

Appendix E

Greenhouse Gas Emissions Modeling Worksheets

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

Ashby and North Berkeley BART: commercial trip reductions
Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	15.00	1000sqft	0.00	15,000.00	0
Day-Care Center	15.00	1000sqft	0.00	15,000.00	0
Fast Food Restaurant w/o Drive Thru	15.00	1000sqft	0.00	15,000.00	0
Health Club	50.00	1000sqft	0.00	50,000.00	0
High Turnover (Sit Down Restaurant)	15.00	1000sqft	0.00	15,000.00	0
Apartments Mid Rise	2,400.00	Dwelling Unit	14.40	2,400,000.00	6864
Convenience Market (24 Hour)	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2030
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	135	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - RPS for 2030 per SB 100 for EBCE

Land Use - Based on Project Description and Traffic Study

Construction Phase - no demo, arch coating extended to reflect typical construction phasing

Grading - Based on export estimates

Architectural Coating - BAAQMD Regulation 8, Rule 3

Vehicle Trips - Based on trip rate and VMT data provided by traffic consultant

Woodstoves - BAAQMD Regulation 6, Rule 3 and Berkeley Municipal Code 12.80

Area Coating - BAAQMD Regulation 8, Rule 3

Energy Use - 2019 Energy Code, assume 10% natural gas use

Water And Wastewater - All wastewater treated at EBMUD WWTP

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Based on density and employment assumptions in PD

Water Mitigation - CALGreen compliance

Waste Mitigation - City of Berkeley solid waste diversion rate of 68% (adjusted to account for 50% diversion already included in CalEEMod)

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblAreaCoating	Area_EF_Parking	150	100
tblConstructionPhase	NumDays	20.00	90.00
tblEnergyUse	LightingElect	4.88	3.42
tblEnergyUse	LightingElect	2.51	1.76
tblEnergyUse	LightingElect	5.34	3.74
tblEnergyUse	LightingElect	3.58	2.51
tblEnergyUse	LightingElect	2.99	2.09
tblEnergyUse	LightingElect	5.34	3.74
tblEnergyUse	NT24NG	2,615.00	261.50
tblEnergyUse	NT24NG	0.70	0.07

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tblEnergyUse	NT24NG	1.62	0.16
tblEnergyUse	NT24NG	128.02	12.80
tblEnergyUse	NT24NG	1.01	0.10
tblEnergyUse	NT24NG	6.90	0.69
tblEnergyUse	NT24NG	128.02	12.80
tblEnergyUse	T24E	2.24	1.57
tblEnergyUse	T24E	0.66	0.46
tblEnergyUse	T24E	2.67	1.87
tblEnergyUse	T24E	4.10	2.87
tblEnergyUse	T24E	1.21	0.85
tblEnergyUse	T24E	2.67	1.87
tblEnergyUse	T24NG	6,115.43	611.54
tblEnergyUse	T24NG	3.90	0.39
tblEnergyUse	T24NG	14.85	1.49
tblEnergyUse	T24NG	39.90	3.99
tblEnergyUse	T24NG	18.32	1.83
tblEnergyUse	T24NG	17.85	1.78
tblEnergyUse	T24NG	39.90	3.99
tblFireplaces	NumberGas	360.00	240.00
tblFireplaces	NumberNoFireplace	96.00	2,160.00
tblFireplaces	NumberWood	408.00	0.00
tblGrading	MaterialExported	0.00	26,666.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	1.15	0.00
tblLandUse	LotAcreage	0.34	0.00

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tblLandUse	LotAcreage	63.16	14.40
tblLandUse	LotAcreage	0.34	0.00
tblProjectCharacteristics	CO2IntensityFactor	0	135
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.70	4.34
tblVehicleTrips	HS_TL	4.80	4.35
tblVehicleTrips	HW_TL	10.80	4.34
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	6.39	6.46
tblVehicleTrips	ST_TR	863.10	0.00
tblVehicleTrips	ST_TR	6.21	0.00
tblVehicleTrips	ST_TR	696.00	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	158.37	0.00
tblVehicleTrips	SU_TR	5.86	6.46
tblVehicleTrips	SU_TR	758.45	0.00
tblVehicleTrips	SU_TR	5.83	0.00
tblVehicleTrips	SU_TR	500.00	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	131.84	0.00
tblVehicleTrips	WD_TR	6.65	6.46
tblVehicleTrips	WD_TR	737.99	0.00
tblVehicleTrips	WD_TR	74.06	0.00
tblVehicleTrips	WD_TR	716.00	0.00

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tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	127.15	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	156,369,661.49	125,095,729.00
tblWater	IndoorWaterUseRate	1,111,087.82	888,870.26
tblWater	IndoorWaterUseRate	643,343.51	514,674.81
tblWater	IndoorWaterUseRate	4,553,005.69	3,642,404.55
tblWater	IndoorWaterUseRate	2,666,006.22	2,132,804.98
tblWater	IndoorWaterUseRate	2,957,157.20	2,365,725.76
tblWater	IndoorWaterUseRate	4,553,005.69	3,642,404.55
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	48.00	0.00
tblWoodstoves	NumberNoncatalytic	48.00	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	1.5735	1.5735
2	4-1-2023	6-30-2023	1.4686	1.4686
3	7-1-2023	9-30-2023	1.4847	1.4847
4	10-1-2023	12-31-2023	1.5208	1.5208
5	1-1-2024	3-31-2024	14.2114	14.2114
6	4-1-2024	6-30-2024	5.0284	5.0284
		Highest	14.2114	14.2114

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	12.1508	0.2308	17.7853	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0283	5.5000e-004	59.9443
Energy	0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	857.3405	857.3405	2.8500e-003	2.7200e-003	858.2231
Mobile	2.1800	11.2357	21.0231	0.0884	9.1118	0.0604	9.1722	2.4442	0.0562	2.5004	0.0000	8,167.6560	8,167.6560	0.2798	0.0000	8,174.6499
Waste						0.0000	0.0000		0.0000	0.0000	369.2020	0.0000	369.2020	21.8192	0.0000	914.6823
Water						0.0000	0.0000		0.0000	0.0000	48.9246	68.3107	117.2353	0.1684	0.1064	153.1509
Total	14.3458	11.5968	38.8779	0.0903	9.1118	0.1717	9.2835	2.4442	0.1675	2.6117	418.1266	9,152.3800	9,570.5066	22.2985	0.1097	10,160.6505

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.1508	0.2308	17.7853	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0283	5.5000e-004	59.9443
Energy	0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	857.3405	857.3405	2.8500e-003	2.7200e-003	858.2231
Mobile	1.9762	10.1388	16.5685	0.0638	6.2507	0.0453	6.2960	1.6767	0.0421	1.7188	0.0000	5,901.5012	5,901.5012	0.2224	0.0000	5,907.0603
Waste						0.0000	0.0000		0.0000	0.0000	236.2893	0.0000	236.2893	13.9643	0.0000	585.3967
Water						0.0000	0.0000		0.0000	0.0000	48.9246	66.9387	115.8633	0.1684	0.1064	151.7789
Total	14.1420	10.4999	34.4232	0.0657	6.2507	0.1566	6.4073	1.6767	0.1534	1.8301	285.2139	6,884.8532	7,170.0671	14.3862	0.1097	7,562.4032

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	1.42	9.46	11.46	27.23	31.40	8.82	30.98	31.40	8.43	29.93	31.79	24.78	25.08	35.48	0.00	25.57

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/13/2023	5	10	
2	Grading	Grading	1/14/2023	2/24/2023	5	30	
3	Building Construction	Building Construction	2/25/2023	4/19/2024	5	300	
4	Architectural Coating	Architectural Coating	1/1/2024	5/3/2024	5	90	
5	Paving	Paving	4/20/2024	5/17/2024	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 4,860,000; Residential Outdoor: 1,620,000; Non-Residential Indoor: 187,500; Non-Residential Outdoor: 62,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	3,333.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,778.00	277.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	356.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	0.0133	0.1376	0.0912	1.9000e-004	0.0903	6.3300e-003	0.0967	0.0497	5.8200e-003	0.0555	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.5000e-004	1.7100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5570	0.5570	1.0000e-005	0.0000	0.5572
Total	2.4000e-004	1.5000e-004	1.7100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5570	0.5570	1.0000e-005	0.0000	0.5572

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3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	0.0133	0.1376	0.0912	1.9000e-004	0.0903	6.3300e-003	0.0967	0.0497	5.8200e-003	0.0555	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.5000e-004	1.7100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5570	0.5570	1.0000e-005	0.0000	0.5572
Total	2.4000e-004	1.5000e-004	1.7100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5570	0.5570	1.0000e-005	0.0000	0.5572

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3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1316	0.0000	0.1316	0.0542	0.0000	0.0542	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642
Total	0.0498	0.5177	0.4208	9.3000e-004	0.1316	0.0214	0.1530	0.0542	0.0197	0.0738	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642

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	8.4500e-003	0.2765	0.0854	1.2300e-003	0.0282	5.0000e-004	0.0287	7.7400e-003	4.8000e-004	8.2200e-003	0.0000	119.6212	119.6212	5.6600e-003	0.0000	119.7627
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	8.0000e-004	5.1000e-004	5.6900e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8566	1.8566	4.0000e-005	0.0000	1.8575
Total	9.2500e-003	0.2770	0.0911	1.2500e-003	0.0305	5.1000e-004	0.0310	8.3700e-003	4.9000e-004	8.8600e-003	0.0000	121.4778	121.4778	5.7000e-003	0.0000	121.6201

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3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1316	0.0000	0.1316	0.0542	0.0000	0.0542	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641
Total	0.0498	0.5177	0.4208	9.3000e-004	0.1316	0.0214	0.1530	0.0542	0.0197	0.0738	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641

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	8.4500e-003	0.2765	0.0854	1.2300e-003	0.0282	5.0000e-004	0.0287	7.7400e-003	4.8000e-004	8.2200e-003	0.0000	119.6212	119.6212	5.6600e-003	0.0000	119.7627
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	8.0000e-004	5.1000e-004	5.6900e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8566	1.8566	4.0000e-005	0.0000	1.8575
Total	9.2500e-003	0.2770	0.0911	1.2500e-003	0.0305	5.1000e-004	0.0310	8.3700e-003	4.9000e-004	8.8600e-003	0.0000	121.4778	121.4778	5.7000e-003	0.0000	121.6201

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1730	1.5823	1.7868	2.9600e-003		0.0770	0.0770		0.0724	0.0724	0.0000	254.9852	254.9852	0.0607	0.0000	256.5017
Total	0.1730	1.5823	1.7868	2.9600e-003		0.0770	0.0770		0.0724	0.0724	0.0000	254.9852	254.9852	0.0607	0.0000	256.5017

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	0.0677	2.3239	0.6686	7.9000e-003	0.1998	2.6700e-003	0.2025	0.0578	2.5600e-003	0.0604	0.0000	760.5432	760.5432	0.0316	0.0000	761.3343
Worker	0.5232	0.3338	3.7082	0.0134	1.5454	9.6700e-003	1.5551	0.4111	8.9000e-003	0.4200	0.0000	1,210.3588	1,210.3588	0.0236	0.0000	1,210.9475
Total	0.5909	2.6577	4.3768	0.0213	1.7453	0.0123	1.7576	0.4689	0.0115	0.4804	0.0000	1,970.9020	1,970.9020	0.0552	0.0000	1,972.2818

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1730	1.5823	1.7868	2.9600e-003		0.0770	0.0770		0.0724	0.0724	0.0000	254.9849	254.9849	0.0607	0.0000	256.5013
Total	0.1730	1.5823	1.7868	2.9600e-003		0.0770	0.0770		0.0724	0.0724	0.0000	254.9849	254.9849	0.0607	0.0000	256.5013

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	0.0677	2.3239	0.6686	7.9000e-003	0.1998	2.6700e-003	0.2025	0.0578	2.5600e-003	0.0604	0.0000	760.5432	760.5432	0.0316	0.0000	761.3343
Worker	0.5232	0.3338	3.7082	0.0134	1.5454	9.6700e-003	1.5551	0.4111	8.9000e-003	0.4200	0.0000	1,210.3588	1,210.3588	0.0236	0.0000	1,210.9475
Total	0.5909	2.6577	4.3768	0.0213	1.7453	0.0123	1.7576	0.4689	0.0115	0.4804	0.0000	1,970.9020	1,970.9020	0.0552	0.0000	1,972.2818

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0589	0.5378	0.6467	1.0800e-003		0.0245	0.0245		0.0231	0.0231	0.0000	92.7396	92.7396	0.0219	0.0000	93.2879
Total	0.0589	0.5378	0.6467	1.0800e-003		0.0245	0.0245		0.0231	0.0231	0.0000	92.7396	92.7396	0.0219	0.0000	93.2879

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	0.0238	0.8356	0.2341	2.8500e-003	0.0727	9.5000e-004	0.0736	0.0210	9.1000e-004	0.0219	0.0000	274.6946	274.6946	0.0113	0.0000	274.9765
Worker	0.1788	0.1096	1.2491	4.6700e-003	0.5620	3.4500e-003	0.5654	0.1495	3.1800e-003	0.1527	0.0000	422.7115	422.7115	7.7100e-003	0.0000	422.9043
Total	0.2026	0.9452	1.4832	7.5200e-003	0.6347	4.4000e-003	0.6391	0.1705	4.0900e-003	0.1746	0.0000	697.4061	697.4061	0.0190	0.0000	697.8807

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0589	0.5378	0.6467	1.0800e-003		0.0245	0.0245		0.0231	0.0231	0.0000	92.7395	92.7395	0.0219	0.0000	93.2878
Total	0.0589	0.5378	0.6467	1.0800e-003		0.0245	0.0245		0.0231	0.0231	0.0000	92.7395	92.7395	0.0219	0.0000	93.2878

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	0.0238	0.8356	0.2341	2.8500e-003	0.0727	9.5000e-004	0.0736	0.0210	9.1000e-004	0.0219	0.0000	274.6946	274.6946	0.0113	0.0000	274.9765
Worker	0.1788	0.1096	1.2491	4.6700e-003	0.5620	3.4500e-003	0.5654	0.1495	3.1800e-003	0.1527	0.0000	422.7115	422.7115	7.7100e-003	0.0000	422.9043
Total	0.2026	0.9452	1.4832	7.5200e-003	0.6347	4.4000e-003	0.6391	0.1705	4.0900e-003	0.1746	0.0000	697.4061	697.4061	0.0190	0.0000	697.8807

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	17.5464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1300e-003	0.0549	0.0815	1.3000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	11.4896	11.4896	6.5000e-004	0.0000	11.5058
Total	17.5545	0.0549	0.0815	1.3000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	11.4896	11.4896	6.5000e-004	0.0000	11.5058

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	0.0403	0.0247	0.2814	1.0500e-003	0.1266	7.8000e-004	0.1274	0.0337	7.2000e-004	0.0344	0.0000	95.2171	95.2171	1.7400e-003	0.0000	95.2605
Total	0.0403	0.0247	0.2814	1.0500e-003	0.1266	7.8000e-004	0.1274	0.0337	7.2000e-004	0.0344	0.0000	95.2171	95.2171	1.7400e-003	0.0000	95.2605

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

3.5 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	17.5464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1300e-003	0.0549	0.0815	1.3000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	11.4896	11.4896	6.5000e-004	0.0000	11.5058
Total	17.5545	0.0549	0.0815	1.3000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	11.4896	11.4896	6.5000e-004	0.0000	11.5058

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	0.0403	0.0247	0.2814	1.0500e-003	0.1266	7.8000e-004	0.1274	0.0337	7.2000e-004	0.0344	0.0000	95.2171	95.2171	1.7400e-003	0.0000	95.2605
Total	0.0403	0.0247	0.2814	1.0500e-003	0.1266	7.8000e-004	0.1274	0.0337	7.2000e-004	0.0344	0.0000	95.2171	95.2171	1.7400e-003	0.0000	95.2605

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.3000e-004	2.6300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8916	0.8916	2.0000e-005	0.0000	0.8920
Total	3.8000e-004	2.3000e-004	2.6300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8916	0.8916	2.0000e-005	0.0000	0.8920

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

3.6 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.3000e-004	2.6300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8916	0.8916	2.0000e-005	0.0000	0.8920
Total	3.8000e-004	2.3000e-004	2.6300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8916	0.8916	2.0000e-005	0.0000	0.8920

4.0 Operational Detail - Mobile

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9762	10.1388	16.5685	0.0638	6.2507	0.0453	6.2960	1.6767	0.0421	1.7188	0.0000	5,901.5012	5,901.5012	0.2224	0.0000	5,907.0603
Unmitigated	2.1800	11.2357	21.0231	0.0884	9.1118	0.0604	9.1722	2.4442	0.0562	2.5004	0.0000	8,167.6560	8,167.6560	0.2798	0.0000	8,174.6499

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	15,504.00	15,504.00	15,504.00	24,501,064	16,807,730
Convenience Market (24 Hour)	0.00	0.00	0.00		
Day-Care Center	0.00	0.00	0.00		
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Total	15,504.00	15,504.00	15,504.00	24,501,064	16,807,730

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	4.34	4.35	4.34	31.00	15.00	54.00	100	0	0
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Fast Food Restaurant w/o Drive	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676
Convenience Market (24 Hour)	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676
Day-Care Center	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676
Fast Food Restaurant w/o Drive Thru	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676
General Office Building	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676
Health Club	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676
High Turnover (Sit Down Restaurant)	0.585795	0.036515	0.193581	0.106455	0.012789	0.005274	0.019465	0.028415	0.002699	0.001789	0.005626	0.000921	0.000676

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Electricity Mitigated							0.0000	0.0000		0.0000	0.0000	0.0000	708.8239	708.8239	0.0000	0.0000	708.8239
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	0.0000	708.8239	708.8239	0.0000	0.0000	708.8239
NaturalGas Mitigated	0.0150	0.1303	0.0694	8.2000e-004			0.0104	0.0104		0.0104	0.0104	0.0000	148.5166	148.5166	2.8500e-003	2.7200e-003	149.3992
NaturalGas Unmitigated	0.0150	0.1303	0.0694	8.2000e-004			0.0104	0.0104		0.0104	0.0104	0.0000	148.5166	148.5166	2.8500e-003	2.7200e-003	149.3992

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.0953e+006	0.0113	0.0966	0.0411	6.2000e-004		7.8100e-003	7.8100e-003		7.8100e-003	7.8100e-003	0.0000	111.8130	111.8130	2.1400e-003	2.0500e-003	112.4774
Convenience Market (24 Hour)	6900	4.0000e-005	3.4000e-004	2.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3682	0.3682	1.0000e-005	1.0000e-005	0.3704
Day-Care Center	24750	1.3000e-004	1.2100e-003	1.0200e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.3208	1.3208	3.0000e-005	2.0000e-005	1.3286
Fast Food Restaurant w/o Drive Thru	251850	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4397	13.4397	2.6000e-004	2.5000e-004	13.5195
General Office Building	28950	1.6000e-004	1.4200e-003	1.1900e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5449	1.5449	3.0000e-005	3.0000e-005	1.5541
Health Club	123500	6.7000e-004	6.0500e-003	5.0900e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5904	6.5904	1.3000e-004	1.2000e-004	6.6296
High Turnover (Sit Down Restaurant)	251850	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4397	13.4397	2.6000e-004	2.5000e-004	13.5195
Total		0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.5166	148.5166	2.8600e-003	2.7300e-003	149.3992

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.0953e+006	0.0113	0.0966	0.0411	6.2000e-004		7.8100e-003	7.8100e-003		7.8100e-003	7.8100e-003	0.0000	111.8130	111.8130	2.1400e-003	2.0500e-003	112.4774
Convenience Market (24 Hour)	6900	4.0000e-005	3.4000e-004	2.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3682	0.3682	1.0000e-005	1.0000e-005	0.3704
Day-Care Center	24750	1.3000e-004	1.2100e-003	1.0200e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.3208	1.3208	3.0000e-005	2.0000e-005	1.3286
Fast Food Restaurant w/o Drive Thru	251850	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4397	13.4397	2.6000e-004	2.5000e-004	13.5195
General Office Building	28950	1.6000e-004	1.4200e-003	1.1900e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5449	1.5449	3.0000e-005	3.0000e-005	1.5541
Health Club	123500	6.7000e-004	6.0500e-003	5.0900e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5904	6.5904	1.3000e-004	1.2000e-004	6.6296
High Turnover (Sit Down Restaurant)	251850	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4397	13.4397	2.6000e-004	2.5000e-004	13.5195
Total		0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.5166	148.5166	2.8600e-003	2.7300e-003	149.3992

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.01328e+007	620.4802	0.0000	0.0000	620.4802
Convenience Market (24 Hour)	125250	7.6697	0.0000	0.0000	7.6697
Day-Care Center	52350	3.2057	0.0000	0.0000	3.2057
Fast Food Restaurant w/o Drive Thru	398700	24.4144	0.0000	0.0000	24.4144
General Office Building	152700	9.3506	0.0000	0.0000	9.3506
Health Club	315000	19.2890	0.0000	0.0000	19.2890
High Turnover (Sit Down Restaurant)	398700	24.4144	0.0000	0.0000	24.4144
Total		708.8239	0.0000	0.0000	708.8239

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.01328e+007	620.4802	0.0000	0.0000	620.4802
Convenience Market (24 Hour)	125250	7.6697	0.0000	0.0000	7.6697
Day-Care Center	52350	3.2057	0.0000	0.0000	3.2057
Fast Food Restaurant w/o Drive Thru	398700	24.4144	0.0000	0.0000	24.4144
General Office Building	152700	9.3506	0.0000	0.0000	9.3506
Health Club	315000	19.2890	0.0000	0.0000	19.2890
High Turnover (Sit Down Restaurant)	398700	24.4144	0.0000	0.0000	24.4144
Total		708.8239	0.0000	0.0000	708.8239

6.0 Area Detail**6.1 Mitigation Measures Area**

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	12.1508	0.2308	17.7853	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0283	5.5000e-004	59.9443
Unmitigated	12.1508	0.2308	17.7853	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0283	5.5000e-004	59.9443

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	1.7546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.8614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.0300e-003	0.0259	0.0110	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003	0.0000	29.9614	29.9614	5.7000e-004	5.5000e-004	30.1395
Landscaping	0.5317	0.2049	17.7743	9.4000e-004		0.0988	0.0988		0.0988	0.0988	0.0000	29.1113	29.1113	0.0277	0.0000	29.8048
Total	12.1508	0.2308	17.7853	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0283	5.5000e-004	59.9443

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.8614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.0300e-003	0.0259	0.0110	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003	0.0000	29.9614	29.9614	5.7000e-004	5.5000e-004	30.1395
Landscaping	0.5317	0.2049	17.7743	9.4000e-004		0.0988	0.0988		0.0988	0.0988	0.0000	29.1113	29.1113	0.0277	0.0000	29.8048
Total	12.1508	0.2308	17.7853	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0283	5.5000e-004	59.9443

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	115.8633	0.1684	0.1064	151.7789
Unmitigated	117.2353	0.1684	0.1064	153.1509

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	125.096 / 98.5809	106.8367	0.1523	0.0963	139.3273
Convenience Market (24 Hour)	0.88887 / 0.680989	0.7550	1.0800e-003	6.8000e-004	0.9858
Day-Care Center	0.514675 / 1.65431	0.7072	6.3000e-004	4.0000e-004	0.8409
Fast Food Restaurant w/o Drive Thru	3.6424 / 0.290617	2.5579	4.4400e-003	2.8000e-003	3.5039
General Office Building	2.1328 / 1.634	1.8115	2.6000e-003	1.6400e-003	2.3654
Health Club	2.36573 / 1.81245	2.0093	2.8800e-003	1.8200e-003	2.6238
High Turnover (Sit Down Restaurant)	3.6424 / 0.290617	2.5579	4.4400e-003	2.8000e-003	3.5039
Total		117.2353	0.1684	0.1064	153.1509

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	125.096 / 92.5674	105.5479	0.1523	0.0963	138.0384
Convenience Market (24 Hour)	0.88887 / 0.639449	0.7461	1.0800e-003	6.8000e-004	0.9769
Day-Care Center	0.514675 / 1.5534	0.6856	6.3000e-004	4.0000e-004	0.8192
Fast Food Restaurant w/o Drive Thru	3.6424 / 0.27289	2.5541	4.4400e-003	2.8000e-003	3.5001
General Office Building	2.1328 / 1.53433	1.7901	2.6000e-003	1.6400e-003	2.3441
Health Club	2.36573 / 1.70189	1.9856	2.8800e-003	1.8200e-003	2.6001
High Turnover (Sit Down Restaurant)	3.6424 / 0.27289	2.5541	4.4400e-003	2.8000e-003	3.5001
Total		115.8633	0.1684	0.1064	151.7789

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	236.2893	13.9643	0.0000	585.3967
Unmitigated	369.2020	21.8192	0.0000	914.6823

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1104	224.1020	13.2441	0.0000	555.2033
Convenience Market (24 Hour)	45.08	9.1508	0.5408	0.0000	22.6708
Day-Care Center	19.5	3.9583	0.2339	0.0000	9.8066
Fast Food Restaurant w/o Drive Thru	172.78	35.0728	2.0727	0.0000	86.8913
General Office Building	13.95	2.8317	0.1674	0.0000	7.0155
Health Club	285	57.8524	3.4190	0.0000	143.3269
High Turnover (Sit Down Restaurant)	178.5	36.2339	2.1414	0.0000	89.7679
Total		369.2020	21.8192	0.0000	914.6823

Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	706.56	143.4253	8.4762	0.0000	355.3301
Convenience Market (24 Hour)	28.8512	5.8565	0.3461	0.0000	14.5093
Day-Care Center	12.48	2.5333	0.1497	0.0000	6.2762
Fast Food Restaurant w/o Drive Thru	110.579	22.4466	1.3266	0.0000	55.6105
General Office Building	8.928	1.8123	0.1071	0.0000	4.4899
Health Club	182.4	37.0256	2.1882	0.0000	91.7292
High Turnover (Sit Down Restaurant)	114.24	23.1897	1.3705	0.0000	57.4515
Total		236.2893	13.9643	0.0000	585.3967

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Ashby and North Berkeley BART: commercial trip reductions - Bay Area AQMD Air District, Annual

Boilers

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

Equipment Type	Number
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11.0 Vegetation

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH
Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	15.00	1000sqft	0.00	15,000.00	0
Day-Care Center	15.00	1000sqft	0.00	15,000.00	0
Fast Food Restaurant w/o Drive Thru	15.00	1000sqft	0.00	15,000.00	0
Health Club	50.00	1000sqft	0.00	50,000.00	0
High Turnover (Sit Down Restaurant)	15.00	1000sqft	0.00	15,000.00	0
Apartments Mid Rise	2,400.00	Dwelling Unit	14.40	2,400,000.00	6864
Convenience Market (24 Hour)	15.00	1000sqft	0.00	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2029
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	135	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

Project Characteristics - RPS for 2030 per SB 100 for EBCE

Land Use - Based on Project Description and Traffic Study

Construction Phase - no demo, arch coating extended to reflect typical construction phasing

Grading - Based on export estimates

Architectural Coating - BAAQMD Regulation 8, Rule 3

Vehicle Trips - Based on trip rate and VMT data provided by traffic consultant

Woodstoves - BAAQMD Regulation 6, Rule 3 and Berkeley Municipal Code 12.80

Area Coating - BAAQMD Regulation 8, Rule 3

Energy Use - 2019 Energy Code, assume 10% natural gas use

Water And Wastewater - All wastewater treated at EBMUD WWTP

Mobile Land Use Mitigation - Based on density and employment assumptions in PD

Energy Mitigation - Mitigation Measure GHG-1: Use 100% renewable or solar energy

Water Mitigation - CALGreen compliance

Waste Mitigation - City of Berkeley solid waste diversion rate of 68% (adjusted to account for 50% diversion already included in CalEEMod)

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblAreaCoating	Area_EF_Parking	150	100
tblConstructionPhase	NumDays	20.00	90.00
tblEnergyUse	LightingElect	4.88	3.42
tblEnergyUse	LightingElect	2.51	1.76
tblEnergyUse	LightingElect	5.34	3.74
tblEnergyUse	LightingElect	3.58	2.51
tblEnergyUse	LightingElect	2.99	2.09
tblEnergyUse	LightingElect	5.34	3.74
tblEnergyUse	NT24NG	2,615.00	261.50
tblEnergyUse	NT24NG	0.70	0.07

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

tblEnergyUse	NT24NG	1.62	0.16
tblEnergyUse	NT24NG	128.02	12.80
tblEnergyUse	NT24NG	1.01	0.10
tblEnergyUse	NT24NG	6.90	0.69
tblEnergyUse	NT24NG	128.02	12.80
tblEnergyUse	T24E	2.24	1.57
tblEnergyUse	T24E	0.66	0.46
tblEnergyUse	T24E	2.67	1.87
tblEnergyUse	T24E	4.10	2.87
tblEnergyUse	T24E	1.21	0.85
tblEnergyUse	T24E	2.67	1.87
tblEnergyUse	T24NG	6,115.43	611.54
tblEnergyUse	T24NG	3.90	0.39
tblEnergyUse	T24NG	14.85	1.49
tblEnergyUse	T24NG	39.90	3.99
tblEnergyUse	T24NG	18.32	1.83
tblEnergyUse	T24NG	17.85	1.78
tblEnergyUse	T24NG	39.90	3.99
tblFireplaces	NumberGas	360.00	240.00
tblFireplaces	NumberNoFireplace	96.00	2,160.00
tblFireplaces	NumberWood	408.00	0.00
tblGrading	MaterialExported	0.00	26,666.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	0.34	0.00
tblLandUse	LotAcreage	1.15	0.00
tblLandUse	LotAcreage	0.34	0.00

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

tblLandUse	LotAcreage	63.16	14.40
tblLandUse	LotAcreage	0.34	0.00
tblProjectCharacteristics	CO2IntensityFactor	0	135
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.70	2.09
tblVehicleTrips	HS_TL	4.80	2.09
tblVehicleTrips	HW_TL	10.80	2.09
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	6.39	14.80
tblVehicleTrips	ST_TR	863.10	0.00
tblVehicleTrips	ST_TR	6.21	0.00
tblVehicleTrips	ST_TR	696.00	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	158.37	0.00
tblVehicleTrips	SU_TR	5.86	14.80
tblVehicleTrips	SU_TR	758.45	0.00
tblVehicleTrips	SU_TR	5.83	0.00
tblVehicleTrips	SU_TR	500.00	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	131.84	0.00
tblVehicleTrips	WD_TR	6.65	14.81
tblVehicleTrips	WD_TR	737.99	0.00
tblVehicleTrips	WD_TR	74.06	0.00
tblVehicleTrips	WD_TR	716.00	0.00

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	127.15	0.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	156,369,661.49	125,095,729.00
tblWater	IndoorWaterUseRate	1,111,087.82	888,870.26
tblWater	IndoorWaterUseRate	643,343.51	514,674.81
tblWater	IndoorWaterUseRate	4,553,005.69	3,642,404.55
tblWater	IndoorWaterUseRate	2,666,006.22	2,132,804.98
tblWater	IndoorWaterUseRate	2,957,157.20	2,365,725.76
tblWater	IndoorWaterUseRate	4,553,005.69	3,642,404.55
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	48.00	0.00
tblWoodstoves	NumberNoncatalytic	48.00	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	1.5735	1.5735
2	4-1-2023	6-30-2023	1.4686	1.4686
3	7-1-2023	9-30-2023	1.4847	1.4847
4	10-1-2023	12-31-2023	1.5208	1.5208
5	1-1-2024	3-31-2024	14.2114	14.2114
6	4-1-2024	6-30-2024	5.0284	5.0284
		Highest	14.2114	14.2114

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	12.1537	0.2310	17.8155	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0285	5.5000e-004	59.9479
Energy	0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	857.3405	857.3405	2.8500e-003	2.7200e-003	858.2231
Mobile	4.4369	21.8105	32.7839	0.1114	10.0545	0.0864	10.1409	2.6972	0.0803	2.7775	0.0000	10,307.1951	10,307.1951	0.4361	0.0000	10,318.0983
Waste						0.0000	0.0000		0.0000	0.0000	369.2020	0.0000	369.2020	21.8192	0.0000	914.6823
Water						0.0000	0.0000		0.0000	0.0000	48.9246	68.3107	117.2353	0.1684	0.1064	153.1509
Total	16.6056	22.1717	50.6688	0.1133	10.0545	0.1977	10.2522	2.6972	0.1916	2.8887	418.1266	11,291.9192	11,710.0458	22.4550	0.1097	12,304.1024

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.1537	0.2310	17.8155	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0285	5.5000e-004	59.9479
Energy	0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.5166	148.5166	2.8500e-003	2.7200e-003	149.3992
Mobile	4.2160	20.6021	27.8995	0.0849	7.0381	0.0693	7.1075	1.8880	0.0644	1.9524	0.0000	7,873.8014	7,873.8014	0.3740	0.0000	7,883.1525
Waste						0.0000	0.0000		0.0000	0.0000	236.2893	0.0000	236.2893	13.9643	0.0000	585.3967
Water						0.0000	0.0000		0.0000	0.0000	48.9246	66.9387	115.8633	0.1684	0.1064	151.7789
Total	16.3847	20.9633	45.7845	0.0869	7.0381	0.1806	7.2187	1.8880	0.1756	2.0636	285.2139	8,148.3295	8,433.5434	14.5380	0.1097	8,829.6751

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	1.33	5.45	9.64	23.32	30.00	8.65	29.59	30.00	8.32	28.56	31.79	27.84	27.98	35.26	0.00	28.24

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/13/2023	5	10	
2	Grading	Grading	1/14/2023	2/24/2023	5	30	
3	Building Construction	Building Construction	2/25/2023	4/19/2024	5	300	
4	Architectural Coating	Architectural Coating	1/1/2024	5/3/2024	5	90	
5	Paving	Paving	4/20/2024	5/17/2024	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 4,860,000; Residential Outdoor: 1,620,000; Non-Residential Indoor: 187,500; Non-Residential Outdoor: 62,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	3,333.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,778.00	277.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	356.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	0.0133	0.1376	0.0912	1.9000e-004	0.0903	6.3300e-003	0.0967	0.0497	5.8200e-003	0.0555	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.5000e-004	1.7100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5570	0.5570	1.0000e-005	0.0000	0.5572
Total	2.4000e-004	1.5000e-004	1.7100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5570	0.5570	1.0000e-005	0.0000	0.5572

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3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	0.0133	0.1376	0.0912	1.9000e-004	0.0903	6.3300e-003	0.0967	0.0497	5.8200e-003	0.0555	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.5000e-004	1.7100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5570	0.5570	1.0000e-005	0.0000	0.5572
Total	2.4000e-004	1.5000e-004	1.7100e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5570	0.5570	1.0000e-005	0.0000	0.5572

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3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1316	0.0000	0.1316	0.0542	0.0000	0.0542	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642
Total	0.0498	0.5177	0.4208	9.3000e-004	0.1316	0.0214	0.1530	0.0542	0.0197	0.0738	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642

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	8.4500e-003	0.2765	0.0854	1.2300e-003	0.0282	5.0000e-004	0.0287	7.7400e-003	4.8000e-004	8.2200e-003	0.0000	119.6212	119.6212	5.6600e-003	0.0000	119.7627
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	8.0000e-004	5.1000e-004	5.6900e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8566	1.8566	4.0000e-005	0.0000	1.8575
Total	9.2500e-003	0.2770	0.0911	1.2500e-003	0.0305	5.1000e-004	0.0310	8.3700e-003	4.9000e-004	8.8600e-003	0.0000	121.4778	121.4778	5.7000e-003	0.0000	121.6201

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3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1316	0.0000	0.1316	0.0542	0.0000	0.0542	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641
Total	0.0498	0.5177	0.4208	9.3000e-004	0.1316	0.0214	0.1530	0.0542	0.0197	0.0738	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641

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	8.4500e-003	0.2765	0.0854	1.2300e-003	0.0282	5.0000e-004	0.0287	7.7400e-003	4.8000e-004	8.2200e-003	0.0000	119.6212	119.6212	5.6600e-003	0.0000	119.7627
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	8.0000e-004	5.1000e-004	5.6900e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.8566	1.8566	4.0000e-005	0.0000	1.8575
Total	9.2500e-003	0.2770	0.0911	1.2500e-003	0.0305	5.1000e-004	0.0310	8.3700e-003	4.9000e-004	8.8600e-003	0.0000	121.4778	121.4778	5.7000e-003	0.0000	121.6201

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3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1730	1.5823	1.7868	2.9600e-003		0.0770	0.0770		0.0724	0.0724	0.0000	254.9852	254.9852	0.0607	0.0000	256.5017
Total	0.1730	1.5823	1.7868	2.9600e-003		0.0770	0.0770		0.0724	0.0724	0.0000	254.9852	254.9852	0.0607	0.0000	256.5017

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	0.0677	2.3239	0.6686	7.9000e-003	0.1998	2.6700e-003	0.2025	0.0578	2.5600e-003	0.0604	0.0000	760.5432	760.5432	0.0316	0.0000	761.3343
Worker	0.5232	0.3338	3.7082	0.0134	1.5454	9.6700e-003	1.5551	0.4111	8.9000e-003	0.4200	0.0000	1,210.3588	1,210.3588	0.0236	0.0000	1,210.9475
Total	0.5909	2.6577	4.3768	0.0213	1.7453	0.0123	1.7576	0.4689	0.0115	0.4804	0.0000	1,970.9020	1,970.9020	0.0552	0.0000	1,972.2818

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3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1730	1.5823	1.7868	2.9600e-003		0.0770	0.0770		0.0724	0.0724	0.0000	254.9849	254.9849	0.0607	0.0000	256.5013
Total	0.1730	1.5823	1.7868	2.9600e-003		0.0770	0.0770		0.0724	0.0724	0.0000	254.9849	254.9849	0.0607	0.0000	256.5013

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	0.0677	2.3239	0.6686	7.9000e-003	0.1998	2.6700e-003	0.2025	0.0578	2.5600e-003	0.0604	0.0000	760.5432	760.5432	0.0316	0.0000	761.3343
Worker	0.5232	0.3338	3.7082	0.0134	1.5454	9.6700e-003	1.5551	0.4111	8.9000e-003	0.4200	0.0000	1,210.3588	1,210.3588	0.0236	0.0000	1,210.9475
Total	0.5909	2.6577	4.3768	0.0213	1.7453	0.0123	1.7576	0.4689	0.0115	0.4804	0.0000	1,970.9020	1,970.9020	0.0552	0.0000	1,972.2818

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3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0589	0.5378	0.6467	1.0800e-003		0.0245	0.0245		0.0231	0.0231	0.0000	92.7396	92.7396	0.0219	0.0000	93.2879
Total	0.0589	0.5378	0.6467	1.0800e-003		0.0245	0.0245		0.0231	0.0231	0.0000	92.7396	92.7396	0.0219	0.0000	93.2879

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	0.0238	0.8356	0.2341	2.8500e-003	0.0727	9.5000e-004	0.0736	0.0210	9.1000e-004	0.0219	0.0000	274.6946	274.6946	0.0113	0.0000	274.9765
Worker	0.1788	0.1096	1.2491	4.6700e-003	0.5620	3.4500e-003	0.5654	0.1495	3.1800e-003	0.1527	0.0000	422.7115	422.7115	7.7100e-003	0.0000	422.9043
Total	0.2026	0.9452	1.4832	7.5200e-003	0.6347	4.4000e-003	0.6391	0.1705	4.0900e-003	0.1746	0.0000	697.4061	697.4061	0.0190	0.0000	697.8807

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0589	0.5378	0.6467	1.0800e-003		0.0245	0.0245		0.0231	0.0231	0.0000	92.7395	92.7395	0.0219	0.0000	93.2878
Total	0.0589	0.5378	0.6467	1.0800e-003		0.0245	0.0245		0.0231	0.0231	0.0000	92.7395	92.7395	0.0219	0.0000	93.2878

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	0.0238	0.8356	0.2341	2.8500e-003	0.0727	9.5000e-004	0.0736	0.0210	9.1000e-004	0.0219	0.0000	274.6946	274.6946	0.0113	0.0000	274.9765
Worker	0.1788	0.1096	1.2491	4.6700e-003	0.5620	3.4500e-003	0.5654	0.1495	3.1800e-003	0.1527	0.0000	422.7115	422.7115	7.7100e-003	0.0000	422.9043
Total	0.2026	0.9452	1.4832	7.5200e-003	0.6347	4.4000e-003	0.6391	0.1705	4.0900e-003	0.1746	0.0000	697.4061	697.4061	0.0190	0.0000	697.8807

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	17.5464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1300e-003	0.0549	0.0815	1.3000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	11.4896	11.4896	6.5000e-004	0.0000	11.5058
Total	17.5545	0.0549	0.0815	1.3000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	11.4896	11.4896	6.5000e-004	0.0000	11.5058

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	0.0403	0.0247	0.2814	1.0500e-003	0.1266	7.8000e-004	0.1274	0.0337	7.2000e-004	0.0344	0.0000	95.2171	95.2171	1.7400e-003	0.0000	95.2605
Total	0.0403	0.0247	0.2814	1.0500e-003	0.1266	7.8000e-004	0.1274	0.0337	7.2000e-004	0.0344	0.0000	95.2171	95.2171	1.7400e-003	0.0000	95.2605

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

3.5 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	17.5464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.1300e-003	0.0549	0.0815	1.3000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	11.4896	11.4896	6.5000e-004	0.0000	11.5058
Total	17.5545	0.0549	0.0815	1.3000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003	0.0000	11.4896	11.4896	6.5000e-004	0.0000	11.5058

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	0.0403	0.0247	0.2814	1.0500e-003	0.1266	7.8000e-004	0.1274	0.0337	7.2000e-004	0.0344	0.0000	95.2171	95.2171	1.7400e-003	0.0000	95.2605
Total	0.0403	0.0247	0.2814	1.0500e-003	0.1266	7.8000e-004	0.1274	0.0337	7.2000e-004	0.0344	0.0000	95.2171	95.2171	1.7400e-003	0.0000	95.2605

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3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.3000e-004	2.6300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8916	0.8916	2.0000e-005	0.0000	0.8920
Total	3.8000e-004	2.3000e-004	2.6300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8916	0.8916	2.0000e-005	0.0000	0.8920

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

3.6 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.3000e-004	2.6300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8916	0.8916	2.0000e-005	0.0000	0.8920
Total	3.8000e-004	2.3000e-004	2.6300e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8916	0.8916	2.0000e-005	0.0000	0.8920

4.0 Operational Detail - Mobile

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.2160	20.6021	27.8995	0.0849	7.0381	0.0693	7.1075	1.8880	0.0644	1.9524	0.0000	7,873.8014	7,873.8014	0.3740	0.0000	7,883.1525
Unmitigated	4.4369	21.8105	32.7839	0.1114	10.0545	0.0864	10.1409	2.6972	0.0803	2.7775	0.0000	10,307.1951	10,307.1951	0.4361	0.0000	10,318.0983

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	35,544.00	35,520.00	35,520.00	27,035,237	18,924,666
Convenience Market (24 Hour)	0.00	0.00	0.00		
Day-Care Center	0.00	0.00	0.00		
Fast Food Restaurant w/o Drive Thru	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Total	35,544.00	35,520.00	35,520.00	27,035,237	18,924,666

4.3 Trip Type Information

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	2.09	2.09	2.09	31.00	15.00	54.00	100	0	0
Convenience Market (24 Hour)	9.50	7.30	7.30	0.90	80.10	19.00	24	15	61
Day-Care Center	9.50	7.30	7.30	12.70	82.30	5.00	28	58	14
Fast Food Restaurant w/o Drive	9.50	7.30	7.30	1.50	79.50	19.00	51	37	12
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
High Turnover (Sit Down)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.585310	0.036704	0.193678	0.106768	0.013058	0.005276	0.019312	0.028136	0.002690	0.001821	0.005648	0.000918	0.000682
Convenience Market (24 Hour)	0.585310	0.036704	0.193678	0.106768	0.013058	0.005276	0.019312	0.028136	0.002690	0.001821	0.005648	0.000918	0.000682
Day-Care Center	0.585310	0.036704	0.193678	0.106768	0.013058	0.005276	0.019312	0.028136	0.002690	0.001821	0.005648	0.000918	0.000682
Fast Food Restaurant w/o Drive Thru	0.585310	0.036704	0.193678	0.106768	0.013058	0.005276	0.019312	0.028136	0.002690	0.001821	0.005648	0.000918	0.000682
General Office Building	0.585310	0.036704	0.193678	0.106768	0.013058	0.005276	0.019312	0.028136	0.002690	0.001821	0.005648	0.000918	0.000682
Health Club	0.585310	0.036704	0.193678	0.106768	0.013058	0.005276	0.019312	0.028136	0.002690	0.001821	0.005648	0.000918	0.000682
High Turnover (Sit Down Restaurant)	0.585310	0.036704	0.193678	0.106768	0.013058	0.005276	0.019312	0.028136	0.002690	0.001821	0.005648	0.000918	0.000682

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	708.8239	708.8239	0.0000	0.0000	708.8239
NaturalGas Mitigated	0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.5166	148.5166	2.8500e-003	2.7200e-003	149.3992
NaturalGas Unmitigated	0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.5166	148.5166	2.8500e-003	2.7200e-003	149.3992

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.0953e+006	0.0113	0.0966	0.0411	6.2000e-004		7.8100e-003	7.8100e-003		7.8100e-003	7.8100e-003	0.0000	111.8130	111.8130	2.1400e-003	2.0500e-003	112.4774
Convenience Market (24 Hour)	6900	4.0000e-005	3.4000e-004	2.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3682	0.3682	1.0000e-005	1.0000e-005	0.3704
Day-Care Center	24750	1.3000e-004	1.2100e-003	1.0200e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.3208	1.3208	3.0000e-005	2.0000e-005	1.3286
Fast Food Restaurant w/o Drive Thru	251850	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4397	13.4397	2.6000e-004	2.5000e-004	13.5195
General Office Building	28950	1.6000e-004	1.4200e-003	1.1900e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5449	1.5449	3.0000e-005	3.0000e-005	1.5541
Health Club	123500	6.7000e-004	6.0500e-003	5.0900e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5904	6.5904	1.3000e-004	1.2000e-004	6.6296
High Turnover (Sit Down Restaurant)	251850	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4397	13.4397	2.6000e-004	2.5000e-004	13.5195
Total		0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.5166	148.5166	2.8600e-003	2.7300e-003	149.3992

Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project - MM GH - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.0953e+006	0.0113	0.0966	0.0411	6.2000e-004		7.8100e-003	7.8100e-003		7.8100e-003	7.8100e-003	0.0000	111.8130	111.8130	2.1400e-003	2.0500e-003	112.4774
Convenience Market (24 Hour)	6900	4.0000e-005	3.4000e-004	2.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3682	0.3682	1.0000e-005	1.0000e-005	0.3704
Day-Care Center	24750	1.3000e-004	1.2100e-003	1.0200e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.3208	1.3208	3.0000e-005	2.0000e-005	1.3286
Fast Food Restaurant w/o Drive Thru	251850	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4397	13.4397	2.6000e-004	2.5000e-004	13.5195
General Office Building	28950	1.6000e-004	1.4200e-003	1.1900e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5449	1.5449	3.0000e-005	3.0000e-005	1.5541
Health Club	123500	6.7000e-004	6.0500e-003	5.0900e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.5904	6.5904	1.3000e-004	1.2000e-004	6.6296
High Turnover (Sit Down Restaurant)	251850	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4397	13.4397	2.6000e-004	2.5000e-004	13.5195
Total		0.0150	0.1303	0.0694	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.5166	148.5166	2.8600e-003	2.7300e-003	149.3992

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.01328e+007	620.4802	0.0000	0.0000	620.4802
Convenience Market (24 Hour)	125250	7.6697	0.0000	0.0000	7.6697
Day-Care Center	52350	3.2057	0.0000	0.0000	3.2057
Fast Food Restaurant w/o Drive Thru	398700	24.4144	0.0000	0.0000	24.4144
General Office Building	152700	9.3506	0.0000	0.0000	9.3506
Health Club	315000	19.2890	0.0000	0.0000	19.2890
High Turnover (Sit Down Restaurant)	398700	24.4144	0.0000	0.0000	24.4144
Total		708.8239	0.0000	0.0000	708.8239

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
Day-Care Center	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Health Club	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	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

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	12.1537	0.2310	17.8155	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0285	5.5000e-004	59.9479
Unmitigated	12.1537	0.2310	17.8155	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0285	5.5000e-004	59.9479

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	1.7546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.8614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.0300e-003	0.0259	0.0110	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003	0.0000	29.9614	29.9614	5.7000e-004	5.5000e-004	30.1395
Landscaping	0.5346	0.2051	17.8045	9.4000e-004		0.0988	0.0988		0.0988	0.0988	0.0000	29.1113	29.1113	0.0279	0.0000	29.8084
Total	12.1537	0.2310	17.8155	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0285	5.5000e-004	59.9479

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.8614					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.0300e-003	0.0259	0.0110	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003	0.0000	29.9614	29.9614	5.7000e-004	5.5000e-004	30.1395
Landscaping	0.5346	0.2051	17.8045	9.4000e-004		0.0988	0.0988		0.0988	0.0988	0.0000	29.1113	29.1113	0.0279	0.0000	29.8084
Total	12.1537	0.2310	17.8155	1.1100e-003		0.1009	0.1009		0.1009	0.1009	0.0000	59.0728	59.0728	0.0285	5.5000e-004	59.9479

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	115.8633	0.1684	0.1064	151.7789
Unmitigated	117.2353	0.1684	0.1064	153.1509

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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	125.096 / 98.5809	106.8367	0.1523	0.0963	139.3273
Convenience Market (24 Hour)	0.88887 / 0.680989	0.7550	1.0800e-003	6.8000e-004	0.9858
Day-Care Center	0.514675 / 1.65431	0.7072	6.3000e-004	4.0000e-004	0.8409
Fast Food Restaurant w/o Drive Thru	3.6424 / 0.290617	2.5579	4.4400e-003	2.8000e-003	3.5039
General Office Building	2.1328 / 1.634	1.8115	2.6000e-003	1.6400e-003	2.3654
Health Club	2.36573 / 1.81245	2.0093	2.8800e-003	1.8200e-003	2.6238
High Turnover (Sit Down Restaurant)	3.6424 / 0.290617	2.5579	4.4400e-003	2.8000e-003	3.5039
Total		117.2353	0.1684	0.1064	153.1509

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	125.096 / 92.5674	105.5479	0.1523	0.0963	138.0384
Convenience Market (24 Hour)	0.88887 / 0.639449	0.7461	1.0800e-003	6.8000e-004	0.9769
Day-Care Center	0.514675 / 1.5534	0.6856	6.3000e-004	4.0000e-004	0.8192
Fast Food Restaurant w/o Drive Thru	3.6424 / 0.27289	2.5541	4.4400e-003	2.8000e-003	3.5001
General Office Building	2.1328 / 1.53433	1.7901	2.6000e-003	1.6400e-003	2.3441
Health Club	2.36573 / 1.70189	1.9856	2.8800e-003	1.8200e-003	2.6001
High Turnover (Sit Down Restaurant)	3.6424 / 0.27289	2.5541	4.4400e-003	2.8000e-003	3.5001
Total		115.8633	0.1684	0.1064	151.7789

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	236.2893	13.9643	0.0000	585.3967
Unmitigated	369.2020	21.8192	0.0000	914.6823

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1104	224.1020	13.2441	0.0000	555.2033
Convenience Market (24 Hour)	45.08	9.1508	0.5408	0.0000	22.6708
Day-Care Center	19.5	3.9583	0.2339	0.0000	9.8066
Fast Food Restaurant w/o Drive Thru	172.78	35.0728	2.0727	0.0000	86.8913
General Office Building	13.95	2.8317	0.1674	0.0000	7.0155
Health Club	285	57.8524	3.4190	0.0000	143.3269
High Turnover (Sit Down Restaurant)	178.5	36.2339	2.1414	0.0000	89.7679
Total		369.2020	21.8192	0.0000	914.6823

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	706.56	143.4253	8.4762	0.0000	355.3301
Convenience Market (24 Hour)	28.8512	5.8565	0.3461	0.0000	14.5093
Day-Care Center	12.48	2.5333	0.1497	0.0000	6.2762
Fast Food Restaurant w/o Drive Thru	110.579	22.4466	1.3266	0.0000	55.6105
General Office Building	8.928	1.8123	0.1071	0.0000	4.4899
Health Club	182.4	37.0256	2.1882	0.0000	91.7292
High Turnover (Sit Down Restaurant)	114.24	23.1897	1.3705	0.0000	57.4515
Total		236.2893	13.9643	0.0000	585.3967

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

N2O Operational GHG Emission Mobile Calculations

Project Code & Title: 19-09047 Ashby and North Berkeley BART Stations Transit-Oriented Development Zoning Standards Project

Vehicle Population Breakdown*	
4507256	Gasoline vehicles
192354	Diesel vehicles
95.9%	Gasoline vehicle %
4.1%	Diesel vehicle %

VMT per Vehicle Type	
16807730	Project VMT (CalEEMod output)
16119795	Gasoline vehicle VMT
687935	Diesel vehicle VMT

Gasoline Vehicles	
95.9%	Gasoline vehicle %
10.1388	Tons per year mobile NOX emissions (annual output in CalEEMod)
9.72	Gasoline vehicle tons per year NOX emissions
0.2989	Tons per year N2O emissions for gasoline vehicles**
0.2712	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
1.60	grams N2O per gallon of fuel for diesel vehicles**
120654.88	Diesel average miles per gallon*
0.00001	grams per mile N2O for diesel vehicles
9.1	grams per year N2O for diesel vehicles
0.0000091	Metric tons per year N2O emissions for diesel vehicles

CO2e Emissions from N2O	
0.2712	Metric tons per year from gasoline + diesel vehicles
298	GWP of N2O***
80.8	CO2e emissions per year from N2O emissions from gasoline + diesel vehicles

Sources
<p>*Vehicle population source: EMFAC2021 (v1.0.3) Emissions Inventory Region Type: Air District Region: Bay Area AQMD Calendar Year: 2030 Season: Annual Vehicle Classification: EMFAC2011 Categories</p> <p>**Methodology source: EMFAC2017 Volume III - Technical Documentation https://www.arb.ca.gov/msei/emfac2011-faq.htm</p> <p>***GWP source: Intergovernmental Panel on Climate Change (IPCC). 2007. AR4 Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.</p>