500e-003	0.2226		792.3182	792.3182	0.0168		792.7373
Total	**0.6884**	**11.3983**	**6.8655**	**0.0410**	**1.6209**	**0.0803**	**1.7012**	**0.4410**	**0.0766**	**0.5176**		**4,475.0131**	**4,475.0131**	**0.4116**		**4,485.3020**

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					0.0280	0.0000	0.0280	3.2900e-003	0.0000	3.2900e-003			0.0000			0.0000
Off-Road	1.4957	17.8398	11.9620	0.0368		0.0890	0.0890		0.0819	0.0819	0.0000	3,638.7673	3,638.7673	1.1513		3,667.5490
Total	**1.4957**	**17.8398**	**11.9620**	**0.0368**	**0.0280**	**0.0890**	**0.1170**	**3.2900e-003**	**0.0819**	**0.0852**	**0.0000**	**3,638.7673**	**3,638.7673**	**1.1513**		**3,667.5490**

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	0.2435	7.9894	3.3109	0.0220	0.4808	0.0366	0.5174	0.1315	0.0351	0.1666		2,474.2545	2,474.2545	0.2993		2,481.7359
Vendor	0.1465	3.2254	1.2809	0.0111	0.3187	0.0386	0.3573	0.0916	0.0369	0.1285		1,208.4404	1,208.4404	0.0955		1,210.8288
Worker	0.2984	0.1836	2.2737	7.9500e-003	0.8215	5.0500e-003	0.8265	0.2179	4.6500e-003	0.2226		792.3182	792.3182	0.0168		792.7373
Total	**0.6884**	**11.3983**	**6.8655**	**0.0410**	**1.6209**	**0.0803**	**1.7012**	**0.4410**	**0.0766**	**0.5176**		**4,475.0131**	**4,475.0131**	**0.4116**		**4,485.3020**

3.4 Superstructure - 2019

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0225	0.5164	0.2025	1.6300e-003	0.0461	5.6300e-003	0.0517	0.0132	5.3800e-003	0.0186		178.3054	178.3054	0.0143		178.6627
Worker	1.1938	0.7342	9.0948	0.0318	3.2859	0.0202	3.3061	0.8716	0.0186	0.8902		3,169.2727	3,169.2727	0.0671		3,170.9491
Total	**1.2163**	**1.2506**	**9.2973**	**0.0334**	**3.3320**	**0.0258**	**3.3578**	**0.8848**	**0.0240**	**0.9088**		**3,347.5780**	**3,347.5780**	**0.0814**		**3,349.6118**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0225	0.5164	0.2025	1.6300e-003	0.0461	5.6300e-003	0.0517	0.0132	5.3800e-003	0.0186		178.3054	178.3054	0.0143		178.6627
Worker	1.1938	0.7342	9.0948	0.0318	3.2859	0.0202	3.3061	0.8716	0.0186	0.8902		3,169.2727	3,169.2727	0.0671		3,170.9491
Total	**1.2163**	**1.2506**	**9.2973**	**0.0334**	**3.3320**	**0.0258**	**3.3578**	**0.8848**	**0.0240**	**0.9088**		**3,347.5780**	**3,347.5780**	**0.0814**		**3,349.6118**

3.4 Superstructure - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0179	0.4523	0.1925	1.6100e-003	0.0461	3.6800e-003	0.0498	0.0132	3.5200e-003	0.0168		176.3337	176.3337	0.0143		176.6913
Worker	1.0990	0.6518	8.2777	0.0308	3.2859	0.0198	3.3057	0.8716	0.0182	0.8898		3,068.4755	3,068.4755	0.0593		3,069.9585
Total	**1.1169**	**1.1040**	**8.4702**	**0.0324**	**3.3320**	**0.0235**	**3.3555**	**0.8848**	**0.0218**	**0.9066**		**3,244.8092**	**3,244.8092**	**0.0736**		**3,246.6498**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0179	0.4523	0.1925	1.6100e-003	0.0461	3.6800e-003	0.0498	0.0132	3.5200e-003	0.0168		176.3337	176.3337	0.0143		176.6913
Worker	1.0990	0.6518	8.2777	0.0308	3.2859	0.0198	3.3057	0.8716	0.0182	0.8898		3,068.4755	3,068.4755	0.0593		3,069.9585

Total	**1.1169**	**1.1040**	**8.4702**	**0.0324**	**3.3320**	**0.0235**	**3.3555**	**0.8848**	**0.0218**	**0.9066**		**3,244.8092**	**3,244.8092**	**0.0736**		**3,246.6498**

3.5 Facade - 2019

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	21.1921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**21.1921**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0186	0.5025	0.1877	1.0800e-003	0.0270	3.4900e-003	0.0305	7.7700e-003	3.3400e-003	0.0111		118.8057	118.8057	0.0103		119.0629
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0186**	**0.5025**	**0.1877**	**1.0800e-003**	**0.0270**	**3.4900e-003**	**0.0305**	**7.7700e-003**	**3.3400e-003**	**0.0111**		**118.8057**	**118.8057**	**0.0103**		**119.0629**

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	21.1921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**21.1921**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0186	0.5025	0.1877	1.0800e-003	0.0270	3.4900e-003	0.0305	7.7700e-003	3.3400e-003	0.0111		118.8057	118.8057	0.0103		119.0629
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0186**	**0.5025**	**0.1877**	**1.0800e-003**	**0.0270**	**3.4900e-003**	**0.0305**	**7.7700e-003**	**3.3400e-003**	**0.0111**		**118.8057**	**118.8057**	**0.0103**		**119.0629**

3.5 Facade - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	21.1921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**21.1921**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0152	0.4568	0.1771	1.0700e-003	0.0270	2.2900e-003	0.0293	7.7700e-003	2.1900e-003	9.9600e-003		117.7053	117.7053	0.0101		117.9565
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0152**	**0.4568**	**0.1771**	**1.0700e-003**	**0.0270**	**2.2900e-003**	**0.0293**	**7.7700e-003**	**2.1900e-003**	**9.9600e-003**		**117.7053**	**117.7053**	**0.0101**		**117.9565**

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	21.1921					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**21.1921**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0152	0.4568	0.1771	1.0700e-003	0.0270	2.2900e-003	0.0293	7.7700e-003	2.1900e-003	9.9600e-003		117.7053	117.7053	0.0101		117.9565
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0152**	**0.4568**	**0.1771**	**1.0700e-003**	**0.0270**	**2.2900e-003**	**0.0293**	**7.7700e-003**	**2.1900e-003**	**9.9600e-003**		**117.7053**	**117.7053**	**0.0101**		**117.9565**

3.6 Interior Fit-Out - 2019

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0186	0.5025	0.1877	1.0800e-003	0.0270	3.4900e-003	0.0305	7.7700e-003	3.3400e-003	0.0111		118.8057	118.8057	0.0103		119.0629
Worker	1.7907	1.1013	13.6423	0.0477	4.9289	0.0303	4.9592	1.3074	0.0279	1.3353		4,753.9090	4,753.9090	0.1006		4,756.4236
Total	**1.8093**	**1.6038**	**13.8300**	**0.0488**	**4.9559**	**0.0338**	**4.9897**	**1.3151**	**0.0313**	**1.3464**		**4,872.7147**	**4,872.7147**	**0.1109**		**4,875.4865**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0186	0.5025	0.1877	1.0800e-003	0.0270	3.4900e-003	0.0305	7.7700e-003	3.3400e-003	0.0111		118.8057	118.8057	0.0103		119.0629
Worker	1.7907	1.1013	13.6423	0.0477	4.9289	0.0303	4.9592	1.3074	0.0279	1.3353		4,753.9090	4,753.9090	0.1006		4,756.4236

Total	**1.8093**	**1.6038**	**13.8300**	**0.0488**	**4.9559**	**0.0338**	**4.9897**	**1.3151**	**0.0313**	**1.3464**		**4,872.7147**	**4,872.7147**	**0.1109**		**4,875.4865**

3.6 Interior Fit-Out - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0152	0.4568	0.1771	1.0700e-003	0.0270	2.2900e-003	0.0293	7.7700e-003	2.1900e-003	9.9600e-003		117.7053	117.7053	0.0101		117.9565
Worker	1.6485	0.9776	12.4165	0.0461	4.9289	0.0297	4.9585	1.3074	0.0273	1.3347		4,602.7133	4,602.7133	0.0890		4,604.9377
Total	**1.6636**	**1.4345**	**12.5936**	**0.0472**	**4.9559**	**0.0320**	**4.9878**	**1.3151**	**0.0295**	**1.3447**		**4,720.4186**	**4,720.4186**	**0.0990**		**4,722.8942**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0152	0.4568	0.1771	1.0700e-003	0.0270	2.2900e-003	0.0293	7.7700e-003	2.1900e-003	9.9600e-003		117.7053	117.7053	0.0101		117.9565
Worker	1.6485	0.9776	12.4165	0.0461	4.9289	0.0297	4.9585	1.3074	0.0273	1.3347		4,602.7133	4,602.7133	0.0890		4,604.9377
Total	**1.6636**	**1.4345**	**12.5936**	**0.0472**	**4.9559**	**0.0320**	**4.9878**	**1.3151**	**0.0295**	**1.3447**		**4,720.4186**	**4,720.4186**	**0.0990**		**4,722.8942**

3.6 Interior Fit-Out - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0125	0.4108	0.1716	1.0600e-003	0.0270	9.3000e-004	0.0279	7.7700e-003	8.9000e-004	8.6600e-003		116.2404	116.2404	9.8800e-003		116.4873
Worker	1.5382	0.8773	11.4976	0.0445	4.9289	0.0288	4.9576	1.3074	0.0265	1.3338		4,438.6226	4,438.6226	0.0800		4,440.6234
Total	**1.5507**	**1.2881**	**11.6692**	**0.0456**	**4.9559**	**0.0297**	**4.9856**	**1.3151**	**0.0274**	**1.3425**		**4,554.8630**	**4,554.8630**	**0.0899**		**4,557.1106**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000		0.0000
Vendor	0.0125	0.4108	0.1716	1.0600e-003	0.0270	9.3000e-004	0.0279	7.7700e-003	8.9000e-004	8.6600e-003		116.2404	116.2404	9.8800e-003		116.4873
Worker	1.5382	0.8773	11.4976	0.0445	4.9289	0.0288	4.9576	1.3074	0.0265	1.3338		4,438.6226	4,438.6226	0.0800		4,440.6234
Total	**1.5507**	**1.2881**	**11.6692**	**0.0456**	**4.9559**	**0.0297**	**4.9856**	**1.3151**	**0.0274**	**1.3425**		**4,554.8630**	**4,554.8630**	**0.0899**		**4,557.1106**

3.7 Site Improvements - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1896	2.0358	1.3294	4.7400e-003		0.0715	0.0715		0.0658	0.0658		458.3425	458.3425	0.1482		462.0484
Total	**0.1896**	**2.0358**	**1.3294**	**4.7400e-003**	**0.0000**	**0.0715**	**0.0715**	**0.0000**	**0.0658**	**0.0658**		**458.3425**	**458.3425**	**0.1482**		**462.0484**

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	0.0526	1.7776	0.8114	5.2100e-003	0.1425	6.4200e-003	0.1489	0.0382	6.1400e-003	0.0444		590.5634	590.5634	0.0737		592.4061
Vendor	8.0000e-003	0.2148	0.0884	6.7000e-004	0.0185	1.5000e-003	0.0199	5.3000e-003	1.4300e-003	6.7300e-003		73.1201	73.1201	6.0200e-003		73.2706
Worker	1.0990	0.6518	8.2777	0.0308	3.2859	0.0198	3.3057	0.8716	0.0182	0.8898		3,068.4755	3,068.4755	0.0593		3,069.9585
Total	**1.1595**	**2.6441**	**9.1775**	**0.0366**	**3.4468**	**0.0277**	**3.4745**	**0.9151**	**0.0258**	**0.9409**		**3,732.1589**	**3,732.1589**	**0.1391**		**3,735.6352**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1896	2.0358	1.3294	4.7400e-003		0.0715	0.0715		0.0658	0.0658	0.0000	458.3425	458.3425	0.1482		462.0484
Total	**0.1896**	**2.0358**	**1.3294**	**4.7400e-003**	**0.0000**	**0.0715**	**0.0715**	**0.0000**	**0.0658**	**0.0658**	**0.0000**	**458.3425**	**458.3425**	**0.1482**		**462.0484**

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	0.0526	1.7776	0.8114	5.2100e-003	0.1425	6.4200e-003	0.1489	0.0382	6.1400e-003	0.0444		590.5634	590.5634	0.0737		592.4061
Vendor	8.0000e-003	0.2148	0.0884	6.7000e-004	0.0185	1.5000e-003	0.0199	5.3000e-003	1.4300e-003	6.7300e-003		73.1201	73.1201	6.0200e-003		73.2706
Worker	1.0990	0.6518	8.2777	0.0308	3.2859	0.0198	3.3057	0.8716	0.0182	0.8898		3,068.4755	3,068.4755	0.0593		3,069.9585

Total	**1.1595**	**2.6441**	**9.1775**	**0.0366**	**3.4468**	**0.0277**	**3.4745**	**0.9151**	**0.0258**	**0.9409**		**3,732.1589**	**3,732.1589**	**0.1391**		**3,735.6352**

3.7 Site Improvements - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1756	1.7384	1.3131	4.7500e-003		0.0627	0.0627		0.0577	0.0577		459.3779	459.3779	0.1486		463.0922
Total	**0.1756**	**1.7384**	**1.3131**	**4.7500e-003**	**0.0000**	**0.0627**	**0.0627**	**0.0000**	**0.0577**	**0.0577**		**459.3779**	**459.3779**	**0.1486**		**463.0922**

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	0.0502	1.6269	0.8415	5.1000e-003	0.4202	5.7700e-003	0.4260	0.1064	5.5200e-003	0.1120		580.7040	580.7040	0.0747		582.5716
Vendor	6.3300e-003	0.1876	0.0855	6.6000e-004	0.0185	5.9000e-004	0.0190	5.3000e-003	5.6000e-004	5.8600e-003		72.2451	72.2451	5.9800e-003		72.3947
Worker	1.0255	0.5849	7.6651	0.0297	3.2859	0.0192	3.3051	0.8716	0.0177	0.8892		2,959.0818	2,959.0818	0.0534		2,960.4156
Total	**1.0820**	**2.3994**	**8.5920**	**0.0354**	**3.7246**	**0.0255**	**3.7501**	**0.9833**	**0.0237**	**1.0070**		**3,612.0309**	**3,612.0309**	**0.1340**		**3,615.3819**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1756	1.7384	1.3131	4.7500e-003		0.0627	0.0627		0.0577	0.0577	0.0000	459.3779	459.3779	0.1486		463.0922
Total	**0.1756**	**1.7384**	**1.3131**	**4.7500e-003**	**0.0000**	**0.0627**	**0.0627**	**0.0000**	**0.0577**	**0.0577**	**0.0000**	**459.3779**	**459.3779**	**0.1486**		**463.0922**

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	0.0502	1.6269	0.8415	5.1000e-003	0.4202	5.7700e-003	0.4260	0.1064	5.5200e-003	0.1120		580.7040	580.7040	0.0747		582.5716
Vendor	6.3300e-003	0.1876	0.0855	6.6000e-004	0.0185	5.9000e-004	0.0190	5.3000e-003	5.6000e-004	5.8600e-003		72.2451	72.2451	5.9800e-003		72.3947
Worker	1.0255	0.5849	7.6651	0.0297	3.2859	0.0192	3.3051	0.8716	0.0177	0.8892		2,959.0818	2,959.0818	0.0534		2,960.4156
Total	**1.0820**	**2.3994**	**8.5920**	**0.0354**	**3.7246**	**0.0255**	**3.7501**	**0.9833**	**0.0237**	**1.0070**		**3,612.0309**	**3,612.0309**	**0.1340**		**3,615.3819**

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	5.0566	12.6063	47.6564	0.1597	14.3851	0.1328	14.5179	3.8519	0.1240	3.9758		16,099.4328	16,099.4328	0.5766		16,113.8484
Unmitigated	5.0566	12.6063	47.6564	0.1597	14.3851	0.1328	14.5179	3.8519	0.1240	3.9758		16,099.4328	16,099.4328	0.5766		16,113.8484

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	279.56	280.14	279.56	324,460	324,460
Hotel	3,393.60	3,393.60	3393.60	6,447,605	6,447,605
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	3,673.16	3,673.74	3,673.16	6,772,065	6,772,065

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
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Unenclosed Parking Structure	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Hotel	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Unenclosed Parking Structure	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3056	2.7786	2.3340	0.0167		0.2112	0.2112		0.2112	0.2112		3,334.3007	3,334.3007	0.0639	0.0611	3,354.1148
NaturalGas Unmitigated	0.3056	2.7786	2.3340	0.0167		0.2112	0.2112		0.2112	0.2112		3,334.3007	3,334.3007	0.0639	0.0611	3,354.1148

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					
High Turnover (Sit Down Restaurant)	1334.16	0.0144	0.1308	0.1099	7.8000e-004		9.9400e-003	9.9400e-003		9.9400e-003	9.9400e-003		156.9599	156.9599	3.0100e-003	2.8800e-003	157.8926
Hotel	27007.4	0.2913	2.6478	2.2241	0.0159		0.2012	0.2012		0.2012	0.2012		3,177.3409	3,177.3409	0.0609	0.0583	3,196.2222
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3057**	**2.7786**	**2.3340**	**0.0167**		**0.2112**	**0.2112**		**0.2112**	**0.2112**		**3,334.3007**	**3,334.3007**	**0.0639**	**0.0611**	**3,354.1148**

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					
High Turnover (Sit Down Restaurant)	1.33416	0.0144	0.1308	0.1099	7.8000e-004		9.9400e-003	9.9400e-003		9.9400e-003	9.9400e-003		156.9599	156.9599	3.0100e-003	2.8800e-003	157.8926
Hotel	27.0074	0.2913	2.6478	2.2241	0.0159		0.2012	0.2012		0.2012	0.2012		3,177.3409	3,177.3409	0.0609	0.0583	3,196.2222
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3057**	**2.7786**	**2.3340**	**0.0167**		**0.2112**	**0.2112**		**0.2112**	**0.2112**		**3,334.3007**	**3,334.3007**	**0.0639**	**0.0611**	**3,354.1148**

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	6.6892	4.9000e-004	0.0538	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1149	0.1149	3.1000e-004		0.1225
Unmitigated	6.6892	4.9000e-004	0.0538	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1149	0.1149	3.1000e-004		0.1225

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	0.7954					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8887					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0300e-003	4.9000e-004	0.0538	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1149	0.1149	3.1000e-004		0.1225
Total	**6.6892**	**4.9000e-004**	**0.0538**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1149**	**0.1149**	**3.1000e-004**		**0.1225**

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	0.7954					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8887					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0300e-003	4.9000e-004	0.0538	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1149	0.1149	3.1000e-004		0.1225
Total	**6.6892**	**4.9000e-004**	**0.0538**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1149**	**0.1149**	**3.1000e-004**		**0.1225**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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	1	0.25	13	700	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 (600 - 750 HP)	0.2872	0.8027	0.7323	1.3800e-003		0.0423	0.0423		0.0423	0.0423		146.9150	146.9150	0.0206		147.4299
Total	**0.2872**	**0.8027**	**0.7323**	**1.3800e-003**		**0.0423**	**0.0423**		**0.0423**	**0.0423**		**146.9150**	**146.9150**	**0.0206**		**147.4299**

11.0 Vegetation

1499 Bayshore Highway Project

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Vegetation only.

Construction Phase - Vegetation only.

Off-road Equipment - Vegetation only.

Off-road Equipment - Vegetation only.

Off-road Equipment - Vegetation only.

Off-road Equipment - Vegetation only.

Off-road Equipment - Vegetation only.

Off-road Equipment - Vegetation only.

Trips and VMT - Vegetation only.

Demolition -

Land Use Change - Vegetation only.

Sequestration - Vegetation only.

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblSequestration	NumberOfNewTrees	0.00	80.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00

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					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

	ROG	NOx	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**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	56.64
Vegetation Land Change	3.4911
Total	**60.1311**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization and Demolition	Demolition	3/4/2019	3/3/2019	5	0	
2	Site Improvements	Site Preparation	3/4/2019	3/3/2019	5	0	
3	Excavation, Foundations, Underground MEP and Slab-On	Grading	3/4/2019	3/3/2019	5	0	
4	Superstructure	Building Construction	3/4/2019	3/3/2019	5	0	
5	Interior Fit-Out	Building Construction	3/4/2019	3/3/2019	5	0	
6	Facade	Architectural Coating	3/4/2019	3/3/2019	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Mobilization and Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Mobilization and Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Excavation, Foundations, Underground MEP and Slab-On Grade	Concrete/Industrial Saws	0	0.00	81	0.73
Excavation, Foundations, Underground MEP and Slab-On Grade	Rubber Tired Dozers	0	0.00	247	0.40
Excavation, Foundations, Underground MEP and Slab-On Grade	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Superstructure	Cranes	0	0.00	231	0.29
Superstructure	Cranes	0	0.00	231	0.29
Superstructure	Forklifts	0	0.00	89	0.20
Superstructure	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Facade	Air Compressors	0	0.00	78	0.48
Interior Fit-Out	Cranes	0	0.00	231	0.29

Interior Fit-Out	Forklifts	0	0.00	89	0.20
Interior Fit-Out	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Improvements	Graders	0	0.00	187	0.41
Site Improvements	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Improvements	Tractors/Loaders/Backhoes	0	0.00	97	0.37

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
Mobilization and Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Excavation, Foundations	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Superstructure	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Facade	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Interior Fit-Out	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Improvements	0	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Mobilization and Demolition - 2019

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Improvements - 2019

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Excavation, Foundations, Underground MEP and Slab-On

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Superstructure - 2019

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Interior Fit-Out - 2019

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Facade - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	60.1311	0	0	60.1311

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	0 / 0.81	3.4911	0.0000	0.0000	3.4911
Total		**3.4911**	**0.0000**	**0.0000**	**3.4911**

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	80	56.6400	0.0000	0.0000	56.6400
Total		**56.6400**	**0.0000**	**0.0000**	**56.6400**

Health Risk Assessment Methodology and Calculations

The AERMOD model is a steady-state Gaussian plume model that was developed by EPA for estimating ground-level impacts from point, area, and fugitive sources in simple and complex terrain. Dispersion models such as AERMOD require local meteorological parameters such as wind speed, stability class, mixing height, and temperature. Hourly meteorological data previously developed in another project from San Francisco Airport covering a 5-year period from 2011 through 2015 were used in the analysis. Construction activities were modeled to occur Monday through Friday between 8 a.m. and 4 p.m. throughout the year.

OEHHA recommends adjusting the receptor height (i.e., flagpole height) to represent the typical breathing zone of a person when the source receptor distance is less than a few hundred meters. The OEHHA-recommended range for analyzing the inhalation pathway is 0 to 1.8 meters. For the Project, all receptors were conservatively modeled at 1.2 meters (3.9 feet) to represent the breathing height of a typical child. Receptors were placed at the Avalon Academy school (across Mahler Road) and at the Diyanet Mosque (on Burlway Road). Onsite construction emissions for the Project were characterized as an area source (AREAPOLY) with a release height of 5 meters (16.4 feet). Offsite construction emissions were characterized as a line/area source (LINEAREA) with a release height of 6.8 meters (22.3 feet). The urban dispersion option with an elevation of 0 meters was used for this location. All other AERMOD inputs are considered regulatory defaults.

The risk calculations incorporate OEHHA's recent guidance update, which now includes age-specific factors that take into account increased sensitivity to carcinogens during early-in-life exposure. The approach to estimating cancer risk from long-term inhalation, with exposure to carcinogens, requires calculating a range of potential doses and multiplying by cancer potency factors in units corresponding to the inverse dose to obtain a range of cancer risks. For cancer risk, the risk for each age group is calculated using the appropriate daily breathing rates, age sensitivity factors, and exposure duration. The cancer risks calculated for individual age groups are summed to estimate the cancer risk for each receptor. For the school receptors, an age-specific sensitivity factor for the maximally exposed individual student aged 2 to 9 was assumed, consistent with OEHHA and BAAQMD recommendations.

Health Risk - Dose and Risk Factors and Values

Dose factors

$$Dose\text{-}air = C_{air} \times \{BR/BW\} \times A \times EF \times 10^{-6}$$

$$Dose\text{-}air = (C_{air} \times WAF) \times \{BR/BW\} \times A \times EF \times 10^{-6}$$

		3rd trimester	0<2	2<9	2<16	16<30	16-70	source
Daily Breath Rate (BR/BW) (L/kg-day)	Residential	361	1090	631	572	261	233	OEHHA 2015, Table 5.6, 95th %ile for 3rdtri-2yrs old; 80th for other age groups
	Recreational	240	1200	640	520	240	230	OEHHA 2015, Table 5.8 (95th, moderate) for all bins but 3rd tri, which was taken from SJVUAPCD's draft guidance
	School	240	1200	640	520	240	230	SJVAPCD for 3rd tri; 95th percentile for all
A		1	1	1	1	1	1	OEHHA 2015, page 5-24
EF, Exposure frequency (unitless), days/365 days	Residential	0.96	0.96	0.96	0.96	0.96	0.96	OEHHA 2015, page 5-24, 350 days/yr
	Recreational	0.036	0.036	0.036	0.036	0.036	0.036	3x/week, 2 hours/day, for 9 years
	School	0.12	0.12	0.12	0.12	0.12	0.12	180 days/yr, 6 hours/day (BAAQMD 2016)
Conversion Factor		1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	(mg/ug + m3/L)

Risk Factors

$$RISK_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

		3rd trimester	0<2	2<9	2<16	16<30	16-70	source
CPF, DPM ($[mg/kg\text{-}day]^{-1}$)		1.1	1.1	1.1	1.1	1.1	1.1	OEHHA 2015, Table 7.1
Average Age Sensitivity Factor		10	10	3	3	1	1	OEHHA 2015, Table 8.3
AT, Average Time (days)		70	70	70	70	70	70	Averaging time for lifetime cancer risk
FAH		0.85	0.85	0.72	0.72	0.73	0.73	OEHHA 2015, Table 8.4: Use FAH = 1 if a school is within the 1×10-6 (or greater) cancer risk isopleth
ED, Exposure Duration (years)		0.25	2	7	14	14	54	Equation 8.2.4 A, OEHHA 2015
Adjustment Factor	Residential	1.00	1.00	1.00	1.00	1.00	1.00	OEHHA 2015, Page 4-44 and Equation 4.1; exposure is adjusted upward to account for overlapping daytime exposure.
	Recreational	3.36	3.36	3.36	3.36	3.36	3.36	
	School	3.36	3.36	3.36	3.36	3.36	3.36	

Hazard Index

Chronic Inhalation Reference Exposure Level, respiratory, DPM	5		OEHHA 2015, Table 6.3

SUMMARY OF DPM

	ONSITE DPM - OFFROAD														
			2019					2020					2021		
Phase	Start date	End date	Days (2019)	DPM (tons)	DPM (grams)	Start date	End date	Days (2020)	DPM (tons)	DPM (grams)	Start date	End date	Days (2021)	DPM (tons)	DPM (grams)
Mobilization and Demolition	3/4/2019	5/10/2019	50	0.0008	725.748	3/4/2019	5/10/2019	0	0.000	0.000	3/4/2019	5/10/2019	0	0.000	0.000
Excavation, Foundations, Underground MEP and Sla	5/13/2019	10/7/2019	106	0.0063	5715.264	5/13/2019	10/7/2019	0	0.000	0.000	5/13/2019	10/7/2019	0	0.000	0.000
Superstructure	8/23/2019	2/27/2020	93	0.0003	226.796	8/23/2019	2/27/2020	42	0.000	63.503	8/23/2019	2/27/2020	0	0.000	0.000
Façade	11/13/2019	5/21/2020	35	0.0001	54.431	11/13/2019	5/21/2020	102	0.000	99.790	11/13/2019	5/21/2020	0	0.000	0.000
Interior Fit-Out	12/13/2019	4/27/2021	13	0.0000	18.144	12/13/2019	4/27/2021	262	0.000	263.084	12/13/2019	4/27/2021	83	0.000	36.287
Site Improvements	10/2/2020	1/27/2021	0	0.0000	0.000	10/2/2020	1/27/2021	65	0.002	1986.735	10/2/2020	1/27/2021	19	0.001	508.023
Total	3/4/2019	12/31/2019	217	0.007	6740.383	1/1/2020	12/31/2020	262	0.003	2413.111	1/1/2021	4/27/2021	83	0.001	544.311
	3/4/2019	4/27/2021	562												

seconds/hour	3600
work hours/day	8
seconds per work day	28800

ONSITE

				Days in Bin per OEHHA			g/day	total g			g/sec			g/sec-m2	
Phase	Start date	End date	days	3rd tri	0<2	2-9		3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2
Mobilization and Demolition	3/4/2019	5/10/2019	50	50			15	726			0.00050			0.00000009	
Excavation, Foundations, Underground MEP and Sla	5/13/2019	10/7/2019	106	41	65		54	2224	3491		0.00187	0.00187		0.00000034	0.00000034
Superstructure	8/23/2019	2/27/2020	135		135		2		290			0.00007			0.00000001
Façade	11/13/2019	5/21/2020	137		137		1		154			0.00004			0.00000001
Interior Fit-Out	12/13/2019	4/27/2021	358		358		1		318			0.00003			0.00000001
Site Improvements	10/2/2020	1/27/2021	84		35	49	30		1039	1455		0.00103	0.00103		0.00000019
Total				91	730	49		2950	5293	1455	0.00112	0.00025	0.00103	0.00000020	0.00000005
			max per oehha	91	730	2555									

ONROAD

Phase	Total trips in Caleemod haul	caleemd trip length haul	Caleemod avg trip length	Aermod avg trip length	VMT scalar	<-- using this to scale onroad DPM for each phase
Mobilization and Demolition	1000	47	47	0.265573965	0.006	
Excavation, Foundations, Underground MEP and Slab-On Grade	1250	47	47	0.265573965	0.006	
Superstructure	0					
Façade	0					
Interior Fit-Out	0					
Site Improvements	240	47	47	0.265573965	0.01	

				Days in Bin per OEHHA			g/day,	g/day,	total g			g/sec			
Phase	12/13/2019	4/27/2021	days	3rd tri	0<2	2-9	caeelmod	aermod	3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri
Mobilization and Demolition	3/4/2019	5/10/2019	50	50			27.034	0.153	8			0.00001			0.00000000
Excavation, Foundations, Underground MEP and Sla	5/13/2019	10/7/2019	106	41	65		16.004	0.090	4	6		0.00000	0.00000		0.00000000
Superstructure	8/23/2019	2/27/2020	135		135		0.000	0.000		0			0.00000		
Façade	11/13/2019	5/21/2020	137		137		0.000	0.000		0			0.00000		
Interior Fit-Out	12/13/2019	4/27/2021	358		358		0.000	0.000		0			0.00000		
Site Improvements	10/2/2020	1/27/2021	84		35	49	2.700	0.015		1	1		0.00000	0.00000	
Total				91	730	49	45.738	0.258	11	6	1	0.00000	0.00000	0.00000	0.00000000

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9
ONSITE	2.02E-07	4.54E-08	1.86E-07
OFFSITE	1.84E-09	1.29E-10	2.25E-10

ASSUMPTIONS

	onsite	offsite	
Areas	5550.2	2350.7	m2
AERMOD segment	427.4	meters	
meters to mile	0.000621371		

OFFSITE DPM - ONROAD TRUCKS

2019					2020					2021					onsite combined			offsite combined		
Start date	End date	Days (2019)	DPM (tons)	DPM (grams)	Start date	End date	Days (2020)	DPM (tons)	DPM (grams)	Start date	End date	Days (2021)	DPM (tons)	DPM (grams)	DPM g	days	g/d	DPM g	days	g/d
3/4/2019	5/10/2019	50	0.00149	1351.705	3/4/2019	5/10/2019	0	0.00000	0.000	3/4/2019	5/10/2019	0	0.00000	0.000	725.748	50	14.515	1351.705	50	27.034
5/13/2019	10/7/2019	106	0.00187	1696.435	5/13/2019	10/7/2019	0	0.00000	0.000	5/13/2019	10/7/2019	0	0.00000	0.000	5715.264	106	53.918	1696.435	106	16.004
8/23/2019	2/27/2020	93	0.00000	0.000	8/23/2019	2/27/2020	42	0.00000	0.000	8/23/2019	2/27/2020	0	0.00000	0.000	290.299	135	2.150	0.000	135	0.000
11/13/2019	5/21/2020	35	0.00000	0.000	11/13/2019	5/21/2020	102	0.00000	0.000	11/13/2019	5/21/2020	0	0.00000	0.000	154.221	137	1.126	0.000	137	0.000
12/13/2019	4/27/2021	13	0.00000	0.000	12/13/2019	4/27/2021	262	0.00000	0.000	12/13/2019	4/27/2021	83	0.00000	0.000	317.515	358	0.887	0.000	358	0.000
10/2/2020	1/27/2021	0	0.00000	0.000	10/2/2020	1/27/2021	65	0.00020	181.437	10/2/2020	1/27/2021	19	0.00005	45.359	2494.758	84	29.700	226.796	84	2.700
			0.00336	3048.141				0.00020	181.437				0.00005	45.359	9697.805	870	11.147	3274.937	870	3.764

2-9			days sum	
	0		50	
	0		106	
	0		135	
	0		137	
	0		358	
0.00000019	*0*		84	
0.00000019			870	TRUE

g/sec-m2		
0<2	2-9	
		0
0.00000000		*0*
0.00000000		
0.00000000		
0.00000000		
0.00000000	0.00000000	*0*
0.00000000	0.00000000	

SUMMARY OF PM2.5 Ex

ONSITE PM2.5Ex - OFFROAD

	2019					2020					2021				
Phase	Start date	End date	Days (2019)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2020)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2021)	PM2.5 Ex (tons)	PM2.5 (grams)
Mobilization and Demolition	3/4/2019	5/10/2019	50	0.0008	725.748	3/4/2019	5/10/2019	0	0.000	0.000	3/4/2019	5/10/2019	0	0.000	0.000
Excavation, Foundations, Underground MEP and Sl	5/13/2019	10/7/2019	106	0.0063	5715.264	5/13/2019	10/7/2019	0	0.000	0.000	5/13/2019	10/7/2019	0	0.000	0.000
Superstructure	8/23/2019	2/27/2020	93	0.0003	226.796	8/23/2019	2/27/2020	42	0.000	63.503	8/23/2019	2/27/2020	0	0.000	0.000
Façade	11/13/2019	5/21/2020	35	0.0001	54.431	11/13/2019	5/21/2020	102	0.000	99.790	11/13/2019	5/21/2020	0	0.000	0.000
Interior Fit-Out	12/13/2019	4/27/2021	13	0.0000	18.144	12/13/2019	4/27/2021	262	0.000	263.084	12/13/2019	4/27/2021	83	0.000	36.287
Site Improvements	10/2/2020	1/27/2021	0	0.0000	0.000	10/2/2020	1/27/2021	65	0.002	1986.735	10/2/2020	1/27/2021	19	0.001	508.023
Total	3/4/2019	12/31/2019	217	0.007	6740.383	1/1/2020	12/31/2020	262	0.003	2413.111	1/1/2021	4/27/2021	83	0.001	544.311
	3/4/2019	4/27/2021	562												

seconds/hour	3600
work hours/day	8
seconds per work day	28800

ONSITE

				Days in Bin per OEHHA			g/day	total g			g/sec			g/sec-m2	
Phase	Start date	End date	days	3rd tri	0<2	2-9		3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2
Mobilization and Demolition	3/4/2019	5/10/2019	50	50			15	726			0.00050			0.00000009	
Excavation, Foundations, Underground MEP and Sl	5/13/2019	10/7/2019	106	41	65		54	2224	3491		0.00187	0.00187		0.00000034	0.00000034
Superstructure	8/23/2019	2/27/2020	135		135		2		290			0.00007			0.00000001
Façade	11/13/2019	5/21/2020	137		137		1		154			0.00004			0.00000001
Interior Fit-Out	12/13/2019	4/27/2021	358		358		1		318			0.00003			0.00000001
Site Improvements	10/2/2020	1/27/2021	84		35	49	30		1039	1455		0.00103	0.00103		0.00000019
Total				91	730	49		2950	5293	1455	0.00112	0.00025	0.00103	0.00000020	0.00000005
			max per oehha	91	730	2555									

ONROAD

	Total trips in Caleemod	caleemd trip length	Caleemod	Aermod		
Phase	haul	haul	avg trip length	avg trip length	VMT scalar	<-- using this to scale onroad PM2.5 for each phase
Mobilization and Demolition	1000	47	47	0.265573965	0.006	
Excavation, Foundations, Underground MEP and Slab-On Grade	1250	47	47	0.265573965	0.006	
Superstructure	0					
Façade	0					
Interior Fit-Out	0					
Site Improvements	240	47	47	0.265573965	0.01	

				Days in Bin per OEHHA			g/day,	g/day,	total g			g/sec			
Phase	12/13/2019	4/27/2021	days	3rd tri	0<2	2-9	caeelmod	aermod	3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri
Mobilization and Demolition	3/4/2019	5/10/2019	50	50			28.304	0.160	8			0.00001			0.00000000
Excavation, Foundations, Underground MEP and Sl	5/13/2019	10/7/2019	106	41	65		18.144	0.103	4	7		0.00000	0.00000		0.00000000
Superstructure	8/23/2019	2/27/2020	135		135		8.400	0.000		0			0.00000		
Façade	11/13/2019	5/21/2020	137		137		0.000	0.000		0			0.00000		
Interior Fit-Out	12/13/2019	4/27/2021	358		358		12.315	0.000		0			0.00000		
Site Improvements	10/2/2020	1/27/2021	84		35	49	10.908	0.062		2	3		0.00000	0.00000	
Total				91	730	49	78.071	0.324	12	9	3	0.00000	0.00000	0.00000	0.00000000

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9
ONSITE	2.02E-07	4.54E-08	1.86E-07
OFFSITE	1.98E-09	1.78E-10	9.10E-10

ASSUMPTIONS

	onsite	offsite	
Areas	5550.2	2350.7	m2
AERMOD segment	427.4	meters	
meters to mile	0.000621371		

OFFSITE PM2.5Ex - ONROAD TRUCKS

2019					2020					2021					onsite combined			offsite combined		
Start date	End date	Days (2019)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2020)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2021)	PM2.5 Ex (tons)	PM2.5 (grams)	PM2.5 Ex g	days	g/d	PM2.5 Ex g	days	g/d
3/4/2019	5/10/2019	50	0.00156	1415.208	3/4/2019	5/10/2019	0	0.00000	0.000	3/4/2019	5/10/2019	0	0.00000	0.000	725.748	50	14.515	1415.208	50	28.304
5/13/2019	10/7/2019	106	0.00212	1923.232	5/13/2019	10/7/2019	0	0.00000	0.000	5/13/2019	10/7/2019	0	0.00000	0.000	5715.264	106	53.918	1923.232	106	18.144
8/23/2019	2/27/2020	93	0.00087	789.251	8/23/2019	2/27/2020	42	0.00038	344.730	8/23/2019	2/27/2020	0	0.00000	0.000	290.299	135	2.150	1133.981	135	8.400
11/13/2019	5/21/2020	35	0.00000	0.000	11/13/2019	5/21/2020	102	0.00000	0.000	11/13/2019	5/21/2020	0	0.00000	0.000	154.221	137	1.126	0.000	137	0.000
12/13/2019	4/27/2021	13	0.00018	163.293	12/13/2019	4/27/2021	262	0.00358	3247.721	12/13/2019	4/27/2021	83	0.00110	997.903	317.515	358	0.887	4408.918	358	12.315
10/2/2020	1/27/2021	0	0.00000	0.000	10/2/2020	1/27/2021	65	0.00079	716.676	10/2/2020	1/27/2021	19	0.00022	199.581	2494.758	84	29.700	916.257	84	10.908
			0.00473	4290.984				0.00475	4309.128				0.00132	1197.484	9697.805	870	11.147	9797.595	870	11.262

2-9			days sum	
	0		50	
	0		106	
	0		135	
	0		137	
	0		358	
0.00000019	*0*		84	
0.00000019			870	TRUE

g/sec-m2		
0<2	2-9	
		0
0.00000000		*0*
0.00000000		
0.00000000		
0.00000000		
0.00000000	0.00000000	*0*
0.00000000	0.00000000	

Receptors					Concentration ug/m3			Dose Inhallation by Bin			Cancer Risk by Bin			Sum of Cancer Risk		Chronic HI (max annual)	Max PM2.5 Ex (ug/m3)
Rec ID	Detail	X	Y	Type	3RDTRI	0_2	2_9	3RDTRI	0_2	2_9	3RDTRI	0_2	2_9	Summed Risk	Cases Per Million		
AA_1	School	555889.52	4161364.87	School	2.23E-02	4.99E-03	2.04E-02	6.6E-07	7.4E-07	1.6E-06	7.4E-08	6.6E-07	1.3E-06	2E-06	2.02	0.00	0.02
AA_2	School	555868.69	4161340.7	School	2.32E-02	5.19E-03	2.12E-02	6.9E-07	7.7E-07	1.7E-06	7.7E-08	6.9E-07	1.3E-06	2E-06	2.10	0.00	0.02
R_1	Mosque	555938.69	4161108.22	Recreational	1.34E-03	3.00E-04	1.23E-03	1.1E-08	1.3E-08	2.8E-08	1.3E-09	1.2E-08	2.2E-08	4E-08	0.04	0.00	0.00
R_2	Mosque	555962.02	4161094.06	Recreational	1.01E-03	2.30E-04	9.30E-04	8.7E-09	9.9E-09	2.1E-08	9.7E-10	8.8E-09	1.7E-08	3E-08	0.03	0.00	0.00
M_1	Hospital	555992.01	4161212.38	Residential	4.73E-03	1.06E-03	4.34E-03	1.6E-06	1.1E-06	2.6E-06	5.5E-08	3.0E-07	6.2E-07	1E-06	0.97	0.00	0.00
M_2	Hospital	555979.52	4161194.05	Residential	3.42E-03	7.70E-04	3.13E-03	1.2E-06	8.0E-07	1.9E-06	4.0E-08	2.1E-07	4.5E-07	7E-07	0.70	0.00	0.00

0

$$Dose\text{-}air = C_{air} \times (BR/BW) \times A \times EF \times 10^{-6}$$

$$RISK_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

Existing, Project, and Total Health Risks

		Cancer	Hazard	PM2.5
Existing	School	46.16667	0.008308	0.687219
	Mosque	59.32902	0.028162	0.773016
Project	School	2.10	0.00	0.02
	Mosque	0.04	0.00	0.00
Total	School	48.27	0.01	0.71
	Mosque	59.36	0.03	0.78
BAAQMD Cumulative Threshold		100	10	0.8

Existing Sources of Health Risks to School

Plant No.	Existing Source	Source Address	Distance to school (feet)	Cancer	Hazard	PM2.5	Notes
G6046	Alamo Rent a Car Inc	778 Burlway Road	810	N/A	N/A	N/A	Closed according to BAAQMD data
G12295	Bayshore Shell - Shell Oil Products	1390 Bayshore Highway	727	0.216541578	0.00027263	N/A	Cancer, Hazard, PM2.5 values calculated from GDF Distance Multiplier Tool
1448	Coit Drapery & Carpet Cleaners, Inc	897 Hinckley Road	706	0.00E+00	3.5334E-05	0	Cancer, Hazard, PM2.5 values calculated from Beta Calculator and Diesel IC Engine Multiplier Tool
G7133	Coit Drapery & Carpet Cleaners, Inc	897 Hinckley Road	706	5.06659E-13	6.6301E-10	0	Cancer, Hazard, PM2.5 values calculated from Beta Calculator and GDF Distance Multiplier Tool
15350	Provident Funding	1633 Old Bayshore Highway	722	N/A	N/A	N/A	Closed according to BAAQMD data
14466	City of Burlingame	1616 Gilbreth Road	904	1.1295	0.008	0.00025	Cancer, Hazard, PM2.5 values calculated from Diesel IC Engine Multiplier Tool
N/A	Highway			33.225712		0.659047	ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A	Major Roads			0.240404		0.006137	ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A	Rail			11.354514		0.021785	ArcMap cancer risk and PM2.5 concentration data from BAAQMD
			Total Risks	**46.16667158**	**0.00830796**	**0.687219**	

Existing Sources of Health Risks to Mosque

Plant No.	Existing Source	Source Address	Distance to mosque (feet)	Cancer	Hazard	PM2.5	Notes
G6046	Alamo Rent a Car Inc	778 Burlway Road	424	N/A	N/A	N/A	Closed according to BAAQMD data
G12295	Bayshore Shell - Shell Oil Products	1390 Bayshore Highway	201	1.717138266	0.0021619	N/A	Cancer, Hazard, PM2.5 values calculated from GDF Distance Multiplier Tool
16377	City of Burlingame, Hyatt Pump Station	1301 Bayshore Boulevard	649	3.4038	0.013	0.00081	Cancer, Hazard, PM2.5 values calculated from Diesel IC Engine Multiplier Tool
20064	CA - One Bay Plaza LP	1350 Old Bayshore Highway	632	3.4038	0.013	0.00081	Cancer, Hazard, PM2.5 values calculated from Diesel IC Engine Multiplier Tool
N/A	Highway			37.603359		0.741618	ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A	Major Roads			0.188452		0.004811	ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A	Rail			13.012467		0.024967	ArcMap cancer risk and PM2.5 concentration data from BAAQMD
			Total Risks	**59.32901627**	**0.0281619**	**0.773016**	

AERMOD Output Available Upon Request

Year 2005 Hotel Room CalEEMod Output and GHG Efficiency Calculations

1499 Bayshore 2005 Hotel GHGs - San Mateo County, Annual

1499 Bayshore 2005 Hotel GHGs

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	1.00	Room	0.03	1,452.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	489	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E 2005 EFs from https://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf

Land Use - 1 hotel room CO2e for year 2005

Construction Phase - Existing hotel rooms only, no construction

Off-road Equipment - Existing hotel rooms only, no construction

Off-road Equipment - Existing hotel rooms only, no construction

Off-road Equipment - Existing hotel rooms only, no construction

Off-road Equipment - Existing hotel rooms only, no construction

Off-road Equipment - Existing hotel rooms only, no construction

Off-road Equipment - Existing hotel rooms only, no construction

Trips and VMT - Existing hotel rooms only, no construction

Grading - Existing hotel rooms only, no construction

Vehicle Trips - CalEEMod defaults

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	1.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	100.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	PhaseEndDate	7/12/2018	6/28/2018
tblConstructionPhase	PhaseEndDate	7/13/2018	7/12/2018
tblConstructionPhase	PhaseEndDate	7/17/2018	7/13/2018
tblConstructionPhase	PhaseEndDate	12/4/2018	7/17/2018
tblConstructionPhase	PhaseEndDate	12/11/2018	12/4/2018
tblConstructionPhase	PhaseEndDate	12/18/2018	12/11/2018
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	489
tblTripsAndVMT	WorkerTripNumber	1.00	0.00

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					

2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	7.3500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.00E-05
Energy	2.9000e-004	2.6000e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	5.4602	5.4602	2.1000e-004	8.0000e-005	5.4905
Mobile	7.1300e-003	0.0178	0.0846	1.4000e-004	5.5400e-003	3.5000e-004	5.8900e-003	1.4900e-003	3.3000e-004	1.8200e-003	0.0000	6.6676	6.6676	7.4000e-004	0.0000	6.6862
Waste						0.0000	0.0000		0.0000	0.0000	0.1117	0.0000	0.1117	6.6000e-003	0.0000	0.2766
Water						0.0000	0.0000		0.0000	0.0000	8.0500e-003	0.0326	0.0407	8.3000e-004	2.0000e-005	0.0673
Total	**0.0148**	**0.0204**	**0.0868**	**1.6000e-004**	**5.5400e-003**	**5.5000e-004**	**6.0900e-003**	**1.4900e-003**	**5.3000e-004**	**2.0200e-003**	**0.1197**	**12.1605**	**12.2802**	**8.3800e-003**	**1.0000e-004**	**12.5207**

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	7.3500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	2.9000e-004	2.6000e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	5.4602	5.4602	2.1000e-004	8.0000e-005	5.4905
Mobile	7.1300e-003	0.0178	0.0846	1.4000e-004	5.5400e-003	3.5000e-004	5.8900e-003	1.4900e-003	3.3000e-004	1.8200e-003	0.0000	6.6676	6.6676	7.4000e-004	0.0000	6.6862
Waste						0.0000	0.0000		0.0000	0.0000	0.1117	0.0000	0.1117	6.6000e-003	0.0000	0.2766
Water						0.0000	0.0000		0.0000	0.0000	8.0500e-003	0.0326	0.0407	8.3000e-004	2.0000e-005	0.0673
Total	**0.0148**	**0.0204**	**0.0868**	**1.6000e-004**	**5.5400e-003**	**5.5000e-004**	**6.0900e-003**	**1.4900e-003**	**5.3000e-004**	**2.0200e-003**	**0.1197**	**12.1605**	**12.2802**	**8.3800e-003**	**1.0000e-004**	**12.5207**

	ROG	NOx	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	Demolition	6/29/2018	6/28/2018	5	0	
2	Site Preparation	Site Preparation	7/13/2018	7/12/2018	5	0	
3	Grading	Grading	7/14/2018	7/13/2018	5	0	
4	Building Construction	Building Construction	7/18/2018	7/17/2018	5	0	
5	Paving	Paving	12/5/2018	12/4/2018	5	0	
6	Architectural Coating	Architectural Coating	12/12/2018	12/11/2018	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,178; Non-Residential Outdoor: 726; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Concrete/Industrial Saws	0	0.00	81	0.73
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation	Graders	0	0.00	187	0.41
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	0	0.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Paving	Pavers	0	0.00	130	0.42
Paving	Rollers	0	0.00	80	0.38

Architectural Coating	Air Compressors	0	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2018

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2018

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2018

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2018

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	7.1300e-003	0.0178	0.0846	1.4000e-004	5.5400e-003	3.5000e-004	5.8900e-003	1.4900e-003	3.3000e-004	1.8200e-003	0.0000	6.6676	6.6676	7.4000e-004	0.0000	6.6862
Unmitigated	7.1300e-003	0.0178	0.0846	1.4000e-004	5.5400e-003	3.5000e-004	5.8900e-003	1.4900e-003	3.3000e-004	1.8200e-003	0.0000	6.6676	6.6676	7.4000e-004	0.0000	6.6862

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	8.17	8.19	5.95	14,925	14,925
Total	8.17	8.19	5.95	14,925	14,925

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-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.591681	0.053807	0.177681	0.108929	0.026974	0.004161	0.017480	0.005828	0.002958	0.003798	0.005637	0.000294	0.000772

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.6313	2.6313	1.6000e-004	3.0000e-005	2.6448
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.6313	2.6313	1.6000e-004	3.0000e-005	2.6448

NaturalGas Mitigated	2.9000e-004	2.6000e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8290	2.8290	5.0000e-005	5.0000e-005	2.8458
NaturalGas Unmitigated	2.9000e-004	2.6000e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8290	2.8290	5.0000e-005	5.0000e-005	2.8458

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					
Hotel	53012.5	2.9000e-004	2.6000e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8290	2.8290	5.0000e-005	5.0000e-005	2.8458
Total		**2.9000e-004**	**2.6000e-003**	**2.1800e-003**	**2.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.8290**	**2.8290**	**5.0000e-005**	**5.0000e-005**	**2.8458**

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					
Hotel	53012.5	2.9000e-004	2.6000e-003	2.1800e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8290	2.8290	5.0000e-005	5.0000e-005	2.8458
Total		**2.9000e-004**	**2.6000e-003**	**2.1800e-003**	**2.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**2.8290**	**2.8290**	**5.0000e-005**	**5.0000e-005**	**2.8458**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	11862.8	2.6313	1.6000e-004	3.0000e-005	2.6448
Total		**2.6313**	**1.6000e-004**	**3.0000e-005**	**2.6448**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	11862.8	2.6313	1.6000e-004	3.0000e-005	2.6448
Total		**2.6313**	**1.6000e-004**	**3.0000e-005**	**2.6448**

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	7.3500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	7.3500e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	1.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**7.3500e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	1.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**7.3500e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0407	8.3000e-004	2.0000e-005	0.0673
Unmitigated	0.0407	8.3000e-004	2.0000e-005	0.0673

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	0.0253668 / 0.002195	0.0407	8.3000e-004	2.0000e-005	0.0673
Total		**0.0407**	**8.3000e-004**	**2.0000e-005**	**0.0673**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	0.0253668 / [illegible]	0.0407	8.3000e-004	2.0000e-005	0.0673
Total		**0.0407**	**8.3000e-004**	**2.0000e-005**	**0.0673**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.1117	6.6000e-003	0.0000	0.2766
Unmitigated	0.1117	6.6000e-003	0.0000	0.2766

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	0.55	0.1117	6.6000e-003	0.0000	0.2766
Total		**0.1117**	**6.6000e-003**	**0.0000**	**0.2766**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	0.55	0.1117	6.6000e-003	0.0000	0.2766
Total		**0.1117**	**6.6000e-003**	**0.0000**	**0.2766**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Hotel Room GHG Efficiency Calculations for Years 2005 and 2021

Year:	2005	
Rooms:	1	
CO2e (MT):	12.5207	
CO2e per Room (MT):	12.5207	
15% below 2005:	10.642595	equal to year 2020 CO2e levels
CO2e threshold for 2021:	10.2168912	4% below 2020 CO2e levels
40% below 2020:	6.385557	
SB 32 Reduction Goal:	40%	below 1990 (or 2020) CO2e levels by 2030
Reduction per year:	4%	

Year:	2021
Rooms:	1
CO2e (MT):	8.16
CO2e per Room (MT):	8.163227574

Appendix B
Supporting Cultural Resources Information

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____
Other Listings _____
Review Code _____ Reviewer _____ Date _____

 ***Resource Name or #** (Assigned by recorder) 1499 Bayshore Highway

P1. Other Identifier: 1499 Bayshore Highway
***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** San Mateo County
And (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** San Mateo **Date** 2018 **T**; **R**; **of Sec** ____; **B.M.**
c. Address: 1499 Bayshore Highway City Burlingame Zip 94010
d. UTM: (give more than one for large and/or linear resources) Zone 10; 555899.00mE/ 4161331.00 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) APN: 026-322-150

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

1499 Bayshore Highway is a Midcentury Modern-style, two-story commercial office building located at the intersection of Old Bayshore Highway and Mahler Road in Burlingame. It has an asymmetrical, U-shaped plan formed by two parallel rectangular volumes, joined by a hyphen near the building's northeast corner. The northeast end of the northern of the two volumes projects towards Old Bayshore Highway beyond the building's hyphen. 1499 Bayshore Highway has a flat roof and deep overhanging eaves, and features horizontal bands of aluminum windows and cement asbestos panels enclosing the first and second stories. The building faces northeast toward Old Bayshore Highway and the City of Burlingame Shorebird Sanctuary. 1499 Bayshore Highway is adjacent to Mills Creek to the southeast, and Mahler Road to the northwest. The legal parcel containing the building encompasses a surface parking lot to the southwest and a commercial office building at 801 Mahler (documented on a separate DPR 523A and B forms) to the southwest. Immediately surrounding the building are landscaped areas containing mature trees and shrubs. A portion of the parking lot and a landscaped courtyard lie between the two legs of the building's U-plan.

The northeast (primary) façade (**Figures 1 and 3**) is clad in a combination of stone masonry, aluminum, and glass. Two areas of stone masonry veneer, one of which spans the width of the building's projecting northern volume, flank the building's hyphen, which is enclosed in an aluminum-frame window assembly. The hyphen contains the building's main entrance at this façade, comprised of a. fully glazed pairing of doors with a transom window. Lettering identifying the address "1499 Bayshore" is mounted to the stone veneer near the main entrance. (See continuation sheet.)

P5a. Photograph or Drawing (Photograph required for buildings, structures and objects)



Figure 1: View of Northeast (primary) façade, facing southwest. Source: ICF International.

***P3b. Resource Attributes:** (List attributes and codes) HP6 (1-3 story commercial building)
***P4. Resources Present:** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo: (View, date, accession #) View looking southwest, 3/6/2018

***P6. Date Constructed/Age and Sources:**
☑Historic ☐ Prehistoric ☐ Both
1962 (building permit)

***P7. Owner and Address:**
1499 Bayshore LLC
1499 Bayshore Hwy,
Burlingame, CA 94010

***P8. Recorded by:** (Name, affiliation, address)
Jon Rusch and Andrea Dumovich
ICF
201 Mission Street, Suite 1500
San Francisco, CA 94105

***P9. Date Recorded:** 3/6/18
***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:**
***Attachments:** ☐NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☑ Building, Structure, and Object Record ☐ Archaeological Record ☐District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record

***NRHP Status Code** 6Z
***Resource Name or #** (Assigned by recorder) 1499 Bayshore Highway

B1. Historic Name: Unknown
B2. Common Name: 1499 Bayshore Highway
B3. Original Use Commercial Office Building B4. Present Use: Commercial Office Building
***B5. Architectural Style:** Midcentury Modern
***B6. Construction History:** (Construction date, alteration, and date of alterations)

1499 Bayshore Highway was designed in 1960 by Blunk & Hoskins Architects and built in 1962, as indicated by the original building permit. Based on available records at the City of Burlingame Building Division, relatively few permits have been issued for the building since its initial construction. In 1972, a sign permit was issued for a double-faced sign to be placed adjacent to Bayshore Highway. In 1980, another sign permit was issued. A 1992 permit indicates a new concrete ramp and handicapped parking was added adjacent to the primary façade. In c1998, the building was reroofed, and in 2001 drainage improvements occurred at the site. A permit dated 2009 indicates that portions of the interior were reconfigured.

***B7. Moved?** ☑ No ☐ Yes ☐ Unknown **Date:** N/A **Original Location:** N/A
***B8. Related Features:** n/a
B9a. Architect: Blunk & Hoskins Architects b. Builder: N/A
***B10. Significance: Theme** N/A **Area** N/A
Period of Significance N/A **Property Type** N/A **Applicable Criteria** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Historic Context: Burlingame

The City of Burlingame currently occupies land that was formerly two Mexican-era ranchos: Buri Buri Rancho to the north and Rancho San Mateo to the south. The Buri Buri Rancho was granted to Mexican soldier Jose Antonio Sanchez, who built a house on El Camino Real, near the current border of Millbrae and Burlingame. Rancho San Mateo, originally granted by the last of California's Mexican governors, Pio Pico, changed ownership hands a few times until William Davis Merry Howard acquired it and established a dairy farm on the land.

Once the United States' war with Mexico concluded in 1848, the Treaty of Guadalupe Hidalgo resulted in Mexico ceding California to the United States. Also per the Treaty, Mexicans who lived on existing ranchos were guaranteed property rights and were allowed to remain on the land. However, the start of the California Gold Rush soon led to the dramatic increase in Northern California's population. Specifically, the influx of gold seekers to California's region between San Francisco and the Sierra foothills forced Mexican landowners off their land. Mexican landowners were not protected as many of the landholding records were incomplete. In present-day Burlingame, Sanchez ultimately lost the Buri Buri Rancho in a lawsuit, which was then divided into several parcels. Howard, however, retained Rancho San Mateo in a legal battle (Carey & Co. 2008).

(See continuation sheet.)

(Sketch Map with north arrow required.)



B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** (See continuation sheet.)
B13. Remarks: n/a
***B14. Evaluator:** Jon Rusch and Andrea Dumovich, ICF
***Date of Evaluation:** 3/14/2018

(This space reserved for official comments.)

***P3a. Description (continued):**

The southeast façade (**Figure 4**) features horizontal bands of windows at both the first and second stories, which continue at the recessed, northern portion of the façade (formed by the building's projecting northern volume). Window bays are comprised of fixed windows above small awnings windows, which are located above cement asbestos panels. The window bays are divided by an aluminum-frame grid. The second story overhangs the first slightly. An identical arrangement of windows, aluminum frames, cement asbestos panels, and overhanging second story is found at the northwest façade (**Figure 5**).

The building's southwest (rear) façade (**Figure 6**), facing the adjacent office building at 801 Mahler Drive, is formed by two unfenestrated cement plaster walls that terminate the building's two volumes. The two inward-facing walls of the building's two parallel volumes feature the same design vocabulary as the building's southeast and northwest façades (**Figure 7**). The rear facade at the building's hyphen is clad in cement plaster with a secondary entrance to the south. Large, aluminum-frame windows enclose the rear entrance, which has a pairing of fully glazed doors and a transom window.

***B10. Significance (continued):**

After Howard passed away, his Rancho San Mateo land was divided amongst his family. However, land west of El Camino Real was sold to William C. Ralston, an established banker. Ralston could afford to buy the land after he discovered the Comstock Lode in Nevada in the 1860s. With this real estate, he planned to develop a suburban tract in San Mateo County, with the vision of creating a "sacrosanct colony" (Burlingame Chamber of Commerce 2018).

Ralston hosted many famous people in his home, including one of his first guests, Anson Burlingame, in 1866. Burlingame—a Massachusetts congressman and previously appointed United States Minister to China under President Lincoln—bought approximately one thousand acres from Ralston to build a private villa. Ralston thence decided to name his new development Burlingame after his friend's newly acquired gain. Following Anson Burlingame's premature death, in 1870 Ralston bought back his land and began planning the town's establishment (Carey & Co. 2008; Burlingame Historical Society 2018). Shortly after, survey work was initiated as evidenced by the 1876 Map of Burlingame (**Error! Reference source not found.**). At that time, the few existing land owners of present-day Burlingame landscaped their properties that fronted El Camino Real with eucalyptus and elm trees (Burlingame Historical Society 2018). After Ralston's death, the land changed hands several times. In 1893, then-owner Francis Newlands subdivided the property and initiated construction of the Burlingame Country Club and five nearby cottages. While Burlingame increased its development and growth throughout the late 1800s, the 1906 San Francisco earthquake and fire propelled hundreds of new residents to Burlingame in search of safety. In 1908, Burlingame incorporated and two years later annexed the neighboring Town of Easton, which was once a part of Rancho Buri Buri (Burlingame Historical Society 2018).

Throughout Burlingame's early development, railway transportation provided a vital connection between developing Peninsula towns with the larger Bay Area. In 1859, the San Francisco and San Jose Railroad was established. Once the Southern Pacific Railroad later gained ownership of the line, it positioned a temporary boarding shed at "Oak Grove Crossing" for Burlingame passengers. In 1894, the Burlingame depot station was constructed (Carey & Co. 2008). Old Bayshore Highway provided a more rapid connection for automobiles between San Jose and San Francisco starting in 1937, partially following the current path of U.S. Route 101 through the Peninsula. Portions of the highway also followed the edge of San Francisco Bay's tidal marshes, such as south of San Francisco International Airport (past the current location of the subject building). Without a center divider, the four-lane highway caused a high level of fatal accidents and obtained the nickname "Bloody Bayshore" (Palo Alto History.org 2018). After mounting political pressure to stop future fatalities, construction of the new Bayshore Highway began in 1947 to replace the Old Bayshore Highway. According to a history of the new Bayshore Highway's construction, "Freeway development processed in segments as funding to acquire property abutting established highway alignments became available. Early disconnected segments of freeways followed an overall plan that were to be integrated into a regional system. The Bayshore Freeway, originally constructed as a highway along the bay side of the peninsula […] began its transition to a freeway in 1947 with the construction of a short section between Burlingame and San Mateo" (State of California Department of Transportation Environmental Program 2003). The new Bayshore Highway is now part of U.S. Route 101, a 1,540-mile highway first built in 1926 that connects Olympia, Washington and Los Angeles, California.



Figure 2: Aerial photograph of the Darius Ogden Mills Estate, date unknown. The red arrow points to current location of 1499 Bayshore Highway.
Source: Peninsula Royalty 2012.

In 1954, Burlingame annexed a portion of the Darius Ogden Mills estate at the city's northernmost border: this estate formed the land spanning from Millbrae Avenue to the north to Mills Creek to the south (Peninsula Royalty 2018). The area of tidal marshes surrounding the current location of the subject building, located east of the new Bayshore Highway, was filled and subdivided in the 1950s; the fill originated from grading and development that occurred at the Mills Estate (City of Burlingame Planning Department 2012:VI-1 to VI-2) (**Figure 2**). As indicated by a 1953 aerial photograph of the Mills Mansion, the current site of 1499 Bayshore Highway and nearby parcels remained completely undeveloped at that time, even while surrounding areas of Burlingame and Millbrae were covered by suburban growth (Peninsula Royalty 2012). In the late 1950s and 1960s, however, the area adjacent to the Old Bayshore Highway that currently contains 1499 Bayshore Highway rapidly developed with many commercial buildings. By 1968, aerial photographs illustrate that 1499 Bayshore Highway and most neighboring buildings were constructed and formed a new automobile-oriented commercial district within Burlingame.

Ownership and Occupant History

The building's original owner has not been identified. A 1972 permit indicates that Dolly Carson was the building owner. From 1980 to 1992 the owner was Henry Hora & Sons as indicated by a building permit. In 1992 Charles Gensler became owner along with Henry Horn & Sons Incorporated, per a building permit from that year. From 2003 to 2008 deed records show Steve Gensler as the owner. Research did not uncover any substantial details regarding these owners at the time they were in possession of the building. From 2008 to 2016 the building was owned by Mehrdad Elie, who in 2007 founded EliCorp—an investment management company based in Burlingame (EliCorp 2015). In 2016, 1499 Bayshore LLC, obtained ownership of the property.

The known owners of 1499 Bayshore Highway, based on available deed records held by the County of San Mateo Clerk-Recorder and building permits held by the City of Burlingame Building Division, are summarized in the table below:

Year	Owner
1972	Dolly Carlson
1980-1992	Henry Hora & Sons
1992	Charles Gensler, Henry Horn & Sons Incorporated
2003-2008	Steve Gensler Trust
2008-2016	Mehrdad Elie Trust
2016-present	1499 Bayshore LLC

Based on available city directories, numerous commercial tenants have occupied spaces within the subject building since it was constructed in the early 1960s. Tenants have included consulting corporations, real estate firms, wholesale companies, office supply retailers, equipment and manufacturing producers, cellular communications services, financial advisors, travel agencies, car rentals, and many others. A few of the building's commercial spaces were listed as "vacant" in city directories throughout the years. Few tenants remained in the building longer than ten years; with such a high number of commercial business tenants, there was high turnover every few years. One of the longest tenants was the local office of Farmers Insurance, which has been in the building for at least 35 years, from 1980-2015.

Architect: Blunk & Hoskins Architects

Based in Burlingame, Blunk & Hoskins Architects was led by Robert M. Blunk, AIA and Gilman G. Hoskins, AIA. The partnership lasted from 1959 – 1962, during which time Blunk & Hoskins Architects primarily designed local "commercial office building[s], water-front apartment buildings with boat docks, and private and speculative residences," according to a local newspaper account (*The Times San Mateo* 1962: 12). However, the firm's work was not covered extensively in the press during the few years when Blunk and Hoskins worked in partnership with one another, and few details could be gathered regarding the firm's body of work.

Before founding the Burlingame practice in 1959, Blunk worked for seven years with a Menlo Park architectural firm (*The Times San Mateo* 1959:20). After professionally separating from Hoskins, Blunk went on to design several large-scale projects in Burlingame, including the $2,500,000, 2,500 seat Hyatt Music Theater and the $1,500,000, 102-room addition in 1965 for the Hyatt House Hotel (*The Times San Mateo* 1964:44; *The Times San Mateo* 1965a:11), both located along Old Bayshore Highway in the vicinity of the subject building. In 1965, Blunk designed the Johnson Tower, a seven-story steel-frame office building in Burlingame (*The Times San Mateo* 1965b:18). By 1967, Blunk (then working in his own firm, Blunk Associates-Architects) was commissioned by the Garden Center Foundation to design a garden center in San Mateo for $250,000 (*The Times San Mateo* 1967:1). The garden center was constructed in 1975, containing three rooms for hosting meetings, cooking, and office and library space, as well as a gazebo and architecturally-landscaped grounds (*The Times San Mateo* 1975:11).

Hoskins earned his architecture degree in 1943 at the University of Oklahoma's School of Architecture and in the 13 years prior to his partnership with Blunk, he led large-scale architectural design and development projects in San Francisco and the Peninsula. These include a 138,950 square foot, Midcentury Modern-style administrative building complex for Avis Rent a Car near San Francisco International Airport. Shortly after 1499 Bayshore Highway was completed in 1962, Hoskins parted ways with Blunk and transitioned to being head of the architectural department for Peninsula planning and engineer consulting firm Wilsey, Ham & Blair (*The Times San Mateo* 1962:11). In 1963 it was announced that Wilsey, Ham & Blair would construct and occupy the first building in Foster City—a newly developed city on the San Francisco Peninsula (*The Times San Mateo* 1963:22). Additionally, Wilsey, Ham & Blair was involved in the $500-million development contract that aided in Foster City's initial growth. By 1964, Hoskins was promoted to Vice President of Wilsey, Ham & Blair's San Francisco division (*The Times San Mateo* 1964:29). Research has not uncovered additional details on Hoskins's later career.

California Register of Historical Resources Evaluation of 1499 Bayshore Highway

1499 Bayshore Highway is not currently listed in, and has not been found eligible for listing in, the California Register of Historical Resources (CRHR). The following provides an evaluation of 1499 Bayshore Highway under CRHR Criteria 1-4:

CRITERION 1 (Events):

1499 Bayshore Highway is not associated with any event(s) of historical significance. The building is a product of suburban commercial office development in Burlingame and is a typical example of such a development pattern. Suburban office buildings were constructed throughout the Peninsula during the 1950s and 1960s. Research conducted on the building's occupants did not reveal that the building fostered early or remarkable business growth for any of its tenants, or for Burlingame at large. Because the building housed many businesses at once with frequent turnover, and because these businesses represented commercial firms that were common within a mid-twentieth-century suburban context, it is unlikely that any one of them was able to make substantial contributions to the local or regional economy in the relatively short amount of time it occupied the building. Although a local office of Farmers Insurance is an exception in that it remained in the building for at least 35 years, Farmers Insurance was founded several decades earlier in Los Angeles. As such, a local branch office—one of several that the company had throughout the United States—is unlikely to imbue the subject building with any potential significance associated with the company at large. The building does not appear to be associated with broad patterns of local or regional history or with the cultural heritage of California or the United States. Therefore, the building at 1499 Bayshore Highway is not significant under CRHR Criteria 1.

CRITERION 2 (Person):

1499 Bayshore Highway is not associated with any person(s) of historical significance. The building has been occupied for over 50 years by a regularly changing mixture of commercial tenants. Countless individuals were employed by the business tenants and worked within 1499 Bayshore Highway, but no individual would have had a sustained association with the building to the extent necessary to imbue significance under Criterion 2. As the building does not have significance within the context of Burlingame's mid-twentieth-century economic development, individuals affiliated with the building's various tenants would not have contributed substantially to local, California, or national history through their day-to-day involvement in the building's business functions. Furthermore, the past owners of the parcel do not appear to have had direct associations with the commercial activities that occurred within 1499 Bayshore Highway; as such, it is extremely unlikely that the building would convey any potential significance that previous owners might have had. Therefore, 1499 Bayshore Highway is not significant under CRHR Criterion 2.

CRITERION 3 (Design/Construction):

1499 Bayshore Highway is a commercial office building designed in the Midcentury Modern architectural style. The architecture firm responsible for the design of the building was Blunk & Hoskins Architects, a Burlingame firm that mainly focused on designing commercial offices, residences, and apartment buildings. Blunk & Hoskins Architects was active locally for three years before the partnership disbanded. As a result, little information was published on the firm, and research has not revealed that their body of work was regarded as innovative or influential at the time the firm existed. The two individual architects involved in the partnership, Robert M. Blunk and Gilman G. Hoskins, both went on to work on much larger projects in the San Francisco Bay Area after dissolving their firm. Blunk continued to work in Burlingame, designing large-scale buildings within the city. Hoskins also continued working on the Peninsula as a lead architect for Wilsey, Ham & Blair consultants. Neither Blunk nor Hoskins appears to have had a discernible influence on architectural practice or design in the San Francisco Bay Area during his career, and neither appears to be a master architect associated with Midcentury Modern commercial office building design.

Furthermore, the office building at 1499 Bayshore Highway represents a relatively small-scaled project that employs general design elements associated with the Midcentury Modern architectural style, which includes: emphasis on the building's horizontality, aluminum window frames, minimal ornamentation, the projecting second story, a flat roof and cantilevered overhang, contrast between glazed and unfenestrated wall planes, transom windows, and stylized address signage. The building's architectural style contains some International Style elements, specifically its horizontal bands of windows and overall rectangular massing. The building's asymmetrical plan is another design aspect associated with the general tenets of Modernist architecture. Despite that the building's design incorporates these broad characteristics of Midcentury Modern architecture, this style was widely used for commercial buildings on the Peninsula and throughout the Bay Area during the 1950s and 1960s. 1499 Bayshore Highway is not the only example, or among the most distinctive examples, of the style in Burlingame and specifically along Old Bayshore Highway. Blunk also designed the nearby Hyatt Music Theater (Hyatt Cinema) at 1307 Bayshore Highway, which is a more expressionistic, emblematic example of Midcentury Modern architecture due to its box massing, a circular and scalloped bowl on its flat roof, and minimally decorated entrance colonnade that functions as the building's screen. In close proximity to the music theater are two-story commercial office buildings at 1291 Bayshore Highway and 1299 Bayshore Highway, which resemble 1499 Bayshore Highway in materials and design. Because of the close resemblance of 1499 Bayshore Highway with these two buildings, and due to their close physical proximity, there is a strong likelihood that Blunk & Hoskins Architects also designed these at approximately the same time as 1499 Bayshore Highway. The presence of these similarly designed buildings in the vicinity of 1499 Bayshore Highway supports the assertion that the subject building was not a distinctive example of the Midcentury Modern architectural style, but rather expresses a typical design vocabulary for a building type of which numerous examples exist.

For the reasons stated above, 1499 Bayshore Highway does not represent the work of a known master; furthermore, the commercial office building is typical of a building type constructed in the Midcentury Modern style in various locations in Burlingame and throughout the Peninsula during the 1950s and 1960s. The building at 1499 Burlingame is thus not significant under CRHR Criterion 3.

CRITERION 4 (Information Potential):

The subject property does not appear to be a source, or likely source, of important historical information not already captured in the historic record. Therefore, it is not significant under CRHR Criterion 4.

Conclusion

Based on an evaluation of the building under CRHR Criteria 1-4, 1499 Bayshore Highway is not eligible for individual listing on the CRHR. The property is therefore not a historical resource for the purposes of the California Environmental Quality Act (CEQA) in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

***B12. References (continued):**

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Palo Alto History.org. 2018. *Bloody Bayshore: A Dangerous Ride*. Available: http://www.paloaltohistory.org/bloody-bayshore.php. Accessed March 9, 2018.

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———. 1963. "Company to Move Office." August 16, 1963.

———. 1964. "Promotions Announced." March 13, 1964.

———. 1965a. "Addition." March 5, 1965.

———. 1965b. "Tower Designed For Bay Soil." March 1, 1965.

———. 1967. "A 'Rebel' Fair Group Stands By." September 29, 1967.

———. 1975. "The Garden Center's Background." May 5, 1975.

Additional Photographs:



Figure 3. View of northeast façade, facing southwest, 3/6/2018.



Figure 4. View of southeast façade, facing northeast, 3/6/2018.



Figure 5. View of northwest façade, facing east, 3/6/2018.



Figure 6. View of southwest façade, facing north, 3/6/2018.



Figure 7. View inward-facing walls and courtyard, facing northeast, 3/6/2018.

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____
Other Listings _____
Review Code _____ Reviewer _____ Date _____

 ***Resource Name or #** (Assigned by recorder) 801 Mahler Road

P1. Other Identifier: 801 Mahler Road
***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** San Mateo County
And (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** San Mateo **Date** 2018 **T**; **R**; **of Sec** ____; **B.M.**
c. Address: 801 Mahler Road City Burlingame Zip 94010
d. UTM: (give more than one for large and/or linear resources) Zone 10; 555886.00 mE/ 4161280.00 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) APN: 026-322-150
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

801 Mahler is a Midcentury Modern-style, two-story commercial office building located near the intersection of Bayshore Highway and Mahler Road in Burlingame. The rectangular-plan building features horizontal bands of aluminum-frame windows and cement asbestos panels enclosing the first and second stories, with a flat roof and deep overhanging eaves. 801 Mahler Road faces the northwest toward Mahler Road, and is located within the same legal parcel as the building adjacent to the north, 1499 Bayshore Highway (documented on separate DPR 523A and B forms). The parcel also contains a surface parking lot.

The northwest (primary) façade (**Figure 1**) features windows and cement asbestos panels arranged within an aluminum-framed grid. The window assembly spans most of the façade's width and contains an arrangement of awning and fixed windows. Cement asbestos panels are located above and below the window band. The primary entrance to the building (**Figure 3**) is located at the north end of the façade. The entrance features two pairings of fully glazed doors at the ground level and aluminum-frame windows that rise to the eave.

The northeast façade (**Figure 4**) features by three bays containing pebbledash stucco panels. The remainder of the façade is clad in horizontal bands of cement asbestos panels and aluminum-frame windows. The window assembly includes a line of fixed windows below larger, one-over-one awning windows. A series of pedestrian doors along the northeast façade serve multiple businesses. Lettering identifying the address the address "801 Mahler" is mounted to the stucco panel at the center of the façade (**Figure 5**). (See continuation sheet.)

P5a. Photograph or Drawing (Photograph required for buildings, structures and objects)



Figure 1. View of northwest (primary) façade, facing southeast

***P3b. Resource Attributes:** (List attributes and codes) HP6 (1-3 story commercial building)
***P4. Resources Present:** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo: (View, date, accession #) View looking southeast, 3/6/2018

***P6. Date Constructed/Age and Sources:**
☑Historic ☐ Prehistoric ☐ Both
c.1960-1962

***P7. Owner and Address:**
1499 Bayshore LLC
1499 Bayshore Hwy,
Burlingame, CA 94010

***P8. Recorded by:** (Name, affiliation, address)
Jon Rusch and Andrea Dumovich
ICF
201 Mission Street, Suite 1500
San Francisco, CA 94105

***P9. Date Recorded:** 3/6/2018
***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:**
***Attachments:** ☐NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☑ Building, Structure, and Object Record ☐ Archaeological Record ☐District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record

***NRHP Status Code** 6Z
***Resource Name or #** (Assigned by recorder) 801 Mahler Road

B1. Historic Name: Unknown
B2. Common Name: 801 Mahler Road
B3. Original Use: Commercial Office Building B4. Present Use: Commercial Office Building
***B5. Architectural Style:** Midcentury Modern
***B6. Construction History:** (Construction date, alteration, and date of alterations)

801 Mahler Road was designed in unison with the adjacent office building at 1499 Bayshore Highway by Blunk & Hoskins Architects. The original building permit for 801 Mahler Road has not been located. However, the building most likely was developed simultaneously with 1499 Bayshore Highway, which was designed in 1960 and built in 1962 in conjunction with 1499 Bayshore Highway. A site plan for 1499 Bayshore Highway held by the City of Burlingame Building Division indicates the footprint of 801 Mahler Road, which is labeled a "proposed future warehouse." A floor plan dated 1963 indicates that Blunk was hired as architect for interior tenant improvements at the building for the St. Regis Paper Co. A 1966 permit notes fire repairs were made to the building at that time. In 1983, there was an interior alteration of a snack bar, and in 1985 an "expansion of deli" occurred for one of the restaurant/eatery tenants. In 2003, 410 square feet was added to the first floor along with a five ton cooling system. The latest building permit issued was in 2008 to install a tenant's vinyl signage with dimensions of 120 inches by 36 inches.

***B7. Moved?** ☑ No ☐ Yes ☐ Unknown **Date:** n/a **Original Location:** n/a
***B8. Related Features:** n/a
B9a. Architect: Blunk & Hoskins Architects (attributed, no permit to confirm) b. Builder: N/A
***B10. Significance: Theme** N/A **Area** N/A
Period of Significance N/A **Property Type** N/A **Applicable Criteria** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Historic Context: Burlingame

The City of Burlingame currently occupies land that was formerly two Mexican-era ranchos: Buri Buri Rancho to the north and Rancho San Mateo to the south. The Buri Buri Rancho was granted to Mexican soldier Jose Antonio Sanchez, who built a house on El Camino Real, near the current border of Millbrae and Burlingame. Rancho San Mateo, originally granted by the last of California's Mexican governors, Pio Pico, changed ownership hands a few times until William Davis Merry Howard acquired it and established a dairy farm on the land.

Once the United States' war with Mexico concluded in 1848, the Treaty of Guadalupe Hidalgo resulted in Mexico ceding California to the United States. Also per the Treaty, Mexicans who lived on existing ranchos were guaranteed property rights and were allowed to remain on the land. However, the start of the California Gold Rush soon led to the dramatic increase in Northern California's population. Specifically, the influx of gold seekers to California's region between San Francisco and the Sierra foothills forced Mexican landowners off their land. Mexican landowners were not protected as many of the landholding records were incomplete. In present-day Burlingame, Sanchez ultimately lost the Buri Buri Rancho in a lawsuit, which was then divided into several parcels. Howard, however, retained Rancho San Mateo in a legal battle (Carey & Co. 2008).

(See continuation sheet.)

(Sketch Map with north arrow required.)



B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** (See continuation sheet.)

B13. Remarks: n/a
***B14. Evaluator:** Jon Rusch and Andrea Dumovich, ICF
***Date of Evaluation:** 3/14/2018

(This space reserved for official comments.)

***P3a. Description (continued):**

The southeast (rear) façade (**Figure 6**) and southwest façade (**Figure 7**) are both clad in cement plaster and lack the deep overhanging eaves found at the primary and northeast façades. The rear façade contains a metal roll-up vehicular door facing an asphalt-paved drive and a twelve-lite steel window with four hinged lites that operate as a casement window. The southwest façade contains several pedestrian doors and aluminum-frame awning windows, which are irregularly placed across the first and second floors.

***B10. Significance (continued):**

After Howard passed away, his Rancho San Mateo land was divided amongst his family. However, land west of El Camino Real was sold to William C. Ralston, an established banker. Ralston could afford to buy the land after he discovered the Comstock Lode in Nevada in the 1860s. With this real estate, he planned to develop a suburban tract in San Mateo County, with the vision of creating a "sacrosanct colony" (Burlingame Chamber of Commerce 2018).

Ralston hosted many famous people in his home, including one of his first guests, Anson Burlingame, in 1866. Burlingame—a Massachusetts congressman and previously appointed United States Minister to China under President Lincoln—bought approximately one thousand acres from Ralston to build a private villa. Ralston thence decided to name his new development Burlingame after his friend's newly acquired gain. Following Anson Burlingame's premature death, in 1870 Ralston bought back his land and began planning the town's establishment (Carey & Co. 2008; Burlingame Historical Society 2018). Shortly after, survey work was initiated as evidenced by the 1876 Map of Burlingame (**Error! Reference source not found.**). At that time, the few existing land owners of present-day Burlingame landscaped their properties that fronted El Camino Real with eucalyptus and elm trees (Burlingame Historical Society 2018). After Ralston's death, the land changed hands several times. In 1893, then-owner Francis Newlands subdivided the property and initiated construction of the Burlingame Country Club and five nearby cottages. While Burlingame increased its development and growth throughout the late 1800s, the 1906 San Francisco earthquake and fire propelled hundreds of new residents to Burlingame in search of safety. In 1908, Burlingame incorporated and two years later annexed the neighboring Town of Easton, which was once a part of Rancho Buri Buri (Burlingame Historical Society 2018).

Throughout Burlingame's early development, railway transportation provided a vital connection between developing Peninsula towns with the larger Bay Area. In 1859, the San Francisco and San Jose Railroad was established. Once the Southern Pacific Railroad later gained ownership of the line, it positioned a temporary boarding shed at "Oak Grove Crossing" for Burlingame passengers. In 1894, the Burlingame depot station was constructed (Carey & Co. 2008). Old Bayshore Highway provided a more rapid connection for automobiles between San Jose and San Francisco starting in 1937, partially following the current path of U.S. Route 101 through the Peninsula. Portions of the highway also followed the edge of San Francisco Bay's tidal marshes, such as south of San Francisco International Airport (past the current location of the subject building). Without a center divider, the four-lane highway caused a high level of fatal accidents and obtained the nickname "Bloody Bayshore" (Palo Alto History.org 2018). After mounting political pressure to stop future fatalities, construction of the new Bayshore Highway began in 1947 to replace the Old Bayshore Highway. According to a history of the new Bayshore Highway's construction, "Freeway development processed in segments as funding to acquire property abutting established highway alignments became available. Early disconnected segments of freeways followed an overall plan that were to be integrated into a regional system. The Bayshore Freeway, originally constructed as a highway along the bay side of the peninsula […] began its transition to a freeway in 1947 with the construction of a short section between Burlingame and San Mateo" (State of California Department of Transportation Environmental Program 2003). The new Bayshore Highway is now part of U.S. Route 101, a 1,540-mile highway first built in 1926 that connects Olympia, Washington and Los Angeles, California.



Figure 1: Aerial photograph of the Darius Ogden Mills Estate, date unknown. The red arrow points to current location of 1499 Bayshore Highway.
Source: Peninsula Royalty 2012.

In 1954, Burlingame annexed a portion of the Darius Ogden Mills estate at the city's northernmost border: this estate formed the land spanning from Millbrae Avenue to the north to Mills Creek to the south (Peninsula Royalty 2018). The area of tidal marshes surrounding the current location of the subject building, located east of the new Bayshore Highway, was filled and subdivided in the 1950s; the fill originated from grading and development that occurred at the Mills Estate (City of Burlingame Planning Department 2012:VI-1 to VI-2) (**Figure 2**). As indicated by a 1953 aerial photograph of the Mills Mansion, the current site of 1499 Bayshore Highway and nearby parcels remained completely undeveloped at that time, even while surrounding areas of Burlingame and Millbrae were covered by suburban growth (Peninsula Royalty 2012). In the late 1950s and 1960s, however, the area adjacent to the Old Bayshore Highway that currently contains 1499 Bayshore Highway rapidly developed with many commercial buildings. By 1968, aerial photographs illustrate that 1499 Bayshore Highway and most neighboring buildings were constructed and formed a new automobile-oriented commercial district within Burlingame.

Ownership and Occupant History

The building's first owner has not been identified. Owner Dolly Carlson was listed on a 1966 building permit. Based on building permits associated with the adjacent 1499 Bayshore Highway, located on the same legal parcel, the owner was Henry Hora & Sons from 1980 to 1992. In 1992 Charles Gensler became owner along with Henry Horn & Sons Incorporated. From 2003 to 2008 deed records show Steve Gensler as the owner. Research did not uncover any substantial details regarding these owners at the time they were in possession of the building. From 2008 to 2016 the building was owned by Mehrdad Elie, who in 2007 founded EliCorp—an investment management company based in Burlingame (EliCorp 2015). In 2016, 1499 Bayshore LLC, obtained ownership of the property.

The known owners of 1499 Bayshore Highway, based on available deed records held by the County of San Mateo Clerk-Recorder and building permits held by the City of Burlingame Building Division, are summarized in the table below:

Year	Owner
1972	Dolly Carlson
1980-1992	Henry Hora & Sons
1992	Charles Gensler, Henry Horn & Sons Incorporated
2003-2008	Steve Gensler Trust
2008-2016	Mehrdad Elie Trust
2016-present	1499 Bayshore LLC

Based on available city directories, a series of commercial tenants have occupied the building since it was constructed. These tenants have included real estate firms, wholesale companies, supply retailers, equipment and manufacturing producers, restaurants and food industry providers, and limousine services. A few of the building's commercial spaces were listed as "vacant" in city directories throughout the years. With such a high number of commercial tenants, there was high turnover, and it does not appear that any one tenant had a long-term presence within the building.

Architect: Blunk & Hoskins Architects

Based in Burlingame, Blunk & Hoskins Architects was led by Robert M. Blunk, AIA and Gilman G. Hoskins, AIA. The partnership lasted from 1959 – 1962, during which time Blunk & Hoskins Architects primarily designed local "commercial office building[s], water-front apartment buildings with boat docks, and private and speculative residences," according to a local newspaper account (*The Times San Mateo* 1962: 12). However, the firm's work was not covered extensively in the press during the few years when Blunk and Hoskins worked in partnership with one another, and few details could be gathered regarding the firm's body of work.

Before founding the Burlingame practice in 1959, Blunk worked for seven years with a Menlo Park architectural firm (*The Times San Mateo* 1959:20). After professionally separating from Hoskins, Blunk went on to design several large-scale projects in Burlingame, including the $2,500,000, 2,500 seat Hyatt Music Theater and the $1,500,000, 102-room addition in 1965 for the Hyatt House Hotel (*The Times San Mateo* 1964:44; *The Times San Mateo* 1965a:11), both located along Old Bayshore Highway in the vicinity of the subject building. In 1965, Blunk designed the Johnson Tower, a seven-story steel-frame office building in Burlingame (*The Times San Mateo* 1965b:18). By 1967, Blunk (then working in his own firm, Blunk Associates-Architects) was commissioned by the Garden Center Foundation to design a garden center in San Mateo for $250,000 (*The Times San Mateo* 1967:1). The garden center was constructed in 1975, containing three rooms for hosting meetings, cooking, and office and library space, as well as a gazebo and architecturally-landscaped grounds (*The Times San Mateo* 1975:11).

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California Register of Historical Resources Evaluation of 801 Mahler Road:

801 Mahler Road is not currently listed in, and has not been found eligible for listing in, the California Register of Historical Resources (CRHR). The following provides an evaluation of 801 Mahler Road under CRHR Criteria 1-4:

CRITERION 1 (Events):

801 Mahler Road is not associated with any event(s) of historical significance. The building is a product of suburban commercial office development in Burlingame and is a typical example of such a development pattern. Suburban office buildings were constructed throughout the Peninsula during the 1950s and 1960s. Research conducted on the building's occupants did not reveal that the building fostered early or remarkable business growth for any of its tenants, or for Burlingame at large. Because the building housed many businesses at once with frequent turnover, and because these businesses represented commercial firms that were common within a mid-twentieth-century suburban context, it is unlikely that any one of them was able to make substantial contributions to the local or regional economy in the relatively short amount of time it occupied the building. The building does not appear to be associated with broad patterns of local or regional history or with the cultural heritage of California or the United States. Therefore, the building at 801 Mahler Road is not significant under CRHR Criteria 1.

CRITERION 2 (Person):

801 Mahler Road is not associated with any person(s) of historical significance. The building has been occupied for over 50 years by a regularly changing mixture of commercial tenants. Countless individuals were employed by the business tenants and worked within 801 Mahler Road, but no individual would have had a sustained association with the building to the extent necessary to imbue significance under Criterion 2. As the building does not have significance within the context of Burlingame's mid-twentieth-century economic development, individuals affiliated with the building's various tenants would not have contributed substantially to local, California, or

national history through their day-to-day involvement in the building's business functions. Furthermore, the past owners of the parcel do not appear to have had direct associations with the commercial activities that occurred within 801 Mahler Road; as such, it is extremely unlikely that the building would convey any potential significance that previous owners might have had. Therefore, 801 Mahler Road is not significant under CRHR Criterion 2.

CRITERION 3 (Design/Construction):

801 Mahler Road is a commercial office building designed in the Midcentury Modern architectural style. The architecture firm responsible for the design of the building is Blunk & Hoskins Architects, a Burlingame firm that mainly focused on designing commercial offices, residences, and apartment buildings. Blunk & Hoskins Architects was active locally for three years before the partnership disbanded. As a result, little information was published on the firm, and research has not revealed that their body of work was regarded as innovative or influential at the time the firm existed. The two individual architects involved in the partnership, Robert M. Blunk and Gilman G. Hoskins, both went on to work on much larger projects in the San Francisco Bay Area after dissolving their firm. Blunk continued to work in Burlingame, designing large-scale buildings within the city. Hoskins also continued working on the Peninsula as a lead architect for Wilsey, Ham & Blair consultants. Neither Blunk nor Hoskins appears to have had a discernible influence on architectural practice or design in the San Francisco Bay Area during his career, and neither appears to be a master architect associated with Midcentury Modern commercial office building design.

Furthermore, the office building at 801 Mahler Road represents a relatively small-scaled project that employs general design elements associated with the Midcentury Modern architectural style, which includes: emphasis on the building's horizontality, aluminum window frames, minimal ornamentation, a flat roof and cantilevered overhang, contrast between glazed and unfenestrated wall planes, and stylized address signage. The building's architectural style contains some International Style elements, specifically its horizontal bands of windows and overall rectangular massing. Despite that the building's design incorporates these broad characteristics of Midcentury Modern architecture, this style was widely used for commercial buildings on the Peninsula and throughout the Bay Area during the 1950s and 1960s. The building has a basic footprint and rectangular massing, and is therefore not distinctive in consideration of the general tenets of Modernist architecture. 801 Mahler Road is also not the only example, or among the most distinctive examples, of the style in Burlingame and specifically along Old Bayshore Highway. Blunk also designed the nearby Hyatt Music Theater (Hyatt Cinema) at 1307 Bayshore Highway, which is a more expressionistic, emblematic expression of Midcentury Modern architecture due to its box massing, a circular and scalloped bowl on its flat roof, and minimally decorated entrance colonnade that functions as the building's screen. In close proximity to the music theater are two-story commercial office buildings at 1291 Bayshore Highway and 1299 Bayshore Highway, which resemble 801 Mahler Road in materials and design. Because of the close resemblance of 801 Mahler Road and 1499 Bayshore Highway with these two buildings, and due to their close physical proximity, there is a strong likelihood that Blunk & Hoskins Architects also designed these at approximately the same time as 1499 Bayshore Highway and 801 Mahler Road. The presence of these similarly designed buildings in the vicinity of 801 Mahler Road supports the assertion that the subject building was not a distinctive example of the Midcentury Modern architectural style, but rather expresses a typical design vocabulary for a building type of which numerous examples exist.

For the reasons stated above, 801 Mahler Road does not represent the work of a known master; furthermore, the commercial office building is typical of a building type constructed in the Midcentury Modern style in various locations in Burlingame and throughout the Peninsula during the 1950s and 1960s. The building at 801 Mahler Road is thus not significant under CRHR Criterion 3.

CRITERION 4 (Information Potential):

The subject property does not appear to be a source, or likely source, of important historical information not already captured in the historic record. Therefore, it is not significant under CRHR Criterion 4.

Conclusion:
Based on an evaluation of the building under CRHR Criteria 1-4, 801 Mahler Road is ineligible for individual listing on the CRHR. The property is therefore not historical resource for the purposes of the California Environmental Quality Act (CEQA) in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

***B12. References (continued):**

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Additional Photographs:



ade, facing southeast,



Figure 4. View of northeast façade, facing southwest, 3/6/2018.



Figure 5.
Address lettering attached to the center of the northeast façade, 3/6/2018.



3/6/2018.



Figure 7. View of southwest façade, facing east, 3/6/2018.

Appendix C
Supporting Greenhouse Gas Emissions Information

GREENHOUSE GAS EMISSIONS SUPPORTING INFORMATION

1499 BAYSHORE HIGHWAY PROJECT

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July 2019

Introduction

This document summarizes the environmental and regulatory setting for greenhouse gas (GHG) emissions. It also describes how the 1499 Bayshore Highway Project (Project) would be consistent with different regulations pertaining to GHG emissions.

Environmental Setting

Table 1 lists the global warming potential (GWP) of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O); their lifetimes; and abundances in the atmosphere. The GWP values used are based on the Intergovernmental Panel of Climate Change (IPCC) Fourth Assessment Report (AR4) and the United Nations Framework Convention on Climate Change reporting guidelines, as defined in Table 1.[1] The AR4 GWP values are used in the California Air Resources Board's (CARB) California inventory and the 2017 scoping plan.[2]

Table 1. Lifetimes and Global Warming Potentials of Principal Greenhouse Gases

Greenhouse Gas	Global Warming Potential (100 years)	Lifetime (years)	2016 Atmospheric Abundance
Carbon dioxide	1	50–200	400 ppm
Methane	25	9–15	1,834 ppb
Nitrous oxide	298	121	328 ppb

Sources:

Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007: The Physical Science Basis.* Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor, and H. L. Miller (eds.). Available: http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html. Accessed: February 2018.

Blasing, T. J. 2016. *Recent Greenhouse Gas Concentrations*. DOI: 10.3334/CDIAC/atg.032. Updated: April 2016.

ppm = parts per million; ppb = parts per billion

A GHG inventory is a quantification of all GHG emissions and sinks[3] within a selected physical or economic boundary. Table 2 outlines the most recent global, national, statewide, and regional GHG inventories.

1 Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007: The Physical Science Basis.* Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor, and H. L. Miller (eds.). Available: http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html. Accessed: February 2018.

2 California Air Resources Board. 2017. *California's 2017 Climate Change Scoping Plan*. November. Available: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed: February 2018.

3 A GHG sink is a process, activity, or mechanism that removes a GHG from the atmosphere.

Table 2. Global, National, and State GHG Emissions Inventories

Emissions Inventory	CO_2e (metric tons)
2010 IPCC Global GHG Emissions Inventory	52,000,000,000
2015 EPA National GHG Emissions Inventory	6,587,000,000
2016 CARB State GHG Emissions Inventory	429,400,000
2011 BAAQMD GHG Emissions Inventory	86,600,000

Sources:

Intergovernmental Panel on Climate Change. 2014. *Climate Change 2014: Synthesis Report*. Contribution of Working Groups I, II, and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R. K. Pachauri and L. A. Meyer (eds.)]. Geneva, Switzerland. Available: http://www.ipcc.ch/report/ar5/syr/. Accessed: July 2018.

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California Air Resources Board 2018. *California Greenhouse Gas Emission Inventory – 2018 Edition*. Available: https://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed: July 2018.

Bay Area Air Quality Management District. 2011. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. Updated: July 2018.

In 2009, the City of Burlingame (City) adopted a Climate Action Plan (CAP) to reduce GHG emissions. As a component of the CAP's analysis, GHG emissions in Burlingame in 2005 and 2020 (forecast) were quantified. A "business-as-usual" forecast was prepared for 2020 to determine the emissions reductions the City would need to achieve to meet its GHG reduction goal. GHG emissions produced by the community in 2005, as well as the expected level of emissions in 2020, are shown in Table 3. The inventory and forecast data indicate that transportation sources in the city represent the largest source of community emissions in each analysis year.

Table 3. City of Burlingame Community Greenhouse Gas Emissions Inventories and Forecasts (metric tons of carbon dioxide equivalent [CO_2e])

	2005 Inventory		2020 Forecast	
Emission Sector	**Metric Tons CO_2e**	**Percent**	**Metric Tons CO_2e**	**Percent**
Transportation	203,213	60.3%	246,497	60.3%
Residential	47,523	14.1%	57,645	14.1%
Commercial (including industrial and municipal)	74,466	22.1%	90,327	22.1%
Waste Generation	11,742	3.5%	14,243	3.5%
Total	**336,944**	**100%**	**408,780**	**100.%**

Source: City of Burlingame. 2009. *City of Burlingame Climate Action Plan*. June. Available: http://www.cecburlingame.com/wp-content/uploads/2015/02/climate_action_plan.pdf. Accessed: July 2018.

California has adopted statewide legislation to address various aspects of climate change. Much of this legislation establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. The governor has also issued several executive orders (EOs) related to the state's

evolving climate change policy. Of particular importance are Assembly Bill (AB) 32 and Senate Bill (SB) 32, which outline the state's GHG reduction goals (i.e., 1990 emissions levels by 2020 and 40 percent below 1990 emissions levels by 2030). Summaries of key policies, legal cases, regulations, and legislation at the state, regional, and local levels relevant to the Project are provided below.

Regulatory Setting

State Regulations

Executive Order S-3-05 (2005)

EO S-3-05 asserted that California is vulnerable to the effects of climate change. To combat this concern, the order established the following GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Executive orders are legally binding on state agencies. Accordingly, EO S-3-05 guides efforts by state agencies to control and regulate GHG emissions but has no direct binding effect on local government or private actions. The secretary of the California Environmental Protection Agency is required to report to the governor and state legislature biannually regarding the impacts of global warming on California, mitigation and adaptation plans, and progress made toward reducing GHG emissions and meeting the targets established in EO S-3-05.

Assembly Bill 32—California Global Warming Solutions Act (2006)

AB 32 codified the state's GHG emissions target by requiring the state's global warming emissions to be reduced to 1990 levels by 2020. Since AB 32 was adopted, CARB, the California Energy Commission (CEC), the California Public Utilities commission (CPUC), and the Building Standards Commission have been developing regulations to meet the goals of AB 32. The AB 32 Scoping Plan identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires CARB and other state agencies to develop and enforce regulations and other initiatives to reduce GHGs. Specifically, the AB 32 Scoping Plan articulates a key role for local governments, recommending that they establish GHG reduction goals for both their municipal operations and the community consistent with those of the state.

Executive Order S-01-07—Low-Carbon Fuel Standard (2007)

EO S-01-07 mandates that (1) a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 and (2) a Low-Carbon Fuel Standard (LCFS) for transportation fuels be established in California. CARB approved the LCFS on April 23, 2009; the regulation became effective on January 12, 2010.[4]

[4] California Air Resources Board. 2016. *LCFS Workgroups and Subprograms*. May. Available: https://www.arb.ca.gov/fuels/lcfs/workgroups/workgroups.htm. Accessed: February 2018.

Senate Bill SB 375 (2008)

SB 375 requires regional transportation plans developed by Metropolitan Planning Organizations to incorporate a "sustainable communities strategy" that will meet the GHG emissions reduction targets set by CARB, which approved the regional targets in March 2018. SB 375 also includes provisions for streamlined California Environmental Quality Act (CEQA) review for some infill projects, such as transit-oriented developments. However, those provisions will not become effective until a sustainable communities strategy is adopted.

Senate Bills 1078, 107, and 2—Renewables Portfolio Standard (2011)

SBs 1078 (2002), 107 (2006), and 2 (2011), California's Renewables Portfolio Standard (RPS), obligates investor-owned utilities, energy service providers, and community choice aggregators to procure additional retail sales per year from eligible renewable sources, with the long-range target of procuring 33 percent of retail sales from renewable resources by 2020. The CPUC and CEC are jointly responsible for implementing the program.

California Energy Efficiency Standards for Residential and Nonresidential Buildings—Green Building Code (2011), Title 24 Update (2017)

California has adopted aggressive energy efficiency standards for new buildings. In 2008, the California Building Standards Commission adopted the nation's first green building standards, including standards for aspects of the built environment apart from energy efficiency. The California Green Building Standards Code was adopted as Part 11 of the California Building Standards Code (Title 24, California Code of Regulations). Part 11 requires compliance with standards regarding planning and design for sustainable site development, energy efficiency (in excess of California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The current energy efficiency standards were adopted in 2016 and took effect on January 1, 2017. The standards are to be updated periodically, with the next update planned for 2019.

Senate Bill 32 (2016)

SB 32 (2016) requires CARB to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 level by 2030, consistent with the target set forth in EO B-30-15. CARB adopted the 2017 Climate Change Scoping Plan in November 2017 to meet the GHG reduction requirement set forth in SB 32. It proposes continuing the major programs of the previous scoping plan, including programs regarding cap-and-trade regulation; the LCFS; more efficient cars, trucks, and freight movement; the RPS; and reductions in methane emissions from agricultural and other wastes. The 2017 scoping plan also addresses, for the first time, GHG emissions from natural and working lands in California.

Regional and Local Regulations

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is responsible for local air quality management in the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD's 2017 Clean Air Plan includes a goal to reduce GHG emissions to 1990 levels by 2020, 40 percent below 1990 levels by 2035, and

80 percent below 1990 levels by 2050.[5] In addition, BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the SFBAAB. The program includes measures for GHG emissions reductions that promote energy efficiency, reduce vehicle miles traveled (VMT), and develop alternative energy sources.[6]

The BAAQMD CEQA Guidelines help lead agencies comply with the requirements of CEQA as they pertain to potentially adverse impacts related to air quality and climate change. The mass emissions threshold for stationary source projects is 10,000 metric tons per year of carbon dioxide equivalent (CO_2e). For land use development projects, the guidelines established three potential analysis criteria for determining significance: compliance with a qualified CAP, a mass emissions threshold of 1,100 metric tons per year of CO_2e, and a GHG efficiency threshold of 4.6 metric tons of CO2e per service population (i.e., projected jobs plus projected residents).

City of Burlingame Climate Action Plan

The City adopted its CAP in June 2009, with the goal reducing GHG emissions to 286,402 metric tons of CO_2e by 2020. Although the City CAP is not a qualified CAP that can be used for CEQA tiering purposes, pursuant to CEQA Guidelines Section 15183.5, it does conform to the state emissions targets for 2020, as set forth in AB 32 (15 percent 2005 levels [equal to 1990 levels]), and 2050, as set forth in EO S-03-05 (80 percent below 1990 levels).

Consistency with GHG Regulations

The Project's consistency with AB 32, SB 32, the City's CAP, BAAQMD's 2017 Clean Air Plan, SB 375/Plan Bay Area 2040, and EO S-3-05 is assessed below.

Assembly Bill 32 and Senate Bill 32

AB 32 codifies the state's GHG emissions reduction targets for 2020. CARB adopted the 2008 scoping plan and 2014 first update as a framework for achieving AB 32. The 2008 scoping plan and 2014 first update outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. CARB adopted the Climate Change Scoping Plan in November 2017 as a framework for achieving the 2030 goal for GHG emissions reductions, as described in SB 32.

The 2008 and 2014 scoping plans indicate that some reductions will need to come in the form of changes pertaining to vehicle emissions and mileage standards. Some will come from changes pertaining to sources of electricity and increased energy efficiency at existing facilities. The remainder will need to come from state and local plans, policies, or regulations to lower carbon emissions, relative to business-as-usual conditions. The 2017 scoping plan carries forward GHG reduction measures from the 2014 first update and outlines potential measures to achieve the state's 2030 target across all sectors of the California economy, including transportation, energy, and industry. Local governments will also

[5] Bay Area Air Quality Management District. 2017b. *Clean Air Plan*. April. Available: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed: March 30, 2018.

[6] Bay Area Air Quality Management District. 2017c. *Climate Protection Planning Program*. April. Available: http://www.baaqmd.gov/plans-and-climate/climate-protection/climate-protection-program. Accessed: March 2018.

continue to play a vital role in reducing GHG emissions at the local level. Currently, 60 percent of California cities and more than 70 percent of California counties have completed a GHG inventory; 42 percent of local governments have completed a climate, energy, or sustainability plan that addresses GHG emissions.[7]

Applicable transportation-related GHG reduction strategies and policies for the Project, as outlined in the 2008, 2014, and 2017 scoping plans, include the Mobile-Source Strategy, which encourages a reduction in VMT through implementation of SB 375 and regional sustainable communities strategies, as well as other VMT reduction strategies. The scoping plans also discuss existing and proposed water conservation measures, including implementation of rain-harvesting systems and reducing the amount of impervious surfaces on land. GHG reduction strategies related to growing trees and vegetation are also described in the scoping plans.

The Project includes numerous objectives and measures that are consistent with the aforementioned scoping plan strategies and policies to reduce operational and construction-related GHG emissions. The Project would optimize public transit, bicycle and pedestrian access to the site by locating development adjacent to local transit lines and routes that provide safe and convenient access for cyclists and pedestrians, thereby reducing VMT. In addition, the Project would consist of a mix of hotel and restaurant uses, resulting in an increase in internal trips on the Project site, thereby further reducing VMT. The Project would increase the amount of the landscaped area compared with current conditions, providing a net total of 80 trees and approximately 35,300 square feet of landscaping. Finally, the Project would include a rain-harvesting system to capture stormwater runoff, which would be used for irrigating landscaped areas and the proposed turf block system. These Project features would be consistent with the conservation- and vegetation-related measures in the scoping plans. Moreover, the Project's net GHG emissions would be below the hotel GHG efficiency threshold for 2021, which is based on overall SB 32 reduction targets. Accordingly, the Project would not conflict with applicable policies described in the scoping plans for AB 32 and SB 32, and the Project's net GHG emissions would be below the GHG efficiency threshold, based on overall SB 32 reduction targets.

Consistency with 2017 Scoping Plan

In general, the Project would be built around the concept of sustainability. This is manifested through increased density, mixed-use and transit-oriented development, and green building principles, with an emphasis on water conservation and landscaping. Although the measures included in the updated scoping plan are necessarily broad, the Project is generally consistent with the goals and desired outcomes of the plan (i.e., energy efficiency, water conservation, waste diversion, transportation sustainability). The Project's consistency with the policies of the 2017 Climate Change Scoping Plan is analyzed in Table 4.

[7] California Air Resources Board. 2017. *California's 2017 Climate Change Scoping Plan*. November. Available: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed: February 27, 2018.

Table 4. Consistency of Proposed Plan with 2017 Scoping Plan Policies[a]

Policy	Primary Objective	Proposed Plan Consistency Analysis
SB 350	Reduce GHG emissions in the electricity sector by implementing the 50% RPS, doubling energy savings, and taking other actions, as appropriate, to achieve the planning targets for GHG emissions reductions in the Integrated Resource Plan process.	This policy is a state program that requires no action at the local or project level. Nonetheless, development of new land uses under the proposed plan would be consistent with the energy-saving objective of this measure. The Project would include maximizing natural cooling and passive solar heating through building placement and orientation, using vegetation to shade buildings and limit direct solar gain and glare, and using plantings on building exteriors to insulate and cool interiors. These design guidelines and standards would reduce energy demands. In addition, the incorporation of a rain-harvesting system to manage stormwater runoff would reduce water and energy consumption.
Low-Carbon Fuel Standard	Transition to cleaner, less-polluting fuels that have a lower carbon footprint.	This policy is a state program that requires no action at the local or project level. Nonetheless, implementation of the Project would optimize public transit, bicycle, and pedestrian access to the site by locating development adjacent to local transit lines and routes that provide safe and convenient access for cyclists and pedestrians, thereby reducing VMT. In addition, the Project would consist of a mix of hotel and restaurant uses, resulting in an increase in internal trips on the Project site, thereby further reducing VMT.
Mobile-Source Strategy (Cleaner Technology and Fuels Scenario)	Reduce GHGs and other pollutants from the transportation sector through the transition to zero-emission and low-emission vehicles, cleaner transit systems, and a reduction in vehicle miles traveled.	This policy is a state program that requires no action at the local or project level. Nonetheless, as discussed above, the Project would optimize public transit, bicycle, and pedestrian access to the site by locating development adjacent to local transit lines and routes that provide safe and convenient access for cyclists and pedestrians, thereby reducing VMT. In addition, the Project would consist of a mix of hotel and restaurant uses, resulting in an increase in internal trips on the Project site, thereby further reducing VMT.
SB 1383	Approve and implement short-lived climate pollutant strategy to reduce highly potent GHGs.	This policy is a state program that requires no action at the local or project level and is not applicable to the Project.

Policy	Primary Objective	Proposed Plan Consistency Analysis
California Sustainable Freight Action Plan	Improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system.	This policy is a state program that requires no action at the local or project level and is not applicable to the Project.
Post-2020 Cap-and-Trade Program	Reduce GHGs across largest GHG emissions sources.	This policy is a state program that requires no action at the local or project level and is not applicable to the Project.

Note:

[a] The scoping plan policies included in this table are those representing the state strategy for meeting the 2030 GHG target of SB 32.

As shown, the Project would not conflict with or hinder implementation of the policies the 2017 Climate Change Scoping Plan.

City of Burlingame Climate Action Plan

As discussed above, the City adopted a CAP in 2009 to reduce community and municipal GHG emissions.[8] The City's CAP is a roadmap that outlines a path for achieving the 2020 GHG emissions reduction goal (15 percent below 2005 levels) and 2050 (80 percent below 2020 levels). The CAP lists 29 recommended GHG emissions reduction measures from five sectors of San Mateo County's (County's) community and municipal operations (i.e., energy efficiency and green building, transportation and land use, waste reduction and recycling, education and promotion, municipal operations).

The consistency of the Project with the measures in the City's CAP is analyzed in Table 5.

Table 5. Consistency of Project with CAP Recommendations

No.	CAP Measure	Applicable?	Project Implementation	Consistent?
Energy Efficiency and Green Building Measures				
Energy-1	Adopt Water Efficiency Landscape Ordinance	Yes	The Project would include a rain-harvesting system to capture stormwater runoff; rainwater would be used for irrigating landscaped areas and the proposed turf block system.	Yes
Energy 2	Adopt Residential Energy Conservation Policy	No	This measure applies to existing residential development and would not be applicable to construction of the Project.	N/A
Energy-3	Solar and Energy Efficiency Financing Program	No	This measure applies to existing residential and small business development and would not be applicable to construction of the Project.	N/A

[8] City of Burlingame. 2009. *City of Burlingame Climate Action Plan*. June. Available: http://www.cecburlingame.com/wp-content/uploads/2015/02/climate_action_plan.pdf. Accessed: July 25, 2018.

No.	CAP Measure	Applicable?	Project Implementation	Consistent?
Energy-4	Residential Green Building Ordinance	No	This measure applies to residential development and would not be applicable to construction of the Project.	N/A
Energy-5	Commercial Green Building Ordinance	Yes	The Project would meet all City building standard requirements.	Yes
Energy-6	Commercial Energy Efficiency Policy	Yes	The Project would meet all City building standard requirements.	Yes
Energy-7	Expand Solar and Renewable Energy Generation	No	This measure applies to municipal efforts to streamline the City's solar permit process and would not be applicable to construction of the Project.	N/A
Energy-8	Adopt Commercial Energy Conservation Policy	Yes	The Project would meet all City building standard requirements.	Yes
Energy-9	Adopt Commercial Energy Conservation Ordinance	No	This measure applies to existing commercial development and would not be applicable to construction of the Project.	N/A
Energy-10	Adopt Residential Energy Conservation Ordinance	No	This measure applies to existing residential development and would not be applicable to construction of the Project.	N/A
Transportation and Land Use Measures				
On Road-1	Large Commercial Properties to Develop TDM Strategies	Yes	The Project would meet all City and County requirements regarding TDM strategies for new development.	Yes
On Road-2	Provide Public Parking for Hybrid or Alternative-Fuel Cars	No	The Project would not include public parking spaces; the measure would not be applicable to construction of the Project.	N/A
On Road-3	Ensure New Developments Provide Safe and Convenient Alternative Modes of Travel	Yes	The Project would optimize public transit, bicycle, and pedestrian access to the site by locating development adjacent to local transit lines and routes that provide safe and convenient access for cyclists and pedestrians.	Yes
On Road-4	Increase Ridership and Expand Shuttle Service	No	This measure applies to municipal shuttle and public transportation services and would not be applicable to construction of the Project.	N/A

No.	CAP Measure	Applicable?	Project Implementation	Consistent?
On Road-5	Encourage Mixed-Use, Infill, and Higher-Density Development	Yes	The Project would develop a mix of high-density hotel and onsite restaurant land uses in downtown Burlingame near public transportation.	Yes
Waste Reduction and Recycling Measures				
Waste-1	Provide New Residential and Commercial Recycling Service	No	This measure applies to municipal recycling services and would not be applicable to construction of the Project.	N/A
Waste-2	Adopt a Commercial Recycling Ordinance	Yes	The Project would comply with all City ordinances.	Yes
Waste-3	Consider an Increase in the Required Construction and Demolition Diversion Rate	Yes	The Project would comply with all City ordinances.	Yes
Waste-4	Consider an Increase in the Required Construction and Demolition Diversion Rate	Yes	The Project would comply with all City ordinances.	Yes
Waste-5	Require Recycling at Major Public Events	No	This measure applies to conditions of approval for public events and would not be applicable to construction of the Project.	N/A
Waste-6	Achieve a Citywide Diversion Rate of 75% by 2015	Yes	The Project would comply with all City ordinances.	Yes
Promotion and Education Measures				
Education-1	Develop "Burlingame Green" Community Group	No	This measure applies to municipal efforts to encourage development of a community group and would not be applicable to construction of the Project.	N/A
Education-2	Dedicate a Sustainability Coordinator	No	This measure applies to municipal efforts to create a part-time position of Sustainability Coordinator and would not be applicable to construction of the Project.	N/A
Municipal Measures				
Municipal-1	Develop "City Green Team"	No	This measure applies to development of a "City Green Team, composed of City personnel, and would not be applicable to construction of the Project.	N/A

No.	CAP Measure	Applicable?	Project Implementation	Consistent?
Municipal-2	Require Municipal Construction and Major Remodels to Achieve LEED Green Building Standards	No	This measure applies to construction and remodeling of municipal buildings and would not be applicable to construction of the Project.	N/A
Municipal-3	Consider Establishing a Sustainable Commission	No	This measure applies to municipal efforts to create a Sustainable Commission and would not be applicable to construction of the Project.	N/A
Municipal-4	Complete a Feasibility Study on Installation of Solar or Renewable Energy Projects at City Facilities	No	This measure applies to the municipal efforts to study the feasibility of solar and renewable energy projects at City facilities and would not be applicable to construction of the Project.	N/A
Municipal-5	Adopt a Sustainable Purchasing Policy	No	This measure applies to City fleet purchases of vehicles and paper products and would not be applicable to construction of the Project.	N/A
Municipal-6	Dedicate a Sustainability Coordinator	No	This measure applies to municipal efforts to create a part-time position of Sustainability Coordinator and would not be applicable to construction of the Project.	N/A

Note:
N/A = not applicable; TDM = Transportation Demand Management; LEED = Leadership in Energy and Environmental Design

As shown in Table 5, the Project would be consistent with all applicable measures in the City's CAP. Eighteen of the measures are not applicable to the Project. Because the Project would be consistent with all applicable CAP measures, it would not conflict with the City's CAP.

2017 Clean Air Plan

The 2017 Clean Air Plan includes performance objectives that are consistent with the state's climate protection goals under AB 32 and SB 375, which are designed to reduce GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2035. The 2017 Clean Air Plan identifies a range of transportation control measures, land use and local impact measures, and energy and climate measures, which make up the Clean Air Plan's control strategy for emissions, including GHGs.

As described above, the Project includes numerous objectives and measures to reduce operational GHG emissions. The Project is consistent with Clean Air Plan measures, including Water Control Measure WR2, Support Water Conservation, and Natural and Working Lands Control Measure NW2, Urban Tree Planting.

Plan Bay Area 2040/ California Senate Bill 375

Under the requirements of SB 375, the Metropolitan Transportation Commission and Association of Bay Area Governments have developed a sustainable community strategy for achieving the Bay Area's regional GHG emissions reduction target with the adopted Plan Bay Area 2040. Targets for the Bay Area, approved in March 2018 by CARB, include a 10 percent reduction in GHG emissions per capita from passenger vehicles by 2020 compared to 2005 emissions. The adopted target for 2035 is a 19 percent reduction per capita from passenger vehicles compared to emissions in 2005. The emissions reduction targets are associated with land use and transportation strategies only.

It is estimated that the Project would generate up to 3,279 local daily trips. The Project would optimize public transit, bicycle, and pedestrian access to the site by locating development adjacent to local transit lines and routes that provide safe and convenient access for cyclists and pedestrians. In addition, the Project would have relatively few employees (70 employees) and would not contribute to a substantial increase in passenger vehicle travel within the region.

These policies would support alternative transportation within the community, which could help reduce VMT and per capita GHG emissions from passenger vehicles, consistent with Plan Bay Area 2040.

Executive Order S-3-05

Achieving EO S-3-05 would require even more aggressive changes in all sectors of the economy and participation from all levels of government to reduce GHG emissions even further. Although many of the GHG reduction measures outlined in the 2017 scoping plan will continue to be implemented and enhanced beyond 2030, no plan for meeting the 2050 GHG emissions reduction goal, as described in EO S-3-05, has yet been adopted. In addition, EO S-3-05 does not apply to GHG emissions from commercial development, such as the Project.

The Climate Change Committee of the Association of Environmental Professionals (AEP) recommended in a 2016 white paper that CEQA analyses for multiple-phase projects with post-2020 development, such as the Project, not only "consider consistency with the 2020/AB 32–based framework but also analyze the consequences of post-2020 GHG emissions in terms of their impacts on the reduction trajectory from 2020 toward 2050." AEP further recommends that the "significance determination…should be based on consistency with 'substantial progress' along a post-2020 trajectory." The 2016 AEP white paper is advisory only and not binding guidance or an adopted set of CEQA thresholds. However, the CEQA Guidelines do authorize a lead agency to consider thresholds of significance recommended by experts, such as members of the AEP Climate Change Committee, which consists of leaders in climate action planning practices from consulting firms and agencies that have lead many of the local GHG emissions reduction planning efforts across California.

As mentioned above, the Project includes numerous objectives and measures to reduce operational and construction-related GHG emissions. In addition, the Project's net GHG emissions would be below the hotel GHG efficiency threshold for 2021. This threshold is based on overall SB 32 reduction targets; through the use of this threshold, the analysis of substantial progress through 2021, on a trajectory toward 2050 reduction targets, is used to disclose Project consistency with the long-term reductions called for in EO-S-3-05. It is also possible that future state and federal actions will reduce the Project's net emissions even further. Accordingly, it is assumed that the Project's emission levels would be consistent with the goals in EO S-3-05.

Appendix D
Supporting Noise Information

NOISE TECHNICAL REPORT

1499 BAYSHORE HIGHWAY PROJECT

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Introduction

This Noise Technical Report summarizes the potential noise impacts related to construction and operation of the 1499 Bayshore Highway Project (Project). Included are a review of existing conditions in the Project area, a summary of applicable policies and regulations related to noise, and an analysis of noise impacts resulting from construction and operation of the Project.

The Project is located within the Bayfront area of the City of Burlingame on a 2.19-acre parcel. East[1] of the Project site, across Old Bayshore Highway, is the City of Burlingame Shorebird Sanctuary and a segment of the San Francisco Bay Trail (Bay Trail). South of the Project site is Mills Creek, and beyond the creek to the south of the Project site is a single-story industrial building. Single-story commercial buildings are located north of the Project site along Mahler Road, as is The Avalon Academy, a school for children with movement disorders. Within the vicinity of the Project site are various multi-story buildings for office, commercial, and hospitality uses.

The Project would demolish the two existing two-story office buildings and other onsite features, such as utilities, paving, and landscaping. This newly vacant site would be used for development of a 12-story hotel with 404 guestrooms; an attached above-grade, four-level parking structure for 356 vehicles; and a free-standing restaurant. In total, the Project would involve approximately 410,000 gsf of development. In total, the maximum number of people expected at the Project site during operation of the three buildings, including employees and visitors would be 490 people.

The Setting section of this report explains relevant noise and vibration terminology, describes the surrounding land uses in the Project area, and presents the noise and vibration criteria and guidance that apply to the Project. The Impact section includes the analysis of the Project's potential noise and vibration impacts in the context of the CEQA Appendix G checklist.

Setting

Fundamentals of Environmental Noise and Vibration

Terminology

A brief description of the noise and vibration concepts and terminology used in this assessment is provided below.

- **Sound**. A vibratory disturbance transmitted by pressure waves through a medium such as air or water that is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micropascals. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion; rather, they combine logarithmically. For instance, if two identical noise sources each produce noise levels of 50 dBA (see definition immediately following), the combined sound level would be 53 dBA, not 100 dBA.

[1] For the purposes of this analysis, Old Bayshore Road is assumed to run in a north–south direction.

- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear. The dBA scale is the most widely used for environmental noise assessments.
- **C-Weighted Decibel (dBC).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear at very high noise levels. The C-weighting scale is flat and therefore includes more of the low-frequency sound energy than the A scale.
- **Maximum Sound Levels (L_{max}).** The maximum sound level measured during a given measurement period.
- **Equivalent Sound Level (L_{eq})**. The equivalent steady-state sound level that, in a stated period of time, would contain the same acoustical energy. The 1-hour A-weighted equivalent sound level (L_{eq} 1h) is the energy average of A-weighted sound levels occurring during a 1-hour period.
- **Day-Night Level (L_{dn}).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with a 10 dB penalty added to sound levels between 10:00 p.m. and 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. L_{dn} and CNEL are typically within 1 dBA of each other and, for all intents and purposes, interchangeable.
- **Vibration Velocity Level (or Vibration Decibel Level, VdB).** The root-mean-square velocity amplitude for measured ground motion expressed in dB.
- **Peak Particle Velocity (PPV).** A measurement of ground vibration, defined as the maximum speed at which a particle in the ground is moving, expressed in inches per second (in/sec).

Overview of Noise and Sound

Noise is commonly defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, an evaluation of noise is necessary when considering the environmental impacts of a proposed project.

Sound is characterized by various parameters, including the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level. Although the decibel scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The human ear is not equally sensitive to all frequencies in the entire spectrum; therefore, noise measurements are weighted more heavily toward frequencies to which humans are sensitive through a process referred to as A-weighting. Table 1 on the following page summarizes typical A-weighted sound levels for different noise sources.

Table 1. Typical A-Weighted Sound Levels

Common Outdoor Activities	Sound Level (dBA)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 mph at 50 feet		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower at 100 feet	70	Vacuum cleaner at 3 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban area, daytime	50	Dishwasher in next room
Quiet urban area, nighttime	40	Theater, large conference room (background)
Quiet suburban area, nighttime		
	30	Library
Quiet rural area, nighttime		Bedroom at night, concert hall (background)
Rustling of leaves	20	
		Broadcast/recording studio
	10	
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: California Department of Transportation. 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol.* September. Available: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf. Accessed: October 6, 2015.

Human sound perception, in general, is such that a change in sound level of 1 dB cannot typically be perceived by the human ear, a change in sound level of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level. A doubling of actual sound energy is required to result in a 3 dB (i.e., barely noticeable) increase in noise; in practice, for example, this means that the volume of traffic on a roadway would typically need to double to result in a noticeable increase in noise.[2]

The decibel level of a sound decreases (or attenuates) exponentially as the distance from the source of that sound increases. For a point source, such as a stationary compressor or construction equipment, sound attenuates at a rate of 6 dB per doubling of distance. For a line source, such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance. Atmospheric conditions, including wind, temperature gradients, and humidity, can change how sound propagates over distance

[2] California Department of Transportation. 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September. Available: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf.

and affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1 to 2 dB per doubling of distance. Barriers, such as buildings and topography, which block the line of sight between a source and receiver also increase the attenuation of sound over distance.

In urban environments, simultaneous noise from multiple sources may occur. Because sound pressure levels in decibels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. Adding a new noise source to an existing noise source, with both producing noise at the same level, will not double the noise level. If the difference between two noise sources is 10 dBA or more, the higher noise source will dominate, and the resultant noise level will be equal to the noise level of the higher noise source. In general, if the difference between two noise sources is 0 to 1 dBA, the resultant noise level will be 3 dBA higher than the higher noise source, or both sources if the sources are equal. If the difference between two noise sources is 2 to 3 dBA, the resultant noise level will be 2 dBA above the higher noise source. If the difference between two noise sources is 4 to 10 dBA, the resultant noise level will be 1 dBA higher than the higher noise source.

Community noise environments are generally perceived as quiet when the 24-hour average noise level is below 45 dBA, moderate in the 45 to 60 dBA range, and loud above 60 dBA. Very noisy urban residential areas are usually around 70 dBA CNEL. Along major thoroughfares, roadside noise levels are typically between 65 and 75 dBA CNEL. Incremental increases of 3 to 5 dB to the existing 1-hour L_{eq}, or to the CNEL, are common thresholds for an adverse community reaction to a noise increase. However, there is evidence that incremental thresholds in this range may not be sufficiently protective in areas where noise-sensitive uses are located and CNEL is already high (i.e., above 60 dBA). In these areas, limiting noise increases to 3 dB or less is recommended.[3] Noise intrusions that cause short-term interior levels to rise above 45 dBA at night can disrupt sleep. Exposure to noise levels greater than 85 dBA of 8 hours or longer can cause permanent hearing damage.

Overview of Ground-borne Vibration

The operation of heavy construction equipment, particularly pile-driving equipment and other impact devices (e.g., pavement breakers), creates seismic waves that radiate along the surface of the ground and downward. These surface waves can be felt as ground vibration. Vibration from the operation of this type of equipment can result in effects that range from annoyance for people to damage for structures.

Perceptible ground-borne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they cause rock and soil particles to oscillate. The actual distance that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is referred to as peak particle velocity (PPV), the commonly accepted descriptor of vibration amplitude.

Vibration amplitude attenuates (or decreases) over distance. This attenuation is a complex function of how energy is imparted into the ground as well as the soil or rock conditions through which the vibration is traveling (variations in geology can result in different vibration levels).

[3] Federal Transit Administration. 2006. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. Office of Planning and Environment. Available: http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf.

The following equation is used to estimate the vibration level at a given distance for typical soil conditions.[4] PPV_{ref} is the reference PPV at 25 feet (Table 2, below).

$PPV = PPV_{ref} \times (25/Distance)^{1.5}$

Table 2 summarizes typical vibration levels generated by construction equipment at a reference distance of 25 feet and other distances, as determined with use of the attenuation equation above.

Table 2. Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet	PPV at 50 Feet	PPV at 70 Feet	PPV at 80 Feet	PPV at 100 Feet	PPV at 200 Feet
Pile driver (impact)	0.650	0.303	0.209	0.181	0.141	0.066
Pile driver (sonic/vibratory)	0.650	0.303	0.209	0.181	0.141	0.066
Hoe ram	0.089	0.042	0.029	0.025	0.019	0.009
Large bulldozer	0.089	0.042	0.029	0.025	0.019	0.009
Caisson Drill	0.089	0.042	0.029	0.025	0.019	0.009
Loaded trucks	0.076	0.035	0.024	0.021	0.017	0.008
Jackhammer	0.035	0.016	0.011	0.010	0.008	0.004
Small bulldozer	0.003	0.001	0.001	0.001	0.001	0.000

Source: California Department of Transportation. 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September. Available: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf.

Tables 3 and 4, below, summarize the guidelines developed by the California Department of Transportation (Caltrans) for damage and annoyance from the transient and continuous vibration that is usually associated with construction activity. Impact pile drivers, "pogo stick" compactors (small hand-held soil compactors), crack-and-seat equipment (equipment that breaks and re-seats pavement), excavation equipment, static compaction equipment, tracked vehicles, vehicles on highways, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment are typically associated with continuous vibration. The activities that are typically associated with single-impact (transient) or low-rate, repeated impact vibration include blasting and the use of drop balls or dropped metal plates.[5]

[4] Federal Transit Administration. 2006. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. Office of Planning and Environment. Available: http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf.

[5] California Department of Transportation. 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September. Available: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf.

Table 3. Vibration Damage Potential, Threshold Criteria Guidelines

	Maximum PPV (in/sec)	
Structure and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Note: Transient sources create a single, isolated vibration event (e.g., blasting or drop balls). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: California Department of Transportation. 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September. Available: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf.

Table 4. Vibration Annoyance Potential, Criteria Guidelines

	Maximum PPV (in/sec)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Note: Transient sources create a single, isolated vibration event (e.g., blasting or drop balls). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: California Department of Transportation. 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September. Available: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf.

Regulatory Setting

Federal

No federal noise standards are directly applicable to the Project.

State

Title 24 of the California Code of Regulations, Part 2, California Noise Insulation Standards, establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under this regulation, interior noise levels that are attributable to exterior noise sources cannot exceed the 45 L_{dn} in any habitable room. Where such residences are located in an environment in which exterior noise is 60 L_{dn} or greater, an acoustical analysis is required to ensure that interior levels do not exceed the 45 L_{dn} interior standard.

Local

City of Burlingame General Plan

The Noise Element of the City of Burlingame General Plan establishes noise and land use compatibility standards to guide development, as well as noise goals and policies to reduce the harmful and annoying effects of excessive noise in the City. According to the General Plan Noise Element, public, quasi-public, and residential land uses are compatible with outdoor noise levels of up to 60 dBA CNEL while the indoor noise levels of up to 45 dBA CNEL. Refer to Table 5 below for the outdoor noise levels suitable to various land use categories.

Table 5. City of Burlingame Outdoor Noise Level Planning Criteria

Land Use Categories	CNEL (dBA)
Public, Quasi-Public and Residential: Schools, Hospitals, Libraries, Auditoriums, Intensively Used Parks and Playgrounds, Public Buildings, Single Family Home, Multiple Family Apartments and Condominiums, Mobile Home Parks	60
Passively-Used Open Space: Wilderness-Type Parks, Nature or Contemplation Areas of Public Parks	45
Commercial: Shopping Centers, Self-Generative Business, Commercial Districts, Offices, Banks, Clinics, Hotels and Motels	65
Industrial: Non-Manufacturing Industry, Transportation, Communications, Utilities, Manufacturing	75

In addition, the General Plan also identifies recommended noise standards for construction equipment operating within the City, which are summarized in Table 6.

Finally, the General Plan also states that no construction noise shall be emitted past the property line so as to create a noise level increase of more than 5 dB above the ambient noise level. The Noise Element also contains policies, recommendations, and actions to avoid or reduce noise effects resulting from development within the City. Development of the Project would be subject to applicable General Plan policies, including those listed below.

N(A): Preserve peaceful noise conditions in the City where they do exist.

N(B): Reduce annoying levels of noise for existing situations; aircraft, motor vehicle and domestic animal noise were identified by a Noise Questionnaire to be the most annoying at present.

N(C): Achieve a peaceful acoustic environment in portions of the City to be developed.

City of Burlingame Municipal Code

The Building Construction Section of the Municipal Code establishes daily hours for construction in the City of Burlingame. Chapter 18.07.110 states that no person shall erect, demolish, alter, or repair any building or structure other than between the hours of 7:00 a.m. and 7:00 p.m. on weekdays, 9:00 a.m. and 6:00 p.m. on Saturdays, and 10:00 a.m. and 6:00 p.m. on Sundays and holidays, except under circumstances of urgent necessity in the interest of public health and safety. An exception must be approved in writing by the building official and shall be granted for a period of no more than 3 days for projects, including structures with a gross floor area of less than 40,000 square feet; when reasonable to accomplish the erection, demolition, alteration, or repair, the exception shall not exceed 20 days for projects, including structures with a gross floor area of 40,000 square feet or greater.

Table 6. Maximum Allowable Noise Levels from Construction Equipment

Equipment	Peak Noise Level in dBA at 50 Feet
Earthmoving	
Front loader	75
Backhoes	75
Dozers	75
Tractors	75
Scrapers	80
Graders	75
Truck	75
Paver	80
Materials Handling	
Concrete Mixer	75
Concrete Pump	75
Crane	75
Derrick	75
Stationary	
Pumps	75
Generators	75
Compressors	75
Impact	
Pile Drivers	95
Jackhammers	75
Rock Drills	80
Pneumatic tools	80
Other	
Saws	75
Vibrator	75

In addition to the restriction on hours for construction, Section 10.40.039 of the Municipal Code identifies time periods when loading and unloading activities are prohibited:

- Between the hours of 10:00 p.m. on a Sunday, Monday, Tuesday, Wednesday, or Thursday and 7 a.m. of the following day;
- Between the hours of 10:00 p.m. on a Friday and 8 a.m. on the following Saturday;
- Between the hours of 10:00 p.m. on a Saturday and 8 a.m. on the following Sunday; and
- Between the hours of 10:00 p.m. on a day before a holiday and 8 a.m. on the holiday.

The City of Burlingame Municipal Code also contains standards (Section 25.58.050) that limit noise from mechanical equipment, such as air-conditioners and generators, to 60 dBA during the daytime hours of 7:00 a.m. to 10:00 p.m. and 50 dBA during the nighttime hours of 10:00 p.m. to 7:00 a.m.

Surrounding Land Uses

Office buildings are currently located on the Project site. Surrounding land uses include hotels, restaurants, other commercial and office buildings, the San Francisco Bay Trail, and The Avalon Academy, a school for children with movement disorders (such as cerebral palsy). This is located adjacent to the Project site across Mahler Road. The San Francisco International Airport is located approximately 0.8 mile to the north of the Project site.

Existing Noise Levels

Noise-sensitive land uses[6] in the Project vicinity consist primarily of the adjacent schools, nearby hotel use, and open space area of the San Francisco Bay Trail. The closest sensitive land uses are the nearby school, The Avalon Academy, which is located approximately 65 to 70 feet from the Project site. The nearby hotel, the Bay Landing Lodge, is located over 200 feet away. The existing ambient noise environment in the Project area is characteristic of an urban environment (e.g., highway and local traffic, aircraft overflights). Noise from vehicle traffic on Bayshore Highway and US 101 is the dominant noise source at the Project site.

To quantify existing ambient noise levels in the Project area, long-term (24-hour) measurements were conducted between Tuesday, April 3, 2018 and Wednesday, April 4, 2018. Short-term measurements were conducted on Tuesday, April 4, 2018. Measurements were conducted at locations adjacent to the Project site. Short- and long-term measurement locations were selected to capture noise levels in areas that are sensitive to noise or representative of ambient levels in the vicinity throughout the day.

The locations of the noise measurement sites are described in Tables 7 and 8, below. These tables also summarize the results of the noise measurement survey. For the complete dataset of measured noise levels, please refer to Appendix D-2.

As shown in Table 7, below, existing noise levels along the northern side of the Project site (measured along Mahler Road) were measured to be approximately 67.4 dBA L_{dn} (refer to Measurement LT-1 above). As shown in Table 8, the short-term measurement taken closest to the western side of the Project site, ST-1 (located along the southern perimeter of the Burlingame Music School, to the north of the Project site), demonstrated a 15-minute average noise level of 60.7 dBA L_{eq}. The L_{max} noise level recorded during this measurement was 77.5 dBA L_{max}. Although some aircraft and some wildlife noise (bird chirping) was captured during the measurements, the predominant noise source for all measurements was roadway traffic from Bayshore Highway located adjacent to the Project site.

[6] Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive land uses typically include single- and multi-family residential areas, health care facilities, lodging facilities, and schools. Recreational areas where quiet is an important part of the environment can also be considered sensitive to noise. Some commercial areas may be considered noise sensitive as well, such as the outdoor restaurant seating areas.

Table 7. Long-Term Noise Levels Measurements in and around the Project Site

			Tuesday-Wednesday 04/03 - 04/04	
	Site Description	**Date and Time**	**Measured L_{dn}**	**Measured 12-hour (7 a.m. to 7 p.m.) Daytime L_{eq}**
LT-1	Located on a pole directly across from The Avalon Academy on the south side of Mahler Road.	Start: Tuesday April 3, 2018 at ~11:00 a.m. End: Wednesday April 4, 2018 at ~12:00 p.m.	67.4	64.8
LT-2	Located in a tree south of the parking lot for the Bay Landing Hotel, east of Bayshore Highway	Start: Tuesday April 3, 2018 at ~12 noon End: Wednesday April 4, 2018 at ~12 noon	71.8	69.4

Note: See Appendix D-2 for data.
LT = long-term (24-hour/multi-day) ambient noise measurement.

Table 8. Short-Term Noise Levels Measurements near the Project Site

				Measured Noise Level (dBA)		
Site	**Site Description**	**Date and Time**	**Primary Noise Sources**	**L_{eq}**	**L_{max}**	**L_{min}**
ST-1	Near the intersection of Bayshore Highway and Mahler Road in front of the Burlingame Music School. To the north of the Project site.	04/03/2018 at 12:05 p.m.	Traffic along Bayshore Highway, aircraft noise from nearby San Francisco International Airport, intermittent bird chirping noise.	60.7	74.9	48.2
ST-2	To the Northeast of the Project site along the San Francisco Bay Trail, south of the Bay Landing Hotel.	04/03/2018 at 12:05 p.m.	Traffic along Bayshore Highway, aircraft noise from nearby San Francisco International Airport, intermittent bird chirping noise.	63.7	77.5	52.7

Note: See Appendix D-2 for data files.
ST = short-term (~15-minute) ambient noise measurement.

Impact Assessment

Criteria for Determining Significance

The State CEQA Guidelines Appendix G (14 CCR 15000 et seq.) identifies significance criteria to be considered for determining whether a project could have significant impacts on the existing noise environment.

A project impact would be considered significant if construction or operation of the proposed project would result in any of the following:

1. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
1. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
2. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
3. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
4. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
5. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Methods

This noise impact analysis evaluates the temporary noise increase associated with Project demolition and construction activities, operational noise generated by sound-generating equipment and onsite activities, traffic noise associated with Project-related changes in traffic patterns, and the exposure of the Project site to traffic and other noise sources.

Noise impacts associated with onsite demolition and construction activities were evaluated using the noise calculation method and construction equipment noise data in the Federal Highway Administration (FHWA) roadway construction noise model (RCNM). The noise data include the A-weighted L_{max}, measured at a distance of 50 feet from the construction equipment and the utilization factors for the equipment. The utilization factor is the percentage of time each piece of construction equipment is typically operated at full power over the specified time period and is used to estimate L_{eq} values from L_{max} values. For example, the L_{eq} value for a piece of equipment that operates at full power over 50 percent of the time is 3 dB less than the L_{max} value.[7]

[7] Federal Highway Administration. 2006. *FHWA Roadway Construction Noise Model User's Guide*. FHWA-HEP-05-054. January.

Direct noise impacts associated with increased traffic volumes generated by the Project were evaluated for:

- Existing (Year 2018) condition, and
- Existing (Year 2018) plus Project condition.

Modeling was conducted using a spreadsheet based on the FHWA Traffic Noise Model (TNM) Version 2.5. This spreadsheet calculates the traffic noise level at a fixed distance from the centerline of a roadway based on the traffic volume, roadway speed, and vehicle mix that is predicted to occur under each condition. Peak hour turning movements received from Hexagon were converted into ADT by taking the average (between AM and PM) peak-hour segment volume and multiplying by 10. These ADT numbers were then utilized to determine potential Project-related traffic noise impacts along the roadways in the Project area. A reasonable default vehicle mix (i.e., the proportion of automobiles, trucks, buses, and other vehicles) was used for future and Project-related traffic. Traffic noise was evaluated in terms of how Project-related traffic noise increases could affect existing noise-sensitive land uses as well as proposed onsite sensitive land uses along the major Project traffic access roadways.

Operational noise impacts associated with the proposed onsite activities and stationary sources were evaluated based on the proposed site plan layout and the types of noise generating equipment and noise generating activities provided by the Project Sponsor.

Noise from point sources (e.g., construction equipment and stationary operational equipment) was estimated using point-source attenuation of 6 dB per doubling of distance. Noise generated by line sources (e.g., vehicles traveling on streets) was estimated using line-source attenuation of 3 dB per doubling of distance from the noise source.

Discussion

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant with Mitigation (Construction). The Project would involve demolition of buildings and paved surfaces on the site and construction of an approximately 131-foot-tall hotel. The phases of construction are demolition, excavation and foundations, superstructure, façade, interior fit-out, and site improvements. Project construction would occur only during daytime hours (summarized previously).

The City of Burlingame's General Plan Noise Element contains specific numerical thresholds for noise generated by construction activities. The General Plan identifies recommended noise standards for individual pieces of construction equipment operating within the City, which are summarized in Table 6. In addition, the General Plan states that no construction noise shall be emitted past the property line so as to create a noise level increase of more than 5 dB above the ambient noise level. Project construction noise is analyzed in the context of these two sets of thresholds.

The maximum allowable noise levels for equipment that would be used during Project construction are shown in column 3 of Table 9, below. As shown, noise levels from equipment used for Project construction may exceed the numerical standards.

Table 9. Maximum Noise Levels for Typical Construction Equipment compared to Allowable Noise Levels from City of Burlingame General Plan

Construction Equipment	FHWA Source Noise Levels L_{max} at 50 feet (dBA)	Maximum Allowable Noise Levels from Construction Equipment[a]	Delta (dB)	Utilization Factor[b]	L_{eq} at 50 feet Adjusted for Utilization	In Excess of Threshold?
Backhoe	78	75	3	40%	74	No
Crane	81	75	6	20%	73	No
Concrete Pump Truck	81	75	6	20%	74	No
Concrete Mixer Truck	79	75	4	40%	75	No
Dump/Haul Truck	76	75	1	40%	72	No
Front-end Loader	79	75	4	40%	75	No
Generator	81	**75**	6	50%	**78**	**Yes**
Grader	85	**75**	10	40%	**81**	**Yes**
Scraper	84	80	4	40%	80	No

Source: Federal Highway Administration. 2006. Roadway Construction Noise Model User's Guide. Available: http://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf.

Notes:

a. Maximum allowable noise levels for construction equipment from the City of Burlingame General Plan, Noise Element, Table 4.6.

b. Utilization Factor = the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power during a 1-hour period.

As demonstrated in Table 9, the typical L_{max} noise levels according to the FHWA guidance are in the range of 1 to 10 dB higher than the recommended maximum level for equipment in the City, with most equipment in the range of 3 to 6 dB higher. When accounting for the typical utilization rates of these equipment, only two pieces of equipment (generator and a grader) are still in excess of the equipment-specific thresholds set out in the City General Plan. Therefore, although most of the equipment proposed for Project construction would not exceed this standard, it is possible that noise from some construction equipment may exceed these applicable thresholds. Construction noise impacts related to the equipment-specific thresholds in the City of Burlingame would be potentially significant.

With regard to the City General Plan threshold stating that construction noise past the property line should not increase the ambient noise level by more than 5 dB, combined reasonable worst-case construction noise was modeled. The phase that involves the most construction equipment and the loudest pieces of equipment is the excavation and foundations phase. During this phase, it is expected that excavators, concrete trucks, dump trucks, cranes and drill rigs would be used.

In order to analyze a reasonable worst-case combined construction noise level, it was assumed that the three loudest pieces of equipment that would be expected to be used during a single construction phase (excavation and foundations) would be operating simultaneously in close

proximity to one another. The combined noise level was calculated based on the assumption that a drill, excavator, and concrete mixer truck were all being used simultaneously on the Project site. To calculate average L_{eq} values, L_{max} values were utilized in conjunction with estimated utilization factors (the fraction of time that equipment is anticipated to be operate). Anticipated L_{max} and L_{eq} construction noise levels at various distances from the Project site are provided in Table 10.

Table 10. Combined Construction Noise Levels from Loudest Phase

Source Data:	Maximum Sound Level (dBA)	Utilization Factor	L_{eq} Sound Level (dBA)
Construction Condition: Site Leveling			
Source 1: Concrete mixer truck - Sound level (dBA) at 50 feet =	79	40%	75.0
Source 2: Excavator - Sound level (dBA) at 50 feet =	81	40%	77.0
Source 3: Drill- Sound level (dBA) at 50 feet =	84	20%	77.0
Calculated Data:			
All Sources Combined - L_{max} sound level (dBA) at 50 feet =			87
All Sources Combined - L_{eq} sound level (dBA) at 50 feet =			81

Distance Between Source and Receiver (ft.)	Geometric Attenuation (dB)	Calculated L_{max} Sound Level (dBA)	Calculated L_{eq} Sound Level (dBA)
50	0	87	81
70	**-2**	**84**	**78**
100	-6	81	75
200	-12	75	69
300	-16	71	66
500	-20	67	61
700	-23	64	58
1,000	-26	61	55

Notes:

Geometric attenuation based on 6 dB per doubling of distance.

Note: This calculation does not include the effects, if any, of local shielding from walls, topography or other barriers which may reduce sound levels further.

The nearest noise sensitive receptor is The Avalon Academy, which is located approximately 70 feet from the edge of expected Project construction areas. As shown in Table 10, the modeled L_{max} noise level at a distance of 70 feet is 98 dBA L_{max}, and the modeled average noise levels from construction activity at a distance of 70 feet is 78 dBA L_{eq}. As shown in in Table 7, above, average daytime (7 a.m. to 7 p.m.) ambient noise levels at The Avalon Academy are approximately 65 dBA L_{eq}. The reasonable worst-case modeled construction noise would, therefore, be over 13 dB greater than the existing ambient noise level, and would exceed the allowable 5 dB level over ambient as described in the General Plan. This impact would be potentially significant. **Mitigation Measure NOI-1** would require the implementation of a Noise Control Plan, which would include noise reduction measures that would ensure that the Project would not exceed the noise thresholds from the City General Plan. The impact would be ***less than significant after mitigation***.

Mitigation Measure NOI-1: Construction Noise Control Plan. To ensure that existing ambient noise levels are not exceeded by more than 5 dBA with Project construction activities and that individual pieces of equipment do not exceed the allowable equipment-specific thresholds, the owner or designee shall develop a construction noise control plan to reduce construction noise levels. The plan shall require the construction contractor to conduct Project construction such that average noise levels do not exceed 70 dBA at the closest sensitive land use, The Avalon Academy (approximately 70 feet from proposed construction activities). In addition, the plan shall require average noise levels from individual pieces of equipment (specifically, graders and generators) not to exceed the thresholds from the Burlingame General Plan. Measures that can be employed to reduce construction noise include:

- Requiring generators used for Project construction to include barriers or shielding to reduce noise levels at 50 feet to the allowable level.
- Using smaller graders with lower horsepower or reducing the hourly utilization rate of graders used on the site to reduce noise levels at 50 feet to the allowable level.
- Locating construction equipment as far as feasible from noise-sensitive uses.
- Locating stationary noise sources, such as temporary generators, as far from nearby receptors as possible (or consider the use of mufflers or temporary enclosures and barriers).
- Requiring all construction equipment powered by gasoline or diesel engines to have sound control devices that are at least as effective as those originally provided by the manufacturer and all equipment to be operated and maintained to minimize noise.
- Prohibiting gasoline or diesel engines from having unmuffled exhaust systems.
- Not idling inactive construction equipment for prolonged periods (i.e., more than 5 minutes).
- Constructing solid plywood fences around the construction site adjacent to operational businesses, residences, or other noise-sensitive land uses.
- Using temporary noise control blanket barriers.
- Monitoring the effectiveness of noise attenuation measures by taking noise measurements.
- Using “quiet” gasoline-powered compressors or electrically powered compressors as well as electric rather than gasoline- or diesel-powered forklifts for small lifting.
- Designating a "disturbance coordinator," who shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler) and require that reasonable measures to correct the problem be implemented as soon as possible. A telephone number for the disturbance coordinator shall be posted at the construction site and included in notices sent to neighbors regarding the construction schedule. The construction contractor shall log construction noise complaints, the causes for the complaints, and the measures implemented to address the complaints. The log shall be provided to the City upon request.

Less than significant (Operation). The Project would have the potential to lead to an increase in traffic in the vicinity of the Project site, as detailed in Section XVI, *Transportation and Traffic*. Traffic noise under Existing and Existing plus Project conditions was modeled to determine if Project-related traffic noise increases would be significant. A significant impact would occur if the Project would increase traffic noise by 3 dB or more in areas where existing noise levels exceed 60 L_{dn}, or by 5 dB in areas where existing noise levels would remain at or below 60 L_{dn} with Project-added traffic. Existing traffic noise levels were modeled to be greater than 60 L_{dn} for most roadway segments, with only 7 of the 39 modeled segments having existing noise levels of less than 60 L_{dn}.

As shown in Appendix D-2, Project-generated traffic would increase traffic noise by no more than 0.4 dB on any modeled roadway segment. A change in sound level of 1 dB cannot typically be perceived by the human ear, and a change in sound level of 3 dB is considered to be just noticeable. As Project-related traffic noise increases would not result in greater than the allowable 3 dB or 5 dB increases, and in fact would not be detectable, traffic noise impacts would be ***less than significant.***

A rooftop bar is proposed as part of the Project. The bar would be at least 100 feet above the ground level, and individuals conversing at the bar would not have a direct line of sight to nearby noise sensitive uses (such as the nearby school). Modeling was conducted to determine future noise levels at the nearby school from people talking at the bar. To determine the overall noise level generated by people talking at the bar, it was assumed that there would be up to 50 people (including bartenders/employees and patrons) at the bar at a given time. The sound level of a person speaking in a "very loud" voice is about 74 dBA at 1 meter (Harris 1979). This corresponds to about 44 dBA at 100 feet for one person.

With an estimated 50 people speaking at the same time, the sound would combine to generate an overall maximum noise level of about 61 dBA at a distance of 100 feet. Since it is unlikely that people would be speaking 100 percent of the time over a one-hour period, it was conservatively assumed that each person would be speaking about 30 percent of the time during an hour. The corresponding one-hour L_{eq} would therefore be about 56 dBA L_{eq} at a distance of 100 feet from the hotel bar. In addition, noise would likely be reduced by about 5 dB due to attenuation from the line of sight being blocked between the noise source (individuals talking at the bar) and the nearby receptor, resulting in an hourly average noise level of approximately 51 dBA L_{eq}. Note that "soft music" may be played at the bar, but this would largely be overshadowed by the noise of individuals talking. As the existing noise environment (12-hour daytime L_{eq}) in the area was a measured to be between approximately 65 to 70 dBA L_{eq} (refer to Table 7), an hourly average noise level of approximately 51 dBA L_{eq} would not contribute substantially to the overall ambient noise level. Impacts from crowd noise at the rooftop bar would be ***less than significant***.

The proposed 131-foot-tall hotel would require heating, ventilation, and air-conditioning (HVAC) systems. Although the exact sizes and locations of the proposed HVAC systems are unknown at this time, it is reasonable to assume that standard package units would be installed on the roof of the proposed hotel. This would mean that the property line could be as close as approximately 131 feet away and that the existing adjacent school could be as close as 150 feet away. HVAC equipment installed on the rooftop of the proposed building could generate an average noise level of approximately 66 dBA L_{eq} at a distance of 50 feet.[8] At a distance of 131 feet, the noise level would be reduced to less than 58 dBA L_{eq}. However, roof-mounted HVAC equipment, especially on the roof of a building as tall as the proposed hotel, would not generally have a direct line of sight to adjacent noise-

[8] U.S. Environmental Protection Agency. 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*. December 31.

sensitive receivers. Therefore, an additional 5 dB reduction can be assumed, and the estimated noise level from HVAC equipment would be approximately 53 dBA L_{eq} at the property line. As discussed in Appendix D, Section 25.58.050 limits noise from mechanical equipment, such as air-conditioners and generators, to 60 dBA during the daytime hours of 7:00 a.m. to 10:00 p.m. and 50 dBA during the nighttime hours of 10:00 p.m. to 7:00 a.m. This noise level would be below the allowable daytime noise level but may be in excess of the nighttime 50 dBA L_{eq} noise limit at the property line. Therefore, noise impacts from HVAC equipment would be potentially significant**.** Implementation of Mitigation Measure NOI-2 would require acoustical treatments for the proposed HVAC equipment and that noise from HVAC equipment be minimized and below acceptable noise levels. The impact would be ***less than significant after mitigation***.

In addition to HVAC equipment, an emergency generator would be installed with Project implementation. The planned location for the generator is near the northeastern corner of the Project perimeter, which could be as close as 90 feet from the property line of The Avalon Academy. Emergency generators create temporary and periodic noise during testing. The generator would most likely be tested once a week during daytime hours for a period of 15 minutes. Sound levels from emergency generators vary, depending on the type of generator and the noise attenuation that has been incorporated into the design and placement. The exact generator proposed for Project use is not known at this time.

Given the temporary and periodic nature of emergency generator testing, generators would not permanently increase ambient noise levels. However, the generators would need to comply with the 60 dBA noise limit during the daytime hours of 7:00 a.m. to 10:00 p.m. and 50 dBA during the nighttime hours of 10:00 p.m. to 7:00 a.m. Although the design is not final, the generator is expected to be located within a mostly enclosed area. Because specifics of this enclosure are not known at this time, noise reduction from this potential enclosure cannot be quantified. Without accounting for noise attenuation, a single emergency generator may generate a sound level of up to 81 dBA at a distance of 50 feet.[9] At a distance of 25 feet, the approximate edge of the property, noise levels from generator testing could be almost 6 dB higher, or approximately 87 dBA L_{max}. Although noise from weekly generator testing would be temporary in nature, it would most likely exceed the daytime allowable noise limit for mechanical equipment of 60 dBA during testing. Therefore, impacts from generator testing would be potentially significant. Implementation of Mitigation Measure NOI-2 would require acoustical treatments for the proposed emergency generator and that the noise from the proposed emergency generator be minimized and below acceptable noise levels. The impact would be ***less than significant after mitigation***.

> **Mitigation Measure NOI-2: Provide Acoustical Treatments for Mechanical Equipment**. The Project Sponsor shall provide acoustical treatments for the proposed emergency generator to reduce noise levels to below the 60 dBA L_{eq} daytime threshold for mechanical equipment, as determined by a qualified acoustical consultant. In addition, the Project Sponsor shall provide acoustical treatments for the proposed HVAC equipment to reduce noise to a level below the nighttime noise limit of 50 dBA L_{eq} at the property line, as also determined by a qualified acoustical consultant. Acoustical treatments shall be selected that ensure that noise levels will be below the 60 dBA daytime and 50 dBA nighttime thresholds, as applicable, in accordance with the noise limitations specified in the City Municipal Code. Treatments may include, but are not limited to:

[9] This value assumes an L_{max} of 81 dBA for a generator at 50 feet (see Table 3.6-8) and an attenuation of 6 dBA per doubling of distance.

- Installing stationary equipment as far as possible from offsite noise-sensitive land uses to reduce noise levels at adjacent parcels,
- Constructing enclosures around noise-generating mechanical equipment,
- Placing barriers around the equipment,
- Installing relatively quiet models of mechanical equipment,
- Using mufflers or silencers on equipment exhaust fans,
- Orienting or shielding equipment to protect sensitive uses to the greatest extent feasible,
- Limiting the testing of emergency generators to daytime hours (7:00 a.m. to 10:00 p.m.), and
- Limiting the testing of emergency generators such that only one generator is tested at a given time to limit the effects of additive noise from the equipment.

b) Exposure of persons to, or generation of, excessive ground-borne vibration or ground-borne noise levels?

Less than Significant. Construction of the Project could create ground-borne vibration from equipment such as bulldozers, drills, trucks, jackhammers, and hoe rams. The Project would not require pile driving. The annoyance threshold used to assess potential annoyance-related vibration effects, particuarly at the adjacent school and neaby hotel land uses, is 0.04 in/sec PPV (or the "distinctly perceptible"level for continuous or frequent intermittent sources). The nearest sensitive receptor, The Avalon Academy, is located approximately 70 feet from the edge of the Project site where construction activities would occur. At a distance of 70 feet, vibration from all construction equipment proposed to be used would be below the 0.04 PPV in/sec distinctly perceptible threshold for continuous/frequent sources (as shown in Table 11, below). Since pile driving is not proposed, construction ground-borne vibration impacts would be ***less than significant***.

Table 11. Vibration Source Level for Proposed Construction Equipment

Equipment	PPV at 70 Feet
Hoe ram	0.029
Large bulldozer	0.029
Caisson Drill	0.029
Loaded trucks	0.024
Jackhammer	0.011
Small bulldozer	0.001

Source: California Department of Transportation. 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September. Available: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf.

Ground-borne vibration during operation of the Project would mainly result from increased traffic. However, vibration generated by traffic traveling on roadways is usually below the threshold of perception at adjacent land uses, unless there are severe discontinuities, such as large potholes, in the roadway surface. This analysis assumes that roadways in the Project area are, and will continue to be reasonably maintained, with no severe discontinuities. Therefore, no analysis of vibration generated by the Project's operational traffic is provided.

c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Less than Significant with Mitigation. As discussed under Item (a), Project-generated traffic would increase traffic noise by no more than 0.4 dB on any modeled roadway segment. Because a 1 dB change in the sound level cannot typically be perceived by the human ear, Project-related traffic increases would not result in a substantial permanent increase in noise. In addition, Project-related HVAC equipment and emergency generator could generate noise levels in excess of the allowable 50 dBA nighttime and 60 dBA daytime limits for mechanical equipment, which would be a potentially significant impact. Implementation of Mitigation Measure NOI-2, however, would ensure that these noise limits would not be exceeded. Because Project-generated noise would not exceed the allowable limits in the City of Burlingame, the Project would not result in a substantial permanent increase in noise. This impact would be ***less than significant after mitigation***.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the Project?

Less than Significant with Mitigation. As discussed under Item (a), Project-generated construction noise could increase ambient noise levels in the Project vicinity by more than the allowable 5 dB. This would constitute a substantial temporary increase in ambient noise levels, which is considered a potentially significant impact. With implementation of Mitigation Measure NOI-1, noise from construction activities would not be expected to exceed 70 dBA L_{eq}, or increase by 5 dB over the ambient noise level, at nearby sensitive receptors. Impacts related to a substantial temporary or periodic increase in noise would therefore be ***less than significant after mitigation***.

e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?

Less than Significant. The closest airport to the Project site is the San Francisco International Airport, located approximately 0.8 mile to the north of the Project site. Although the Project site is located within two (2) miles of this public airport, it is located outside of the 65 CNEL contour for the airport as shown in the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport.*[10] As such, aircraft activity at the San Francisco International Airport would not be expected to expose persons to excessive noise levels, and there would be ***a less than significant impact*** related to excessive aircraft noise from public airports.

f) For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the project area to excessive noise levels?

No Impact. There are no private airstrips in the vicinity of the Project site, and those working or temporarily residing at the proposed hotel use would not be exposed to excessive noise from any private airstrip activities. Therefore, there would be ***no impact*** related to excessive aircraft noise from private airstrips.

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10 City/County Association of Governments of San Mateo County. 2012. *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport.* Available: http://ccag.ca.gov/wp-content/uploads/2014/10/Consolidated_CCAG_ALUCP_November-20121.pdf. November. Accessed: April 20, 2018.

Traffic Noise Modeling Results Summary

Traffic Noise Modeling Results Summary

Link	Roadway	Segment Location	Existing Noise Level dB Ldn	Existing plus Project Noise Level dB Ldn	Project-Related Increase (Delta)
1	Airport Boulevard	from Anza Boulevard to Beach Road	62.9	62.9	0.1
2	Airport Boulevard	from Old Bayshore Highway to Anza Boulevard	62.5	62.5	0.1
3	Anza	from Airport Boulevard to End	58.2	58.2	0.0
4	Anza	from US 101 Ramps to Airport Boulevard	60.7	60.7	0.0
5	Broadway	from California Drive to Carolan Ave	68.1	68.2	0.0
6	Broadway	from California Drive to Carolan Ave	63.6	63.6	0.1
7	Broadway	from Carolan Ave to Rollins Road	67.9	68.0	0.0
8	Broadway	from Carolan Ave to Rollins Road	67.8	67.8	0.0
9	Broadway	from Chula Vista Ave/Laguna Ave to California Drive	67.8	67.8	0.0
10	Broadway	from Old Bayshore Highway to Anza Boulevard	67.6	67.7	0.1
11	Broadway	from Rollins Road to Old Bayshore Highway	62.6	62.6	0.1
12	Broadway	from Rollins Road to US 101 SB Ramps	68.9	69.0	0.1
13	Broadway	from Rollins Road to US 101 SB Ramps	68.8	68.9	0.1
14	Broadway	from US 101 SB Ramps to Old Bayshore Highway	67.6	67.7	0.1
15	California Drive	from Broadway to Carmelita Ave	66.3	66.3	0.0
16	California Drive	from Rhinette Ave to Broadway	66.4	66.4	0.0
17	Carolan Ave	from Broadway to Toyon Drive	44.8	44.8	0.0
18	Mahler Road	from Gilbreth Road to Old Bayshore Highway	43.6	43.6	0.0
19	Milbrae Avenue	from Rollins Road to US 101 SB Ramps	69.3	69.4	0.1
20	Milbrae Avenue	from US 101 NB Ramps to Old Bayshore Highway	69.3	69.4	0.1
21	Milbrae Avenue	West of Old Bayshore Highway	44.5	44.5	0.0
22	Milbrae Avenue	from US 101 SB Ramps to US 101 NB Ramps	69.7	69.7	0.0
23	Milbrae Avenue	from US 101 SB Ramps to US 101 NB Ramps	65.9	66.1	0.2
24	Mitten Road	from Gilbreth Road to Old Bayshore Highway	54.4	54.4	0.0
25	Old Bayshore Highway	from Burlway Road to US 101 NB Ramps	67.3	67.4	0.1
26	Old Bayshore Highway	from Cowan Road to Mitten Road	65.1	65.4	0.3
27	Old Bayshore Highway	Driveway to the South	67.3	67.4	0.1
28	Old Bayshore Highway	from Hinkley Road to Mahler Road	64.4	64.8	0.4
29	Old Bayshore Highway	from Mahler Road to Burlway Road	64.1	64.5	0.4
30	Old Bayshore Highway	from Malcom Road to Stanton Road	64.5	64.9	0.3
31	Old Bayshore Highway	from Milbrae Avenue to Cowan Road	60.8	60.8	0.0
32	Old Bayshore Highway	from Mitten Road to Malcom Road	65.9	66.1	0.2
33	Old Bayshore Highway	from Stanton Road to Hinckley Road	64.9	65.2	0.3
34	Old Bayshore Highway	from US 101 NB Ramps to Airport Boulevard/Broadway	64.8	65.1	0.3
35	Old Bayshore Highway	from US 101 NB Ramps to Airport Boulevard/Broadway	52.7	52.7	0.0
36	Rollins Road	from Broadway to Cadillac Way	64.1	64.1	0.0
37	Rollins Road	from N Carolan Ave to Broadway	63.8	63.8	0.0
38	S McDonnel Road	North of Milbrae Avenue	66.6	66.8	0.2
39	Stanton Road	from Gilbreth Road to Old Bayshore Highway	46.7	46.7	0.0
				Largest Delta?	**0.4**

Appendix E
Transportation Impact Analysis

HEXAGON TRANSPORTATION CONSULTANTS, INC.

1499 Old Bayshore Highway Hotel

Draft Transportation Impact Analysis

Prepared for:

ICF Jones & Stokes, Inc.

June 12, 2019

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Executive Summary

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed hotel development at 1499 Old Bayshore Highway in Burlingame, California. The project proposes to construct a 404-room hotel and a detached 2,900 square-foot restaurant on the 2.19-acre site. Parking would be provided via a parking structure with approximately 289 parking stalls for the hotel and restaurant uses. Currently, two existing office buildings occupy the site and will be demolished as part of the project. Access to the proposed uses would be provided via two driveways on Mahler Road (one full access and one inbound only) and one outbound driveway on Old Bayshore Highway.

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame and the City/County Association of Governments (C/CAG) of San Mateo County Congestion Management Program (CMP). The study includes an analysis of AM and PM peak hour traffic conditions during weekdays on 13 study intersections in the vicinity of the project site. Potential impacts to pedestrians, bikes, and transit services were also considered.

Based on trip generation rates recommended by the Institute of Transportation Engineers, it is estimated that the proposed project would generate 2,799 net new daily vehicle trips, with 159 net new trips during the AM peak hour and 174 net new trips during the PM peak hour.

The City of Burlingame does not have a Council-adopted level of service threshold, thus significance standards (such as LOS D or better) that have typically been applied in traffic studies and EIRs, were used. The results of the intersection level of service analysis under all scenarios with and without the project are summarized in Table ES-1. The results determined that under all scenarios with and without the project, most of the study intersections would operate at an acceptable LOS D or better during both the AM and PM peak hours. While the California Drive/Broadway intersection would operate at unacceptable levels of service (LOS E or worse) during both the AM and PM peak hours under background and cumulative conditions, the addition of project-generated traffic would be considered a less than significant impact, adding only 1.4 seconds of average delay. In addition, the City of Burlingame's planned grade separation of the Caltrain tracks would eliminate the gate downtime at the Broadway and California Drive intersection, improving the intersection level of service during peak hours under cumulative conditions.

This report has also provided the following conclusions and recommendations for the project:

- Based on the CMP guidelines, the project should prepare a TDM Plan to satisfy the requirements outlined by the City/County Association of Governments (C/CAG) of San Mateo County

- Based on the project's on-site circulation analysis, a driveway width of 23 feet is too wide for a one-way driveway, as it interferes with pedestrian circulation and may confuse drivers into thinking it is a two-way driveway. Therefore, the partial-access driveway on Old Bayshore Highway should be designed between 12 and 16 feet wide.

- Based on the bike and pedestrian on-site circulation analysis, the project should provide convenient bike parking to create a pedestrian- and bicycle-friendly environment and to encourage bicycling by patrons and employees. The inclusion of convenient bike parking would also complement the bicycle facilities in the vicinity of the project site.

- Based on the sight distance analysis, red-curb should be painted west of the project driveway on Mahler Road, to ensure exiting vehicles can see bicyclists in the street.

- Based on the garbage collection analysis, signs prohibiting parking during garbage pickup hours should be placed adjacent to the loading zone driveway.

- Based on the emergency vehicle access analysis, the California Fire Code does not permit the installation of gates across fire department access roads and driveways without prior approval from the local fire agency. Therefore, the applicant should obtain approval of the access gates before installation. The security gate should also be equipped with an approved fire department override key switch.

- Based on the parking analysis, the proposed parking supply of 289 spaces would not meet the City's Parking Code requirement of 436 parking spaces. This represents a parking deficit of approximately 34 percent. The project should be prepared to implement a valet parking service for peak events. Valet parking can typically achieve at least a 15% increase in parking spaces.

- Based on the parking analysis, the project should sign all restaurant designated parking spaces for two-hour parking. This will help with parking turnover and keep spaces available for patrons and visitors.

- Based on the parking analysis, designated parking spaces for the restaurant employees should be provided to allow them to park for more than two hours.

- Based on the parking analysis, the site plan should be revised to adhere to the CBC accessible parking provisions.

- Based on the pedestrian impact analysis, the proposed sidewalk width of 4 feet is too narrow along the Old Bayshore Highway frontage due to the street's traffic volumes and speed. Therefore, the project should design a sidewalk width of 10-12 feet, to provide a more pedestrian-friendly environment.

- Based on the transit analysis, the project should consider providing an airport shuttle service for guests of the hotel. Given that the project site is located approximately two miles from the San Francisco Airport, the provided shuttle service could reduce the number of vehicle trips made by hotel guests and patrons traveling to and from the airport.

Table ES-1
Intersection Level of Service Summary

Study Number	Intersection	Peak Hour	Count Date	Existing No Project Avg Delay (sec.)	Existing No Project LOS	Existing with Project Avg Delay (sec.)	Existing with Project LOS	Background No Project Avg Delay (sec.)	Background No Project LOS	Background with Project Avg Delay (sec.)	Background with Project LOS	Background with Project Incr. in Avg. Delay	Cumulative No Project Avg Delay (sec.)	Cumulative No Project LOS	Cumulative with Project Avg Delay (sec.)	Cumulative with Project LOS	Cumulative with Project Incr. in Avg. Delay
1	US 101 Southbound Ramps and Millbrae Avenue *	AM	05/23/17	26.8	C	27.0	C	26.9	C	27.0	C	0.1	28.5	C	28.7	C	0.2
		PM	05/23/17	30.1	C	30.2	C	30.1	C	30.2	C	0.1	31.6	C	31.7	C	0.1
2	US 101 Nouthbound Ramps and Millbrae Avenue	AM	05/23/17	15.6	B	16.0	B	15.6	B	16.1	B	0.5	17.2	B	17.7	B	0.5
		PM	05/23/17	11.5	B	11.7	B	11.5	B	11.7	B	0.2	12.1	B	12.2	B	0.1
3	Old Bayshore Highway and Millbrae Avenue	AM	02/08/18	28.6	C	29.2	C	28.6	C	29.2	C	0.6	29.0	C	30.1	C	1.1
		PM	02/08/18	33.6	C	34.4	C	33.6	C	34.4	C	0.8	35.1	D	36.0	D	0.9
4	Old Bayshore Highway and Mitten Road *	AM	02/08/18	15.2	B	15.3	B	15.2	B	15.3	B	0.1	15.8	B	15.9	B	0.1
		PM	02/08/18	18.1	B	18.2	B	18.1	B	18.2	B	0.1	18.7	B	18.8	B	0.1
5	Old Bayshore Highway and Stanton Road *	AM	02/08/18	13.3	B	13.3	B	13.3	B	13.3	B	0.0	13.5	B	13.6	B	0.1
		PM	02/08/18	15.1	B	15.2	B	15.1	B	15.2	B	0.1	15.6	B	15.7	B	0.1
6	Old Bayshore Highway and Mahler Road *	AM	05/31/17	7.4	A	10.2	B	7.4	A	10.2	B	2.8	7.8	A	10.3	B	2.5
		PM	05/31/17	8.0	A	11.0	B	8.0	A	11.0	B	3.0	8.3	A	11.1	B	2.8
7	Old Bayshore Highway and US 101 Nouthbound Ramps *	AM	06/20/17	34.4	C	34.8	C	36.8	D	37.3	D	0.5	39.1	D	39.7	D	0.6
		PM	06/20/17	38.3	D	39.0	D	42.4	D	43.1	D	0.7	45.4	D	46.2	D	0.8
8	Old Bayshore Highway and Airport Boulevard *	AM	06/20/17	18.2	B	18.2	B	18.4	B	18.5	B	0.1	19.0	B	19.2	B	0.2
		PM	06/20/17	18.6	B	18.7	B	19.4	B	19.5	B	0.1	20.1	C	20.2	C	0.1
9	US 101 Southbound Ramps and Broadway *	AM	06/20/17	26.5	C	26.9	C	28.1	C	28.5	C	0.4	29.6	C	30.0	C	0.4
		PM	06/20/17	17.7	B	17.9	B	19.4	B	19.8	C	0.4	21.2	C	21.7	C	0.5
10	Rollins Road and Broadway	AM	06/20/17	33.2	C	33.4	C	35.7	D	35.9	D	0.2	38.2	D	38.5	D	0.3
		PM	06/20/17	33.9	C	34.0	C	38.6	D	38.9	D	0.3	42.1	D	42.4	D	0.3
11	Carolan Avenue and Broadway	AM	05/23/17	25.9	C	25.9	C	27.3	C	27.3	C	0.0	28.0	C	28.1	C	0.1
		PM	05/23/17	24.8	C	24.9	C	29.0	C	29.1	C	0.1	30.5	C	30.6	C	0.1
12	California Drive and Broadway	AM	05/23/17	**61.2**	**E**	**62.3**	**E**	**69.9**	**E**	**71.3**	**E**	**1.4**	**87.1**	**F**	**88.9**	**F**	**1.8**
		PM	05/23/17	45.0	D	45.4	D	**65.8**	**E**	**66.5**	**E**	**0.7**	**72.8**	**E**	**73.7**	**E**	**0.9**
13	Airport Boulevard and Anza Boulevard *	AM	05/23/17	14.9	B	14.8	B	14.9	B	14.8	B	-0.1	15.3	B	15.3	B	0.0
		PM	05/23/17	23.2	C	23.1	C	23.2	C	23.1	C	-0.1	24.3	C	24.3	C	0.0

Note:

* The *Highway Capacity Manual* (HCM) *2010* does not support turning movements with shared and exclusive lanes. Therefore, this intersection was analyzed using the HCM 2000.

Bold indicates a substandard level of service.

1. Introduction

This report presents the results of the Transportation Impact Analysis (TIA) conducted for the proposed hotel project at 1499 Old Bayshore Highway in Burlingame, California. The project site is located at the corner of the Old Bayshore Highway and Mahler Road intersection and is within the Bayfront Specific Plan area (see Figure 1). The project proposes to construct a 404-room hotel and a detached 2,900 square-foot restaurant on the 2.19-acre site (see Figure 2). Parking would be provided via a parking structure with approximately 289 parking stalls for the hotel and restaurant uses. Currently, two existing office buildings occupy the site and will be demolished as part of the project. Access to the proposed uses would be provided via two driveways on Mahler Road (one full access and one inbound only) and one outbound driveway on Old Bayshore Highway.

Scope of Study

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame and the City/County Association of Governments (C/CAG) of San Mateo County. The C/CAG administers the San Mateo County Congestion Management Plan (CMP). Given that the project is expected to add more than 100 peak hour trips to CMP roadways (US 101), a C/CAG trip reduction analysis was prepared. The traffic study includes an analysis of AM and PM peak hour traffic conditions for 13 signalized intersections and two freeway segments in the vicinity of the project site. The study also includes an analysis of site access and on-site circulation, vehicle queuing, and transit, bicycle, and pedestrian access.

Study Intersections

1. US 101 Southbound Ramps and Millbrae Avenue
2. US 101 Northbound Ramps and Millbrae Avenue
3. Old Bayshore Highway and Millbrae Avenue
4. Old Bayshore Highway and Mitten Road
5. Old Bayshore Highway and Stanton Road
6. Old Bayshore Highway and Mahler Road
7. Old Bayshore Highway and US 101 Northbound Ramps
8. Old Bayshore Highway and Airport Boulevard
9. US 101 Southbound Ramps and Broadway
10. Rollins Road and Broadway
11. Carolan Avenue and Broadway
12. California Drive and Broadway
13. Airport Boulevard and Anza Boulevard



Figure 1
Site Location and Study Intersections

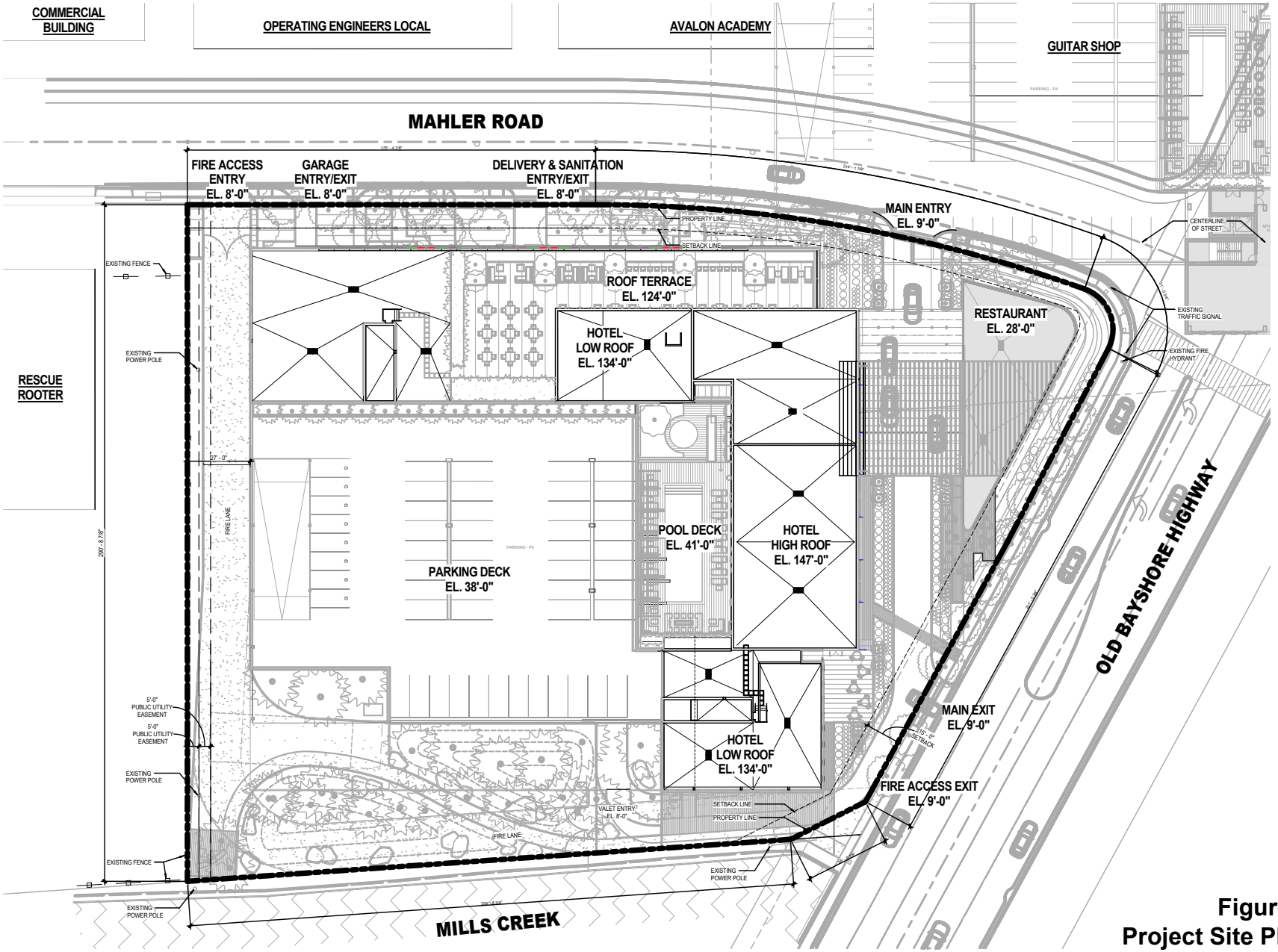


Figure 2
Project Site Plan

Study Freeway Segments

1. US 101, North of Millbrae Avenue
2. US 101, South of Broadway

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways.

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing traffic volumes at study intersections were based on traffic counts conducted in May and June of 2017 and February of 2018. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the *2010 Highway Capacity Manual* methodology.

Scenario 2: *Background Conditions.* Background traffic volumes reflect traffic added by projected volumes from approved but not yet completed developments in the project area. The approved project trips and/or approved project information was obtained from recent traffic studies in the City of Burlingame.

Scenario 3: *Existing plus Project Conditions.* Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.

Scenario 4: *Project Conditions.* Background traffic volumes with the project (hereafter called project traffic volumes) were estimated by adding to background traffic volumes the additional traffic generated by the project. Project Conditions were evaluated relative to background conditions to determine potential project impacts.

Scenario 5: *Cumulative Conditions.* Cumulative traffic volumes represent traffic growth through the year 2028. Cumulative traffic volumes were estimated by applying an annual growth factor of 1.0 percent to the existing volumes, then adding trips from approved developments, as well as project-generated traffic. Cumulative plus project conditions were evaluated relative to cumulative conditions to determine potential project impacts.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from new traffic counts, the City of Burlingame, local traffic studies and EIRs, and field observations. The following data were collected from these sources:

- existing peak-hour intersection turning-movement volumes
- lane configurations
- intersection signal timing and phasing

- approved project trips

Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

City of Burlingame Signalized Intersections

The City of Burlingame level of service standards were used to evaluate the signalized study intersections. The City of Burlingame evaluates intersection level of service based on the *Highway Capacity Manual* (HCM) *2010* method using Synchro software[1]. The 2010 HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. This average delay can then be correlated to a level of service. While the City of Burlingame does not have a Council-adopted level of service threshold, a standard of LOS D or better has typically been applied in local traffic studies and EIRs. The correlation between delay and level of service is shown in Table 1.

Table 1
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	Up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lenghts, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* , (Washington, D.C., 2000).

[1] The *2010 Highway Capacity Manual (HCM)* does not support turning movements with shared and exclusive lanes, and intersections with more than four approaches. Intersections with these features were analyzed using the *2000 HCM*.

City of Millbrae Signalized Intersections

Two of the study intersections are located in the City of Millbrae. The City of Millbrae level of service standard for signalized intersections along Millbrae Avenue is LOS D.

Freeway Segment Analysis

As prescribed in the CMP technical guidelines, the level of service for freeway segments is estimated based on the average vehicle travel speed. The CMP evaluates freeway level of service based on the *Highway Capacity Manual* (HCM) *1994* method. The 1994 HCM method evaluates freeway segment operations on the basis of average travel speed for all vehicles on the freeway segment. This average speed can then be correlated to a level of service. A freeway segment is considered to operate at an acceptable level of service if the segment operates at or better than the level of service standard identified for that segment by the County congestion management agency. C/CAG's level of service standards for the study freeway segments is LOS E for US 101, between Peninsula Avenue and I-380. The correlation between average vehicle travel speed and level of service on freeway segments is shown in Table 2.

Table 2
Freeway Level of Service Based on Travel Speed

Level of Service	Description	Average Travel Speed [1]
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≥ 65 mph
B	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	≥ 65 mph
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	≥ 64.5 mph
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	≥ 62 mph
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	≥ 52 mph
F	Vehicular flow breakdowns occurs. Large queues form behind breakdown points.	< 52 mph

[1] Based on free-flow speed of 65 mph.

Source: Transportation Research Board, *Highway Capacity Manual* (1994, Washington, D.C.).

Intersection Operations

The analysis of intersection level of service was supplemented with an analysis of traffic operations for intersections where the project would add a significant number of left turns. The operations analysis is based on vehicle queuing for high demand left-turn movements at intersections. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x=n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P (x=n) = probability of "n" vehicles in queue per lane
n = number of vehicles in the queue per lane
λ = average # of vehicles in the queue per lane (vehicles per hr per lane/signal cycles per hr)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. This analysis thus provides a basis for estimating future turn pocket storage requirements at signalized intersections.

The 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Therefore, left-turn storage pocket designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time. The 95th percentile queue length is also known as the "design queue length."

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. For this analysis, the criteria used to determine significant impacts on signalized intersections are based on City of Burlingame Level of Service standards.

Signalized Intersection Impact Criteria

The City of Burlingame does not have any Council-adopted definitions of significant traffic impacts. The following standards typically have been used in traffic studies and EIRs. The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of Burlingame if for any peak-hour:

1. The level of service at the intersection degrades from an acceptable LOS D under background conditions to an unacceptable LOS E or F under project conditions; or
2. The level of service at the intersection is an unacceptable LOS D, E, or F under background conditions and the addition of project trips causes the average delay at the intersection to increase by five (5) or more seconds.

A significant impact typically is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

Freeway Segment Impact Criteria

The CMP defines an acceptable level of service for freeway segments of US 101, between Peninsula Avenue and I-380, as LOS E or better. A project is said to create a significant impact on traffic conditions on a freeway segment if for either peak hour:

1. The level of service on the freeway segment degrades from an acceptable LOS E or better under existing conditions to an unacceptable LOS F with the addition of project trips; or
2. The level of service on the freeway segment degrades from an acceptable LOS E or better under cumulative conditions to an unacceptable LOS F with the addition of project trips and the number of project trips added to the segment constitutes at least one percent of capacity of the segment; or
3. The level of service on the freeway segment is already operating at an unacceptable LOS F and the number of project trips added to the segment constitutes at least one percent of capacity of the segment.

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions to no-impact levels of service.

CMP Roadway Impact and Compliance

As the Congestion Management Agency (CMA) for San Mateo County, the City/County Association of Governments (C/CAG) is responsible for maintaining the performance and standards of the Congestion Management Program (CMP) roadway network. Per CMP technical guidelines, all new developments projected to add at least 100 net peak hour trips to the CMP roadway network are required to implement Travel Demand Management (TDM) measures in accordance with the C/CAG CMP checklist that would reduce project impacts. In the vicinity of the project site, roadway facilities that are part of the CMP network include US 101 and El Camino Real.

Report Organization

The remainder of this report is divided into six chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian facilities. Chapter 3 presents describes the methods used to estimate project traffic and its impact on the existing transportation system. Chapter 4 the intersection operations under the background scenario conditions, including the approved projects in the City of Burlingame, and the background plus project conditions which are used to determine the impacts the project will have on the network. Chapter 5 describes the cumulative conditions, generated from applying a growth factor to the network and analyzed with project traffic. Chapter 6 includes the analysis of freeway segment operations under project conditions, and impacts associated with them. Chapter 7 presents the projects impacts on other transportation issues including transit, bicycle and pedestrian facilities, and vehicle queuing.

2. Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit service, pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the project site is provided via US 101. Local access to the site is provided on Old Bayshore Highway, Millbrae Avenue, Broadway, and Mahler Road. These roadways are described below.

US 101 is a north/south, eight-lane freeway in the vicinity of the site. US 101 extends northward through San Francisco and southward through San Jose. Access to and from the project study area is provided via a full-interchange at Broadway.

Old Bayshore Highway is a north/south four-lane arterial that parallels the edge of the San Francisco Bay, extending from just north of Millbrae Avenue at the southern edge of the SFO Airport to its intersection with Broadway and Airport Boulevard. According to the City's General Plan, arterial roadways are two- to six-lane streets that provide connections between residential areas, shopping areas, places of employment, and recreational areas to the regional roadway network.

Millbrae Avenue is an east/west arterial that extends from Old Bayshore Highway to Vallejo Drive and I-280, where it terminates. Millbrae Avenue connects the western residential areas of the City of Millbrae to the regional roadways, El Camino Real and US 101. Millbrae Avenue varies in width from two- to six-lanes, with six-lane cross sections consisting of a median that provides left-turn pockets at the major intersections. Access to the project site from Millbrae Avenue is provided via Old Bayshore Highway.

Broadway is an east/west, two- to four-lane arterial that extends from west of Vancouver Avenue to Old Bayshore Highway, where it transitions into Airport Boulevard. Broadway operates as one of the main gateways into the city with high volumes and access to other parts to the city. Access to the project site from Broadway is provided via Old Bayshore Highway.

Mahler Road is an east/west, two-lane street that extends from Old Bayshore Highway west where it transitions into Gilbreth Road. On-street parking is permitted along both sides of Mahler Road. Mahler Road provides direct access to the project site

Existing Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, sidewalks exist along both sides of Old Bayshore Highway, Mahler Road, Broadway/Airport Boulevard, and Millbrae Avenue, providing pedestrian access to and from the project site. Marked crosswalks with pedestrian signal heads and push buttons are provided on all approaches of the Old Bayshore Highway/Broadway, California Drive/Broadway, and Airport Boulevard/Anza Boulevard intersections. Crosswalks are provided along the following approaches of the signalized study intersections:

- South leg of the Old Bayshore Highway/Millbrae Avenue intersection
- South leg of the US 101 northbound ramps/Millbrae Avenue intersection
- South and west leg of the Old Bayshore Highway/Mahler Road intersection
- South leg of the Old Bayshore Highway/US 101 northbound ramps intersection
- North leg of the US 101 southbound ramps/Broadway intersection
- North, south, and west leg of the Rollins Road/Broadway intersection
- South and east leg of the Carolan Avenue/Broadway intersection

Although some sidewalk and crosswalk connections are missing, the overall network of sidewalks and crosswalks in the study area has adequate connectivity and provides pedestrians with safe routes to transit services and other points of interest in the vicinity of the project site.

Existing Bicycle Facilities

There are some bicycle facilities in the vicinity of the project site. The existing bicycle facilities within the study area are described below and are shown on Figure 3.

North-south bicycle connections in the study area include the San Francisco Bay Trail, as well as bike routes along Old Bayshore Highway, California Drive, Carolan Avenue, and Rollins Road. The San Francisco Bay Trail is a 500-mile Class I facility that provides a multi-use path around the entire San Francisco Bay running through all nine Bay Area counties, 47 cities, and across the region's seven toll bridges. The Trail is accessible via an access point located at the southeast corner of the Old Bayshore Highway/Mahler Road intersection. Also within the project vicinity, bike routes are signed and designated along Old Bayshore Highway between Millbrae Avenue and Airport Boulevard, California Drive between Millbrae Avenue and Burlingame Avenue, Carolan Avenue between Broadway and Howard Avenue, and along Rollins Road between Millbrae Avenue and Broadway. These bike routes provide connections to the project site, Class I and Class II bike facilities, as well as parks, schools, other community amenities such as downtown Burlingame and the Millbrae Transit Center.

East-west bicycle connections in the study area consist of a bike route along Broadway/Airport Boulevard, between California Drive and Peninsula. The Class III facility provides a bike connection across US 101 via a separate bike bridge.

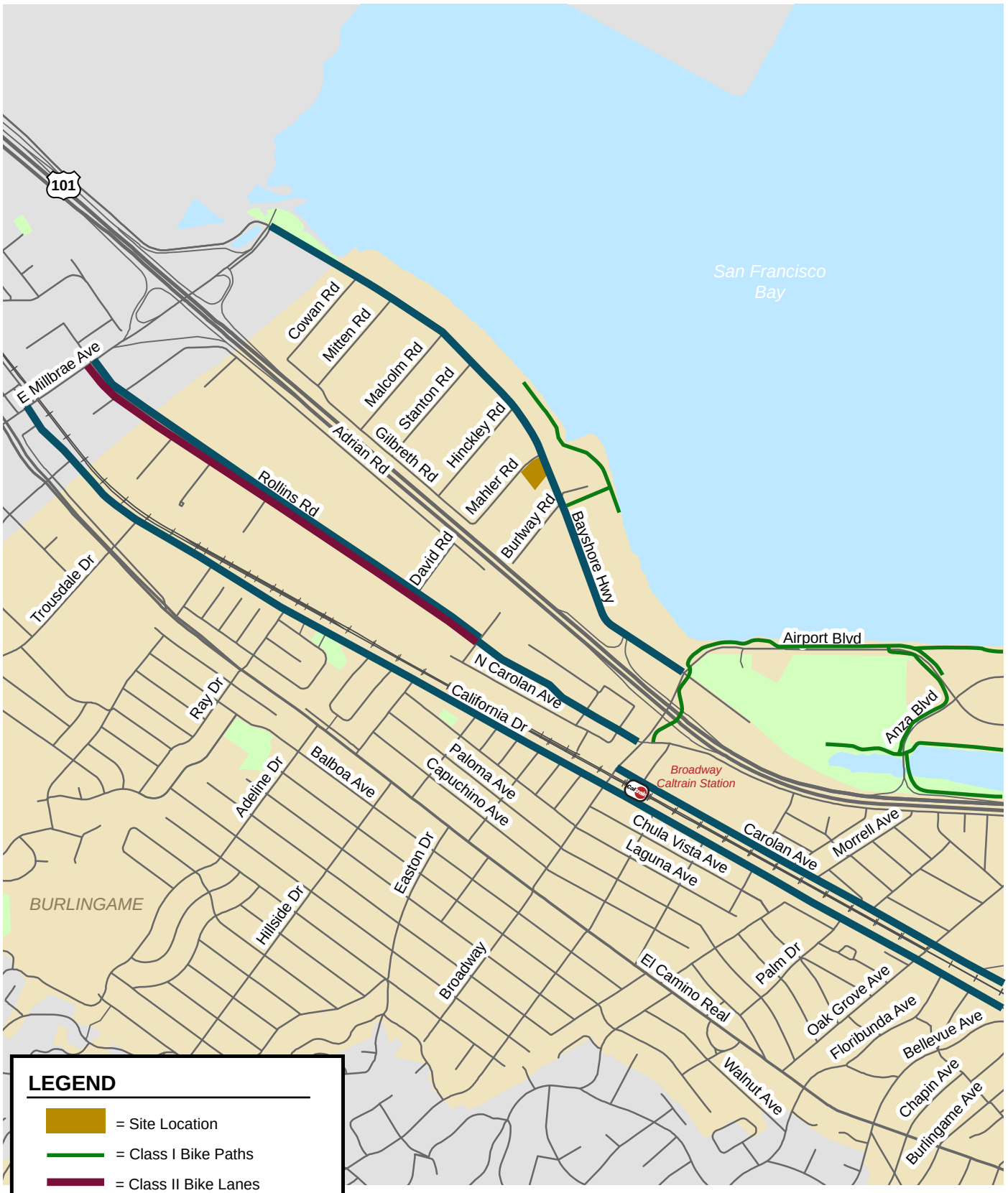


Figure 3
Existing Bicycle Facilities

Existing Transit Service

Existing transit service to the study area is provided by the San Mateo County Transit District (SamTrans), the San Mateo County's Transportation Demand Management Agency, and the Burlingame Trolley (See Figure 4). The study area is served directly by one express bus route and two shuttle routes. The transit service routes that run through the study area are listed in Table 3, including their route description and commute hour headways.

Table 3
Existing Transit Services

Transit Route	Route Description	Headway [1]
Express Route 292	Hillsdale Shopping Center to Transbay Transit Center	30 mins
Burlingame-Bayside Shuttle Service	Millbrae Transit Station to Airport Boulevard/Bay View Place Intersection	20 - 30 mins
Burlingame Trolley Service	Burlingame Caltrain Station to San Francisco Airport Marriott Hotel	45 mins

Notes:
[1] Approximate headways during peak commute periods.

SamTrans Bus Service

The study area is served directly by Express Route 292, which operates as an all-day, limited stop bus service in the vicinity of the project. Route 292 operates between the Hillsdale Shopping Center in San Mateo and the Transbay Transit Center in downtown San Francisco. Weekday service is from approximately 3:55 AM to 2:30 AM (next day). The nearest bus stops are located less than 500 feet south of the project site on Old Bayshore Highway.

Caltrain Service

Caltrain provides frequent passenger train service between San Jose and San Francisco seven days a week. During commute hours, Caltrain provides extended service to Morgan Hill and Gilroy. The closest Caltrain station is the Broadway Station (approximately a mile from the project site); however, the Broadway Station only provides weekend service. The closest Caltrain stations with weekday service are the Burlingame Station and the Millbrae Station, which are described below.
As part of the Caltrain Modernization Program, the rail service will be electrified. The electrified Caltrain system will provide increased service, including reopening the Broadway Station for weekday service. Electrification is also expected to help accommodate the increase in system ridership through much improved system operations.

Burlingame Caltrain Station

The Burlingame Station is served by local and limited Caltrain trains. Located approximately two miles south of the project site, the Burlingame Station is connected to the project site via the Burlingame Trolley Service. Trains that stop at the Burlingame Station operate at approximately 25-minute headways in both directions during the commute hours, with somewhat less frequent service midday.

Service operates between about 5:30 AM and 11:35 PM in the northbound direction and between 5:20 AM and 12:35 AM (next day) in the southbound direction.

Burlingame Trolley Service

The Burlingame Trolley service provides weekday peak-hour service between the Burlingame Caltrain Station and the San Francisco Airport Marriott Hotel. The Burlingame Trolley primarily connects the hotels east of Highway 101 with downtown Burlingame. The trolley service operates between 11:50 AM and 9:45 PM, with approximately 45-minute headways. The nearest trolley stop is located near the project site at the Hyatt Regency Hotel, approximately a half-mile walking distance from the project site.

Millbrae Transit Station

The Millbrae Station is served by local, limited, and Baby Bullet Caltrain trains, as well as by Bay Area Rapid Transit (BART). Located approximately 1.5 miles north of the project site, the Millbrae Station is connected to the project site via the BART/Caltrain Shuttle Service. Caltrain trains that stop at the Millbrae Station operate at approximately 20-minute headways in the northbound direction and 23-minute headways in the southbound direction during the commute hours. Service operates between about 5:35 AM and 11:40 PM in the northbound direction and between 5:20 AM and 12:30 AM (next day) in the southbound direction.

BART operates regional rail service in the Bay Area, connecting between San Francisco International Airport, San Francisco to the north, and cities in the East Bay. The Millbrae Station is the southern terminus of the Richmond-Millbrae Line on weekdays before 9:00 PM and the Pittsburg/Bay Point-SFO Airport-Millbrae Line after 9:00 PM on weekdays. BART provides service from 4:00 AM to 12:00 AM (next day) on weekdays, with headways of 15 minutes on the Richmond-Millbrae Line serving the station during peak and mid-day hours, and 20-minute headways on the Pittsburg/Bay Point-SFO Airport-Millbrae Line.

Burlingame-Bayside BART/Caltrain Shuttle Service

The Burlingame-Bayside BART/Caltrain Shuttle Service is one of San Mateo County's free public shuttle services. It travels between the Millbrae Transit Station and the Airport Boulevard/Bay View Place intersection in Burlingame. The shuttle stops curbside along Rollins Road, Old Bayshore Highway, and Airport Boulevard. The nearest shuttle stops are located near the project site, approximately 1,000 feet walking distance on both sides of Old Bayshore Highway, which would equate to about a five-minute walking time. Shuttle service is provided during commute hours (7-9 AM and 4-6 PM) Monday through Friday and is coordinated with the Caltrain and BART schedules, with approximately 20- to 30-minute headways.

Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 5. Existing traffic volumes were obtained from peak hour counts collected on May 31st and June 20th of 2017 and on February 8th, 2018. Although traffic counts are typically conducted when schools are in session, Hexagon wanted to wait until the completion of the Broadway interchange. In addition, there are no schools located in the vicinity of the project site. The existing peak-hour intersection volumes are shown in Figure 6. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.

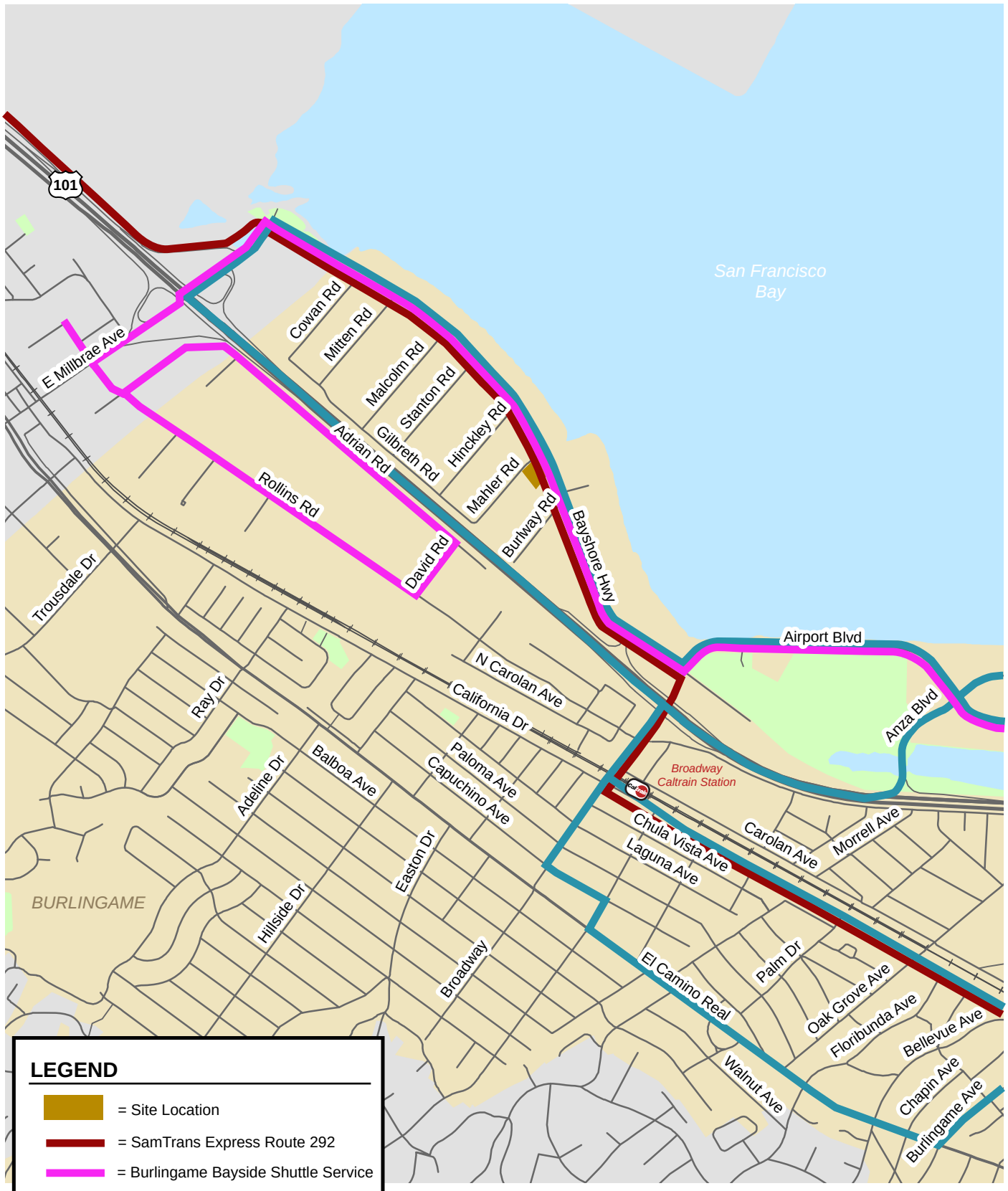


Figure 4
Existing Transit Services

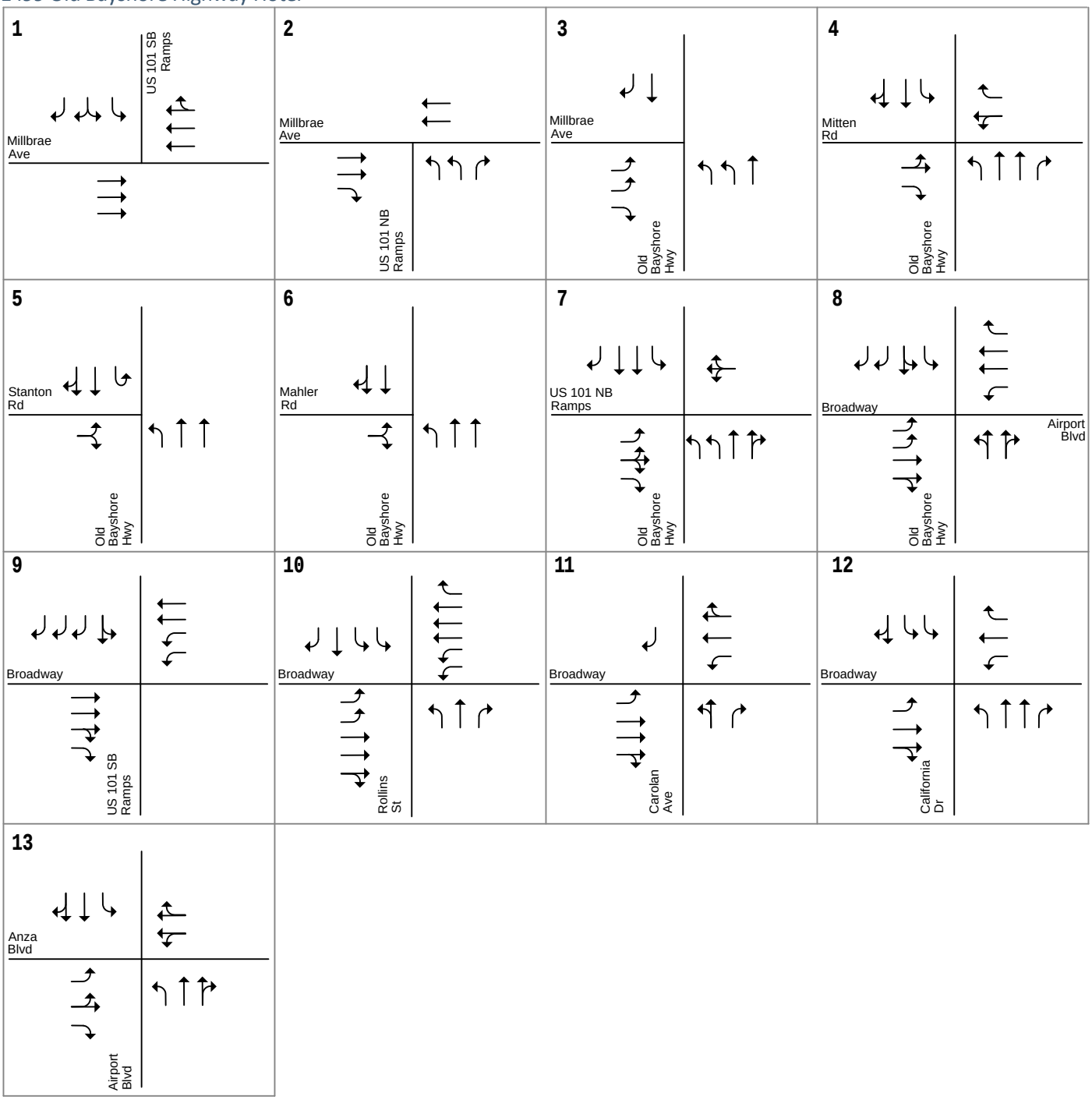
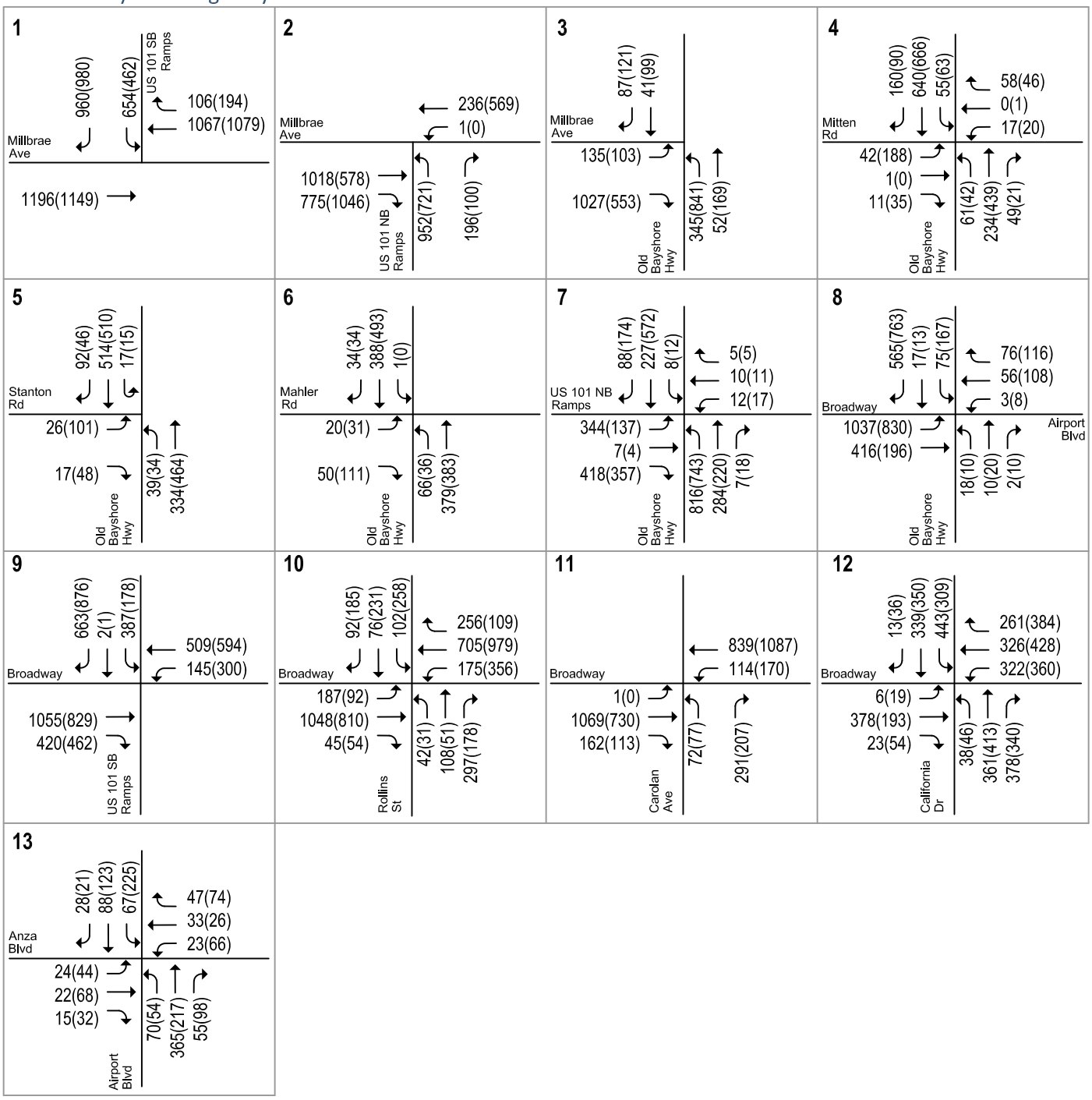


Figure 5
Existing Lane Configurations

NORTH
Not to Scale



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 6
Existing Traffic Volumes

HEXAGON

NORTH
Not to Scale

Existing Intersection Levels of Service

The results of the analysis show that most of the signalized study intersections currently operate at LOS D or better during the AM and PM peak hours (see Table 4). The intersection of California Drive and Broadway operates at a substandard LOS E during the AM peak hour. The unacceptable level of service at this intersection is attributed to the high traffic volume on Broadway, as well as the Caltrain railroad gate down-times on Broadway, between California Drive and Carolan Avenue. The intersection levels of service calculation sheets are included in Appendix B.

Table 4
Existing Intersection Levels of Service

Study Number	Intersection	Peak Hour	Count Date	Existing Conditions Avg Delay (sec.)	Existing Conditions LOS
1	US 101 Southbound Ramps and Millbrae Avenue *	AM	05/23/17	26.8	C
		PM	05/23/17	30.1	C
2	US 101 Nouthbound Ramps and Millbrae Avenue	AM	05/23/17	15.6	B
		PM	05/23/17	11.5	B
3	Old Bayshore Highway and Millbrae Avenue	AM	02/08/18	28.6	C
		PM	02/08/18	33.6	C
4	Old Bayshore Highway and Mitten Road *	AM	02/08/18	15.2	B
		PM	02/08/18	18.1	B
5	Old Bayshore Highway and Stanton Road *	AM	02/08/18	13.3	B
		PM	02/08/18	15.1	B
6	Old Bayshore Highway and Mahler Road *	AM	05/31/17	7.4	A
		PM	05/31/17	8.0	A
7	Old Bayshore Highway and US 101 Nouthbound Ramps *	AM	06/20/17	34.4	C
		PM	06/20/17	38.3	D
8	Old Bayshore Highway and Airport Boulevard *	AM	06/20/17	18.2	B
		PM	06/20/17	18.6	B
9	US 101 Southbound Ramps and Broadway *	AM	06/20/17	26.5	C
		PM	06/20/17	17.7	B
10	Rollins Road and Broadway	AM	06/20/17	33.2	C
		PM	06/20/17	33.9	C
11	Carolan Avenue and Broadway	AM	05/23/17	25.9	C
		PM	05/23/17	24.8	C
12	California Drive and Broadway	AM	05/23/17	**61.2**	**E**
		PM	05/23/17	45.0	D
13	Airport Boulevard and Anza Boulevard *	AM	05/23/17	14.9	B
		PM	05/23/17	23.2	C

Notes:

* The *Highway Capacity Manual* (HCM) *2010* does not support turning movements with shared and exclusive lanes. Therefore, this intersection was analyzed using the HCM 2000.

Bold indicates a substandard level of service.

Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions.

Overall, most study intersections operated adequately during both the AM and PM peak hours of traffic, and the level of service analysis appears to accurately reflect actual existing traffic conditions. However, field observations showed that some operational problems currently occur during the AM and PM peak commute hours. These issues are described below.

The study intersections nearest to the project site operate adequately during the AM and PM peak hours of traffic, and the level of service analysis accurately reflects actual existing traffic conditions. The study intersections along Millbrae Avenue and Broadway carry relatively heavy traffic volume to and from US 101. The close spacing of the intersections along Broadway results in spill backs, vehicles not clearing in one signal cycle, and turning vehicles occasionally blocking through lanes. Although Broadway experiences long vehicular queues on the eastbound and westbound approaches at California Drive, particularly due to the frequent Caltrain railroad gate down-times, the other movements at this intersection have relatively moderate back-ups. The eastbound through volume on Broadway frequently backs up past the Caltrain tracks to the California Drive intersection, resulting in extended wait times for vehicles turning on to Broadway from California Drive. However, movements such as the southbound left-turn only occasionally require more than one signal cycle to clear the intersection.

3. Background Conditions

This chapter describes background traffic conditions. Background conditions are defined as conditions within the next 3-5 years (a horizon year of 2021-2023) just prior to completion/occupation of the proposed development. Traffic volumes for background conditions comprise existing traffic volumes plus traffic generated by other approved developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

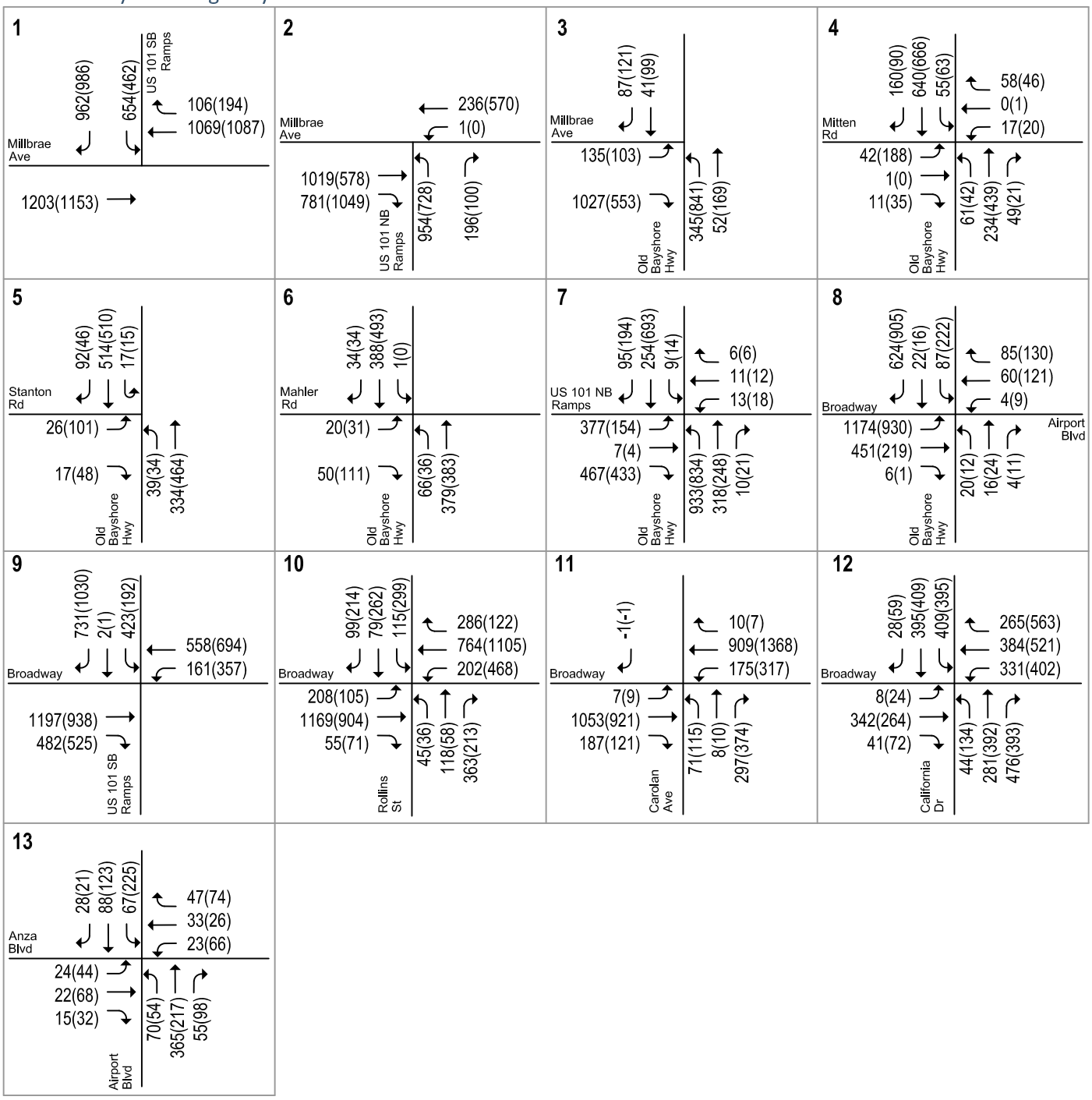
Roadway Network and Traffic Volumes

Under background conditions, the Carolan Avenue Complete Streets Project would be completed. Carolan Avenue would be modified between Broadway and Oak Grove Avenue from a four-lane roadway with a Class III bicycle route, into a two-lane roadway with a third center turn-lane and new Class II bike lanes. It is also assumed that the proposed Peninsula Corridor Electrification Project (PCEP), which is a key component of the Caltrain Modernization program, would be completed (projected to be operational between 2020 and 2021). According to Fehr & Peers's *Caltrain Peninsula Corridor Electrification Project Transportation Analysis* (2014), weekday service at the Broadway Station is expected to be restored with the implementation of the PCEP. The PCEP is expected to increase service by up to six Caltrain trains per peak hour per direction by 2020. The remainder of the transportation network is assumed to be the same under background conditions as that of the existing transportation network.

Background peak hour traffic volumes were obtained from the Year 2020 scenario in the Carolan Avenue and Rollins Road Residential traffic study. Traffic volumes for background conditions include the completion of approved major developments in the vicinity of the project site, such as the Carolan Avenue residential project and the 300 Airport Boulevard project. Background peak hour traffic volumes are shown on Figure 7.

Background Intersection Levels of Service

Table 5 shows that most of the study intersections would continue to operate at acceptable levels of service (LOS D or better) during both the AM and PM peak hours under background conditions. The intersection of California Drive and Broadway would operate at an unacceptable LOS E during both peak hours, due to train interruptions. The intersection level of service calculation sheets are provided in Appendix B.



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 7
Background Traffic Volumes

HEXAGON

NORTH
Not to Scale

Table 5
Background Intersection Levels of Service

Study Number	Intersection	Peak Hour	Background Avg Delay (sec.)	Background LOS
1	US 101 Southbound Ramps and Millbrae Avenue *	AM	26.9	C
		PM	30.1	C
2	US 101 Nouthbound Ramps and Millbrae Avenue	AM	15.6	B
		PM	11.5	B
3	Old Bayshore Highway and Millbrae Avenue	AM	28.6	C
		PM	33.6	C
4	Old Bayshore Highway and Mitten Road *	AM	15.2	B
		PM	18.1	B
5	Old Bayshore Highway and Stanton Road *	AM	13.3	B
		PM	15.1	B
6	Old Bayshore Highway and Mahler Road *	AM	7.4	A
		PM	8.0	A
7	Old Bayshore Highway and US 101 Nouthbound Ramps *	AM	36.8	D
		PM	42.4	D
8	Old Bayshore Highway and Airport Boulevard *	AM	18.4	B
		PM	19.4	B
9	US 101 Southbound Ramps and Broadway *	AM	28.1	C
		PM	19.4	B
10	Rollins Road and Broadway	AM	35.7	D
		PM	38.6	D
11	Carolan Avenue and Broadway	AM	27.3	C
		PM	29.0	C
12	California Drive and Broadway	AM	**69.9**	**E**
		PM	**65.8**	**E**
13	Airport Boulevard and Anza Boulevard *	AM	14.9	B
		PM	23.2	C

Notes:

* The *Highway Capacity Manual* (HCM) *2010* does not support turning movements with shared and exclusive lanes. Therefore, this intersection was analyzed using the HCM 2000.

Bold indicates a substandard level of service.

4. Project Conditions

This chapter describes traffic conditions with the project and includes: (1) the method by which project traffic is estimated and (2) a level of service summary. Existing plus project conditions are represented by existing traffic conditions with the addition of traffic generated by the project. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area. Project conditions are represented by background traffic conditions with the addition of traffic generated by the project.

Roadway Network

It is assumed in this analysis that the transportation network under project conditions would be the same as the background transportation network.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed mixed-use development was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that indicate the amount of traffic that can be expected to be generated by common land uses. The standard trip generation rates can be applied to help predict the future traffic increases that would result from a new development. The standard trip generation rates come from the publication titled Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition.*

Project trip generation was estimated by applying to the size and uses of the development by the appropriate trip generation rates obtained from the ITE *Trip Generation Manual, 10th Edition* (2017). The average trip generation rates for Hotel (Land Use 310) and High-Turnover (Sit-Down) Restaurant (Land Use 932) were applied to the project. It should be noted that while the project as proposed consists of a detached 2,900 square-foot restaurant, the project plans show a 3,050 square-foot restaurant. The trip generation estimates were based on the project description presented in the project plans; and therefore, present a conservative estimate of trips generated by the project.

Based on the project description and ITE rates for Hotel and High-Turnover (Sit-Down) Restaurant, the proposed development would generate a total of 3,719 gross daily vehicle trips, with 220 gross trips occurring during the AM peak hour and 272 gross trips occurring during the PM peak hour (see Table 6).

Trip Reductions

Since the project would consist of a mix of hotel and restaurant uses, a 15 percent trip reduction was applied to account for the internalization of trips between the two land use components of the project. In addition, a transit shuttle trip reduction of 10 percent was applied to the peak hour trip generation estimates for the proposed hotel space. Justification for applying the shuttle trip reduction is founded on the observation that the project would provide convenient access to the Burlingame Trolley service and the Burlingame-Bayside BART/Caltrain Shuttle service, as well as the project site's close proximity (within two miles) to the Millbrae Transit Station and the San Francisco International Airport. The project site is also available to ride-sharing services (e.g., Uber, Lyft, Wingz), which would contribute to the expected 10 percent trip reduction.

Existing Use Credit

Trips that are generated by existing occupied uses can be subtracted from the gross project trip generation estimates. Accordingly, trip credits were applied to account for the existing uses currently occupying the project site (i.e. an office building, a restaurant, and a print shop) that will be removed as part of the project. The trip generation for the existing buildings was based on driveway counts conducted at the existing driveways along Mahler Road and Old Bayshore Highway. Based on the trip generation counts, the existing uses were found to be generating a total of 32 trips during the AM peak hour and 64 trips during the PM peak hour.

Net Project Trips

After applying the appropriate trip reductions, the project would generate 2,799 net new daily vehicle trips, with 159 net new trips (103 inbound and 56 outbound) during the AM peak hour and 174 net new trips (87 inbound and 87 outbound) during the PM peak hour (See Table 6).

Trip Distribution and Trip Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern. Given that the project site would consist of multiple points of vehicular ingress and egress, a small portion of the project traffic was assumed to use the partial-access driveways corresponding to the drive aisle adjacent to the hotel and restaurant entrances. This small portion of project traffic would still be able to access the parking garage; thus, not all project traffic entering the site via the partial-access driveway on Mahler Road were assumed to exit on to Old Bayshore Highway. Figures 8, 9, and 10 show the trip distribution pattern and trip assignment for the hotel and restaurant components of the project, as well as the trip credits for the existing buildings, respectively. Figure 11 shows the net trip assignment of project traffic on the local transportation network.

Table 6
Project Trip Generation Estimates

Land Use	Size	Daily Rate	Daily Trips [6]	AM Peak Hour Rate	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour Rate	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Proposed Use											
Hotel [1]	404 units	8.36	3,377	0.47	112	78	190	0.60	123	119	242
Alternative Transportation Trip Reduction (10%) [4]			(338)		(11)	(8)	(19)		(12)	(12)	(24)
Internalization Trip Reduction (15%) [5]			(51)		(2)	(3)	(5)		(2)	(3)	(5)
Subtotal			**2,988**		**99**	**67**	**166**		**109**	**104**	**213**
Restaurant [2]	3.05 ksf	112.18	342	9.94	17	13	30	9.77	18	12	30
Internalization Trip Reduction (15%) [5]			(51)		(3)	(2)	(5)		(3)	(2)	(5)
Subtotal			**291**		**14**	**11**	**25**		**15**	**10**	**25**
Total Project Trips			**3,279**		**113**	**78**	**191**		**124**	**114**	**238**
Existing Use [3]			(480)		(10)	(22)	(32)		(37)	(27)	(64)
Net Project Trips			**2,799**		**103**	**56**	**159**		**87**	**87**	**174**

Notes:
KSF = 1,000 square feet
[1] Hotel (Land Use 310) average rates published in ITE's *Trip Generation Manual, 10th Edition*, 2017.
[2] High-Turnover (Sit-Down) Restaurant (Land Use 932) average rates published in ITE's *Trip Generation Manual, 10th Edition*, 2017.
[3] Based on driveway counts conducted on February 8, 2018.
[4] A 10% trip reduction was applied given the proximity of the Burlingame Trolley, Burlingame-Bayside BART/Caltrain shuttle service from adjacent hotels to the Millbrae Transit Station, and the availability of ride-sharing alternatives. The trip reduction percentage was based on the transit trip reduction factors published in the ITE *Trip Generation Manual, 9th Edition* (2012).
[5] A 15% trip reduction was applied to account for internalization between complementary land uses. The trip reduction percentage was based on the trip reduction factors published in the ITE *Trip Generation Manual, 9th Edition* (2012).
[6] Daily trip reductions for the existing uses are the average of the AM and PM peak hour rate multiplied by 10.

1499 Old Bayshore Highway Hotel

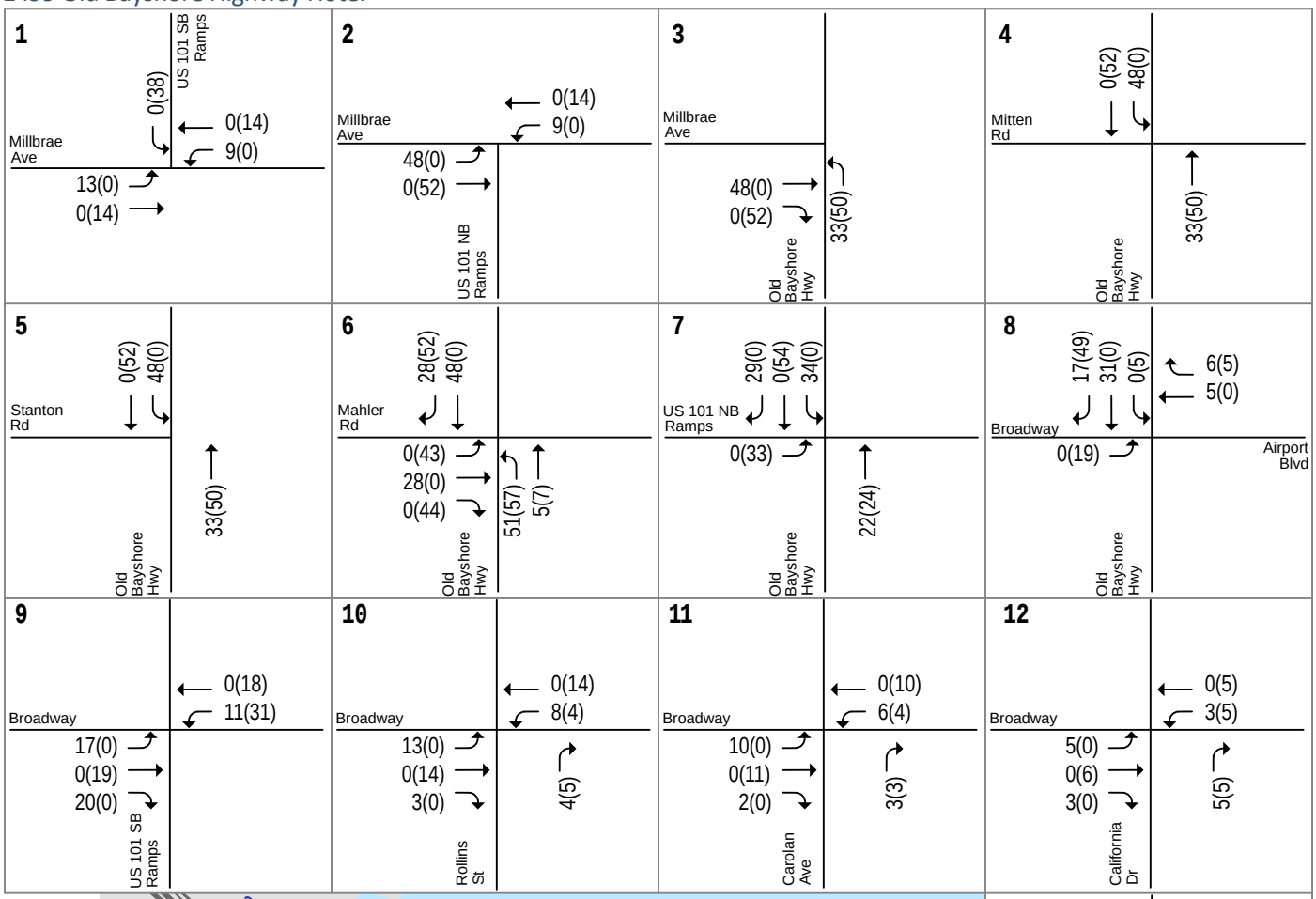
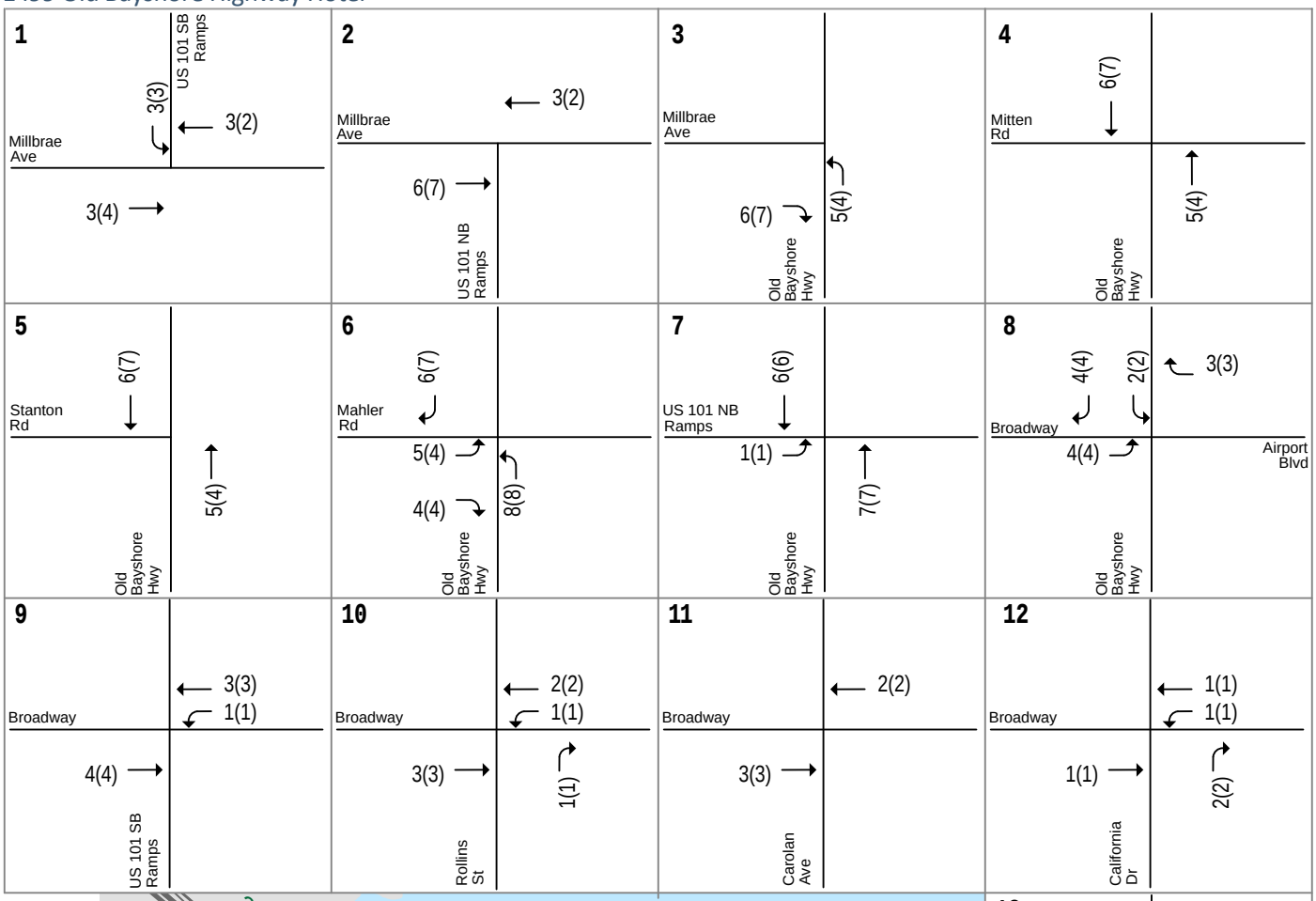


Figure 8
Project Hotel Trip Distribution and Assignment

HEXAGON

NORTH
Not to Scale

1499 Old Bayshore Highway Hotel





LEGEND

= Site Location

X = Study Intersection

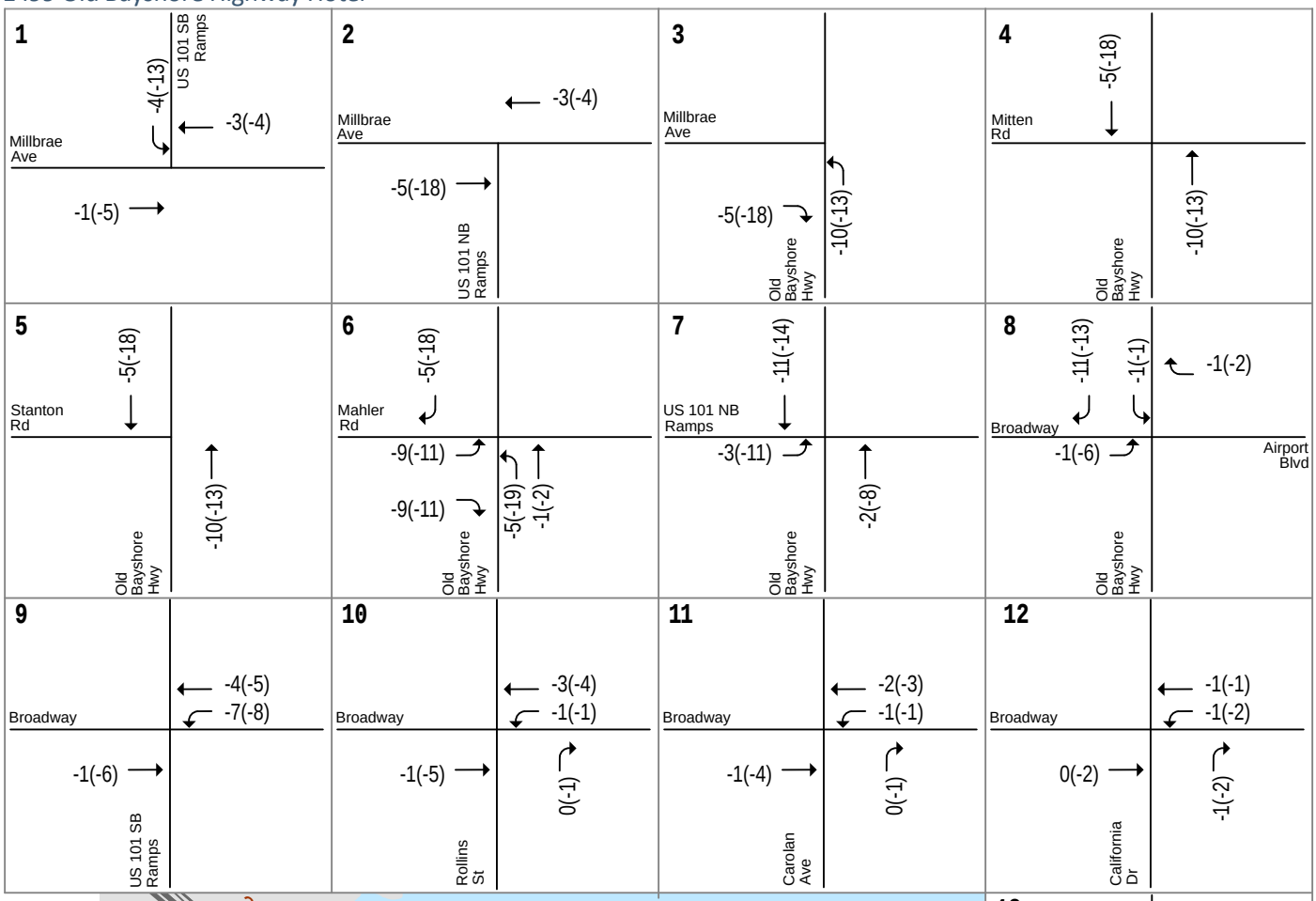
XX% = Restaurant Trip Distribution

Figure 9
Project Restaurant Trip Distribution and Assignment

HEXAGON

NORTH
Not to Scale

1499 Old Bayshore Highway Hotel





LEGEND

= Site Location

= Study Intersection

XX% = Existing Use Trip Distribution

Figure 10
Existing Use Trip Distribution and Assignment

HEXAGON

NORTH
Not to Scale

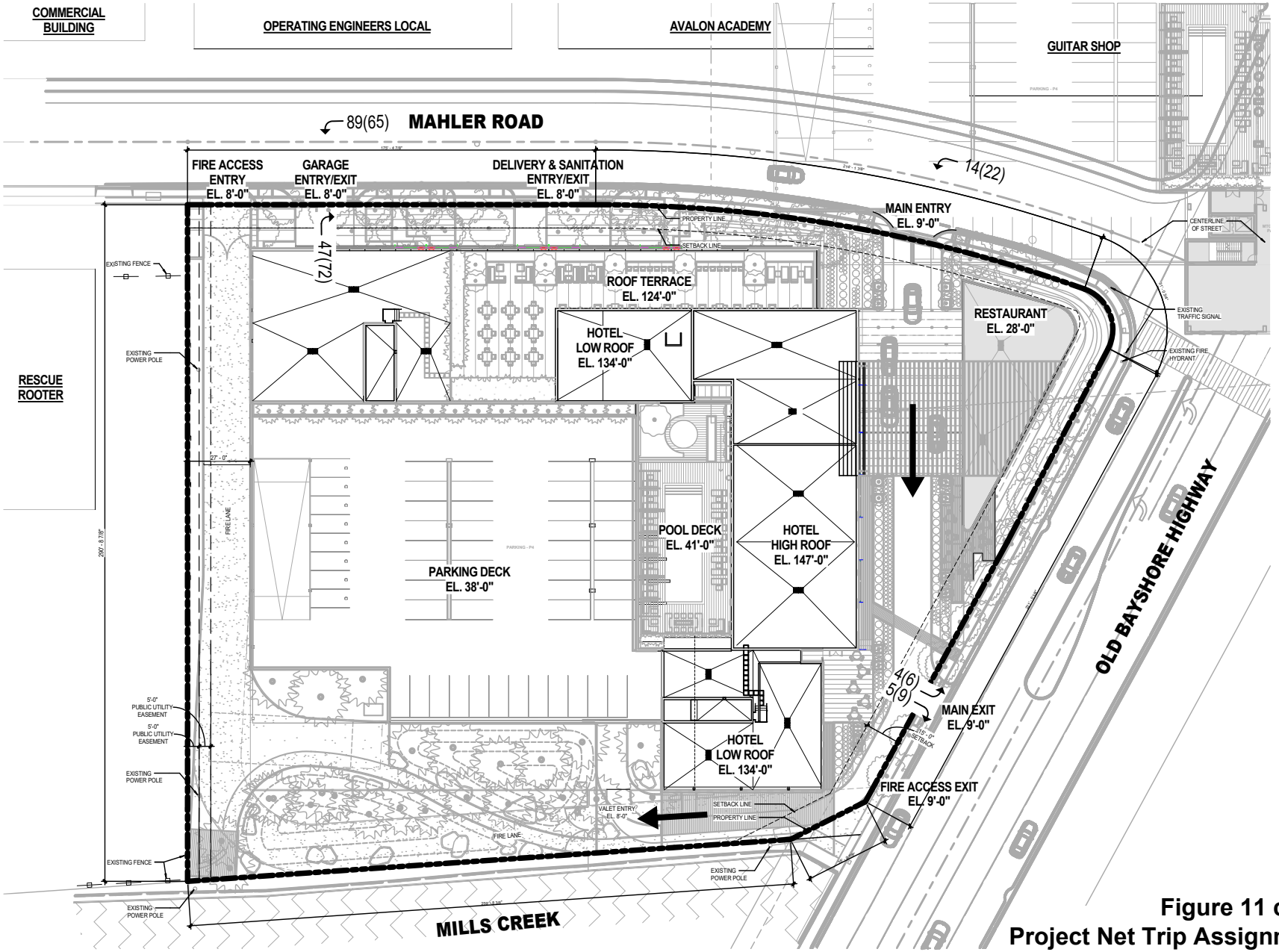
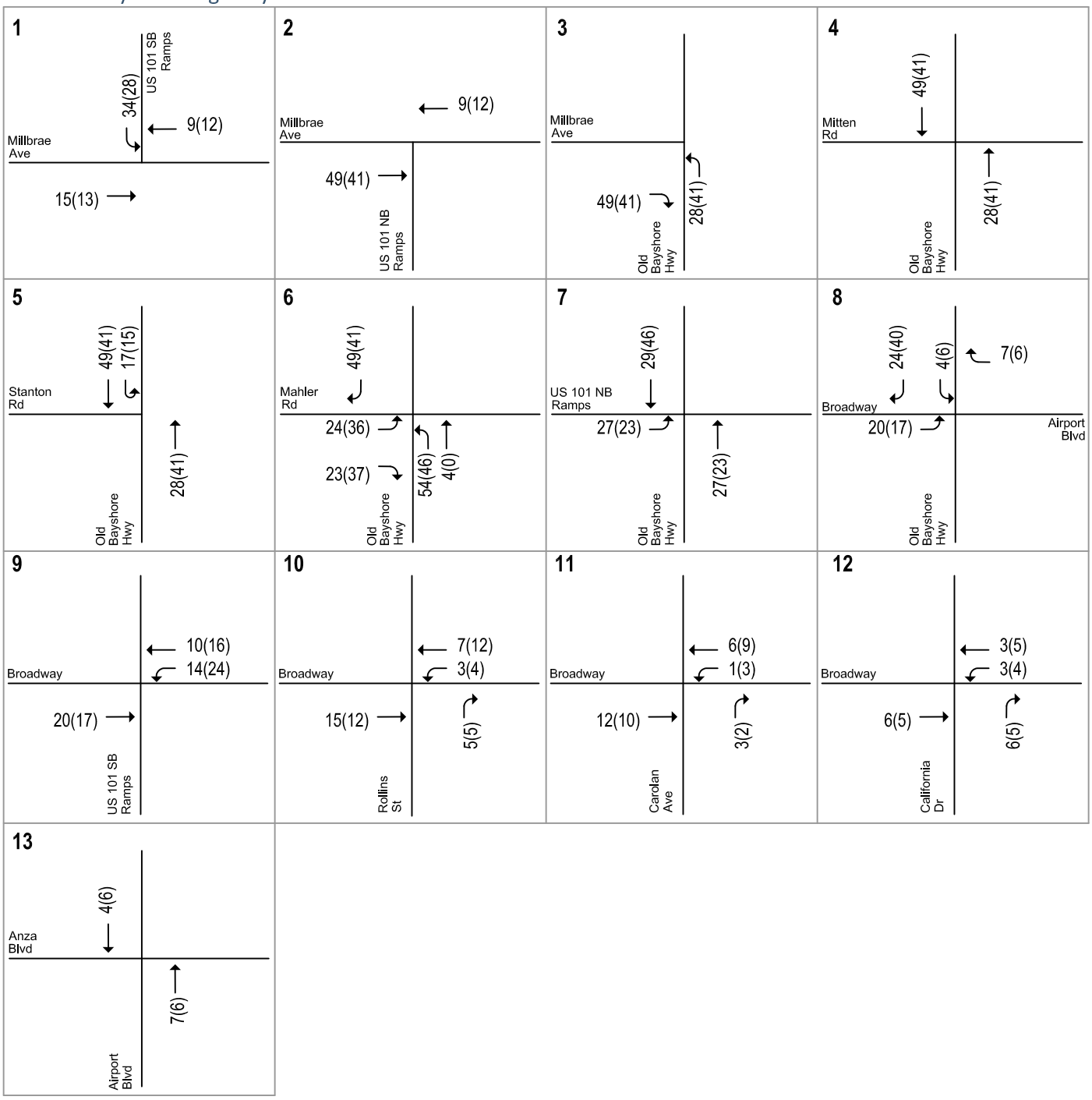


Figure 11 cont.
Project Net Trip Assignment



LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Figure 11
Net Project Trip Assignment

HEXAGON

NORTH
Not to Scale

Existing Plus Project Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes are shown on Figure 12.

Existing Plus Project Intersection Analysis

Table 7 shows that most of the study intersections would continue to operate at LOS D or better during both the AM and PM peak hours of traffic. The California Drive/Broadway intersection would operate at a substandard LOS E during the AM peak hour. The project would increase the delay by less than 5 seconds, so the project impact would be less than significant. The intersection level of service calculation sheets are provided in Appendix B.

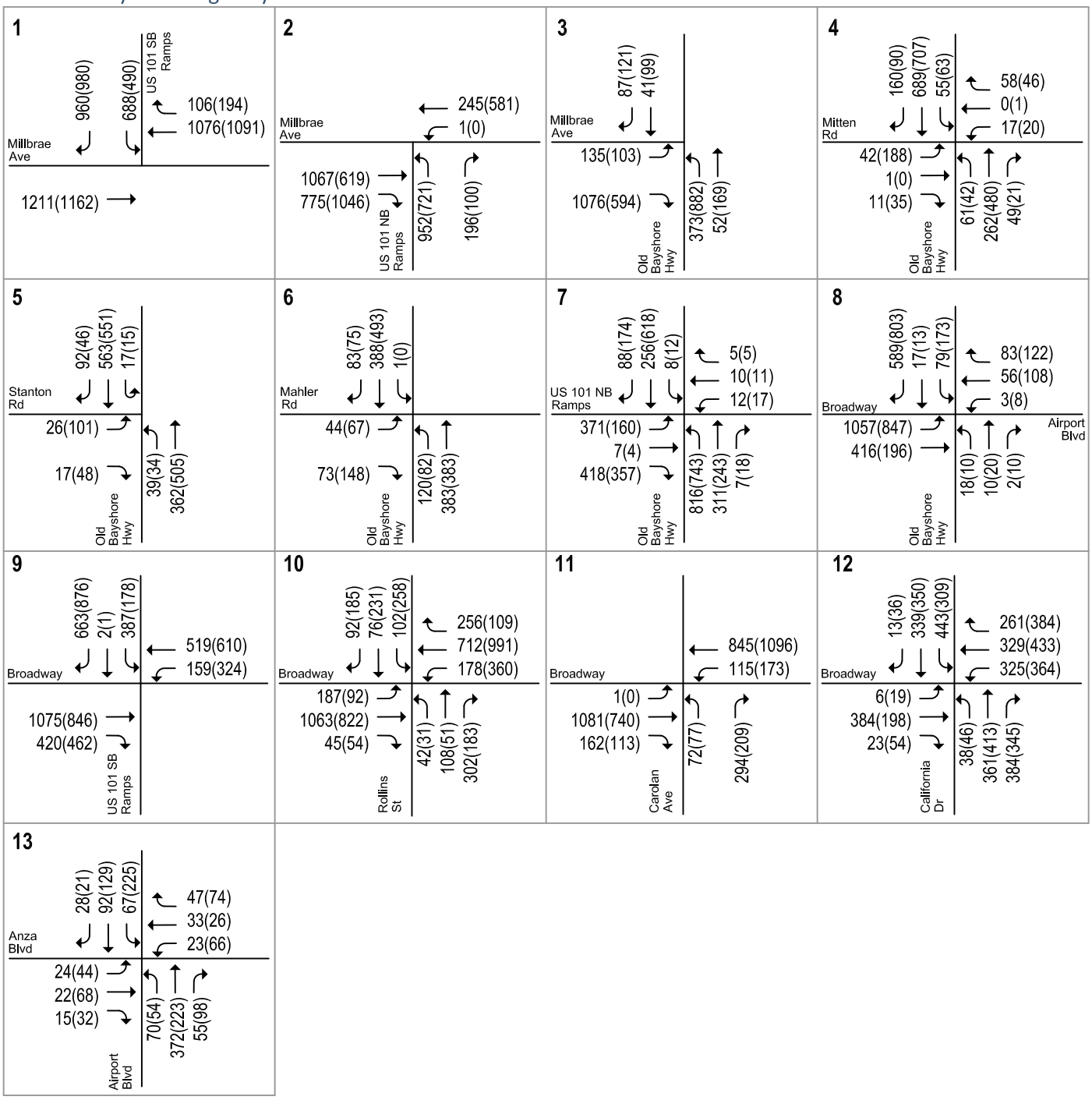
Table 7
Existing Plus Project Intersection Levels of Service

Study Number	Intersection	Peak Hour	Existing Conditions			
			No Project		With Project	
			Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS
1	US 101 Southbound Ramps and Millbrae Avenue *	AM	26.8	C	27.0	C
		PM	30.1	C	30.2	C
2	US 101 Nouthbound Ramps and Millbrae Avenue	AM	15.6	B	16.0	B
		PM	11.5	B	11.7	B
3	Old Bayshore Highway and Millbrae Avenue	AM	28.6	C	29.2	C
		PM	33.6	C	34.4	C
4	Old Bayshore Highway and Mitten Road *	AM	15.2	B	15.3	B
		PM	18.1	B	18.2	B
5	Old Bayshore Highway and Stanton Road *	AM	13.3	B	13.3	B
		PM	15.1	B	15.2	B
6	Old Bayshore Highway and Mahler Road *	AM	7.4	A	10.2	B
		PM	8.0	A	11.0	B
7	Old Bayshore Highway and US 101 Nouthbound Ramps *	AM	34.4	C	34.8	C
		PM	38.3	D	39.0	D
8	California Drive and Broadway	AM	18.2	B	18.2	B
		PM	18.6	B	18.7	B
9	Carolan Avenue and Broadway	AM	26.5	C	26.9	C
		PM	17.7	B	17.9	B
10	Rollins Road and Broadway	AM	33.2	C	33.4	C
		PM	33.9	C	34.0	C
11	US 101 Southbound Ramps and Broadway *	AM	25.9	C	25.9	C
		PM	24.8	C	24.9	C
12	Old Bayshore Highway and Airport Boulevard *	AM	**61.2**	**E**	**62.3**	**E**
		PM	45.0	D	45.4	D
13	Airport Boulevard and Anza Boulevard *	AM	14.9	B	14.8	B
		PM	23.2	C	23.1	C

Note:

* The *Highway Capacity Manual* (HCM) *2010* does not support turning movements with shared and exclusive lanes. Therefore, this intersection was analyzed using the HCM 2000.

Bold indicates a substandard level of service.



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 12
Existing Plus Project Traffic Volumes

HEXAGON

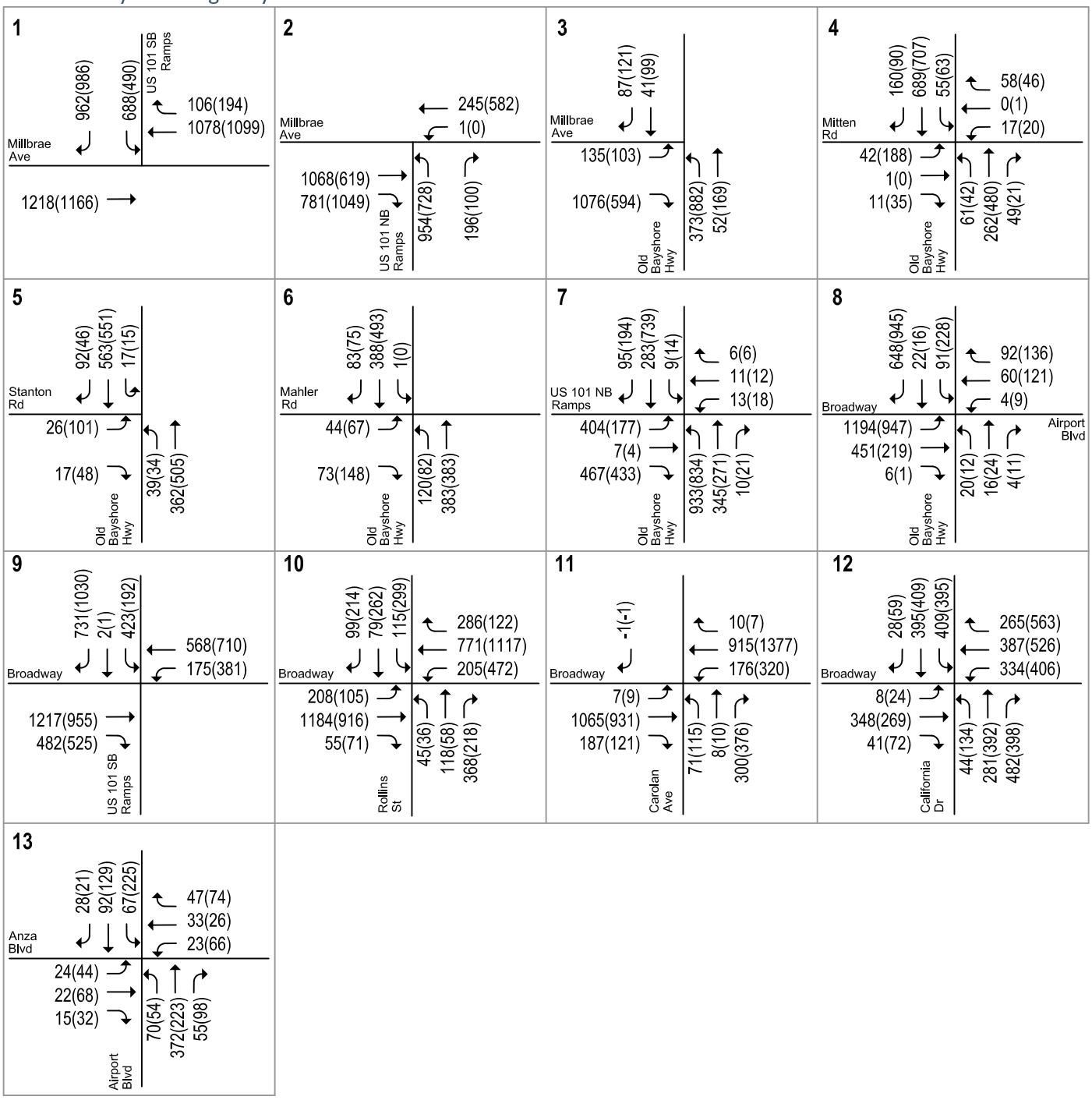
NORTH
Not to Scale

Project Conditions Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to background traffic volumes to obtain project conditions traffic volumes. The project conditions traffic volumes at the study intersections are shown on Figure 13.

Project Conditions Intersection Analysis

Table 8 shows that most of the study intersections would continue to operate at LOS D or better during both the AM and PM peak hours of traffic. The California Drive/Broadway intersection would continue to operate at an unacceptable LOS E during both peak hours with the addition of the project traffic. However, the addition of project traffic would not create a significant impact at this intersection because the weighted average delay per vehicle would increase by only 1.4 seconds, which is less than the standard threshold of five (5) seconds for a significant impact. It should also be noted that although the Airport Boulevard/Anza Boulevard intersection shows an improvement with the increased traffic from the project, this typically occurs when traffic is added to intersection turning movements that have low delay. Thus, the overall weighted average delay can improve. The intersection level of service calculation sheets are provided in Appendix B.



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 13
Background Plus Project Traffic Volumes

HEXAGON

NORTH
Not to Scale

Table 8
Background Plus Project Intersection Levels of Service

Study Number	Intersection	Peak Hour	Background Conditions			
			No Project		With Project	
			Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS
1	US 101 Southbound Ramps and Millbrae Avenue *	AM	26.9	C	27.0	C
		PM	30.1	C	30.2	C
2	US 101 Nouthbound Ramps and Millbrae Avenue	AM	15.6	B	16.1	B
		PM	11.5	B	11.7	B
3	Old Bayshore Highway and Millbrae Avenue	AM	28.6	C	29.2	C
		PM	33.6	C	34.4	C
4	Old Bayshore Highway and Mitten Road *	AM	15.2	B	15.3	B
		PM	18.1	B	18.2	B
5	Old Bayshore Highway and Stanton Road *	AM	13.3	B	13.3	B
		PM	15.1	B	15.2	B
6	Old Bayshore Highway and Mahler Road *	AM	7.4	A	10.2	B
		PM	8.0	A	11.0	B
7	Old Bayshore Highway and US 101 Nouthbound Ramps *	AM	36.8	D	37.3	D
		PM	42.4	D	43.1	D
8	Old Bayshore Highway and Airport Boulevard *	AM	18.4	B	18.5	B
		PM	19.4	B	19.5	B
9	US 101 Southbound Ramps and Broadway *	AM	28.1	C	28.5	C
		PM	19.4	B	19.8	C
10	Rollins Road and Broadway	AM	35.7	D	35.9	D
		PM	38.6	D	38.9	D
11	Carolan Avenue and Broadway	AM	27.3	C	27.3	C
		PM	29.0	C	29.1	C
12	California Drive and Broadway	AM	**69.9**	**E**	**71.3**	**E**
		PM	**65.8**	**E**	**66.5**	**E**
13	Airport Boulevard and Anza Boulevard *	AM	14.9	B	14.8	B
		PM	23.2	C	23.1	C

Note:

* The *Highway Capacity Manual* (HCM) *2010* does not support turning movements with shared and exclusive lanes. Therefore, this intersection was analyzed using the HCM 2000.

Bold indicates a substandard level of service.

5. Cumulative Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative conditions with the proposed project. Cumulative conditions represent future traffic conditions with expected growth in the area. The expected future traffic growth was estimated by applying an annual growth factor to the existing counts for 10 years. Cumulative conditions reflect a horizon year of 2028.

Roadway Network and Traffic Volumes

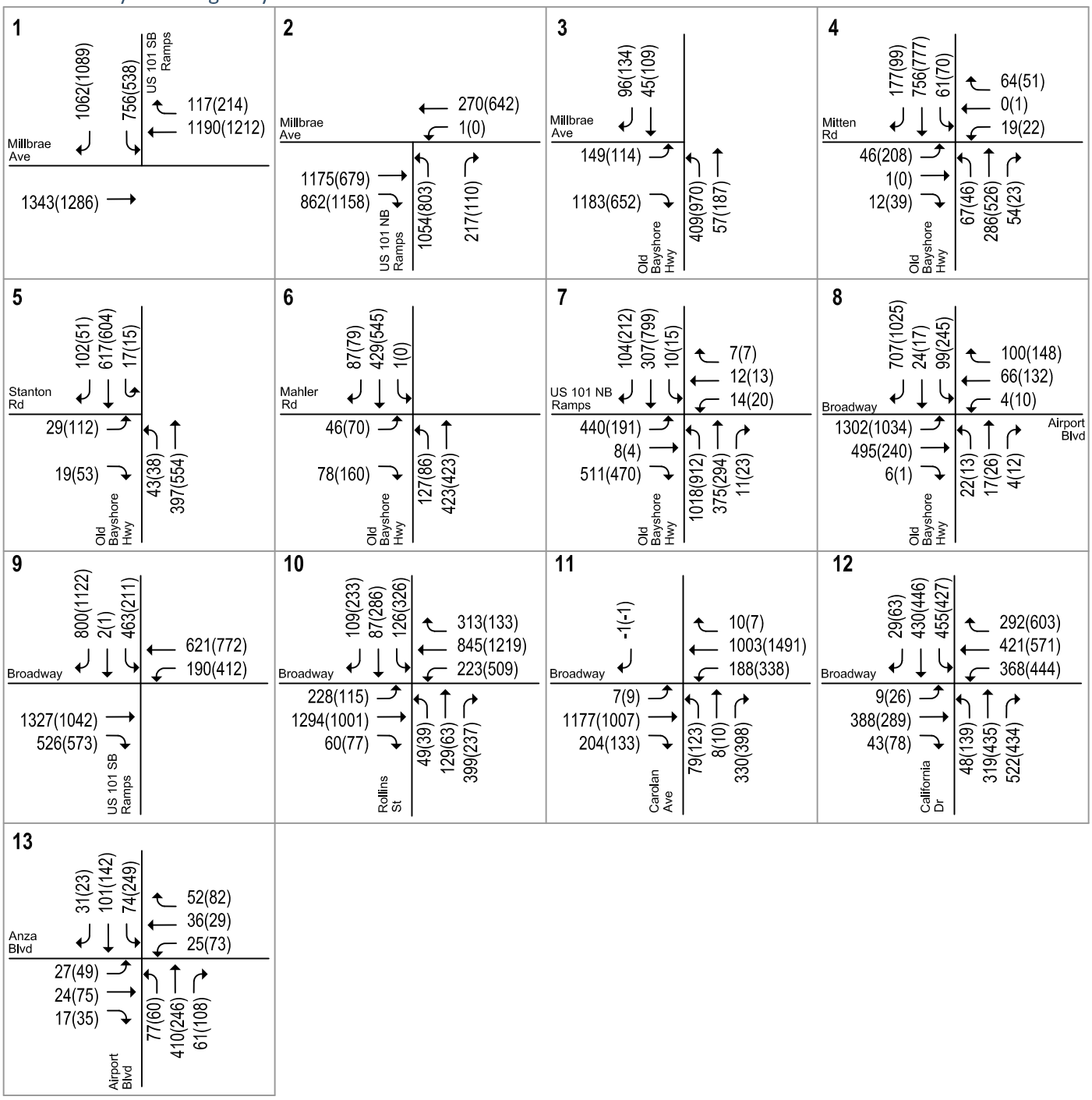
The intersection lane configurations under cumulative conditions were assumed to be the same as described under background conditions.

The traffic volumes under cumulative conditions for the study intersections were estimated by applying a 1.0 percent annual growth rate to the existing traffic counts and adding traffic from approved developments. The growth rate was applied to the study intersections through the year 2028 (ten-year horizon). Project trips were then added to the growth estimates to create the cumulative conditions volumes (see Figure 14).

Intersection Levels of Service Analysis

The results of the level of service analysis under cumulative conditions show that most of the study intersections would operate at an acceptable LOS D or better during both the AM and PM peak hours (see Table 9). The California Drive/Broadway intersection would operate at an unacceptable LOS F and LOS E during the AM and PM peak hours, respectively. However, based on the significance criteria presented in Chapter 4, the project would add only 1.8 seconds of average delay, and its impact would be considered less than significant. Level of service calculation sheets are included in Appendix B.

It should also be noted that the City of Burlingame is seeking to grade-separate the Caltrain tracks at Broadway and currently is studying design options. With the grade separation, the gate downtime at the Broadway and California Drive intersection would be eliminated, adding relief to the vehicle queues along Broadway. Thus, the intersection would operate at LOS D or better during peak hours under cumulative conditions.



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 14
Cumulative with Project Traffic Volumes

HEXAGON

NORTH
Not to Scale

Table 9
Cumulative Level of Service Summary

Study Number	Intersection	Peak Hour	Cumulative Conditions			
			No Project		With Project	
			Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS
1	US 101 Southbound Ramps and Millbrae Avenue *	AM	28.5	C	28.7	C
		PM	31.6	C	31.7	C
2	US 101 Nouthbound Ramps and Millbrae Avenue	AM	17.2	B	17.7	B
		PM	12.1	B	12.2	B
3	Old Bayshore Highway and Millbrae Avenue	AM	29.0	C	30.1	C
		PM	35.1	D	36.0	D
4	Old Bayshore Highway and Mitten Road *	AM	15.8	B	15.9	B
		PM	18.7	B	18.8	B
5	Old Bayshore Highway and Stanton Road *	AM	13.5	B	13.6	B
		PM	15.6	B	15.7	B
6	Old Bayshore Highway and Mahler Road *	AM	7.8	A	10.3	B
		PM	8.3	A	11.1	B
7	Old Bayshore Highway and US 101 Nouthbound Ramps *	AM	39.1	D	39.7	D
		PM	45.4	D	46.2	D
8	Old Bayshore Highway and Airport Boulevard *	AM	19.0	B	19.2	B
		PM	20.1	C	20.2	C
9	US 101 Southbound Ramps and Broadway *	AM	29.6	C	30.0	C
		PM	21.2	C	21.7	C
10	Rollins Road and Broadway	AM	38.2	D	38.5	D
		PM	42.1	D	42.4	D
11	Carolan Avenue and Broadway	AM	28.0	C	28.1	C
		PM	30.5	C	30.6	C
12	California Drive and Broadway	AM	**87.1**	**F**	**88.9**	**F**
		PM	**72.8**	**E**	**73.7**	**E**
13	Airport Boulevard and Anza Boulevard *	AM	15.3	B	15.3	B
		PM	24.3	C	24.3	C

Note:

* The *Highway Capacity Manual* (HCM) *2010* does not support turning movements with shared and exclusive lanes. Therefore, this intersection was analyzed using the HCM 2000.

Bold indicates a substandard level of service.

6. Freeway Segment Analysis and CMP Compliance

The magnitude of project trips on the freeway segments near the project site were determined based on the trip assignment. Freeway segments were analyzed for the AM and PM peak hours as required by the CMP.

Freeway Segment Analysis

Per CMP technical guidelines, a freeway segment level of service analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. New freeway trips generated by the project are expected to be considerably less than the one percent threshold of freeway capacity to all segments in the area. Therefore, a detailed analysis of freeway segments was not performed, and the project is considered to have an insignificant impact on the study freeway segments. A simple freeway segment capacity evaluation to substantiate this determination is presented in Table 10.

Table 10
Freeway Segment Capacity Evaluation

				Existing Conditions [1]			Project Conditions		
Freeway	Segment	Direction	Peak Hour	# of Lanes	Capacity [2]	LOS	Project Trips	% Capacity	Impact
US 101	Peninsula Avenue to Broadway	NB	AM	**4**	**9,200**	**F**	27	0.29%	NO
			PM	**4**	**9,200**	**F**	23	0.25%	NO
US 101	Millbrae Avenue to I-380	NB	AM	4	9,200	E	19	0.21%	NO
			PM	**4**	**9,200**	**F**	29	0.32%	NO
US 101	I-380 to Millbrae Avenue	SB	AM	4	9,200	E	34	0.37%	NO
			PM	**4**	**9,200**	**F**	28	0.30%	NO
US 101	Broadway to Peninsula Avenue	SB	AM	**4**	**9,200**	**F**	14	0.15%	NO
			PM	**4**	**9,200**	**F**	24	0.26%	NO

Notes:
[1] Existing freeway conditions referenced the Level of Service and Performance Measure Monitoring Report - 2015.
BOLD indicates a substandard level of service.

CMP Compliance and TDM Measures

Transportation Demand Management (TDM) is a combination of services, incentives, facilities, and actions that reduce single–occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution problems. The purpose of TDM is to (1) reduce the amount of trips generated by new developments; (2) promote more efficient utilization of existing transportation facilities and ensure that new developments are designed to maximize the potential for sustainable transportation usage; (3) reduce the parking demand generated by new developments and allow for a reduction in parking supply; and (4) establish an ongoing monitoring and enforcement program to guarantee the desired trip and parking reductions are achieved.

The project as proposed does not include a TDM plan as part of the project description. Therefore, the TDM plan could not be evaluated. The project should prepare a TDM Plan to satisfy the requirements outlined by the City/County Association of Governments (C/CAG) of San Mateo County.

7. Other Transportation Issues

This chapter presents other transportation issues associated with the project. These include an analysis of:

- Site access and circulation
- Truck access and circulation
- Parking analysis
- Intersection queuing analysis
- Potential impacts to pedestrian, bicycle, and transit facilities

Unlike the level of service impact methodology, which is adopted by the City Council, most of the analyses in this chapter are based on professional judgement in accordance with the standards and methods employed by traffic engineering professionals. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

Site Access and On-Site Circulation

The site access and on-site circulation evaluation is based on the October 30, 2017 site plan prepared by HKS Architects, Inc. (see Figure 2). Site access was evaluated to determine the adequacy of the site's driveways with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Project Driveway Design

Vehicular access to the project site would be provided via a partial-access driveway (enter-only) and an existing full-access driveway on Mahler Road, and an existing partial-access driveway on Old Bayshore Highway (exit-only). The full-access driveway measures approximately 25 feet wide (measured at the throat), providing access to all levels of the parking garage, while the partial-access driveways range between 16 feet and 23 feet wide, providing access to the hotel lobby and the restaurant entrance. The City of Burlingame Zoning Code requires a minimum of either two 12-foot driveways or one 18-foot driveway for parking areas of more than 30 vehicle spaces. While the project would meet the City's minimum width requirement for both one-way and two-way driveways, a driveway width of 23 feet is too wide for a one-way driveway, as it interferes with pedestrian circulation and may confuse drivers into thinking it is a two-way driveway. Therefore, the partial-access driveway on Old Bayshore Highway should be designed between 12 and 16 feet wide.

The project driveways must provide adequate access and storage space for vehicles entering the parking garage to avoid backups onto the sidewalks and streets. The full-access driveway on Mahler Road would provide enough stacking space for approximately two inbound vehicles. Typically, a minimum distance of 50 feet, the equivalent of two vehicles, measured from the face of the curb provides adequate stacking space at driveways. Therefore, the project is expected to provide adequate inbound stacking space at the project driveway leading into the parking garage.

Nearby Driveways

The locations of the project driveways were also reviewed with respect to proximity to public street intersections and other driveways in the vicinity of the project site. The Old Bayshore Highway and Mahler Road intersection is the nearest public street intersection, located approximately 100 feet east of the partial-access driveway on Mahler Road and 200 feet north of the driveway on Old Bayshore Highway. The close proximity of the partial-access driveway on Mahler Road and the public street intersection would result in eastbound vehicle queues occasionally extending in front of the driveway. However, the intersection vehicle queues are expected to have a minimal effect on driveway operations because the maximum queues would occur infrequently. Also, the number of vehicles expected to use the driveway is only 25 during the PM peak hour.

Nearby driveways are located approximately 200 feet east and 100 feet west of the full-access driveway, 50 feet west of the partial-access driveway on Mahler Road, and 50 feet south of the partial-access driveway on Old Bayshore Highway. While the partial-access driveways would be close in proximity to their respective neighboring driveways, vehicles are still expected to be able to make turns in and out of the project driveways without affecting similar operations at the adjacent driveways. Therefore, the driveway locations as proposed were found to be adequate. However, adequate sight distance needs to be provided at both project driveways to ensure vehicles at the adjacent driveways are within the line of sight. Sight distance at the project driveways is described below.

Sight Distance

There are no existing trees or visual obstructions along the project frontage to obscure sight distance at the project driveways. The project access points should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and vehicles and bicycles traveling on Mahler Road and Old Bayshore Highway. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site.

Adequate sight distance (sight distance triangles) should be provided at the project driveway in accordance with Caltrans standards. Sight distance triangles should be measured approximately 10 feet back from the traveled way. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to exit a driveway or locate sufficient gaps in traffic. The minimum acceptable sight distance is often considered the Caltrans stopping sight distance. Sight distance requirements vary depending on the roadway speeds. For the driveways on Mahler Road, which has a posted speed limit of 25 mph, the Caltrans stopping sight distance is 200 feet (based on a design speed of 30 mph). Thus, a driver must be able to see 200 feet in both directions along Mahler Road in order to stop and avoid a collision. Similarly, Old Bayshore Highway has a posted speed limit of 35 mph; thus, a driver at the project driveway on Old Bayshore Highway must be able to see 300 feet (based on a design speed of 40 mph) in both directions in order to stop and avoid a collision. Based on the project site plan, it can be concluded that the project driveways would meet the Caltrans stopping sight distance standards. However, given that on-street parking is permitted along Mahler Road, red-curb should be painted west of the project driveway an equivalent length to that of a standard vehicle, to ensure exiting vehicles can see bicyclists in the street.

Project Driveway Operations

The project-generated gross trips that are estimated to occur at the project driveways are 113 inbound trips and 78 outbound trips during the AM peak hour, and 124 inbound trips and 114 outbound trips during the PM peak hour. Based on the relatively low traffic volumes near the project site and observations of existing traffic operations along Mahler Road as well as Old Bayshore Highway, vehicle queues should rarely exceed a few (2 to 3) vehicles in length during the peak hours.

The western most driveway on Mahler Road would provide full-access, allowing right and left inbound and outbound turns to and from Mahler Road. Outbound left turns from the project driveway would require vehicles to wait for gaps in traffic in both the eastbound and westbound directions, while inbound left turns would require vehicles to wait for a gap in the eastbound traffic flow only. Similarly, the eastern driveway on Mahler Road would provide partial-access, allowing only right and left inbound turns from Mahler Road. Given that Mahler Road consists of only one lane in each direction with no left-turn pockets, left turns at both project driveways would be made from the through lane. Thus, there would be interruptions to the through traffic flow while left-turn vehicles wait for a gap in the on-coming traffic flow, albeit momentary.

The driveway on Old Bayshore Highway would also provide partial-access, allowing only right and left outbound turns out to Old Bayshore Highway. Outbound left turns from this project driveway would require vehicles to wait for gaps in traffic in both the southbound and northbound directions. Old Bayshore Highway contains a two-way center left-turn lane, which can be used as a refuge for outbound left turns, thus providing a two-stage merging process whereby vehicles can occupy the center turn-lane while waiting for an appropriate gap in the northbound traffic flow.

A level of service analysis was conducted for left-turns at the project driveways to ensure that vehicles would operate without excessive delays or queues (see Table 11). Under all scenarios with project traffic, the driveways on Mahler Road would operate at LOS A during the AM and PM peak hours, while left and right turns from the project site on to Old Bayshore Highway would experience a LOS B during both peak hours. This indicates that left-turning vehicles at the project driveways would experience minor delays and are expected to have a minimal effect on operations at the adjacent intersections.

Table 11
Project Driveway Levels of Service Summary

Study Number	Intersection	Movement	Peak Hour	Existing with Project		Background with Project		Cumulative with Project	
				Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS
14	Project Driveway #1 and Mahler Road	Inbound Left	AM	7.5	A	7.5	A	7.5	A
			PM	7.7	A	7.6	A	7.7	A
		Outbound Right	AM	8.8	A	8.8	A	8.8	A
			PM	9.4	A	9.3	A	9.4	A
15	Project Driveway #2 and Mahler Road	Inbound Left	AM	0.8	A	0.8	A	0.8	A
			PM	1.5	A	1.5	A	1.5	A
16	Project Driveway #3 and Old Bayshore Highway	Outbound Left/Right	AM	11.1	B	11.0	B	11.3	B
			PM	12.3	B	12.3	B	12.8	B

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of Burlingame Zoning Code and generally accepted traffic engineering standards. Generally, the proposed site plan would provide vehicle traffic with adequate connectivity through the parking areas. The site plan shows three dead-end aisles: one dead-end drive aisle on the ground floor at the southeast corner of the garage leading to the entry-only gate, one dead-end aisle on the second floor at the northwest corner of the garage, and one dead-end aisle on the parking deck at the southwest corner of the garage. However, vehicle turnarounds would be provided at the end of the drive aisle, giving vehicles adequate space to turnaround if they fail to find a parking space. The project site plan also shows a one-way drive aisle leading from the hotel lobby and the restaurant entrance to an exit-only driveway as well as to an entrance gate into the parking garage. This additional access point into the garage would allow for patrons and possibly valet services conducting drop-off/pick-up operations to easily circulate into the parking garage without leaving the site; thus, containing the traffic flow on-site without queuing into the project driveway.

The project would provide 90-degree parking stalls throughout the ground floor and upper levels of the parking garage. The City's standard minimum width for two-way drive aisles is 24 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of the parking spaces. According to the site plan, the drive aisles throughout the parking garage measure 24 feet wide. Thus, adequate access to all parking stalls would be provided throughout the site.

Parking Stall Dimensions

According to the site plan, the project proposes standard-sized (8.5 feet wide by 18 feet long) and compact-sized (8 feet wide by 17 feet long) parking stalls, which would meet the City's off-street parking design standard. Van accessibility is provided at two of the ADA accessible stall locations.

Parking Garage Circulation

A multilevel parking structure would occupy the western half of the project site. There would be one entrance/exit located at the northwest corner of the garage, and an additional entrance gate located at the southeast corner of the ground floor (see Figure 2). Thus, vehicles would be able to choose to either enter the parking garage directly using the western driveway on Mahler Road, or use the eastern driveway on Mahler Road and circulate through the drop-off/pick-up area between the hotel lobby and restaurant entrance to enter the garage on the south side. The site plan shows that all parking levels of the garage would be accessible by both entrances. Access to the upper levels of the parking garage would be provided via a ramp located along the southern edge of the project site.

Pedestrian access between the parking structure and the on-site uses would be provided via elevators and a stairway on each parking level. The elevators and stairway are located on the northern side of the garage and would provide direct access to either the building's main lobby, or to an exit corridor. Patrons accessing the restaurant from the parking garage would take any of the elevators to the hotel lobby or take the stairway to Mahler Road and use the sidewalk along the northern edge of the site.

Therefore, based on the project site plan, the project would provide adequate vehicular and pedestrian circulation on all levels of the parking structure.

Bike and Pedestrian On-site Circulation

The site provides adequate pedestrian circulation throughout the site, as well as between the site and the surrounding pedestrian facilities. The site plan shows continuous walkways along the northern edge of the site, as well as between the hotel and restaurant buildings. Near the southeast corner of the project site, the site plan shows a pedestrian connection from the hotel to the sidewalk on Old Bayshore

Highway. As previously mentioned, the parking garage also includes a few areas with elevators and stairs so that pedestrians would have convenient access to them from any part of the garage.

Although the City of Burlingame Zoning Code does not require bike parking, the project should provide convenient bike parking to create a pedestrian- and bicycle-friendly environment and to encourage bicycling by patrons and employees. In addition, the inclusion of convenient bike parking would complement the bicycle facilities in the vicinity of the project site.

Truck Access and Circulation

The ground level site plan shows two freight/delivery loading spaces measuring 12 feet by 38 feet located along the northern edge of the site, adjacent to the parking garage entrance/exit. The loading zones would be accessed from Mahler Road. Access to the loading spaces would be provided via a separate driveway from the garage driveway, so there would not be a conflict among turning movements. The loading area would accommodate trucks up to about 16 feet in height, which makes the loading spaces adequate for large delivery and moving trucks (SU-30 truck types). The loading area would not incorporate a turnaround, so trucks would need to back in and exit forward. Given that trucks would need to back into the loading zone, they could have difficulty during peak times due to traffic on Mahler Road. Thus, deliveries should be scheduled to avoid the peak AM and PM commute times. At off-peak times Mahler Road is not busy, and trucks would not have difficulty using the loading zone.

The project site plan was also reviewed for truck access using truck turning-movement templates for a WB-40 truck type, a SU-30 truck type, which represent small emergency vehicles, garbage trucks, and small to medium delivery and moving trucks. Based on the current site plan configuration, the project would provide adequate access for large vehicle types at the loading spaces, including a WB-40 truck and a SU-30 truck.

Garbage Collection

The site plan shows the trash room to be located adjacent to the loading spaces on Mahler Road. Garbage collection activities for the project are not expected to occur on-site due to height and access limitations. Therefore, the trash bins should be moved to the curb along Mahler Road on designated garbage collection days. Given that on-street parking is permitted along Mahler Road, signs prohibiting parking during garbage pickup hours should be placed adjacent to the loading zone driveway. The trash bins also should be removed from the public right-of-way immediately after garbage pickup as to not impact AM or PM peak hour traffic conditions.

Emergency Vehicle Access

Emergency vehicles access (EVA) would be provided via an EVA road that runs behind the proposed hotel along the property line. Emergency vehicles also would be able to access the Porte Cochere area.

Parking Supply

The City of Burlingame Zoning Code (Section 25.70.040) states that hotel uses are required to provide one parking stall per room; and restaurants are required to provide one parking stall per 100 square feet of gross floor area and one parking stall per 1,000 square feet of gross floor area for restaurant employees. Table 12 shows the total required parking spaces for the project in accordance with the City of Burlingame Zoning Code. The project as proposed would construct a 404-room hotel and a detached 2,900 square-foot restaurant. Based on the City's parking requirements and the current project description, the project would be required to provide 404 parking spaces for the hotel component and

32 parking spaces for the restaurant component, for a total of 436 parking spaces. The City's parking code also states that for projects with over 20 required parking spaces, up to 20 percent of the spaces are allowed to be compact parking spaces.

Based on the project site plan, the parking garage would supply 289 parking spaces, of which 55 spaces are compact-sized (an equivalent of 19 percent). The proposed parking supply would not meet the City's Parking Code, with the project being a total 147 spaces short of the City's parking requirement. This represents a parking deficit of approximately 34 percent.

Since parking for the restaurant use would be short-term, restaurant designated parking spaces should be signed for two-hour parking. This would help with parking turnover and keep spaces available for patrons and visitors. Designated parking spaces should be provided for restaurant employees to allow them to park for more than two hours. Additional details of the shared parking scheme would be determined when the restaurant tenant is identified. The property manager should take steps, such as additional signage or other controls, to ensure that all tenants' parking stalls are actively managed in the parking garage.

Per the California Building Code (CBC) Table 11B-6, eight (8) ADA accessible spaces are required for projects with 301 to 400 parking spaces. Of the required accessible parking spaces, one van accessible space is required. The plans show a total of three (3) accessible spaces, with one space located on each floor except on the roof parking deck (third above-grade floor) of the parking garage. Of the provided ADA accessible spaces, none of the spaces are shown to be designated van accessible. The project would not meet the requirement for ADA spaces, and therefore the site plan should be revised to adhere to the CBC accessible parking provisions.

Shared Parking

The project description as proposed would share the spaces in the parking garage between the hotel and restaurant land uses. It is expected that the combined land uses will result in a demand for parking that would be less than the demand that would be generated by separate free-standing developments because different land uses have different time of day parking characteristics. To determine the shared parking demand, an hourly evaluation of the peak parking characteristics for the proposed development was completed. The shared parking analysis is based on the Urban Land Institute's *Shared Parking, 2nd Edition (2005)*, which provides parking occupancy rates for many land uses according to the time of day. These parking occupancy rates can be applied to the parking demand for each proposed land use. Comparing the parking requirement for each land use separately with the cumulative parking demand for all land uses combined will show whether or not parking demand can be reduced with a shared parking plan. For example, since office space has peak parking demand during the day and residential uses have peak parking demand at night, office and residential uses have complementary parking needs and are frequently good candidates for shared parking.

Table 12 shows the parking occupancy and the potential for shared parking between the two proposed land uses (hotel and restaurant). Results of the shared parking analysis show how parking demand varies throughout the day, with the peak parking demand for hotels occurring during the late evening hours (between 10:00 pm and midnight) and the peak demand for restaurants occurring between 7:00 pm and 9:00 pm. Based on the analysis, the parking demand for the entire project would peak at 11:00 p.m., when the parking demand for the hotel is 100% and at about 80% for the restaurant. The maximum demand would be 432 parking spaces, four spaces fewer than the required 436 spaces. Therefore, even with shared parking the project would not provide enough parking spaces to meet the parking requirement.

Table 12
On-Site Shared Parking Analysis

Hour of Day	Restaurant [2]		Business Hotel		Total Demand	
	Wkdy	Wknd	Wkdy	Wknd	Wkdy	Wknd
Parking Demand by Hour						
6 a.m.	0	0	384	384	**384**	**384**
7 a.m.	1	1	364	364	**365**	**365**
8 a.m.	3	2	323	323	**326**	**325**
9 a.m.	4	3	283	283	**286**	**286**
10 a.m.	8	4	242	242	**251**	**246**
11 a.m.	15	8	242	242	**258**	**250**
Noon	25	17	222	222	**247**	**239**
1 p.m.	25	19	222	222	**247**	**241**
2 p.m.	22	16	242	242	**264**	**258**
3 p.m.	14	16	242	242	**257**	**258**
4 p.m.	17	16	263	263	**280**	**279**
5 p.m.	25	21	283	283	**308**	**304**
6 p.m.	31	29	303	303	**334**	**332**
7 p.m.	32	31	303	303	**335**	**334**
8 p.m.	32	32	323	323	**355**	**355**
9 p.m.	32	29	343	343	**375**	**373**
10 p.m.	31	29	384	384	**415**	**413**
11 p.m.	25	28	404	404	**429**	**432**
Midnight	9	16	404	404	**413**	**420**
City Parking Requirement						
Total Required Spaces [1]	**32**	**32**	**404**	**404**	**436**	**436**
Maximum Combined Demand					**429**	**432**

Notes:
Wkdy = Weekday; Wknd = Weekend
Source: Urban Land Institute (ULI) Shared Parking, 2nd Edition, 2005.
[1] Required number of spaces based on the City of Burlingame Zoning Code (Section 25.70.040).
[2] Fine/Casual Dining, weighted average of customer (85%) and employee (15%) ratios

On-Call Valet Service

Given that the project as proposed would not meet the City's Parking Code, the project should consider the implementation of an on-call valet service during periods of peak parking demand or special events. The valet service would allow for hotel and restaurant vehicles to be parked and stacked in the garage in areas not specifically designated for parking. Valet parking can typically achieve at least a 15% increase in parking spaces. As previously stated, the project site plan shows an additional entrance gate accessible near Old Bayshore Highway. Thus, patrons of the restaurant and hotel would drop-off/pick-up their vehicles on-site at the designated drop-off/pick-up area between the hotel lobby and the restaurant entrance, and valet staff would easily circulate vehicles from the hotel lobby and the restaurant entrance into the parking garage without leaving the site.

Intersection Queuing Analysis

The operations analysis is based on vehicle queuing for high-demand movements at the study intersections (see Table 13). The following three left-turn movements were examined as part of the queuing analysis for this project:

- Northbound left turn and eastbound left/right turn at Old Bayshore Highway and Mahler Road
- Eastbound left/through turn at Old Bayshore Highway and US 101 Northbound Ramps
- Northbound left turn at Old Bayshore Highway and Millbrae Avenue

The intersections along Old Bayshore Highway at Mahler Road and the northbound US 101 ramps, consist of two storage pockets for the northbound and eastbound left-turn movements, respectively. Given that one of the eastbound left-turn pockets at the US 101 northbound ramp intersection is combined with other turn movements, the eastbound movement as a whole was evaluated. The estimated queue lengths based on the Poisson numerical calculations show queuing deficiencies for one of the three studied turn pockets (see Table 13). Locations where the vehicular queues would be deficient are discussed below.

Old Bayshore Highway and Millbrae Avenue

At the intersection of Old Bayshore Highway and Millbrae Avenue, the storage pockets for the northbound left-turn movement extends a total of approximately 250 feet per lane, which equates to an available storage of about 10 vehicles seeking to turn left from Old Bayshore Highway onto westbound Millbrae Avenue. During the PM peak hour, the project would add 41 trips to the northbound left-turn movement. With the addition of project-generated traffic, the 95th percentile queue would increase by 25 feet to 275 feet under both existing and background conditions, which equates to a change from 10 vehicles to 11 vehicles. The resulting queue length would exceed the available storage by approximately one vehicle. However, given that the left-turn spillback would last for a short period of time during only the busiest cycles within the PM peak hour, the project is expected to have a minimal effect on traffic operations at this location.

Old Bayshore Highway and Mahler Road

During the PM peak hour, the project would add 73 trips to the eastbound movement at this study intersection. With the addition of project-generated traffic, the 95th percentile queue would increase by 25 feet to 125 feet under both existing and background conditions, which equates to a change from 4 vehicles to 5 vehicles.

Although the maximum queue length would back up to the proposed partial-access driveway on Mahler Road, operations at the Old Bayshore Highway/Mahler Road intersection are expected to have a minimal effect on the operations of the proposed driveway because of the low number of inbound vehicles turning into the driveway.

Table 13
Queuing Analysis Summary

Measurement	Old Bayshore Highway & Millbrae Avenue NBL AM	Old Bayshore Highway & Millbrae Avenue NBL PM	Old Bayshore Highway & US 101 NB Ramps EBL/EBT/EBR AM	Old Bayshore Highway & US 101 NB Ramps EBL/EBT/EBR PM	Old Bayshore Highway & Mahler Road NBL AM	Old Bayshore Highway & Mahler Road NBL PM	Old Bayshore Highway & Mahler Road EBL/EBR AM	Old Bayshore Highway & Mahler Road EBL/EBR PM
Existing								
Cycle/Delay [1] (sec)	90	115	120	153	78	75	78	75
Volume (vphpl)	173	421	256	166	66	36	70	142
95th %. Queue (veh/ln.)	8	10	14	12	2	2	2	4
95th %. Queue (ft./ln)	200	250	350	300	50	50	50	100
Storage (ft./ ln.)	250	250	750	750	100	100	100	100
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y
Existing Plus Project								
Cycle/Delay [1] (sec)	90	115	120	153	78	75	78	75
Volume (vphpl)	187	442	265	174	120	82	117	215
95th %. Queue (veh/ln.)	8	11	14	12	3	3	3	5
95th %. Queue (ft./ln)	200	275	350	300	75	75	75	125
Storage (ft./ ln.)	250	250	750	750	100	100	100	100
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	**N**
Background								
Cycle/Delay [1] (sec)	90	115	120	153	78	75	78	75
Volume (vphpl)	173	421	284	197	66	36	70	142
95th %. Queue (veh/ln.)	8	10	15	13	2	2	2	4
95th %. Queue (ft./ln)	200	250	375	325	50	50	50	100
Storage (ft./ ln.)	250	250	750	750	100	100	100	100
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y
Background Plus Project								
Cycle/Delay [1] (sec)	90	115	120	153	78	75	78	75
Volume (vphpl)	187	442	293	205	120	82	117	215
95th %. Queue (veh/ln.)	8	11	15	14	3	3	3	5
95th %. Queue (ft./ln)	200	275	375	350	75	75	75	125
Storage (ft./ ln.)	250	250	750	750	100	100	100	100
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	**N**
Cumulative								
Cycle/Delay [1] (sec)	90	115	120	153	78	75	78	75
Volume (vphpl)	191	465	311	214	73	40	77	157
95th %. Queue (veh/ln.)	9	11	16	14	2	2	3	4
95th %. Queue (ft./ln)	225	275	400	350	50	50	75	100
Storage (ft./ ln.)	250	250	750	750	100	100	100	100
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	Y
Cumulative Plus Project								
Cycle/Delay [1] (sec)	90	115	120	153	78	75	78	75
Volume (vphpl)	205	486	320	222	127	86	124	230
95th %. Queue (veh/ln.)	9	12	16	15	4	3	3	5
95th %. Queue (ft./ln)	225	300	400	375	100	75	75	125
Storage (ft./ ln.)	250	250	750	750	100	100	100	100
Adequate (Y/N)	Y	**N**	Y	Y	Y	Y	Y	**N**

Notes:
WBL = westbound left movement; EBL = eastbound left movement; EBT = eastbound through movement; EBR = eastbound right movement; SBL = southbound left movement
[1] Vehicle queue calculations based on cycle length for signalized intersections.
[2] Assumes 25 Feet Per Vehicle Queued.

Pedestrian, Bicycle, and Transit Analysis

All new development projects in the City of Burlingame should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve Burlingame's mobility goals. In addition, the adopted Bicycle Transportation Plan establishes goals and policies to make bicycling a daily part of life in Burlingame. The Transportation Plan includes designated bike lanes where possible, as well as designated routes for both local and regional trips, to provide a complete connection through Burlingame. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details). The project site plan shows sidewalks of approximately 5 feet in width along its Mahler Road frontage and 4 feet in width along its Old Bayshore Highway frontage, both backed by a berm. The sidewalk width is too narrow along the Old Bayshore Highway frontage due to the street's traffic volumes and speed. In addition, marked crosswalks are provided at the Old Bayshore Highway/Mahler Road intersection adjacent to the northeast corner of the project site. The project is expected to increase the number of pedestrians using the sidewalks and crosswalks. Hexagon recommends a sidewalk width of 10-12 feet to provide a more pedestrian-friendly environment.

Bicycle Facilities

There are some bike facilities in the immediate vicinity of the project site (see Chapter 2 for details). There are also many planned additional bicycle facilities in the study area, including a bike route along Millbrae Avenue between Old Bayshore Highway and California Drive.

To get to the site from the Broadway Caltrain station, cyclists could use the new bicycle bridge over US101 near Broadway. For now, bicyclists between the project site and the Millbrae station would use Millbrae Avenue, which is classified as a "suggested route" in the Millbrae bicycle plan. In the future, the City of Millbrae is planning to build a bicycle bridge over US101 north of, and parallel to, Millbrae Avenue.

Transit Services

The project site is well-served by SamTrans, Caltrain and BART (via shuttle services to the Millbrae Station), and the Burlingame Trolley. The study area is served directly by one express bus route and two shuttle routes. The project would generate 190 hotel person-trips during the AM peak hour and about 242 hotel person-trips during the PM peak hour. With the proximity to transit and shuttle services, it could be expected that a portion (10%-20%) of hotel employee trips would be made by transit. Assuming up to 10% of the total trips are made by employees, that translates into a maximum of 24 new transit riders during the peak hours. There are 10 buses that serve the bus stops near the site during peak hours. This calculates to an average of about 3 new transit riders per bus. It is assumed that the buses have sufficient capacity to accommodate this minor increase in ridership.

In addition to the available transit services in the study area, the project should consider providing an airport shuttle service for guests of the hotel. Given that the project site is located approximately two miles from the San Francisco Airport, the provided shuttle service could reduce the number of vehicle trips made by hotel guests and patrons traveling to and from the airport.

Future Transit Services

Although only weekend (Saturday and Sunday) service is currently provided at the Broadway Caltrain station, with the proposed Peninsula Corridor Electrification Project (PCEP), which is a key component of the Caltrain Modernization program, weekday service at the Broadway station is expected to be restored. The PCEP is expected to increase service by up to six Caltrain trains per peak hour per direction by 2020. With the proposed electrification project, it is expected that the transit ridership at the Broadway station will increase. Given the nearby Caltrain station, development of the Hotel project would result in new transit riders, thus reducing vehicle trips. It is not known whether shuttle service would be added to the Broadway station along with weekday train service. Shuttle service is currently available from the Millbrae station. If shuttle service were to continue to not be available from the Broadway station, bicycling to the site would be a suitable option, given that there are adequate bicycle facilities between the Broadway station and the project site.

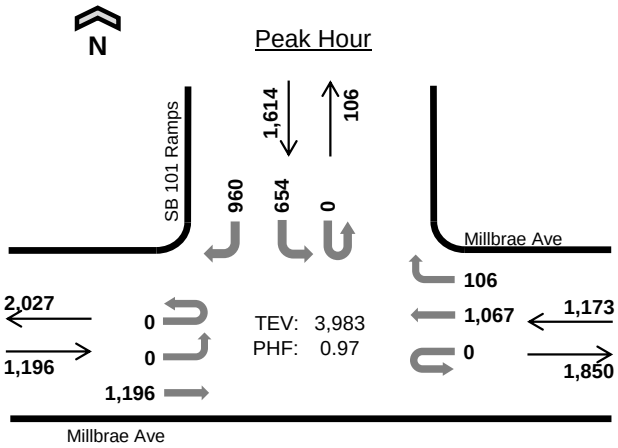
1499 Old Bayshore Highway
Hotel Transportation Impact Analysis
Technical Appendices

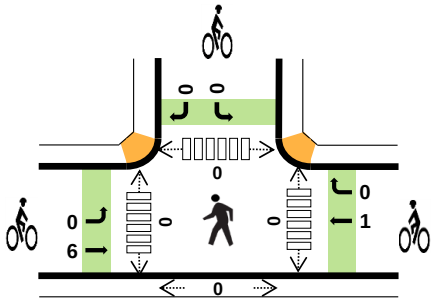
June 12, 2019

Appendix A
Traffic Counts

SB 101 Ramps
Millbrae Ave

Date: 05/23/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	4.0%	0.99
WB	5.5%	0.86
NB	-	-
SB	5.9%	0.94
TOTAL	5.2%	0.97

Two-Hour Count Summaries

Interval Start		Millbrae Ave Eastbound				Millbrae Ave Westbound				0 Northbound				SB 101 Ramps Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	238	0	0	0	199	33	0	0	0	0	0	116	0	190	776	0
7:15 AM		0	0	210	0	0	0	237	40	0	0	0	0	0	111	0	205	803	0
7:30 AM		0	0	210	0	0	0	243	30	0	0	0	0	0	153	0	214	850	0
7:45 AM		0	0	265	0	0	0	259	28	0	0	0	0	0	172	0	281	1,005	3,434
8:00 AM		**0**	**0**	**302**	**0**	**0**	**0**	**276**	**31**	**0**	**0**	**0**	**0**	**0**	**147**	**0**	**228**	**984**	3,642
8:15 AM		**0**	**0**	**291**	**0**	**0**	**0**	**314**	**27**	**0**	**0**	**0**	**0**	**0**	**169**	**0**	**226**	**1,027**	3,866
8:30 AM		**0**	**0**	**300**	**0**	**0**	**0**	**224**	**27**	**0**	**0**	**0**	**0**	**0**	**170**	**0**	**243**	**964**	3,980
8:45 AM		**0**	**0**	**303**	**0**	**0**	**0**	**253**	**21**	**0**	**0**	**0**	**0**	**0**	**168**	**0**	**263**	**1,008**	**3,983**
Count Total		0	0	2,119	0	0	0	2,005	237	0	0	0	0	0	1,206	0	1,850	7,417	0
Peak Hour	**All**	**0**	**0**	**1,196**	**0**	**0**	**0**	**1,067**	**106**	**0**	**0**	**0**	**0**	**0**	**654**	**0**	**960**	**3,983**	**0**
	HV	**0**	**0**	**48**	**0**	**0**	**0**	**51**	**14**	**0**	**0**	**0**	**0**	**0**	**59**	**0**	**37**	**209**	**0**
	HV%	**-**	**-**	**4%**	**-**	**-**	**-**	**5%**	**13%**	**-**	**-**	**-**	**-**	**-**	**9%**	**-**	**4%**	**5%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	17	14	0	17	*48*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	13	21	0	22	*56*	1	0	0	0	*1*	0	0	0	0	*0*
7:30 AM	12	10	0	20	*42*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	10	12	0	21	*43*	1	0	0	0	*1*	0	0	0	0	*0*
8:00 AM	**8**	**17**	**0**	**19**	***44***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**16**	**19**	**0**	**20**	***55***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**17**	**10**	**0**	**27**	***54***	**3**	**0**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	*0*
8:45 AM	**7**	**19**	**0**	**30**	***56***	**2**	**0**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***
Count Total	100	122	0	176	*398*	8	1	0	0	*9*	0	1	0	0	*1*
Peak Hr	**48**	**65**	**0**	**96**	***209***	**6**	**1**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millbrae Ave				Millbrae Ave				0				SB 101 Ramps				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	17	0	0	0	8	6	0	0	0	0	0	9	0	8	48	0
7:15 AM	0	0	13	0	0	0	12	9	0	0	0	0	0	10	0	12	56	0
7:30 AM	0	0	12	0	0	0	8	2	0	0	0	0	0	14	0	6	42	0
7:45 AM	0	0	10	0	0	0	9	3	0	0	0	0	0	11	0	10	43	189
8:00 AM	**0**	**0**	**8**	**0**	**0**	**0**	**15**	**2**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**7**	**44**	185
8:15 AM	**0**	**0**	**16**	**0**	**0**	**0**	**15**	**4**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**9**	**55**	184
8:30 AM	**0**	**0**	**17**	**0**	**0**	**0**	**7**	**3**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**7**	**54**	196
8:45 AM	**0**	**0**	**7**	**0**	**0**	**0**	**14**	**5**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**14**	**56**	**209**
Count Total	0	0	100	0	0	0	88	34	0	0	0	0	0	103	0	73	398	0
Peak Hour	**0**	**0**	**48**	**0**	**0**	**0**	**51**	**14**	**0**	**0**	**0**	**0**	**0**	**59**	**0**	**37**	**209**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Millbrae Ave			Millbrae Ave			0			SB 101 Ramps			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	2
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
8:15 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
8:30 AM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	6
8:45 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**7**
Count Total	0	8	0	0	1	0	0	0	0	0	0	0	9	0
Peak Hour	**0**	**6**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**

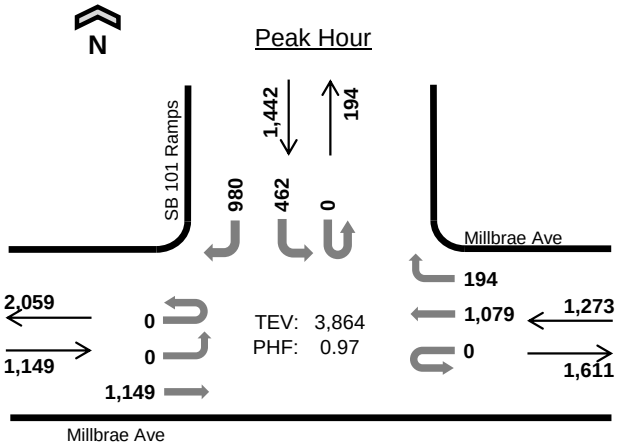
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

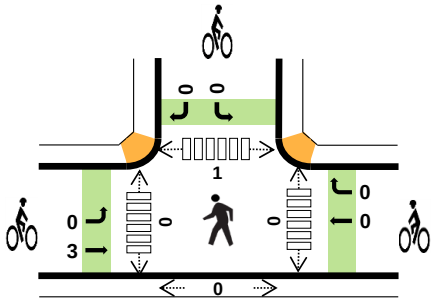
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

SB 101 Ramps
Millbrae Ave

Date: 05/23/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Peak Hour





	HV %:	PHF
EB	3.0%	0.90
WB	3.1%	0.93
NB	-	-
SB	4.1%	0.93
TOTAL	3.4%	0.97

Two-Hour Count Summaries

Interval Start		Millbrae Ave Eastbound				Millbrae Ave Westbound				0 Northbound				SB 101 Ramps Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	246	0	0	0	233	62	0	0	0	0	0	134	0	214	889	0
4:15 PM		0	0	234	0	0	0	254	50	0	0	0	0	0	94	0	240	872	0
4:30 PM		**0**	**0**	**257**	**0**	**0**	**0**	**283**	**41**	**0**	**0**	**0**	**0**	**0**	**122**	**0**	**266**	**969**	0
4:45 PM		**0**	**0**	**296**	**0**	**0**	**0**	**238**	**47**	**0**	**0**	**0**	**0**	**0**	**107**	**0**	**226**	**914**	3,644
5:00 PM		**0**	**0**	**319**	**0**	**0**	**0**	**275**	**48**	**0**	**0**	**0**	**0**	**0**	**125**	**0**	**224**	**991**	3,746
5:15 PM		**0**	**0**	**277**	**0**	**0**	**0**	**283**	**58**	**0**	**0**	**0**	**0**	**0**	**108**	**0**	**264**	**990**	**3,864**
5:30 PM		0	0	277	0	0	0	298	48	0	0	0	0	0	79	0	239	941	3,836
5:45 PM		0	0	214	0	0	0	253	40	0	0	0	0	0	97	0	259	863	3,785
Count Total		0	0	2,120	0	0	0	2,117	394	0	0	0	0	0	866	0	1,932	7,429	0
Peak Hour	**All**	**0**	**0**	**1,149**	**0**	**0**	**0**	**1,079**	**194**	**0**	**0**	**0**	**0**	**0**	**462**	**0**	**980**	**3,864**	**0**
	HV	**0**	**0**	**35**	**0**	**0**	**0**	**28**	**11**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**33**	**133**	**0**
	HV%	**-**	**-**	**3%**	**-**	**-**	**-**	**3%**	**6%**	**-**	**-**	**-**	**-**	**-**	**6%**	**-**	**3%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	5	8	0	15	*28*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	7	8	0	7	*22*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**9**	**8**	**0**	**19**	***36***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**8**	**11**	**0**	**10**	***29***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**7**	**10**	**0**	**15**	***32***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
5:15 PM	**11**	**10**	**0**	**15**	***36***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
5:30 PM	11	6	0	9	*26*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	5	9	0	10	*24*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	63	70	0	100	*233*	3	0	0	0	*3*	0	0	1	0	*1*
Peak Hr	**35**	**39**	**0**	**59**	***133***	**3**	**0**	**0**	**0**	***3***	**0**	**0**	**1**	**0**	***1***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millbrae Ave				Millbrae Ave				0				SB 101 Ramps				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	5	0	0	0	4	4	0	0	0	0	0	8	0	7	28	0
4:15 PM	0	0	7	0	0	0	4	4	0	0	0	0	0	4	0	3	22	0
4:30 PM	**0**	**0**	**9**	**0**	**0**	**0**	**5**	**3**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**12**	**36**	0
4:45 PM	**0**	**0**	**8**	**0**	**0**	**0**	**7**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**7**	**29**	115
5:00 PM	**0**	**0**	**7**	**0**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**8**	**32**	119
5:15 PM	**0**	**0**	**11**	**0**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**6**	**36**	**133**
5:30 PM	0	0	11	0	0	0	2	4	0	0	0	0	0	3	0	6	26	123
5:45 PM	0	0	5	0	0	0	6	3	0	0	0	0	0	6	0	4	24	118
Count Total	0	0	63	0	0	0	44	26	0	0	0	0	0	47	0	53	233	0
Peak Hour	**0**	**0**	**35**	**0**	**0**	**0**	**28**	**11**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**33**	**133**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Millbrae Ave			Millbrae Ave			0			SB 101 Ramps			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	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	0	0	0	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	3	0	0	0	0	0	0	0	0	0	0	3	0
Peak Hour	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

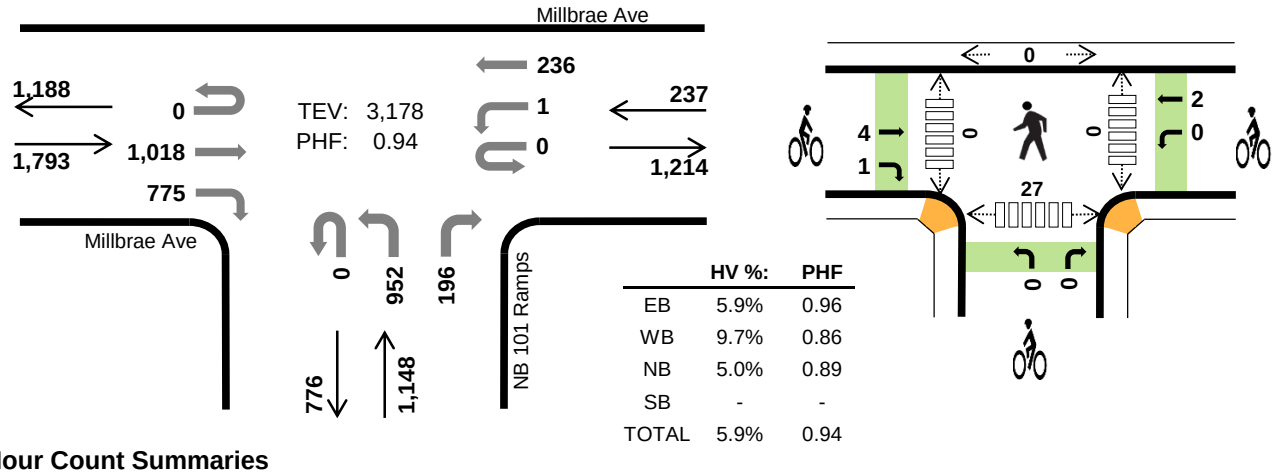
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

NB 101 Ramps
Millbrae Ave

N

Peak Hour

Date: 05/23/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	5.9%	0.96
WB	9.7%	0.86
NB	5.0%	0.89
SB	-	-
TOTAL	5.9%	0.94

Two-Hour Count Summaries

Interval Start		Millbrae Ave Eastbound				Millbrae Ave Westbound				NB 101 Ramps Northbound				0 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	154	213	0	0	62	0	0	177	0	38	0	0	0	0	644	0
7:15 AM		0	0	154	148	0	0	59	0	0	191	0	34	0	0	0	0	586	0
7:30 AM		0	0	210	164	0	0	56	0	0	206	0	38	0	0	0	0	674	0
7:45 AM		0	0	254	183	0	0	55	0	0	234	0	45	0	0	0	0	771	2,675
8:00 AM		**0**	**0**	**256**	**170**	**0**	**1**	**55**	**0**	**0**	**245**	**0**	**56**	**0**	**0**	**0**	**0**	**783**	2,814
8:15 AM		**0**	**0**	**246**	**206**	**0**	**0**	**69**	**0**	**0**	**276**	**0**	**47**	**0**	**0**	**0**	**0**	**844**	3,072
8:30 AM		**0**	**0**	**242**	**208**	**0**	**0**	**57**	**0**	**0**	**209**	**0**	**44**	**0**	**0**	**0**	**0**	**760**	3,158
8:45 AM		**0**	**0**	**274**	**191**	**0**	**0**	**55**	**0**	**0**	**222**	**0**	**49**	**0**	**0**	**0**	**0**	**791**	**3,178**
Count Total		0	0	1,790	1,483	0	1	468	0	0	1,760	0	351	0	0	0	0	5,853	0
Peak Hour	**All**	**0**	**0**	**1,018**	**775**	**0**	**1**	**236**	**0**	**0**	**952**	**0**	**196**	**0**	**0**	**0**	**0**	**3,178**	**0**
	HV	**0**	**0**	**79**	**27**	**0**	**0**	**23**	**0**	**0**	**37**	**0**	**20**	**0**	**0**	**0**	**0**	**186**	**0**
	HV%	**-**	**-**	**8%**	**3%**	**-**	**0%**	**10%**	**-**	**-**	**4%**	**-**	**10%**	**-**	**-**	**-**	**-**	**6%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	25	11	12	0	*48*	0	0	0	0	*0*	0	0	0	1	*1*
7:15 AM	23	13	13	0	*49*	1	0	0	0	*1*	0	0	0	4	*4*
7:30 AM	29	2	11	0	*42*	0	0	0	0	*0*	0	0	0	8	*8*
7:45 AM	19	6	10	0	*35*	0	0	0	0	*0*	0	0	0	6	*6*
8:00 AM	**18**	**4**	**19**	**0**	***41***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**9**	*9*
8:15 AM	**30**	**8**	**15**	**0**	***53***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**5**	*5*
8:30 AM	**38**	**5**	**8**	**0**	***51***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**6**	*6*
8:45 AM	**20**	**6**	**15**	**0**	***41***	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**0**	**7**	***7***
Count Total	202	55	103	0	*360*	6	2	0	0	*8*	0	0	0	46	*46*
Peak Hr	**106**	**23**	**57**	**0**	***186***	**5**	**2**	**0**	**0**	***7***	**0**	**0**	**0**	**27**	***27***

Deon Fouche: 415 - 757 - 7714

deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millbrae Ave				Millbrae Ave				NB 101 Ramps				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	13	12	0	0	11	0	0	5	0	7	0	0	0	0	48	0
7:15 AM	0	0	11	12	0	0	13	0	0	6	0	7	0	0	0	0	49	0
7:30 AM	0	0	16	13	0	0	2	0	0	6	0	5	0	0	0	0	42	0
7:45 AM	0	0	14	5	0	0	6	0	0	8	0	2	0	0	0	0	35	174
8:00 AM	**0**	**0**	**16**	**2**	**0**	**0**	**4**	**0**	**0**	**11**	**0**	**8**	**0**	**0**	**0**	**0**	**41**	167
8:15 AM	**0**	**0**	**21**	**9**	**0**	**0**	**8**	**0**	**0**	**11**	**0**	**4**	**0**	**0**	**0**	**0**	**53**	171
8:30 AM	**0**	**0**	**25**	**13**	**0**	**0**	**5**	**0**	**0**	**5**	**0**	**3**	**0**	**0**	**0**	**0**	**51**	180
8:45 AM	**0**	**0**	**17**	**3**	**0**	**0**	**6**	**0**	**0**	**10**	**0**	**5**	**0**	**0**	**0**	**0**	**41**	**186**
Count Total	0	0	133	69	0	0	55	0	0	62	0	41	0	0	0	0	360	0
Peak Hour	**0**	**0**	**79**	**27**	**0**	**0**	**23**	**0**	**0**	**37**	**0**	**20**	**0**	**0**	**0**	**0**	**186**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Millbrae Ave			Millbrae Ave			NB 101 Ramps			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
8:15 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
8:30 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
8:45 AM	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**7**
Count Total	0	5	1	0	2	0	0	0	0	0	0	0	8	0
Peak Hour	**0**	**4**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

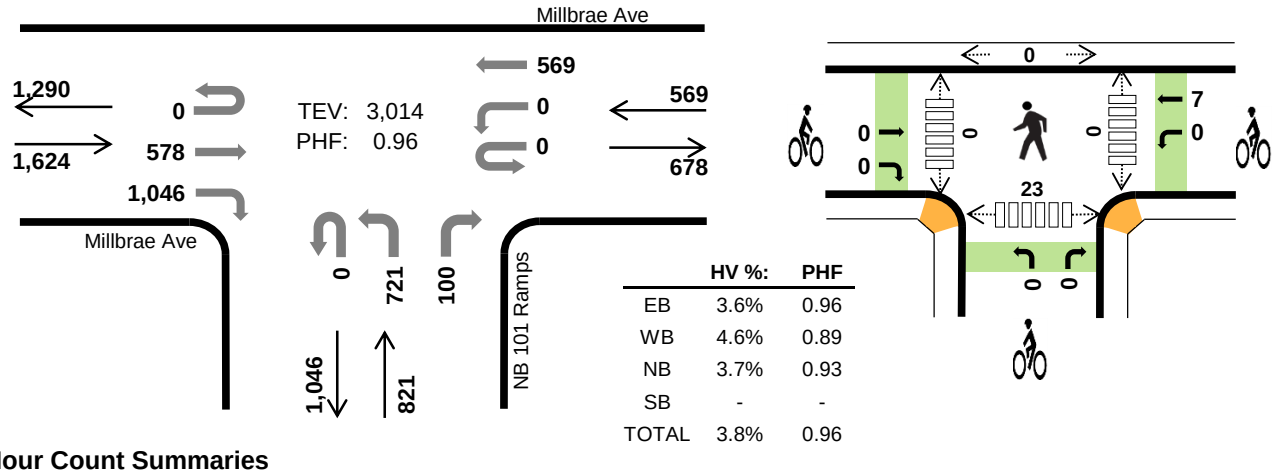
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

NB 101 Ramps
Millbrae Ave

N

Peak Hour

Date: 05/23/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	3.6%	0.96
WB	4.6%	0.89
NB	3.7%	0.93
SB	-	-
TOTAL	3.8%	0.96

Two-Hour Count Summaries

Interval Start		Millbrae Ave Eastbound				Millbrae Ave Westbound				NB 101 Ramps Northbound				0 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	136	236	0	0	128	0	0	168	0	25	0	0	0	0	693	0
4:15 PM		0	0	123	203	0	0	128	0	0	176	0	31	0	0	0	0	661	0
4:30 PM		**0**	**0**	**148**	**244**	**0**	**0**	**136**	**0**	**0**	**197**	**0**	**24**	**0**	**0**	**0**	**0**	**749**	0
4:45 PM		**0**	**0**	**142**	**266**	**0**	**0**	**120**	**0**	**0**	**157**	**0**	**25**	**0**	**0**	**0**	**0**	**710**	2,813
5:00 PM		**0**	**0**	**143**	**281**	**0**	**0**	**153**	**0**	**0**	**183**	**0**	**28**	**0**	**0**	**0**	**0**	**788**	2,908
5:15 PM		**0**	**0**	**145**	**255**	**0**	**0**	**160**	**0**	**0**	**184**	**0**	**23**	**0**	**0**	**0**	**0**	**767**	**3,014**
5:30 PM		0	0	137	202	0	0	137	0	0	205	0	28	0	0	0	0	709	2,974
5:45 PM		0	0	150	179	0	0	115	0	0	181	0	25	0	0	0	0	650	2,914
Count Total		0	0	1,124	1,866	0	0	1,077	0	0	1,451	0	209	0	0	0	0	5,727	0
Peak Hour	**All**	**0**	**0**	**578**	**1,046**	**0**	**0**	**569**	**0**	**0**	**721**	**0**	**100**	**0**	**0**	**0**	**0**	**3,014**	**0**
	HV	**0**	**0**	**31**	**27**	**0**	**0**	**26**	**0**	**0**	**18**	**0**	**12**	**0**	**0**	**0**	**0**	**114**	**0**
	HV%	**-**	**-**	**5%**	**3%**	**-**	**-**	**5%**	**-**	**-**	**2%**	**-**	**12%**	**-**	**-**	**-**	**-**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	16	8	3	0	*27*	0	1	0	0	*1*	0	0	0	3	*3*
4:15 PM	14	7	9	0	*30*	0	2	0	0	*2*	0	0	0	3	*3*
4:30 PM	**17**	**7**	**5**	**0**	***29***	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**2**	*2*
4:45 PM	**15**	**9**	**6**	**0**	***30***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**4**	*4*
5:00 PM	**11**	**6**	**10**	**0**	***27***	**0**	**3**	**0**	**0**	***3***	**0**	**0**	**0**	**14**	*14*
5:15 PM	**15**	**4**	**9**	**0**	***28***	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**3**	***3***
5:30 PM	11	6	2	0	*19*	0	5	0	0	*5*	0	0	0	9	*9*
5:45 PM	9	6	3	0	*18*	0	0	0	0	*0*	0	0	0	2	*2*
Count Total	108	53	47	0	*208*	0	15	0	0	*15*	0	0	0	40	*40*
Peak Hr	**58**	**26**	**30**	**0**	***114***	**0**	**7**	**0**	**0**	***7***	**0**	**0**	**0**	**23**	***23***

Deon Fouche: 415 - 757 - 7714

deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millbrae Ave				Millbrae Ave				NB 101 Ramps				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	12	4	0	0	8	0	0	2	0	1	0	0	0	0	27	0
4:15 PM	0	0	10	4	0	0	7	0	0	5	0	4	0	0	0	0	30	0
4:30 PM	**0**	**0**	**10**	**7**	**0**	**0**	**7**	**0**	**0**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**29**	0
4:45 PM	**0**	**0**	**6**	**9**	**0**	**0**	**9**	**0**	**0**	**3**	**0**	**3**	**0**	**0**	**0**	**0**	**30**	116
5:00 PM	**0**	**0**	**6**	**5**	**0**	**0**	**6**	**0**	**0**	**4**	**0**	**6**	**0**	**0**	**0**	**0**	**27**	116
5:15 PM	**0**	**0**	**9**	**6**	**0**	**0**	**4**	**0**	**0**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	**28**	**114**
5:30 PM	0	0	4	7	0	0	6	0	0	0	0	2	0	0	0	0	19	104
5:45 PM	0	0	6	3	0	0	6	0	0	3	0	0	0	0	0	0	18	92
Count Total	0	0	63	45	0	0	53	0	0	28	0	19	0	0	0	0	208	0
Peak Hour	**0**	**0**	**31**	**27**	**0**	**0**	**26**	**0**	**0**	**18**	**0**	**12**	**0**	**0**	**0**	**0**	**114**	**0**

Two-Hour Count Summaries - Bikes

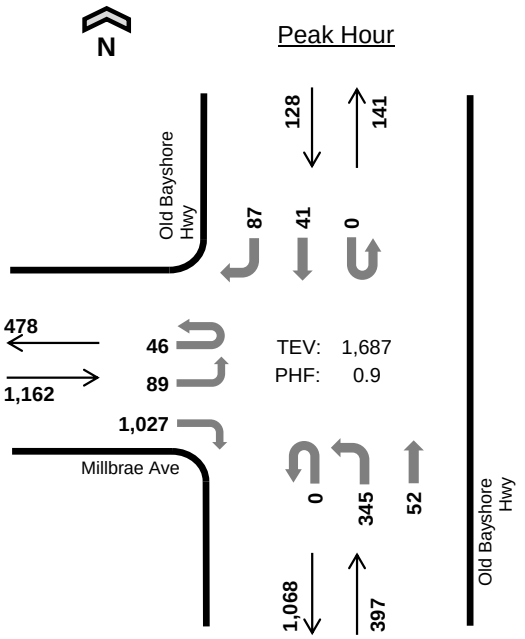
Interval Start	Millbrae Ave			Millbrae Ave			NB 101 Ramps			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0
4:30 PM	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
5:00 PM	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	7
5:15 PM	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**7**
5:30 PM	0	0	0	0	5	0	0	0	0	0	0	0	5	10
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Count Total	0	0	0	0	15	0	0	0	0	0	0	0	15	0
Peak Hour	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**

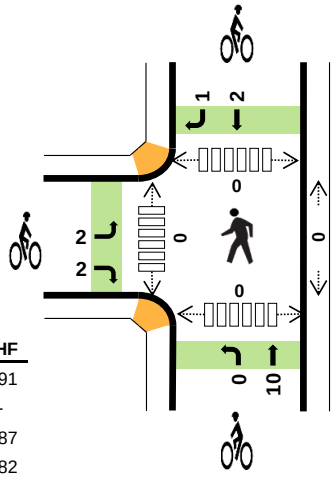
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Old Bayshore Hwy
Millbrae Ave

Date: 02-08-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	5.9%	0.91
WB	-	-
NB	15.1%	0.87
SB	26.6%	0.82
TOTAL	9.6%	0.90

Two-Hour Count Summaries

Interval Start	Millbrae Ave Eastbound				0 Westbound				Old Bayshore Hwy Northbound				Old Bayshore Hwy Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	10	18	0	150	0	0	0	0	0	87	9	0	0	0	5	12	291	0
7:15 AM	11	22	0	180	0	0	0	0	0	71	16	0	0	0	8	10	318	0
7:30 AM	12	20	0	170	0	0	0	0	0	90	27	0	0	0	9	17	345	0
7:45 AM	13	20	0	238	0	0	0	0	0	93	14	0	0	0	9	19	406	1,360
8:00 AM	**17**	**23**	**0**	**229**	**0**	**0**	**0**	**0**	**0**	**75**	**11**	**0**	**0**	**0**	**5**	**19**	**379**	1,448
8:15 AM	**8**	**19**	**0**	**262**	**0**	**0**	**0**	**0**	**0**	**101**	**7**	**0**	**0**	**0**	**10**	**19**	**426**	1,556
8:30 AM	**10**	**28**	**0**	**247**	**0**	**0**	**0**	**0**	**0**	**74**	**15**	**0**	**0**	**0**	**18**	**21**	**413**	1,624
8:45 AM	**11**	**19**	**0**	**289**	**0**	**0**	**0**	**0**	**0**	**95**	**19**	**0**	**0**	**0**	**8**	**28**	**469**	**1,687**
Count Total	92	169	0	1,765	0	0	0	0	0	686	118	0	0	0	72	145	3,047	0
Peak Hour All	**46**	**89**	**0**	**1,027**	**0**	**0**	**0**	**0**	**0**	**345**	**52**	**0**	**0**	**0**	**41**	**87**	**1,687**	**0**
Peak Hour HV	**0**	**34**	**0**	**34**	**0**	**0**	**0**	**0**	**0**	**51**	**9**	**0**	**0**	**0**	**13**	**21**	**162**	**0**
Peak Hour HV%	**0%**	**38%**	**-**	**3%**	**-**	**-**	**-**	**-**	**-**	**15%**	**17%**	**-**	**-**	**-**	**32%**	**24%**	**10%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	15	0	5	3	*23*	0	0	0	2	*2*	0	0	1	1	*2*
7:15 AM	11	0	7	2	*20*	4	0	3	3	*10*	0	0	0	0	*0*
7:30 AM	9	0	12	4	*25*	0	0	6	6	*12*	0	1	0	1	*2*
7:45 AM	15	0	7	8	*30*	5	0	3	3	*11*	0	0	0	0	*0*
8:00 AM	**16**	**0**	**13**	**7**	***36***	**1**	**0**	**1**	**0**	***2***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**20**	**0**	**14**	**8**	***42***	**0**	**0**	**6**	**1**	***7***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**15**	**0**	**13**	**11**	***39***	**2**	**0**	**1**	**2**	***5***	**0**	**0**	**0**	**0**	*0*
8:45 AM	**17**	**0**	**20**	**8**	***45***	**1**	**0**	**2**	**0**	***3***	**0**	**0**	**0**	**0**	***0***
Count Total	118	0	91	51	*260*	13	0	22	17	*52*	0	1	1	2	*4*
Peak Hr	**68**	**0**	**60**	**34**	***162***	**4**	**0**	**10**	**3**	***17***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millbrae Ave				0				Old Bayshore Hwy				Old Bayshore Hwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	4	0	11	0	0	0	0	0	5	0	0	0	0	1	2	23	0
7:15 AM	0	5	0	6	0	0	0	0	0	6	1	0	0	0	1	1	20	0
7:30 AM	1	4	0	4	0	0	0	0	0	6	6	0	0	0	1	3	25	0
7:45 AM	0	4	0	11	0	0	0	0	0	7	0	0	0	0	1	7	30	98
8:00 AM	**0**	**9**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**11**	**2**	**0**	**0**	**0**	**4**	**3**	**36**	111
8:15 AM	**0**	**7**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**13**	**1**	**0**	**0**	**0**	**3**	**5**	**42**	133
8:30 AM	**0**	**7**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**9**	**4**	**0**	**0**	**0**	**5**	**6**	**39**	147
8:45 AM	**0**	**11**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**18**	**2**	**0**	**0**	**0**	**1**	**7**	**45**	**162**
Count Total	1	51	0	66	0	0	0	0	0	75	16	0	0	0	17	34	260	0
Peak Hour	**0**	**34**	**0**	**34**	**0**	**0**	**0**	**0**	**0**	**51**	**9**	**0**	**0**	**0**	**13**	**21**	**162**	**0**

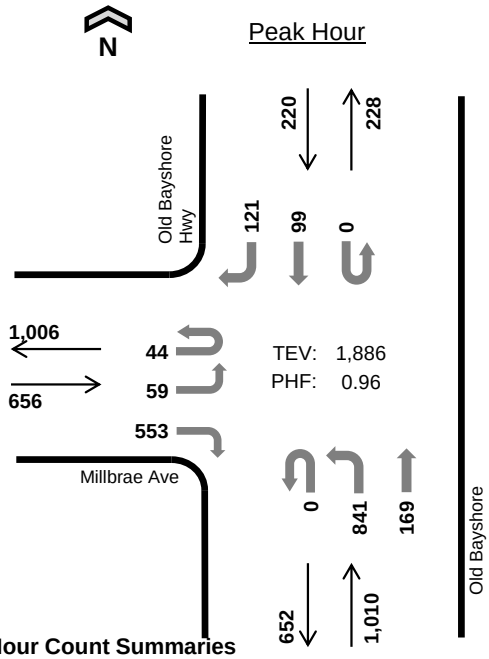
Two-Hour Count Summaries - Bikes

Interval Start	Millbrae Ave			0			Old Bayshore Hwy			Old Bayshore Hwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
7:15 AM	0	0	4	0	0	0	0	3	0	0	3	0	10	0
7:30 AM	0	0	0	0	0	0	0	6	0	0	6	0	12	0
7:45 AM	1	0	4	0	0	0	0	3	0	0	3	0	11	35
8:00 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	35
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**0**	**7**	32
8:30 AM	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**5**	25
8:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**17**
Count Total	3	0	10	0	0	0	0	22	0	0	16	1	52	0
Peak Hour	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**2**	**1**	**17**	**0**

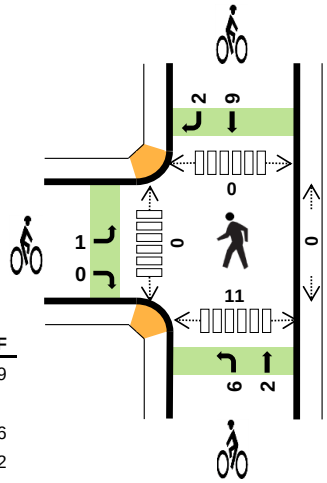
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Old Bayshore Hwy
Millbrae Ave

Date: 02-08-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	4.1%	0.89
WB	-	-
NB	2.8%	0.86
SB	8.6%	0.92
TOTAL	3.9%	0.96



Two-Hour Count Summaries

Interval Start	Millbrae Ave Eastbound				0 Westbound				Old Bayshore Hwy Northbound				Old Bayshore Hwy Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	4	15	0	112	0	0	0	0	0	189	24	0	0	0	49	70	463	0
4:15 PM	13	15	0	133	0	0	0	0	0	156	19	0	0	0	58	53	447	0
4:30 PM	13	15	0	138	0	0	0	0	0	231	19	0	0	0	35	33	484	0
4:45 PM	8	21	0	140	0	0	0	0	0	192	23	0	0	0	22	40	446	1,840
5:00 PM	**9**	**13**	**0**	**109**	**0**	**0**	**0**	**0**	**0**	**265**	**28**	**0**	**0**	**0**	**21**	**39**	**484**	1,861
5:15 PM	**9**	**10**	**0**	**144**	**0**	**0**	**0**	**0**	**0**	**206**	**27**	**0**	**0**	**0**	**32**	**23**	**451**	1,865
5:30 PM	**16**	**21**	**0**	**148**	**0**	**0**	**0**	**0**	**0**	**210**	**51**	**0**	**0**	**0**	**18**	**29**	**493**	1,874
5:45 PM	**10**	**15**	**0**	**152**	**0**	**0**	**0**	**0**	**0**	**160**	**63**	**0**	**0**	**0**	**28**	**30**	**458**	**1,886**
Count Total	82	125	0	1,076	0	0	0	0	0	1,609	254	0	0	0	263	317	3,726	0
Peak Hour All	**44**	**59**	**0**	**553**	**0**	**0**	**0**	**0**	**0**	**841**	**169**	**0**	**0**	**0**	**99**	**121**	**1,886**	**0**
Peak Hour HV	**0**	**6**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**13**	**15**	**0**	**0**	**0**	**7**	**12**	**74**	**0**
Peak Hour HV%	**0%**	**10%**	**-**	**4%**	**-**	**-**	**-**	**-**	**-**	**2%**	**9%**	**-**	**-**	**-**	**7%**	**10%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	7	0	7	6	*20*	0	0	2	1	*3*	0	0	0	0	*0*
4:15 PM	8	0	3	11	*22*	0	0	0	2	*2*	0	0	0	0	*0*
4:30 PM	4	0	10	3	*17*	0	0	1	1	*2*	0	0	0	0	*0*
4:45 PM	10	0	5	4	*19*	0	0	2	4	*6*	0	0	0	0	*0*
5:00 PM	**8**	**0**	**6**	**6**	***20***	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**5**	**0**	**4**	**6**	***15***	**1**	**0**	**1**	**5**	***7***	**0**	**0**	**0**	**5**	*5*
5:30 PM	**9**	**0**	**5**	**3**	***17***	**0**	**0**	**2**	**1**	***3***	**0**	**0**	**0**	**3**	*3*
5:45 PM	**5**	**0**	**13**	**4**	***22***	**0**	**0**	**3**	**3**	***6***	**0**	**0**	**0**	**3**	***3***
Count Total	56	0	53	43	*152*	1	0	13	19	*33*	0	0	0	11	*11*
Peak Hr	**27**	**0**	**28**	**19**	***74***	**1**	**0**	**8**	**11**	***20***	**0**	**0**	**0**	**11**	***11***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millbrae Ave				0				Old Bayshore Hwy				Old Bayshore Hwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	4	0	3	0	0	0	0	0	4	3	0	0	0	1	5	20	0
4:15 PM	0	2	0	6	0	0	0	0	0	2	1	0	0	0	8	3	22	0
4:30 PM	0	1	0	3	0	0	0	0	0	9	1	0	0	0	1	2	17	0
4:45 PM	0	4	0	6	0	0	0	0	0	3	2	0	0	0	1	3	19	78
5:00 PM	**0**	**3**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**4**	**2**	**0**	**0**	**0**	**1**	**5**	**20**	78
5:15 PM	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**3**	**3**	**15**	71
5:30 PM	**0**	**2**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**1**	**2**	**17**	71
5:45 PM	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**5**	**8**	**0**	**0**	**0**	**2**	**2**	**22**	**74**
Count Total	0	17	0	39	0	0	0	0	0	31	22	0	0	0	18	25	152	0
Peak Hour	**0**	**6**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**13**	**15**	**0**	**0**	**0**	**7**	**12**	**74**	**0**

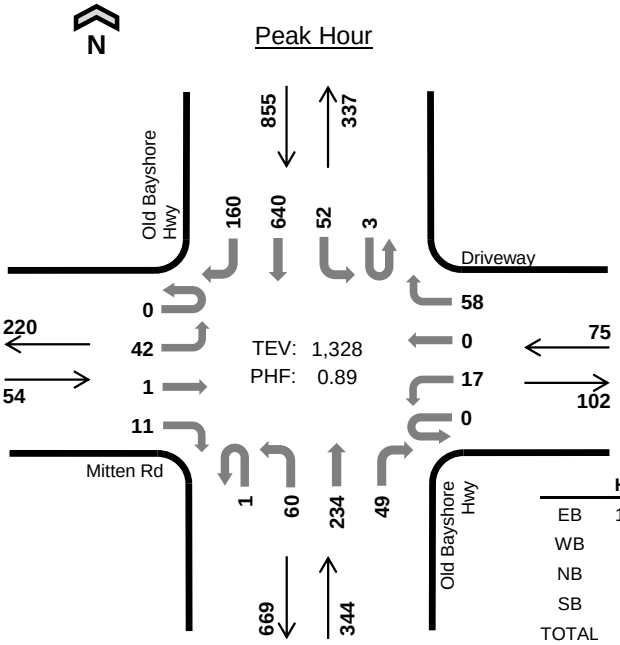
Two-Hour Count Summaries - Bikes

Interval Start	Millbrae Ave			0			Old Bayshore Hwy			Old Bayshore Hwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	1	1	0	0	0	1	3	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:30 PM	0	0	0	0	0	0	1	0	0	0	1	0	2	0
4:45 PM	0	0	0	0	0	0	1	1	0	0	4	0	6	13
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**0**	**4**	14
5:15 PM	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**1**	**7**	19
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**3**	20
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**6**	**20**
Count Total	1	0	0	0	0	0	9	4	0	0	16	3	33	0
Peak Hour	**1**	**0**	**0**	**0**	**0**	**0**	**6**	**2**	**0**	**0**	**9**	**2**	**20**	**0**

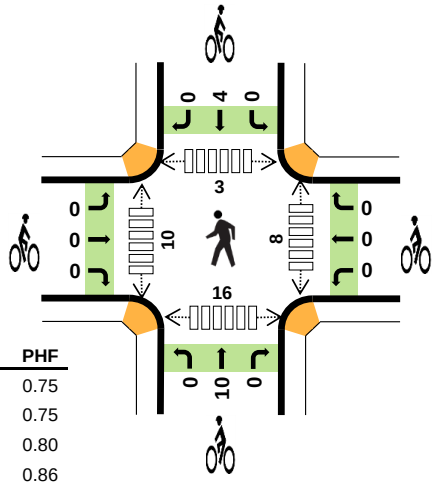
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Old Bayshore Hwy
Mitten Rd

Date: 02-08-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	13.0%	0.75
WB	1.3%	0.75
NB	9.9%	0.80
SB	4.9%	0.86
TOTAL	6.3%	0.89



Two-Hour Count Summaries

Interval Start		Mitten Rd Eastbound				Driveway Westbound				Old Bayshore Hwy Northbound				Old Bayshore Hwy Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	9	0	2	0	8	0	15	4	2	56	6	2	17	91	19	231	0
7:15 AM		0	8	0	0	0	5	0	7	1	3	60	13	1	11	122	17	248	0
7:30 AM		0	9	0	1	0	6	0	18	0	7	74	9	0	8	105	15	252	0
7:45 AM		0	5	0	4	0	2	0	18	2	17	62	6	1	18	166	43	344	1,075
8:00 AM		**0**	**7**	**0**	**1**	**0**	**2**	**0**	**15**	**1**	**12**	**50**	**11**	**0**	**6**	**148**	**36**	**289**	1,133
8:15 AM		**0**	**10**	**0**	**4**	**0**	**5**	**0**	**16**	**0**	**12**	**53**	**10**	**1**	**11**	**145**	**33**	**300**	1,185
8:30 AM		**0**	**11**	**0**	**3**	**0**	**9**	**0**	**16**	**0**	**17**	**55**	**16**	**1**	**21**	**186**	**40**	**375**	1,308
8:45 AM		**0**	**14**	**1**	**3**	**0**	**1**	**0**	**11**	**0**	**19**	**76**	**12**	**1**	**14**	**161**	**51**	**364**	**1,328**
Count Total		0	73	1	18	0	38	0	116	8	89	486	83	7	106	1,124	254	2,403	0
Peak Hour	**All**	**0**	**42**	**1**	**11**	**0**	**17**	**0**	**58**	**1**	**60**	**234**	**49**	**3**	**52**	**640**	**160**	**1,328**	**0**
	HV	**0**	**7**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**33**	**1**	**0**	**7**	**32**	**3**	**84**	**0**
	HV%	**-**	**17%**	**0%**	**0%**	**-**	**6%**	**-**	**0%**	**0%**	**0%**	**14%**	**2%**	**0%**	**13%**	**5%**	**2%**	**6%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	1	0	7	11	*19*	0	0	1	2	*3*	5	1	0	3	*9*
7:15 AM	2	1	6	5	*14*	0	0	2	8	*10*	4	1	0	1	*6*
7:30 AM	0	0	10	7	*17*	0	0	8	6	*14*	11	2	0	1	*14*
7:45 AM	1	0	3	14	*18*	0	0	2	5	*7*	15	0	0	3	*18*
8:00 AM	**1**	**0**	**7**	**10**	***18***	**0**	**0**	**2**	**0**	***2***	**2**	**6**	**0**	**3**	*11*
8:15 AM	**1**	**0**	**9**	**11**	***21***	**0**	**0**	**5**	**2**	***7***	**1**	**1**	**2**	**5**	*9*
8:30 AM	**2**	**1**	**8**	**14**	***25***	**0**	**0**	**1**	**2**	***3***	**3**	**3**	**0**	**6**	*12*
8:45 AM	**3**	**0**	**10**	**7**	***20***	**0**	**0**	**2**	**0**	***2***	**2**	**0**	**1**	**2**	***5***
Count Total	11	2	60	79	*152*	0	0	23	25	*48*	43	14	3	24	*84*
Peak Hour	**7**	**1**	**34**	**42**	***84***	**0**	**0**	**10**	**4**	***14***	**8**	**10**	**3**	**16**	***37***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Mitten Rd				Driveway				Old Bayshore Hwy				Old Bayshore Hwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	0	0	0	0	7	0	0	2	9	0	19	0
7:15 AM	0	2	0	0	0	1	0	0	0	0	3	3	0	1	4	0	14	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	9	0	0	0	7	0	17	0
7:45 AM	0	1	0	0	0	0	0	0	0	1	2	0	0	3	8	3	18	68
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**1**	**9**	**0**	**18**	67
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**2**	**7**	**2**	**21**	74
8:30 AM	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**2**	**12**	**0**	**25**	82
8:45 AM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**1**	**0**	**2**	**4**	**1**	**20**	**84**
Count Total	0	11	0	0	0	2	0	0	0	2	54	4	0	13	60	6	152	0
Peak Hour	**0**	**7**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**33**	**1**	**0**	**7**	**32**	**3**	**84**	**0**

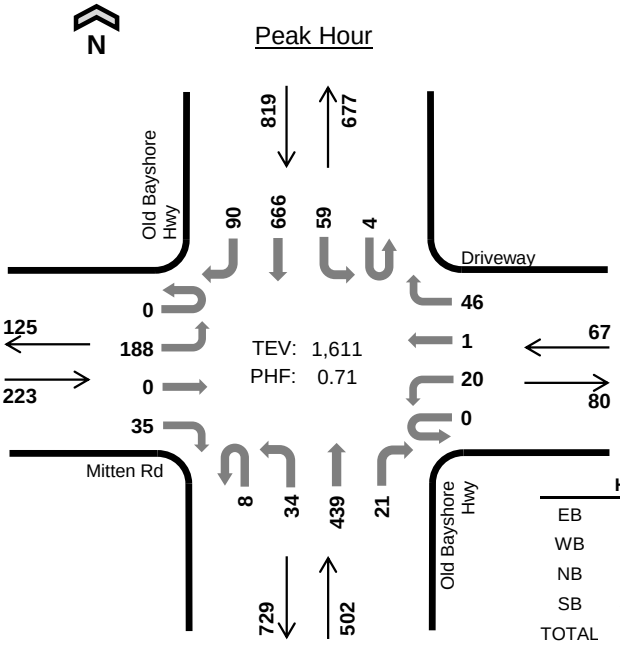
Two-Hour Count Summaries - Bikes

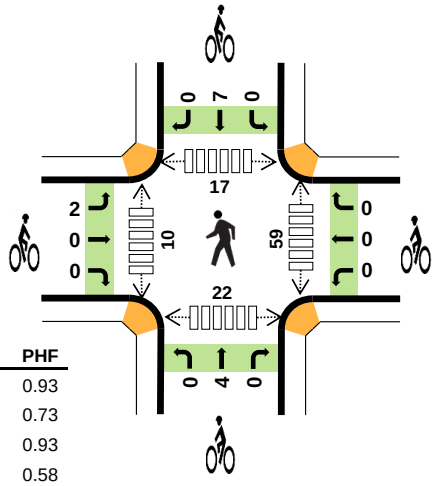
Interval Start	Mitten Rd			Driveway			Old Bayshore Hwy			Old Bayshore Hwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	0
7:15 AM	0	0	0	0	0	0	0	2	0	0	8	0	10	0
7:30 AM	0	0	0	0	0	0	0	8	0	0	6	0	14	0
7:45 AM	0	0	0	0	0	0	0	2	0	0	5	0	7	34
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	33
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**2**	**0**	**7**	30
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**	19
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**14**
Count Total	0	0	0	0	0	0	0	23	0	0	25	0	48	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**4**	**0**	**14**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Old Bayshore Hwy
Mitten Rd

Date: 02-08-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	2.2%	0.93
WB	0.0%	0.73
NB	3.2%	0.93
SB	4.8%	0.58
TOTAL	3.7%	0.71

Two-Hour Count Summaries

Interval Start		Mitten Rd Eastbound				Driveway Westbound				Old Bayshore Hwy Northbound				Old Bayshore Hwy Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**46**	**0**	**14**	**0**	**8**	**0**	**11**	**2**	**22**	**104**	**7**	**1**	**12**	**281**	**60**	**568**	0
4:15 PM		**0**	**40**	**0**	**12**	**0**	**6**	**0**	**17**	**3**	**6**	**96**	**5**	**0**	**17**	**135**	**16**	**353**	0
4:30 PM		**0**	**49**	**0**	**6**	**0**	**5**	**0**	**9**	**3**	**2**	**122**	**6**	**1**	**18**	**129**	**6**	**356**	0
4:45 PM		**0**	**53**	**0**	**3**	**0**	**1**	**1**	**9**	**0**	**4**	**117**	**3**	**2**	**12**	**121**	**8**	**334**	**1,611**
5:00 PM		0	73	1	13	0	6	2	18	0	2	154	5	7	9	103	8	401	1,444
5:15 PM		0	63	1	13	0	6	0	12	1	3	126	11	0	7	117	10	370	1,461
5:30 PM		0	73	1	14	0	4	0	8	3	5	170	11	2	11	117	4	423	1,528
5:45 PM		0	51	0	9	0	3	1	10	0	1	115	5	0	13	124	7	339	1,533
Count Total		0	448	3	84	0	39	4	94	12	45	1,004	53	13	99	1,127	119	3,144	0
Peak Hour	**All**	**0**	**188**	**0**	**35**	**0**	**20**	**1**	**46**	**8**	**34**	**439**	**21**	**4**	**59**	**666**	**90**	**1,611**	**0**
	HV	**0**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**15**	**0**	**0**	**5**	**30**	**4**	**60**	**0**
	HV%	**-**	**2%**	**-**	**3%**	**-**	**0%**	**0%**	**0%**	**0%**	**3%**	**3%**	**0%**	**0%**	**8%**	**5%**	**4%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	**1**	**0**	**4**	**13**	***18***	**0**	**0**	**2**	**0**	***2***	**5**	**3**	**3**	**7**	*18*
4:15 PM	**3**	**0**	**2**	**15**	***20***	**0**	**0**	**0**	**2**	***2***	**11**	**3**	**10**	**2**	*26*
4:30 PM	**1**	**0**	**6**	**4**	***11***	**0**	**0**	**1**	**3**	***4***	**31**	**3**	**2**	**12**	*48*
4:45 PM	**0**	**0**	**4**	**7**	***11***	**2**	**0**	**1**	**2**	***5***	**12**	**1**	**2**	**1**	***16***
5:00 PM	0	0	5	6	*11*	1	0	1	3	*5*	7	2	6	12	*27*
5:15 PM	0	0	2	8	*10*	1	0	0	3	*4*	6	3	6	6	*21*
5:30 PM	0	0	7	6	*13*	1	0	1	1	*3*	1	2	0	1	*4*
5:45 PM	1	1	8	7	*17*	1	0	0	3	*4*	2	0	4	1	*7*
Count Total	6	1	38	66	*111*	6	0	6	17	*29*	75	17	33	42	*167*
Peak Hour	**5**	**0**	**16**	**39**	***60***	**2**	**0**	**4**	**7**	***13***	**59**	**10**	**17**	**22**	***108***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Mitten Rd				Driveway				Old Bayshore Hwy				Old Bayshore Hwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**1**	**10**	**2**	**18**	0
4:15 PM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**12**	**1**	**20**	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**3**	**1**	**11**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**5**	**0**	**11**	**60**
5:00 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	6	0	11	53
5:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	6	1	10	43
5:30 PM	0	0	0	0	0	0	0	0	0	1	5	1	0	2	4	0	13	45
5:45 PM	0	1	0	0	0	0	0	1	0	0	7	1	0	2	5	0	17	51
Count Total	0	5	0	1	0	0	0	1	0	2	34	2	0	10	51	5	111	0
Peak Hour	**0**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**15**	**0**	**0**	**5**	**30**	**4**	**60**	**0**

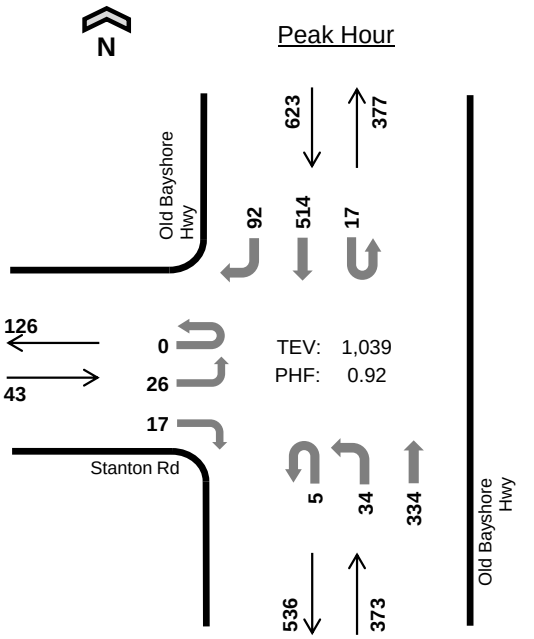
Two-Hour Count Summaries - Bikes

Interval Start	Mitten Rd			Driveway			Old Bayshore Hwy			Old Bayshore Hwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**4**	0
4:45 PM	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**5**	**13**
5:00 PM	1	0	0	0	0	0	0	1	0	0	3	0	5	16
5:15 PM	1	0	0	0	0	0	0	0	0	0	3	0	4	18
5:30 PM	1	0	0	0	0	0	0	1	0	0	1	0	3	17
5:45 PM	1	0	0	0	0	0	0	0	0	0	3	0	4	16
Count Total	6	0	0	0	0	0	0	6	0	0	17	0	29	0
Peak Hour	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**7**	**0**	**13**	**0**

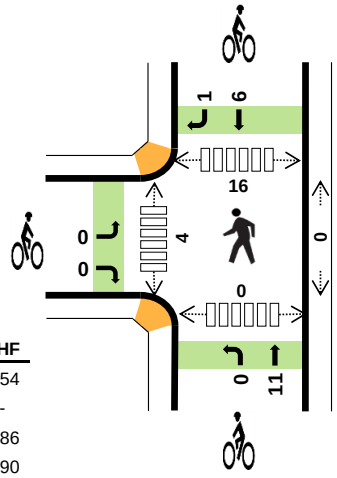
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Old Bayshore Hwy
Stanton Rd

Date: 02-08-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	27.9%	0.54
WB	-	-
NB	7.2%	0.86
SB	4.7%	0.90
TOTAL	6.5%	0.92



Two-Hour Count Summaries

Interval Start	Stanton Rd Eastbound				0 Westbound				Old Bayshore Hwy Northbound				Old Bayshore Hwy Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	7	0	11	0	0	0	0	3	3	53	0	5	0	78	20	180	0
7:15 AM	0	10	0	6	0	0	0	0	0	7	68	0	5	0	101	11	208	0
7:30 AM	0	11	0	6	0	0	0	0	1	4	73	0	4	0	89	12	200	0
7:45 AM	0	6	0	3	0	0	0	0	0	16	82	0	5	0	120	19	251	839
8:00 AM	**0**	**4**	**0**	**3**	**0**	**0**	**0**	**0**	**4**	**6**	**80**	**0**	**4**	**0**	**117**	**19**	**237**	896
8:15 AM	**0**	**4**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**6**	**75**	**0**	**4**	**0**	**128**	**25**	**245**	933
8:30 AM	**0**	**3**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**12**	**81**	**0**	**5**	**0**	**146**	**22**	**276**	1,009
8:45 AM	**0**	**15**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**10**	**98**	**0**	**4**	**0**	**123**	**26**	**281**	**1,039**
Count Total	0	60	0	43	0	0	0	0	9	64	610	0	36	0	902	154	1,878	0
Peak Hour All	**0**	**26**	**0**	**17**	**0**	**0**	**0**	**0**	**5**	**34**	**334**	**0**	**17**	**0**	**514**	**92**	**1,039**	**0**
Peak Hour HV	**0**	**9**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**4**	**23**	**0**	**0**	**0**	**27**	**2**	**68**	**0**
Peak Hour HV%	**-**	**35%**	**-**	**18%**	**-**	**-**	**-**	**-**	**0%**	**12%**	**7%**	**-**	**0%**	**-**	**5%**	**2%**	**7%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	5	8	*13*	0	0	2	1	*3*	0	4	1	0	*5*
7:15 AM	0	0	7	5	*12*	0	0	2	8	*10*	0	0	2	0	*2*
7:30 AM	1	0	6	6	*13*	0	0	7	6	*13*	0	1	2	0	*3*
7:45 AM	0	0	4	7	*11*	0	0	1	2	*3*	0	5	2	0	*7*
8:00 AM	**1**	**0**	**4**	**7**	***12***	**0**	**0**	**2**	**3**	***5***	**0**	**1**	**5**	**0**	*6*
8:15 AM	**1**	**0**	**10**	**9**	***20***	**0**	**0**	**6**	**1**	***7***	**0**	**2**	**0**	**0**	*2*
8:30 AM	**3**	**0**	**6**	**8**	***17***	**0**	**0**	**3**	**3**	***6***	**0**	**1**	**4**	**0**	*5*
8:45 AM	**7**	**0**	**7**	**5**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**7**	**0**	***7***
Count Total	13	0	49	55	*117*	0	0	23	24	*47*	0	14	23	0	*37*
Peak Hr	**12**	**0**	**27**	**29**	***68***	**0**	**0**	**11**	**7**	***18***	**0**	**4**	**16**	**0**	***20***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Stanton Rd				0				Old Bayshore Hwy				Old Bayshore Hwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	8	0	13	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	6	0	0	0	5	0	12	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	6	0	0	0	5	1	13	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	1	11	49
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**7**	**0**	**12**	48
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**9**	**0**	**0**	**0**	**9**	**0**	**20**	56
8:30 AM	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**0**	**0**	**0**	**8**	**0**	**17**	60
8:45 AM	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**0**	**0**	**0**	**3**	**2**	**19**	**68**
Count Total	0	10	0	3	0	0	0	0	0	5	44	0	0	0	51	4	117	0
Peak Hour	**0**	**9**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**4**	**23**	**0**	**0**	**0**	**27**	**2**	**68**	**0**

Two-Hour Count Summaries - Bikes

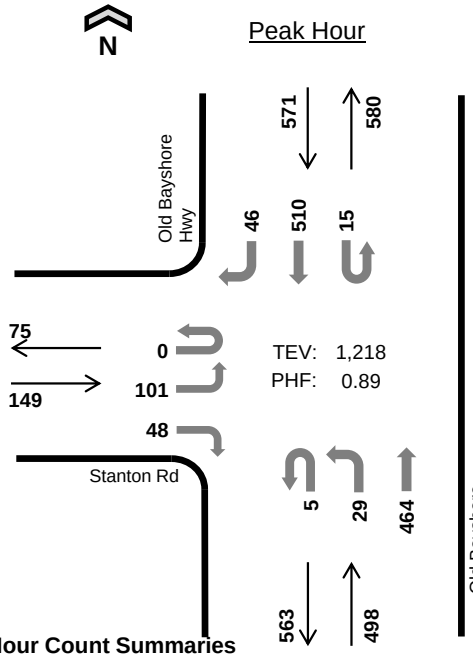
Interval Start	Stanton Rd			0			Old Bayshore Hwy			Old Bayshore Hwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3	0
7:15 AM	0	0	0	0	0	0	0	2	0	0	7	1	10	0
7:30 AM	0	0	0	0	0	0	0	7	0	0	6	0	13	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	29
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**3**	**0**	**5**	31
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**0**	**7**	28
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**2**	**1**	**6**	21
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**
Count Total	0	0	0	0	0	0	0	23	0	0	22	2	47	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**6**	**1**	**18**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

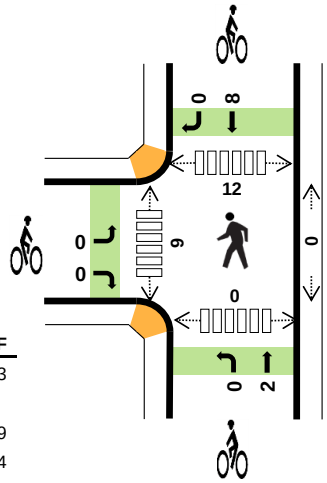
Old Bayshore Hwy
Stanton Rd

Date: 02-08-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour



	HV %:	PHF
EB	1.3%	0.73
WB	-	-
NB	2.8%	0.89
SB	3.2%	0.94
TOTAL	2.8%	0.89



Two-Hour Count Summaries

Interval Start	Stanton Rd Eastbound				0 Westbound				Old Bayshore Hwy Northbound				Old Bayshore Hwy Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	22	0	8	0	0	0	0	2	12	86	0	4	0	132	8	274	0
4:15 PM	0	16	0	13	0	0	0	0	3	14	84	0	4	0	139	9	282	0
4:30 PM	0	27	0	15	0	0	0	0	2	9	83	0	9	0	133	10	288	0
4:45 PM	0	21	0	16	0	0	0	0	3	10	94	0	4	0	110	19	277	1,121
5:00 PM	**0**	**20**	**0**	**15**	**0**	**0**	**0**	**0**	**1**	**4**	**135**	**0**	**2**	**0**	**126**	**8**	**311**	1,158
5:15 PM	**0**	**30**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**3**	**101**	**0**	**9**	**0**	**123**	**8**	**286**	1,162
5:30 PM	**0**	**39**	**0**	**12**	**0**	**0**	**0**	**0**	**1**	**5**	**133**	**0**	**2**	**0**	**138**	**12**	**342**	1,216
5:45 PM	**0**	**12**	**0**	**9**	**0**	**0**	**0**	**0**	**3**	**17**	**95**	**0**	**2**	**0**	**123**	**18**	**279**	**1,218**
Count Total	0	187	0	100	0	0	0	0	15	74	811	0	36	0	1,024	92	2,339	0
Peak Hour All	**0**	**101**	**0**	**48**	**0**	**0**	**0**	**0**	**5**	**29**	**464**	**0**	**15**	**0**	**510**	**46**	**1,218**	**0**
Peak Hour HV	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**15**	**3**	**34**	**0**
Peak Hour HV%	**-**	**2%**	**-**	**0%**	**-**	**-**	**-**	**-**	**0%**	**0%**	**3%**	**-**	**0%**	**-**	**3%**	**7%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	4	6	*11*	0	0	2	0	*2*	0	2	2	0	*4*
4:15 PM	0	0	4	5	*9*	0	0	0	2	*2*	0	4	8	0	*12*
4:30 PM	0	0	6	6	*12*	1	0	0	2	*3*	0	5	1	0	*6*
4:45 PM	1	0	4	4	*9*	0	0	1	3	*4*	0	1	0	0	*1*
5:00 PM	**0**	**0**	**4**	**4**	***8***	**0**	**0**	**1**	**3**	***4***	**0**	**6**	**5**	**0**	*11*
5:15 PM	**1**	**0**	**2**	**5**	***8***	**0**	**0**	**0**	**3**	***3***	**0**	**2**	**4**	**0**	*6*
5:30 PM	**1**	**0**	**5**	**3**	***9***	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**2**	**0**	*2*
5:45 PM	**0**	**0**	**3**	**6**	***9***	**0**	**0**	**0**	**1**	***1***	**0**	**1**	**1**	**0**	***2***
Count Total	4	0	32	39	*75*	1	0	5	15	*21*	0	21	23	0	*44*
Peak Hr	**2**	**0**	**14**	**18**	***34***	**0**	**0**	**2**	**8**	***10***	**0**	**9**	**12**	**0**	***21***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Stanton Rd				0				Old Bayshore Hwy				Old Bayshore Hwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	4	0	0	0	6	0	11	0
4:15 PM	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	1	9	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	5	1	12	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	4	0	0	0	4	0	9	41
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**1**	**8**	38
5:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**4**	**1**	**8**	37
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**3**	**0**	**9**	34
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**5**	**1**	**9**	**34**
Count Total	0	4	0	0	0	0	0	0	0	2	30	0	0	0	34	5	75	0
Peak Hour	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**15**	**3**	**34**	**0**

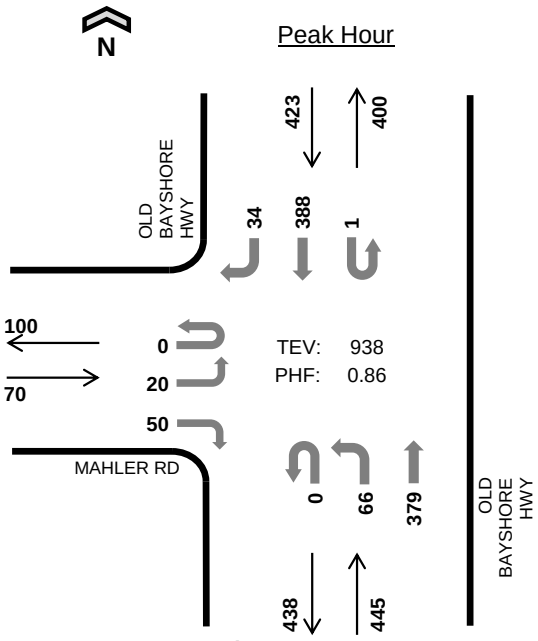
Two-Hour Count Summaries - Bikes

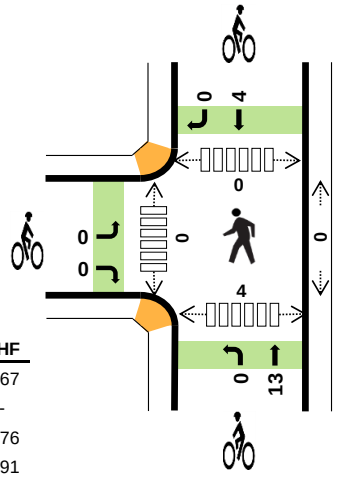
Interval Start	Stanton Rd			0			Old Bayshore Hwy			Old Bayshore Hwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:30 PM	1	0	0	0	0	0	0	0	0	0	2	0	3	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	3	0	4	11
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**4**	13
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	14
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	13
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**10**
Count Total	1	0	0	0	0	0	0	5	0	0	15	0	21	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**8**	**0**	**10**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

OLD BAYSHORE HWY
MAHLER RD

Date: 05/31/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	1.4%	0.67
WB	-	-
NB	0.7%	0.76
SB	0.2%	0.91
TOTAL	0.5%	0.86

Two-Hour Count Summaries

Interval Start	MAHLER RD Eastbound				0 Westbound				OLD BAYSHORE HWY Northbound				OLD BAYSHORE HWY Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	0	6	0	0	0	0	2	12	45	0	0	0	51	7	125	0
7:15 AM	0	0	0	14	0	0	0	0	0	11	57	0	0	0	67	12	161	0
7:30 AM	0	3	0	13	0	0	0	0	0	10	78	0	0	0	55	10	169	0
7:45 AM	0	3	0	6	0	0	0	0	0	11	92	0	1	0	72	4	189	644
8:00 AM	**0**	**3**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**13**	**85**	**0**	**0**	**0**	**87**	**5**	**201**	720
8:15 AM	**0**	**8**	**0**	**18**	**0**	**0**	**0**	**0**	**0**	**10**	**72**	**0**	**1**	**0**	**100**	**6**	**215**	774
8:30 AM	**0**	**4**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**18**	**100**	**0**	**0**	**0**	**105**	**11**	**250**	855
8:45 AM	**0**	**5**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**25**	**122**	**0**	**0**	**0**	**96**	**12**	**272**	**938**
Count Total	0	28	0	89	0	0	0	0	2	110	651	0	2	0	633	67	1,582	0
Peak Hour All	**0**	**20**	**0**	**50**	**0**	**0**	**0**	**0**	**0**	**66**	**379**	**0**	**1**	**0**	**388**	**34**	**938**	**0**
Peak Hour HV	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**5**	**0**
Peak Hour HV%	**-**	**0%**	**-**	**2%**	**-**	**-**	**-**	**-**	**-**	**0%**	**1%**	**-**	**0%**	**-**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	1	*1*	0	0	1	2	*3*	0	0	0	0	*0*
7:15 AM	2	0	1	0	*3*	0	0	1	4	*5*	0	0	0	0	*0*
7:30 AM	0	0	4	1	*5*	0	0	2	2	*4*	0	1	0	3	*4*
7:45 AM	0	0	2	0	*2*	0	0	5	7	*12*	0	1	0	1	*2*
8:00 AM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**4**	**3**	***7***	**0**	**0**	**0**	**1**	*1*
8:15 AM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**2**	*2*
8:30 AM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**1**	*1*
8:45 AM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**6**	**0**	***6***	**0**	**0**	**0**	**0**	***0***
Count Total	3	0	10	3	*16*	0	0	22	19	*41*	0	2	0	8	*10*
Peak Hr	**1**	**0**	**3**	**1**	***5***	**0**	**0**	**13**	**4**	***17***	**0**	**0**	**0**	**4**	***4***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	MAHLER RD				0				OLD BAYSHORE HWY				OLD BAYSHORE HWY				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:15 AM	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	3	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	5	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	11
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	12
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	10
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	6
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**5**
Count Total	0	0	0	3	0	0	0	0	0	0	10	0	0	0	2	1	16	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**5**	**0**

Two-Hour Count Summaries - Bikes

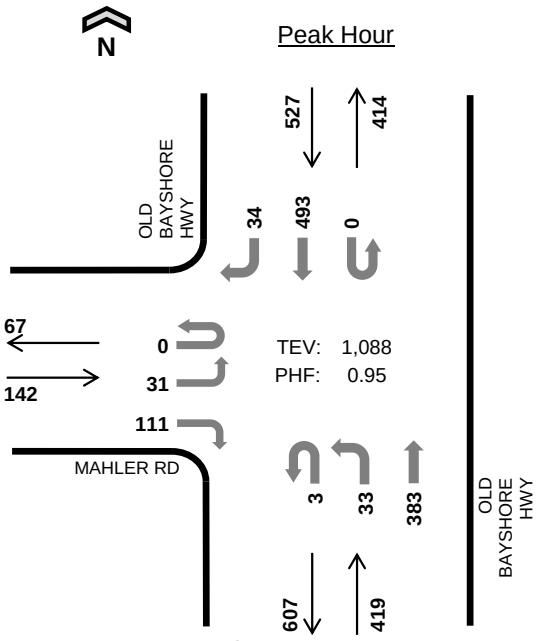
Interval Start	MAHLER RD			0			OLD BAYSHORE HWY			OLD BAYSHORE HWY			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	4	0	5	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0
7:45 AM	0	0	0	0	0	0	0	5	0	0	7	0	12	24
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**3**	**0**	**7**	28
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	25
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	23
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**17**
Count Total	0	0	0	0	0	0	0	22	0	0	19	0	41	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**4**	**0**	**17**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

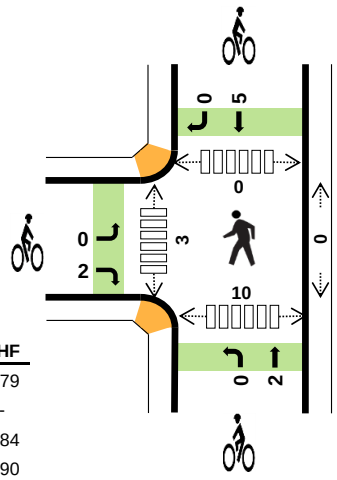
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

OLD BAYSHORE HWY
MAHLER RD

Date: 05/31/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	0.0%	0.79
WB	-	-
NB	1.2%	0.84
SB	1.7%	0.90
TOTAL	1.3%	0.95



Two-Hour Count Summaries

Interval Start	MAHLER RD Eastbound				0 Westbound				OLD BAYSHORE HWY Northbound				OLD BAYSHORE HWY Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	8	0	22	0	0	0	0	0	6	90	0	0	0	117	10	253	0
4:15 PM	**0**	**4**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**10**	**114**	**0**	**0**	**0**	**112**	**8**	**272**	0
4:30 PM	**0**	**5**	**0**	**25**	**0**	**0**	**0**	**0**	**0**	**14**	**86**	**0**	**0**	**0**	**134**	**12**	**276**	0
4:45 PM	**0**	**10**	**0**	**29**	**0**	**0**	**0**	**0**	**2**	**6**	**90**	**0**	**0**	**0**	**109**	**9**	**255**	1,056
5:00 PM	**0**	**12**	**0**	**33**	**0**	**0**	**0**	**0**	**1**	**3**	**93**	**0**	**0**	**0**	**138**	**5**	**285**	**1,088**
5:15 PM	0	6	0	19	0	0	0	0	0	3	93	0	0	0	119	5	245	1,061
5:30 PM	0	10	0	26	0	0	0	0	1	6	83	0	0	0	118	8	252	1,037
5:45 PM	0	5	0	14	0	0	0	0	0	5	89	0	0	0	118	8	239	1,021
Count Total	0	60	0	192	0	0	0	0	4	53	738	0	0	0	965	65	2,077	0
Peak Hour All	**0**	**31**	**0**	**111**	**0**	**0**	**0**	**0**	**3**	**33**	**383**	**0**	**0**	**0**	**493**	**34**	**1,088**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**8**	**1**	**14**	**0**
Peak Hour HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**0%**	**0%**	**1%**	**-**	**-**	**-**	**2%**	**3%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	2	*3*	0	0	1	0	*1*	0	1	0	1	*2*
4:15 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**1**	***1***	**0**	**1**	**0**	**2**	*3*
4:30 PM	**0**	**0**	**1**	**4**	***5***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**0**	**2**	**1**	***3***	**1**	**0**	**1**	**2**	***4***	**0**	**2**	**0**	**5**	*7*
5:00 PM	**0**	**0**	**1**	**2**	***3***	**1**	**0**	**1**	**1**	***3***	**0**	**0**	**0**	**3**	***3***
5:15 PM	0	0	1	1	*2*	0	0	1	2	*3*	0	0	0	1	*1*
5:30 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	3	*3*
5:45 PM	0	0	0	2	*2*	0	0	0	4	*4*	0	1	0	2	*3*
Count Total	0	0	8	15	*23*	2	0	4	11	*17*	0	5	0	17	*22*
Peak Hr	**0**	**0**	**5**	**9**	***14***	**2**	**0**	**2**	**5**	***9***	**0**	**3**	**0**	**10**	***13***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	MAHLER RD				0				OLD BAYSHORE HWY				OLD BAYSHORE HWY				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**1**	**5**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**3**	14
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	**14**
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	13
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	10
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	9
Count Total	0	0	0	0	0	0	0	0	0	1	7	0	0	0	14	1	23	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**8**	**1**	**14**	**0**

Two-Hour Count Summaries - Bikes

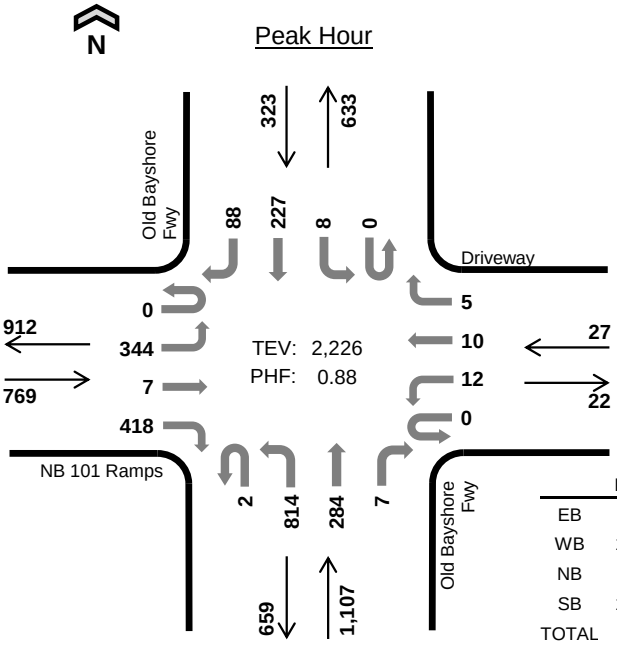
Interval Start	MAHLER RD			0			OLD BAYSHORE HWY			OLD BAYSHORE HWY			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**4**	7
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	**9**
5:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	11
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	10
5:45 PM	0	0	0	0	0	0	0	0	0	0	4	0	4	10
Count Total	0	0	2	0	0	0	0	4	0	0	11	0	17	0
Peak Hour	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**5**	**0**	**9**	**0**

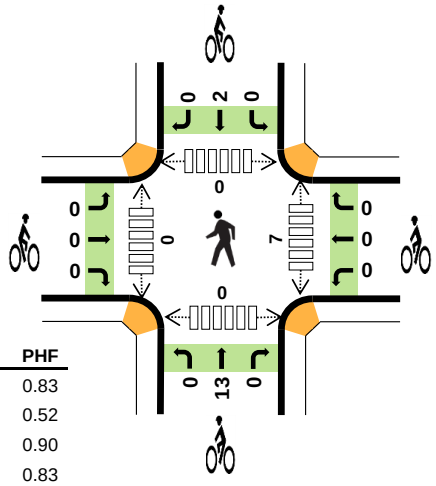
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Old Bayshore Fwy
NB 101 Ramps

Date: 06/20/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	4.0%	0.83
WB	18.5%	0.52
NB	3.1%	0.90
SB	11.5%	0.83
TOTAL	4.8%	0.88

Two-Hour Count Summaries

Interval Start	NB 101 Ramps				Driveway				Old Bayshore Fwy				Old Bayshore Fwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	43	2	98	0	1	4	0	0	220	26	1	0	1	32	17	445	0
7:15 AM	0	49	1	86	0	5	4	0	1	217	42	1	0	1	36	12	455	0
7:30 AM	0	78	1	92	0	10	5	2	0	209	32	2	0	3	52	13	499	0
7:45 AM	0	79	1	109	0	2	2	1	0	223	56	3	1	1	51	10	539	1,938
8:00 AM	**0**	**81**	**3**	**95**	**0**	**5**	**5**	**3**	**0**	**203**	**47**	**2**	**0**	**4**	**53**	**14**	**515**	2,008
8:15 AM	**0**	**79**	**1**	**108**	**0**	**2**	**3**	**0**	**1**	**226**	**78**	**2**	**0**	**2**	**47**	**19**	**568**	2,121
8:30 AM	**0**	**77**	**2**	**91**	**0**	**2**	**1**	**2**	**0**	**170**	**81**	**1**	**0**	**1**	**60**	**26**	**514**	2,136
8:45 AM	**0**	**107**	**1**	**124**	**0**	**3**	**1**	**0**	**1**	**215**	**78**	**2**	**0**	**1**	**67**	**29**	**629**	**2,226**
Count Total	0	593	12	803	0	30	25	8	3	1,683	440	14	1	14	398	140	4,164	0
Peak Hour All	**0**	**344**	**7**	**418**	**0**	**12**	**10**	**5**	**2**	**814**	**284**	**7**	**0**	**8**	**227**	**88**	**2,226**	**0**
Peak Hour HV	**0**	**14**	**0**	**17**	**0**	**2**	**2**	**1**	**0**	**22**	**12**	**0**	**0**	**5**	**18**	**14**	**107**	**0**
Peak Hour HV%	**-**	**4%**	**0%**	**4%**	**-**	**17%**	**20%**	**20%**	**0%**	**3%**	**4%**	**0%**	**-**	**63%**	**8%**	**16%**	**5%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	1	7	7	*20*	0	0	4	3	*7*	8	0	0	0	*8*
7:15 AM	2	1	5	7	*15*	0	0	1	2	*3*	8	0	0	0	*8*
7:30 AM	6	3	6	7	*22*	2	0	10	4	*16*	2	0	0	0	*2*
7:45 AM	3	0	4	13	*20*	0	0	1	2	*3*	4	0	0	0	*4*
8:00 AM	**7**	**2**	**13**	**5**	***27***	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**5**	**0**	**6**	**7**	***18***	**0**	**0**	**6**	**0**	***6***	**1**	**0**	**0**	**0**	*1*
8:30 AM	**14**	**2**	**8**	**13**	***37***	**0**	**0**	**3**	**0**	***3***	**6**	**0**	**0**	**0**	*6*
8:45 AM	**5**	**1**	**7**	**12**	***25***	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***
Count Total	47	10	56	71	*184*	2	0	29	13	*44*	29	0	0	0	*29*
Peak Hour	**31**	**5**	**34**	**37**	***107***	**0**	**0**	**13**	**2**	***15***	**7**	**0**	**0**	**0**	***7***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	NB 101 Ramps				Driveway				Old Bayshore Fwy				Old Bayshore Fwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	0	3	0	0	1	0	0	6	1	0	0	1	3	3	20	0
7:15 AM	0	1	0	1	0	1	0	0	0	5	0	0	0	1	4	2	15	0
7:30 AM	0	3	0	3	0	1	2	0	0	4	2	0	0	1	4	2	22	0
7:45 AM	0	0	0	3	0	0	0	0	0	2	2	0	0	0	10	3	20	77
8:00 AM	**0**	**2**	**0**	**5**	**0**	**1**	**1**	**0**	**0**	**8**	**5**	**0**	**0**	**2**	**2**	**1**	**27**	84
8:15 AM	**0**	**2**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**0**	**0**	**1**	**4**	**2**	**18**	87
8:30 AM	**0**	**7**	**0**	**7**	**0**	**0**	**1**	**1**	**0**	**5**	**3**	**0**	**0**	**1**	**7**	**5**	**37**	102
8:45 AM	**0**	**3**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**4**	**3**	**0**	**0**	**1**	**5**	**6**	**25**	**107**
Count Total	0	20	0	27	0	4	5	1	0	39	17	0	0	8	39	24	184	0
Peak Hour	**0**	**14**	**0**	**17**	**0**	**2**	**2**	**1**	**0**	**22**	**12**	**0**	**0**	**5**	**18**	**14**	**107**	**0**

Two-Hour Count Summaries - Bikes

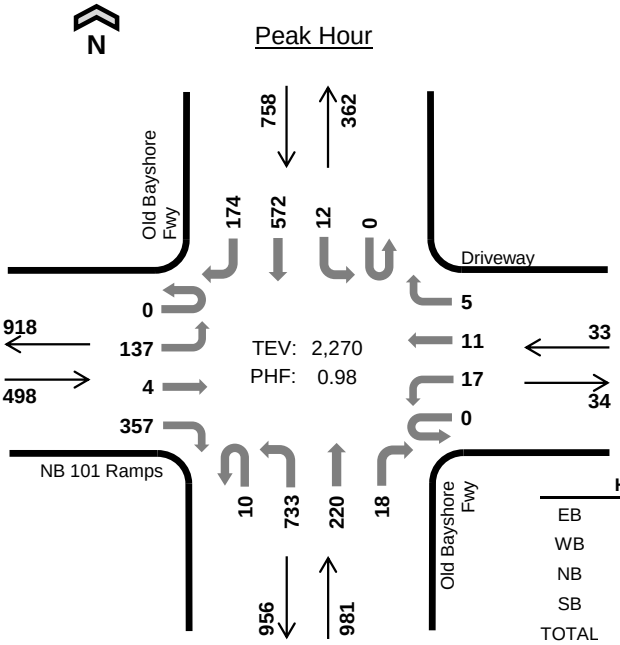
Interval Start	NB 101 Ramps			Driveway			Old Bayshore Fwy			Old Bayshore Fwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	4	0	0	3	0	7	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	0
7:30 AM	0	0	2	0	0	0	0	10	0	0	4	0	16	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	29
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**4**	26
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	29
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	16
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	**15**
Count Total	0	0	2	0	0	0	0	29	0	0	13	0	44	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**2**	**0**	**15**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

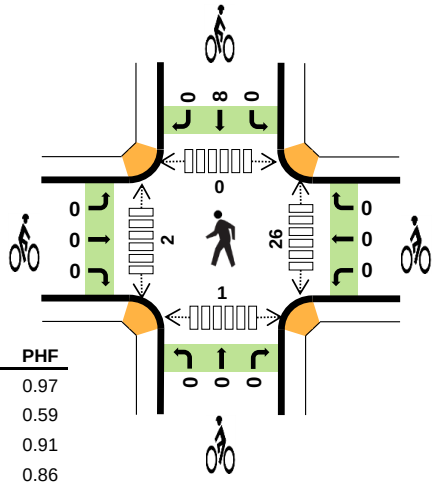
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Old Bayshore Fwy
NB 101 Ramps

Date: 06/20/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	3.0%	0.97
WB	6.1%	0.59
NB	1.9%	0.91
SB	1.8%	0.86
TOTAL	2.2%	0.98



Two-Hour Count Summaries

Interval Start		NB 101 Ramps Eastbound				Driveway Westbound				Old Bayshore Fwy Northbound				Old Bayshore Fwy Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	33	1	89	0	7	5	0	6	155	57	3	0	4	105	37	502	0
4:15 PM		1	27	2	95	0	6	3	0	0	146	45	2	0	2	104	23	456	0
4:30 PM		**0**	**33**	**2**	**90**	**0**	**9**	**3**	**2**	**4**	**177**	**48**	**7**	**0**	**4**	**146**	**41**	**566**	0
4:45 PM		**0**	**41**	**1**	**85**	**0**	**2**	**4**	**0**	**1**	**184**	**54**	**6**	**0**	**3**	**138**	**42**	**561**	2,085
5:00 PM		**0**	**35**	**1**	**82**	**0**	**4**	**2**	**3**	**2**	**171**	**54**	**3**	**0**	**4**	**168**	**49**	**578**	2,161
5:15 PM		**0**	**28**	**0**	**100**	**0**	**2**	**2**	**0**	**3**	**201**	**64**	**2**	**0**	**1**	**120**	**42**	**565**	**2,270**
5:30 PM		0	33	1	89	0	3	3	0	2	161	45	2	0	3	159	46	547	2,251
5:45 PM		1	48	0	96	0	0	2	0	2	139	70	9	0	2	124	36	529	2,219
Count Total		2	278	8	726	0	33	24	5	20	1,334	437	34	0	23	1,064	316	4,304	0
Peak Hour	**All**	**0**	**137**	**4**	**357**	**0**	**17**	**11**	**5**	**10**	**733**	**220**	**18**	**0**	**12**	**572**	**174**	**2,270**	**0**
	HV	**0**	**4**	**0**	**11**	**0**	**0**	**2**	**0**	**0**	**11**	**8**	**0**	**0**	**3**	**8**	**3**	**50**	**0**
	HV%	**-**	**3%**	**0%**	**3%**	**-**	**0%**	**18%**	**0%**	**0%**	**2%**	**4%**	**0%**	**-**	**25%**	**1%**	**2%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	3	2	6	2	*13*	0	0	0	1	*1*	1	0	0	0	*1*
4:15 PM	4	0	2	3	*9*	0	0	0	3	*3*	3	0	0	0	*3*
4:30 PM	**7**	**1**	**7**	**4**	***19***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**1**	*4*
4:45 PM	**5**	**0**	**2**	**4**	***11***	**0**	**0**	**0**	**3**	***3***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**3**	**1**	**5**	**4**	***13***	**0**	**0**	**0**	**3**	***3***	**17**	**2**	**0**	**0**	*19*
5:15 PM	**0**	**0**	**5**	**2**	***7***	**0**	**0**	**0**	**2**	***2***	**6**	**0**	**0**	**0**	***6***
5:30 PM	1	1	3	6	*11*	0	0	0	0	*0*	1	0	0	0	*1*
5:45 PM	3	0	2	1	*6*	0	0	0	0	*0*	6	0	0	0	*6*
Count Total	26	5	32	26	*89*	0	0	0	12	*12*	37	2	0	1	*40*
Peak Hour	**15**	**2**	**19**	**14**	***50***	**0**	**0**	**0**	**8**	***8***	**26**	**2**	**0**	**1**	***29***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	NB 101 Ramps				Driveway				Old Bayshore Fwy				Old Bayshore Fwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	3	0	0	2	0	0	3	3	0	0	1	1	0	13	0
4:15 PM	0	0	0	4	0	0	0	0	0	2	0	0	0	0	2	1	9	0
4:30 PM	**0**	**3**	**0**	**4**	**0**	**0**	**1**	**0**	**0**	**3**	**4**	**0**	**0**	**2**	**2**	**0**	**19**	0
4:45 PM	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**3**	**1**	**11**	52
5:00 PM	**0**	**1**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**1**	**2**	**13**	52
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**0**	**2**	**0**	**7**	**50**
5:30 PM	0	0	0	1	0	0	1	0	0	1	2	0	0	1	4	1	11	42
5:45 PM	0	2	0	1	0	0	0	0	0	2	0	0	0	0	0	1	6	37
Count Total	0	6	0	20	0	0	5	0	0	19	13	0	0	5	15	6	89	0
Peak Hour	**0**	**4**	**0**	**11**	**0**	**0**	**2**	**0**	**0**	**11**	**8**	**0**	**0**	**3**	**8**	**3**	**50**	**0**

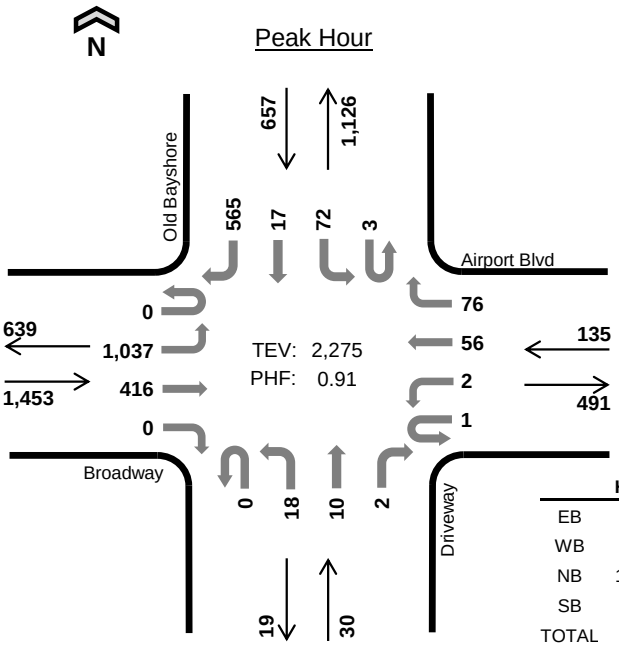
Two-Hour Count Summaries - Bikes

Interval Start	NB 101 Ramps			Driveway			Old Bayshore Fwy			Old Bayshore Fwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	3	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	7
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	9
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**8**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Count Total	0	0	0	0	0	0	0	0	0	0	12	0	12	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**8**	**0**

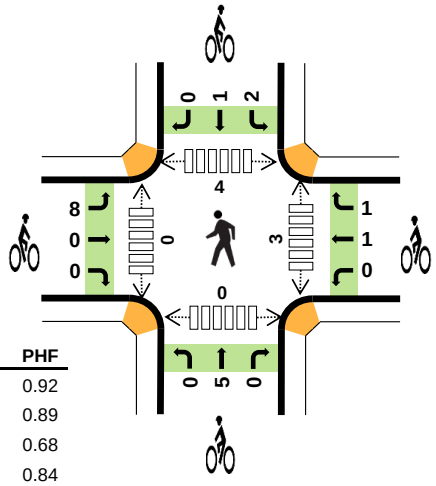
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Old Bayshore
Broadway



	HV %:	PHF
EB	2.8%	0.92
WB	5.9%	0.89
NB	13.3%	0.68
SB	7.0%	0.84
TOTAL	4.3%	0.91



Date: 06/20/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM

Two-Hour Count Summaries

Interval Start		Broadway Eastbound				Airport Blvd Westbound				Driveway Northbound				Old Bayshore Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	223	31	0	0	0	17	10	0	4	5	2	0	14	3	100	409	0
7:15 AM		0	252	70	0	0	4	16	10	0	1	2	1	1	7	4	119	487	0
7:30 AM		1	226	77	0	0	0	13	18	0	4	2	3	0	15	3	135	497	0
7:45 AM		0	254	79	0	0	3	7	20	0	5	5	4	0	16	3	140	536	1,929
8:00 AM		**0**	**245**	**91**	**0**	**1**	**0**	**11**	**13**	**0**	**2**	**3**	**0**	**0**	**15**	**1**	**129**	**511**	2,031
8:15 AM		**0**	**285**	**108**	**0**	**0**	**1**	**16**	**20**	**0**	**8**	**1**	**0**	**2**	**11**	**8**	**136**	**596**	2,140
8:30 AM		**0**	**236**	**101**	**0**	**0**	**0**	**16**	**22**	**0**	**6**	**3**	**2**	**1**	**27**	**2**	**130**	**546**	2,189
8:45 AM		**0**	**271**	**116**	**0**	**0**	**1**	**13**	**21**	**0**	**2**	**3**	**0**	**0**	**19**	**6**	**170**	**622**	**2,275**
Count Total		1	1,992	673	0	1	9	109	134	0	32	24	12	4	124	30	1,059	4,204	0
Peak Hour	**All**	**0**	**1,037**	**416**	**0**	**1**	**2**	**56**	**76**	**0**	**18**	**10**	**2**	**3**	**72**	**17**	**565**	**2,275**	**0**
	HV	**0**	**26**	**14**	**0**	**0**	**0**	**3**	**5**	**0**	**1**	**2**	**1**	**1**	**9**	**2**	**34**	**98**	**0**
	HV%	**-**	**3%**	**3%**	**-**	**0%**	**0%**	**5%**	**7%**	**-**	**6%**	**20%**	**50%**	**33%**	**13%**	**12%**	**6%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	10	1	2	7	*20*	0	2	0	6	*8*	4	0	0	0	*4*
7:15 AM	9	1	0	8	*18*	3	0	1	3	*7*	1	0	3	0	*4*
7:30 AM	11	2	1	10	*24*	2	3	3	4	*12*	2	0	0	0	*2*
7:45 AM	7	0	1	11	*19*	0	4	0	2	*6*	1	0	3	0	*4*
8:00 AM	**11**	**3**	**1**	**9**	***24***	**1**	**0**	**1**	**2**	***4***	**1**	**0**	**1**	**0**	*2*
8:15 AM	**8**	**2**	**0**	**10**	***20***	**5**	**1**	**1**	**0**	***7***	**1**	**0**	**3**	**0**	*4*
8:30 AM	**10**	**1**	**3**	**18**	***32***	**0**	**0**	**2**	**0**	***2***	**1**	**0**	**0**	**0**	*1*
8:45 AM	**11**	**2**	**0**	**9**	***22***	**2**	**1**	**1**	**1**	***5***	**0**	**0**	**0**	**0**	***0***
Count Total	77	12	8	82	*179*	13	11	9	18	*51*	11	0	10	0	*21*
Peak Hour	**40**	**8**	**4**	**46**	***98***	**8**	**2**	**5**	**3**	***18***	**3**	**0**	**4**	**0**	***7***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway Eastbound				Airport Blvd Westbound				Driveway Northbound				Old Bayshore Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	7	3	0	0	0	0	1	0	0	2	0	0	3	0	4	20	0
7:15 AM	0	5	4	0	0	0	1	0	0	0	0	0	1	1	0	6	18	0
7:30 AM	0	7	4	0	0	0	1	1	0	0	1	0	0	2	0	8	24	0
7:45 AM	0	4	3	0	0	0	0	0	0	1	0	0	0	2	1	8	19	81
8:00 AM	**0**	**10**	**1**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**1**	**0**	**0**	**3**	**1**	**5**	**24**	85
8:15 AM	**0**	**3**	**5**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**8**	**20**	87
8:30 AM	**0**	**6**	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**1**	**0**	**3**	**1**	**14**	**32**	95
8:45 AM	**0**	**7**	**4**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**7**	**22**	**98**
Count Total	0	49	28	0	0	0	5	7	0	2	5	1	2	17	3	60	179	0
Peak Hour	**0**	**26**	**14**	**0**	**0**	**0**	**3**	**5**	**0**	**1**	**2**	**1**	**1**	**9**	**2**	**34**	**98**	**0**

Two-Hour Count Summaries - Bikes

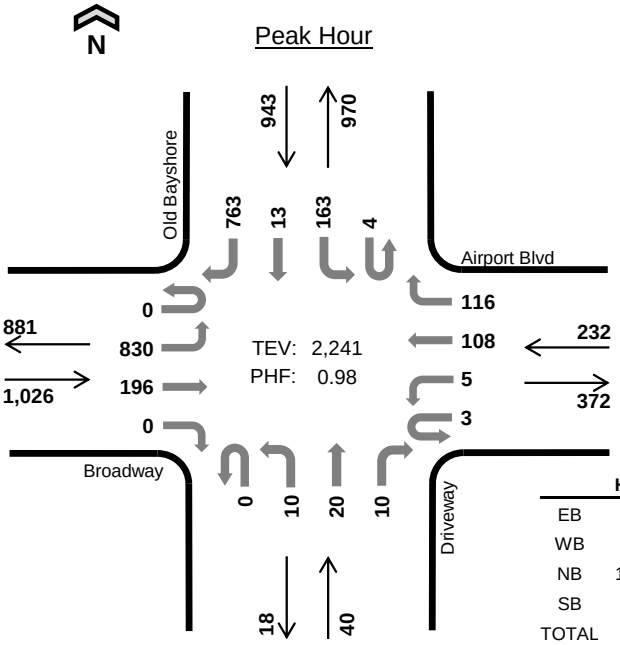
Interval Start	Broadway Eastbound			Airport Blvd Westbound			Driveway Northbound			Old Bayshore Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	2	0	0	0	6	0	0	8	0
7:15 AM	3	0	0	0	0	0	0	1	0	2	1	0	7	0
7:30 AM	2	0	0	0	0	3	0	3	0	4	0	0	12	0
7:45 AM	0	0	0	0	0	4	0	0	0	2	0	0	6	33
8:00 AM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**4**	29
8:15 AM	**5**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**7**	29
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	19
8:45 AM	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**5**	**18**
Count Total	13	0	0	0	1	10	0	9	0	16	2	0	51	0
Peak Hour	**8**	**0**	**0**	**0**	**1**	**1**	**0**	**5**	**0**	**2**	**1**	**0**	**18**	**0**

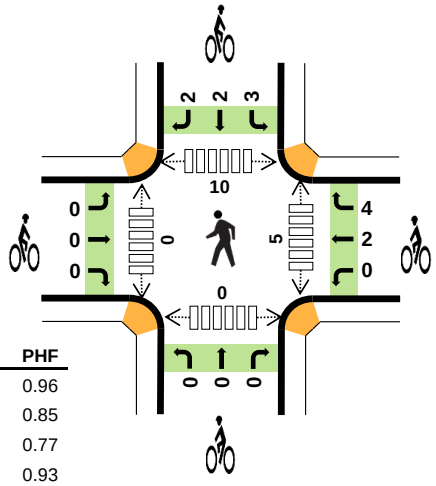
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Old Bayshore
Broadway

Date: 06/20/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV %:	PHF
EB	3.1%	0.96
WB	5.6%	0.85
NB	10.0%	0.77
SB	2.4%	0.93
TOTAL	3.2%	0.98

Two-Hour Count Summaries

Interval Start		Broadway Eastbound				Airport Blvd Westbound				Driveway Northbound				Old Bayshore Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		2	172	43	0	0	0	25	21	0	6	1	2	0	36	2	180	490	0
4:15 PM		0	176	37	0	0	0	24	19	0	1	5	1	1	14	5	171	454	0
4:30 PM		**0**	**208**	**53**	**0**	**1**	**0**	**21**	**23**	**0**	**1**	**6**	**3**	**0**	**50**	**4**	**199**	**569**	0
4:45 PM		**0**	**206**	**48**	**0**	**0**	**2**	**34**	**24**	**0**	**4**	**2**	**1**	**2**	**37**	**4**	**196**	**560**	2,073
5:00 PM		**0**	**219**	**48**	**0**	**1**	**0**	**26**	**32**	**0**	**2**	**7**	**1**	**1**	**37**	**1**	**196**	**571**	2,154
5:15 PM		**0**	**197**	**47**	**0**	**1**	**3**	**27**	**37**	**0**	**3**	**5**	**5**	**1**	**39**	**4**	**172**	**541**	**2,241**
5:30 PM		0	187	40	0	0	1	27	22	0	2	2	5	0	33	8	196	523	2,195
5:45 PM		0	195	34	0	0	2	26	32	0	1	5	5	1	34	5	198	538	2,173
Count Total		2	1,560	350	0	3	8	210	210	0	20	33	23	6	280	33	1,508	4,246	0
Peak Hour	**All**	**0**	**830**	**196**	**0**	**3**	**5**	**108**	**116**	**0**	**10**	**20**	**10**	**4**	**163**	**13**	**763**	**2,241**	**0**
	HV	**0**	**12**	**20**	**0**	**2**	**1**	**4**	**6**	**0**	**0**	**3**	**1**	**0**	**3**	**1**	**19**	**72**	**0**
	HV%	**-**	**1%**	**10%**	**-**	**67%**	**20%**	**4%**	**5%**	**-**	**0%**	**15%**	**10%**	**0%**	**2%**	**8%**	**2%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	10	5	1	5	*21*	0	0	0	1	*1*	2	0	0	0	*2*
4:15 PM	7	3	0	6	*16*	0	0	0	3	*3*	4	0	2	0	*6*
4:30 PM	**8**	**4**	**1**	**8**	***21***	**0**	**1**	**0**	**0**	***1***	**1**	**0**	**3**	**0**	***4***
4:45 PM	**6**	**2**	**0**	**9**	***17***	**0**	**2**	**0**	**3**	***5***	**0**	**0**	**2**	**0**	*2*
5:00 PM	**9**	**3**	**2**	**3**	***17***	**0**	**3**	**0**	**3**	***6***	**3**	**0**	**2**	**0**	*5*
5:15 PM	**9**	**4**	**1**	**3**	***17***	**0**	**0**	**0**	**1**	***1***	**1**	**0**	**3**	**0**	***4***
5:30 PM	5	2	2	4	*13*	0	0	0	4	*4*	0	0	3	0	*3*
5:45 PM	9	2	0	2	*13*	0	0	0	1	*1*	1	0	2	0	*3*
Count Total	63	25	7	40	*135*	0	6	0	16	*22*	12	0	17	0	*29*
Peak Hour	**32**	**13**	**4**	**23**	***72***	**0**	**6**	**0**	**7**	***13***	**5**	**0**	**10**	**0**	***15***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway Eastbound				Airport Blvd Westbound				Driveway Northbound				Old Bayshore Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	4	6	0	0	0	4	1	0	0	1	0	0	1	0	4	21	0
4:15 PM	0	1	6	0	0	0	2	1	0	0	0	0	0	0	0	6	16	0
4:30 PM	**0**	**3**	**5**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**1**	**0**	**0**	**2**	**1**	**5**	**21**	0
4:45 PM	**0**	**1**	**5**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**8**	**17**	75
5:00 PM	**0**	**3**	**6**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**17**	71
5:15 PM	**0**	**5**	**4**	**0**	**1**	**1**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**17**	**72**
5:30 PM	0	1	4	0	0	0	1	1	0	0	1	1	0	0	1	3	13	64
5:45 PM	0	3	6	0	0	0	1	1	0	0	0	0	0	0	0	2	13	60
Count Total	0	21	42	0	2	1	12	10	0	0	5	2	0	4	2	34	135	0
Peak Hour	**0**	**12**	**20**	**0**	**2**	**1**	**4**	**6**	**0**	**0**	**3**	**1**	**0**	**3**	**1**	**19**	**72**	**0**

Two-Hour Count Summaries - Bikes

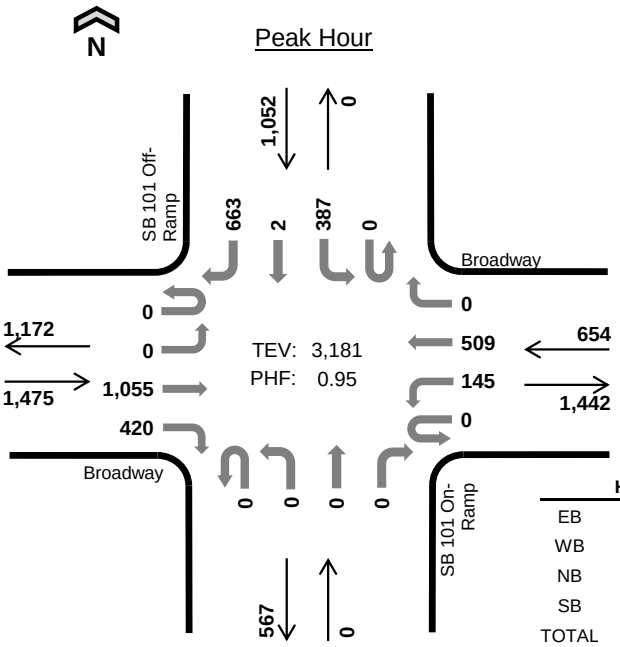
Interval Start	Broadway Eastbound			Airport Blvd Westbound			Driveway Northbound			Old Bayshore Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	3	0
4:30 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**2**	**1**	**5**	10
5:00 PM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**1**	**6**	15
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**13**
5:30 PM	0	0	0	0	0	0	0	0	0	1	1	2	4	16
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	12
Count Total	0	0	0	0	2	4	0	0	0	8	3	5	22	0
Peak Hour	**0**	**0**	**0**	**0**	**2**	**4**	**0**	**0**	**0**	**3**	**2**	**2**	**13**	**0**

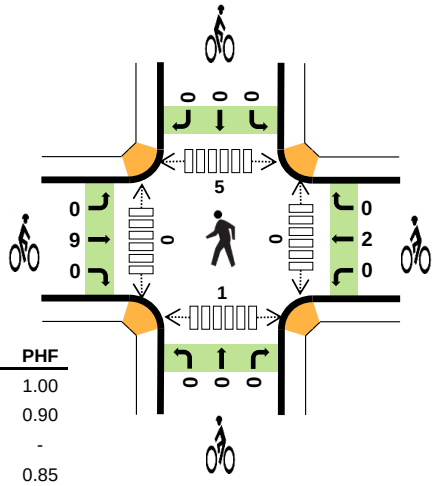
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

SB 101 On-Ramp
Broadway

Date: 06/20/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	3.3%	1.00
WB	5.5%	0.90
NB	-	-
SB	3.4%	0.85
TOTAL	3.8%	0.95

Two-Hour Count Summaries

Interval Start		Broadway Eastbound				Broadway Westbound				SB 101 On-Ramp Northbound				SB 101 Off-Ramp Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	227	128	0	24	120	0	0	0	0	0	0	41	0	110	650	0
7:15 AM		0	0	241	108	0	38	99	0	0	0	0	0	0	70	0	110	666	0
7:30 AM		0	0	244	133	0	37	122	0	0	0	0	0	0	83	0	146	765	0
7:45 AM		0	0	241	115	1	20	127	0	0	0	0	0	0	90	0	183	777	2,858
8:00 AM		**0**	**0**	**274**	**96**	**0**	**39**	**119**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**2**	**130**	**739**	2,947
8:15 AM		**0**	**0**	**262**	**108**	**0**	**38**	**117**	**0**	**0**	**0**	**0**	**0**	**0**	**116**	**0**	**192**	**833**	3,114
8:30 AM		**0**	**0**	**252**	**118**	**0**	**33**	**127**	**0**	**0**	**0**	**0**	**0**	**0**	**96**	**0**	**157**	**783**	3,132
8:45 AM		**0**	**0**	**267**	**98**	**0**	**35**	**146**	**0**	**0**	**0**	**0**	**0**	**0**	**96**	**0**	**184**	**826**	**3,181**
Count Total		0	0	2,008	904	1	264	977	0	0	0	0	0	0	671	2	1,212	6,039	0
Peak Hour	**All**	**0**	**0**	**1,055**	**420**	**0**	**145**	**509**	**0**	**0**	**0**	**0**	**0**	**0**	**387**	**2**	**663**	**3,181**	**0**
	HV	**0**	**0**	**25**	**24**	**0**	**15**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**20**	**121**	**0**
	HV%	**-**	**-**	**2%**	**6%**	**-**	**10%**	**4%**	**-**	**-**	**-**	**-**	**-**	**-**	**4%**	**0%**	**3%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	9	4	0	7	*20*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	6	7	0	15	*28*	4	0	0	0	*4*	0	0	3	0	*3*
7:30 AM	9	8	0	9	*26*	3	1	0	0	*4*	0	0	0	0	*0*
7:45 AM	11	9	0	4	*24*	2	0	0	0	*2*	0	0	1	0	*1*
8:00 AM	**16**	**7**	**0**	**10**	***33***	**1**	**1**	**0**	**0**	***2***	**0**	**0**	**2**	**1**	*3*
8:15 AM	**11**	**4**	**0**	**10**	***25***	**5**	**0**	**0**	**0**	***5***	**0**	**0**	**3**	**0**	*3*
8:30 AM	**9**	**18**	**0**	**4**	***31***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
8:45 AM	**13**	**7**	**0**	**12**	***32***	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***
Count Total	84	64	0	71	*219*	18	3	0	0	*21*	0	0	9	1	*10*
Peak Hour	**49**	**36**	**0**	**36**	***121***	**9**	**2**	**0**	**0**	***11***	**0**	**0**	**5**	**1**	***6***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway Eastbound				Broadway Westbound				SB 101 On-Ramp Northbound				SB 101 Off-Ramp Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	7	2	0	0	4	0	0	0	0	0	0	3	0	4	20	0
7:15 AM	0	0	1	5	0	2	5	0	0	0	0	0	0	7	0	8	28	0
7:30 AM	0	0	5	4	0	3	5	0	0	0	0	0	0	4	0	5	26	0
7:45 AM	0	0	4	7	0	5	4	0	0	0	0	0	0	0	0	4	24	98
8:00 AM	**0**	**0**	**9**	**7**	**0**	**3**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**7**	**33**	111
8:15 AM	**0**	**0**	**5**	**6**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**4**	**25**	108
8:30 AM	**0**	**0**	**5**	**4**	**0**	**8**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**31**	113
8:45 AM	**0**	**0**	**6**	**7**	**0**	**2**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**7**	**32**	**121**
Count Total	0	0	42	42	0	25	39	0	0	0	0	0	0	30	0	41	219	0
Peak Hour	**0**	**0**	**25**	**24**	**0**	**15**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**20**	**121**	**0**

Two-Hour Count Summaries - Bikes

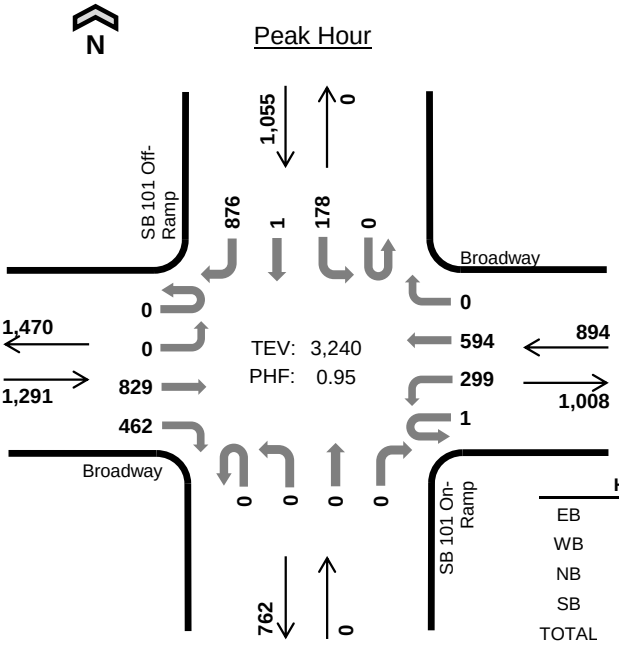
Interval Start	Broadway Eastbound			Broadway Westbound			SB 101 On-Ramp Northbound			SB 101 Off-Ramp Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	4	0	0	0	0	0	0	0	0	0	0	4	0
7:30 AM	0	3	0	0	1	0	0	0	0	0	0	0	4	0
7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	10
8:00 AM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	12
8:15 AM	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	13
8:30 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	10
8:45 AM	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**11**
Count Total	0	18	0	0	3	0	0	0	0	0	0	0	21	0
Peak Hour	**0**	**9**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**

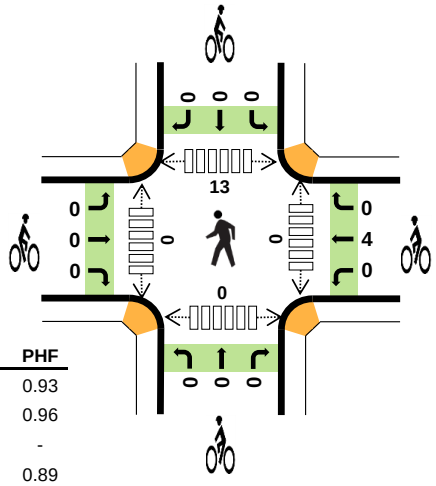
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

SB 101 On-Ramp
Broadway

Date: 06/20/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	1.9%	0.93
WB	2.3%	0.96
NB	-	-
SB	3.4%	0.89
TOTAL	2.5%	0.95

Two-Hour Count Summaries

Interval Start		Broadway Eastbound				Broadway Westbound				SB 101 On-Ramp Northbound				SB 101 Off-Ramp Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	177	128	0	88	119	0	0	0	0	0	0	40	0	162	714	0
4:15 PM		0	0	194	118	0	74	137	0	0	0	0	0	0	37	0	176	736	0
4:30 PM		0	0	207	139	0	64	147	0	0	0	0	0	0	45	0	160	762	0
4:45 PM		**0**	**0**	**210**	**113**	**1**	**83**	**150**	**0**	**0**	**0**	**0**	**0**	**0**	**48**	**0**	**199**	**804**	3,016
5:00 PM		**0**	**0**	**225**	**115**	**0**	**79**	**152**	**0**	**0**	**0**	**0**	**0**	**0**	**57**	**1**	**183**	**812**	3,114
5:15 PM		**0**	**0**	**222**	**124**	**0**	**65**	**143**	**0**	**0**	**0**	**0**	**0**	**0**	**38**	**0**	**258**	**850**	3,228
5:30 PM		**0**	**0**	**172**	**110**	**0**	**72**	**149**	**0**	**0**	**0**	**0**	**0**	**0**	**35**	**0**	**236**	**774**	**3,240**
5:45 PM		0	0	198	98	0	64	131	0	0	0	0	0	0	45	1	218	755	3,191
Count Total		0	0	1,605	945	1	589	1,128	0	0	0	0	0	0	345	2	1,592	6,207	0
Peak Hour	**All**	**0**	**0**	**829**	**462**	**1**	**299**	**594**	**0**	**0**	**0**	**0**	**0**	**0**	**178**	**1**	**876**	**3,240**	**0**
	HV	**0**	**0**	**10**	**15**	**0**	**4**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**0**	**13**	**82**	**0**
	HV%	**-**	**-**	**1%**	**3%**	**0%**	**1%**	**3%**	**-**	**-**	**-**	**-**	**-**	**-**	**13%**	**0%**	**1%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	13	7	0	5	*25*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	6	8	0	6	*20*	0	0	0	0	*0*	0	0	1	0	*1*
4:30 PM	7	6	0	11	*24*	0	2	0	0	*2*	0	0	4	0	*4*
4:45 PM	**3**	**9**	**0**	**9**	***21***	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**2**	**0**	*2*
5:00 PM	**7**	**5**	**0**	**6**	***18***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**4**	**0**	*4*
5:15 PM	**7**	**3**	**0**	**10**	***20***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**3**	**0**	*3*
5:30 PM	**8**	**4**	**0**	**11**	***23***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**4**	**0**	***4***
5:45 PM	5	3	0	10	*18*	0	0	0	0	*0*	0	0	2	0	*2*
Count Total	56	45	0	68	*169*	0	6	0	0	*6*	0	0	20	0	*20*
Peak Hour	**25**	**21**	**0**	**36**	***82***	**0**	**4**	**0**	**0**	***4***	**0**	**0**	**13**	**0**	***13***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway Eastbound				Broadway Westbound				SB 101 On-Ramp Northbound				SB 101 Off-Ramp Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	5	8	0	3	4	0	0	0	0	0	0	5	0	0	25	0
4:15 PM	0	0	4	2	0	2	6	0	0	0	0	0	0	5	0	1	20	0
4:30 PM	0	0	3	4	0	0	6	0	0	0	0	0	0	5	0	6	24	0
4:45 PM	**0**	**0**	**1**	**2**	**0**	**1**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**1**	**21**	90
5:00 PM	**0**	**0**	**4**	**3**	**0**	**2**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**2**	**18**	83
5:15 PM	**0**	**0**	**4**	**3**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**4**	**20**	83
5:30 PM	**0**	**0**	**1**	**7**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**6**	**23**	**82**
5:45 PM	0	0	2	3	0	0	3	0	0	0	0	0	0	7	0	3	18	79
Count Total	0	0	24	32	0	9	36	0	0	0	0	0	0	45	0	23	169	0
Peak Hour	**0**	**0**	**10**	**15**	**0**	**4**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**0**	**13**	**82**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Broadway Eastbound			Broadway Westbound			SB 101 On-Ramp Northbound			SB 101 Off-Ramp Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	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	0	0	0	0
4:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0
4:45 PM	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	4
5:00 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
5:30 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	6	0	0	0	0	0	0	0	6	0
Peak Hour	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**

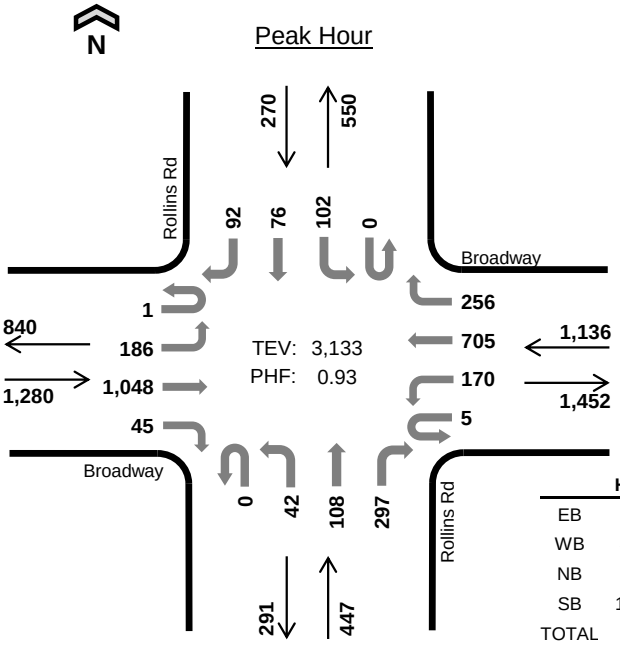
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

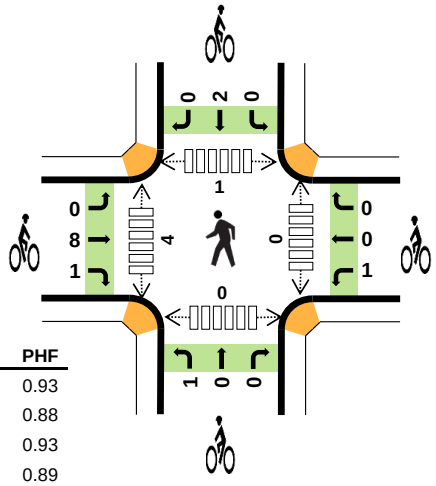
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Rollins Rd
Broadway

Peak Hour

Date: 06/20/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	2.3%	0.93
WB	4.3%	0.88
NB	1.8%	0.93
SB	13.0%	0.89
TOTAL	3.9%	0.93

Two-Hour Count Summaries

Interval Start		Broadway Eastbound				Broadway Westbound				Rollins Rd Northbound				Rollins Rd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		1	24	243	7	1	27	135	73	0	1	13	72	0	32	7	17	653	0
7:15 AM		0	34	270	1	0	27	115	65	0	3	28	70	0	22	13	17	665	0
7:30 AM		0	24	242	3	0	39	148	68	0	10	25	86	0	30	19	15	709	0
7:45 AM		**0**	**52**	**278**	**6**	**2**	**45**	**207**	**67**	**0**	**17**	**31**	**72**	**0**	**22**	**20**	**25**	**844**	2,871
8:00 AM		**1**	**61**	**237**	**12**	**0**	**34**	**143**	**54**	**0**	**8**	**22**	**73**	**0**	**25**	**17**	**23**	**710**	2,928
8:15 AM		**0**	**36**	**290**	**19**	**2**	**42**	**179**	**79**	**0**	**8**	**29**	**75**	**0**	**26**	**25**	**25**	**835**	3,098
8:30 AM		**0**	**37**	**243**	**8**	**1**	**49**	**176**	**56**	**0**	**9**	**26**	**77**	**0**	**29**	**14**	**19**	**744**	**3,133**
8:45 AM		0	47	261	5	1	50	212	66	0	11	31	80	0	23	11	33	831	3,120
Count Total		2	315	2,064	61	7	313	1,315	528	0	67	205	605	0	209	126	174	5,991	0
Peak Hour	**All**	**1**	**186**	**1,048**	**45**	**5**	**170**	**705**	**256**	**0**	**42**	**108**	**297**	**0**	**102**	**76**	**92**	**3,133**	**0**
	HV	**0**	**5**	**23**	**2**	**0**	**3**	**29**	**17**	**0**	**2**	**1**	**5**	**0**	**22**	**7**	**6**	**122**	**0**
	HV%	**0%**	**3%**	**2%**	**4%**	**0%**	**2%**	**4%**	**7%**	**-**	**5%**	**1%**	**2%**	**-**	**22%**	**9%**	**7%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	8	2	9	*22*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	5	12	1	7	*25*	5	0	0	1	*6*	0	0	4	0	*4*
7:30 AM	3	9	1	8	*21*	2	0	0	1	*3*	0	0	0	0	*0*
7:45 AM	**5**	**12**	**2**	**9**	***28***	**1**	**1**	**0**	**0**	***2***	**0**	**0**	**1**	**0**	*1*
8:00 AM	**7**	**11**	**2**	**12**	***32***	**3**	**0**	**0**	**0**	***3***	**0**	**1**	**0**	**0**	*1*
8:15 AM	**8**	**9**	**0**	**10**	***27***	**3**	**0**	**0**	**1**	***4***	**0**	**2**	**0**	**0**	*2*
8:30 AM	**10**	**17**	**4**	**4**	***35***	**2**	**0**	**1**	**1**	***4***	**0**	**1**	**0**	**0**	***1***
8:45 AM	7	14	5	6	*32*	3	0	0	0	*3*	0	0	0	0	*0*
Count Total	48	92	17	65	*222*	19	1	1	4	*25*	0	5	5	0	*10*
Peak Hour	**30**	**49**	**8**	**35**	***122***	**9**	**1**	**1**	**2**	***13***	**0**	**4**	**1**	**0**	***5***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway Eastbound				Broadway Westbound				Rollins Rd Northbound				Rollins Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	1	5	2	0	0	0	2	0	6	3	0	22	0
7:15 AM	0	1	4	0	0	1	7	4	0	1	0	0	0	6	0	1	25	0
7:30 AM	0	0	3	0	0	2	6	1	0	0	0	1	0	6	2	0	21	0
7:45 AM	**0**	**2**	**3**	**0**	**0**	**0**	**10**	**2**	**0**	**0**	**0**	**2**	**0**	**5**	**3**	**1**	**28**	96
8:00 AM	**0**	**1**	**6**	**0**	**0**	**0**	**7**	**4**	**0**	**1**	**0**	**1**	**0**	**10**	**0**	**2**	**32**	106
8:15 AM	**0**	**1**	**6**	**1**	**0**	**0**	**5**	**4**	**0**	**0**	**0**	**0**	**0**	**4**	**4**	**2**	**27**	108
8:30 AM	**0**	**1**	**8**	**1**	**0**	**3**	**7**	**7**	**0**	**1**	**1**	**2**	**0**	**3**	**0**	**1**	**35**	**122**
8:45 AM	0	0	7	0	0	0	10	4	0	1	1	3	0	3	2	1	32	126
Count Total	0	6	40	2	0	7	57	28	0	4	2	11	0	43	14	8	222	0
Peak Hour	**0**	**5**	**23**	**2**	**0**	**3**	**29**	**17**	**0**	**2**	**1**	**5**	**0**	**22**	**7**	**6**	**122**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Broadway Eastbound			Broadway Westbound			Rollins Rd Northbound			Rollins Rd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	5	0	0	0	0	0	0	0	0	0	1	6	0
7:30 AM	0	2	0	0	0	0	0	0	0	0	1	0	3	0
7:45 AM	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	11
8:00 AM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	14
8:15 AM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	12
8:30 AM	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**4**	**13**
8:45 AM	0	3	0	0	0	0	0	0	0	0	0	0	3	14
Count Total	0	18	1	1	0	0	1	0	0	0	3	1	25	0
Peak Hour	**0**	**8**	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**13**	**0**

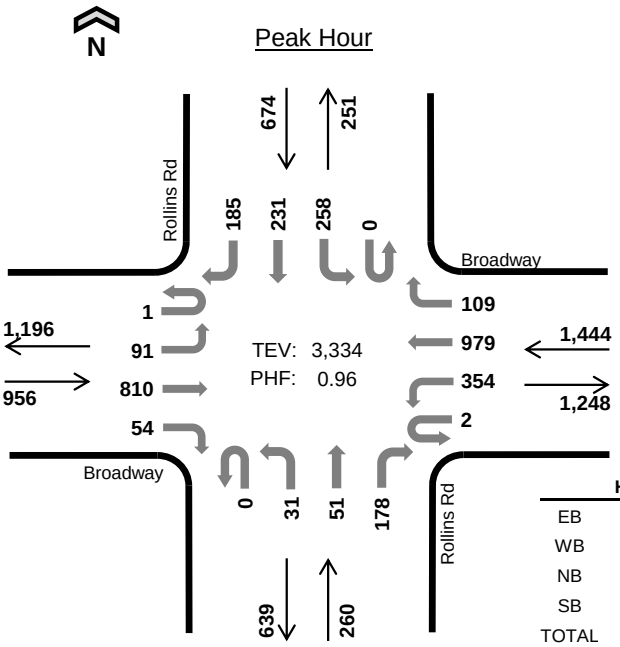
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

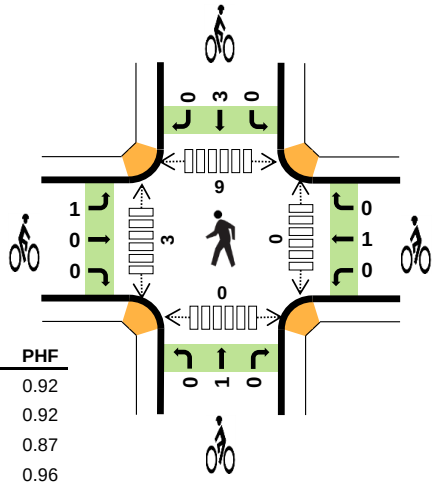
Rollins Rd
Broadway

Peak Hour

Date: 06/20/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	0.9%	0.92
WB	1.7%	0.92
NB	1.2%	0.87
SB	2.1%	0.96
TOTAL	1.5%	0.96



Two-Hour Count Summaries

Interval Start		Broadway Eastbound				Broadway Westbound				Rollins Rd Northbound				Rollins Rd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	28	174	14	0	45	191	30	0	2	11	45	0	88	52	31	711	0
4:15 PM		2	31	206	17	2	59	214	31	0	7	13	41	0	54	40	38	755	0
4:30 PM		1	39	173	15	2	69	215	22	0	11	10	53	0	104	47	55	816	0
4:45 PM		0	23	219	11	1	65	235	35	0	5	15	53	0	61	32	49	804	3,086
5:00 PM		**1**	**17**	**196**	**9**	**0**	**89**	**239**	**19**	**0**	**2**	**13**	**52**	**0**	**84**	**54**	**38**	**813**	3,188
5:15 PM		**0**	**31**	**214**	**12**	**0**	**96**	**244**	**29**	**0**	**10**	**14**	**51**	**0**	**66**	**49**	**52**	**868**	3,301
5:30 PM		**0**	**10**	**192**	**14**	**2**	**86**	**265**	**40**	**0**	**7**	**14**	**45**	**0**	**57**	**56**	**44**	**832**	3,317
5:45 PM		**0**	**33**	**208**	**19**	**0**	**83**	**231**	**21**	**0**	**12**	**10**	**30**	**0**	**51**	**72**	**51**	**821**	**3,334**
Count Total		4	212	1,582	111	7	592	1,834	227	0	56	100	370	0	565	402	358	6,420	0
Peak Hour	**All**	**1**	**91**	**810**	**54**	**2**	**354**	**979**	**109**	**0**	**31**	**51**	**178**	**0**	**258**	**231**	**185**	**3,334**	**0**
	HV	**0**	**1**	**8**	**0**	**1**	**4**	**10**	**10**	**0**	**0**	**0**	**3**	**0**	**11**	**2**	**1**	**51**	**0**
	HV%	**0%**	**1%**	**1%**	**0%**	**50%**	**1%**	**1%**	**9%**	**-**	**0%**	**0%**	**2%**	**-**	**4%**	**1%**	**1%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	9	5	0	5	*19*	0	0	1	0	*1*	0	0	0	0	*0*
4:15 PM	4	8	1	4	*17*	0	0	0	1	*1*	0	1	1	0	*2*
4:30 PM	4	11	2	3	*20*	0	2	0	0	*2*	0	0	2	0	*2*
4:45 PM	2	9	1	3	*15*	0	0	0	0	*0*	0	0	2	0	*2*
5:00 PM	**2**	**3**	**2**	**3**	***10***	**0**	**1**	**0**	**1**	***2***	**0**	**1**	**3**	**0**	***4***
5:15 PM	**2**	**6**	**0**	**3**	***11***	**1**	**0**	**1**	**2**	***4***	**0**	**1**	**0**	**0**	***1***
5:30 PM	**2**	**11**	**1**	**2**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**5**	**0**	*6*
5:45 PM	**3**	**5**	**0**	**6**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
Count Total	28	58	7	29	*122*	1	3	2	4	*10*	0	4	14	0	*18*
Peak Hour	**9**	**25**	**3**	**14**	***51***	**1**	**1**	**1**	**3**	***6***	**0**	**3**	**9**	**0**	***12***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway Eastbound				Broadway Westbound				Rollins Rd Northbound				Rollins Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	9	0	0	0	3	2	0	0	0	0	0	4	0	1	19	0
4:15 PM	0	1	3	0	0	1	1	6	0	0	1	0	0	4	0	0	17	0
4:30 PM	0	1	3	0	0	1	4	6	0	0	0	2	0	2	1	0	20	0
4:45 PM	0	0	2	0	0	2	2	5	0	0	1	0	0	2	1	0	15	71
5:00 PM	**0**	**0**	**2**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**3**	**0**	**0**	**10**	62
5:15 PM	**0**	**0**	**2**	**0**	**0**	**1**	**2**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**11**	56
5:30 PM	**0**	**0**	**2**	**0**	**1**	**2**	**3**	**5**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**16**	52
5:45 PM	**0**	**1**	**2**	**0**	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**4**	**2**	**0**	**14**	**51**
Count Total	0	3	25	0	1	8	20	29	0	0	2	5	0	23	4	2	122	0
Peak Hour	**0**	**1**	**8**	**0**	**1**	**4**	**10**	**10**	**0**	**0**	**0**	**3**	**0**	**11**	**2**	**1**	**51**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Broadway Eastbound			Broadway Westbound			Rollins Rd Northbound			Rollins Rd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:00 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	5
5:15 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**4**	8
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	6
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**
Count Total	1	0	0	0	3	0	0	2	0	0	4	0	10	0
Peak Hour	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**6**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

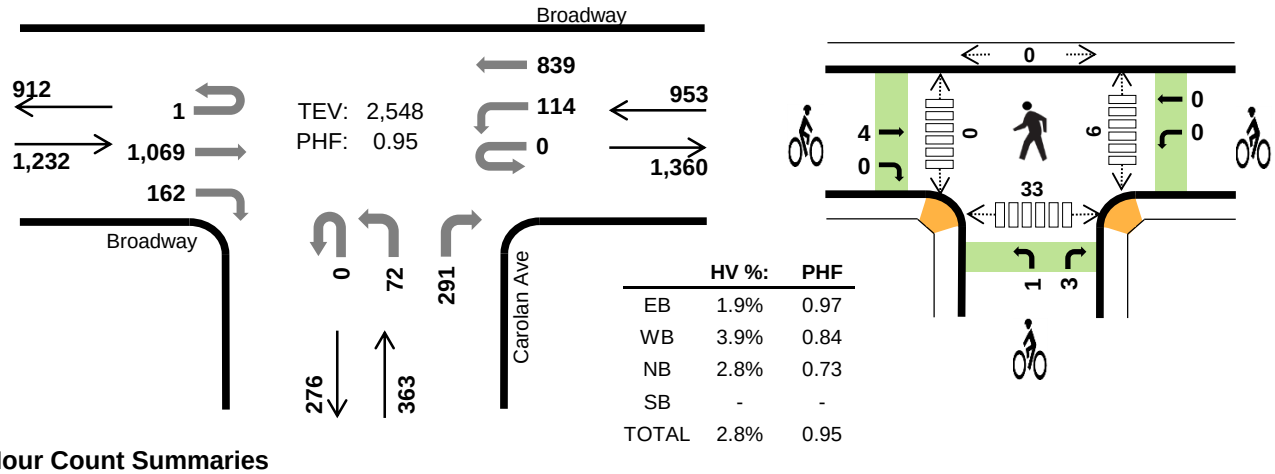
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Carolan Ave
Broadway

N

Peak Hour

Date: 05/23/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	1.9%	0.97
WB	3.9%	0.84
NB	2.8%	0.73
SB	-	-
TOTAL	2.8%	0.95

Two-Hour Count Summaries

Interval Start		Broadway Eastbound				Broadway Westbound				Carolan Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		2	0	218	5	0	23	132	0	0	6	0	58	0	0	0	0	444	0
7:15 AM		0	0	199	9	0	22	140	0	0	6	0	65	0	0	0	0	441	0
7:30 AM		**1**	**0**	**271**	**46**	**0**	**32**	**183**	**0**	**0**	**9**	**0**	**68**	**0**	**0**	**0**	**0**	**610**	0
7:45 AM		**0**	**0**	**246**	**65**	**0**	**29**	**206**	**0**	**0**	**33**	**0**	**91**	**0**	**0**	**0**	**0**	**670**	2,165
8:00 AM		**0**	**0**	**281**	**27**	**0**	**21**	**200**	**0**	**0**	**24**	**0**	**72**	**0**	**0**	**0**	**0**	**625**	2,346
8:15 AM		**0**	**0**	**271**	**24**	**0**	**32**	**250**	**0**	**0**	**6**	**0**	**60**	**0**	**0**	**0**	**0**	**643**	**2,548**
8:30 AM		0	0	256	40	0	20	173	0	0	23	0	79	0	0	0	0	591	2,529
8:45 AM		0	0	240	32	0	26	207	0	0	17	0	73	0	0	0	0	595	2,454
Count Total		3	0	1,982	248	0	205	1,491	0	0	124	0	566	0	0	0	0	4,619	0
Peak Hour	**All**	**1**	**0**	**1,069**	**162**	**0**	**114**	**839**	**0**	**0**	**72**	**0**	**291**	**0**	**0**	**0**	**0**	**2,548**	**0**
	HV	**0**	**0**	**24**	**0**	**0**	**1**	**36**	**0**	**0**	**3**	**0**	**7**	**0**	**0**	**0**	**0**	**71**	**0**
	HV%	**0%**	**-**	**2%**	**0%**	**-**	**1%**	**4%**	**-**	**-**	**4%**	**-**	**2%**	**-**	**-**	**-**	**-**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	7	0	0	*8*	2	0	1	0	*3*	0	0	0	2	*2*
7:15 AM	1	6	0	0	*7*	1	0	0	0	*1*	1	0	0	6	*7*
7:30 AM	**8**	**7**	**1**	**0**	***16***	**0**	**0**	**3**	**0**	***3***	**2**	**0**	**0**	**9**	*11*
7:45 AM	**4**	**8**	**6**	**0**	***18***	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**0**	**8**	*9*
8:00 AM	**9**	**10**	**2**	**0**	***21***	**2**	**0**	**0**	**0**	***2***	**2**	**0**	**0**	**11**	*13*
8:15 AM	**3**	**12**	**1**	**0**	***16***	**1**	**0**	**1**	**0**	***2***	**1**	**0**	**0**	**5**	***6***
8:30 AM	5	6	1	0	*12*	2	0	1	0	*3*	0	0	0	4	*4*
8:45 AM	5	8	0	0	*13*	0	0	1	0	*1*	0	0	0	7	*7*
Count Total	36	64	11	0	*111*	9	0	7	0	*16*	7	0	0	52	*59*
Peak Hr	**24**	**37**	**10**	**0**	***71***	**4**	**0**	**4**	**0**	***8***	**6**	**0**	**0**	**33**	***39***

Deon Fouche: 415 - 757 - 7714

deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway				Broadway				Carolan Ave				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	7	0	0	0	0	0	0	0	0	0	8	0
7:15 AM	0	0	1	0	0	1	5	0	0	0	0	0	0	0	0	0	7	0
7:30 AM	**0**	**0**	**8**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**16**	0
7:45 AM	**0**	**0**	**4**	**0**	**0**	**1**	**7**	**0**	**0**	**3**	**0**	**3**	**0**	**0**	**0**	**0**	**18**	49
8:00 AM	**0**	**0**	**9**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**21**	62
8:15 AM	**0**	**0**	**3**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**16**	**71**
8:30 AM	0	0	5	0	0	1	5	0	0	1	0	0	0	0	0	0	12	67
8:45 AM	0	0	5	0	0	1	7	0	0	0	0	0	0	0	0	0	13	62
Count Total	0	0	36	0	0	4	60	0	0	4	0	7	0	0	0	0	111	0
Peak Hour	**0**	**0**	**24**	**0**	**0**	**1**	**36**	**0**	**0**	**3**	**0**	**7**	**0**	**0**	**0**	**0**	**71**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Broadway			Broadway			Carolan Ave			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	2	0	0	0	0	1	0	0	0	0	0	3	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**3**	0
7:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	8
8:00 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	7
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**8**
8:30 AM	0	1	1	0	0	0	1	0	0	0	0	0	3	8
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	8
Count Total	0	8	1	0	0	0	3	0	4	0	0	0	16	0
Peak Hour	**0**	**4**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**8**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

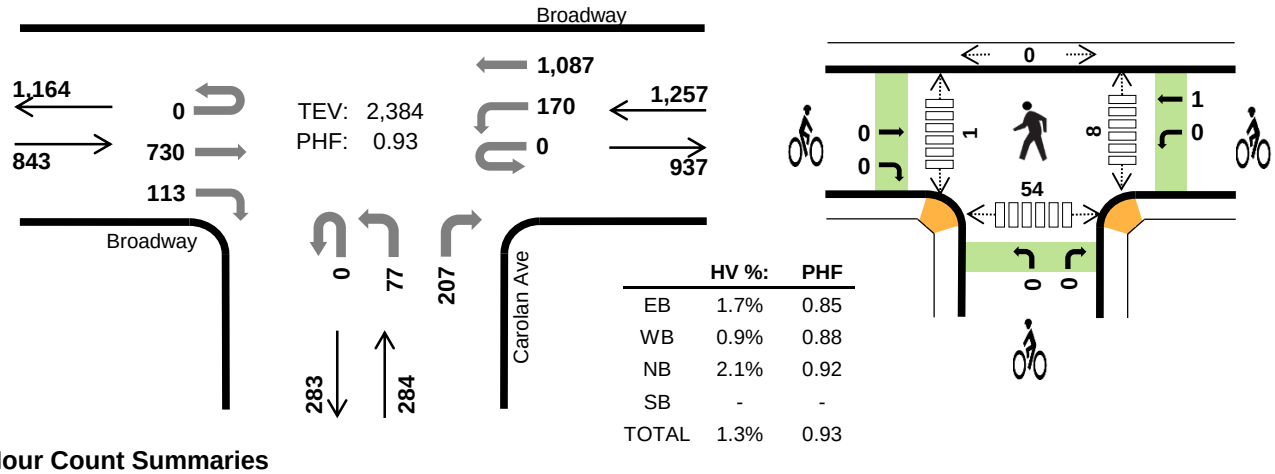
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Carolan Ave
Broadway

N

Peak Hour

Date: 05/23/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	1.7%	0.85
WB	0.9%	0.88
NB	2.1%	0.92
SB	-	-
TOTAL	1.3%	0.93

Two-Hour Count Summaries

Interval Start		Broadway Eastbound				Broadway Westbound				Carolan Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	186	27	0	26	223	0	0	17	0	67	0	0	0	0	546	0
4:15 PM		0	0	190	19	1	36	221	0	0	21	0	50	0	0	0	0	538	0
4:30 PM		0	0	204	20	0	38	224	0	0	12	0	53	0	0	0	0	551	0
4:45 PM		0	0	202	25	0	41	254	0	0	18	0	57	0	0	0	0	597	2,232
5:00 PM		**0**	**0**	**182**	**20**	**0**	**36**	**259**	**0**	**0**	**17**	**0**	**48**	**0**	**0**	**0**	**0**	**562**	2,248
5:15 PM		**0**	**0**	**214**	**35**	**0**	**39**	**253**	**0**	**0**	**19**	**0**	**53**	**0**	**0**	**0**	**0**	**613**	2,323
5:30 PM		**0**	**0**	**146**	**33**	**0**	**58**	**253**	**0**	**0**	**20**	**0**	**57**	**0**	**0**	**0**	**0**	**567**	2,339
5:45 PM		**0**	**0**	**188**	**25**	**0**	**37**	**322**	**0**	**0**	**21**	**0**	**49**	**0**	**0**	**0**	**0**	**642**	**2,384**
Count Total		0	0	1,512	204	1	311	2,009	0	0	145	0	434	0	0	0	0	4,616	0
Peak Hour	**All**	**0**	**0**	**730**	**113**	**0**	**170**	**1,087**	**0**	**0**	**77**	**0**	**207**	**0**	**0**	**0**	**0**	**2,384**	**0**
	HV	**0**	**0**	**14**	**0**	**0**	**0**	**11**	**0**	**0**	**1**	**0**	**5**	**0**	**0**	**0**	**0**	**31**	**0**
	HV%	**-**	**-**	**2%**	**0%**	**-**	**0%**	**1%**	**-**	**-**	**1%**	**-**	**2%**	**-**	**-**	**-**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	6	1	0	*10*	0	2	0	0	*2*	1	0	0	7	*8*
4:15 PM	10	3	2	0	*15*	1	1	0	0	*2*	5	0	0	11	*16*
4:30 PM	4	3	1	0	*8*	1	0	1	0	*2*	0	0	0	4	*4*
4:45 PM	2	7	0	0	*9*	0	0	0	0	*0*	0	0	0	5	*5*
5:00 PM	**5**	**2**	**1**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**15**	*16*
5:15 PM	**7**	**4**	**0**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**6**	**0**	**0**	**13**	*19*
5:30 PM	**1**	**1**	**4**	**0**	***6***	**0**	**1**	**0**	**0**	***1***	**2**	**0**	**0**	**11**	*13*
5:45 PM	**1**	**4**	**1**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**15**	***15***
Count Total	33	30	10	0	*73*	2	4	1	0	*7*	14	1	0	81	*96*
Peak Hr	**14**	**11**	**6**	**0**	***31***	**0**	**1**	**0**	**0**	***1***	**8**	**1**	**0**	**54**	***63***

Deon Fouche: 415 - 757 - 7714

deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway Eastbound				Broadway Westbound				Carolan Ave Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	3	0	0	1	5	0	0	0	0	1	0	0	0	0	10	0
4:15 PM	0	0	9	1	0	0	3	0	0	1	0	1	0	0	0	0	15	0
4:30 PM	0	0	4	0	0	0	3	0	0	0	0	1	0	0	0	0	8	0
4:45 PM	0	0	2	0	0	1	6	0	0	0	0	0	0	0	0	0	9	42
5:00 PM	**0**	**0**	**5**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	40
5:15 PM	**0**	**0**	**7**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	36
5:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**6**	34
5:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	**31**
Count Total	0	0	32	1	0	2	28	0	0	2	0	8	0	0	0	0	73	0
Peak Hour	**0**	**0**	**14**	**0**	**0**	**0**	**11**	**0**	**0**	**1**	**0**	**5**	**0**	**0**	**0**	**0**	**31**	**0**

Two-Hour Count Summaries - Bikes

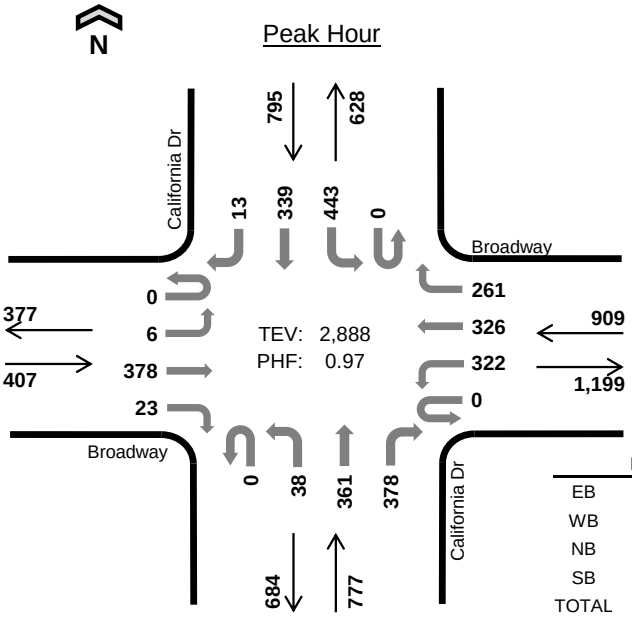
Interval Start	Broadway Eastbound			Broadway Westbound			Carolan Ave Northbound			0 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	2	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0
4:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	1
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Count Total	0	1	1	1	3	0	0	0	1	0	0	0	7	0
Peak Hour	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

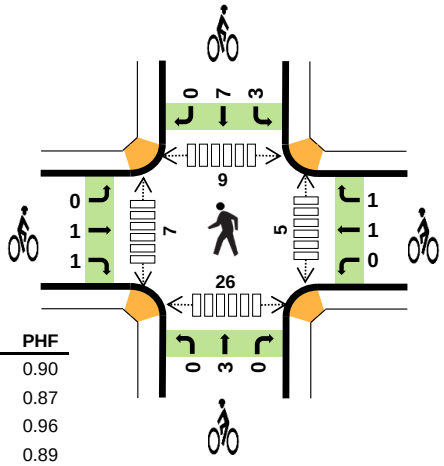
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

California Dr
Broadway

Date: 05/23/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	1.0%	0.90
WB	4.0%	0.87
NB	2.7%	0.96
SB	1.6%	0.89
TOTAL	2.6%	0.97



Two-Hour Count Summaries

Interval Start	Broadway Eastbound				Broadway Westbound				California Dr Northbound				California Dr Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	71	6	0	62	53	21	0	7	36	92	0	63	38	1	450	0
7:15 AM	0	3	65	8	0	56	51	42	0	9	47	92	0	48	42	5	468	0
7:30 AM	0	3	84	3	0	72	55	60	0	2	71	121	0	116	69	2	658	0
7:45 AM	**0**	**1**	**105**	**7**	**0**	**75**	**84**	**78**	**0**	**14**	**95**	**82**	**0**	**108**	**75**	**2**	**726**	2,302
8:00 AM	**0**	**1**	**98**	**7**	**0**	**65**	**72**	**76**	**0**	**8**	**102**	**92**	**0**	**122**	**97**	**4**	**744**	2,596
8:15 AM	**0**	**3**	**95**	**3**	**0**	**104**	**94**	**63**	**0**	**4**	**80**	**97**	**0**	**95**	**95**	**2**	**735**	2,863
8:30 AM	**0**	**1**	**80**	**6**	**0**	**78**	**76**	**44**	**0**	**12**	**84**	**107**	**0**	**118**	**72**	**5**	**683**	**2,888**
8:45 AM	0	1	77	12	0	67	85	69	0	11	82	94	0	93	92	7	690	2,852
Count Total	0	13	675	52	0	579	570	453	0	67	597	777	0	763	580	28	5,154	0
Peak Hour All	**0**	**6**	**378**	**23**	**0**	**322**	**326**	**261**	**0**	**38**	**361**	**378**	**0**	**443**	**339**	**13**	**2,888**	**0**
Peak Hour HV	**0**	**0**	**4**	**0**	**0**	**18**	**9**	**9**	**0**	**0**	**7**	**14**	**0**	**6**	**6**	**1**	**74**	**0**
Peak Hour HV%	**-**	**0%**	**1%**	**0%**	**-**	**6%**	**3%**	**3%**	**-**	**0%**	**2%**	**4%**	**-**	**1%**	**2%**	**8%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	6	2	1	*9*	1	0	0	2	*3*	0	0	4	6	*10*
7:15 AM	0	6	4	0	*10*	0	0	0	0	*0*	1	1	3	4	*9*
7:30 AM	5	6	4	3	*18*	0	0	0	5	*5*	4	1	5	5	*15*
7:45 AM	**0**	**12**	**8**	**2**	***22***	**0**	**0**	**0**	**1**	***1***	**0**	**3**	**1**	**8**	*12*
8:00 AM	**4**	**9**	**4**	**3**	***20***	**1**	**1**	**2**	**4**	***8***	**0**	**0**	**3**	**12**	*15*
8:15 AM	**0**	**9**	**3**	**3**	***15***	**0**	**0**	**1**	**2**	***3***	**1**	**3**	**2**	**3**	*9*
8:30 AM	**0**	**6**	**6**	**5**	***17***	**1**	**1**	**0**	**3**	***5***	**4**	**1**	**3**	**3**	***11***
8:45 AM	0	8	5	7	*20*	0	0	1	2	*3*	5	2	6	4	*17*
Count Total	9	62	36	24	*131*	3	2	4	19	*28*	15	11	27	45	*98*
Peak Hour	**4**	**36**	**21**	**13**	***74***	**2**	**2**	**3**	**10**	***17***	**5**	**7**	**9**	**26**	***47***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway Eastbound				Broadway Westbound				California Dr Northbound				California Dr Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	2	3	1	0	0	1	1	0	0	1	0	9	0
7:15 AM	0	0	0	0	0	6	0	0	0	1	2	1	0	0	0	0	10	0
7:30 AM	0	1	3	1	0	1	3	2	0	0	2	2	0	1	2	0	18	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**4**	**3**	**5**	**0**	**0**	**4**	**4**	**0**	**1**	**1**	**0**	**22**	59
8:00 AM	**0**	**0**	**4**	**0**	**0**	**4**	**4**	**1**	**0**	**0**	**0**	**4**	**0**	**1**	**1**	**1**	**20**	70
8:15 AM	**0**	**0**	**0**	**0**	**0**	**6**	**1**	**2**	**0**	**0**	**2**	**1**	**0**	**2**	**1**	**0**	**15**	75
8:30 AM	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**1**	**0**	**0**	**1**	**5**	**0**	**2**	**3**	**0**	**17**	**74**
8:45 AM	0	0	0	0	0	3	3	2	0	1	1	3	0	1	6	0	20	72
Count Total	0	1	7	1	0	30	18	14	0	2	13	21	0	8	15	1	131	0
Peak Hour	**0**	**0**	**4**	**0**	**0**	**18**	**9**	**9**	**0**	**0**	**7**	**14**	**0**	**6**	**6**	**1**	**74**	**0**

Two-Hour Count Summaries - Bikes

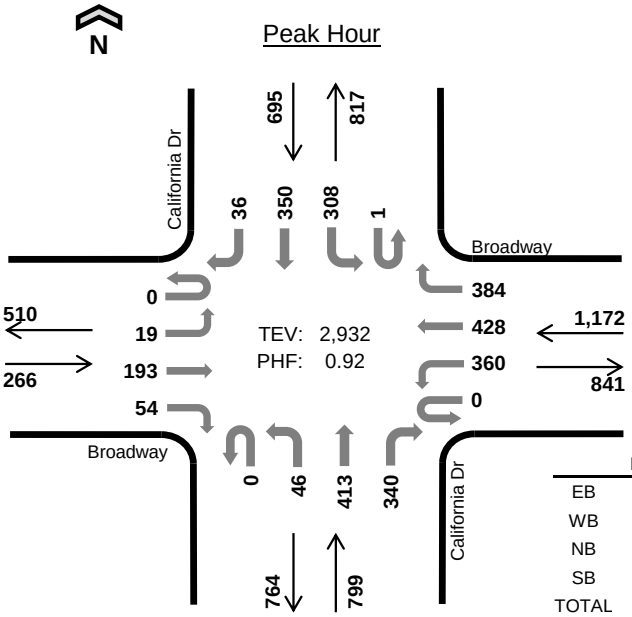
Interval Start	Broadway Eastbound			Broadway Westbound			California Dr Northbound			California Dr Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	0	0	0	0	2	0	3	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	3	2	5	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	9
8:00 AM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**1**	**3**	**0**	**8**	14
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**	17
8:30 AM	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**1**	**0**	**5**	**17**
8:45 AM	0	0	0	0	0	0	0	1	0	1	1	0	3	19
Count Total	0	2	1	0	1	1	0	4	0	4	13	2	28	0
Peak Hour	**0**	**1**	**1**	**0**	**1**	**1**	**0**	**3**	**0**	**3**	**7**	**0**	**17**	**0**

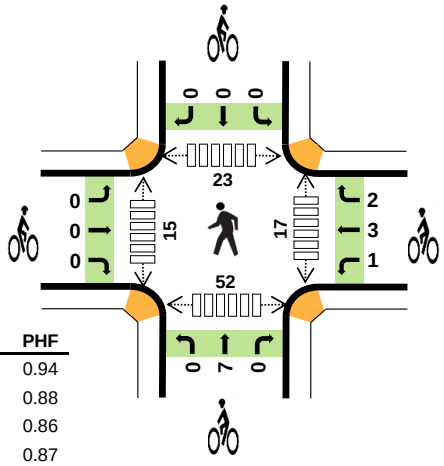
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

California Dr
Broadway

Date: 05/23/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM





	HV %:	PHF
EB	1.5%	0.94
WB	1.1%	0.88
NB	1.4%	0.86
SB	0.9%	0.87
TOTAL	1.2%	0.92

Two-Hour Count Summaries

Interval Start	Broadway Eastbound				Broadway Westbound				California Dr Northbound				California Dr Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	3	58	13	0	81	78	77	0	12	76	75	0	86	88	6	653	0
4:15 PM	0	1	48	10	0	83	91	75	0	12	97	100	0	57	83	6	663	0
4:30 PM	0	4	83	11	0	72	76	79	0	7	81	78	0	64	84	2	641	0
4:45 PM	0	3	60	9	0	90	90	81	0	17	93	93	0	77	84	7	704	2,661
5:00 PM	**0**	**7**	**45**	**17**	**0**	**104**	**91**	**84**	**0**	**12**	**91**	**85**	**0**	**74**	**72**	**6**	**688**	2,696
5:15 PM	**0**	**7**	**50**	**13**	**0**	**73**	**98**	**97**	**0**	**9**	**121**	**103**	**0**	**88**	**99**	**12**	**770**	2,803
5:30 PM	**0**	**0**	**47**	**9**	**0**	**89**	**110**	**92**	**0**	**10**	**103**	**68**	**0**	**63**	**78**	**10**	**679**	2,841
5:45 PM	**0**	**5**	**51**	**15**	**0**	**94**	**129**	**111**	**0**	**15**	**98**	**84**	**1**	**83**	**101**	**8**	**795**	**2,932**
Count Total	0	30	442	97	0	686	763	696	0	94	760	686	1	592	689	57	5,593	0
Peak Hour All	**0**	**19**	**193**	**54**	**0**	**360**	**428**	**384**	**0**	**46**	**413**	**340**	**1**	**308**	**350**	**36**	**2,932**	**0**
Peak Hour HV	**0**	**0**	**3**	**1**	**0**	**6**	**5**	**2**	**0**	**1**	**5**	**5**	**0**	**3**	**3**	**0**	**34**	**0**
Peak Hour HV%	**-**	**0%**	**2%**	**2%**	**-**	**2%**	**1%**	**1%**	**-**	**2%**	**1%**	**1%**	**0%**	**1%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	5	2	4	*12*	0	0	1	0	*1*	4	5	4	11	*24*
4:15 PM	2	4	5	4	*15*	1	1	0	0	*2*	2	1	4	11	*18*
4:30 PM	2	5	3	4	*14*	0	0	0	1	*1*	4	5	14	6	*29*
4:45 PM	0	3	0	0	*3*	0	0	1	0	*1*	2	7	5	6	*20*
5:00 PM	**0**	**4**	**2**	**3**	***9***	**0**	**3**	**2**	**0**	***5***	**7**	**2**	**10**	**11**	*30*
5:15 PM	**1**	**3**	**4**	**1**	***9***	**0**	**1**	**1**	**0**	***2***	**2**	**6**	**3**	**9**	*20*
5:30 PM	**1**	**3**	**3**	**2**	***9***	**0**	**1**	**2**	**0**	***3***	**4**	**4**	**4**	**18**	*30*
5:45 PM	**2**	**3**	**2**	**0**	***7***	**0**	**1**	**2**	**0**	***3***	**4**	**3**	**6**	**14**	***27***
Count Total	9	30	21	18	*78*	1	7	9	1	*18*	29	33	50	86	*198*
Peak Hour	**4**	**13**	**11**	**6**	***34***	**0**	**6**	**7**	**0**	***13***	**17**	**15**	**23**	**52**	***107***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Broadway Eastbound				Broadway Westbound				California Dr Northbound				California Dr Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	0	0	3	1	1	0	0	2	0	0	2	2	0	12	0
4:15 PM	0	0	2	0	0	2	2	0	0	0	0	5	0	2	2	0	15	0
4:30 PM	0	0	2	0	0	1	2	2	0	0	1	2	0	0	4	0	14	0
4:45 PM	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3	44
5:00 PM	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**1**	**1**	**0**	**2**	**1**	**0**	**9**	41
5:15 PM	**0**	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**1**	**0**	**9**	35
5:30 PM	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**1**	**0**	**1**	**2**	**0**	**0**	**1**	**1**	**0**	**9**	30
5:45 PM	**0**	**0**	**1**	**1**	**0**	**1**	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**7**	**34**
Count Total	0	0	8	1	0	14	11	5	0	1	8	12	0	7	11	0	78	0
Peak Hour	**0**	**0**	**3**	**1**	**0**	**6**	**5**	**2**	**0**	**1**	**5**	**5**	**0**	**3**	**3**	**0**	**34**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Broadway Eastbound			Broadway Westbound			California Dr Northbound			California Dr Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	5
5:00 PM	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	9
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	9
5:30 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	11
5:45 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**13**
Count Total	0	1	0	1	4	2	0	9	0	0	0	1	18	0
Peak Hour	**0**	**0**	**0**	**1**	**3**	**2**	**0**	**7**	**0**	**0**	**0**	**0**	**13**	**0**

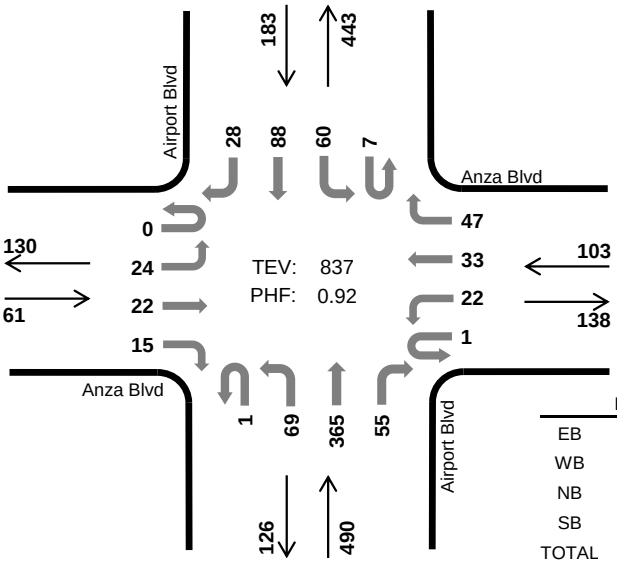
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

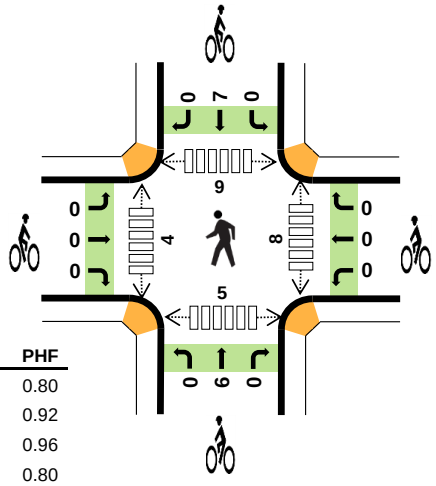
Airport Blvd
Anza Blvd

Date: 05/23/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM

Peak Hour



	HV %:	PHF
EB	6.6%	0.80
WB	6.8%	0.92
NB	4.1%	0.96
SB	8.7%	0.80
TOTAL	5.6%	0.92



Two-Hour Count Summaries

Interval Start		Anza Blvd Eastbound				Anza Blvd Westbound				Airport Blvd Northbound				Airport Blvd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	2	4	2	0	4	6	10	0	9	41	11	1	9	12	3	114	0
7:15 AM		0	2	8	6	3	3	11	7	1	7	49	8	1	11	19	6	142	0
7:30 AM		0	7	8	6	1	8	5	10	0	11	60	8	1	16	22	9	172	0
7:45 AM		0	4	5	5	1	3	9	10	0	11	74	10	4	20	15	6	177	605
8:00 AM		**0**	**5**	**4**	**5**	**0**	**6**	**7**	**15**	**0**	**13**	**95**	**20**	**2**	**11**	**20**	**8**	**211**	702
8:15 AM		**0**	**9**	**5**	**2**	**0**	**8**	**7**	**11**	**0**	**24**	**76**	**15**	**0**	**15**	**25**	**7**	**204**	764
8:30 AM		**0**	**8**	**8**	**3**	**0**	**5**	**10**	**13**	**0**	**17**	**93**	**13**	**2**	**26**	**24**	**5**	**227**	819
8:45 AM		**0**	**2**	**5**	**5**	**1**	**3**	**9**	**8**	**1**	**15**	**101**	**7**	**3**	**8**	**19**	**8**	**195**	**837**
Count Total		0	39	47	34	6	40	64	84	2	107	589	92	14	116	156	52	1,442	0
Peak Hour	**All**	**0**	**24**	**22**	**15**	**1**	**22**	**33**	**47**	**1**	**69**	**365**	**55**	**7**	**60**	**88**	**28**	**837**	**0**
	HV	**0**	**1**	**3**	**0**	**0**	**3**	**0**	**4**	**0**	**2**	**15**	**3**	**0**	**9**	**4**	**3**	**47**	**0**
	HV%	**-**	**4%**	**14%**	**0%**	**0%**	**14%**	**0%**	**9%**	**0%**	**3%**	**4%**	**5%**	**0%**	**15%**	**5%**	**11%**	**6%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	1	8	6	*16*	0	0	1	2	*3*	0	1	3	0	*4*
7:15 AM	1	0	5	8	*14*	0	0	9	3	*12*	0	0	2	2	*4*
7:30 AM	1	2	3	4	*10*	0	0	1	0	*1*	2	0	2	0	*4*
7:45 AM	1	1	9	5	*16*	0	0	5	3	*8*	4	0	6	1	*11*
8:00 AM	**0**	**4**	**8**	**3**	***15***	**0**	**0**	**1**	**2**	***3***	**1**	**4**	**2**	**1**	*8*
8:15 AM	**1**	**2**	**3**	**6**	***12***	**0**	**0**	**1**	**3**	***4***	**1**	**0**	**0**	**0**	*1*
8:30 AM	**2**	**1**	**6**	**3**	***12***	**0**	**0**	**1**	**1**	***2***	**2**	**0**	**2**	**3**	*7*
8:45 AM	**1**	**0**	**3**	**4**	***8***	**0**	**0**	**3**	**1**	***4***	**4**	**0**	**5**	**1**	***10***
Count Total	8	11	45	39	*103*	0	0	22	15	*37*	14	5	22	8	*49*
Peak Hour	**4**	**7**	**20**	**16**	***47***	**0**	**0**	**6**	**7**	***13***	**8**	**4**	**9**	**5**	***26***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Anza Blvd Eastbound				Anza Blvd Westbound				Airport Blvd Northbound				Airport Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	1	0	0	6	2	0	3	2	1	16	0
7:15 AM	0	1	0	0	0	0	0	0	0	1	4	0	0	5	2	1	14	0
7:30 AM	0	0	1	0	0	2	0	0	0	0	2	1	0	3	1	0	10	0
7:45 AM	0	0	1	0	0	1	0	0	0	0	9	0	0	4	0	1	16	56
8:00 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**1**	**5**	**2**	**0**	**1**	**1**	**1**	**15**	55
8:15 AM	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**2**	**0**	**0**	**3**	**2**	**1**	**12**	53
8:30 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**1**	**0**	**3**	**0**	**0**	**12**	55
8:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**2**	**1**	**1**	**8**	**47**
Count Total	0	2	6	0	0	6	0	5	0	3	36	6	0	24	9	6	103	0
Peak Hour	**0**	**1**	**3**	**0**	**0**	**3**	**0**	**4**	**0**	**2**	**15**	**3**	**0**	**9**	**4**	**3**	**47**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Anza Blvd Eastbound			Anza Blvd Westbound			Airport Blvd Northbound			Airport Blvd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	0
7:15 AM	0	0	0	0	0	0	0	9	0	0	3	0	12	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	1	4	0	0	3	0	8	24
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**	24
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**4**	16
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	17
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**4**	**13**
Count Total	0	0	0	0	0	0	1	21	0	0	15	0	37	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**7**	**0**	**13**	**0**

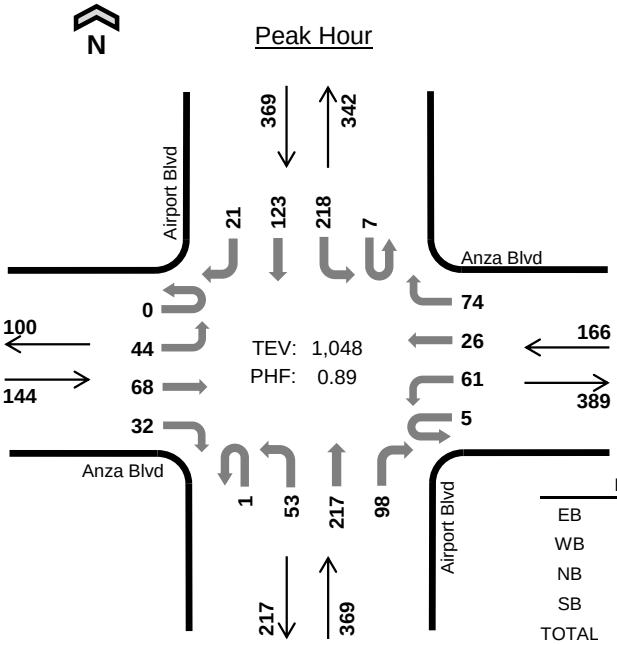
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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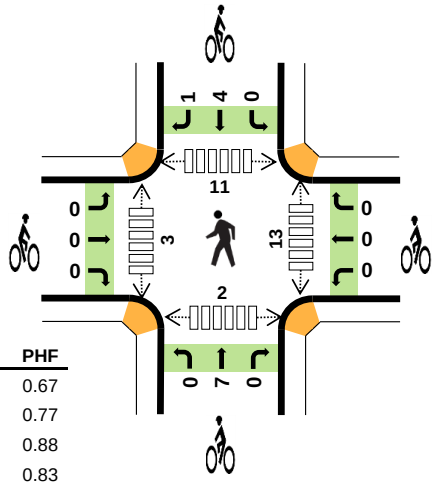
Airport Blvd
Anza Blvd

Peak Hour

Date: 05/23/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	3.5%	0.67
WB	3.6%	0.77
NB	5.1%	0.88
SB	5.1%	0.83
TOTAL	4.7%	0.89



Two-Hour Count Summaries

Interval Start	Anza Blvd Eastbound				Anza Blvd Westbound				Airport Blvd Northbound				Airport Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	9	15	7	1	19	5	11	0	19	66	25	0	48	33	11	269	0
4:15 PM	0	15	17	6	1	10	5	10	0	12	51	14	0	31	26	2	200	0
4:30 PM	0	16	25	11	0	8	5	7	0	10	45	12	2	43	23	6	213	0
4:45 PM	0	12	14	4	0	7	6	8	0	7	48	12	3	34	23	4	182	864
5:00 PM	**0**	**10**	**29**	**15**	**1**	**10**	**4**	**12**	**1**	**12**	**60**	**29**	**1**	**71**	**34**	**5**	**294**	889
5:15 PM	**0**	**11**	**14**	**3**	**2**	**14**	**9**	**16**	**0**	**9**	**54**	**42**	**1**	**53**	**31**	**3**	**262**	951
5:30 PM	**0**	**9**	**15**	**8**	**1**	**19**	**7**	**27**	**0**	**16**	**55**	**18**	**2**	**45**	**32**	**3**	**257**	995
5:45 PM	**0**	**14**	**10**	**6**	**1**	**18**	**6**	**19**	**0**	**16**	**48**	**9**	**3**	**49**	**26**	**10**	**235**	**1,048**
Count Total	0	96	139	60	7	105	47	110	1	101	427	161	12	374	228	44	1,912	0
Peak Hour All	**0**	**44**	**68**	**32**	**5**	**61**	**26**	**74**	**1**	**53**	**217**	**98**	**7**	**218**	**123**	**21**	**1,048**	**0**
Peak Hour HV	**0**	**1**	**3**	**1**	**0**	**4**	**0**	**2**	**0**	**1**	**17**	**1**	**0**	**10**	**5**	**4**	**49**	**0**
Peak Hour HV%	**-**	**2%**	**4%**	**3%**	**0%**	**7%**	**0%**	**3%**	**0%**	**2%**	**8%**	**1%**	**0%**	**5%**	**4%**	**19%**	**5%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	2	5	4	*13*	0	0	0	1	*1*	1	0	0	0	*1*
4:15 PM	2	2	5	2	*11*	0	0	4	0	*4*	6	0	2	0	*8*
4:30 PM	1	1	3	4	*9*	0	0	1	0	*1*	3	0	0	0	*3*
4:45 PM	2	1	7	5	*15*	0	0	0	1	*1*	2	3	5	3	*13*
5:00 PM	**1**	**2**	**4**	**6**	***13***	**0**	**0**	**3**	**1**	***4***	**4**	**0**	**4**	**1**	*9*
5:15 PM	**0**	**3**	**7**	**3**	***13***	**0**	**0**	**0**	**2**	***2***	**2**	**3**	**2**	**0**	*7*
5:30 PM	**1**	**1**	**4**	**4**	***10***	**0**	**0**	**2**	**1**	***3***	**4**	**0**	**2**	**0**	*6*
5:45 PM	**3**	**0**	**4**	**6**	***13***	**0**	**0**	**2**	**1**	***3***	**3**	**0**	**3**	**1**	***7***
Count Total	12	12	39	34	*97*	0	0	12	7	*19*	25	6	18	5	*54*
Peak Hour	**5**	**6**	**19**	**19**	***49***	**0**	**0**	**7**	**5**	***12***	**13**	**3**	**11**	**2**	***29***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Anza Blvd Eastbound				Anza Blvd Westbound				Airport Blvd Northbound				Airport Blvd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	1	0	1	0	1	3	1	0	0	3	1	13	0
4:15 PM	0	1	1	0	0	1	0	1	0	1	4	0	0	1	1	0	11	0
4:30 PM	0	0	1	0	0	0	0	1	0	0	3	0	0	2	1	1	9	0
4:45 PM	0	0	2	0	0	0	0	1	0	0	7	0	0	3	1	1	15	48
5:00 PM	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**4**	**1**	**1**	**13**	48
5:15 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**7**	**0**	**0**	**2**	**0**	**1**	**13**	50
5:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**3**	**0**	**0**	**2**	**2**	**0**	**10**	51
5:45 PM	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**2**	**2**	**13**	**49**
Count Total	0	2	9	1	0	6	0	6	0	3	34	2	0	16	11	7	97	0
Peak Hour	**0**	**1**	**3**	**1**	**0**	**4**	**0**	**2**	**0**	**1**	**17**	**1**	**0**	**10**	**5**	**4**	**49**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Anza Blvd Eastbound			Anza Blvd Westbound			Airport Blvd Northbound			Airport Blvd Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:15 PM	0	0	0	0	0	0	0	4	0	0	0	0	4	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	7
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**4**	10
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**2**	8
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**3**	10
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**3**	**12**
Count Total	0	0	0	0	0	0	0	12	0	0	6	1	19	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**4**	**1**	**12**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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Appendix B
Level of Service Calculations



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1196	1067	106	654	960
Future Volume (vph)	0	1196	1067	106	654	960
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.99		0.94	0.85
Flt Protected		1.00	1.00		0.97	1.00
Satd. Flow (prot)		5085	5016		3297	1441
Flt Permitted		1.00	1.00		0.97	1.00
Satd. Flow (perm)		5085	5016		3297	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1196	1067	106	654	960
RTOR Reduction (vph)	0	0	11	0	7	7
Lane Group Flow (vph)	0	1196	1162	0	1089	511
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		35.1	35.1		65.6	65.6
Effective Green, g (s)		35.1	35.1		65.6	65.6
Actuated g/C Ratio		0.32	0.32		0.60	0.60
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1627	1604		1971	861
v/s Ratio Prot		c0.24	0.23		0.33	
v/s Ratio Perm						c0.35
v/c Ratio		0.74	0.72		0.55	0.59
Uniform Delay, d1		33.2	33.0		13.2	13.7
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.8	1.7		1.1	3.0
Delay (s)		34.9	34.7		14.4	16.7
Level of Service		C	C		B	B
Approach Delay (s)		34.9	34.7		15.1	
Approach LOS		C	C		B	

Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1018	775	1	236	952	196
Future Volume (veh/h)	1018	775	1	236	952	196
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1018	0	1	236	952	196
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1445	646	55	1416	1576	725
Arrive On Green	0.41	0.00	0.41	0.41	0.46	0.46
Sat Flow, veh/h	3632	1583	2	3552	3442	1583
Grp Volume(v), veh/h	1018	0	127	110	952	196
Grp Sat Flow(s),veh/h/ln	1770	1583	1859	1610	1721	1583
Q Serve(g_s), s	16.1	0.0	0.0	2.9	13.9	5.2
Cycle Q Clear(g_c), s	16.1	0.0	2.9	2.9	13.9	5.2
Prop In Lane		1.00	0.01		1.00	1.00
Lane Grp Cap(c), veh/h	1445	646	813	657	1576	725
V/C Ratio(X)	0.70	0.00	0.16	0.17	0.60	0.27
Avail Cap(c_a), veh/h	2115	946	1159	962	1576	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	12.6	12.6	13.7	11.3
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	1.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	1.5	1.3	7.0	2.4
LnGrp Delay(d),s/veh	17.2	0.0	12.7	12.8	15.4	12.2
LnGrp LOS	B		B	B	B	B
Approach Vol, veh/h	1018			237	1148	
Approach Delay, s/veh	17.2			12.7	14.8	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.3		32.0				32.0
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		30.8		40.2				40.2
Max Q Clear Time (g_c+I1), s		15.9		18.1				4.9
Green Ext Time (p_c), s		4.2		9.4				11.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	135	1027	345	52	41	87
Future Volume (veh/h)	135	1027	345	52	41	87
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	135	0	345	52	41	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1683	774	449	749	405	344
Arrive On Green	0.49	0.00	0.13	0.40	0.22	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	135	0	345	52	41	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	1.7	0.0	8.0	1.4	1.5	0.0
Cycle Q Clear(g_c), s	1.7	0.0	8.0	1.4	1.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1683	774	449	749	405	344
V/C Ratio(X)	0.08	0.00	0.77	0.07	0.10	0.00
Avail Cap(c_a), veh/h	1683	774	748	749	405	344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.2	0.0	34.8	15.2	25.9	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.8	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	4.0	0.8	0.8	0.0
LnGrp Delay(d),s/veh	11.3	0.0	37.6	15.4	26.4	0.0
LnGrp LOS	B		D	B	C	
Approach Vol, veh/h	135			397	41	
Approach Delay, s/veh	11.3			34.7	26.4	
Approach LOS	B			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	15.3	22.5				37.8		45.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	18.0	18.0				18.0		40.5
Max Q Clear Time (g_c+I1), s	10.0	3.5				3.4		3.7
Green Ext Time (p_c), s	0.8	0.3				0.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1	11	17	0	58	61	234	49	55	640	160
Future Volume (vph)	42	1	11	17	0	58	61	234	49	55	640	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1776	1583		1770	1583	1770	3539	1583	1770	3433	
Flt Permitted		0.79	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1462	1583		1358	1583	1770	3539	1583	1770	3433	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	1	11	17	0	58	61	234	49	55	640	160
RTOR Reduction (vph)	0	0	8	0	0	42	0	0	26	0	28	0
Lane Group Flow (vph)	0	43	3	0	17	16	61	234	23	55	772	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		19.7	19.7		19.7	19.7	4.6	33.8	33.8	4.6	33.8	
Effective Green, g (s)		19.7	19.7		19.7	19.7	4.6	33.8	33.8	4.6	33.8	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.06	0.47	0.47	0.06	0.47	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		402	435		373	435	113	1670	747	113	1620	
v/s Ratio Prot							c0.03	0.07		0.03	c0.22	
v/s Ratio Perm		c0.03	0.00		0.01	0.01			0.01			
v/c Ratio		0.11	0.01		0.05	0.04	0.54	0.14	0.03	0.49	0.48	
Uniform Delay, d1		19.4	18.8		19.0	19.0	32.5	10.7	10.1	32.4	12.9	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5	0.0		0.1	0.0	4.9	0.2	0.1	3.3	0.2	
Delay (s)		19.9	18.9		19.1	19.0	37.4	10.9	10.2	35.6	13.1	
Level of Service		B	B		B	B	D	B	B	D	B	
Approach Delay (s)		19.7			19.1			15.5			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	26	17	39	334	17	514	92
Future Volume (vph)	26	17	39	334	17	514	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.95		1.00	1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1712		1770	3539	1770	3459	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1712		1770	3539	1770	3459	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	17	39	334	17	514	92
RTOR Reduction (vph)	12	0	0	0	0	17	0
Lane Group Flow (vph)	31	0	39	334	17	589	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	20.6		4.6	41.5	1.4	38.3	
Effective Green, g (s)	20.6		4.6	41.5	1.4	38.3	
Actuated g/C Ratio	0.27		0.06	0.54	0.02	0.50	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	458		105	1907	32	1720	
v/s Ratio Prot	c0.02		c0.02	c0.09	0.01	c0.17	
v/s Ratio Perm							
v/c Ratio	0.07		0.37	0.18	0.53	0.34	
Uniform Delay, d1	21.0		34.8	9.0	37.5	11.7	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3		2.2	0.2	15.9	0.5	
Delay (s)	21.3		37.0	9.2	53.4	12.3	
Level of Service	C		D	A	D	B	
Approach Delay (s)	21.3			12.1		13.4	
Approach LOS	C			B		B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	50	66	379	388	34
Future Volume (vph)	20	50	66	379	388	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.90		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1659		1770	3539	3496	
Flt Permitted	0.99		0.95	1.00	1.00	
Satd. Flow (perm)	1659		1770	3539	3496	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	50	66	379	388	34
RTOR Reduction (vph)	47	0	0	0	5	0
Lane Group Flow (vph)	23	0	66	379	417	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	4.6		5.4	54.2	44.3	
Effective Green, g (s)	4.6		5.4	54.2	44.3	
Actuated g/C Ratio	0.07		0.08	0.80	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	112		140	2829	2284	
v/s Ratio Prot	c0.01		c0.04	0.11	c0.12	
v/s Ratio Perm						
v/c Ratio	0.21		0.47	0.13	0.18	
Uniform Delay, d1	29.9		29.8	1.5	4.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9		2.5	0.1	0.2	
Delay (s)	30.8		32.3	1.6	4.8	
Level of Service	C		C	A	A	
Approach Delay (s)	30.8			6.2	4.8	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	67.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	344	7	418	12	10	5	816	284	7	8	227	88
Future Volume (vph)	344	7	418	12	10	5	816	284	7	8	227	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.90	0.85		0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1501	1504		1777		3433	3526		1770	3539	1583
Flt Permitted	0.95	0.99	1.00		0.74		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1501	1504		1345		3433	3526		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	344	7	418	12	10	5	816	284	7	8	227	88
RTOR Reduction (vph)	0	58	159	0	5	0	0	2	0	0	0	78
Lane Group Flow (vph)	268	196	88	0	22	0	816	289	0	8	227	10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2			6		3	8		7	4	
Permitted Phases			2	6								4
Actuated Green, G (s)	37.8	37.8	37.8		7.6		30.9	37.2		5.5	11.8	11.8
Effective Green, g (s)	37.8	37.8	37.8		7.6		30.9	37.2		5.5	11.8	11.8
Actuated g/C Ratio	0.36	0.36	0.36		0.07		0.29	0.35		0.05	0.11	0.11
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	598	534	535		96		999	1236		91	393	176
v/s Ratio Prot	c0.16	0.13					c0.24	0.08		0.00	c0.06	
v/s Ratio Perm			0.06		c0.02							0.01
v/c Ratio	0.45	0.37	0.16		0.23		0.82	0.23		0.09	0.58	0.06
Uniform Delay, d1	26.2	25.3	23.4		46.5		35.0	24.4		47.9	44.8	42.2
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	1.9	0.7		5.6		5.3	0.1		0.4	2.1	0.1
Delay (s)	28.6	27.2	24.0		52.1		40.2	24.5		48.3	46.8	42.3
Level of Service	C	C	C		D		D	C		D	D	D
Approach Delay (s)		26.7			52.1			36.1			45.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	106.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1037	416	0	3	56	76	18	10	2	75	17	565
Future Volume (vph)	1037	416	0	3	56	76	18	10	2	75	17	565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.97	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583		3402		1681	1716	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.70		0.95	0.97	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583		2437		1681	1716	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1037	416	0	3	56	76	18	10	2	75	17	565
RTOR Reduction (vph)	0	0	0	0	0	71	0	2	0	0	0	233
Lane Group Flow (vph)	1037	416	0	3	56	5	0	28	0	46	46	332
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	34.7	39.0		1.1	5.4	5.4		10.8		13.9	13.9	48.6
Effective Green, g (s)	34.7	39.0		1.1	5.4	5.4		10.8		13.9	13.9	48.6
Actuated g/C Ratio	0.42	0.47		0.01	0.07	0.07		0.13		0.17	0.17	0.59
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1438	1666		23	230	103		317		282	288	1635
v/s Ratio Prot	c0.30	c0.12		0.00	c0.02					0.03	0.03	c0.08
v/s Ratio Perm						0.00		c0.01				0.03
v/c Ratio	0.72	0.25		0.13	0.24	0.05		0.09		0.16	0.16	0.20
Uniform Delay, d1	20.0	13.1		40.4	36.8	36.3		31.7		29.5	29.5	8.0
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.8	0.1		2.6	0.6	0.2		0.6		1.2	1.2	0.1
Delay (s)	21.8	13.2		42.9	37.3	36.5		32.2		30.7	30.6	8.1
Level of Service	C	B		D	D	D		C		C	C	A
Approach Delay (s)		19.4			37.0			32.2			11.2	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1055	420	145	509	0	0	0	0	387	2	663
Future Volume (vph)	0	1055	420	145	509	0	0	0	0	387	2	663
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4748	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4748	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1055	420	145	509	0	0	0	0	387	2	663
RTOR Reduction (vph)	0	8	174	0	0	0	0	0	0	0	0	368
Lane Group Flow (vph)	0	1139	154	145	509	0	0	0	0	0	389	295
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		38.6	38.6	9.9	53.0						49.8	49.8
Effective Green, g (s)		38.6	38.6	9.9	53.0						49.8	49.8
Actuated g/C Ratio		0.35	0.35	0.09	0.47						0.45	0.45
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1639	470	303	1677						790	1608
v/s Ratio Prot		c0.24		c0.04	0.14							
v/s Ratio Perm			0.11								0.22	0.08
v/c Ratio		0.70	0.33	0.48	0.30						0.49	0.18
Uniform Delay, d1		31.5	27.0	48.5	18.1						22.0	18.7
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.3	0.4	1.2	0.1						0.5	0.3
Delay (s)		32.8	27.4	49.7	18.2						22.5	19.0
Level of Service		C	C	D	B						C	B
Approach Delay (s)		31.6			25.2			0.0			20.3	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	111.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	1048	45	175	705	256	42	108	297	102	76	92
Future Volume (veh/h)	187	1048	45	175	705	256	42	108	297	102	76	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	187	1048	45	175	705	0	42	108	297	102	76	92
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	1643	70	247	1652	514	601	631	536	290	157	133
Arrive On Green	0.08	0.33	0.33	0.07	0.32	0.00	0.34	0.34	0.34	0.08	0.08	0.08
Sat Flow, veh/h	3442	5001	215	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	187	710	383	175	705	0	42	108	297	102	76	92
Grp Sat Flow(s),veh/h/ln	1721	1695	1825	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.4	18.1	18.2	5.1	11.1	0.0	1.6	4.1	15.6	2.8	4.0	5.8
Cycle Q Clear(g_c), s	5.4	18.1	18.2	5.1	11.1	0.0	1.6	4.1	15.6	2.8	4.0	5.8
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	1114	600	247	1652	514	601	631	536	290	157	133
V/C Ratio(X)	0.72	0.64	0.64	0.71	0.43	0.00	0.07	0.17	0.55	0.35	0.48	0.69
Avail Cap(c_a), veh/h	490	1414	761	490	2122	661	601	631	536	693	375	319
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	29.0	29.1	46.2	27.0	0.0	22.8	23.6	27.4	44.0	44.5	45.4
Incr Delay (d2), s/veh	3.7	0.6	1.2	3.7	0.2	0.0	0.2	0.6	4.1	0.7	2.3	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.6	9.3	2.5	5.2	0.0	0.8	2.2	7.4	1.4	2.1	2.7
LnGrp Delay(d),s/veh	49.8	29.7	30.2	49.9	27.1	0.0	23.0	24.2	31.5	44.8	46.8	51.6
LnGrp LOS	D	C	C	D	C		C	C	C	D	D	D
Approach Vol, veh/h		1280			880			447			270	
Approach Delay, s/veh		32.8			31.7			29.0			47.7	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	11.8	38.0		13.1	12.2	37.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		34.5	14.5	42.5		20.5	14.5	42.5
Max Q Clear Time (g_c+I1), s		17.6	7.1	20.2		7.8	7.4	13.1
Green Ext Time (p_c), s		1.6	0.3	13.3		0.8	0.3	15.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1069	162	114	839	0	72	0	291	0	0	0
Future Volume (veh/h)	1	1069	162	114	839	0	72	0	291	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	1	1069	162	114	839	0	72	0	291			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	278	1776	269	173	1727	0	769	0	686			
Arrive On Green	0.40	0.40	0.40	0.05	0.49	0.00	0.43	0.00	0.43			
Sat Flow, veh/h	653	4459	675	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	1	812	419	114	839	0	72	0	291			
Grp Sat Flow(s),veh/h/ln	653	1695	1744	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.1	21.7	21.7	3.7	18.2	0.0	2.7	0.0	14.6			
Cycle Q Clear(g_c), s	8.0	21.7	21.7	3.7	18.2	0.0	2.7	0.0	14.6			
Prop In Lane	1.00		0.39	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	278	1351	695	173	1727	0	769	0	686			
V/C Ratio(X)	0.00	0.60	0.60	0.66	0.49	0.00	0.09	0.00	0.42			
Avail Cap(c_a), veh/h	375	1854	954	437	2524	0	769	0	686			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.8	27.2	27.2	53.3	19.6	0.0	19.1	0.0	22.5			
Incr Delay (d2), s/veh	0.0	0.4	0.8	4.2	0.2	0.0	0.2	0.0	1.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	10.2	10.6	1.9	8.9	0.0	1.4	0.0	6.7			
LnGrp Delay(d),s/veh	25.8	27.6	28.1	57.5	19.8	0.0	19.4	0.0	24.4			
LnGrp LOS	C	C	C	E	B		B		C			
Approach Vol, veh/h		1232			953			363				
Approach Delay, s/veh		27.8			24.3			23.4				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		54.0	10.2	50.0				60.3
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		49.5	14.5	62.5				81.5
Max Q Clear Time (g_c+I1), s		16.6	5.7	23.7				20.2
Green Ext Time (p_c), s		1.5	0.2	21.8				26.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	378	23	322	326	261	38	361	378	443	339	13
Future Volume (veh/h)	6	378	23	322	326	261	38	361	378	443	339	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	6	378	23	322	326	0	38	361	0	443	339	13
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	458	28	321	337	287	51	1399	626	516	920	35
Arrive On Green	0.14	0.14	0.14	0.18	0.18	0.00	0.03	0.40	0.00	0.15	0.52	0.52
Sat Flow, veh/h	1774	3390	206	1774	1863	1583	1774	3539	1583	3442	1782	68
Grp Volume(v), veh/h	6	197	204	322	326	0	38	361	0	443	0	352
Grp Sat Flow(s),veh/h/ln	1774	1770	1826	1774	1863	1583	1774	1770	1583	1721	0	1851
Q Serve(g_s), s	0.4	14.0	14.1	23.5	22.5	0.0	2.8	8.9	0.0	16.3	0.0	14.7
Cycle Q Clear(g_c), s	0.4	14.0	14.1	23.5	22.5	0.0	2.8	8.9	0.0	16.3	0.0	14.7
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	240	239	247	321	337	287	51	1399	626	516	0	956
V/C Ratio(X)	0.03	0.82	0.83	1.00	0.97	0.00	0.75	0.26	0.00	0.86	0.00	0.37
Avail Cap(c_a), veh/h	324	323	334	321	337	287	178	1399	626	729	0	956
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.7	54.6	54.7	53.1	52.7	0.0	62.6	26.4	0.0	53.8	0.0	18.7
Incr Delay (d2), s/veh	0.0	11.8	12.0	50.8	40.0	0.0	19.1	0.4	0.0	7.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	7.7	8.0	16.0	15.3	0.0	1.6	4.4	0.0	8.3	0.0	7.8
LnGrp Delay(d),s/veh	48.7	66.4	66.6	104.0	92.7	0.0	81.7	26.9	0.0	61.2	0.0	19.8
LnGrp LOS	D	E	E	F	F		F	C		E		B
Approach Vol, veh/h		407			648			399			795	
Approach Delay, s/veh		66.2			98.3			32.1			42.9	
Approach LOS		E			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.9	55.8		22.0	8.2	71.5		28.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	27.5	51.3		23.7	13.0	65.8		23.5
Max Q Clear Time (g_c+I1), s	18.3	10.9		16.1	4.8	16.7		25.5
Green Ext Time (p_c), s	1.1	5.3		1.4	0.0	5.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.2
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	22	15	23	33	47	70	365	55	67	88	28
Future Volume (vph)	24	22	15	23	33	47	70	365	55	67	88	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1762	1583		3261		1770	3470		1770	3411	
Flt Permitted	0.95	1.00	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1762	1583		2949		1770	3470		1770	3411	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	22	15	23	33	47	70	365	55	67	88	28
RTOR Reduction (vph)	0	0	14	0	44	0	0	16	0	0	15	0
Lane Group Flow (vph)	22	24	1	0	59	0	70	404	0	67	101	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Effective Green, g (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Actuated g/C Ratio	0.06	0.06	0.06		0.06		0.08	0.47		0.08	0.47	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	102	92		177		133	1620		133	1593	
v/s Ratio Prot	0.01	c0.01					c0.04	c0.12		0.04	0.03	
v/s Ratio Perm			0.00		c0.02							
v/c Ratio	0.22	0.24	0.01		0.33		0.53	0.25		0.50	0.06	
Uniform Delay, d1	23.9	23.9	23.6		23.9		23.6	8.5		23.6	7.8	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	1.2	0.0		1.1		3.7	0.4		3.0	0.1	
Delay (s)	25.0	25.1	23.6		25.0		27.4	8.9		26.6	7.8	
Level of Service	C	C	C		C		C	A		C	A	
Approach Delay (s)		24.7			25.0			11.5			14.7	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1149	1079	194	462	980
Future Volume (vph)	0	1149	1079	194	462	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.98		0.92	0.85
Flt Protected		1.00	1.00		0.98	1.00
Satd. Flow (prot)		5085	4969		3256	1441
Flt Permitted		1.00	1.00		0.98	1.00
Satd. Flow (perm)		5085	4969		3256	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1149	1079	194	462	980
RTOR Reduction (vph)	0	0	21	0	9	9
Lane Group Flow (vph)	0	1149	1252	0	943	481
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		42.2	42.2		74.7	74.7
Effective Green, g (s)		42.2	42.2		74.7	74.7
Actuated g/C Ratio		0.34	0.34		0.59	0.59
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1704	1665		1931	854
v/s Ratio Prot		0.23	c0.25		0.29	
v/s Ratio Perm						c0.33
v/c Ratio		0.67	0.75		0.49	0.56
Uniform Delay, d1		35.9	37.2		14.7	15.6
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.1	2.0		0.9	2.7
Delay (s)		37.0	39.2		15.5	18.3
Level of Service		D	D		B	B
Approach Delay (s)		37.0	39.2		16.5	
Approach LOS		D	D		B	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	125.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	578	1046	0	569	721	100
Future Volume (veh/h)	578	1046	0	569	721	100
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	578	0	0	569	721	100
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1263	565	0	1263	1600	736
Arrive On Green	0.36	0.00	0.00	0.36	0.46	0.46
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	578	0	0	569	721	100
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	6.3	0.0	0.0	6.2	7.2	1.8
Cycle Q Clear(g_c), s	6.3	0.0	0.0	6.2	7.2	1.8
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1263	565	0	1263	1600	736
V/C Ratio(X)	0.46	0.00	0.00	0.45	0.45	0.14
Avail Cap(c_a), veh/h	2976	1331	0	2976	1600	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	12.5	9.2	7.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.3	0.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	3.0	3.6	0.9
LnGrp Delay(d),s/veh	12.7	0.0	0.0	12.7	10.1	8.1
LnGrp LOS	B			B	B	A
Approach Vol, veh/h	578			569	821	
Approach Delay, s/veh	12.7			12.7	9.8	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		28.0		22.5				22.5
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		23.5		42.5				42.5
Max Q Clear Time (g_c+I1), s		9.2		8.3				8.2
Green Ext Time (p_c), s		2.8		9.7				9.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	103	553	841	169	99	121
Future Volume (veh/h)	103	553	841	169	99	121
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	103	0	841	169	99	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1295	596	970	998	391	333
Arrive On Green	0.38	0.00	0.28	0.54	0.21	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	103	0	841	169	99	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	2.0	0.0	23.8	4.7	4.5	0.0
Cycle Q Clear(g_c), s	2.0	0.0	23.8	4.7	4.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1295	596	970	998	391	333
V/C Ratio(X)	0.08	0.00	0.87	0.17	0.25	0.00
Avail Cap(c_a), veh/h	1295	596	1396	998	391	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	34.9	12.1	33.7	0.0
Incr Delay (d2), s/veh	0.1	0.0	4.3	0.4	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	11.8	2.5	2.5	0.0
LnGrp Delay(d),s/veh	20.6	0.0	39.2	12.5	35.3	0.0
LnGrp LOS	C		D	B	D	
Approach Vol, veh/h	103			1010	99	
Approach Delay, s/veh	20.6			34.7	35.3	
Approach LOS	C			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	33.3	26.0				59.3		43.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	41.5	21.5				21.5		38.5
Max Q Clear Time (g_c+I1), s	25.8	6.5				6.7		4.0
Green Ext Time (p_c), s	3.1	1.3				1.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	0	35	20	1	46	42	439	21	63	666	90
Future Volume (vph)	188	0	35	20	1	46	42	439	21	63	666	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1770	1583		1778	1583	1770	3539	1583	1770	3476	
Flt Permitted		0.74	1.00		0.77	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1385	1583		1443	1583	1770	3539	1583	1770	3476	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	188	0	35	20	1	46	42	439	21	63	666	90
RTOR Reduction (vph)	0	0	24	0	0	31	0	0	12	0	12	0
Lane Group Flow (vph)	0	188	11	0	21	15	42	439	9	63	744	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		25.6	25.6		25.6	25.6	4.6	32.6	32.6	6.5	34.5	
Effective Green, g (s)		25.6	25.6		25.6	25.6	4.6	32.6	32.6	6.5	34.5	
Actuated g/C Ratio		0.33	0.33		0.33	0.33	0.06	0.42	0.42	0.08	0.44	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		453	518		472	518	104	1475	659	147	1533	
v/s Ratio Prot							0.02	0.12		c0.04	c0.21	
v/s Ratio Perm		c0.14	0.01		0.01	0.01			0.01			
v/c Ratio		0.42	0.02		0.04	0.03	0.40	0.30	0.01	0.43	0.49	
Uniform Delay, d1		20.5	17.8		18.0	17.9	35.5	15.2	13.4	34.1	15.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.8	0.1		0.0	0.0	2.6	0.5	0.0	2.0	0.2	
Delay (s)		23.3	17.9		18.0	17.9	38.0	15.7	13.4	36.1	15.8	
Level of Service		C	B		B	B	D	B	B	D	B	
Approach Delay (s)		22.4			17.9			17.5			17.3	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	101	48	34	464	15	510	46
Future Volume (vph)	101	48	34	464	15	510	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.96		1.00	1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1723		1770	3539	1770	3495	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1723		1770	3539	1770	3495	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	101	48	34	464	15	510	46
RTOR Reduction (vph)	21	0	0	0	0	8	0
Lane Group Flow (vph)	128	0	34	464	15	548	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	24.6		3.1	36.6	1.4	34.9	
Effective Green, g (s)	24.6		3.1	36.6	1.4	34.9	
Actuated g/C Ratio	0.32		0.04	0.48	0.02	0.46	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	556		72	1702	32	1602	
v/s Ratio Prot	c0.07		c0.02	0.13	0.01	c0.16	
v/s Ratio Perm							
v/c Ratio	0.23		0.47	0.27	0.47	0.34	
Uniform Delay, d1	18.8		35.7	11.8	37.0	13.2	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0		4.8	0.4	10.5	0.6	
Delay (s)	19.8		40.5	12.2	47.4	13.8	
Level of Service	B		D	B	D	B	
Approach Delay (s)	19.8			14.1		14.7	
Approach LOS	B			B		B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	76.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	31	111	36	383	493	34
Future Volume (vph)	31	111	36	383	493	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.89		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1648		1770	3539	3505	
Flt Permitted	0.99		0.95	1.00	1.00	
Satd. Flow (perm)	1648		1770	3539	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	111	36	383	493	34
RTOR Reduction (vph)	101	0	0	0	4	0
Lane Group Flow (vph)	41	0	36	383	523	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	6.2		3.2	50.8	43.1	
Effective Green, g (s)	6.2		3.2	50.8	43.1	
Actuated g/C Ratio	0.09		0.05	0.77	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	154		85	2723	2288	
v/s Ratio Prot	c0.03		c0.02	0.11	c0.15	
v/s Ratio Perm						
v/c Ratio	0.27		0.42	0.14	0.23	
Uniform Delay, d1	27.8		30.5	2.0	4.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9		3.4	0.1	0.2	
Delay (s)	28.7		33.9	2.1	4.9	
Level of Service	C		C	A	A	
Approach Delay (s)	28.7			4.8	4.9	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	4	357	17	11	5	743	220	18	12	572	174
Future Volume (vph)	137	4	357	17	11	5	743	220	18	12	572	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.86	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1460	1504		1779		3433	3499		1770	3539	1583
Flt Permitted	0.95	1.00	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1460	1504		1779		3433	3499		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	137	4	357	17	11	5	743	220	18	12	572	174
RTOR Reduction (vph)	0	127	138	0	4	0	0	5	0	0	0	99
Lane Group Flow (vph)	123	62	48	0	29	0	743	233	0	12	572	75
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)	29.9	29.9	29.9		8.6		30.6	56.7		2.6	28.7	28.7
Effective Green, g (s)	29.9	29.9	29.9		8.6		30.6	56.7		2.6	28.7	28.7
Actuated g/C Ratio	0.26	0.26	0.26		0.07		0.26	0.49		0.02	0.25	0.25
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	434	376	388		132		907	1713		39	877	392
v/s Ratio Prot	c0.07	0.04			c0.02		c0.22	0.07		0.01	c0.16	
v/s Ratio Perm			0.03									0.05
v/c Ratio	0.28	0.17	0.12		0.22		0.82	0.14		0.31	0.65	0.19
Uniform Delay, d1	34.4	33.3	32.9		50.5		40.0	16.2		55.7	39.1	34.4
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.6	0.9	0.7		3.8		5.8	0.0		4.4	1.8	0.2
Delay (s)	36.0	34.2	33.6		54.3		45.8	16.2		60.2	40.8	34.6
Level of Service	D	C	C		D		D	B		E	D	C
Approach Delay (s)		34.4			54.3			38.6			39.7	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	115.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	830	196	0	8	108	116	10	20	10	167	13	763
Future Volume (vph)	830	196	0	8	108	116	10	20	10	167	13	763
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583		3364		1681	1697	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.62		0.95	0.96	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583		2118		1681	1697	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	830	196	0	8	108	116	10	20	10	167	13	763
RTOR Reduction (vph)	0	0	0	0	0	105	0	9	0	0	0	340
Lane Group Flow (vph)	830	196	0	8	108	11	0	31	0	90	90	423
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	30.3	37.2		0.9	7.8	7.8		9.6		13.7	13.7	44.0
Effective Green, g (s)	30.3	37.2		0.9	7.8	7.8		9.6		13.7	13.7	44.0
Actuated g/C Ratio	0.38	0.47		0.01	0.10	0.10		0.12		0.17	0.17	0.55
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1310	1658		20	347	155		256		290	292	1544
v/s Ratio Prot	c0.24	0.06		0.00	c0.03					c0.05	0.05	0.10
v/s Ratio Perm						0.01		c0.01				0.05
v/c Ratio	0.63	0.12		0.40	0.31	0.07		0.12		0.31	0.31	0.27
Uniform Delay, d1	20.0	11.9		39.0	33.3	32.5		31.1		28.7	28.7	9.3
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.0		12.6	0.5	0.2		1.0		2.8	2.7	0.1
Delay (s)	21.0	11.9		51.6	33.8	32.7		32.1		31.5	31.4	9.4
Level of Service	C	B		D	C	C		C		C	C	A
Approach Delay (s)		19.3			33.9			32.1			13.6	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	79.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	829	462	300	594	0	0	0	0	178	1	876
Future Volume (vph)	0	829	462	300	594	0	0	0	0	178	1	876
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.97	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4683	1362	3433	3539						1775	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4683	1362	3433	3539						1775	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	829	462	300	594	0	0	0	0	178	1	876
RTOR Reduction (vph)	0	44	205	0	0	0	0	0	0	0	0	383
Lane Group Flow (vph)	0	956	86	300	594	0	0	0	0	0	179	493
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		18.7	18.7	9.7	32.9						21.5	21.5
Effective Green, g (s)		18.7	18.7	9.7	32.9						21.5	21.5
Actuated g/C Ratio		0.29	0.29	0.15	0.52						0.34	0.34
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1381	401	525	1836						601	1224
v/s Ratio Prot		c0.20		c0.09	0.17							
v/s Ratio Perm			0.06								0.10	c0.14
v/c Ratio		0.69	0.21	0.57	0.32						0.30	0.40
Uniform Delay, d1		19.8	16.8	24.9	8.8						15.4	16.0
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.5	0.3	1.5	0.1						0.3	1.0
Delay (s)		21.3	17.1	26.4	8.9						15.7	17.0
Level of Service		C	B	C	A						B	B
Approach Delay (s)		20.4			14.8			0.0			16.8	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	63.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	810	54	356	979	109	31	51	178	258	231	185
Future Volume (veh/h)	92	810	54	356	979	109	31	51	178	258	231	185
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	92	810	54	356	979	0	31	51	178	258	231	185
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	1327	88	449	1810	564	442	464	395	568	308	261
Arrive On Green	0.05	0.27	0.27	0.13	0.36	0.00	0.25	0.25	0.25	0.17	0.17	0.17
Sat Flow, veh/h	3442	4872	324	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	92	563	301	356	979	0	31	51	178	258	231	185
Grp Sat Flow(s),veh/h/ln	1721	1695	1806	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	2.6	14.2	14.3	9.9	15.1	0.0	1.3	2.1	9.4	6.7	11.6	10.9
Cycle Q Clear(g_c), s	2.6	14.2	14.3	9.9	15.1	0.0	1.3	2.1	9.4	6.7	11.6	10.9
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	923	492	449	1810	564	442	464	395	568	308	261
V/C Ratio(X)	0.57	0.61	0.61	0.79	0.54	0.00	0.07	0.11	0.45	0.45	0.75	0.71
Avail Cap(c_a), veh/h	298	1086	578	788	2353	733	442	464	395	998	540	459
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.9	31.2	31.2	41.5	25.3	0.0	28.2	28.5	31.2	37.0	39.1	38.8
Incr Delay (d2), s/veh	3.2	0.7	1.4	3.2	0.3	0.0	0.3	0.5	3.7	0.6	3.7	3.5
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	1.3	6.7	7.3	4.9	7.1	0.0	0.7	1.1	4.5	3.2	6.3	5.0
LnGrp Delay(d),s/veh	49.1	32.0	32.7	44.7	25.5	0.0	28.5	29.0	34.9	37.6	42.8	42.3
LnGrp LOS	D	C	C	D	C		C	C	C	D	D	D
Approach Vol, veh/h		956			1335			260			674	
Approach Delay, s/veh		33.8			30.6			33.0			40.7	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	17.3	31.3		20.7	9.1	39.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	22.5	31.5		28.5	8.5	45.5
Max Q Clear Time (g_c+I1), s		11.4	11.9	16.3		13.6	4.6	17.1
Green Ext Time (p_c), s		0.8	1.0	10.4		2.6	0.1	15.8

Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	730	113	170	1087	0	77	0	207	0	0	0
Future Volume (veh/h)	0	730	113	170	1087	0	77	0	207	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	0	730	113	170	1087	0	77	0	207			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	67	1665	255	244	1722	0	763	0	681			
Arrive On Green	0.00	0.37	0.37	0.07	0.49	0.00	0.43	0.00	0.43			
Sat Flow, veh/h	517	4450	683	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	0	555	288	170	1087	0	77	0	207			
Grp Sat Flow(s),veh/h/ln	517	1695	1742	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.0	13.2	13.4	5.2	24.6	0.0	2.8	0.0	9.3			
Cycle Q Clear(g_c), s	0.0	13.2	13.4	5.2	24.6	0.0	2.8	0.0	9.3			
Prop In Lane	1.00		0.39	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	67	1268	652	244	1722	0	763	0	681			
V/C Ratio(X)	0.00	0.44	0.44	0.70	0.63	0.00	0.10	0.00	0.30			
Avail Cap(c_a), veh/h	234	2368	1217	780	3422	0	763	0	681			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	25.3	25.4	49.1	20.6	0.0	18.3	0.0	20.2			
Incr Delay (d2), s/veh	0.0	0.2	0.5	3.6	0.4	0.0	0.3	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	6.2	6.5	2.6	12.0	0.0	1.4	0.0	4.3			
LnGrp Delay(d),s/veh	0.0	25.6	25.8	52.7	21.0	0.0	18.6	0.0	21.3			
LnGrp LOS		C	C	D	C		B		C			
Approach Vol, veh/h		843			1257			284				
Approach Delay, s/veh		25.7			25.2			20.6				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		51.0	12.2	44.9				57.1
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		46.5	24.5	75.5				104.5
Max Q Clear Time (g_c+I1), s		11.3	7.2	15.4				26.6
Green Ext Time (p_c), s		1.2	0.5	24.2				26.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	193	54	360	428	384	46	413	340	309	350	36
Future Volume (veh/h)	19	193	54	360	428	384	46	413	340	309	350	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	19	193	54	360	428	0	46	413	0	309	350	36
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	255	70	472	495	421	59	1394	624	378	781	80
Arrive On Green	0.09	0.09	0.09	0.27	0.27	0.00	0.03	0.39	0.00	0.11	0.47	0.47
Sat Flow, veh/h	1774	2750	750	1774	1863	1583	1774	3539	1583	3442	1662	171
Grp Volume(v), veh/h	19	122	125	360	428	0	46	413	0	309	0	386
Grp Sat Flow(s),veh/h/ln	1774	1770	1730	1774	1863	1583	1774	1770	1583	1721	0	1833
Q Serve(g_s), s	1.3	8.8	9.2	24.4	28.6	0.0	3.4	10.5	0.0	11.5	0.0	18.5
Cycle Q Clear(g_c), s	1.3	8.8	9.2	24.4	28.6	0.0	3.4	10.5	0.0	11.5	0.0	18.5
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	165	164	161	472	495	421	59	1394	624	378	0	862
V/C Ratio(X)	0.12	0.75	0.78	0.76	0.86	0.00	0.77	0.30	0.00	0.82	0.00	0.45
Avail Cap(c_a), veh/h	278	277	271	861	904	769	156	1394	624	697	0	862
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.4	57.8	58.0	44.2	45.8	0.0	62.7	27.2	0.0	56.9	0.0	23.3
Incr Delay (d2), s/veh	0.3	6.5	7.8	2.6	4.6	0.0	18.9	0.5	0.0	4.4	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.6	4.7	12.3	15.4	0.0	2.0	5.2	0.0	5.7	0.0	9.7
LnGrp Delay(d),s/veh	54.7	64.4	65.8	46.8	50.4	0.0	81.6	27.8	0.0	61.3	0.0	24.9
LnGrp LOS	D	E	E	D	D		F	C		E		C
Approach Vol, veh/h		266			788			459			695	
Approach Delay, s/veh		64.3			48.8			33.2			41.1	
Approach LOS		E			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.9	56.0		16.6	8.9	66.0		39.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	26.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	13.5	12.5		11.2	5.4	20.5		30.6
Green Ext Time (p_c), s	0.9	6.0		0.9	0.0	6.1		4.1

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	68	32	66	26	74	54	217	98	225	123	21
Future Volume (vph)	44	68	32	66	26	74	54	217	98	225	123	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1765	1583		3238		1770	3374		1770	3462	
Flt Permitted	0.95	1.00	1.00		0.83		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1765	1583		2737		1770	3374		1770	3462	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	44	68	32	66	26	74	54	217	98	225	123	21
RTOR Reduction (vph)	0	0	29	0	68	0	0	53	0	0	11	0
Lane Group Flow (vph)	40	72	3	0	98	0	54	262	0	225	133	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	6.5	6.5	6.5		6.1		4.2	24.8		14.1	34.7	
Effective Green, g (s)	6.5	6.5	6.5		6.1		4.2	24.8		14.1	34.7	
Actuated g/C Ratio	0.09	0.09	0.09		0.09		0.06	0.36		0.20	0.50	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	165	148		240		106	1203		359	1728	
v/s Ratio Prot	0.02	c0.04					0.03	c0.08		c0.13	0.04	
v/s Ratio Perm			0.00		c0.04							
v/c Ratio	0.25	0.44	0.02		0.41		0.51	0.22		0.63	0.08	
Uniform Delay, d1	29.3	29.8	28.6		30.0		31.7	15.6		25.3	9.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	1.8	0.1		1.1		3.8	0.4		3.4	0.1	
Delay (s)	30.1	31.6	28.7		31.1		35.5	16.0		28.7	9.1	
Level of Service	C	C	C		C		D	B		C	A	
Approach Delay (s)		30.5			31.1			18.8			21.1	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1211	1076	106	688	960
Future Volume (vph)	0	1211	1076	106	688	960
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.99		0.94	0.85
Flt Protected		1.00	1.00		0.97	1.00
Satd. Flow (prot)		5085	5017		3303	1441
Flt Permitted		1.00	1.00		0.97	1.00
Satd. Flow (perm)		5085	5017		3303	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1211	1076	106	688	960
RTOR Reduction (vph)	0	0	11	0	7	7
Lane Group Flow (vph)	0	1211	1171	0	1113	521
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		35.4	35.4		65.6	65.6
Effective Green, g (s)		35.4	35.4		65.6	65.6
Actuated g/C Ratio		0.32	0.32		0.60	0.60
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1636	1614		1969	859
v/s Ratio Prot		c0.24	0.23		0.34	
v/s Ratio Perm						c0.36
v/c Ratio		0.74	0.73		0.57	0.61
Uniform Delay, d1		33.2	33.0		13.5	14.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.8	1.7		1.2	3.2
Delay (s)		35.0	34.7		14.7	17.2
Level of Service		D	C		B	B
Approach Delay (s)		35.0	34.7		15.5	
Approach LOS		D	C		B	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1067	775	1	245	952	196
Future Volume (veh/h)	1067	775	1	245	952	196
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1067	0	1	245	952	196
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1487	665	54	1457	1545	711
Arrive On Green	0.42	0.00	0.42	0.42	0.45	0.45
Sat Flow, veh/h	3632	1583	2	3552	3442	1583
Grp Volume(v), veh/h	1067	0	132	114	952	196
Grp Sat Flow(s),veh/h/ln	1770	1583	1859	1610	1721	1583
Q Serve(g_s), s	17.2	0.0	0.0	3.0	14.5	5.3
Cycle Q Clear(g_c), s	17.2	0.0	3.0	3.0	14.5	5.3
Prop In Lane		1.00	0.01		1.00	1.00
Lane Grp Cap(c), veh/h	1487	665	834	676	1545	711
V/C Ratio(X)	0.72	0.00	0.16	0.17	0.62	0.28
Avail Cap(c_a), veh/h	2073	927	1136	943	1545	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	12.4	12.4	14.4	11.9
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.1	1.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.0	1.6	1.4	7.3	2.5
LnGrp Delay(d),s/veh	17.3	0.0	12.5	12.5	16.3	12.9
LnGrp LOS	B		B	B	B	B
Approach Vol, veh/h	1067			246	1148	
Approach Delay, s/veh	17.3			12.5	15.7	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.3		33.3				33.3
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		30.8		40.2				40.2
Max Q Clear Time (g_c+I1), s		16.5		19.2				5.0
Green Ext Time (p_c), s		4.1		9.7				12.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	135	1076	373	52	41	87
Future Volume (veh/h)	135	1076	373	52	41	87
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	135	0	373	52	41	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1668	767	476	759	401	341
Arrive On Green	0.48	0.00	0.14	0.41	0.22	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	135	0	373	52	41	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	1.8	0.0	8.8	1.4	1.5	0.0
Cycle Q Clear(g_c), s	1.8	0.0	8.8	1.4	1.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1668	767	476	759	401	341
V/C Ratio(X)	0.08	0.00	0.78	0.07	0.10	0.00
Avail Cap(c_a), veh/h	1668	767	741	759	401	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.5	0.0	34.8	15.1	26.3	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.9	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	4.3	0.8	0.8	0.0
LnGrp Delay(d),s/veh	11.6	0.0	37.7	15.3	26.8	0.0
LnGrp LOS	B		D	B	C	
Approach Vol, veh/h	135			425	41	
Approach Delay, s/veh	11.6			35.0	26.8	
Approach LOS	B			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.1	22.5				38.6		45.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	18.0	18.0				18.0		40.5
Max Q Clear Time (g_c+I1), s	10.8	3.5				3.4		3.8
Green Ext Time (p_c), s	0.8	0.3				0.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1	11	17	0	58	61	262	49	55	689	160
Future Volume (vph)	42	1	11	17	0	58	61	262	49	55	689	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1776	1583		1770	1583	1770	3539	1583	1770	3439	
Flt Permitted		0.79	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1462	1583		1358	1583	1770	3539	1583	1770	3439	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	1	11	17	0	58	61	262	49	55	689	160
RTOR Reduction (vph)	0	0	8	0	0	42	0	0	26	0	25	0
Lane Group Flow (vph)	0	43	3	0	17	16	61	262	23	55	824	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		19.7	19.7		19.7	19.7	4.6	33.8	33.8	4.6	33.8	
Effective Green, g (s)		19.7	19.7		19.7	19.7	4.6	33.8	33.8	4.6	33.8	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.06	0.47	0.47	0.06	0.47	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		402	435		373	435	113	1670	747	113	1623	
v/s Ratio Prot							c0.03	0.07		0.03	c0.24	
v/s Ratio Perm		c0.03	0.00		0.01	0.01			0.01			
v/c Ratio		0.11	0.01		0.05	0.04	0.54	0.16	0.03	0.49	0.51	
Uniform Delay, d1		19.4	18.8		19.0	19.0	32.5	10.8	10.1	32.4	13.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5	0.0		0.1	0.0	4.9	0.2	0.1	3.3	0.3	
Delay (s)		19.9	18.9		19.1	19.0	37.4	11.0	10.2	35.6	13.4	
Level of Service		B	B		B	B	D	B	B	D	B	
Approach Delay (s)		19.7			19.1			15.2			14.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	26	17	39	362	17	563	92
Future Volume (vph)	26	17	39	362	17	563	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.95		1.00	1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1712		1770	3539	1770	3465	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1712		1770	3539	1770	3465	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	17	39	362	17	563	92
RTOR Reduction (vph)	12	0	0	0	0	15	0
Lane Group Flow (vph)	31	0	39	362	17	640	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	20.6		4.6	41.5	1.4	38.3	
Effective Green, g (s)	20.6		4.6	41.5	1.4	38.3	
Actuated g/C Ratio	0.27		0.06	0.54	0.02	0.50	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	458		105	1907	32	1723	
v/s Ratio Prot	c0.02		c0.02	c0.10	0.01	c0.18	
v/s Ratio Perm							
v/c Ratio	0.07		0.37	0.19	0.53	0.37	
Uniform Delay, d1	21.0		34.8	9.1	37.5	11.9	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3		2.2	0.2	15.9	0.6	
Delay (s)	21.3		37.0	9.3	53.4	12.5	
Level of Service	C		D	A	D	B	
Approach Delay (s)	21.3			12.0		13.6	
Approach LOS	C			B		B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	44	73	120	383	388	83
Future Volume (vph)	44	73	120	383	388	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.92		1.00	1.00	0.97	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1674		1770	3539	3446	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1674		1770	3539	3446	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	44	73	120	383	388	83
RTOR Reduction (vph)	66	0	0	0	16	0
Lane Group Flow (vph)	51	0	120	383	455	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	6.4		8.2	50.3	37.6	
Effective Green, g (s)	6.4		8.2	50.3	37.6	
Actuated g/C Ratio	0.10		0.12	0.77	0.57	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	163		220	2709	1972	
v/s Ratio Prot	c0.03		c0.07	0.11	c0.13	
v/s Ratio Perm						
v/c Ratio	0.31		0.55	0.14	0.23	
Uniform Delay, d1	27.6		27.0	2.0	6.9	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.1		2.8	0.1	0.3	
Delay (s)	28.7		29.8	2.1	7.2	
Level of Service	C		C	A	A	
Approach Delay (s)	28.7			8.7	7.2	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	371	7	418	12	10	5	816	311	7	8	256	88
Future Volume (vph)	371	7	418	12	10	5	816	311	7	8	256	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.91	0.85		0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1512	1504		1777		3433	3528		1770	3539	1583
Flt Permitted	0.95	0.98	1.00		0.73		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1512	1504		1330		3433	3528		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	371	7	418	12	10	5	816	311	7	8	256	88
RTOR Reduction (vph)	0	45	165	0	5	0	0	1	0	0	0	78
Lane Group Flow (vph)	275	221	90	0	22	0	816	317	0	8	256	10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2			6		3	8		7	4	
Permitted Phases			2	6								4
Actuated Green, G (s)	37.7	37.7	37.7		7.5		31.0	37.9		5.5	12.4	12.4
Effective Green, g (s)	37.7	37.7	37.7		7.5		31.0	37.9		5.5	12.4	12.4
Actuated g/C Ratio	0.35	0.35	0.35		0.07		0.29	0.36		0.05	0.12	0.12
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	594	534	531		93		998	1254		91	411	184
v/s Ratio Prot	c0.16	0.15					c0.24	0.09		0.00	c0.07	
v/s Ratio Perm			0.06		c0.02							0.01
v/c Ratio	0.46	0.41	0.17		0.24		0.82	0.25		0.09	0.62	0.06
Uniform Delay, d1	26.6	26.1	23.7		46.9		35.2	24.3		48.2	44.9	41.9
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.6	2.4	0.7		6.0		5.3	0.1		0.4	2.9	0.1
Delay (s)	29.2	28.5	24.4		52.9		40.5	24.4		48.6	47.8	42.0
Level of Service	C	C	C		D		D	C		D	D	D
Approach Delay (s)		27.4			52.9			36.0			46.4	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	106.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1057	416	0	3	56	83	18	10	2	79	17	589
Future Volume (vph)	1057	416	0	3	56	83	18	10	2	79	17	589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.97	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583		3402		1681	1714	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.70		0.95	0.97	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583		2438		1681	1714	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1057	416	0	3	56	83	18	10	2	79	17	589
RTOR Reduction (vph)	0	0	0	0	0	78	0	2	0	0	0	240
Lane Group Flow (vph)	1057	416	0	3	56	5	0	28	0	47	49	349
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	35.8	40.1		1.1	5.4	5.4		10.8		13.9	13.9	49.7
Effective Green, g (s)	35.8	40.1		1.1	5.4	5.4		10.8		13.9	13.9	49.7
Actuated g/C Ratio	0.43	0.48		0.01	0.06	0.06		0.13		0.17	0.17	0.59
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1464	1691		23	227	101		313		278	283	1650
v/s Ratio Prot	c0.31	c0.12		0.00	c0.02					0.03	0.03	c0.09
v/s Ratio Perm						0.00		c0.01				0.04
v/c Ratio	0.72	0.25		0.13	0.25	0.05		0.09		0.17	0.17	0.21
Uniform Delay, d1	19.9	13.0		40.9	37.3	36.8		32.2		30.0	30.1	8.0
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.8	0.1		2.6	0.6	0.2		0.6		1.3	1.3	0.1
Delay (s)	21.7	13.0		43.5	37.9	37.1		32.8		31.4	31.4	8.0
Level of Service	C	B		D	D	D		C		C	C	A
Approach Delay (s)		19.3			37.5			32.8			11.3	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	83.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1075	420	159	519	0	0	0	0	387	2	663
Future Volume (vph)	0	1075	420	159	519	0	0	0	0	387	2	663
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4751	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4751	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1075	420	159	519	0	0	0	0	387	2	663
RTOR Reduction (vph)	0	8	171	0	0	0	0	0	0	0	0	370
Lane Group Flow (vph)	0	1155	161	159	519	0	0	0	0	0	389	293
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		38.9	38.9	10.3	53.7						49.8	49.8
Effective Green, g (s)		38.9	38.9	10.3	53.7						49.8	49.8
Actuated g/C Ratio		0.35	0.35	0.09	0.48						0.44	0.44
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1642	470	314	1689						785	1598
v/s Ratio Prot		c0.24		c0.05	0.15							
v/s Ratio Perm			0.12								0.22	0.08
v/c Ratio		0.70	0.34	0.51	0.31						0.50	0.18
Uniform Delay, d1		31.8	27.3	48.7	18.0						22.4	19.0
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.4	0.4	1.3	0.1						0.5	0.3
Delay (s)		33.2	27.7	50.0	18.1						22.9	19.3
Level of Service		C	C	D	B						C	B
Approach Delay (s)		32.0			25.6			0.0			20.6	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	112.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	1063	45	178	712	256	42	108	302	102	76	92
Future Volume (veh/h)	187	1063	45	178	712	256	42	108	302	102	76	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	187	1063	45	178	712	0	42	108	302	102	76	92
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	1654	70	250	1667	519	598	628	533	289	157	133
Arrive On Green	0.08	0.33	0.33	0.07	0.33	0.00	0.34	0.34	0.34	0.08	0.08	0.08
Sat Flow, veh/h	3442	5004	212	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	187	720	388	178	712	0	42	108	302	102	76	92
Grp Sat Flow(s),veh/h/ln	1721	1695	1825	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.4	18.5	18.5	5.2	11.2	0.0	1.6	4.2	16.0	2.9	4.0	5.8
Cycle Q Clear(g_c), s	5.4	18.5	18.5	5.2	11.2	0.0	1.6	4.2	16.0	2.9	4.0	5.8
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	1121	603	250	1667	519	598	628	533	289	157	133
V/C Ratio(X)	0.72	0.64	0.64	0.71	0.43	0.00	0.07	0.17	0.57	0.35	0.49	0.69
Avail Cap(c_a), veh/h	487	1407	758	487	2111	657	598	628	533	689	373	317
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	29.1	29.1	46.4	26.9	0.0	23.1	23.9	27.8	44.3	44.8	45.6
Incr Delay (d2), s/veh	3.7	0.7	1.3	3.7	0.2	0.0	0.2	0.6	4.3	0.7	2.3	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.7	9.5	2.6	5.2	0.0	0.8	2.3	7.6	1.4	2.1	2.8
LnGrp Delay(d),s/veh	50.0	29.8	30.4	50.2	27.1	0.0	23.3	24.5	32.1	45.0	47.1	51.9
LnGrp LOS	D	C	C	D	C		C	C	C	D	D	D
Approach Vol, veh/h		1295			890			452			270	
Approach Delay, s/veh		32.9			31.7			29.5			47.9	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	11.9	38.4		13.1	12.2	38.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		34.5	14.5	42.5		20.5	14.5	42.5
Max Q Clear Time (g_c+I1), s		18.0	7.2	20.5		7.8	7.4	13.2
Green Ext Time (p_c), s		1.6	0.3	13.3		0.8	0.3	15.8

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1081	162	115	845	0	72	0	294	0	0	0
Future Volume (veh/h)	1	1081	162	115	845	0	72	0	294	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	1	1081	162	115	845	0	72	0	294			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	277	1789	268	174	1735	0	765	0	683			
Arrive On Green	0.40	0.40	0.40	0.05	0.49	0.00	0.43	0.00	0.43			
Sat Flow, veh/h	649	4466	669	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	1	820	423	115	845	0	72	0	294			
Grp Sat Flow(s),veh/h/ln	649	1695	1745	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.1	22.0	22.0	3.8	18.3	0.0	2.8	0.0	14.9			
Cycle Q Clear(g_c), s	8.2	22.0	22.0	3.8	18.3	0.0	2.8	0.0	14.9			
Prop In Lane	1.00		0.38	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	277	1358	699	174	1735	0	765	0	683			
V/C Ratio(X)	0.00	0.60	0.60	0.66	0.49	0.00	0.09	0.00	0.43			
Avail Cap(c_a), veh/h	371	1846	950	435	2513	0	765	0	683			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.8	27.2	27.2	53.5	19.6	0.0	19.3	0.0	22.8			
Incr Delay (d2), s/veh	0.0	0.4	0.8	4.2	0.2	0.0	0.2	0.0	2.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	10.3	10.7	1.9	9.0	0.0	1.4	0.0	6.8			
LnGrp Delay(d),s/veh	25.8	27.6	28.1	57.7	19.8	0.0	19.6	0.0	24.8			
LnGrp LOS	C	C	C	E	B		B		C			
Approach Vol, veh/h		1244			960			366				
Approach Delay, s/veh		27.8			24.3			23.7				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		54.0	10.3	50.5				60.8
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		49.5	14.5	62.5				81.5
Max Q Clear Time (g_c+I1), s		16.9	5.8	24.0				20.3
Green Ext Time (p_c), s		1.5	0.2	22.0				27.3

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	384	23	325	329	261	38	361	384	443	339	13
Future Volume (veh/h)	6	384	23	325	329	261	38	361	384	443	339	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	6	384	23	325	329	0	38	361	0	443	339	13
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	464	28	321	337	286	51	1396	625	516	919	35
Arrive On Green	0.14	0.14	0.14	0.18	0.18	0.00	0.03	0.39	0.00	0.15	0.52	0.52
Sat Flow, veh/h	1774	3394	203	1774	1863	1583	1774	3539	1583	3442	1782	68
Grp Volume(v), veh/h	6	200	207	325	329	0	38	361	0	443	0	352
Grp Sat Flow(s),veh/h/ln	1774	1770	1827	1774	1863	1583	1774	1770	1583	1721	0	1851
Q Serve(g_s), s	0.4	14.3	14.4	23.5	22.9	0.0	2.8	8.9	0.0	16.3	0.0	14.8
Cycle Q Clear(g_c), s	0.4	14.3	14.4	23.5	22.9	0.0	2.8	8.9	0.0	16.3	0.0	14.8
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	242	242	250	321	337	286	51	1396	625	516	0	954
V/C Ratio(X)	0.02	0.83	0.83	1.01	0.98	0.00	0.75	0.26	0.00	0.86	0.00	0.37
Avail Cap(c_a), veh/h	323	323	333	321	337	286	177	1396	625	728	0	954
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.6	54.6	54.7	53.3	53.0	0.0	62.7	26.5	0.0	53.9	0.0	18.8
Incr Delay (d2), s/veh	0.0	12.3	12.5	53.8	42.8	0.0	19.2	0.4	0.0	7.4	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	7.8	8.1	16.3	15.8	0.0	1.6	4.4	0.0	8.3	0.0	7.8
LnGrp Delay(d),s/veh	48.7	66.9	67.1	107.2	95.8	0.0	81.9	27.0	0.0	61.3	0.0	19.9
LnGrp LOS	D	E	E	F	F		F	C		E		B
Approach Vol, veh/h		413			654			399			795	
Approach Delay, s/veh		66.8			101.5			32.2			43.0	
Approach LOS		E			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.0	55.8		22.3	8.2	71.5		28.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	27.5	51.3		23.7	13.0	65.8		23.5
Max Q Clear Time (g_c+I1), s	18.3	10.9		16.4	4.8	16.8		25.5
Green Ext Time (p_c), s	1.1	5.3		1.4	0.0	5.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.3
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	22	15	23	33	47	70	372	55	67	92	28
Future Volume (vph)	24	22	15	23	33	47	70	372	55	67	92	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1762	1583		3261		1770	3471		1770	3415	
Flt Permitted	0.95	1.00	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1762	1583		2949		1770	3471		1770	3415	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	22	15	23	33	47	70	372	55	67	92	28
RTOR Reduction (vph)	0	0	14	0	44	0	0	15	0	0	15	0
Lane Group Flow (vph)	22	24	1	0	59	0	70	412	0	67	105	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Effective Green, g (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Actuated g/C Ratio	0.06	0.06	0.06		0.06		0.08	0.47		0.08	0.47	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	102	92		177		133	1621		133	1594	
v/s Ratio Prot	0.01	c0.01					c0.04	c0.12		0.04	0.03	
v/s Ratio Perm			0.00		c0.02							
v/c Ratio	0.22	0.24	0.01		0.33		0.53	0.25		0.50	0.07	
Uniform Delay, d1	23.9	23.9	23.6		23.9		23.6	8.6		23.6	7.8	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	1.2	0.0		1.1		3.7	0.4		3.0	0.1	
Delay (s)	25.0	25.1	23.6		25.0		27.4	8.9		26.6	7.9	
Level of Service	C	C	C		C		C	A		C	A	
Approach Delay (s)		24.7			25.0			11.5			14.6	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1162	1091	194	490	980
Future Volume (vph)	0	1162	1091	194	490	980
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.98		0.93	0.85
Flt Protected		1.00	1.00		0.98	1.00
Satd. Flow (prot)		5085	4970		3261	1441
Flt Permitted		1.00	1.00		0.98	1.00
Satd. Flow (perm)		5085	4970		3261	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1162	1091	194	490	980
RTOR Reduction (vph)	0	0	20	0	9	9
Lane Group Flow (vph)	0	1162	1265	0	971	481
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		42.5	42.5		74.7	74.7
Effective Green, g (s)		42.5	42.5		74.7	74.7
Actuated g/C Ratio		0.34	0.34		0.59	0.59
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1712	1673		1930	852
v/s Ratio Prot		0.23	c0.25		0.30	
v/s Ratio Perm						c0.33
v/c Ratio		0.68	0.76		0.50	0.56
Uniform Delay, d1		36.0	37.2		15.0	15.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.1	2.0		0.9	2.7
Delay (s)		37.1	39.2		15.9	18.5
Level of Service		D	D		B	B
Approach Delay (s)		37.1	39.2		16.8	
Approach LOS		D	D		B	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	126.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	619	1046	0	581	721	100
Future Volume (veh/h)	619	1046	0	581	721	100
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	619	0	0	581	721	100
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1312	587	0	1312	1566	721
Arrive On Green	0.37	0.00	0.00	0.37	0.46	0.46
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	619	0	0	581	721	100
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	6.9	0.0	0.0	6.4	7.5	1.9
Cycle Q Clear(g_c), s	6.9	0.0	0.0	6.4	7.5	1.9
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1312	587	0	1312	1566	721
V/C Ratio(X)	0.47	0.00	0.00	0.44	0.46	0.14
Avail Cap(c_a), veh/h	2913	1303	0	2913	1566	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	0.0	0.0	12.2	9.7	8.2
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	1.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	3.1	3.7	0.9
LnGrp Delay(d),s/veh	12.7	0.0	0.0	12.5	10.7	8.6
LnGrp LOS	B			B	B	A
Approach Vol, veh/h	619			581	821	
Approach Delay, s/veh	12.7			12.5	10.4	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		28.0		23.6				23.6
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		23.5		42.5				42.5
Max Q Clear Time (g_c+I1), s		9.5		8.9				8.4
Green Ext Time (p_c), s		2.8		10.2				10.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	103	594	882	169	99	121
Future Volume (veh/h)	103	594	882	169	99	121
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	103	0	882	169	99	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1275	586	1008	1012	385	327
Arrive On Green	0.37	0.00	0.29	0.54	0.21	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	103	0	882	169	99	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	2.0	0.0	25.3	4.7	4.6	0.0
Cycle Q Clear(g_c), s	2.0	0.0	25.3	4.7	4.6	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1275	586	1008	1012	385	327
V/C Ratio(X)	0.08	0.00	0.87	0.17	0.26	0.00
Avail Cap(c_a), veh/h	1275	586	1374	1012	385	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.2	0.0	34.9	11.9	34.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	5.0	0.4	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	12.7	2.5	2.6	0.0
LnGrp Delay(d),s/veh	21.4	0.0	40.0	12.3	36.1	0.0
LnGrp LOS	C		D	B	D	
Approach Vol, veh/h	103			1051	99	
Approach Delay, s/veh	21.4			35.5	36.1	
Approach LOS	C			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	35.0	26.0				61.0		43.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	41.5	21.5				21.5		38.5
Max Q Clear Time (g_c+I1), s	27.3	6.6				6.7		4.0
Green Ext Time (p_c), s	3.1	1.2				1.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.4
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	0	35	20	1	46	42	480	21	63	707	90
Future Volume (vph)	188	0	35	20	1	46	42	480	21	63	707	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1770	1583		1778	1583	1770	3539	1583	1770	3479	
Flt Permitted		0.74	1.00		0.77	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1385	1583		1443	1583	1770	3539	1583	1770	3479	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	188	0	35	20	1	46	42	480	21	63	707	90
RTOR Reduction (vph)	0	0	24	0	0	31	0	0	12	0	12	0
Lane Group Flow (vph)	0	188	11	0	21	15	42	480	9	63	785	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		25.6	25.6		25.6	25.6	4.6	32.6	32.6	6.5	34.5	
Effective Green, g (s)		25.6	25.6		25.6	25.6	4.6	32.6	32.6	6.5	34.5	
Actuated g/C Ratio		0.33	0.33		0.33	0.33	0.06	0.42	0.42	0.08	0.44	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		453	518		472	518	104	1475	659	147	1534	
v/s Ratio Prot							0.02	0.14		c0.04	c0.23	
v/s Ratio Perm		c0.14	0.01		0.01	0.01			0.01			
v/c Ratio		0.42	0.02		0.04	0.03	0.40	0.33	0.01	0.43	0.51	
Uniform Delay, d1		20.5	17.8		18.0	17.9	35.5	15.4	13.4	34.1	15.8	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.8	0.1		0.0	0.0	2.6	0.6	0.0	2.0	0.3	
Delay (s)		23.3	17.9		18.0	17.9	38.0	16.0	13.4	36.1	16.1	
Level of Service		C	B		B	B	D	B	B	D	B	
Approach Delay (s)		22.4			17.9			17.6			17.5	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	101	48	34	505	15	551	46
Future Volume (vph)	101	48	34	505	15	551	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.96		1.00	1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1723		1770	3539	1770	3498	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1723		1770	3539	1770	3498	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	101	48	34	505	15	551	46
RTOR Reduction (vph)	21	0	0	0	0	7	0
Lane Group Flow (vph)	128	0	34	505	15	590	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	24.6		3.1	36.6	1.4	34.9	
Effective Green, g (s)	24.6		3.1	36.6	1.4	34.9	
Actuated g/C Ratio	0.32		0.04	0.48	0.02	0.46	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	556		72	1702	32	1604	
v/s Ratio Prot	c0.07		c0.02	0.14	0.01	c0.17	
v/s Ratio Perm							
v/c Ratio	0.23		0.47	0.30	0.47	0.37	
Uniform Delay, d1	18.8		35.7	12.0	37.0	13.4	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0		4.8	0.4	10.5	0.7	
Delay (s)	19.8		40.5	12.4	47.4	14.1	
Level of Service	B		D	B	D	B	
Approach Delay (s)	19.8			14.2		14.9	
Approach LOS	B			B		B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	76.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	148	82	383	493	75
Future Volume (vph)	67	148	82	383	493	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.91		1.00	1.00	0.98	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1664		1770	3539	3469	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1664		1770	3539	3469	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	148	82	383	493	75
RTOR Reduction (vph)	128	0	0	0	11	0
Lane Group Flow (vph)	87	0	82	383	557	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	8.7		5.4	47.3	37.4	
Effective Green, g (s)	8.7		5.4	47.3	37.4	
Actuated g/C Ratio	0.13		0.08	0.73	0.58	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	222		147	2575	1996	
v/s Ratio Prot	c0.05		c0.05	0.11	c0.16	
v/s Ratio Perm						
v/c Ratio	0.39		0.56	0.15	0.28	
Uniform Delay, d1	25.7		28.7	2.7	7.0	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.1		4.5	0.1	0.3	
Delay (s)	26.9		33.2	2.8	7.3	
Level of Service	C		C	A	A	
Approach Delay (s)	26.9			8.2	7.3	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	4	357	17	11	5	743	243	18	12	618	174
Future Volume (vph)	160	4	357	17	11	5	743	243	18	12	618	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.87	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1461	1504		1779		3433	3503		1770	3539	1583
Flt Permitted	0.95	1.00	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1461	1504		1779		3433	3503		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	160	4	357	17	11	5	743	243	18	12	618	174
RTOR Reduction (vph)	0	128	139	0	4	0	0	4	0	0	0	90
Lane Group Flow (vph)	144	63	47	0	29	0	743	257	0	12	618	84
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)	29.9	29.9	29.9		8.6		31.3	59.6		2.6	30.9	30.9
Effective Green, g (s)	29.9	29.9	29.9		8.6		31.3	59.6		2.6	30.9	30.9
Actuated g/C Ratio	0.25	0.25	0.25		0.07		0.26	0.50		0.02	0.26	0.26
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	423	368	378		128		905	1758		38	921	412
v/s Ratio Prot	c0.09	0.04			c0.02		c0.22	0.07		0.01	c0.17	
v/s Ratio Perm			0.03									0.05
v/c Ratio	0.34	0.17	0.12		0.23		0.82	0.15		0.32	0.67	0.20
Uniform Delay, d1	36.3	34.7	34.3		51.9		41.1	15.9		57.2	39.3	34.3
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.2	1.0	0.7		4.1		6.0	0.0		4.7	1.9	0.2
Delay (s)	38.5	35.7	35.0		56.0		47.1	15.9		61.9	41.3	34.5
Level of Service	D	D	C		E		D	B		E	D	C
Approach Delay (s)		36.2			56.0			39.0			40.1	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	118.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	847	196	0	8	108	122	10	20	10	173	13	803
Future Volume (vph)	847	196	0	8	108	122	10	20	10	173	13	803
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583		3364		1681	1697	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.62		0.95	0.96	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583		2118		1681	1697	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	847	196	0	8	108	122	10	20	10	173	13	803
RTOR Reduction (vph)	0	0	0	0	0	110	0	9	0	0	0	355
Lane Group Flow (vph)	847	196	0	8	108	12	0	31	0	93	93	448
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	31.0	37.9		0.9	7.8	7.8		9.6		13.7	13.7	44.7
Effective Green, g (s)	31.0	37.9		0.9	7.8	7.8		9.6		13.7	13.7	44.7
Actuated g/C Ratio	0.39	0.47		0.01	0.10	0.10		0.12		0.17	0.17	0.56
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1328	1674		19	344	154		253		287	290	1555
v/s Ratio Prot	c0.25	0.06		0.00	c0.03					c0.06	0.05	0.11
v/s Ratio Perm						0.01		c0.01				0.05
v/c Ratio	0.64	0.12		0.42	0.31	0.08		0.12		0.32	0.32	0.29
Uniform Delay, d1	20.0	11.8		39.3	33.7	32.9		31.5		29.1	29.1	9.3
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.0		14.4	0.5	0.2		1.0		3.0	2.9	0.1
Delay (s)	21.0	11.8		53.7	34.2	33.1		32.5		32.1	32.0	9.4
Level of Service	C	B		D	C	C		C		C	C	A
Approach Delay (s)		19.3			34.3			32.5			13.7	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	80.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	846	462	324	610	0	0	0	0	178	1	876
Future Volume (vph)	0	846	462	324	610	0	0	0	0	178	1	876
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.98	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4688	1362	3433	3539						1775	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4688	1362	3433	3539						1775	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	846	462	324	610	0	0	0	0	178	1	876
RTOR Reduction (vph)	0	41	209	0	0	0	0	0	0	0	0	368
Lane Group Flow (vph)	0	971	87	324	610	0	0	0	0	0	179	508
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		18.8	18.8	9.9	33.2						21.5	21.5
Effective Green, g (s)		18.8	18.8	9.9	33.2						21.5	21.5
Actuated g/C Ratio		0.30	0.30	0.16	0.52						0.34	0.34
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1383	401	533	1844						599	1218
v/s Ratio Prot		c0.21		c0.09	0.17							
v/s Ratio Perm			0.06								0.10	c0.14
v/c Ratio		0.70	0.22	0.61	0.33						0.30	0.42
Uniform Delay, d1		20.0	16.9	25.1	8.8						15.5	16.3
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.6	0.3	2.0	0.1						0.3	1.1
Delay (s)		21.6	17.2	27.1	8.9						15.8	17.3
Level of Service		C	B	C	A						B	B
Approach Delay (s)		20.6			15.2			0.0			17.1	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	822	54	360	991	109	31	51	183	258	231	185
Future Volume (veh/h)	92	822	54	360	991	109	31	51	183	258	231	185
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	92	822	54	360	991	0	31	51	183	258	231	185
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	1334	87	452	1822	567	440	462	393	568	307	261
Arrive On Green	0.05	0.27	0.27	0.13	0.36	0.00	0.25	0.25	0.25	0.16	0.16	0.16
Sat Flow, veh/h	3442	4877	319	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	92	571	305	360	991	0	31	51	183	258	231	185
Grp Sat Flow(s),veh/h/ln	1721	1695	1806	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	2.6	14.5	14.6	10.0	15.3	0.0	1.3	2.1	9.7	6.7	11.7	10.9
Cycle Q Clear(g_c), s	2.6	14.5	14.6	10.0	15.3	0.0	1.3	2.1	9.7	6.7	11.7	10.9
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	927	494	452	1822	567	440	462	393	568	307	261
V/C Ratio(X)	0.57	0.62	0.62	0.80	0.54	0.00	0.07	0.11	0.47	0.45	0.75	0.71
Avail Cap(c_a), veh/h	296	1081	576	784	2342	729	440	462	393	993	537	457
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	31.3	31.4	41.6	25.3	0.0	28.4	28.7	31.6	37.2	39.3	39.0
Incr Delay (d2), s/veh	3.2	0.8	1.5	3.2	0.3	0.0	0.3	0.5	3.9	0.6	3.7	3.5
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	1.3	6.9	7.5	5.0	7.2	0.0	0.7	1.1	4.7	3.2	6.3	5.0
LnGrp Delay(d),s/veh	49.4	32.1	32.9	44.9	25.5	0.0	28.7	29.2	35.5	37.8	43.0	42.5
LnGrp LOS	D	C	C	D	C		C	C	D	D	D	D
Approach Vol, veh/h		968			1351			265			674	
Approach Delay, s/veh		34.0			30.7			33.5			40.9	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	17.5	31.5		20.8	9.1	39.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	22.5	31.5		28.5	8.5	45.5
Max Q Clear Time (g_c+I1), s		11.7	12.0	16.6		13.7	4.6	17.3
Green Ext Time (p_c), s		0.8	1.0	10.4		2.6	0.1	16.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.0
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	740	113	173	1096	0	77	0	209	0	0	0
Future Volume (veh/h)	0	740	113	173	1096	0	77	0	209	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	0	740	113	173	1096	0	77	0	209			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	66	1682	255	246	1735	0	758	0	676			
Arrive On Green	0.00	0.38	0.38	0.07	0.49	0.00	0.43	0.00	0.43			
Sat Flow, veh/h	512	4459	675	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	0	561	292	173	1096	0	77	0	209			
Grp Sat Flow(s),veh/h/ln	512	1695	1744	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.0	13.4	13.6	5.3	24.9	0.0	2.8	0.0	9.5			
Cycle Q Clear(g_c), s	0.0	13.4	13.6	5.3	24.9	0.0	2.8	0.0	9.5			
Prop In Lane	1.00		0.39	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	66	1279	658	246	1735	0	758	0	676			
V/C Ratio(X)	0.00	0.44	0.44	0.70	0.63	0.00	0.10	0.00	0.31			
Avail Cap(c_a), veh/h	228	2352	1209	775	3398	0	758	0	676			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	25.3	25.4	49.4	20.5	0.0	18.7	0.0	20.6			
Incr Delay (d2), s/veh	0.0	0.2	0.5	3.6	0.4	0.0	0.3	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	6.4	6.7	2.7	12.1	0.0	1.4	0.0	4.4			
LnGrp Delay(d),s/veh	0.0	25.5	25.8	53.0	20.9	0.0	18.9	0.0	21.8			
LnGrp LOS		C	C	D	C		B		C			
Approach Vol, veh/h		853			1269			286				
Approach Delay, s/veh		25.6			25.3			21.0				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		51.0	12.3	45.6				57.8
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		46.5	24.5	75.5				104.5
Max Q Clear Time (g_c+I1), s		11.5	7.3	15.6				26.9
Green Ext Time (p_c), s		1.2	0.5	24.6				26.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	198	54	364	433	384	46	413	345	309	350	36
Future Volume (veh/h)	19	198	54	364	433	384	46	413	345	309	350	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	19	198	54	364	433	0	46	413	0	309	350	36
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	260	69	476	500	425	59	1384	619	377	776	80
Arrive On Green	0.09	0.09	0.09	0.27	0.27	0.00	0.03	0.39	0.00	0.11	0.47	0.47
Sat Flow, veh/h	1774	2766	736	1774	1863	1583	1774	3539	1583	3442	1662	171
Grp Volume(v), veh/h	19	125	127	364	433	0	46	413	0	309	0	386
Grp Sat Flow(s),veh/h/ln	1774	1770	1733	1774	1863	1583	1774	1770	1583	1721	0	1833
Q Serve(g_s), s	1.3	9.1	9.4	24.9	29.2	0.0	3.4	10.6	0.0	11.6	0.0	18.7
Cycle Q Clear(g_c), s	1.3	9.1	9.4	24.9	29.2	0.0	3.4	10.6	0.0	11.6	0.0	18.7
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	167	166	163	476	500	425	59	1384	619	377	0	856
V/C Ratio(X)	0.11	0.75	0.78	0.76	0.87	0.00	0.77	0.30	0.00	0.82	0.00	0.45
Avail Cap(c_a), veh/h	276	276	270	856	898	764	155	1384	619	693	0	856
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.6	58.1	58.3	44.3	45.9	0.0	63.1	27.6	0.0	57.3	0.0	23.7
Incr Delay (d2), s/veh	0.3	6.6	7.8	2.6	4.6	0.0	18.9	0.6	0.0	4.4	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.7	4.9	12.5	15.7	0.0	2.0	5.3	0.0	5.7	0.0	9.8
LnGrp Delay(d),s/veh	54.9	64.8	66.1	46.9	50.5	0.0	82.0	28.2	0.0	61.7	0.0	25.4
LnGrp LOS	D	E	E	D	D		F	C		E		C
Approach Vol, veh/h		271			797			459			695	
Approach Delay, s/veh		64.7			48.9			33.6			41.6	
Approach LOS		E			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.9	56.0		16.9	8.9	66.0		39.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	26.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	13.6	12.6		11.4	5.4	20.7		31.2
Green Ext Time (p_c), s	0.9	6.0		0.9	0.0	6.1		4.2

Intersection Summary	
HCM 2010 Ctrl Delay	45.4
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	68	32	66	26	74	54	223	98	225	129	21
Future Volume (vph)	44	68	32	66	26	74	54	223	98	225	129	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1765	1583		3238		1770	3377		1770	3465	
Flt Permitted	0.95	1.00	1.00		0.83		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1765	1583		2737		1770	3377		1770	3465	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	44	68	32	66	26	74	54	223	98	225	129	21
RTOR Reduction (vph)	0	0	29	0	68	0	0	51	0	0	11	0
Lane Group Flow (vph)	40	72	3	0	98	0	54	270	0	225	139	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	6.5	6.5	6.5		6.1		4.2	24.8		14.1	34.7	
Effective Green, g (s)	6.5	6.5	6.5		6.1		4.2	24.8		14.1	34.7	
Actuated g/C Ratio	0.09	0.09	0.09		0.09		0.06	0.36		0.20	0.50	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	165	148		240		106	1205		359	1730	
v/s Ratio Prot	0.02	c0.04					0.03	c0.08		c0.13	0.04	
v/s Ratio Perm			0.00		c0.04							
v/c Ratio	0.25	0.44	0.02		0.41		0.51	0.22		0.63	0.08	
Uniform Delay, d1	29.3	29.8	28.6		30.0		31.7	15.6		25.3	9.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	1.8	0.1		1.1		3.8	0.4		3.4	0.1	
Delay (s)	30.1	31.6	28.7		31.1		35.5	16.1		28.7	9.2	
Level of Service	C	C	C		C		D	B		C	A	
Approach Delay (s)		30.5			31.1			18.8			20.9	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1203	1069	106	654	962
Future Volume (vph)	0	1203	1069	106	654	962
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.99		0.94	0.85
Flt Protected		1.00	1.00		0.97	1.00
Satd. Flow (prot)		5085	5016		3297	1441
Flt Permitted		1.00	1.00		0.97	1.00
Satd. Flow (perm)		5085	5016		3297	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1203	1069	106	654	962
RTOR Reduction (vph)	0	0	11	0	7	7
Lane Group Flow (vph)	0	1203	1164	0	1090	512
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		35.2	35.2		65.6	65.6
Effective Green, g (s)		35.2	35.2		65.6	65.6
Actuated g/C Ratio		0.32	0.32		0.60	0.60
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1630	1608		1969	860
v/s Ratio Prot		c0.24	0.23		0.33	
v/s Ratio Perm						c0.36
v/c Ratio		0.74	0.72		0.55	0.60
Uniform Delay, d1		33.2	33.0		13.3	13.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.8	1.6		1.1	3.0
Delay (s)		35.0	34.6		14.4	16.8
Level of Service		C	C		B	B
Approach Delay (s)		35.0	34.6		15.2	
Approach LOS		C	C		B	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	109.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1019	781	1	236	954	196
Future Volume (veh/h)	1019	781	1	236	954	196
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1019	0	1	236	954	196
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1446	647	55	1416	1575	725
Arrive On Green	0.41	0.00	0.41	0.41	0.46	0.46
Sat Flow, veh/h	3632	1583	2	3552	3442	1583
Grp Volume(v), veh/h	1019	0	127	110	954	196
Grp Sat Flow(s),veh/h/ln	1770	1583	1859	1610	1721	1583
Q Serve(g_s), s	16.1	0.0	0.0	2.9	14.0	5.2
Cycle Q Clear(g_c), s	16.1	0.0	2.9	2.9	14.0	5.2
Prop In Lane		1.00	0.01		1.00	1.00
Lane Grp Cap(c), veh/h	1446	647	813	658	1575	725
V/C Ratio(X)	0.70	0.00	0.16	0.17	0.61	0.27
Avail Cap(c_a), veh/h	2114	946	1159	962	1575	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	12.6	12.6	13.7	11.3
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	1.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	1.5	1.3	7.0	2.4
LnGrp Delay(d),s/veh	17.2	0.0	12.7	12.8	15.4	12.2
LnGrp LOS	B		B	B	B	B
Approach Vol, veh/h	1019			237	1150	
Approach Delay, s/veh	17.2			12.7	14.9	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.3		32.0				32.0
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		30.8		40.2				40.2
Max Q Clear Time (g_c+I1), s		16.0		18.1				4.9
Green Ext Time (p_c), s		4.2		9.4				11.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	135	1027	345	52	41	87
Future Volume (veh/h)	135	1027	345	52	41	87
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	135	0	345	52	41	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1683	774	449	749	405	344
Arrive On Green	0.49	0.00	0.13	0.40	0.22	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	135	0	345	52	41	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	1.7	0.0	8.0	1.4	1.5	0.0
Cycle Q Clear(g_c), s	1.7	0.0	8.0	1.4	1.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1683	774	449	749	405	344
V/C Ratio(X)	0.08	0.00	0.77	0.07	0.10	0.00
Avail Cap(c_a), veh/h	1683	774	748	749	405	344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.2	0.0	34.8	15.2	25.9	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.8	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	4.0	0.8	0.8	0.0
LnGrp Delay(d),s/veh	11.3	0.0	37.6	15.4	26.4	0.0
LnGrp LOS	B		D	B	C	
Approach Vol, veh/h	135			397	41	
Approach Delay, s/veh	11.3			34.7	26.4	
Approach LOS	B			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	15.3	22.5				37.8		45.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	18.0	18.0				18.0		40.5
Max Q Clear Time (g_c+I1), s	10.0	3.5				3.4		3.7
Green Ext Time (p_c), s	0.8	0.3				0.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1	11	17	0	58	61	234	49	55	640	160
Future Volume (vph)	42	1	11	17	0	58	61	234	49	55	640	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1776	1583		1770	1583	1770	3539	1583	1770	3433	
Flt Permitted		0.79	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1462	1583		1358	1583	1770	3539	1583	1770	3433	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	1	11	17	0	58	61	234	49	55	640	160
RTOR Reduction (vph)	0	0	8	0	0	42	0	0	26	0	28	0
Lane Group Flow (vph)	0	43	3	0	17	16	61	234	23	55	772	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		19.7	19.7		19.7	19.7	4.6	33.8	33.8	4.6	33.8	
Effective Green, g (s)		19.7	19.7		19.7	19.7	4.6	33.8	33.8	4.6	33.8	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.06	0.47	0.47	0.06	0.47	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		402	435		373	435	113	1670	747	113	1620	
v/s Ratio Prot							c0.03	0.07		0.03	c0.22	
v/s Ratio Perm		c0.03	0.00		0.01	0.01			0.01			
v/c Ratio		0.11	0.01		0.05	0.04	0.54	0.14	0.03	0.49	0.48	
Uniform Delay, d1		19.4	18.8		19.0	19.0	32.5	10.7	10.1	32.4	12.9	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5	0.0		0.1	0.0	4.9	0.2	0.1	3.3	0.2	
Delay (s)		19.9	18.9		19.1	19.0	37.4	10.9	10.2	35.6	13.1	
Level of Service		B	B		B	B	D	B	B	D	B	
Approach Delay (s)		19.7			19.1			15.5			14.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	26	17	39	334	17	514	92
Future Volume (vph)	26	17	39	334	17	514	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.95		1.00	1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1712		1770	3539	1770	3459	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1712		1770	3539	1770	3459	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	17	39	334	17	514	92
RTOR Reduction (vph)	12	0	0	0	0	17	0
Lane Group Flow (vph)	31	0	39	334	17	589	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	20.6		4.6	41.5	1.4	38.3	
Effective Green, g (s)	20.6		4.6	41.5	1.4	38.3	
Actuated g/C Ratio	0.27		0.06	0.54	0.02	0.50	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	458		105	1907	32	1720	
v/s Ratio Prot	c0.02		c0.02	c0.09	0.01	c0.17	
v/s Ratio Perm							
v/c Ratio	0.07		0.37	0.18	0.53	0.34	
Uniform Delay, d1	21.0		34.8	9.0	37.5	11.7	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3		2.2	0.2	15.9	0.5	
Delay (s)	21.3		37.0	9.2	53.4	12.3	
Level of Service	C		D	A	D	B	
Approach Delay (s)	21.3			12.1		13.4	
Approach LOS	C			B		B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	50	66	379	388	34
Future Volume (vph)	20	50	66	379	388	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.90		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1659		1770	3539	3496	
Flt Permitted	0.99		0.95	1.00	1.00	
Satd. Flow (perm)	1659		1770	3539	3496	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	50	66	379	388	34
RTOR Reduction (vph)	47	0	0	0	5	0
Lane Group Flow (vph)	23	0	66	379	417	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	4.6		5.4	54.2	44.3	
Effective Green, g (s)	4.6		5.4	54.2	44.3	
Actuated g/C Ratio	0.07		0.08	0.80	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	112		140	2829	2284	
v/s Ratio Prot	c0.01		c0.04	0.11	c0.12	
v/s Ratio Perm						
v/c Ratio	0.21		0.47	0.13	0.18	
Uniform Delay, d1	29.9		29.8	1.5	4.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9		2.5	0.1	0.2	
Delay (s)	30.8		32.3	1.6	4.8	
Level of Service	C		C	A	A	
Approach Delay (s)	30.8			6.2	4.8	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	67.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	377	7	467	13	11	6	933	318	10	9	254	95
Future Volume (vph)	377	7	467	13	11	6	933	318	10	9	254	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.90	0.85		0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1497	1504		1774		3433	3523		1770	3539	1583
Flt Permitted	0.95	0.99	1.00		0.72		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1497	1504		1312		3433	3523		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	377	7	467	13	11	6	933	318	10	9	254	95
RTOR Reduction (vph)	0	65	179	0	6	0	0	2	0	0	0	84
Lane Group Flow (vph)	298	217	92	0	24	0	933	326	0	9	254	11
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2			6		3	8		7	4	
Permitted Phases			2	6								4
Actuated Green, G (s)	37.7	37.7	37.7		7.5		35.4	42.5		5.5	12.6	12.6
Effective Green, g (s)	37.7	37.7	37.7		7.5		35.4	42.5		5.5	12.6	12.6
Actuated g/C Ratio	0.34	0.34	0.34		0.07		0.32	0.38		0.05	0.11	0.11
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	569	507	509		88		1092	1346		87	401	179
v/s Ratio Prot	c0.18	0.14					c0.27	0.09		0.01	c0.07	
v/s Ratio Perm			0.06		c0.02							0.01
v/c Ratio	0.52	0.43	0.18		0.28		0.85	0.24		0.10	0.63	0.06
Uniform Delay, d1	29.5	28.4	25.9		49.3		35.5	23.4		50.5	47.1	44.0
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.4	2.6	0.8		7.7		6.7	0.1		0.5	3.3	0.1
Delay (s)	33.0	31.0	26.7		56.9		42.2	23.5		51.0	50.3	44.2
Level of Service	C	C	C		E		D	C		D	D	D
Approach Delay (s)		30.3			56.9			37.3			48.7	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	111.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1174	451	6	4	60	85	20	16	4	87	22	624
Future Volume (vph)	1174	451	6	4	60	85	20	16	4	87	22	624
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.97	1.00
Satd. Flow (prot)	3433	3532		1770	3539	1583		3401		1681	1718	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.68		0.95	0.97	1.00
Satd. Flow (perm)	3433	3532		1770	3539	1583		2358		1681	1718	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1174	451	6	4	60	85	20	16	4	87	22	624
RTOR Reduction (vph)	0	1	0	0	0	80	0	4	0	0	0	239
Lane Group Flow (vph)	1174	456	0	4	60	5	0	36	0	54	55	385
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	41.7	46.2		1.1	5.6	5.6		10.8		13.9	13.9	55.6
Effective Green, g (s)	41.7	46.2		1.1	5.6	5.6		10.8		13.9	13.9	55.6
Actuated g/C Ratio	0.46	0.51		0.01	0.06	0.06		0.12		0.15	0.15	0.62
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1590	1813		21	220	98		282		259	265	1721
v/s Ratio Prot	c0.34	c0.13		0.00	c0.02					0.03	0.03	c0.10
v/s Ratio Perm						0.00		c0.02				0.03
v/c Ratio	0.74	0.25		0.19	0.27	0.05		0.13		0.21	0.21	0.22
Uniform Delay, d1	19.7	12.2		44.0	40.3	39.7		35.4		33.2	33.2	7.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.8	0.1		4.4	0.7	0.2		0.9		1.8	1.8	0.1
Delay (s)	21.5	12.3		48.4	40.9	39.9		36.3		35.1	35.0	7.7
Level of Service	C	B		D	D	D		D		D	D	A
Approach Delay (s)		18.9			40.6			36.3			11.8	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1197	482	161	558	0	0	0	0	423	2	731
Future Volume (vph)	0	1197	482	161	558	0	0	0	0	423	2	731
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4747	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4747	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1197	482	161	558	0	0	0	0	423	2	731
RTOR Reduction (vph)	0	8	172	0	0	0	0	0	0	0	0	344
Lane Group Flow (vph)	0	1295	204	161	558	0	0	0	0	0	425	387
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		41.9	41.9	10.5	56.9						49.6	49.6
Effective Green, g (s)		41.9	41.9	10.5	56.9						49.6	49.6
Actuated g/C Ratio		0.36	0.36	0.09	0.49						0.43	0.43
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1722	494	312	1743						761	1550
v/s Ratio Prot		c0.27		c0.05	0.16							
v/s Ratio Perm			0.15								0.24	0.11
v/c Ratio		0.75	0.41	0.52	0.32						0.56	0.25
Uniform Delay, d1		32.2	27.6	50.1	17.6						24.7	21.1
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.9	0.6	1.4	0.1						0.9	0.4
Delay (s)		34.1	28.1	51.5	17.8						25.6	21.4
Level of Service		C	C	D	B						C	C
Approach Delay (s)		32.8			25.3			0.0			23.0	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	115.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	1169	55	202	764	286	45	118	363	115	79	99
Future Volume (veh/h)	208	1169	55	202	764	286	45	118	363	115	79	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	208	1169	55	202	764	0	45	118	363	115	79	99
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	278	1705	80	272	1733	540	572	601	511	302	163	139
Arrive On Green	0.08	0.34	0.34	0.08	0.34	0.00	0.32	0.32	0.32	0.09	0.09	0.09
Sat Flow, veh/h	3442	4978	234	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	208	796	428	202	764	0	45	118	363	115	79	99
Grp Sat Flow(s),veh/h/ln	1721	1695	1821	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	6.3	21.6	21.6	6.1	12.5	0.0	1.9	4.9	21.6	3.4	4.3	6.5
Cycle Q Clear(g_c), s	6.3	21.6	21.6	6.1	12.5	0.0	1.9	4.9	21.6	3.4	4.3	6.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	1161	624	272	1733	540	572	601	511	302	163	139
V/C Ratio(X)	0.75	0.69	0.69	0.74	0.44	0.00	0.08	0.20	0.71	0.38	0.48	0.71
Avail Cap(c_a), veh/h	466	1347	723	466	2020	629	572	601	511	659	357	303
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	30.2	30.2	48.2	27.4	0.0	25.2	26.2	31.9	46.1	46.5	47.5
Incr Delay (d2), s/veh	4.0	1.2	2.2	4.0	0.2	0.0	0.3	0.7	8.2	0.8	2.2	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	10.3	11.2	3.1	5.8	0.0	1.0	2.6	10.6	1.6	2.3	3.1
LnGrp Delay(d),s/veh	52.1	31.4	32.5	52.2	27.5	0.0	25.5	27.0	40.0	46.9	48.7	54.1
LnGrp LOS	D	C	C	D	C		C	C	D	D	D	D
Approach Vol, veh/h		1432			966			526			293	
Approach Delay, s/veh		34.7			32.7			35.8			49.8	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	13.0	41.2		13.9	13.1	41.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		34.5	14.5	42.5		20.5	14.5	42.5
Max Q Clear Time (g_c+I1), s		23.6	8.1	23.6		8.5	8.3	14.5
Green Ext Time (p_c), s		1.6	0.3	13.0		0.9	0.3	17.1

Intersection Summary	
HCM 2010 Ctrl Delay	35.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1053	187	175	909	10	71	8	297	0	0	0
Future Volume (veh/h)	7	1053	187	175	909	10	71	8	297	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	7	1053	187	175	909	10	71	8	297			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	264	1722	305	238	1805	20	673	76	665			
Arrive On Green	0.40	0.40	0.40	0.07	0.50	0.50	0.42	0.42	0.42			
Sat Flow, veh/h	605	4346	771	3442	3586	39	1602	181	1583			
Grp Volume(v), veh/h	7	821	419	175	449	470	79	0	297			
Grp Sat Flow(s),veh/h/ln	605	1695	1727	1721	1770	1856	1783	0	1583			
Q Serve(g_s), s	0.9	22.7	22.8	5.9	19.9	19.9	3.2	0.0	15.8			
Cycle Q Clear(g_c), s	8.2	22.7	22.8	5.9	19.9	19.9	3.2	0.0	15.8			
Prop In Lane	1.00		0.45	1.00		0.02	0.90		1.00			
Lane Grp Cap(c), veh/h	264	1343	684	238	891	934	749	0	665			
V/C Ratio(X)	0.03	0.61	0.61	0.74	0.50	0.50	0.11	0.00	0.45			
Avail Cap(c_a), veh/h	345	1799	916	424	1224	1284	749	0	665			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.4	28.3	28.4	53.8	19.5	19.5	20.7	0.0	24.4			
Incr Delay (d2), s/veh	0.0	0.5	0.9	4.4	0.4	0.4	0.3	0.0	2.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	10.7	11.0	2.9	9.8	10.3	1.6	0.0	7.3			
LnGrp Delay(d),s/veh	26.4	28.8	29.2	58.2	19.9	19.9	21.0	0.0	26.5			
LnGrp LOS	C	C	C	E	B	B	C		C			
Approach Vol, veh/h		1247			1094			376				
Approach Delay, s/veh		28.9			26.0			25.4				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		54.0	12.6	51.2				63.8
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		49.5	14.5	62.5				81.5
Max Q Clear Time (g_c+I1), s		17.8	7.9	24.8				21.9
Green Ext Time (p_c), s		1.5	0.3	21.9				27.3

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	342	41	331	384	265	44	281	476	409	395	28
Future Volume (veh/h)	8	342	41	331	384	265	44	281	476	409	395	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	8	342	41	331	384	0	44	281	0	409	395	28
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	420	50	325	341	290	57	1432	641	483	882	62
Arrive On Green	0.13	0.13	0.13	0.18	0.18	0.00	0.03	0.40	0.00	0.14	0.51	0.51
Sat Flow, veh/h	1774	3186	379	1774	1863	1583	1774	3539	1583	3442	1719	122
Grp Volume(v), veh/h	8	189	194	331	384	0	44	281	0	409	0	423
Grp Sat Flow(s),veh/h/ln	1774	1770	1796	1774	1863	1583	1774	1770	1583	1721	0	1841
Q Serve(g_s), s	0.5	13.3	13.5	23.5	23.5	0.0	3.2	6.6	0.0	14.9	0.0	18.6
Cycle Q Clear(g_c), s	0.5	13.3	13.5	23.5	23.5	0.0	3.2	6.6	0.0	14.9	0.0	18.6
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	234	233	237	325	341	290	57	1432	641	483	0	944
V/C Ratio(X)	0.03	0.81	0.82	1.02	1.13	0.00	0.77	0.20	0.00	0.85	0.00	0.45
Avail Cap(c_a), veh/h	328	327	332	325	341	290	180	1432	641	738	0	944
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.6	54.1	54.2	52.4	52.4	0.0	61.6	24.7	0.0	53.8	0.0	19.8
Incr Delay (d2), s/veh	0.1	9.9	10.7	54.8	87.2	0.0	19.7	0.3	0.0	5.7	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.1	7.4	16.4	20.3	0.0	1.9	3.3	0.0	7.5	0.0	9.8
LnGrp Delay(d),s/veh	48.6	64.1	65.0	107.3	139.6	0.0	81.3	25.0	0.0	59.6	0.0	21.3
LnGrp LOS	D	E	E	F	F		F	C		E		C
Approach Vol, veh/h		391			715			325			832	
Approach Delay, s/veh		64.2			124.6			32.6			40.1	
Approach LOS		E			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.5	56.4		21.4	8.6	70.3		28.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	27.5	51.3		23.7	13.0	65.8		23.5
Max Q Clear Time (g_c+I1), s	16.9	8.6		15.5	5.2	20.6		25.5
Green Ext Time (p_c), s	1.1	5.3		1.4	0.0	5.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.9
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	22	15	23	33	47	70	365	55	67	88	28
Future Volume (vph)	24	22	15	23	33	47	70	365	55	67	88	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1762	1583		3261		1770	3470		1770	3411	
Flt Permitted	0.95	1.00	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1762	1583		2949		1770	3470		1770	3411	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	22	15	23	33	47	70	365	55	67	88	28
RTOR Reduction (vph)	0	0	14	0	44	0	0	16	0	0	15	0
Lane Group Flow (vph)	22	24	1	0	59	0	70	404	0	67	101	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Effective Green, g (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Actuated g/C Ratio	0.06	0.06	0.06		0.06		0.08	0.47		0.08	0.47	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	102	92		177		133	1620		133	1593	
v/s Ratio Prot	0.01	c0.01					c0.04	c0.12		0.04	0.03	
v/s Ratio Perm			0.00		c0.02							
v/c Ratio	0.22	0.24	0.01		0.33		0.53	0.25		0.50	0.06	
Uniform Delay, d1	23.9	23.9	23.6		23.9		23.6	8.5		23.6	7.8	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	1.2	0.0		1.1		3.7	0.4		3.0	0.1	
Delay (s)	25.0	25.1	23.6		25.0		27.4	8.9		26.6	7.8	
Level of Service	C	C	C		C		C	A		C	A	
Approach Delay (s)		24.7			25.0			11.5			14.7	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1153	1087	194	462	986
Future Volume (vph)	0	1153	1087	194	462	986
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.98		0.92	0.85
Flt Protected		1.00	1.00		0.98	1.00
Satd. Flow (prot)		5085	4970		3255	1441
Flt Permitted		1.00	1.00		0.98	1.00
Satd. Flow (perm)		5085	4970		3255	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1153	1087	194	462	986
RTOR Reduction (vph)	0	0	20	0	9	9
Lane Group Flow (vph)	0	1153	1261	0	946	484
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		42.4	42.4		74.7	74.7
Effective Green, g (s)		42.4	42.4		74.7	74.7
Actuated g/C Ratio		0.34	0.34		0.59	0.59
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1709	1671		1928	853
v/s Ratio Prot		0.23	c0.25		0.29	
v/s Ratio Perm						c0.34
v/c Ratio		0.67	0.75		0.49	0.57
Uniform Delay, d1		35.9	37.2		14.8	15.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.1	2.0		0.9	2.7
Delay (s)		37.0	39.2		15.7	18.5
Level of Service		D	D		B	B
Approach Delay (s)		37.0	39.2		16.6	
Approach LOS		D	D		B	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	126.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	578	1049	0	570	728	100
Future Volume (veh/h)	578	1049	0	570	728	100
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	578	0	0	570	728	100
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1264	565	0	1264	1600	736
Arrive On Green	0.36	0.00	0.00	0.36	0.46	0.46
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	578	0	0	570	728	100
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	6.3	0.0	0.0	6.2	7.3	1.8
Cycle Q Clear(g_c), s	6.3	0.0	0.0	6.2	7.3	1.8
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1264	565	0	1264	1600	736
V/C Ratio(X)	0.46	0.00	0.00	0.45	0.46	0.14
Avail Cap(c_a), veh/h	2976	1331	0	2976	1600	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	12.5	9.2	7.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.3	0.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	3.1	3.6	0.9
LnGrp Delay(d),s/veh	12.7	0.0	0.0	12.7	10.1	8.1
LnGrp LOS	B			B	B	A
Approach Vol, veh/h	578			570	828	
Approach Delay, s/veh	12.7			12.7	9.9	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		28.0		22.6				22.6
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		23.5		42.5				42.5
Max Q Clear Time (g_c+I1), s		9.3		8.3				8.2
Green Ext Time (p_c), s		2.8		9.7				9.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	103	553	841	169	99	121
Future Volume (veh/h)	103	553	841	169	99	121
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	103	0	841	169	99	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1295	596	970	998	391	333
Arrive On Green	0.38	0.00	0.28	0.54	0.21	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	103	0	841	169	99	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	2.0	0.0	23.8	4.7	4.5	0.0
Cycle Q Clear(g_c), s	2.0	0.0	23.8	4.7	4.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1295	596	970	998	391	333
V/C Ratio(X)	0.08	0.00	0.87	0.17	0.25	0.00
Avail Cap(c_a), veh/h	1295	596	1396	998	391	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	34.9	12.1	33.7	0.0
Incr Delay (d2), s/veh	0.1	0.0	4.3	0.4	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	11.8	2.5	2.5	0.0
LnGrp Delay(d),s/veh	20.6	0.0	39.2	12.5	35.3	0.0
LnGrp LOS	C		D	B	D	
Approach Vol, veh/h	103			1010	99	
Approach Delay, s/veh	20.6			34.7	35.3	
Approach LOS	C			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	33.3	26.0				59.3		43.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	41.5	21.5				21.5		38.5
Max Q Clear Time (g_c+I1), s	25.8	6.5				6.7		4.0
Green Ext Time (p_c), s	3.1	1.3				1.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	0	35	20	1	46	42	439	21	63	666	90
Future Volume (vph)	188	0	35	20	1	46	42	439	21	63	666	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1770	1583		1778	1583	1770	3539	1583	1770	3476	
Flt Permitted		0.74	1.00		0.77	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1385	1583		1443	1583	1770	3539	1583	1770	3476	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	188	0	35	20	1	46	42	439	21	63	666	90
RTOR Reduction (vph)	0	0	24	0	0	31	0	0	12	0	12	0
Lane Group Flow (vph)	0	188	11	0	21	15	42	439	9	63	744	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		25.6	25.6		25.6	25.6	4.6	32.6	32.6	6.5	34.5	
Effective Green, g (s)		25.6	25.6		25.6	25.6	4.6	32.6	32.6	6.5	34.5	
Actuated g/C Ratio		0.33	0.33		0.33	0.33	0.06	0.42	0.42	0.08	0.44	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		453	518		472	518	104	1475	659	147	1533	
v/s Ratio Prot							0.02	0.12		c0.04	c0.21	
v/s Ratio Perm		c0.14	0.01		0.01	0.01			0.01			
v/c Ratio		0.42	0.02		0.04	0.03	0.40	0.30	0.01	0.43	0.49	
Uniform Delay, d1		20.5	17.8		18.0	17.9	35.5	15.2	13.4	34.1	15.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.8	0.1		0.0	0.0	2.6	0.5	0.0	2.0	0.2	
Delay (s)		23.3	17.9		18.0	17.9	38.0	15.7	13.4	36.1	15.8	
Level of Service		C	B		B	B	D	B	B	D	B	
Approach Delay (s)		22.4			17.9			17.5			17.3	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	101	48	34	464	15	510	46
Future Volume (vph)	101	48	34	464	15	510	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.96		1.00	1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1723		1770	3539	1770	3495	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1723		1770	3539	1770	3495	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	101	48	34	464	15	510	46
RTOR Reduction (vph)	21	0	0	0	0	8	0
Lane Group Flow (vph)	128	0	34	464	15	548	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	24.6		3.1	36.6	1.4	34.9	
Effective Green, g (s)	24.6		3.1	36.6	1.4	34.9	
Actuated g/C Ratio	0.32		0.04	0.48	0.02	0.46	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	556		72	1702	32	1602	
v/s Ratio Prot	c0.07		c0.02	0.13	0.01	c0.16	
v/s Ratio Perm							
v/c Ratio	0.23		0.47	0.27	0.47	0.34	
Uniform Delay, d1	18.8		35.7	11.8	37.0	13.2	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0		4.8	0.4	10.5	0.6	
Delay (s)	19.8		40.5	12.2	47.4	13.8	
Level of Service	B		D	B	D	B	
Approach Delay (s)	19.8			14.1		14.7	
Approach LOS	B			B		B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	76.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	31	111	36	383	493	34
Future Volume (vph)	31	111	36	383	493	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.89		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1648		1770	3539	3505	
Flt Permitted	0.99		0.95	1.00	1.00	
Satd. Flow (perm)	1648		1770	3539	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	31	111	36	383	493	34
RTOR Reduction (vph)	101	0	0	0	4	0
Lane Group Flow (vph)	41	0	36	383	523	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	6.2		3.2	50.8	43.1	
Effective Green, g (s)	6.2		3.2	50.8	43.1	
Actuated g/C Ratio	0.09		0.05	0.77	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	154		85	2723	2288	
v/s Ratio Prot	c0.03		c0.02	0.11	c0.15	
v/s Ratio Perm						
v/c Ratio	0.27		0.42	0.14	0.23	
Uniform Delay, d1	27.8		30.5	2.0	4.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9		3.4	0.1	0.2	
Delay (s)	28.7		33.9	2.1	4.9	
Level of Service	C		C	A	A	
Approach Delay (s)	28.7			4.8	4.9	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	4	433	18	12	6	834	248	21	14	693	194
Future Volume (vph)	154	4	433	18	12	6	834	248	21	14	693	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.86	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1457	1504		1776		3433	3498		1770	3539	1583
Flt Permitted	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1457	1504		1776		3433	3498		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	154	4	433	18	12	6	834	248	21	14	693	194
RTOR Reduction (vph)	0	160	173	0	5	0	0	5	0	0	0	88
Lane Group Flow (vph)	139	67	52	0	31	0	834	264	0	14	693	106
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)	29.9	29.9	29.9		8.6		36.9	69.5		2.6	35.2	35.2
Effective Green, g (s)	29.9	29.9	29.9		8.6		36.9	69.5		2.6	35.2	35.2
Actuated g/C Ratio	0.23	0.23	0.23		0.07		0.29	0.54		0.02	0.27	0.27
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	390	338	349		118		985	1890		35	968	433
v/s Ratio Prot	c0.08	0.05			c0.02		c0.24	0.08		0.01	c0.20	
v/s Ratio Perm			0.03									0.07
v/c Ratio	0.36	0.20	0.15		0.27		0.85	0.14		0.40	0.72	0.25
Uniform Delay, d1	41.3	39.7	39.2		57.0		43.2	14.7		62.2	42.2	36.4
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.5	1.3	0.9		5.4		6.8	0.0		7.3	2.5	0.3
Delay (s)	43.8	41.0	40.2		62.4		50.0	14.7		69.6	44.7	36.7
Level of Service	D	D	D		E		D	B		E	D	D
Approach Delay (s)		41.4			62.4			41.4			43.4	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	128.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	930	219	1	9	121	130	12	24	11	222	16	905
Future Volume (vph)	930	219	1	9	121	130	12	24	11	222	16	905
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (prot)	3433	3537		1770	3539	1583		3372		1681	1696	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.63		0.95	0.96	1.00
Satd. Flow (perm)	3433	3537		1770	3539	1583		2135		1681	1696	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	930	219	1	9	121	130	12	24	11	222	16	905
RTOR Reduction (vph)	0	1	0	0	0	117	0	10	0	0	0	389
Lane Group Flow (vph)	930	219	0	9	121	13	0	37	0	118	120	516
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	33.8	41.0		1.0	8.2	8.2		9.6		13.6	13.6	47.4
Effective Green, g (s)	33.8	41.0		1.0	8.2	8.2		9.6		13.6	13.6	47.4
Actuated g/C Ratio	0.41	0.49		0.01	0.10	0.10		0.12		0.16	0.16	0.57
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1394	1742		21	348	156		246		274	277	1587
v/s Ratio Prot	c0.27	0.06		0.01	c0.03					0.07	c0.07	0.13
v/s Ratio Perm						0.01		c0.02				0.05
v/c Ratio	0.67	0.13		0.43	0.35	0.08		0.15		0.43	0.43	0.32
Uniform Delay, d1	20.1	11.4		40.8	35.0	34.1		33.1		31.3	31.3	9.5
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.0		13.4	0.6	0.2		1.3		4.9	4.9	0.1
Delay (s)	21.3	11.4		54.3	35.6	34.3		34.4		36.2	36.2	9.6
Level of Service	C	B		D	D	C		C		D	D	A
Approach Delay (s)		19.4			35.6			34.4			15.1	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	83.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	938	525	357	694	0	0	0	0	192	1	1030
Future Volume (vph)	0	938	525	357	694	0	0	0	0	192	1	1030
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.97	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4682	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4682	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	938	525	357	694	0	0	0	0	192	1	1030
RTOR Reduction (vph)	0	44	232	0	0	0	0	0	0	0	0	299
Lane Group Flow (vph)	0	1088	99	357	694	0	0	0	0	0	193	731
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		19.3	19.3	10.1	33.9						21.5	21.5
Effective Green, g (s)		19.3	19.3	10.1	33.9						21.5	21.5
Actuated g/C Ratio		0.30	0.30	0.16	0.53						0.33	0.33
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1403	408	538	1862						592	1205
v/s Ratio Prot		c0.23		c0.10	0.20							
v/s Ratio Perm			0.07								0.11	c0.20
v/c Ratio		0.78	0.24	0.66	0.37						0.33	0.61
Uniform Delay, d1		20.6	17.0	25.6	9.0						16.0	17.9
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		2.8	0.3	3.1	0.1						0.3	2.3
Delay (s)		23.3	17.3	28.6	9.1						16.4	20.2
Level of Service		C	B	C	A						B	C
Approach Delay (s)		22.0			15.7			0.0			19.6	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	64.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	904	71	468	1105	122	36	58	213	299	262	214
Future Volume (veh/h)	105	904	71	468	1105	122	36	58	213	299	262	214
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	904	71	468	1105	0	36	58	213	299	262	214
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	1297	102	549	1944	605	401	421	358	615	333	283
Arrive On Green	0.05	0.27	0.27	0.16	0.38	0.00	0.23	0.23	0.23	0.18	0.18	0.18
Sat Flow, veh/h	3442	4810	377	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	105	636	339	468	1105	0	36	58	213	299	262	214
Grp Sat Flow(s),veh/h/ln	1721	1695	1796	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.3	18.3	18.4	14.3	18.6	0.0	1.7	2.7	13.0	8.5	14.6	13.9
Cycle Q Clear(g_c), s	3.3	18.3	18.4	14.3	18.6	0.0	1.7	2.7	13.0	8.5	14.6	13.9
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	914	484	549	1944	605	401	421	358	615	333	283
V/C Ratio(X)	0.65	0.70	0.70	0.85	0.57	0.00	0.09	0.14	0.60	0.49	0.79	0.76
Avail Cap(c_a), veh/h	270	985	522	714	2135	665	401	421	358	905	490	416
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	35.6	35.6	44.3	26.4	0.0	33.1	33.5	37.5	40.0	42.6	42.3
Incr Delay (d2), s/veh	4.3	2.0	3.8	7.8	0.3	0.0	0.4	0.7	7.1	0.6	5.2	4.5
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	1.6	8.8	9.6	7.4	8.8	0.0	0.9	1.5	6.4	4.1	8.0	6.4
LnGrp Delay(d),s/veh	55.1	37.6	39.4	52.1	26.7	0.0	33.6	34.2	44.6	40.6	47.7	46.8
LnGrp LOS	E	D	D	D	C		C	C	D	D	D	D
Approach Vol, veh/h		1080			1573			307			775	
Approach Delay, s/veh		39.8			34.3			41.4			44.7	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	21.8	33.7		23.9	9.6	45.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	22.5	31.5		28.5	8.5	45.5
Max Q Clear Time (g_c+I1), s		15.0	16.3	20.4		16.6	5.3	20.6
Green Ext Time (p_c), s		0.8	1.0	8.8		2.8	0.1	16.6

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	921	121	317	1368	7	115	10	374	0	0	0
Future Volume (veh/h)	9	921	121	317	1368	7	115	10	374	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	9	921	121	317	1368	7	115	10	374			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	174	1899	249	387	2039	10	597	52	577			
Arrive On Green	0.42	0.42	0.42	0.11	0.56	0.56	0.36	0.36	0.36			
Sat Flow, veh/h	393	4552	596	3442	3611	18	1638	142	1583			
Grp Volume(v), veh/h	9	685	357	317	670	705	125	0	374			
Grp Sat Flow(s),veh/h/ln	393	1695	1758	1721	1770	1859	1781	0	1583			
Q Serve(g_s), s	2.1	18.8	18.9	11.5	33.8	33.9	6.1	0.0	25.1			
Cycle Q Clear(g_c), s	17.1	18.8	18.9	11.5	33.8	33.9	6.1	0.0	25.1			
Prop In Lane	1.00		0.34	1.00		0.01	0.92		1.00			
Lane Grp Cap(c), veh/h	174	1414	733	387	999	1050	649	0	577			
V/C Ratio(X)	0.05	0.48	0.49	0.82	0.67	0.67	0.19	0.00	0.65			
Avail Cap(c_a), veh/h	243	2007	1041	661	1450	1524	649	0	577			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	32.0	27.1	27.2	55.3	19.4	19.4	27.7	0.0	33.7			
Incr Delay (d2), s/veh	0.1	0.3	0.5	4.3	0.8	0.8	0.7	0.0	5.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	8.8	9.3	5.7	16.6	17.4	3.1	0.0	11.8			
LnGrp Delay(d),s/veh	32.2	27.4	27.7	59.7	20.2	20.2	28.3	0.0	39.2			
LnGrp LOS	C	C	C	E	C	C	C		D			
Approach Vol, veh/h		1051			1692			499				
Approach Delay, s/veh		27.5			27.6			36.5				
Approach LOS		C			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		51.0	18.8	57.7				76.5
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		46.5	24.5	75.5				104.5
Max Q Clear Time (g_c+I1), s		27.1	13.5	20.9				35.9
Green Ext Time (p_c), s		2.0	0.8	32.1				36.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	264	72	402	521	563	134	392	393	395	409	59
Future Volume (veh/h)	24	264	72	402	521	563	134	392	393	395	409	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	24	264	72	402	521	0	134	392	0	395	409	59
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	311	83	550	578	491	129	1177	526	450	621	90
Arrive On Green	0.11	0.11	0.11	0.31	0.31	0.00	0.07	0.33	0.00	0.13	0.39	0.39
Sat Flow, veh/h	1774	2763	739	1774	1863	1583	1774	3539	1583	3442	1592	230
Grp Volume(v), veh/h	24	167	169	402	521	0	134	392	0	395	0	468
Grp Sat Flow(s),veh/h/ln	1774	1770	1732	1774	1863	1583	1774	1770	1583	1721	0	1822
Q Serve(g_s), s	1.9	14.6	15.1	31.9	42.2	0.0	11.5	13.1	0.0	17.8	0.0	33.2
Cycle Q Clear(g_c), s	1.9	14.6	15.1	31.9	42.2	0.0	11.5	13.1	0.0	17.8	0.0	33.2
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	200	199	195	550	578	491	129	1177	526	450	0	711
V/C Ratio(X)	0.12	0.84	0.87	0.73	0.90	0.00	1.04	0.33	0.00	0.88	0.00	0.66
Avail Cap(c_a), veh/h	231	230	225	715	751	638	129	1177	526	579	0	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.9	68.5	68.8	48.5	52.1	0.0	73.1	39.5	0.0	67.3	0.0	39.4
Incr Delay (d2), s/veh	0.3	20.9	25.4	2.7	11.8	0.0	88.8	0.8	0.0	11.9	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.3	8.6	16.1	23.6	0.0	8.8	6.5	0.0	9.2	0.0	17.7
LnGrp Delay(d),s/veh	63.2	89.5	94.1	51.2	63.9	0.0	162.3	40.2	0.0	79.2	0.0	44.2
LnGrp LOS	E	F	F	D	E		F	D		E		D
Approach Vol, veh/h		360			923			526			863	
Approach Delay, s/veh		89.9			58.4			71.3			60.2	
Approach LOS		F			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.1	56.9		22.2	16.0	66.0		53.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	26.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	19.8	15.1		17.1	13.5	35.2		44.2
Green Ext Time (p_c), s	0.8	6.5		0.6	0.0	6.2		4.6

Intersection Summary	
HCM 2010 Ctrl Delay	65.8
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	68	32	66	26	74	54	217	98	225	123	21
Future Volume (vph)	44	68	32	66	26	74	54	217	98	225	123	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1765	1583		3238		1770	3374		1770	3462	
Flt Permitted	0.95	1.00	1.00		0.83		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1765	1583		2737		1770	3374		1770	3462	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	44	68	32	66	26	74	54	217	98	225	123	21
RTOR Reduction (vph)	0	0	29	0	68	0	0	53	0	0	11	0
Lane Group Flow (vph)	40	72	3	0	98	0	54	262	0	225	133	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	6.5	6.5	6.5		6.1		4.2	24.8		14.1	34.7	
Effective Green, g (s)	6.5	6.5	6.5		6.1		4.2	24.8		14.1	34.7	
Actuated g/C Ratio	0.09	0.09	0.09		0.09		0.06	0.36		0.20	0.50	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	165	148		240		106	1203		359	1728	
v/s Ratio Prot	0.02	c0.04					0.03	c0.08		c0.13	0.04	
v/s Ratio Perm			0.00		c0.04							
v/c Ratio	0.25	0.44	0.02		0.41		0.51	0.22		0.63	0.08	
Uniform Delay, d1	29.3	29.8	28.6		30.0		31.7	15.6		25.3	9.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	1.8	0.1		1.1		3.8	0.4		3.4	0.1	
Delay (s)	30.1	31.6	28.7		31.1		35.5	16.0		28.7	9.1	
Level of Service	C	C	C		C		D	B		C	A	
Approach Delay (s)		30.5			31.1			18.8			21.1	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1218	1078	106	688	962
Future Volume (vph)	0	1218	1078	106	688	962
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.99		0.94	0.85
Flt Protected		1.00	1.00		0.97	1.00
Satd. Flow (prot)		5085	5017		3303	1441
Flt Permitted		1.00	1.00		0.97	1.00
Satd. Flow (perm)		5085	5017		3303	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1218	1078	106	688	962
RTOR Reduction (vph)	0	0	11	0	7	7
Lane Group Flow (vph)	0	1218	1173	0	1114	522
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		35.5	35.5		65.6	65.6
Effective Green, g (s)		35.5	35.5		65.6	65.6
Actuated g/C Ratio		0.32	0.32		0.60	0.60
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1639	1617		1968	858
v/s Ratio Prot		c0.24	0.23		0.34	
v/s Ratio Perm						c0.36
v/c Ratio		0.74	0.73		0.57	0.61
Uniform Delay, d1		33.2	33.0		13.6	14.1
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.9	1.6		1.2	3.2
Delay (s)		35.1	34.6		14.8	17.3
Level of Service		D	C		B	B
Approach Delay (s)		35.1	34.6		15.6	
Approach LOS		D	C		B	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1068	781	1	245	954	196
Future Volume (veh/h)	1068	781	1	245	954	196
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1068	0	1	245	954	196
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1488	665	54	1457	1544	710
Arrive On Green	0.42	0.00	0.42	0.42	0.45	0.45
Sat Flow, veh/h	3632	1583	2	3552	3442	1583
Grp Volume(v), veh/h	1068	0	132	114	954	196
Grp Sat Flow(s),veh/h/ln	1770	1583	1859	1610	1721	1583
Q Serve(g_s), s	17.2	0.0	0.0	3.0	14.5	5.3
Cycle Q Clear(g_c), s	17.2	0.0	3.0	3.0	14.5	5.3
Prop In Lane		1.00	0.01		1.00	1.00
Lane Grp Cap(c), veh/h	1488	665	834	677	1544	710
V/C Ratio(X)	0.72	0.00	0.16	0.17	0.62	0.28
Avail Cap(c_a), veh/h	2072	927	1136	943	1544	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	12.4	12.4	14.4	11.9
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.1	1.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.0	1.6	1.4	7.3	2.5
LnGrp Delay(d),s/veh	17.3	0.0	12.5	12.5	16.3	12.9
LnGrp LOS	B		B	B	B	B
Approach Vol, veh/h	1068			246	1150	
Approach Delay, s/veh	17.3			12.5	15.7	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.3		33.4				33.4
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		30.8		40.2				40.2
Max Q Clear Time (g_c+I1), s		16.5		19.2				5.0
Green Ext Time (p_c), s		4.1		9.7				12.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	135	1076	373	52	41	87
Future Volume (veh/h)	135	1076	373	52	41	87
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	135	0	373	52	41	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1668	767	476	759	401	341
Arrive On Green	0.48	0.00	0.14	0.41	0.22	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	135	0	373	52	41	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	1.8	0.0	8.8	1.4	1.5	0.0
Cycle Q Clear(g_c), s	1.8	0.0	8.8	1.4	1.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1668	767	476	759	401	341
V/C Ratio(X)	0.08	0.00	0.78	0.07	0.10	0.00
Avail Cap(c_a), veh/h	1668	767	741	759	401	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.5	0.0	34.8	15.1	26.3	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.9	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	4.3	0.8	0.8	0.0
LnGrp Delay(d),s/veh	11.6	0.0	37.7	15.3	26.8	0.0
LnGrp LOS	B		D	B	C	
Approach Vol, veh/h	135			425	41	
Approach Delay, s/veh	11.6			35.0	26.8	
Approach LOS	B			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.1	22.5				38.6		45.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	18.0	18.0				18.0		40.5
Max Q Clear Time (g_c+I1), s	10.8	3.5				3.4		3.8
Green Ext Time (p_c), s	0.8	0.3				0.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1	11	17	0	58	61	262	49	55	689	160
Future Volume (vph)	42	1	11	17	0	58	61	262	49	55	689	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1776	1583		1770	1583	1770	3539	1583	1770	3439	
Flt Permitted		0.79	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1462	1583		1358	1583	1770	3539	1583	1770	3439	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	1	11	17	0	58	61	262	49	55	689	160
RTOR Reduction (vph)	0	0	8	0	0	42	0	0	26	0	25	0
Lane Group Flow (vph)	0	43	3	0	17	16	61	262	23	55	824	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		19.7	19.7		19.7	19.7	4.6	33.8	33.8	4.6	33.8	
Effective Green, g (s)		19.7	19.7		19.7	19.7	4.6	33.8	33.8	4.6	33.8	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.06	0.47	0.47	0.06	0.47	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		402	435		373	435	113	1670	747	113	1623	
v/s Ratio Prot							c0.03	0.07		0.03	c0.24	
v/s Ratio Perm		c0.03	0.00		0.01	0.01			0.01			
v/c Ratio		0.11	0.01		0.05	0.04	0.54	0.16	0.03	0.49	0.51	
Uniform Delay, d1		19.4	18.8		19.0	19.0	32.5	10.8	10.1	32.4	13.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5	0.0		0.1	0.0	4.9	0.2	0.1	3.3	0.3	
Delay (s)		19.9	18.9		19.1	19.0	37.4	11.0	10.2	35.6	13.4	
Level of Service		B	B		B	B	D	B	B	D	B	
Approach Delay (s)		19.7			19.1			15.2			14.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	26	17	39	362	17	563	92
Future Volume (vph)	26	17	39	362	17	563	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.95		1.00	1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1712		1770	3539	1770	3465	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1712		1770	3539	1770	3465	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	17	39	362	17	563	92
RTOR Reduction (vph)	12	0	0	0	0	15	0
Lane Group Flow (vph)	31	0	39	362	17	640	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	20.6		4.6	41.5	1.4	38.3	
Effective Green, g (s)	20.6		4.6	41.5	1.4	38.3	
Actuated g/C Ratio	0.27		0.06	0.54	0.02	0.50	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	458		105	1907	32	1723	
v/s Ratio Prot	c0.02		c0.02	c0.10	0.01	c0.18	
v/s Ratio Perm							
v/c Ratio	0.07		0.37	0.19	0.53	0.37	
Uniform Delay, d1	21.0		34.8	9.1	37.5	11.9	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3		2.2	0.2	15.9	0.6	
Delay (s)	21.3		37.0	9.3	53.4	12.5	
Level of Service	C		D	A	D	B	
Approach Delay (s)	21.3			12.0		13.6	
Approach LOS	C			B		B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	44	73	120	383	388	83
Future Volume (vph)	44	73	120	383	388	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.92		1.00	1.00	0.97	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1674		1770	3539	3446	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1674		1770	3539	3446	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	44	73	120	383	388	83
RTOR Reduction (vph)	66	0	0	0	16	0
Lane Group Flow (vph)	51	0	120	383	455	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	6.4		8.2	50.3	37.6	
Effective Green, g (s)	6.4		8.2	50.3	37.6	
Actuated g/C Ratio	0.10		0.12	0.77	0.57	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	163		220	2709	1972	
v/s Ratio Prot	c0.03		c0.07	0.11	c0.13	
v/s Ratio Perm						
v/c Ratio	0.31		0.55	0.14	0.23	
Uniform Delay, d1	27.6		27.0	2.0	6.9	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.1		2.8	0.1	0.3	
Delay (s)	28.7		29.8	2.1	7.2	
Level of Service	C		C	A	A	
Approach Delay (s)	28.7			8.7	7.2	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	65.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	404	7	467	13	11	6	933	345	10	9	283	95
Future Volume (vph)	404	7	467	13	11	6	933	345	10	9	283	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.90	0.85		0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1508	1504		1774		3433	3524		1770	3539	1583
Flt Permitted	0.95	0.98	1.00		0.72		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1508	1504		1300		3433	3524		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	404	7	467	13	11	6	933	345	10	9	283	95
RTOR Reduction (vph)	0	50	186	0	6	0	0	2	0	0	0	84
Lane Group Flow (vph)	303	245	94	0	24	0	933	353	0	9	283	11
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2			6		3	8		7	4	
Permitted Phases			2	6								4
Actuated Green, G (s)	37.7	37.7	37.7		7.5		35.5	43.1		5.5	13.1	13.1
Effective Green, g (s)	37.7	37.7	37.7		7.5		35.5	43.1		5.5	13.1	13.1
Actuated g/C Ratio	0.34	0.34	0.34		0.07		0.32	0.39		0.05	0.12	0.12
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	566	508	507		87		1090	1358		87	414	185
v/s Ratio Prot	c0.18	0.16					c0.27	0.10		0.01	c0.08	
v/s Ratio Perm			0.06		c0.02							0.01
v/c Ratio	0.54	0.48	0.19		0.28		0.86	0.26		0.10	0.68	0.06
Uniform Delay, d1	30.0	29.3	26.2		49.6		35.8	23.5		50.8	47.4	43.9
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.6	3.2	0.8		7.9		6.8	0.1		0.5	4.6	0.1
Delay (s)	33.6	32.6	27.0		57.5		42.5	23.6		51.3	52.0	44.0
Level of Service	C	C	C		E		D	C		D	D	D
Approach Delay (s)		31.1			57.5			37.3			50.0	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	111.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1194	451	6	4	60	92	20	16	4	91	22	648
Future Volume (vph)	1194	451	6	4	60	92	20	16	4	91	22	648
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.97	1.00
Satd. Flow (prot)	3433	3532		1770	3539	1583		3401		1681	1717	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.68		0.95	0.97	1.00
Satd. Flow (perm)	3433	3532		1770	3539	1583		2360		1681	1717	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1194	451	6	4	60	92	20	16	4	91	22	648
RTOR Reduction (vph)	0	1	0	0	0	86	0	4	0	0	0	245
Lane Group Flow (vph)	1194	456	0	4	60	6	0	36	0	56	57	403
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	42.9	47.6		1.1	5.8	5.8		10.8		13.9	13.9	56.8
Effective Green, g (s)	42.9	47.6		1.1	5.8	5.8		10.8		13.9	13.9	56.8
Actuated g/C Ratio	0.47	0.52		0.01	0.06	0.06		0.12		0.15	0.15	0.62
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1611	1839		21	224	100		278		255	261	1731
v/s Ratio Prot	c0.35	0.13		0.00	c0.02					0.03	0.03	c0.11
v/s Ratio Perm						0.00		c0.02				0.04
v/c Ratio	0.74	0.25		0.19	0.27	0.06		0.13		0.22	0.22	0.23
Uniform Delay, d1	19.7	12.1		44.7	40.8	40.2		36.1		34.0	34.0	7.7
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.9	0.1		4.4	0.6	0.2		1.0		2.0	1.9	0.1
Delay (s)	21.6	12.1		49.1	41.4	40.5		37.1		36.0	35.9	7.7
Level of Service	C	B		D	D	D		D		D	D	A
Approach Delay (s)		19.0			41.1			37.1			11.9	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	91.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1217	482	175	568	0	0	0	0	423	2	731
Future Volume (vph)	0	1217	482	175	568	0	0	0	0	423	2	731
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4751	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4751	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1217	482	175	568	0	0	0	0	423	2	731
RTOR Reduction (vph)	0	8	169	0	0	0	0	0	0	0	0	336
Lane Group Flow (vph)	0	1310	212	175	568	0	0	0	0	0	425	395
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		42.3	42.3	10.8	57.6						49.6	49.6
Effective Green, g (s)		42.3	42.3	10.8	57.6						49.6	49.6
Actuated g/C Ratio		0.36	0.36	0.09	0.50						0.43	0.43
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1729	495	319	1754						757	1540
v/s Ratio Prot		c0.28		c0.05	0.16							
v/s Ratio Perm			0.16								0.24	0.11
v/c Ratio		0.76	0.43	0.55	0.32						0.56	0.26
Uniform Delay, d1		32.5	27.8	50.4	17.6						25.1	21.4
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		2.0	0.6	1.9	0.1						1.0	0.4
Delay (s)		34.4	28.4	52.3	17.7						26.1	21.8
Level of Service		C	C	D	B						C	C
Approach Delay (s)		33.1			25.9			0.0			23.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	116.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	1184	55	205	771	286	45	118	368	115	79	99
Future Volume (veh/h)	208	1184	55	205	771	286	45	118	368	115	79	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	208	1184	55	205	771	0	45	118	368	115	79	99
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	278	1713	80	275	1745	543	570	598	508	302	163	139
Arrive On Green	0.08	0.34	0.34	0.08	0.34	0.00	0.32	0.32	0.32	0.09	0.09	0.09
Sat Flow, veh/h	3442	4981	231	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	208	806	433	205	771	0	45	118	368	115	79	99
Grp Sat Flow(s),veh/h/ln	1721	1695	1822	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	6.4	22.0	22.0	6.3	12.6	0.0	1.9	4.9	22.1	3.4	4.3	6.5
Cycle Q Clear(g_c), s	6.4	22.0	22.0	6.3	12.6	0.0	1.9	4.9	22.1	3.4	4.3	6.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	1166	627	275	1745	543	570	598	508	302	163	139
V/C Ratio(X)	0.75	0.69	0.69	0.75	0.44	0.00	0.08	0.20	0.72	0.38	0.48	0.71
Avail Cap(c_a), veh/h	464	1341	721	464	2011	626	570	598	508	657	355	302
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	30.3	30.3	48.4	27.3	0.0	25.4	26.4	32.3	46.3	46.7	47.7
Incr Delay (d2), s/veh	4.0	1.3	2.4	4.0	0.2	0.0	0.3	0.7	8.7	0.8	2.2	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	10.5	11.5	3.1	6.0	0.0	1.0	2.6	10.8	1.6	2.3	3.1
LnGrp Delay(d),s/veh	52.4	31.6	32.7	52.4	27.5	0.0	25.7	27.2	40.9	47.1	48.9	54.3
LnGrp LOS	D	C	C	D	C		C	C	D	D	D	D
Approach Vol, veh/h		1447			976			531			293	
Approach Delay, s/veh		34.9			32.7			36.6			50.0	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	13.1	41.5		13.9	13.2	41.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		34.5	14.5	42.5		20.5	14.5	42.5
Max Q Clear Time (g_c+I1), s		24.1	8.3	24.0		8.5	8.4	14.6
Green Ext Time (p_c), s		1.6	0.3	13.0		0.9	0.3	17.2

Intersection Summary	
HCM 2010 Ctrl Delay	35.9
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1065	187	176	915	10	71	8	300	0	0	0
Future Volume (veh/h)	7	1065	187	176	915	10	71	8	300	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	7	1065	187	176	915	10	71	8	300			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	263	1734	304	238	1813	20	670	76	663			
Arrive On Green	0.40	0.40	0.40	0.07	0.51	0.51	0.42	0.42	0.42			
Sat Flow, veh/h	602	4354	764	3442	3586	39	1602	181	1583			
Grp Volume(v), veh/h	7	829	423	176	451	474	79	0	300			
Grp Sat Flow(s),veh/h/ln	602	1695	1728	1721	1770	1856	1783	0	1583			
Q Serve(g_s), s	0.9	23.0	23.1	5.9	20.0	20.0	3.2	0.0	16.1			
Cycle Q Clear(g_c), s	8.3	23.0	23.1	5.9	20.0	20.0	3.2	0.0	16.1			
Prop In Lane	1.00		0.44	1.00		0.02	0.90		1.00			
Lane Grp Cap(c), veh/h	263	1350	688	238	894	938	746	0	663			
V/C Ratio(X)	0.03	0.61	0.62	0.74	0.50	0.50	0.11	0.00	0.45			
Avail Cap(c_a), veh/h	342	1791	913	422	1219	1279	746	0	663			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.4	28.4	28.4	54.0	19.4	19.4	20.9	0.0	24.7			
Incr Delay (d2), s/veh	0.0	0.5	0.9	4.4	0.4	0.4	0.3	0.0	2.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	10.8	11.1	3.0	9.9	10.4	1.6	0.0	7.4			
LnGrp Delay(d),s/veh	26.4	28.8	29.3	58.4	19.9	19.8	21.2	0.0	26.9			
LnGrp LOS	C	C	C	E	B	B	C		C			
Approach Vol, veh/h		1259			1101			379				
Approach Delay, s/veh		29.0			26.0			25.7				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		54.0	12.7	51.6				64.3
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		49.5	14.5	62.5				81.5
Max Q Clear Time (g_c+I1), s		18.1	7.9	25.1				22.0
Green Ext Time (p_c), s		1.5	0.3	22.0				27.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	348	41	334	387	265	44	281	482	409	395	28
Future Volume (veh/h)	8	348	41	334	387	265	44	281	482	409	395	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	8	348	41	334	387	0	44	281	0	409	395	28
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	426	50	324	341	289	57	1429	639	483	880	62
Arrive On Green	0.13	0.13	0.13	0.18	0.18	0.00	0.03	0.40	0.00	0.14	0.51	0.51
Sat Flow, veh/h	1774	3193	374	1774	1863	1583	1774	3539	1583	3442	1719	122
Grp Volume(v), veh/h	8	192	197	334	387	0	44	281	0	409	0	423
Grp Sat Flow(s),veh/h/ln	1774	1770	1797	1774	1863	1583	1774	1770	1583	1721	0	1841
Q Serve(g_s), s	0.5	13.5	13.7	23.5	23.5	0.0	3.2	6.6	0.0	14.9	0.0	18.7
Cycle Q Clear(g_c), s	0.5	13.5	13.7	23.5	23.5	0.0	3.2	6.6	0.0	14.9	0.0	18.7
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	237	236	240	324	341	289	57	1429	639	483	0	942
V/C Ratio(X)	0.03	0.81	0.82	1.03	1.14	0.00	0.77	0.20	0.00	0.85	0.00	0.45
Avail Cap(c_a), veh/h	327	326	331	324	341	289	179	1429	639	736	0	942
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.5	54.2	54.2	52.5	52.5	0.0	61.8	24.8	0.0	53.9	0.0	19.9
Incr Delay (d2), s/veh	0.1	10.4	11.2	57.9	91.1	0.0	19.7	0.3	0.0	5.8	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.3	7.6	16.7	20.6	0.0	1.9	3.3	0.0	7.5	0.0	9.9
LnGrp Delay(d),s/veh	48.6	64.6	65.5	110.4	143.6	0.0	81.4	25.1	0.0	59.7	0.0	21.4
LnGrp LOS	D	E	E	F	F		F	C		E		C
Approach Vol, veh/h		397			721			325			832	
Approach Delay, s/veh		64.7			128.3			32.8			40.3	
Approach LOS		E			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.5	56.4		21.6	8.6	70.3		28.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	27.5	51.3		23.7	13.0	65.8		23.5
Max Q Clear Time (g_c+I1), s	16.9	8.6		15.7	5.2	20.7		25.5
Green Ext Time (p_c), s	1.1	5.3		1.4	0.0	5.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	71.3
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	22	15	23	33	47	70	372	55	67	92	28
Future Volume (vph)	24	22	15	23	33	47	70	372	55	67	92	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1762	1583		3261		1770	3471		1770	3415	
Flt Permitted	0.95	1.00	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1762	1583		2949		1770	3471		1770	3415	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	24	22	15	23	33	47	70	372	55	67	92	28
RTOR Reduction (vph)	0	0	14	0	44	0	0	15	0	0	15	0
Lane Group Flow (vph)	22	24	1	0	59	0	70	412	0	67	105	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Effective Green, g (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Actuated g/C Ratio	0.06	0.06	0.06		0.06		0.08	0.47		0.08	0.47	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	102	92		177		133	1621		133	1594	
v/s Ratio Prot	0.01	c0.01					c0.04	c0.12		0.04	0.03	
v/s Ratio Perm			0.00		c0.02							
v/c Ratio	0.22	0.24	0.01		0.33		0.53	0.25		0.50	0.07	
Uniform Delay, d1	23.9	23.9	23.6		23.9		23.6	8.6		23.6	7.8	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	1.2	0.0		1.1		3.7	0.4		3.0	0.1	
Delay (s)	25.0	25.1	23.6		25.0		27.4	8.9		26.6	7.9	
Level of Service	C	C	C		C		C	A		C	A	
Approach Delay (s)		24.7			25.0			11.5			14.6	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1166	1099	194	490	986
Future Volume (vph)	0	1166	1099	194	490	986
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.98		0.92	0.85
Flt Protected		1.00	1.00		0.98	1.00
Satd. Flow (prot)		5085	4971		3261	1441
Flt Permitted		1.00	1.00		0.98	1.00
Satd. Flow (perm)		5085	4971		3261	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1166	1099	194	490	986
RTOR Reduction (vph)	0	0	20	0	9	9
Lane Group Flow (vph)	0	1166	1273	0	974	484
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		42.7	42.7		74.7	74.7
Effective Green, g (s)		42.7	42.7		74.7	74.7
Actuated g/C Ratio		0.34	0.34		0.59	0.59
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1717	1679		1927	851
v/s Ratio Prot		0.23	c0.26		0.30	
v/s Ratio Perm						c0.34
v/c Ratio		0.68	0.76		0.51	0.57
Uniform Delay, d1		36.0	37.3		15.1	15.9
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.1	2.0		1.0	2.8
Delay (s)		37.0	39.3		16.0	18.7
Level of Service		D	D		B	B
Approach Delay (s)		37.0	39.3		16.9	
Approach LOS		D	D		B	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	126.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	619	1049	0	582	728	100
Future Volume (veh/h)	619	1049	0	582	728	100
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	619	0	0	582	728	100
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1312	587	0	1312	1566	720
Arrive On Green	0.37	0.00	0.00	0.37	0.46	0.46
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	619	0	0	582	728	100
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	6.9	0.0	0.0	6.4	7.6	1.9
Cycle Q Clear(g_c), s	6.9	0.0	0.0	6.4	7.6	1.9
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1312	587	0	1312	1566	720
V/C Ratio(X)	0.47	0.00	0.00	0.44	0.46	0.14
Avail Cap(c_a), veh/h	2912	1303	0	2912	1566	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	0.0	0.0	12.2	9.7	8.2
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	1.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	3.1	3.8	0.9
LnGrp Delay(d),s/veh	12.7	0.0	0.0	12.5	10.7	8.6
LnGrp LOS	B			B	B	A
Approach Vol, veh/h	619			582	828	
Approach Delay, s/veh	12.7			12.5	10.5	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		28.0		23.6				23.6
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		23.5		42.5				42.5
Max Q Clear Time (g_c+I1), s		9.6		8.9				8.4
Green Ext Time (p_c), s		2.8		10.3				10.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	103	594	882	169	99	121
Future Volume (veh/h)	103	594	882	169	99	121
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	103	0	882	169	99	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1275	586	1008	1012	385	327
Arrive On Green	0.37	0.00	0.29	0.54	0.21	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	103	0	882	169	99	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	2.0	0.0	25.3	4.7	4.6	0.0
Cycle Q Clear(g_c), s	2.0	0.0	25.3	4.7	4.6	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1275	586	1008	1012	385	327
V/C Ratio(X)	0.08	0.00	0.87	0.17	0.26	0.00
Avail Cap(c_a), veh/h	1275	586	1374	1012	385	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.2	0.0	34.9	11.9	34.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	5.0	0.4	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	12.7	2.5	2.6	0.0
LnGrp Delay(d),s/veh	21.4	0.0	40.0	12.3	36.1	0.0
LnGrp LOS	C		D	B	D	
Approach Vol, veh/h	103			1051	99	
Approach Delay, s/veh	21.4			35.5	36.1	
Approach LOS	C			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	35.0	26.0				61.0		43.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	41.5	21.5				21.5		38.5
Max Q Clear Time (g_c+I1), s	27.3	6.6				6.7		4.0
Green Ext Time (p_c), s	3.1	1.2				1.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.4
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	0	35	20	1	46	42	480	21	63	707	90
Future Volume (vph)	188	0	35	20	1	46	42	480	21	63	707	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1770	1583		1778	1583	1770	3539	1583	1770	3479	
Flt Permitted		0.74	1.00		0.77	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1385	1583		1443	1583	1770	3539	1583	1770	3479	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	188	0	35	20	1	46	42	480	21	63	707	90
RTOR Reduction (vph)	0	0	24	0	0	31	0	0	12	0	12	0
Lane Group Flow (vph)	0	188	11	0	21	15	42	480	9	63	785	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		25.6	25.6		25.6	25.6	4.6	32.6	32.6	6.5	34.5	
Effective Green, g (s)		25.6	25.6		25.6	25.6	4.6	32.6	32.6	6.5	34.5	
Actuated g/C Ratio		0.33	0.33		0.33	0.33	0.06	0.42	0.42	0.08	0.44	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		453	518		472	518	104	1475	659	147	1534	
v/s Ratio Prot							0.02	0.14		c0.04	c0.23	
v/s Ratio Perm		c0.14	0.01		0.01	0.01			0.01			
v/c Ratio		0.42	0.02		0.04	0.03	0.40	0.33	0.01	0.43	0.51	
Uniform Delay, d1		20.5	17.8		18.0	17.9	35.5	15.4	13.4	34.1	15.8	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.8	0.1		0.0	0.0	2.6	0.6	0.0	2.0	0.3	
Delay (s)		23.3	17.9		18.0	17.9	38.0	16.0	13.4	36.1	16.1	
Level of Service		C	B		B	B	D	B	B	D	B	
Approach Delay (s)		22.4			17.9			17.6			17.5	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	101	48	34	505	15	551	46
Future Volume (vph)	101	48	34	505	15	551	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.96		1.00	1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1723		1770	3539	1770	3498	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1723		1770	3539	1770	3498	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	101	48	34	505	15	551	46
RTOR Reduction (vph)	21	0	0	0	0	7	0
Lane Group Flow (vph)	128	0	34	505	15	590	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	24.6		3.1	36.6	1.4	34.9	
Effective Green, g (s)	24.6		3.1	36.6	1.4	34.9	
Actuated g/C Ratio	0.32		0.04	0.48	0.02	0.46	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	556		72	1702	32	1604	
v/s Ratio Prot	c0.07		c0.02	0.14	0.01	c0.17	
v/s Ratio Perm							
v/c Ratio	0.23		0.47	0.30	0.47	0.37	
Uniform Delay, d1	18.8		35.7	12.0	37.0	13.4	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0		4.8	0.4	10.5	0.7	
Delay (s)	19.8		40.5	12.4	47.4	14.1	
Level of Service	B		D	B	D	B	
Approach Delay (s)	19.8			14.2		14.9	
Approach LOS	B			B		B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	76.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	148	82	383	493	75
Future Volume (vph)	67	148	82	383	493	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.91		1.00	1.00	0.98	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1664		1770	3539	3469	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1664		1770	3539	3469	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	148	82	383	493	75
RTOR Reduction (vph)	128	0	0	0	11	0
Lane Group Flow (vph)	87	0	82	383	557	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	8.7		5.4	47.3	37.4	
Effective Green, g (s)	8.7		5.4	47.3	37.4	
Actuated g/C Ratio	0.13		0.08	0.73	0.58	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	222		147	2575	1996	
v/s Ratio Prot	c0.05		c0.05	0.11	c0.16	
v/s Ratio Perm						
v/c Ratio	0.39		0.56	0.15	0.28	
Uniform Delay, d1	25.7		28.7	2.7	7.0	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.1		4.5	0.1	0.3	
Delay (s)	26.9		33.2	2.8	7.3	
Level of Service	C		C	A	A	
Approach Delay (s)	26.9			8.2	7.3	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	4	433	18	12	6	834	271	21	14	739	194
Future Volume (vph)	177	4	433	18	12	6	834	271	21	14	739	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.86	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1459	1504		1776		3433	3501		1770	3539	1583
Flt Permitted	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1459	1504		1776		3433	3501		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	177	4	433	18	12	6	834	271	21	14	739	194
RTOR Reduction (vph)	0	161	174	0	5	0	0	4	0	0	0	82
Lane Group Flow (vph)	159	69	51	0	31	0	834	288	0	14	739	112
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)	29.9	29.9	29.9		8.6		37.5	72.0		2.6	37.1	37.1
Effective Green, g (s)	29.9	29.9	29.9		8.6		37.5	72.0		2.6	37.1	37.1
Actuated g/C Ratio	0.23	0.23	0.23		0.07		0.29	0.55		0.02	0.28	0.28
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	383	332	343		116		981	1922		35	1001	447
v/s Ratio Prot	c0.09	0.05			c0.02		c0.24	0.08		0.01	c0.21	
v/s Ratio Perm			0.03									0.07
v/c Ratio	0.42	0.21	0.15		0.27		0.85	0.15		0.40	0.74	0.25
Uniform Delay, d1	43.1	41.0	40.4		58.3		44.1	14.5		63.5	42.6	36.3
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.3	1.4	0.9		5.6		7.2	0.0		7.3	2.9	0.3
Delay (s)	46.4	42.4	41.4		63.9		51.3	14.6		70.8	45.5	36.6
Level of Service	D	D	D		E		D	B		E	D	D
Approach Delay (s)		43.1			63.9			41.8			44.0	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	131.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	947	219	1	9	121	136	12	24	11	228	16	945
Future Volume (vph)	947	219	1	9	121	136	12	24	11	228	16	945
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (prot)	3433	3537		1770	3539	1583		3372		1681	1696	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.63		0.95	0.96	1.00
Satd. Flow (perm)	3433	3537		1770	3539	1583		2135		1681	1696	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	947	219	1	9	121	136	12	24	11	228	16	945
RTOR Reduction (vph)	0	1	0	0	0	123	0	10	0	0	0	404
Lane Group Flow (vph)	947	219	0	9	121	13	0	37	0	121	123	541
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	34.5	41.8		1.0	8.3	8.3		9.6		13.6	13.6	48.1
Effective Green, g (s)	34.5	41.8		1.0	8.3	8.3		9.6		13.6	13.6	48.1
Actuated g/C Ratio	0.41	0.50		0.01	0.10	0.10		0.11		0.16	0.16	0.57
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1409	1760		21	349	156		244		272	274	1595
v/s Ratio Prot	c0.28	0.06		0.01	c0.03					0.07	c0.07	0.14
v/s Ratio Perm						0.01		c0.02				0.05
v/c Ratio	0.67	0.12		0.43	0.35	0.09		0.15		0.44	0.45	0.34
Uniform Delay, d1	20.1	11.3		41.2	35.3	34.4		33.5		31.8	31.8	9.5
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.3	0.0		13.4	0.6	0.2		1.3		5.2	5.2	0.1
Delay (s)	21.4	11.3		54.7	35.9	34.6		34.9		37.0	37.1	9.6
Level of Service	C	B		D	D	C		C		D	D	A
Approach Delay (s)		19.5			35.9			34.9			15.3	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	84.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	955	525	381	710	0	0	0	0	192	1	1030
Future Volume (vph)	0	955	525	381	710	0	0	0	0	192	1	1030
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.98	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4687	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4687	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	955	525	381	710	0	0	0	0	192	1	1030
RTOR Reduction (vph)	0	41	235	0	0	0	0	0	0	0	0	287
Lane Group Flow (vph)	0	1103	101	381	710	0	0	0	0	0	193	743
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		19.3	19.3	10.2	34.0						21.5	21.5
Effective Green, g (s)		19.3	19.3	10.2	34.0						21.5	21.5
Actuated g/C Ratio		0.30	0.30	0.16	0.53						0.33	0.33
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1402	407	542	1865						591	1203
v/s Ratio Prot		c0.24		c0.11	0.20							
v/s Ratio Perm			0.07								0.11	c0.21
v/c Ratio		0.79	0.25	0.70	0.38						0.33	0.62
Uniform Delay, d1		20.7	17.1	25.7	9.0						16.1	18.0
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		3.0	0.3	4.1	0.1						0.3	2.4
Delay (s)		23.7	17.4	29.8	9.2						16.4	20.4
Level of Service		C	B	C	A						B	C
Approach Delay (s)		22.3			16.4			0.0			19.8	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	916	71	472	1117	122	36	58	218	299	262	214
Future Volume (veh/h)	105	916	71	472	1117	122	36	58	218	299	262	214
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	916	71	472	1117	0	36	58	218	299	262	214
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	1301	101	553	1952	608	400	420	357	614	332	282
Arrive On Green	0.05	0.27	0.27	0.16	0.38	0.00	0.23	0.23	0.23	0.18	0.18	0.18
Sat Flow, veh/h	3442	4815	372	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	105	644	343	472	1117	0	36	58	218	299	262	214
Grp Sat Flow(s),veh/h/ln	1721	1695	1797	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.3	18.6	18.7	14.5	18.9	0.0	1.7	2.7	13.5	8.5	14.6	14.0
Cycle Q Clear(g_c), s	3.3	18.6	18.7	14.5	18.9	0.0	1.7	2.7	13.5	8.5	14.6	14.0
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	916	486	553	1952	608	400	420	357	614	332	282
V/C Ratio(X)	0.65	0.70	0.71	0.85	0.57	0.00	0.09	0.14	0.61	0.49	0.79	0.76
Avail Cap(c_a), veh/h	269	982	520	712	2127	662	400	420	357	902	488	415
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	35.8	35.8	44.4	26.5	0.0	33.3	33.7	37.9	40.2	42.7	42.4
Incr Delay (d2), s/veh	4.3	2.1	4.0	8.0	0.3	0.0	0.4	0.7	7.6	0.6	5.2	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	8.9	9.8	7.5	8.8	0.0	0.9	1.5	6.6	4.1	8.0	6.4
LnGrp Delay(d),s/veh	55.3	37.9	39.8	52.4	26.8	0.0	33.8	34.4	45.5	40.8	48.0	47.0
LnGrp LOS	E	D	D	D	C		C	C	D	D	D	D
Approach Vol, veh/h		1092			1589			312			775	
Approach Delay, s/veh		40.1			34.4			42.1			44.9	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	22.0	33.9		23.9	9.6	46.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	22.5	31.5		28.5	8.5	45.5
Max Q Clear Time (g_c+I1), s		15.5	16.5	20.7		16.6	5.3	20.9
Green Ext Time (p_c), s		0.8	1.0	8.7		2.8	0.1	16.6

Intersection Summary	
HCM 2010 Ctrl Delay	38.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	931	121	320	1377	7	115	10	376	0	0	0
Future Volume (veh/h)	9	931	121	320	1377	7	115	10	376	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	9	931	121	320	1377	7	115	10	376			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	173	1911	248	389	2048	10	594	52	574			
Arrive On Green	0.42	0.42	0.42	0.11	0.57	0.57	0.36	0.36	0.36			
Sat Flow, veh/h	390	4558	591	3442	3611	18	1638	142	1583			
Grp Volume(v), veh/h	9	692	360	320	675	709	125	0	376			
Grp Sat Flow(s),veh/h/ln	390	1695	1759	1721	1770	1860	1781	0	1583			
Q Serve(g_s), s	2.1	19.1	19.2	11.7	34.2	34.2	6.2	0.0	25.5			
Cycle Q Clear(g_c), s	17.3	19.1	19.2	11.7	34.2	34.2	6.2	0.0	25.5			
Prop In Lane	1.00		0.34	1.00		0.01	0.92		1.00			
Lane Grp Cap(c), veh/h	173	1421	737	389	1004	1055	646	0	574			
V/C Ratio(X)	0.05	0.49	0.49	0.82	0.67	0.67	0.19	0.00	0.66			
Avail Cap(c_a), veh/h	239	1995	1035	657	1442	1515	646	0	574			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	32.1	27.2	27.2	55.6	19.4	19.4	28.0	0.0	34.2			
Incr Delay (d2), s/veh	0.1	0.3	0.5	4.4	0.8	0.8	0.7	0.0	5.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	9.0	9.4	5.8	16.9	17.8	3.1	0.0	12.1			
LnGrp Delay(d),s/veh	32.2	27.4	27.7	60.0	20.2	20.2	28.7	0.0	39.9			
LnGrp LOS	C	C	C	E	C	C	C		D			
Approach Vol, veh/h		1061			1704			501				
Approach Delay, s/veh		27.6			27.7			37.1				
Approach LOS		C			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		51.0	19.0	58.3				77.3
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		46.5	24.5	75.5				104.5
Max Q Clear Time (g_c+I1), s		27.5	13.7	21.2				36.2
Green Ext Time (p_c), s		2.0	0.8	32.4				36.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	269	72	406	526	563	134	392	398	395	409	59
Future Volume (veh/h)	24	269	72	406	526	563	134	392	398	395	409	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	24	269	72	406	526	0	134	392	0	395	409	59
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	315	83	554	582	495	129	1168	522	449	618	89
Arrive On Green	0.11	0.11	0.11	0.31	0.31	0.00	0.07	0.33	0.00	0.13	0.39	0.39
Sat Flow, veh/h	1774	2775	729	1774	1863	1583	1774	3539	1583	3442	1592	230
Grp Volume(v), veh/h	24	170	171	406	526	0	134	392	0	395	0	468
Grp Sat Flow(s),veh/h/ln	1774	1770	1734	1774	1863	1583	1774	1770	1583	1721	0	1822
Q Serve(g_s), s	1.9	14.9	15.4	32.4	42.9	0.0	11.5	13.2	0.0	17.9	0.0	33.5
Cycle Q Clear(g_c), s	1.9	14.9	15.4	32.4	42.9	0.0	11.5	13.2	0.0	17.9	0.0	33.5
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	201	201	197	554	582	495	129	1168	522	449	0	707
V/C Ratio(X)	0.12	0.84	0.87	0.73	0.90	0.00	1.04	0.34	0.00	0.88	0.00	0.66
Avail Cap(c_a), veh/h	229	229	224	711	746	634	129	1168	522	575	0	707
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.1	68.9	69.1	48.6	52.2	0.0	73.5	40.0	0.0	67.7	0.0	40.0
Incr Delay (d2), s/veh	0.3	22.0	26.5	2.8	12.2	0.0	90.8	0.8	0.0	12.1	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.5	8.8	16.3	24.0	0.0	8.9	6.6	0.0	9.3	0.0	17.8
LnGrp Delay(d),s/veh	63.4	90.9	95.6	51.4	64.4	0.0	164.8	40.8	0.0	79.8	0.0	44.8
LnGrp LOS	E	F	F	D	E		F	D		E		D
Approach Vol, veh/h		365			932			526			863	
Approach Delay, s/veh		91.3			58.8			72.4			60.8	
Approach LOS		F			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.2	56.8		22.5	16.0	66.0		54.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	26.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	19.9	15.2		17.4	13.5	35.5		44.9
Green Ext Time (p_c), s	0.8	6.5		0.6	0.0	6.2		4.6

Intersection Summary	
HCM 2010 Ctrl Delay	66.5
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	68	32	66	26	74	54	223	98	225	129	21
Future Volume (vph)	44	68	32	66	26	74	54	223	98	225	129	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1765	1583		3238		1770	3377		1770	3465	
Flt Permitted	0.95	1.00	1.00		0.83		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1765	1583		2737		1770	3377		1770	3465	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	44	68	32	66	26	74	54	223	98	225	129	21
RTOR Reduction (vph)	0	0	29	0	68	0	0	51	0	0	11	0
Lane Group Flow (vph)	40	72	3	0	98	0	54	270	0	225	139	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	6.5	6.5	6.5		6.1		4.2	24.8		14.1	34.7	
Effective Green, g (s)	6.5	6.5	6.5		6.1		4.2	24.8		14.1	34.7	
Actuated g/C Ratio	0.09	0.09	0.09		0.09		0.06	0.36		0.20	0.50	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	165	148		240		106	1205		359	1730	
v/s Ratio Prot	0.02	c0.04					0.03	c0.08		c0.13	0.04	
v/s Ratio Perm			0.00		c0.04							
v/c Ratio	0.25	0.44	0.02		0.41		0.51	0.22		0.63	0.08	
Uniform Delay, d1	29.3	29.8	28.6		30.0		31.7	15.6		25.3	9.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	1.8	0.1		1.1		3.8	0.4		3.4	0.1	
Delay (s)	30.1	31.6	28.7		31.1		35.5	16.1		28.7	9.2	
Level of Service	C	C	C		C		D	B		C	A	
Approach Delay (s)		30.5			31.1			18.8			20.9	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1328	1181	117	722	1062
Future Volume (vph)	0	1328	1181	117	722	1062
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.99		0.94	0.85
Flt Protected		1.00	1.00		0.97	1.00
Satd. Flow (prot)		5085	5017		3297	1441
Flt Permitted		1.00	1.00		0.97	1.00
Satd. Flow (perm)		5085	5017		3297	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1328	1181	117	722	1062
RTOR Reduction (vph)	0	0	11	0	5	5
Lane Group Flow (vph)	0	1328	1287	0	1206	568
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		37.8	37.8		65.6	65.6
Effective Green, g (s)		37.8	37.8		65.6	65.6
Actuated g/C Ratio		0.34	0.34		0.58	0.58
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1710	1687		1924	841
v/s Ratio Prot		c0.26	0.26		0.37	
v/s Ratio Perm						c0.39
v/c Ratio		0.78	0.76		0.63	0.68
Uniform Delay, d1		33.5	33.3		15.4	16.1
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		2.3	2.1		1.6	4.3
Delay (s)		35.8	35.4		16.9	20.4
Level of Service		D	D		B	C
Approach Delay (s)		35.8	35.4		18.0	
Approach LOS		D	D		B	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	112.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1126	862	1	261	1054	217
Future Volume (veh/h)	1126	862	1	261	1054	217
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1126	0	1	261	1054	217
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1535	687	52	1503	1509	694
Arrive On Green	0.43	0.00	0.43	0.43	0.44	0.44
Sat Flow, veh/h	3632	1583	2	3552	3442	1583
Grp Volume(v), veh/h	1126	0	140	122	1054	217
Grp Sat Flow(s),veh/h/ln	1770	1583	1859	1610	1721	1583
Q Serve(g_s), s	18.6	0.0	0.0	3.2	17.4	6.3
Cycle Q Clear(g_c), s	18.6	0.0	3.2	3.2	17.4	6.3
Prop In Lane		1.00	0.01		1.00	1.00
Lane Grp Cap(c), veh/h	1535	687	857	698	1509	694
V/C Ratio(X)	0.73	0.00	0.16	0.17	0.70	0.31
Avail Cap(c_a), veh/h	2025	906	1111	921	1509	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	12.2	12.2	16.0	12.8
Incr Delay (d2), s/veh	1.0	0.0	0.1	0.1	2.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	0.0	1.7	1.5	8.8	2.9
LnGrp Delay(d),s/veh	17.5	0.0	12.3	12.3	18.7	14.0
LnGrp LOS	B		B	B	B	B
Approach Vol, veh/h	1126			262	1271	
Approach Delay, s/veh	17.5			12.3	17.9	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.3		35.0				35.0
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		30.8		40.2				40.2
Max Q Clear Time (g_c+I1), s		19.4		20.6				5.2
Green Ext Time (p_c), s		4.2		9.9				12.9

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	149	1134	381	57	45	96
Future Volume (veh/h)	149	1134	381	57	45	96
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	149	0	381	57	45	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1664	765	484	762	400	340
Arrive On Green	0.48	0.00	0.14	0.41	0.21	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	149	0	381	57	45	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	2.0	0.0	9.0	1.6	1.6	0.0
Cycle Q Clear(g_c), s	2.0	0.0	9.0	1.6	1.6	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1664	765	484	762	400	340
V/C Ratio(X)	0.09	0.00	0.79	0.07	0.11	0.00
Avail Cap(c_a), veh/h	1664	765	739	762	400	340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.7	0.0	34.8	15.1	26.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	3.2	0.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.4	0.8	0.9	0.0
LnGrp Delay(d),s/veh	11.8	0.0	38.0	15.3	27.0	0.0
LnGrp LOS	B		D	B	C	
Approach Vol, veh/h	149			438	45	
Approach Delay, s/veh	11.8			35.0	27.0	
Approach LOS	B			D	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.3	22.5				38.8		45.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	18.0	18.0				18.0		40.5
Max Q Clear Time (g_c+I1), s	11.0	3.6				3.6		4.0
Green Ext Time (p_c), s	0.8	0.4				0.4		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	1	12	19	0	64	67	258	54	61	707	177
Future Volume (vph)	46	1	12	19	0	64	67	258	54	61	707	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1776	1583		1770	1583	1770	3539	1583	1770	3433	
Flt Permitted		0.78	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1449	1583		1353	1583	1770	3539	1583	1770	3433	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	1	12	19	0	64	67	258	54	61	707	177
RTOR Reduction (vph)	0	0	9	0	0	46	0	0	29	0	28	0
Lane Group Flow (vph)	0	47	3	0	19	18	67	258	25	61	856	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		19.7	19.7		19.7	19.7	4.7	33.8	33.8	4.6	33.7	
Effective Green, g (s)		19.7	19.7		19.7	19.7	4.7	33.8	33.8	4.6	33.7	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.07	0.47	0.47	0.06	0.47	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		398	435		372	435	116	1670	747	113	1615	
v/s Ratio Prot							c0.04	0.07		0.03	c0.25	
v/s Ratio Perm		c0.03	0.00		0.01	0.01			0.02			
v/c Ratio		0.12	0.01		0.05	0.04	0.58	0.15	0.03	0.54	0.53	
Uniform Delay, d1		19.4	18.8		19.1	19.0	32.5	10.8	10.1	32.5	13.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.6	0.0		0.1	0.0	6.8	0.2	0.1	4.9	0.3	
Delay (s)		20.0	18.9		19.1	19.1	39.3	11.0	10.2	37.4	13.7	
Level of Service		C	B		B	B	D	B	B	D	B	
Approach Delay (s)		19.8			19.1			15.9			15.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	29	19	43	369	17	568	102
Future Volume (vph)	29	19	43	369	17	568	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.95		1.00	1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1712		1770	3539	1770	3458	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1712		1770	3539	1770	3458	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	29	19	43	369	17	568	102
RTOR Reduction (vph)	14	0	0	0	0	17	0
Lane Group Flow (vph)	34	0	43	369	17	653	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	20.6		4.7	41.6	1.4	38.3	
Effective Green, g (s)	20.6		4.7	41.6	1.4	38.3	
Actuated g/C Ratio	0.27		0.06	0.54	0.02	0.50	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	457		107	1909	32	1717	
v/s Ratio Prot	c0.02		c0.02	c0.10	0.01	c0.19	
v/s Ratio Perm							
v/c Ratio	0.07		0.40	0.19	0.53	0.38	
Uniform Delay, d1	21.1		34.8	9.1	37.5	12.0	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3		2.5	0.2	15.9	0.6	
Delay (s)	21.4		37.3	9.4	53.4	12.7	
Level of Service	C		D	A	D	B	
Approach Delay (s)	21.4			12.3		13.7	
Approach LOS	C			B		B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	77.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	55	73	419	429	38
Future Volume (vph)	22	55	73	419	429	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.90		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1659		1770	3539	3496	
Flt Permitted	0.99		0.95	1.00	1.00	
Satd. Flow (perm)	1659		1770	3539	3496	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	55	73	419	429	38
RTOR Reduction (vph)	50	0	0	0	5	0
Lane Group Flow (vph)	27	0	73	419	462	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	5.7		6.9	52.2	40.8	
Effective Green, g (s)	5.7		6.9	52.2	40.8	
Actuated g/C Ratio	0.09		0.10	0.78	0.61	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	141		182	2761	2132	
v/s Ratio Prot	c0.02		c0.04	0.12	c0.13	
v/s Ratio Perm						
v/c Ratio	0.19		0.40	0.15	0.22	
Uniform Delay, d1	28.5		28.1	1.8	5.9	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.7		1.4	0.1	0.2	
Delay (s)	29.1		29.5	1.9	6.1	
Level of Service	C		C	A	A	
Approach Delay (s)	29.1			6.0	6.1	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	413	8	511	14	12	7	1018	348	11	10	278	104
Future Volume (vph)	413	8	511	14	12	7	1018	348	11	10	278	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.90	0.85		0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1498	1504		1772		3433	3523		1770	3539	1583
Flt Permitted	0.95	0.99	1.00		0.71		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1498	1504		1285		3433	3523		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	413	8	511	14	12	7	1018	348	11	10	278	104
RTOR Reduction (vph)	0	66	199	0	7	0	0	2	0	0	0	92
Lane Group Flow (vph)	326	244	97	0	26	0	1018	357	0	10	278	12
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2			6		3	8		7	4	
Permitted Phases			2	6								4
Actuated Green, G (s)	37.6	37.6	37.6		7.5		38.2	45.8		5.5	13.1	13.1
Effective Green, g (s)	37.6	37.6	37.6		7.5		38.2	45.8		5.5	13.1	13.1
Actuated g/C Ratio	0.33	0.33	0.33		0.07		0.33	0.40		0.05	0.11	0.11
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	552	492	494		84		1146	1410		85	405	181
v/s Ratio Prot	c0.19	0.16					c0.30	0.10		0.01	c0.08	
v/s Ratio Perm			0.06		c0.02							0.01
v/c Ratio	0.59	0.49	0.20		0.31		0.89	0.25		0.12	0.69	0.07
Uniform Delay, d1	32.0	30.8	27.6		51.0		36.1	22.9		52.1	48.7	45.2
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.6	3.5	0.9		9.6		8.6	0.1		0.6	4.8	0.2
Delay (s)	36.6	34.3	28.5		60.6		44.7	23.0		52.7	53.5	45.3
Level of Service	D	C	C		E		D	C		D	D	D
Approach Delay (s)		33.2			60.6			39.0			51.3	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	114.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1282	495	6	4	66	93	22	17	4	95	24	683
Future Volume (vph)	1282	495	6	4	66	93	22	17	4	95	24	683
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.97	1.00
Satd. Flow (prot)	3433	3533		1770	3539	1583		3403		1681	1718	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.69		0.95	0.97	1.00
Satd. Flow (perm)	3433	3533		1770	3539	1583		2403		1681	1718	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1282	495	6	4	66	93	22	17	4	95	24	683
RTOR Reduction (vph)	0	1	0	0	0	86	0	4	0	0	0	251
Lane Group Flow (vph)	1282	500	0	4	66	7	0	39	0	59	60	432
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	48.6	55.0		1.1	7.5	7.5		10.7		13.7	13.7	62.3
Effective Green, g (s)	48.6	55.0		1.1	7.5	7.5		10.7		13.7	13.7	62.3
Actuated g/C Ratio	0.49	0.56		0.01	0.08	0.08		0.11		0.14	0.14	0.63
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1693	1972		19	269	120		261		233	238	1762
v/s Ratio Prot	c0.37	0.14		0.00	c0.02					c0.04	0.03	0.12
v/s Ratio Perm						0.00		c0.02				0.03
v/c Ratio	0.76	0.25		0.21	0.25	0.06		0.15		0.25	0.25	0.25
Uniform Delay, d1	20.2	11.2		48.3	42.8	42.2		39.8		37.8	37.8	7.9
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	2.0	0.1		5.5	0.5	0.2		1.2		2.6	2.5	0.1
Delay (s)	22.2	11.3		53.7	43.3	42.4		41.0		40.4	40.4	7.9
Level of Service	C	B		D	D	D		D		D	D	A
Approach Delay (s)		19.1			43.1			41.0			12.8	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	98.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1307	526	176	611	0	0	0	0	463	2	800
Future Volume (vph)	0	1307	526	176	611	0	0	0	0	463	2	800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4747	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4747	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1307	526	176	611	0	0	0	0	463	2	800
RTOR Reduction (vph)	0	8	169	0	0	0	0	0	0	0	0	303
Lane Group Flow (vph)	0	1415	241	176	611	0	0	0	0	0	465	497
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		43.6	43.6	10.9	59.0						49.5	49.5
Effective Green, g (s)		43.6	43.6	10.9	59.0						49.5	49.5
Actuated g/C Ratio		0.37	0.37	0.09	0.50						0.42	0.42
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1761	505	318	1777						747	1520
v/s Ratio Prot		c0.30		c0.05	0.17							
v/s Ratio Perm			0.18								0.26	0.14
v/c Ratio		0.80	0.48	0.55	0.34						0.62	0.33
Uniform Delay, d1		33.1	28.2	51.0	17.6						26.7	22.8
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		2.8	0.7	2.1	0.1						1.6	0.6
Delay (s)		35.9	28.9	53.1	17.7						28.3	23.4
Level of Service		D	C	D	B						C	C
Approach Delay (s)		34.3			25.6			0.0			25.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	117.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	1279	60	220	838	313	49	129	394	126	87	109
Future Volume (veh/h)	228	1279	60	220	838	313	49	129	394	126	87	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	228	1279	60	220	838	0	49	129	394	126	87	109
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	295	1746	82	287	1771	552	551	578	491	322	174	148
Arrive On Green	0.09	0.35	0.35	0.08	0.35	0.00	0.31	0.31	0.31	0.09	0.09	0.09
Sat Flow, veh/h	3442	4978	234	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	228	871	468	220	838	0	49	129	394	126	87	109
Grp Sat Flow(s),veh/h/ln	1721	1695	1822	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	7.2	25.0	25.0	7.0	14.3	0.0	2.2	5.7	25.4	3.8	4.9	7.4
Cycle Q Clear(g_c), s	7.2	25.0	25.0	7.0	14.3	0.0	2.2	5.7	25.4	3.8	4.9	7.4
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	1189	639	287	1771	552	551	578	491	322	174	148
V/C Ratio(X)	0.77	0.73	0.73	0.77	0.47	0.00	0.09	0.22	0.80	0.39	0.50	0.74
Avail Cap(c_a), veh/h	449	1296	696	449	1944	605	551	578	491	635	344	292
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	31.5	31.5	49.9	28.3	0.0	27.2	28.4	35.2	47.4	47.9	49.0
Incr Delay (d2), s/veh	4.5	2.0	3.6	4.2	0.2	0.0	0.3	0.9	12.9	0.8	2.2	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	11.9	13.1	3.5	6.7	0.0	1.1	3.1	12.9	1.9	2.6	3.5
LnGrp Delay(d),s/veh	54.2	33.5	35.2	54.1	28.5	0.0	27.5	29.3	48.1	48.2	50.1	56.0
LnGrp LOS	D	C	D	D	C		C	C	D	D	D	E
Approach Vol, veh/h		1567			1058			572			322	
Approach Delay, s/veh		37.0			33.8			42.1			51.3	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	13.8	43.5		14.9	14.0	43.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		34.5	14.5	42.5		20.5	14.5	42.5
Max Q Clear Time (g_c+I1), s		27.4	9.0	27.0		9.4	9.2	16.3
Green Ext Time (p_c), s		1.4	0.3	12.0		0.9	0.3	17.9

Intersection Summary	
HCM 2010 Ctrl Delay	38.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1165	204	187	997	10	79	8	327	0	0	0
Future Volume (veh/h)	7	1165	204	187	997	10	79	8	327	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	7	1165	204	187	997	10	79	8	327			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	249	1816	318	247	1885	19	650	66	636			
Arrive On Green	0.42	0.42	0.42	0.07	0.53	0.53	0.40	0.40	0.40			
Sat Flow, veh/h	557	4356	763	3442	3590	36	1618	164	1583			
Grp Volume(v), veh/h	7	907	462	187	491	516	87	0	327			
Grp Sat Flow(s),veh/h/ln	557	1695	1728	1721	1770	1856	1782	0	1583			
Q Serve(g_s), s	1.0	26.2	26.2	6.6	22.5	22.5	3.8	0.0	19.2			
Cycle Q Clear(g_c), s	10.2	26.2	26.2	6.6	22.5	22.5	3.8	0.0	19.2			
Prop In Lane	1.00		0.44	1.00		0.02	0.91		1.00			
Lane Grp Cap(c), veh/h	249	1413	720	247	929	975	716	0	636			
V/C Ratio(X)	0.03	0.64	0.64	0.76	0.53	0.53	0.12	0.00	0.51			
Avail Cap(c_a), veh/h	300	1720	877	405	1171	1228	716	0	636			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.0	28.6	28.6	56.1	19.2	19.2	23.2	0.0	27.8			
Incr Delay (d2), s/veh	0.0	0.6	1.2	4.7	0.5	0.4	0.3	0.0	3.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	12.3	12.7	3.3	11.0	11.6	1.9	0.0	8.9			
LnGrp Delay(d),s/veh	27.0	29.2	29.7	60.8	19.7	19.7	23.5	0.0	30.7			
LnGrp LOS	C	C	C	E	B	B	C		C			
Approach Vol, veh/h		1376			1194			414				
Approach Delay, s/veh		29.4			26.1			29.2				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		54.0	13.3	55.9				69.2
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		49.5	14.5	62.5				81.5
Max Q Clear Time (g_c+I1), s		21.2	8.6	28.2				24.5
Green Ext Time (p_c), s		1.7	0.3	23.1				31.3

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	382	43	365	418	292	48	319	516	455	430	29
Future Volume (veh/h)	9	382	43	365	418	292	48	319	516	455	430	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	9	382	43	365	418	0	48	319	0	455	430	29
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	456	51	317	333	283	62	1380	617	526	876	59
Arrive On Green	0.14	0.14	0.14	0.18	0.18	0.00	0.03	0.39	0.00	0.15	0.51	0.51
Sat Flow, veh/h	1774	3210	359	1774	1863	1583	1774	3539	1583	3442	1726	116
Grp Volume(v), veh/h	9	210	215	365	418	0	48	319	0	455	0	459
Grp Sat Flow(s),veh/h/ln	1774	1770	1799	1774	1863	1583	1774	1770	1583	1721	0	1842
Q Serve(g_s), s	0.6	15.2	15.4	23.5	23.5	0.0	3.5	8.0	0.0	17.0	0.0	21.5
Cycle Q Clear(g_c), s	0.6	15.2	15.4	23.5	23.5	0.0	3.5	8.0	0.0	17.0	0.0	21.5
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	252	251	256	317	333	283	62	1380	617	526	0	935
V/C Ratio(X)	0.04	0.83	0.84	1.15	1.26	0.00	0.77	0.23	0.00	0.86	0.00	0.49
Avail Cap(c_a), veh/h	319	319	324	317	333	283	175	1380	617	719	0	935
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.7	55.0	55.0	54.1	54.1	0.0	63.0	26.9	0.0	54.4	0.0	21.2
Incr Delay (d2), s/veh	0.1	14.0	14.8	98.4	137.8	0.0	18.1	0.4	0.0	8.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.4	8.7	20.1	24.7	0.0	2.0	4.0	0.0	8.7	0.0	11.3
LnGrp Delay(d),s/veh	48.7	69.0	69.9	152.5	191.8	0.0	81.1	27.3	0.0	62.6	0.0	23.1
LnGrp LOS	D	E	E	F	F		F	C		E		C
Approach Vol, veh/h		434			783			367			914	
Approach Delay, s/veh		69.0			173.5			34.4			42.7	
Approach LOS		E			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.6	55.8		23.2	9.1	71.3		28.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	27.5	51.3		23.7	13.0	65.8		23.5
Max Q Clear Time (g_c+I1), s	19.0	10.0		17.4	5.5	23.5		25.5
Green Ext Time (p_c), s	1.1	6.0		1.3	0.0	6.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	87.1
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	24	17	25	36	52	77	403	61	74	97	31
Future Volume (vph)	27	24	17	25	36	52	77	403	61	74	97	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.98		1.00	0.96	
Flt Protected	0.95	0.99	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1760	1583		3259		1770	3469		1770	3411	
Flt Permitted	0.95	0.99	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1760	1583		2947		1770	3469		1770	3411	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	27	24	17	25	36	52	77	403	61	74	97	31
RTOR Reduction (vph)	0	0	16	0	49	0	0	16	0	0	17	0
Lane Group Flow (vph)	24	27	1	0	64	0	77	448	0	74	111	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Effective Green, g (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Actuated g/C Ratio	0.06	0.06	0.06		0.06		0.08	0.47		0.08	0.47	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	102	92		177		133	1620		133	1593	
v/s Ratio Prot	0.01	c0.02					c0.04	c0.13		0.04	0.03	
v/s Ratio Perm			0.00		c0.02							
v/c Ratio	0.24	0.26	0.01		0.36		0.58	0.28		0.56	0.07	
Uniform Delay, d1	23.9	23.9	23.6		24.0		23.7	8.7		23.7	7.8	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	1.4	0.0		1.3		6.0	0.4		5.0	0.1	
Delay (s)	25.2	25.3	23.6		25.2		29.7	9.1		28.7	7.9	
Level of Service	C	C	C		C		C	A		C	A	
Approach Delay (s)		24.8			25.2			12.0			15.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1273	1200	214	510	1089
Future Volume (vph)	0	1273	1200	214	510	1089
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.98		0.92	0.85
Flt Protected		1.00	1.00		0.98	1.00
Satd. Flow (prot)		5085	4970		3255	1441
Flt Permitted		1.00	1.00		0.98	1.00
Satd. Flow (perm)		5085	4970		3255	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1273	1200	214	510	1089
RTOR Reduction (vph)	0	0	19	0	6	6
Lane Group Flow (vph)	0	1273	1395	0	1049	538
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		46.6	46.6		74.6	74.6
Effective Green, g (s)		46.6	46.6		74.6	74.6
Actuated g/C Ratio		0.36	0.36		0.57	0.57
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1819	1778		1865	825
v/s Ratio Prot		0.25	c0.28		0.32	
v/s Ratio Perm						c0.37
v/c Ratio		0.70	0.78		0.56	0.65
Uniform Delay, d1		35.8	37.3		17.5	18.9
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.2	2.3		1.2	4.0
Delay (s)		37.0	39.7		18.7	22.9
Level of Service		D	D		B	C
Approach Delay (s)		37.0	39.7		20.2	
Approach LOS		D	D		C	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	130.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	638	1158	0	630	803	110
Future Volume (veh/h)	638	1158	0	630	803	110
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	638	0	0	630	803	110
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1354	606	0	1354	1536	707
Arrive On Green	0.38	0.00	0.00	0.38	0.45	0.45
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	638	0	0	630	803	110
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	7.1	0.0	0.0	7.0	8.9	2.2
Cycle Q Clear(g_c), s	7.1	0.0	0.0	7.0	8.9	2.2
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1354	606	0	1354	1536	707
V/C Ratio(X)	0.47	0.00	0.00	0.47	0.52	0.16
Avail Cap(c_a), veh/h	2858	1278	0	2858	1536	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	12.2	10.5	8.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	1.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.0	3.5	4.4	1.0
LnGrp Delay(d),s/veh	12.5	0.0	0.0	12.5	11.8	9.1
LnGrp LOS	B			B	B	A
Approach Vol, veh/h	638			630	913	
Approach Delay, s/veh	12.5			12.5	11.5	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		28.0		24.6				24.6
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		23.5		42.5				42.5
Max Q Clear Time (g_c+I1), s		10.9		9.1				9.0
Green Ext Time (p_c), s		3.0		11.0				11.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	114	611	929	187	109	134
Future Volume (veh/h)	114	611	929	187	109	134
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	114	0	929	187	109	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1252	576	1051	1027	378	322
Arrive On Green	0.36	0.00	0.31	0.55	0.20	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	114	0	929	187	109	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	2.3	0.0	27.2	5.3	5.2	0.0
Cycle Q Clear(g_c), s	2.3	0.0	27.2	5.3	5.2	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1252	576	1051	1027	378	322
V/C Ratio(X)	0.09	0.00	0.88	0.18	0.29	0.00
Avail Cap(c_a), veh/h	1252	576	1350	1027	378	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.1	0.0	35.0	11.9	35.7	0.0
Incr Delay (d2), s/veh	0.1	0.0	6.0	0.4	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	13.8	2.8	2.9	0.0
LnGrp Delay(d),s/veh	22.3	0.0	40.9	12.2	37.6	0.0
LnGrp LOS	C		D	B	D	
Approach Vol, veh/h	114			1116	109	
Approach Delay, s/veh	22.3			36.1	37.6	
Approach LOS	C			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	36.8	26.0				62.8		43.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	41.5	21.5				21.5		38.5
Max Q Clear Time (g_c+I1), s	29.2	7.2				7.3		4.3
Green Ext Time (p_c), s	3.1	1.4				1.4		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	0	39	22	1	51	46	485	23	70	736	99
Future Volume (vph)	208	0	39	22	1	51	46	485	23	70	736	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1770	1583		1778	1583	1770	3539	1583	1770	3476	
Flt Permitted		0.74	1.00		0.76	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1383	1583		1414	1583	1770	3539	1583	1770	3476	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	208	0	39	22	1	51	46	485	23	70	736	99
RTOR Reduction (vph)	0	0	26	0	0	34	0	0	13	0	12	0
Lane Group Flow (vph)	0	208	13	0	23	17	46	485	10	70	823	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		25.6	25.6		25.6	25.6	4.7	32.6	32.6	6.7	34.6	
Effective Green, g (s)		25.6	25.6		25.6	25.6	4.7	32.6	32.6	6.7	34.6	
Actuated g/C Ratio		0.33	0.33		0.33	0.33	0.06	0.42	0.42	0.09	0.44	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		451	516		461	516	106	1471	658	151	1534	
v/s Ratio Prot							0.03	0.14		c0.04	c0.24	
v/s Ratio Perm		c0.15	0.01		0.02	0.01			0.01			
v/c Ratio		0.46	0.02		0.05	0.03	0.43	0.33	0.01	0.46	0.54	
Uniform Delay, d1		20.9	17.9		18.1	18.0	35.6	15.5	13.5	34.1	16.0	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		3.4	0.1		0.0	0.0	2.8	0.6	0.0	2.2	0.4	
Delay (s)		24.3	18.0		18.1	18.0	38.4	16.1	13.5	36.4	16.4	
Level of Service		C	B		B	B	D	B	B	D	B	
Approach Delay (s)		23.3			18.0			17.8			17.9	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	78.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	112	53	38	513	15	563	51
Future Volume (vph)	112	53	38	513	15	563	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.96		1.00	1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1723		1770	3539	1770	3495	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1723		1770	3539	1770	3495	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	53	38	513	15	563	51
RTOR Reduction (vph)	21	0	0	0	0	8	0
Lane Group Flow (vph)	144	0	38	513	15	606	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	24.6		4.6	38.5	1.4	35.3	
Effective Green, g (s)	24.6		4.6	38.5	1.4	35.3	
Actuated g/C Ratio	0.32		0.06	0.49	0.02	0.45	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	543		104	1746	31	1581	
v/s Ratio Prot	c0.08		c0.02	c0.14	0.01	c0.17	
v/s Ratio Perm							
v/c Ratio	0.26		0.37	0.29	0.48	0.38	
Uniform Delay, d1	19.9		35.3	11.7	37.9	14.1	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2		2.2	0.4	11.4	0.7	
Delay (s)	21.1		37.5	12.1	49.4	14.8	
Level of Service	C		D	B	D	B	
Approach Delay (s)	21.1			13.9		15.7	
Approach LOS	C			B		B	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	78.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	34	123	40	423	545	38
Future Volume (vph)	34	123	40	423	545	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.89		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1648		1770	3539	3505	
Flt Permitted	0.99		0.95	1.00	1.00	
Satd. Flow (perm)	1648		1770	3539	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	123	40	423	545	38
RTOR Reduction (vph)	109	0	0	0	4	0
Lane Group Flow (vph)	48	0	40	423	579	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.5		3.4	49.9	42.0	
Effective Green, g (s)	7.5		3.4	49.9	42.0	
Actuated g/C Ratio	0.11		0.05	0.75	0.63	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	186		90	2659	2217	
v/s Ratio Prot	c0.03		c0.02	0.12	c0.17	
v/s Ratio Perm						
v/c Ratio	0.26		0.44	0.16	0.26	
Uniform Delay, d1	26.9		30.6	2.3	5.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.7		3.5	0.1	0.3	
Delay (s)	27.6		34.1	2.5	5.7	
Level of Service	C		C	A	A	
Approach Delay (s)	27.6			5.2	5.7	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	4	470	20	13	7	912	271	23	15	753	212
Future Volume (vph)	168	4	470	20	13	7	912	271	23	15	753	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.86	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1457	1504		1774		3433	3498		1770	3539	1583
Flt Permitted	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1457	1504		1774		3433	3498		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	168	4	470	20	13	7	912	271	23	15	753	212
RTOR Reduction (vph)	0	177	191	0	5	0	0	4	0	0	0	88
Lane Group Flow (vph)	151	70	53	0	35	0	912	290	0	15	753	124
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)	29.9	29.9	29.9		8.6		41.9	77.7		2.7	38.5	38.5
Effective Green, g (s)	29.9	29.9	29.9		8.6		41.9	77.7		2.7	38.5	38.5
Actuated g/C Ratio	0.22	0.22	0.22		0.06		0.31	0.57		0.02	0.28	0.28
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	367	318	328		111		1050	1985		34	995	445
v/s Ratio Prot	c0.09	0.05			c0.02		c0.27	0.08		0.01	c0.21	
v/s Ratio Perm			0.04									0.08
v/c Ratio	0.41	0.22	0.16		0.32		0.87	0.15		0.44	0.76	0.28
Uniform Delay, d1	45.9	43.9	43.4		61.3		44.9	14.0		66.4	44.9	38.4
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.4	1.6	1.1		7.4		7.8	0.0		8.9	3.3	0.3
Delay (s)	49.3	45.5	44.4		68.7		52.7	14.0		75.2	48.3	38.7
Level of Service	D	D	D		E		D	B		E	D	D
Approach Delay (s)		46.0			68.7			43.2			46.6	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	45.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	136.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1017	240	1	10	132	142	13	26	12	239	17	985
Future Volume (vph)	1017	240	1	10	132	142	13	26	12	239	17	985
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (prot)	3433	3537		1770	3539	1583		3371		1681	1696	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.63		0.95	0.96	1.00
Satd. Flow (perm)	3433	3537		1770	3539	1583		2138		1681	1696	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1017	240	1	10	132	142	13	26	12	239	17	985
RTOR Reduction (vph)	0	0	0	0	0	128	0	11	0	0	0	413
Lane Group Flow (vph)	1017	241	0	10	132	14	0	40	0	127	129	572
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	36.3	43.8		1.0	8.5	8.5		9.6		13.6	13.6	49.9
Effective Green, g (s)	36.3	43.8		1.0	8.5	8.5		9.6		13.6	13.6	49.9
Actuated g/C Ratio	0.42	0.51		0.01	0.10	0.10		0.11		0.16	0.16	0.58
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1449	1801		20	349	156		238		265	268	1617
v/s Ratio Prot	c0.30	0.07		0.01	c0.04					0.08	c0.08	0.15
v/s Ratio Perm						0.01		c0.02				0.06
v/c Ratio	0.70	0.13		0.50	0.38	0.09		0.17		0.48	0.48	0.35
Uniform Delay, d1	20.4	11.1		42.3	36.3	35.2		34.6		33.0	33.0	9.5
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.6	0.0		18.3	0.7	0.3		1.5		6.1	6.1	0.1
Delay (s)	22.0	11.1		60.6	37.0	35.5		36.1		39.1	39.1	9.7
Level of Service	C	B		E	D	D		D		D	D	A
Approach Delay (s)		19.9			37.1			36.1			15.7	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1025	573	388	756	0	0	0	0	211	1	1122
Future Volume (vph)	0	1025	573	388	756	0	0	0	0	211	1	1122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.97	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4682	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4682	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1025	573	388	756	0	0	0	0	211	1	1122
RTOR Reduction (vph)	0	44	252	0	0	0	0	0	0	0	0	256
Lane Group Flow (vph)	0	1193	109	388	756	0	0	0	0	0	212	866
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		19.5	19.5	10.2	34.2						21.5	21.5
Effective Green, g (s)		19.5	19.5	10.2	34.2						21.5	21.5
Actuated g/C Ratio		0.30	0.30	0.16	0.53						0.33	0.33
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1411	410	541	1870						589	1199
v/s Ratio Prot		c0.25		c0.11	0.21							
v/s Ratio Perm			0.08								0.12	c0.24
v/c Ratio		0.85	0.27	0.72	0.40						0.36	0.72
Uniform Delay, d1		21.2	17.2	25.9	9.1						16.4	19.0
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		4.9	0.3	4.5	0.1						0.4	3.8
Delay (s)		26.0	17.5	30.4	9.3						16.8	22.8
Level of Service		C	B	C	A						B	C
Approach Delay (s)		24.1			16.4			0.0			21.8	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	64.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	989	77	505	1207	133	39	63	232	326	286	233
Future Volume (veh/h)	115	989	77	505	1207	133	39	63	232	326	286	233
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	115	989	77	505	1207	0	39	63	232	326	286	233
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	1291	100	578	1965	612	383	402	342	651	352	300
Arrive On Green	0.05	0.27	0.27	0.17	0.39	0.00	0.22	0.22	0.22	0.19	0.19	0.19
Sat Flow, veh/h	3442	4813	374	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	115	696	370	505	1207	0	39	63	232	326	286	233
Grp Sat Flow(s),veh/h/ln	1721	1695	1797	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.7	21.4	21.5	16.2	21.7	0.0	2.0	3.1	15.3	9.6	16.7	15.9
Cycle Q Clear(g_c), s	3.7	21.4	21.5	16.2	21.7	0.0	2.0	3.1	15.3	9.6	16.7	15.9
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	909	482	578	1965	612	383	402	342	651	352	300
V/C Ratio(X)	0.67	0.77	0.77	0.87	0.61	0.00	0.10	0.16	0.68	0.50	0.81	0.78
Avail Cap(c_a), veh/h	258	941	499	683	2040	635	383	402	342	865	468	398
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	38.2	38.2	46.0	28.0	0.0	35.6	36.1	40.8	41.2	44.0	43.7
Incr Delay (d2), s/veh	4.5	3.7	6.9	10.7	0.5	0.0	0.5	0.8	10.4	0.6	7.9	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	10.5	11.6	8.6	10.3	0.0	1.0	1.7	7.7	4.6	9.3	7.5
LnGrp Delay(d),s/veh	57.5	41.9	45.1	56.8	28.5	0.0	36.2	36.9	51.2	41.8	51.9	50.6
LnGrp LOS	E	D	D	E	C		D	D	D	D	D	D
Approach Vol, veh/h		1181			1712			334			845	
Approach Delay, s/veh		44.4			36.9			46.8			47.6	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	23.5	34.9		26.0	10.1	48.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	22.5	31.5		28.5	8.5	45.5
Max Q Clear Time (g_c+I1), s		17.3	18.2	23.5		18.7	5.7	23.7
Green Ext Time (p_c), s		0.7	0.8	6.9		2.8	0.1	16.3

Intersection Summary	
HCM 2010 Ctrl Delay	42.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	997	133	335	1482	7	123	10	396	0	0	0
Future Volume (veh/h)	9	997	133	335	1482	7	123	10	396	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	9	997	133	335	1482	7	123	10	396			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	161	2010	268	400	2138	10	563	46	541			
Arrive On Green	0.44	0.44	0.44	0.12	0.59	0.59	0.34	0.34	0.34			
Sat Flow, veh/h	352	4542	605	3442	3612	17	1647	134	1583			
Grp Volume(v), veh/h	9	744	386	335	726	763	133	0	396			
Grp Sat Flow(s),veh/h/ln	352	1695	1756	1721	1770	1860	1780	0	1583			
Q Serve(g_s), s	2.5	21.3	21.4	13.0	38.6	38.6	7.2	0.0	29.8			
Cycle Q Clear(g_c), s	20.8	21.3	21.4	13.0	38.6	38.6	7.2	0.0	29.8			
Prop In Lane	1.00		0.34	1.00		0.01	0.92		1.00			
Lane Grp Cap(c), veh/h	161	1500	777	400	1047	1101	609	0	541			
V/C Ratio(X)	0.06	0.50	0.50	0.84	0.69	0.69	0.22	0.00	0.73			
Avail Cap(c_a), veh/h	201	1882	975	620	1360	1429	609	0	541			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	33.4	27.1	27.1	58.8	19.2	19.2	31.8	0.0	39.3			
Incr Delay (d2), s/veh	0.1	0.3	0.5	6.0	1.0	1.0	0.8	0.0	8.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	10.0	10.4	6.5	19.1	20.0	3.7	0.0	14.3			
LnGrp Delay(d),s/veh	33.6	27.3	27.6	64.8	20.2	20.2	32.6	0.0	47.7			
LnGrp LOS	C	C	C	E	C	C	C		D			
Approach Vol, veh/h		1139			1824			529				
Approach Delay, s/veh		27.5			28.4			43.9				
Approach LOS		C			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		51.0	20.3	64.7				85.0
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		46.5	24.5	75.5				104.5
Max Q Clear Time (g_c+I1), s		31.8	15.0	23.4				40.6
Green Ext Time (p_c), s		2.0	0.8	35.1				39.8

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	284	78	440	566	603	139	435	429	427	446	63
Future Volume (veh/h)	26	284	78	440	566	603	139	435	429	427	446	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	26	284	78	440	566	0	139	435	0	427	446	63
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	324	87	587	617	524	124	1076	482	476	595	84
Arrive On Green	0.12	0.12	0.12	0.33	0.33	0.00	0.07	0.30	0.00	0.14	0.37	0.37
Sat Flow, veh/h	1774	2757	744	1774	1863	1583	1774	3539	1583	3442	1597	226
Grp Volume(v), veh/h	26	180	182	440	566	0	139	435	0	427	0	509
Grp Sat Flow(s),veh/h/ln	1774	1770	1731	1774	1863	1583	1774	1770	1583	1721	0	1823
Q Serve(g_s), s	2.2	16.5	17.1	36.4	48.2	0.0	11.5	16.1	0.0	20.1	0.0	40.1
Cycle Q Clear(g_c), s	2.2	16.5	17.1	36.4	48.2	0.0	11.5	16.1	0.0	20.1	0.0	40.1
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	208	208	203	587	617	524	124	1076	482	476	0	679
V/C Ratio(X)	0.12	0.87	0.89	0.75	0.92	0.00	1.12	0.40	0.00	0.90	0.00	0.75
Avail Cap(c_a), veh/h	220	220	215	683	717	609	124	1076	482	553	0	679
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.2	71.5	71.8	49.1	53.0	0.0	76.8	45.5	0.0	69.9	0.0	45.0
Incr Delay (d2), s/veh	0.3	27.8	33.0	3.9	15.4	0.0	118.2	1.1	0.0	15.8	0.0	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.7	10.0	18.5	27.5	0.0	9.7	8.0	0.0	10.7	0.0	21.6
LnGrp Delay(d),s/veh	65.5	99.4	104.8	53.0	68.5	0.0	194.9	46.7	0.0	85.8	0.0	52.5
LnGrp LOS	E	F	F	D	E		F	D		F		D
Approach Vol, veh/h		388			1006			574			936	
Approach Delay, s/veh		99.6			61.7			82.6			67.7	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.3	54.7		23.9	16.0	66.0		59.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	26.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	22.1	18.1		19.1	13.5	42.1		50.2
Green Ext Time (p_c), s	0.7	7.2		0.3	0.0	6.3		4.4

Intersection Summary	
HCM 2010 Ctrl Delay	72.8
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	75	35	73	29	82	60	240	108	249	136	23
Future Volume (vph)	49	75	35	73	29	82	60	240	108	249	136	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1764	1583		3238		1770	3374		1770	3462	
Flt Permitted	0.95	1.00	1.00		0.82		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1764	1583		2709		1770	3374		1770	3462	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	75	35	73	29	82	60	240	108	249	136	23
RTOR Reduction (vph)	0	0	32	0	73	0	0	56	0	0	12	0
Lane Group Flow (vph)	44	80	3	0	111	0	60	292	0	249	147	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	6.9	6.9	6.9		8.1		4.4	22.9		14.9	33.4	
Effective Green, g (s)	6.9	6.9	6.9		8.1		4.4	22.9		14.9	33.4	
Actuated g/C Ratio	0.10	0.10	0.10		0.11		0.06	0.32		0.21	0.47	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	163	171	154		309		110	1091		372	1633	
v/s Ratio Prot	0.03	c0.05					0.03	c0.09		c0.14	0.04	
v/s Ratio Perm			0.00		c0.04							
v/c Ratio	0.27	0.47	0.02		0.36		0.55	0.27		0.67	0.09	
Uniform Delay, d1	29.6	30.2	28.9		29.0		32.2	17.7		25.7	10.3	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	2.0	0.1		0.7		5.4	0.6		4.5	0.1	
Delay (s)	30.5	32.2	29.0		29.7		37.7	18.3		30.2	10.4	
Level of Service	C	C	C		C		D	B		C	B	
Approach Delay (s)		31.0			29.7			21.2			22.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	70.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1343	1190	117	756	1062
Future Volume (vph)	0	1343	1190	117	756	1062
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.99		0.94	0.85
Flt Protected		1.00	1.00		0.97	1.00
Satd. Flow (prot)		5085	5017		3303	1441
Flt Permitted		1.00	1.00		0.97	1.00
Satd. Flow (perm)		5085	5017		3303	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1343	1190	117	756	1062
RTOR Reduction (vph)	0	0	11	0	4	4
Lane Group Flow (vph)	0	1343	1296	0	1230	580
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		37.9	37.9		65.6	65.6
Effective Green, g (s)		37.9	37.9		65.6	65.6
Actuated g/C Ratio		0.34	0.34		0.58	0.58
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1713	1690		1926	840
v/s Ratio Prot		c0.26	0.26		0.37	
v/s Ratio Perm						c0.40
v/c Ratio		0.78	0.77		0.64	0.69
Uniform Delay, d1		33.6	33.4		15.6	16.4
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		2.4	2.1		1.6	4.6
Delay (s)		36.0	35.5		17.2	21.0
Level of Service		D	D		B	C
Approach Delay (s)		36.0	35.5		18.4	
Approach LOS		D	D		B	

Intersection Summary			
HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	112.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1175	862	1	270	1054	217
Future Volume (veh/h)	1175	862	1	270	1054	217
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1175	0	1	270	1054	217
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1570	703	51	1539	1482	682
Arrive On Green	0.44	0.00	0.44	0.44	0.43	0.43
Sat Flow, veh/h	3632	1583	1	3552	3442	1583
Grp Volume(v), veh/h	1175	0	145	126	1054	217
Grp Sat Flow(s),veh/h/ln	1770	1583	1859	1610	1721	1583
Q Serve(g_s), s	19.8	0.0	0.0	3.4	18.0	6.5
Cycle Q Clear(g_c), s	19.8	0.0	3.4	3.4	18.0	6.5
Prop In Lane		1.00	0.01		1.00	1.00
Lane Grp Cap(c), veh/h	1570	703	875	715	1482	682
V/C Ratio(X)	0.75	0.00	0.17	0.18	0.71	0.32
Avail Cap(c_a), veh/h	1989	890	1091	905	1482	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	12.0	12.0	16.7	13.4
Incr Delay (d2), s/veh	1.2	0.0	0.1	0.1	2.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	0.0	1.8	1.5	9.1	3.1
LnGrp Delay(d),s/veh	17.8	0.0	12.1	12.1	19.7	14.7
LnGrp LOS	B		B	B	B	B
Approach Vol, veh/h	1175			271	1271	
Approach Delay, s/veh	17.8			12.1	18.8	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		35.3		36.2				36.2
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		30.8		40.2				40.2
Max Q Clear Time (g_c+I1), s		20.0		21.8				5.4
Green Ext Time (p_c), s		4.1		10.0				13.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	149	1183	409	57	45	96
Future Volume (veh/h)	149	1183	409	57	45	96
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	149	0	409	57	45	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1649	759	510	772	397	337
Arrive On Green	0.48	0.00	0.15	0.41	0.21	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	149	0	409	57	45	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	2.0	0.0	9.7	1.6	1.6	0.0
Cycle Q Clear(g_c), s	2.0	0.0	9.7	1.6	1.6	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1649	759	510	772	397	337
V/C Ratio(X)	0.09	0.00	0.80	0.07	0.11	0.00
Avail Cap(c_a), veh/h	1649	759	733	772	397	337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.0	0.0	34.8	14.9	26.8	0.0
Incr Delay (d2), s/veh	0.1	0.0	4.2	0.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.9	0.8	0.9	0.0
LnGrp Delay(d),s/veh	12.1	0.0	39.0	15.1	27.4	0.0
LnGrp LOS	B		D	B	C	
Approach Vol, veh/h	149			466	45	
Approach Delay, s/veh	12.1			36.1	27.4	
Approach LOS	B			D	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	22.5				39.5		45.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	18.0	18.0				18.0		40.5
Max Q Clear Time (g_c+I1), s	11.7	3.6				3.6		4.0
Green Ext Time (p_c), s	0.8	0.4				0.4		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	1	12	19	0	64	67	286	54	61	756	177
Future Volume (vph)	46	1	12	19	0	64	67	286	54	61	756	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1776	1583		1770	1583	1770	3539	1583	1770	3439	
Flt Permitted		0.78	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1449	1583		1353	1583	1770	3539	1583	1770	3439	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	1	12	19	0	64	67	286	54	61	756	177
RTOR Reduction (vph)	0	0	9	0	0	46	0	0	29	0	26	0
Lane Group Flow (vph)	0	47	3	0	19	18	67	286	25	61	907	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		19.7	19.7		19.7	19.7	4.7	33.8	33.8	4.6	33.7	
Effective Green, g (s)		19.7	19.7		19.7	19.7	4.7	33.8	33.8	4.6	33.7	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.07	0.47	0.47	0.06	0.47	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		398	435		372	435	116	1670	747	113	1618	
v/s Ratio Prot							c0.04	0.08		0.03	c0.26	
v/s Ratio Perm		c0.03	0.00		0.01	0.01			0.02			
v/c Ratio		0.12	0.01		0.05	0.04	0.58	0.17	0.03	0.54	0.56	
Uniform Delay, d1		19.4	18.8		19.1	19.0	32.5	10.9	10.1	32.5	13.6	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.6	0.0		0.1	0.0	6.8	0.2	0.1	4.9	0.4	
Delay (s)		20.0	18.9		19.1	19.1	39.3	11.1	10.2	37.4	14.1	
Level of Service		C	B		B	B	D	B	B	D	B	
Approach Delay (s)		19.8			19.1			15.6			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	29	19	43	397	17	617	102
Future Volume (vph)	29	19	43	397	17	617	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.95		1.00	1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1712		1770	3539	1770	3464	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1712		1770	3539	1770	3464	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	29	19	43	397	17	617	102
RTOR Reduction (vph)	14	0	0	0	0	15	0
Lane Group Flow (vph)	34	0	43	397	17	704	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	20.6		4.7	41.6	1.4	38.3	
Effective Green, g (s)	20.6		4.7	41.6	1.4	38.3	
Actuated g/C Ratio	0.27		0.06	0.54	0.02	0.50	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	457		107	1909	32	1720	
v/s Ratio Prot	c0.02		c0.02	c0.11	0.01	c0.20	
v/s Ratio Perm							
v/c Ratio	0.07		0.40	0.21	0.53	0.41	
Uniform Delay, d1	21.1		34.8	9.2	37.5	12.3	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3		2.5	0.2	15.9	0.7	
Delay (s)	21.4		37.3	9.5	53.4	13.0	
Level of Service	C		D	A	D	B	
Approach Delay (s)	21.4			12.2		13.9	
Approach LOS	C			B		B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	77.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	46	78	127	423	429	87
Future Volume (vph)	46	78	127	423	429	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.92		1.00	1.00	0.97	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1674		1770	3539	3450	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1674		1770	3539	3450	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	78	127	423	429	87
RTOR Reduction (vph)	70	0	0	0	15	0
Lane Group Flow (vph)	54	0	127	423	501	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	6.6		8.3	50.3	37.5	
Effective Green, g (s)	6.6		8.3	50.3	37.5	
Actuated g/C Ratio	0.10		0.13	0.76	0.57	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	167		222	2701	1963	
v/s Ratio Prot	c0.03		c0.07	0.12	c0.15	
v/s Ratio Perm						
v/c Ratio	0.32		0.57	0.16	0.26	
Uniform Delay, d1	27.6		27.1	2.1	7.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.1		3.5	0.1	0.3	
Delay (s)	28.7		30.7	2.2	7.5	
Level of Service	C		C	A	A	
Approach Delay (s)	28.7			8.8	7.5	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	65.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	440	8	511	14	12	7	1018	375	11	10	307	104
Future Volume (vph)	440	8	511	14	12	7	1018	375	11	10	307	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.90	0.85		0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1507	1504		1772		3433	3524		1770	3539	1583
Flt Permitted	0.95	0.98	1.00		0.71		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1507	1504		1279		3433	3524		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	440	8	511	14	12	7	1018	375	11	10	307	104
RTOR Reduction (vph)	0	52	207	0	7	0	0	2	0	0	0	92
Lane Group Flow (vph)	334	266	100	0	26	0	1018	384	0	10	307	12
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2			6		3	8		7	4	
Permitted Phases			2	6								4
Actuated Green, G (s)	37.6	37.6	37.6		7.5		38.3	46.3		5.5	13.5	13.5
Effective Green, g (s)	37.6	37.6	37.6		7.5		38.3	46.3		5.5	13.5	13.5
Actuated g/C Ratio	0.33	0.33	0.33		0.07		0.33	0.40		0.05	0.12	0.12
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	550	493	492		83		1144	1420		84	415	185
v/s Ratio Prot	c0.20	0.18					c0.30	0.11		0.01	c0.09	
v/s Ratio Perm			0.07		c0.02							0.01
v/c Ratio	0.61	0.54	0.20		0.32		0.89	0.27		0.12	0.74	0.07
Uniform Delay, d1	32.5	31.6	27.9		51.3		36.3	23.0		52.4	49.0	45.1
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.9	4.2	0.9		9.8		8.7	0.1		0.6	6.8	0.2
Delay (s)	37.4	35.7	28.8		61.1		45.0	23.1		53.0	55.8	45.2
Level of Service	D	D	C		E		D	C		D	E	D
Approach Delay (s)		34.1			61.1			39.0			53.1	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	114.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1302	495	6	4	66	100	22	17	4	99	24	707
Future Volume (vph)	1302	495	6	4	66	100	22	17	4	99	24	707
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.97	1.00
Satd. Flow (prot)	3433	3533		1770	3539	1583		3403		1681	1717	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.69		0.95	0.97	1.00
Satd. Flow (perm)	3433	3533		1770	3539	1583		2405		1681	1717	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1302	495	6	4	66	100	22	17	4	99	24	707
RTOR Reduction (vph)	0	1	0	0	0	92	0	4	0	0	0	258
Lane Group Flow (vph)	1302	500	0	4	66	8	0	39	0	61	62	449
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	49.5	56.0		1.1	7.6	7.6		10.7		13.7	13.7	63.2
Effective Green, g (s)	49.5	56.0		1.1	7.6	7.6		10.7		13.7	13.7	63.2
Actuated g/C Ratio	0.50	0.56		0.01	0.08	0.08		0.11		0.14	0.14	0.64
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1707	1988		19	270	120		258		231	236	1770
v/s Ratio Prot	c0.38	0.14		0.00	c0.02					c0.04	0.04	0.13
v/s Ratio Perm						0.00		c0.02				0.03
v/c Ratio	0.76	0.25		0.21	0.24	0.06		0.15		0.26	0.26	0.25
Uniform Delay, d1	20.2	11.1		48.8	43.2	42.6		40.3		38.4	38.4	7.9
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	2.1	0.1		5.5	0.5	0.2		1.3		2.8	2.7	0.1
Delay (s)	22.3	11.1		54.2	43.7	42.9		41.5		41.2	41.1	8.0
Level of Service	C	B		D	D	D		D		D	D	A
Approach Delay (s)		19.2			43.5			41.5			12.9	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	99.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1327	526	190	621	0	0	0	0	463	2	800
Future Volume (vph)	0	1327	526	190	621	0	0	0	0	463	2	800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4751	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4751	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1327	526	190	621	0	0	0	0	463	2	800
RTOR Reduction (vph)	0	8	167	0	0	0	0	0	0	0	0	296
Lane Group Flow (vph)	0	1429	249	190	621	0	0	0	0	0	465	504
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		43.7	43.7	11.1	59.3						49.5	49.5
Effective Green, g (s)		43.7	43.7	11.1	59.3						49.5	49.5
Actuated g/C Ratio		0.37	0.37	0.09	0.50						0.42	0.42
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1762	505	323	1781						745	1516
v/s Ratio Prot		c0.30		c0.06	0.18							
v/s Ratio Perm			0.18								0.26	0.14
v/c Ratio		0.81	0.49	0.59	0.35						0.62	0.33
Uniform Delay, d1		33.3	28.5	51.2	17.6						26.8	23.0
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		3.0	0.8	2.7	0.1						1.6	0.6
Delay (s)		36.3	29.3	53.9	17.7						28.5	23.6
Level of Service		D	C	D	B						C	C
Approach Delay (s)		34.7			26.2			0.0			25.4	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	117.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	1294	60	223	845	313	49	129	399	126	87	109
Future Volume (veh/h)	228	1294	60	223	845	313	49	129	399	126	87	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	228	1294	60	223	845	0	49	129	399	126	87	109
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	295	1751	81	290	1780	554	549	576	490	322	174	148
Arrive On Green	0.09	0.35	0.35	0.08	0.35	0.00	0.31	0.31	0.31	0.09	0.09	0.09
Sat Flow, veh/h	3442	4981	231	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	228	881	473	223	845	0	49	129	399	126	87	109
Grp Sat Flow(s),veh/h/ln	1721	1695	1822	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	7.2	25.4	25.4	7.1	14.4	0.0	2.2	5.7	26.0	3.8	5.0	7.5
Cycle Q Clear(g_c), s	7.2	25.4	25.4	7.1	14.4	0.0	2.2	5.7	26.0	3.8	5.0	7.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	1192	641	290	1780	554	549	576	490	322	174	148
V/C Ratio(X)	0.77	0.74	0.74	0.77	0.47	0.00	0.09	0.22	0.81	0.39	0.50	0.74
Avail Cap(c_a), veh/h	447	1292	694	447	1938	603	549	576	490	633	342	291
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	31.7	31.7	50.0	28.2	0.0	27.4	28.6	35.6	47.6	48.1	49.2
Incr Delay (d2), s/veh	4.6	2.1	3.9	4.3	0.2	0.0	0.3	0.9	13.9	0.8	2.2	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	12.2	13.4	3.5	6.8	0.0	1.1	3.1	13.2	1.9	2.7	3.6
LnGrp Delay(d),s/veh	54.5	33.8	35.5	54.3	28.4	0.0	27.7	29.5	49.4	48.4	50.3	56.2
LnGrp LOS	D	C	D	D	C		C	C	D	D	D	E
Approach Vol, veh/h		1582			1068			577			322	
Approach Delay, s/veh		37.3			33.8			43.1			51.5	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		39.0	13.9	43.7		14.9	14.1	43.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		34.5	14.5	42.5		20.5	14.5	42.5
Max Q Clear Time (g_c+I1), s		28.0	9.1	27.4		9.5	9.2	16.4
Green Ext Time (p_c), s		1.4	0.3	11.8		0.9	0.3	18.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1177	204	188	1003	10	79	8	330	0	0	0
Future Volume (veh/h)	7	1177	204	188	1003	10	79	8	330	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	7	1177	204	188	1003	10	79	8	330			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	249	1826	316	248	1891	19	648	66	634			
Arrive On Green	0.42	0.42	0.42	0.07	0.53	0.53	0.40	0.40	0.40			
Sat Flow, veh/h	554	4363	756	3442	3590	36	1618	164	1583			
Grp Volume(v), veh/h	7	914	467	188	494	519	87	0	330			
Grp Sat Flow(s),veh/h/ln	554	1695	1729	1721	1770	1856	1782	0	1583			
Q Serve(g_s), s	1.0	26.6	26.6	6.6	22.7	22.7	3.8	0.0	19.5			
Cycle Q Clear(g_c), s	10.3	26.6	26.6	6.6	22.7	22.7	3.8	0.0	19.5			
Prop In Lane	1.00		0.44	1.00		0.02	0.91		1.00			
Lane Grp Cap(c), veh/h	249	1418	724	248	932	978	714	0	634			
V/C Ratio(X)	0.03	0.64	0.64	0.76	0.53	0.53	0.12	0.00	0.52			
Avail Cap(c_a), veh/h	297	1714	874	404	1167	1224	714	0	634			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.0	28.6	28.6	56.3	19.2	19.2	23.4	0.0	28.1			
Incr Delay (d2), s/veh	0.0	0.6	1.2	4.7	0.5	0.4	0.4	0.0	3.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	12.6	12.9	3.3	11.1	11.6	1.9	0.0	9.1			
LnGrp Delay(d),s/veh	27.0	29.2	29.8	61.0	19.7	19.7	23.7	0.0	31.1			
LnGrp LOS	C	C	C	E	B	B	C		C			
Approach Vol, veh/h		1388			1201			417				
Approach Delay, s/veh		29.4			26.1			29.6				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		54.0	13.4	56.2				69.6
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		49.5	14.5	62.5				81.5
Max Q Clear Time (g_c+I1), s		21.5	8.6	28.6				24.7
Green Ext Time (p_c), s		1.7	0.3	23.2				31.7

Intersection Summary	
HCM 2010 Ctrl Delay	28.1
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	388	43	368	421	292	48	319	522	455	430	29
Future Volume (veh/h)	9	388	43	368	421	292	48	319	522	455	430	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	9	388	43	368	421	0	48	319	0	455	430	29
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	461	51	316	332	282	62	1377	616	526	875	59
Arrive On Green	0.14	0.14	0.14	0.18	0.18	0.00	0.03	0.39	0.00	0.15	0.51	0.51
Sat Flow, veh/h	1774	3216	354	1774	1863	1583	1774	3539	1583	3442	1726	116
Grp Volume(v), veh/h	9	213	218	368	421	0	48	319	0	455	0	459
Grp Sat Flow(s),veh/h/ln	1774	1770	1800	1774	1863	1583	1774	1770	1583	1721	0	1842
Q Serve(g_s), s	0.6	15.4	15.6	23.5	23.5	0.0	3.5	8.0	0.0	17.0	0.0	21.6
Cycle Q Clear(g_c), s	0.6	15.4	15.6	23.5	23.5	0.0	3.5	8.0	0.0	17.0	0.0	21.6
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	254	254	258	316	332	282	62	1377	616	526	0	934
V/C Ratio(X)	0.04	0.84	0.85	1.16	1.27	0.00	0.77	0.23	0.00	0.87	0.00	0.49
Avail Cap(c_a), veh/h	319	318	324	316	332	282	175	1377	616	718	0	934
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.6	55.0	55.1	54.2	54.2	0.0	63.1	27.1	0.0	54.5	0.0	21.4
Incr Delay (d2), s/veh	0.1	14.6	15.4	102.8	142.4	0.0	18.1	0.4	0.0	8.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.6	8.9	20.4	25.1	0.0	2.0	4.0	0.0	8.7	0.0	11.4
LnGrp Delay(d),s/veh	48.7	69.6	70.4	157.0	196.6	0.0	81.2	27.4	0.0	62.8	0.0	23.2
LnGrp LOS	D	E	E	F	F		F	C		E		C
Approach Vol, veh/h		440			789			367			914	
Approach Delay, s/veh		69.6			178.1			34.5			42.9	
Approach LOS		E			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.7	55.8		23.4	9.1	71.3		28.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	27.5	51.3		23.7	13.0	65.8		23.5
Max Q Clear Time (g_c+I1), s	19.0	10.0		17.6	5.5	23.6		25.5
Green Ext Time (p_c), s	1.1	6.0		1.3	0.0	6.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.9
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	24	17	25	36	52	77	410	61	74	101	31
Future Volume (vph)	27	24	17	25	36	52	77	410	61	74	101	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.98		1.00	0.96	
Flt Protected	0.95	0.99	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1760	1583		3259		1770	3470		1770	3415	
Flt Permitted	0.95	0.99	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1760	1583		2947		1770	3470		1770	3415	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	27	24	17	25	36	52	77	410	61	74	101	31
RTOR Reduction (vph)	0	0	16	0	49	0	0	16	0	0	17	0
Lane Group Flow (vph)	24	27	1	0	64	0	77	455	0	74	115	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Effective Green, g (s)	3.1	3.1	3.1		3.2		4.0	24.8		4.0	24.8	
Actuated g/C Ratio	0.06	0.06	0.06		0.06		0.08	0.47		0.08	0.47	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	102	92		177		133	1620		133	1594	
v/s Ratio Prot	0.01	c0.02					c0.04	c0.13		0.04	0.03	
v/s Ratio Perm			0.00		c0.02							
v/c Ratio	0.24	0.26	0.01		0.36		0.58	0.28		0.56	0.07	
Uniform Delay, d1	23.9	23.9	23.6		24.0		23.7	8.7		23.7	7.8	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	1.4	0.0		1.3		6.0	0.4		5.0	0.1	
Delay (s)	25.2	25.3	23.6		25.2		29.7	9.1		28.7	7.9	
Level of Service	C	C	C		C		C	A		C	A	
Approach Delay (s)		24.8			25.2			12.0			15.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1286	1212	214	538	1089
Future Volume (vph)	0	1286	1212	214	538	1089
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.91	0.91		0.97	0.91
Frt		1.00	0.98		0.92	0.85
Flt Protected		1.00	1.00		0.98	1.00
Satd. Flow (prot)		5085	4971		3260	1441
Flt Permitted		1.00	1.00		0.98	1.00
Satd. Flow (perm)		5085	4971		3260	1441
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1286	1212	214	538	1089
RTOR Reduction (vph)	0	0	19	0	6	6
Lane Group Flow (vph)	0	1286	1407	0	1077	538
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		47.2	47.2		74.6	74.6
Effective Green, g (s)		47.2	47.2		74.6	74.6
Actuated g/C Ratio		0.36	0.36		0.57	0.57
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1834	1793		1859	821
v/s Ratio Prot		0.25	c0.28		0.33	
v/s Ratio Perm						c0.37
v/c Ratio		0.70	0.78		0.58	0.66
Uniform Delay, d1		35.8	37.3		18.0	19.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		1.2	2.3		1.3	4.1
Delay (s)		37.0	39.6		19.4	23.3
Level of Service		D	D		B	C
Approach Delay (s)		37.0	39.6		20.7	
Approach LOS		D	D		C	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	130.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	679	1158	0	642	803	110
Future Volume (veh/h)	679	1158	0	642	803	110
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	679	0	0	642	803	110
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1399	626	0	1399	1505	692
Arrive On Green	0.40	0.00	0.00	0.40	0.44	0.44
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	679	0	0	642	803	110
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	7.7	0.0	0.0	7.2	9.2	2.3
Cycle Q Clear(g_c), s	7.7	0.0	0.0	7.2	9.2	2.3
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1399	626	0	1399	1505	692
V/C Ratio(X)	0.49	0.00	0.00	0.46	0.53	0.16
Avail Cap(c_a), veh/h	2798	1252	0	2798	1505	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	12.0	11.1	9.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	1.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	0.0	3.5	4.6	1.1
LnGrp Delay(d),s/veh	12.4	0.0	0.0	12.2	12.5	9.6
LnGrp LOS	B			B	B	A
Approach Vol, veh/h	679			642	913	
Approach Delay, s/veh	12.4			12.2	12.1	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		28.0		25.8				25.8
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		23.5		42.5				42.5
Max Q Clear Time (g_c+I1), s		11.2		9.7				9.2
Green Ext Time (p_c), s		3.0		11.5				11.6

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	114	652	970	187	109	134
Future Volume (veh/h)	114	652	970	187	109	134
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	114	0	970	187	109	0
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1233	567	1087	1039	373	317
Arrive On Green	0.36	0.00	0.32	0.56	0.20	0.00
Sat Flow, veh/h	3442	1583	3442	1863	1863	1583
Grp Volume(v), veh/h	114	0	970	187	109	0
Grp Sat Flow(s),veh/h/ln	1721	1583	1721	1863	1863	1583
Q Serve(g_s), s	2.4	0.0	28.8	5.3	5.3	0.0
Cycle Q Clear(g_c), s	2.4	0.0	28.8	5.3	5.3	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1233	567	1087	1039	373	317
V/C Ratio(X)	0.09	0.00	0.89	0.18	0.29	0.00
Avail Cap(c_a), veh/h	1233	567	1329	1039	373	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.9	0.0	35.0	11.7	36.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	6.9	0.4	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	14.7	2.8	3.0	0.0
LnGrp Delay(d),s/veh	23.0	0.0	41.9	12.1	38.5	0.0
LnGrp LOS	C		D	B	D	
Approach Vol, veh/h	114			1157	109	
Approach Delay, s/veh	23.0			37.1	38.5	
Approach LOS	C			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	38.4	26.0				64.4		43.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	41.5	21.5				21.5		38.5
Max Q Clear Time (g_c+I1), s	30.8	7.3				7.3		4.4
Green Ext Time (p_c), s	3.1	1.4				1.4		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	36.0
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	0	39	22	1	51	46	526	23	70	777	99
Future Volume (vph)	208	0	39	22	1	51	46	526	23	70	777	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1770	1583		1778	1583	1770	3539	1583	1770	3479	
Flt Permitted		0.74	1.00		0.76	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1383	1583		1414	1583	1770	3539	1583	1770	3479	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	208	0	39	22	1	51	46	526	23	70	777	99
RTOR Reduction (vph)	0	0	26	0	0	34	0	0	13	0	12	0
Lane Group Flow (vph)	0	208	13	0	23	17	46	526	10	70	864	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		3			7		5	2		1	6	
Permitted Phases	3		3	7		7			2			
Actuated Green, G (s)		25.6	25.6		25.6	25.6	4.7	32.6	32.6	6.7	34.6	
Effective Green, g (s)		25.6	25.6		25.6	25.6	4.7	32.6	32.6	6.7	34.6	
Actuated g/C Ratio		0.33	0.33		0.33	0.33	0.06	0.42	0.42	0.09	0.44	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		451	516		461	516	106	1471	658	151	1535	
v/s Ratio Prot							0.03	0.15		c0.04	c0.25	
v/s Ratio Perm		c0.15	0.01		0.02	0.01			0.01			
v/c Ratio		0.46	0.02		0.05	0.03	0.43	0.36	0.01	0.46	0.56	
Uniform Delay, d1		20.9	17.9		18.1	18.0	35.6	15.7	13.5	34.1	16.3	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		3.4	0.1		0.0	0.0	2.8	0.7	0.0	2.2	0.5	
Delay (s)		24.3	18.0		18.1	18.0	38.4	16.4	13.5	36.4	16.8	
Level of Service		C	B		B	B	D	B	B	D	B	
Approach Delay (s)		23.3			18.0			18.0			18.2	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	78.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	112	53	38	554	15	604	51
Future Volume (vph)	112	53	38	554	15	604	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	1.00	0.95	
Frt	0.96		1.00	1.00	1.00	0.99	
Flt Protected	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1723		1770	3539	1770	3498	
Flt Permitted	0.97		0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1723		1770	3539	1770	3498	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	53	38	554	15	604	51
RTOR Reduction (vph)	21	0	0	0	0	7	0
Lane Group Flow (vph)	144	0	38	554	15	648	0
Turn Type	Prot		Prot	NA	Prot	NA	
Protected Phases	3		5	2	1	6	
Permitted Phases							
Actuated Green, G (s)	24.6		4.6	38.5	1.4	35.3	
Effective Green, g (s)	24.6		4.6	38.5	1.4	35.3	
Actuated g/C Ratio	0.32		0.06	0.49	0.02	0.45	
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	543		104	1746	31	1583	
v/s Ratio Prot	c0.08		c0.02	c0.16	0.01	c0.19	
v/s Ratio Perm							
v/c Ratio	0.26		0.37	0.32	0.48	0.41	
Uniform Delay, d1	19.9		35.3	11.9	37.9	14.3	
Progression Factor	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2		2.2	0.5	11.4	0.8	
Delay (s)	21.1		37.5	12.3	49.4	15.1	
Level of Service	C		D	B	D	B	
Approach Delay (s)	21.1			14.0		15.9	
Approach LOS	C			B		B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	78.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	70	160	86	423	545	79
Future Volume (vph)	70	160	86	423	545	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.91		1.00	1.00	0.98	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1663		1770	3539	3472	
Flt Permitted	0.99		0.95	1.00	1.00	
Satd. Flow (perm)	1663		1770	3539	3472	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	160	86	423	545	79
RTOR Reduction (vph)	138	0	0	0	11	0
Lane Group Flow (vph)	92	0	86	423	613	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	8.8		7.0	45.9	34.4	
Effective Green, g (s)	8.8		7.0	45.9	34.4	
Actuated g/C Ratio	0.14		0.11	0.72	0.54	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	229		194	2550	1874	
v/s Ratio Prot	c0.06		c0.05	0.12	c0.18	
v/s Ratio Perm						
v/c Ratio	0.40		0.44	0.17	0.33	
Uniform Delay, d1	25.0		26.5	2.8	8.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.2		1.6	0.1	0.5	
Delay (s)	26.2		28.1	3.0	8.6	
Level of Service	C		C	A	A	
Approach Delay (s)	26.2			7.2	8.6	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	4	470	20	13	7	912	294	23	15	799	212
Future Volume (vph)	191	4	470	20	13	7	912	294	23	15	799	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	0.95	0.91	0.95		1.00		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.86	0.85		0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1459	1504		1774		3433	3501		1770	3539	1583
Flt Permitted	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1459	1504		1774		3433	3501		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	191	4	470	20	13	7	912	294	23	15	799	212
RTOR Reduction (vph)	0	177	192	0	5	0	0	4	0	0	0	82
Lane Group Flow (vph)	172	72	52	0	35	0	912	313	0	15	799	130
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)	29.8	29.8	29.8		8.6		42.4	79.7		2.7	40.0	40.0
Effective Green, g (s)	29.8	29.8	29.8		8.6		42.4	79.7		2.7	40.0	40.0
Actuated g/C Ratio	0.21	0.21	0.21		0.06		0.31	0.57		0.02	0.29	0.29
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	360	313	322		109		1048	2010		34	1019	456
v/s Ratio Prot	c0.10	0.05			c0.02		c0.27	0.09		0.01	c0.23	
v/s Ratio Perm			0.03									0.08
v/c Ratio	0.48	0.23	0.16		0.32		0.87	0.16		0.44	0.78	0.29
Uniform Delay, d1	47.7	45.0	44.3		62.3		45.6	13.8		67.3	45.4	38.3
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.5	1.7	1.1		7.7		8.0	0.0		8.9	4.0	0.3
Delay (s)	52.2	46.7	45.4		70.0		53.6	13.9		76.2	49.4	38.7
Level of Service	D	D	D		E		D	B		E	D	D
Approach Delay (s)		47.7			70.0			43.4			47.6	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	138.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1034	240	1	10	132	148	13	26	12	245	17	1025
Future Volume (vph)	1034	240	1	10	132	148	13	26	12	245	17	1025
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (prot)	3433	3537		1770	3539	1583		3371		1681	1696	2787
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.63		0.95	0.96	1.00
Satd. Flow (perm)	3433	3537		1770	3539	1583		2138		1681	1696	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1034	240	1	10	132	148	13	26	12	245	17	1025
RTOR Reduction (vph)	0	0	0	0	0	133	0	11	0	0	0	428
Lane Group Flow (vph)	1034	241	0	10	132	15	0	40	0	130	132	597
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Split	NA	pm+ov
Protected Phases	7	4		3	8			2		6	6	7
Permitted Phases						8	2					6
Actuated Green, G (s)	36.9	44.5		1.0	8.6	8.6		9.6		13.6	13.6	50.5
Effective Green, g (s)	36.9	44.5		1.0	8.6	8.6		9.6		13.6	13.6	50.5
Actuated g/C Ratio	0.43	0.51		0.01	0.10	0.10		0.11		0.16	0.16	0.58
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	1461	1815		20	351	157		236		263	266	1623
v/s Ratio Prot	c0.30	0.07		0.01	c0.04					0.08	c0.08	0.16
v/s Ratio Perm						0.01		c0.02				0.06
v/c Ratio	0.71	0.13		0.50	0.38	0.09		0.17		0.49	0.50	0.37
Uniform Delay, d1	20.5	11.0		42.6	36.5	35.5		34.9		33.4	33.4	9.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.6	0.0		18.3	0.7	0.3		1.6		6.5	6.5	0.1
Delay (s)	22.1	11.1		60.9	37.2	35.8		36.5		39.9	39.9	9.8
Level of Service	C	B		E	D	D		D		D	D	A
Approach Delay (s)		20.0			37.3			36.5			15.9	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	86.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1042	573	412	772	0	0	0	0	211	1	1122
Future Volume (vph)	0	1042	573	412	772	0	0	0	0	211	1	1122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.98	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4687	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4687	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1042	573	412	772	0	0	0	0	211	1	1122
RTOR Reduction (vph)	0	41	257	0	0	0	0	0	0	0	0	246
Lane Group Flow (vph)	0	1207	110	412	772	0	0	0	0	0	212	876
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		19.5	19.5	10.3	34.3						21.5	21.5
Effective Green, g (s)		19.5	19.5	10.3	34.3						21.5	21.5
Actuated g/C Ratio		0.30	0.30	0.16	0.53						0.33	0.33
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		1410	409	545	1873						588	1197
v/s Ratio Prot		c0.26		c0.12	0.22							
v/s Ratio Perm			0.08								0.12	c0.24
v/c Ratio		0.86	0.27	0.76	0.41						0.36	0.73
Uniform Delay, d1		21.3	17.2	26.0	9.2						16.4	19.1
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		5.3	0.4	5.9	0.1						0.4	4.0
Delay (s)		26.7	17.6	32.0	9.3						16.8	23.1
Level of Service		C	B	C	A						B	C
Approach Delay (s)		24.6			17.2			0.0			22.1	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	64.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	1001	77	509	1219	133	39	63	237	326	286	233
Future Volume (veh/h)	115	1001	77	509	1219	133	39	63	237	326	286	233
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	115	1001	77	509	1219	0	39	63	237	326	286	233
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	1293	99	581	1971	614	382	401	341	651	352	299
Arrive On Green	0.05	0.27	0.27	0.17	0.39	0.00	0.22	0.22	0.22	0.19	0.19	0.19
Sat Flow, veh/h	3442	4818	370	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	115	704	374	509	1219	0	39	63	237	326	286	233
Grp Sat Flow(s),veh/h/ln	1721	1695	1797	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.7	21.8	21.9	16.4	22.0	0.0	2.0	3.1	15.7	9.7	16.7	15.9
Cycle Q Clear(g_c), s	3.7	21.8	21.9	16.4	22.0	0.0	2.0	3.1	15.7	9.7	16.7	15.9
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	910	482	581	1971	614	382	401	341	651	352	299
V/C Ratio(X)	0.67	0.77	0.78	0.88	0.62	0.00	0.10	0.16	0.69	0.50	0.81	0.78
Avail Cap(c_a), veh/h	257	939	498	681	2034	633	382	401	341	862	467	397
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	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	38.4	38.4	46.1	28.1	0.0	35.8	36.2	41.2	41.3	44.2	43.9
Incr Delay (d2), s/veh	4.5	4.0	7.3	11.0	0.5	0.0	0.5	0.8	11.1	0.6	7.9	7.0
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	1.9	10.7	11.8	8.7	10.4	0.0	1.0	1.7	7.9	4.6	9.4	7.5
LnGrp Delay(d),s/veh	57.6	42.4	45.8	57.1	28.6	0.0	36.3	37.1	52.3	41.9	52.1	50.8
LnGrp LOS	E	D	D	E	C		D	D	D	D	D	D
Approach Vol, veh/h		1193			1728			339			845	
Approach Delay, s/veh		44.9			37.0			47.6			47.8	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	23.7	35.0		26.0	10.2	48.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	22.5	31.5		28.5	8.5	45.5
Max Q Clear Time (g_c+I1), s		17.7	18.4	23.9		18.7	5.7	24.0
Green Ext Time (p_c), s		0.7	0.8	6.7		2.8	0.1	16.2

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1007	133	338	1491	7	123	10	398	0	0	0
Future Volume (veh/h)	9	1007	133	338	1491	7	123	10	398	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	9	1007	133	338	1491	7	123	10	398			
Adj No. of Lanes	1	3	0	2	2	0	0	1	1			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	160	2019	266	402	2145	10	560	46	539			
Arrive On Green	0.44	0.44	0.44	0.12	0.59	0.59	0.34	0.34	0.34			
Sat Flow, veh/h	349	4548	599	3442	3612	17	1647	134	1583			
Grp Volume(v), veh/h	9	750	390	338	730	768	133	0	398			
Grp Sat Flow(s),veh/h/ln	349	1695	1757	1721	1770	1860	1780	0	1583			
Q Serve(g_s), s	2.5	21.6	21.7	13.1	39.0	39.0	7.3	0.0	30.3			
Cycle Q Clear(g_c), s	21.0	21.6	21.7	13.1	39.0	39.0	7.3	0.0	30.3			
Prop In Lane	1.00		0.34	1.00		0.01	0.92		1.00			
Lane Grp Cap(c), veh/h	160	1505	780	402	1051	1104	606	0	539			
V/C Ratio(X)	0.06	0.50	0.50	0.84	0.69	0.70	0.22	0.00	0.74			
Avail Cap(c_a), veh/h	198	1873	971	617	1353	1422	606	0	539			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	33.6	27.1	27.1	59.1	19.2	19.2	32.1	0.0	39.7			
Incr Delay (d2), s/veh	0.1	0.3	0.5	6.3	1.1	1.0	0.8	0.0	8.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	10.2	10.6	6.6	19.2	20.1	3.7	0.0	14.5			
LnGrp Delay(d),s/veh	33.7	27.4	27.6	65.4	20.3	20.2	33.0	0.0	48.5			
LnGrp LOS	C	C	C	E	C	C	C		D			
Approach Vol, veh/h		1149			1836			531				
Approach Delay, s/veh		27.5			28.6			44.6				
Approach LOS		C			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		51.0	20.5	65.2				85.7
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		46.5	24.5	75.5				104.5
Max Q Clear Time (g_c+I1), s		32.3	15.1	23.7				41.0
Green Ext Time (p_c), s		1.9	0.8	35.3				40.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	289	78	444	571	603	139	435	434	427	446	63
Future Volume (veh/h)	26	289	78	444	571	603	139	435	434	427	446	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	26	289	78	444	571	0	139	435	0	427	446	63
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour 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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	328	87	591	620	527	123	1068	478	475	592	84
Arrive On Green	0.12	0.12	0.12	0.33	0.33	0.00	0.07	0.30	0.00	0.14	0.37	0.37
Sat Flow, veh/h	1774	2768	734	1774	1863	1583	1774	3539	1583	3442	1597	226
Grp Volume(v), veh/h	26	183	184	444	571	0	139	435	0	427	0	509
Grp Sat Flow(s),veh/h/ln	1774	1770	1733	1774	1863	1583	1774	1770	1583	1721	0	1823
Q Serve(g_s), s	2.2	16.9	17.4	36.9	48.9	0.0	11.5	16.2	0.0	20.3	0.0	40.4
Cycle Q Clear(g_c), s	2.2	16.9	17.4	36.9	48.9	0.0	11.5	16.2	0.0	20.3	0.0	40.4
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	210	210	205	591	620	527	123	1068	478	475	0	676
V/C Ratio(X)	0.12	0.87	0.90	0.75	0.92	0.00	1.13	0.41	0.00	0.90	0.00	0.75
Avail Cap(c_a), veh/h	219	219	214	679	713	606	123	1068	478	550	0	676
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.4	71.9	72.1	49.2	53.2	0.0	77.2	46.1	0.0	70.4	0.0	45.6
Incr Delay (d2), s/veh	0.3	29.1	34.3	4.1	15.9	0.0	120.5	1.2	0.0	16.1	0.0	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	10.0	10.3	18.8	28.0	0.0	9.8	8.1	0.0	10.7	0.0	21.8
LnGrp Delay(d),s/veh	65.7	101.0	106.4	53.3	69.1	0.0	197.7	47.2	0.0	86.4	0.0	53.2
LnGrp LOS	E	F	F	D	E		F	D		F		D
Approach Vol, veh/h		393			1015			574			936	
Approach Delay, s/veh		101.2			62.2			83.7			68.4	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.4	54.6		24.1	16.0	66.0		59.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	26.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	22.3	18.2		19.4	13.5	42.4		50.9
Green Ext Time (p_c), s	0.7	7.2		0.3	0.0	6.2		4.4

Intersection Summary	
HCM 2010 Ctrl Delay	73.7
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	75	35	73	29	82	60	246	108	249	142	23
Future Volume (vph)	49	75	35	73	29	82	60	246	108	249	142	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.93		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1764	1583		3238		1770	3377		1770	3465	
Flt Permitted	0.95	1.00	1.00		0.82		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1764	1583		2709		1770	3377		1770	3465	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	75	35	73	29	82	60	246	108	249	142	23
RTOR Reduction (vph)	0	0	32	0	73	0	0	54	0	0	12	0
Lane Group Flow (vph)	44	80	3	0	111	0	60	300	0	249	153	0
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases	4	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	6.9	6.9	6.9		8.1		4.4	22.9		14.9	33.4	
Effective Green, g (s)	6.9	6.9	6.9		8.1		4.4	22.9		14.9	33.4	
Actuated g/C Ratio	0.10	0.10	0.10		0.11		0.06	0.32		0.21	0.47	
Clearance Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	163	171	154		309		110	1092		372	1634	
v/s Ratio Prot	0.03	c0.05					0.03	c0.09		c0.14	0.04	
v/s Ratio Perm			0.00		c0.04							
v/c Ratio	0.27	0.47	0.02		0.36		0.55	0.27		0.67	0.09	
Uniform Delay, d1	29.6	30.2	28.9		29.0		32.2	17.8		25.7	10.3	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	2.0	0.1		0.7		5.4	0.6		4.5	0.1	
Delay (s)	30.5	32.2	29.0		29.7		37.7	18.4		30.2	10.4	
Level of Service	C	C	C		C		D	B		C	B	
Approach Delay (s)		31.0			29.7			21.2			22.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	70.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group