

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> LSJR Mitigation Project														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.74	12.96	2.29	50.17	0.17	50.00	10.50	0.10	10.40	0.03	2,953.60	0.68	0.09	2,996.70
Grading/Excavation	1.37	25.74	3.96	50.24	0.24	50.00	10.57	0.17	10.40	0.05	5,078.86	1.33	0.13	5,149.39
Drainage/Utilities/Sub-Grade	1.24	23.99	3.53	50.19	0.19	50.00	10.54	0.14	10.40	0.05	4,488.21	1.22	0.11	4,552.93
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (pounds/day)	3.34	62.69	9.78	150.60	0.60	150.00	31.61	0.41	31.20	0.13	12,520.67	3.23	0.33	12,699.01
Total (tons/construction project)	0.06	1.05	0.16	2.21	0.01	2.20	0.46	0.01	0.46	0.00	208.53	0.05	0.01	211.45

Notes:
 Project Start Year -> 2025
 Project Length (months) -> 4
 Total Project Area (acres) -> 154
 Maximum Area Disturbed/Day (acres) -> 5
 Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	780	100
Grading/Excavation	194	0	34	0	780	100
Drainage/Utilities/Sub-Grade	2	0	30	0	360	100
Paving	0	0	0	0	0	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> LSJR Mitigation Project														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.07	0.01	0.28	0.00	0.28	0.06	0.00	0.06	0.00	16.24	0.00	0.00	14.95
Grading/Excavation	0.05	0.85	0.13	1.66	0.01	1.65	0.35	0.01	0.34	0.00	167.60	0.04	0.00	154.16
Drainage/Utilities/Sub-Grade	0.01	0.13	0.02	0.28	0.00	0.28	0.06	0.00	0.06	0.00	24.69	0.01	0.00	22.72
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (tons/phase)	0.05	0.85	0.13	1.66	0.01	1.65	0.35	0.01	0.34	0.00	167.60	0.04	0.00	154.16
Total (tons/construction project)	0.06	1.05	0.16	2.21	0.01	2.20	0.46	0.01	0.46	0.00	208.53	0.05	0.01	191.83

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model
Data Entry Worksheet


Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

Input Type

Project Name
Construction Start Year
Project Type
Project Construction Time
Working Days per Month
Predominant Soil/Site Type: Enter 1, 2, or 3
(for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)
Project Length
Total Project Area
Maximum Area Disturbed/Day
Water Trucks Used?

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To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.



Enter a Year between 2014 and 2040 (inclusive)

1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway
2) Road Widening : Project to add a new lane to an existing roadway
3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane
4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction

months
days (assume 22 if unknown)

1) Sand Gravel : Use for quaternary deposits (Delta/West County)
2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the lone formation (Scott Road, Rancho Murieta)
3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)

miles
acres
acres
1. Yes
2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.consrvision.ca.gov/cgs/information/geologic_mapping/Pages/geologicmaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd ³) (assume 20 if unknown)	Import Volume (yd ³ /day)	Export Volume (yd ³ /day)
Soil	Grubbing/Land Clearing	12.00		
	Grading/Excavation	12.00	96.00	96.00
	Drainage/Utilities/Sub-Grade	12.00	2.00	
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation
Off-road Equipment Emissions Mitigation
Will all off-road equipment be tier 4?

2010 and Newer On-road Vehicles Fleet	Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Tier 4 Equipment	Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation).
All Tier 4 Equipment	Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that require modification when "Other Project Type" is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
	Grubbing/Land Clearing	0.50	0.40	4/1/2025
Grading/Excavation	3.00	1.60	4/16/2025	1/17/2025
Drainage/Utilities/Sub-Grade	0.50	1.40	7/16/2025	4/19/2025
Paving	0.00	0.60	8/6/2025	5/5/2025
Totals (Months)		4		

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions		User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT				
User Input										
Miles/round trip: Grubbing/Land Clearing		2.00			0	0.00				
Miles/round trip: Grading/Excavation		2.00			17	34.00				
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00			1	30.00				
Miles/round trip: Paving					0	0.00				
2010+ Model Year Mitigation Option Emission Rates										
	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Drainage/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions										
	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.03	0.40	0.01	0.00	0.00	125.39	0.00	0.02	131.27
Tons per const. Period - Grading/Excavation	0.00	0.00	0.01	0.00	0.00	0.00	4.14	0.00	0.00	4.33
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.03	0.21	0.01	0.00	0.00	110.64	0.00	0.02	115.83
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.64
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.01	0.00	0.00	0.00	4.75	0.00	0.00	4.97

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions		User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT				
User Input										
Miles/round trip: Grubbing/Land Clearing					0	0.00				
Miles/round trip: Grading/Excavation					0	0.00				
Miles/round trip: Drainage/Utilities/Sub-Grade					0	0.00				
Miles/round trip: Paving					0	0.00				
2010+ Model Year Mitigation Option Emission Rates										
	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Drainage/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions										
	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions		User Override of Worker Commute Default Values	Default Values	Calculated Daily Trips	Calculated Daily VMT					
User Input										
Miles/one-way trip		30								
One-way trips/day		2								
No. of employees: Grubbing/Land Clearing		13		26	780.00					
No. of employees: Grading/Excavation		13		26	780.00					
No. of employees: Drainage/Utilities/Sub-Grade		6		12	360.00					
No. of employees: Paving				0	0.00					
Emission Rates										
	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Grading/Excavation (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Drainage/Utilities/Sub-Grade (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Grading/Excavation (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Drainage/Utilities/Sub-Grade (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Paving (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions										
	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.07	1.48	0.11	0.08	0.03	0.00	512.38	0.01	0.01	515.85
Tons per const. Period - Grubbing/Land Clearing	0.00	0.01	0.00	0.00	0.00	0.00	2.82	0.00	0.00	2.84
Pounds per day - Grading/Excavation	0.07	1.48	0.11	0.08	0.03	0.00	512.38	0.01	0.01	515.85
Tons per const. Period - Grading/Excavation	0.00	0.05	0.00	0.00	0.00	0.00	16.91	0.00	0.00	17.02
Pounds per day - Drainage/Utilities/Sub-Grade	0.03	0.68	0.05	0.04	0.02	0.00	236.48	0.00	0.01	238.08
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	1.31
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.06	0.00	0.00	0.00	0.00	21.03	0.00	0.00	21.17

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT		
User Input										
Grubbing/Land Clearing - Exhaust	1		20.00			5.00		100.00		
Grading/Excavation - Exhaust	1		20.00			5.00		100.00		
Drainage/Utilities/Subgrade	1		20.00			5.00		100.00		
Paving								0.00		
2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Grading/Excavation (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Drainage/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.06	0.11	0.05	0.02	1,672.88	0.00	0.26	1,751.28
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.01	0.09	0.87	0.02	0.01	0.00	368.81	0.00	0.06	386.09
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	2.03	0.00	0.00	2.12
Pounds per day - Grading/Excavation	0.01	0.09	0.87	0.02	0.01	0.00	368.81	0.00	0.06	386.09
Tons per const. Period - Grading/Excavation	0.00	0.00	0.03	0.00	0.00	0.00	12.17	0.00	0.00	12.74
Pounds per day - Drainage/Utilities/Sub-Grade	0.01	0.09	0.87	0.02	0.01	0.00	368.81	0.00	0.06	386.09
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	2.03	0.00	0.00	2.12
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.04	0.00	0.00	0.00	16.23	0.00	0.00	16.99

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing			50.00	0.28	10.40	0.06
Fugitive Dust - Grading/Excavation			50.00	1.65	10.40	0.34
Fugitive Dust - Drainage/Utilities/Subgrade			50.00	0.28	10.40	0.06

Drainage/Utilities/Subgrade		Number of Vehicles	Override of Default	Default	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e	
Override of Default Number of Vehicles	Program-estimate	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	
			Tier 4	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00			Tier 4	Excavators	0.16	3.92	0.02	0.01	0.01	0.01	500.34	0.16		567.73	
			Tier 4	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00			Tier 4	Off-Highway Trucks	0.40	7.00	0.81	0.04	0.04	0.01	1,279.88	0.41	0.01	1,293.45	
			Tier 4	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00			Tier 4	Other Material Handling Equipr	0.18	4.39	0.36	0.02	0.02	0.01	559.68	0.18	0.01	565.71	
			Tier 4	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00			Tier 4	Rubber Tired Dozers	0.26	4.53	0.52	0.03	0.02	0.01	826.96	0.27	0.01	835.87	
1.00			Tier 4	Rubber Tired Loaders	0.19	3.35	0.39	0.02	0.02	0.01	605.62	0.20	0.01	612.16	
			Tier 4	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
User-Defined Off-road Equipment		If non-default vehicles are used, please provide information in "Non-default Off-road Equipment" tab			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e	
Number of Vehicles		Equipment Tier		Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Drainage/Utilities/Sub-Grade				pounds per day	1.19	23.19	2.39	0.12	0.11	0.04	3,772.28	1.22	0.03	3,812.93	
Drainage/Utilities/Sub-Grade				tons per phase	0.01	0.13	0.01	0.00	0.00	0.00	20.75	0.01	0.00	20.97	
Paving		Default Number of Vehicles	Override of Default	Default	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e	
Override of Default Number of Vehicles	Program-estimate	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	
			Tier 4	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Other Material Handling Equipr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			Tier 4	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
User-Defined Off-road Equipment		If non-default vehicles are used, please provide information in "Non-default Off-road Equipment" tab			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e	
Number of Vehicles		Equipment Tier		Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00			N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving				pounds per day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving				tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions all Phases (tons per construction period) =>					0.05	0.99	0.11	0.01	0.00	0.00	166.53	0.05	0.00	168.33	

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET