APPENDIX A
Air Quality/Greenhouse Gas/ Energy Data

COLLINS ISLAND BRIDGE REPLACEMENT PROJECT Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	COLLINS ISLAND BRIDGE REPLACEMENT PROJECT
Construction Start Date	2/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	16.2
Location	33.608259, -117.899921
County	Orange
City	Newport Beach
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5976
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.18

1.2. Land Use Types

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

Bridge/Overpass Construction	0.01	Mile	0.01	0.00	—	—	—	New Bridge: 31 ft (0.00587 mi) long x 20.5 ft (0.00398 mi) wide

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.88	2.42	19.3	28.2	0.05	0.86	1.52	2.39	0.79	0.22	1.02	—	5,337	5,337	0.20	0.06	1.82	5,362
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.88	2.42	19.3	28.0	0.05	0.86	1.53	2.39	0.80	0.22	1.02	—	5,327	5,327	0.21	0.06	0.05	5,351
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.45	1.22	9.96	13.6	0.03	0.42	0.55	0.96	0.39	0.09	0.47	—	2,874	2,874	0.11	0.03	0.39	2,887
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.26	0.22	1.82	2.49	< 0.005	0.08	0.10	0.18	0.07	0.02	0.09	—	476	476	0.02	0.01	0.07	478

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.88	2.42	19.3	28.2	0.05	0.86	1.52	2.39	0.79	0.22	1.02	—	5,337	5,337	0.20	0.06	1.82	5,362
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.88	2.42	19.3	28.0	0.05	0.86	1.53	2.39	0.80	0.22	1.02	—	5,327	5,327	0.21	0.06	0.05	5,351
2026	0.87	0.73	6.40	9.78	0.02	0.26	0.20	0.45	0.24	0.05	0.28	—	2,349	2,349	0.09	0.02	0.02	2,359
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.45	1.22	9.96	13.6	0.03	0.42	0.55	0.96	0.39	0.09	0.47	—	2,874	2,874	0.11	0.03	0.39	2,887
2026	0.01	0.01	0.08	0.12	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	27.6	27.6	< 0.005	< 0.005	< 0.005	27.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.26	0.22	1.82	2.49	< 0.005	0.08	0.10	0.18	0.07	0.02	0.09	—	476	476	0.02	0.01	0.07	478
2026	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.57	4.57	< 0.005	< 0.005	< 0.005	4.59

3. Construction Emissions Details

3.1. Demolition Phase 1 (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.74	1.46	12.5	14.5	0.03	0.49	—	0.49	0.45	—	0.45	—	3,564	3,564	0.14	0.03	—	3,576

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.74	1.46	12.5	14.5	0.03	0.49	—	0.49	0.45	—	0.45	—	3,564	3,564	0.14	0.03	—	3,576
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.51	1.75	< 0.005	0.06	—	0.06	0.05	—	0.05	—	430	430	0.02	< 0.005	—	431
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	71.1	71.1	< 0.005	< 0.005	—	71.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.98	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	232	232	< 0.005	0.01	0.88	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.6	39.6	< 0.005	0.01	0.08	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.85	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	221	221	< 0.005	0.01	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.6	39.6	< 0.005	0.01	< 0.005	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.0	27.0	< 0.005	< 0.005	0.05	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.78	4.78	< 0.005	< 0.005	< 0.005	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.47	4.47	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	—

3.3. Demolition Phase 2 (2025) - Unmitigated

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

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

Off-Road Equipment	1.74	1.46	12.5	14.5	0.03	0.49	—	0.49	0.45	—	0.45	—	3,564	3,564	0.14	0.03	—	3,576
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.74	1.46	12.5	14.5	0.03	0.49	—	0.49	0.45	—	0.45	—	3,564	3,564	0.14	0.03	—	3,576
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.75	0.87	< 0.005	0.03	—	0.03	0.03	—	0.03	—	215	215	0.01	< 0.005	—	216
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.16	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	35.6	35.6	< 0.005	< 0.005	—	35.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.98	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	232	232	< 0.005	0.01	0.88	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.2	79.2	0.01	0.01	0.17	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.85	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	221	221	< 0.005	0.01	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.3	79.3	0.01	0.01	< 0.005	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.78	4.78	< 0.005	< 0.005	< 0.005	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.24	2.24	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	—

3.5. Bridge Construction Phase 1 (2025) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.35	12.4	14.5	0.03	0.46	—	0.46	0.42	—	0.42	—	3,447	3,447	0.14	0.03	—	3,459
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.49	1.75	< 0.005	0.06	—	0.06	0.05	—	0.05	—	416	416	0.02	< 0.005	—	417
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	68.8	68.8	< 0.005	< 0.005	—	69.0
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.12	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	265	265	< 0.005	0.01	1.01	—
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.9	31.9	< 0.005	< 0.005	0.09	—
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.6	39.6	< 0.005	0.01	0.08	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.9	30.9	< 0.005	< 0.005	0.05	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.84	3.84	< 0.005	< 0.005	< 0.005	—
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.78	4.78	< 0.005	< 0.005	< 0.005	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.11	5.11	< 0.005	< 0.005	0.01	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	—
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	—

3.7. Street Improvements Phase 1 (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.74	2.30	19.1	26.3	0.05	0.86	—	0.86	0.79	—	0.79	—	4,846	4,846	0.20	0.04	—	4,862

Dust From Material Movement	—	—	—	—	—	—	1.06	1.06	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.42	3.46	4.75	0.01	0.16	—	0.16	0.14	—	0.14	—	876	876	0.04	0.01	—	879
Dust From Material Movement	—	—	—	—	—	—	0.19	0.19	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.63	0.87	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.12	0.12	1.96	0.00	0.00	0.46	0.46	0.00	0.11	0.11	—	465	465	0.01	0.02	1.76	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.4	26.4	< 0.005	< 0.005	0.06	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.32	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.0	81.0	< 0.005	< 0.005	0.14	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.78	4.78	< 0.005	< 0.005	< 0.005	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	—

3.9. Street Improvements Phase 2 (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.74	2.30	19.1	26.3	0.05	0.86	—	0.86	0.79	—	0.79	—	4,846	4,846	0.20	0.04	—	4,862
Dust From Material Movement	—	—	—	—	—	—	1.06	1.06	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.28	2.30	3.17	0.01	0.10	—	0.10	0.10	—	0.10	—	584	584	0.02	< 0.005	—	586
Dust From Material Movement	—	—	—	—	—	—	0.13	0.13	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.42	0.58	< 0.005	0.02	—	0.02	0.02	—	0.02	—	96.7	96.7	< 0.005	< 0.005	—	97.0
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.12	0.14	1.69	0.00	0.00	0.46	0.46	0.00	0.11	0.11	—	442	442	0.01	0.02	0.05	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.6	39.6	< 0.005	0.01	< 0.005	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	54.0	54.0	< 0.005	< 0.005	0.09	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.78	4.78	< 0.005	< 0.005	< 0.005	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.95	8.95	< 0.005	< 0.005	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	—

3.11. Landscaping/Paving Phase 2 (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.87	0.73	6.92	9.15	0.02	0.29	—	0.29	0.27	—	0.27	—	2,159	2,159	0.09	0.02	—	2,166
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.35	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	110	110	< 0.005	< 0.005	—	110
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.2	18.2	< 0.005	< 0.005	—	18.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.73	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	189	189	< 0.005	0.01	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.77	9.77	< 0.005	< 0.005	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.62	1.62	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.13. Landscaping/Paving Phase 2 (2026) - Unmitigated

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

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

Off-Road Equipment	0.81	0.68	6.35	9.10	0.02	0.26	—	0.26	0.24	—	0.24	—	2,160	2,160	0.09	0.02	—	2,167
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.4	25.4	< 0.005	< 0.005	—	25.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.20	4.20	< 0.005	< 0.005	—	4.21
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.68	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	186	186	< 0.005	0.01	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.21	2.21	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	—

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition Phase 1	Linear, Grubbing & Land Clearing	2/1/2025	4/3/2025	5.00	44.0	—
Demolition Phase 2	Linear, Grubbing & Land Clearing	9/5/2025	10/6/2025	5.00	22.0	—
Bridge Construction Phase 1	Linear, Grading & Excavation	4/4/2025	6/4/2025	5.00	44.0	—
Street Improvements Phase 1	Linear, Drainage, Utilities, & Sub-Grade	6/5/2025	9/4/2025	5.00	66.0	—
Street Improvements Phase 2	Linear, Drainage, Utilities, & Sub-Grade	10/7/2025	12/5/2025	5.00	44.0	—

Landscaping/Paving Phase 2	Linear, Paving	12/6/2025	1/6/2026	5.00	22.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition Phase 1	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition Phase 1	Cranes	Diesel	Average	1.00	8.00	367	0.29
Demolition Phase 1	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition Phase 1	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Demolition Phase 1	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition Phase 1	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Demolition Phase 1	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition Phase 2	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition Phase 2	Cranes	Diesel	Average	1.00	8.00	367	0.29
Demolition Phase 2	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition Phase 2	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Demolition Phase 2	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition Phase 2	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Demolition Phase 2	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Bridge Construction Phase 1	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Bridge Construction Phase 1	Cranes	Diesel	Average	1.00	8.00	367	0.29

Bridge Construction Phase 1	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Bridge Construction Phase 1	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Bridge Construction Phase 1	Surfacing Equipment	Diesel	Average	1.00	8.00	399	0.30
Bridge Construction Phase 1	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Bridge Construction Phase 1	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Street Improvements Phase 1	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Street Improvements Phase 1	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Street Improvements Phase 1	Graders	Diesel	Average	2.00	8.00	148	0.41
Street Improvements Phase 1	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Street Improvements Phase 1	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Street Improvements Phase 1	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Street Improvements Phase 1	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
Street Improvements Phase 1	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Street Improvements Phase 1	Surfacing Equipment	Diesel	Average	1.00	8.00	399	0.30
Street Improvements Phase 1	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Street Improvements Phase 1	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Street Improvements Phase 2	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

Street Improvements Phase 2	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Street Improvements Phase 2	Graders	Diesel	Average	2.00	8.00	148	0.41
Street Improvements Phase 2	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Street Improvements Phase 2	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Street Improvements Phase 2	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Street Improvements Phase 2	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
Street Improvements Phase 2	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Street Improvements Phase 2	Surfacing Equipment	Diesel	Average	1.00	8.00	399	0.30
Street Improvements Phase 2	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Street Improvements Phase 2	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Landscaping/Paving Phase 2	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Landscaping/Paving Phase 2	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Landscaping/Paving Phase 2	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Landscaping/Paving Phase 2	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Landscaping/Paving Phase 2	Surfacing Equipment	Diesel	Average	1.00	8.00	399	0.30
Landscaping/Paving Phase 2	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition Phase 1	—	—	—	—
Demolition Phase 1	Worker	17.5	18.5	LDA,LDT1,LDT2
Demolition Phase 1	Vendor	0.00	10.2	HHDT,MHDT
Demolition Phase 1	Hauling	0.57	20.0	HHDT
Demolition Phase 1	Onsite truck	—	—	HHDT
Street Improvements Phase 1	—	—	—	—
Street Improvements Phase 1	Worker	35.0	18.5	LDA,LDT1,LDT2
Street Improvements Phase 1	Vendor	0.00	10.2	HHDT,MHDT
Street Improvements Phase 1	Hauling	0.38	20.0	HHDT
Street Improvements Phase 1	Onsite truck	—	—	HHDT
Demolition Phase 2	—	—	—	—
Demolition Phase 2	Worker	17.5	18.5	LDA,LDT1,LDT2
Demolition Phase 2	Vendor	0.00	10.2	HHDT,MHDT
Demolition Phase 2	Hauling	1.14	20.0	HHDT
Demolition Phase 2	Onsite truck	—	—	HHDT
Bridge Construction Phase 1	—	—	—	—
Bridge Construction Phase 1	Worker	20.0	18.5	LDA,LDT1,LDT2
Bridge Construction Phase 1	Vendor	1.00	10.2	HHDT,MHDT
Bridge Construction Phase 1	Hauling	0.57	20.0	HHDT
Bridge Construction Phase 1	Onsite truck	—	—	HHDT
Street Improvements Phase 2	—	—	—	—
Street Improvements Phase 2	Worker	35.0	18.5	LDA,LDT1,LDT2
Street Improvements Phase 2	Vendor	0.00	10.2	HHDT,MHDT

Street Improvements Phase 2	Hauling	0.57	20.0	HHDT
Street Improvements Phase 2	Onsite truck	—	—	HHDT
Landscaping/Paving Phase 2	—	—	—	—
Landscaping/Paving Phase 2	Worker	15.0	18.5	LDA,LDT1,LDT2
Landscaping/Paving Phase 2	Vendor	0.00	10.2	HHDT,MHDT
Landscaping/Paving Phase 2	Hauling	0.00	20.0	HHDT
Landscaping/Paving Phase 2	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition Phase 1	0.00	200	0.01	0.00	—
Demolition Phase 2	0.00	200	0.01	0.00	—
Bridge Construction Phase 1	200	0.00	0.01	0.00	—
Street Improvements Phase 1	200	0.00	0.01	0.00	—

Street Improvements Phase 2	200	0.00	0.01	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Bridge/Overpass Construction	0.35	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	29.4	532	0.03	< 0.005
2026	29.4	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.66	annual days of extreme heat
Extreme Precipitation	3.25	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score

Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	51.9
AQ-PM	53.0
AQ-DPM	94.2
Drinking Water	32.3
Lead Risk Housing	57.9
Pesticides	0.00
Toxic Releases	81.0
Traffic	81.0
Effect Indicators	—
CleanUp Sites	25.6
Groundwater	0.00
Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	90.1
Solid Waste	0.00
Sensitive Population	—
Asthma	5.48
Cardio-vascular	10.7
Low Birth Weights	0.00
Socioeconomic Factor Indicators	—

Education	0.00
Housing	61.3
Linguistic	0.00
Poverty	4.02
Unemployment	—

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	86.80867445
Employed	79.81521879
Median HI	75.47799307
Education	—
Bachelor's or higher	92.03131015
High school enrollment	100
Preschool enrollment	95.7141024
Transportation	—
Auto Access	73.42486847
Active commuting	80.57230848
Social	—
2-parent households	45.73335044
Voting	69.19029899
Neighborhood	—
Alcohol availability	4.516874118
Park access	81.35506224
Retail density	65.44334659

Supermarket access	82.0094957
Tree canopy	5.941229308
Housing	—
Homeownership	38.3036058
Housing habitability	74.87488772
Low-inc homeowner severe housing cost burden	73.38637239
Low-inc renter severe housing cost burden	65.94379571
Uncrowded housing	96.93314513
Health Outcomes	—
Insured adults	89.59322469
Arthritis	3.0
Asthma ER Admissions	86.1
High Blood Pressure	3.8
Cancer (excluding skin)	1.1
Asthma	69.3
Coronary Heart Disease	4.7
Chronic Obstructive Pulmonary Disease	37.6
Diagnosed Diabetes	57.0
Life Expectancy at Birth	91.4
Cognitively Disabled	70.6
Physically Disabled	62.2
Heart Attack ER Admissions	98.3
Mental Health Not Good	92.6
Chronic Kidney Disease	14.8
Obesity	86.9
Pedestrian Injuries	19.6
Physical Health Not Good	72.6

Stroke	22.5
Health Risk Behaviors	—
Binge Drinking	69.8
Current Smoker	95.4
No Leisure Time for Physical Activity	86.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	18.5
Children	92.2
Elderly	2.4
English Speaking	94.7
Foreign-born	2.3
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	5.0
Traffic Density	78.9
Traffic Access	23.0
Other Indices	—
Hardship	1.7
Other Decision Support	—
2016 Voting	93.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	6.00
Healthy Places Index Score for Project Location (b)	90.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Per applicant provided construction questionnaire.
Construction: Off-Road Equipment	Per applicant provided construction questionnaire.
Construction: Paving	Per applicant provided construction questionnaire.

COLLINS ISLAND BRIDGE REPLACEMENT PROJECT

Energy Calculations
Construction On-Site (Off-Road) Fuel Consumption

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Fuel Consumption Rate (gallon/hour)[1]	Duration (total hours/day)	# days	Total Fuel Consumption (gallon)
Demolition Phase 1	Concrete/Industrial Saws	1	8	33	0.73	0.96	8	44	339.19
Demolition Phase 1	Cranes	1	8	367	0.29	4.26	8	44	1,498.53
Demolition Phase 1	Excavators	1	8	36	0.38	0.55	8	44	192.61
Demolition Phase 1	Off-Highway Trucks	1	8	376	0.38	5.72	8	44	2,011.75
Demolition Phase 1	Other Construction Equipment	1	8	82	0.42	1.38	8	44	484.92
Demolition Phase 1	Skid Steer Loaders	1	8	71	0.37	1.05	8	44	369.88
Demolition Phase 1	Tractors/Loaders/Backhoes	1	8	84	0.37	1.24	8	44	437.61
Demolition Phase 2	Concrete/Industrial Saws	1	8	33	0.73	0.96	8	22	169.59
Demolition Phase 2	Cranes	1	8	367	0.29	4.26	8	22	749.27
Demolition Phase 2	Excavators	1	8	36	0.38	0.55	8	22	96.31
Demolition Phase 2	Off-Highway Trucks	1	8	376	0.38	5.72	8	22	1,005.88
Demolition Phase 2	Other Construction Equipment	1	8	82	0.42	1.38	8	22	242.46
Demolition Phase 2	Skid Steer Loaders	1	8	71	0.37	1.05	8	22	184.94
Demolition Phase 2	Tractors/Loaders/Backhoes	1	8	84	0.37	1.24	8	22	218.80
Bridge Construction Phase 1	Bore/Drill Rigs	1	8	83	0.5	1.66	8	44	584.32
Bridge Construction Phase 1	Cranes	1	8	367	0.29	4.26	8	44	1,498.53
Bridge Construction Phase 1	Forklifts	1	8	82	0.2	0.66	8	44	230.91
Bridge Construction Phase 1	Generator Sets	1	8	14	0.74	0.41	8	44	145.87
Bridge Construction Phase 1	Surfacing Equipment	1	8	399	0.3	4.79	8	44	1,685.38
Bridge Construction Phase 1	Tractors/Loaders/Backhoes	1	8	84	0.37	1.24	8	44	437.61
Bridge Construction Phase 1	Welders	2	8	46	0.45	0.83	16	44	582.91
Street Improvements Phase 1	Air Compressors	1	8	37	0.48	0.71	8	66	375.09
Street Improvements Phase 1	Generator Sets	1	8	14	0.74	0.41	8	66	218.80
Street Improvements Phase 1	Graders	2	8	148	0.41	2.43	16	66	2,563.12
Street Improvements Phase 1	Plate Compactors	1	8	8	0.43	0.14	8	66	72.65
Street Improvements Phase 1	Pumps	1	8	11	0.74	0.33	8	66	171.92
Street Improvements Phase 1	Rough Terrain Forklifts	1	8	96	0.4	1.54	8	66	811.01
Street Improvements Phase 1	Rubber Tired Loaders	2	8	150	0.36	2.16	16	66	2,280.96
Street Improvements Phase 1	Signal Boards	1	8	6	0.82	0.20	8	66	103.91
Street Improvements Phase 1	Surfacing Equipment	1	8	399	0.3	4.79	8	66	2,528.06
Street Improvements Phase 1	Tractors/Loaders/Backhoes	2	8	84	0.37	1.24	16	66	1,312.82
Street Improvements Phase 1	Trenchers	1	8	40	0.5	0.80	8	66	422.40
Street Improvements Phase 2	Air Compressors	1	8	37	0.48	0.71	8	44	250.06
Street Improvements Phase 2	Generator Sets	1	8	14	0.74	0.41	8	44	145.87
Street Improvements Phase 2	Graders	2	8	148	0.41	2.43	16	44	1,708.75
Street Improvements Phase 2	Plate Compactors	1	8	8	0.43	0.14	8	44	48.44
Street Improvements Phase 2	Pumps	1	8	11	0.74	0.33	8	44	114.61
Street Improvements Phase 2	Rough Terrain Forklifts	1	8	96	0.4	1.54	8	44	540.67
Street Improvements Phase 2	Rubber Tired Loaders	2	8	150	0.36	2.16	16	44	1,520.64
Street Improvements Phase 2	Signal Boards	1	8	6	0.82	0.20	8	44	69.27
Street Improvements Phase 2	Surfacing Equipment	1	8	399	0.3	4.79	8	44	1,685.38
Street Improvements Phase 2	Tractors/Loaders/Backhoes	2	8	84	0.37	1.24	16	44	875.21
Street Improvements Phase 2	Trenchers	1	8	40	0.5	0.80	8	44	281.60
Landscaping/Paving Phase 2	Pavers	1	8	81	0.42	1.36	8	22	239.50
Landscaping/Paving Phase 2	Paving Equipment	1	8	89	0.36	1.28	8	22	225.56
Landscaping/Paving Phase 2	Rollers	1	8	36	0.38	0.55	8	22	96.31
Landscaping/Paving Phase 2	Signal Boards	1	8	6	0.82	0.20	8	22	34.64
Landscaping/Paving Phase 2	Surfacing Equipment	1	8	399	0.3	4.79	8	22	842.69
Landscaping/Paving Phase 2	Tractors/Loaders/Backhoes	1	8	84	0.37	1.24	8	22	218.80
								Total Construction Off-Road Fuel Consumption (gallon)	***32,926.01***
								Countywide Off-Road Fuel Consumption (2025) (gallon)[2]	***100,261,093.89***
								Percentage Increase Countywide	***0.0328%***

Notes:

1. Fuel Consumption Rate = Horsepower x Load Factor x Fuel Consumption Factor

   Where:

   Fuel Consumption Factor for a diesel engine is 0.04 gallons per horsepower per hour (gal/hp/hr) and a gasoline engine is 0.06 gal/hp/hr.

2. Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

COLLINS ISLAND BRIDGE REPLACEMENT PROJECT **Energy Calculations**

Constrution Mobile (On-Road) Fuel Consumption

WORKER TRIPS						
Phase	**Phase Length (# days)**	**# Worker Trips**	**Worker Trip Length**	**Total VMT**	**Fuel Consumption Factor (Miles/Gallon/Day)**	**Total Fuel Consumption (gallon)**
Demolition Phase 1	44	17.5	18.5	14,245	**24.90284233**	572.02
Street Improvements Phase 1	66	35	18.5	42,735		1,716.07
Demolition Phase 2	22	17.5	18.5	7,123		286.01
Bridge Construction Phase 1	44	20	18.5	16,280		653.74
Street Improvements Phase 2	44	35	18.5	28,490		1,144.05
Landscaping/Paving Phase 2	22	15	18.5	6,105		245.15
					Worker Trips Total	*4,617.04*
VENDOR TRIPS						
Phase	**Phase Length (# days)**	**# Vendor Trips**	**Vendor Trip Length**	**Total VMT**	**Fuel Consumption Factor (Miles/Gallon/Day)**	**Total Fuel Consumption (gallon)**
Demolition Phase 1	44	0	10.2	0	**8.343886151**	0.00
Street Improvements Phase 1	66	0	10.2	0		0.00
Demolition Phase 2	22	0	10.2	0		0.00
Bridge Construction Phase 1	44	1	10.2	449		53.79
Street Improvements Phase 2	44	0	10.2	0		0.00
Landscaping/Paving Phase 2	22	0	10.2	0		0.00
					Vendor Trips Total	*53.79*
HAULING TRIPS						
Phase	**Phase Length (# days)**	**# Hauling Trips**	**Hauling Trip Length**	**Total VMT**	**Fuel Consumption Factor (Miles/Gallon/Day)[1]**	**Total Fuel Consumption (gallon)**
Demolition Phase 1	44	0.57	20	502	**8.343886151**	60.12
Street Improvements Phase 1	66	0.38	20	502		60.12
Demolition Phase 2	22	1.14	20	502		60.12
Bridge Construction Phase 1	44	0.57	20	502		60.12
Street Improvements Phase 2	44	0.57	20	502		60.12
Landscaping/Paving Phase 2	22	0	20	0		0.00
					Hauling Trips Total	*300.58*
					Total Construction On-Road (Automotive) Fuel Consumption (gallon)	***4,971.41***
					Countywide On-Road Fuel Consumption (2025) (gallon) [1]	***1,280,285,436***
					Percentage Increase Countywide	***0.0004%***

Notes:

1. Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.