

APPENDIX B

Air Quality Analysis

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AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

Report generated with ACAM version: 5.0.23a

a. Action Location:

Base: COL. BUD DAY FIELD
State: Iowa
County(s): Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: SUX Runway Program

c. Project Number/s (if applicable):

d. Projected Action Start Date: 3 / 2026

e. Action Description:

The Proposed Action would reconstruct, strengthen, and extend Runway 13-31 to a total length of 11,002 feet, with the runway extension on both runway ends to be designated as a Military Only Special Use Pavement (MOSUP) for military aircraft use only. The MOSUP would use displaced thresholds and declared distances for non-military operations to prevent alteration of the existing location of either threshold. This would be accomplished by using a standard FAA displaced threshold marking scheme that features white arrows painted on the extended pavement that direct towards the existing thresholds. The displaced thresholds also prevent alterations to the existing TERPS.

Detailed components of the Action include:

- Extending Runway 13-31 to 11,002 feet length by adding 1,000 feet to both runway ends
- Reconstructing Runway 13-31 to a thickness of sixteen inches
- Retaining the current runway thresholds positions resulting in displaced thresholds totaling 1,000 feet at both ends
- Constructing 1,000-foot blast pads adjacent to both the extended runway pavement ends
- Extending parallel Taxiway A to be a full parallel taxiway on the Runway 13 end
- Marking the runway and taxiway extensions as 185th ARW access only by marking Military Only Special Use Pavement
- Acquiring about one acre of land north of the Runway 13 end for realignment of drainage ditch
- Removing the existing aircraft warm up/holding pad at Runway 13 end
- Constructing a new aircraft warm up/holding pad east of Taxiway A
- Realigning the drainage ditch on Runway 13 end

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- Realigning the perimeter road on both runway ends
- Realigning the Airport perimeter fence on both runway ends
- Removing portions of Taxiway A and Taxiway G at the Runway 31 end
- Realigning Taxiway A to right angle runway connectors at the Runway 31 end
- Widening Taxiway D to 75 feet with 25-foot shoulders
- Reconstructing 300 linear feet of Taxiway F to raise the surface to the new height of the runway
- Replacing the FAA owned Fiber Optic Cables
- Replacing the FAA owned Visual Approach Slope Indicator (VASI) lights with FAA owned Precision Approach Path Indicator (PAPI) lights
- Replacing the FAA owned Localizers (LOC)
- Replacing the FAA owned Glideslopes (GS)
- Replacing the FAA owned Runway 31 Medium-Intensity Approach Lighting System with Runway Alignment Indicator (MALSR) and the FAA owned Runway 13 MALSR
- Relocating the Iowa Air National Guard (IAANG) owned Aircraft Arresting System
- Amending Runway 13-31 Instrument Approach Procedures (for military operations only)
- Temporarily relocating aircraft operations to Runway 18-36 during reconstruction of Runway 13-31

f. Point of Contact:

Name: Michael Fesanco
Title: Consultant
Organization: RS&H
Email: Michael.Fesanco@rsandh.com
Phone Number: 904-256-2255

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the GCR are:

 applicable
 X not applicable

Total reasonably foreseeable net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving “steady state” (no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the *USAF Air Emissions Guide for Air Force Stationary Sources*, the *USAF Air Emissions Guide for Air Force Mobile Sources*, and the *USAF Air Emissions Guide for Air Force Transitory Sources*.

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"Insignificance Indicators" were used in the analysis to provide an indication of the significance of the proposed Action's potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (not exceeding any National Ambient Air Quality Standard (NAAQS)). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators and are summarized below.

Analysis Summary:

2026

VOC	0.423	250	No
NO_x	3.151	250	No
CO	3.640	250	No
SO_x	0.005	250	No
PM 10	3.669	250	No
PM 2.5	0.121	250	No
Pb	0.000	25	No
NH3	0.006	250	No

2027

VOC	1.121	250	No
NO_x	19.352	250	No
CO	14.067	250	No
SO_x	0.038	250	No
PM 10	27.731	250	No
PM 2.5	0.344	250	No
Pb	0.000	25	No
NH3	0.563	250	No

2028

VOC	5.950	250	No
NO_x	1.885	250	No
CO	2.434	250	No
SO_x	0.004	250	No
PM 10	18.274	250	No
PM 2.5	0.064	250	No
Pb	0.000	25	No

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NH3	0.013	250	No
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2029

VOC	0.062	250	No
NOx	0.421	250	No
CO	0.617	250	No
SOx	0.001	250	No
PM 10	7.975	250	No
PM 2.5	0.015	250	No
Pb	0.000	25	No
NH3	0.001	250	No

2030 - (Steady State)

VOC	0.000	250	No
NOx	0.000	250	No
CO	0.000	250	No
SOx	0.000	250	No
PM 10	0.000	250	No
PM 2.5	0.000	250	No
Pb	0.000	25	No
NH3	0.000	250	No

None of the estimated annual net emissions associated with this action are above the insignificance indicators; therefore, the action will not cause or contribute to an exceedance of one or more NAAQSs and will have an insignificant impact on air quality. No further air assessment is needed.

Michael Fesanco, Consultant

Mar 19 2025

Name, Title

Date

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location

Base: COL. BUD DAY FIELD
State: Iowa
County(s): Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- **Action Title:** SUX Runway Program

- **Project Number/s (if applicable):**

- **Projected Action Start Date:** 3 / 2026

- Action Purpose and Need:

The purpose of the runway Action is to provide a runway pavement length and runway pavement strength to meet the operational requirements and safety standards for the 185th Air Refueling Wing (ARW) to operate the KC-135R aircraft with full takeoff weight at the Base.

The need for the Action is because the pavement condition of Runway 13-31, as the only runway used by the 185th ARW, is deficient in terms of pavement strength and length for the 185th ARW to operate its missions at full payload capacity. The existing length and pavement strength of Runway 13-31 places restrictions on the 185th ARW's refueling tanker missions at the Base, resulting in a fuel payload reduction on KC-135R departures necessitating additional fueling stops.

- Action Description:

The Action would reconstruct, strengthen, and extend Runway 13-31 to a total length of 11,002 feet, with the runway extension on both runway ends to be designated as a Military Only Special Use Pavement (MOSUP) for military aircraft use only. The MOSUP would use displaced thresholds and declared distances for non-military operations to prevent alteration of the existing location of either threshold. This would be accomplished by using a standard FAA displaced threshold marking scheme that features white arrows painted on the extended pavement that direct towards the existing thresholds. The displaced thresholds also prevent alterations to the existing TERPS.

Detailed components of the Action include:

- Extending Runway 13-31 to 11,002 feet length by adding 1,000 feet to both runway ends
- Reconstructing Runway 13-31 to a thickness of sixteen inches
- Retaining the current runway thresholds positions resulting in displaced thresholds totaling 1,000 feet at both ends
- Constructing 1,000-foot blast pads adjacent to both the extended runway pavement ends
- Extending parallel Taxiway A to be a full parallel taxiway on the Runway 13 end
- Marking the runway and taxiway extensions as 185th ARW access only by marking Military Only Special Use Pavement
- Acquiring about one acre of land north of the Runway 13 end for realignment of drainage ditch
- Removing the existing aircraft warm up/holding pad at Runway 13 end

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- Constructing a new aircraft warm up/holding pad east of Taxiway A
- Realigning the drainage ditch on Runway 13 end
- Realigning the perimeter road on both runway ends
- Realigning the Airport perimeter fence on both runway ends
- Removing portions of Taxiway A and Taxiway G at the Runway 31 end
- Realigning Taxiway A to right angle runway connectors at the Runway 31 end
- Widening Taxiway D to 75 feet with 25-foot shoulders
- Reconstructing 300 linear feet of Taxiway F to raise the surface to the new height of the runway
- Replacing the FAA owned Fiber Optic Cables
- Replacing the FAA owned Visual Approach Slope Indicator (VASI) lights with FAA owned Precision Approach Path Indicator (PAPI) lights
- Replacing the FAA owned Localizers (LOC)
- Replacing the FAA owned Glideslopes (GS)
- Replacing the FAA owned Runway 31 Medium-Intensity Approach Lighting System with Runway Alignment Indicator (MALSR) and the FAA owned Runway 13 MALSR
- Relocating the Iowa Air National Guard (IAANG) owned Aircraft Arresting System
- Amending Runway 13-31 Instrument Approach Procedures (for military operations only)
- Temporarily relocating aircraft operations to Runway 18-36 during reconstruction of Runway 13-31

- Point of Contact

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Title: Consultant
Organization: RS&H
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Phone Number: 904-256-2255

Report generated with ACAM version: 5.0.23a

- Activity List:

Activity Type		Activity Title
2.	Construction / Demolition	Runway Reconstruction
3.	Construction / Demolition	Taxiway D Widening
4.	Construction / Demolition	Taxiway F Reconstruction
5.	Construction / Demolition	Fiber Optic Cable Replacement
6.	Construction / Demolition	Runway 13 End Extension
7.	Construction / Demolition	Runway 13 End Blast Pad
8.	Construction / Demolition	Runway 13 End Taxiway

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Activity Type		Activity Title
9.	Construction / Demolition	Runway 13 End Warm Up/Hold Pad
10.	Construction / Demolition	Runway 13 End Access Road and Fence Realignment
11.	Construction / Demolition	Pavement Demolition
12.	Construction / Demolition	Runway 31 End Extension
13.	Construction / Demolition	Runway 31 End Warm up/Hold Pad
14.	Construction / Demolition	Taxiway A Realignment
15.	Construction / Demolition	Runway 31 End Access Road and Fence Realignment
16.	Construction / Demolition	Airfield Painting
17.	Construction / Demolition	Drainage Ditch

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Construction / Demolition

2.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Runway Reconstruction

- Activity Description:

The reconstruction of Runway 13-31 to a thickness of sixteen inches, relocation of the Aircraft Arresting System and replacing the Visual Approach Slope Indicator (VASI) lights with Precision Approach Path Indicator (PAPI) lights

- Activity Start Date

Start Month: 4

Start Month: 2026

- Activity End Date

Indefinite: False

End Month: 12

End Month: 2026

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.329445
SO _x	0.004047
NO _x	2.421735
CO	2.622769

Pollutant	Total Emissions (TONs)
PM 10	0.101633
PM 2.5	0.093491
Pb	0.000000
NH ₃	0.003641

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.018570
N ₂ O	0.006744

Pollutant	Total Emissions (TONs)
CO ₂	462.053643
CO ₂ e	464.527518

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- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.018570
N ₂ O	0.006744

Pollutant	Total Emissions (TONs)
CO ₂	462.053643
CO ₂ e	464.527518

2.1 Demolition Phase

2.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2026

- Phase Duration

Number of Month: 9
Number of Days: 0

2.1.2 Demolition Phase Assumptions

- General Demolition Information

Area of Building to be demolished (ft²): 1800400
Height of Building to be demolished (ft): 0

- Default Settings Used: Yes

- Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	3	8
Rubber Tired Dozers Composite	2	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

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2.1.3 Demolition Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.39317	0.00542	3.40690	4.22083	0.09860	0.09071

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.35280	0.00491	3.22260	2.72624	0.14205	0.13069

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02381	0.00476	587.02896	589.04350

	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.54993	534.37751

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

LDGV	0.27651	0.00160	0.14084	4.06469	0.00617	0.00546	0.04866
LDGT	0.22002	0.00197	0.17021	3.45019	0.00691	0.00611	0.04109
HDGV	0.72816	0.00453	0.61714	10.26309	0.02393	0.02117	0.08975
LDDV	0.12269	0.00122	0.15218	5.20953	0.00368	0.00339	0.01619
LDDT	0.17071	0.00138	0.42147	4.50853	0.00559	0.00514	0.01672
HDDV	0.11502	0.00422	2.29648	1.41581	0.04134	0.03803	0.06689
MC	2.38585	0.00195	0.71398	12.80058	0.02350	0.02079	0.05503

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

LDGV	0.01915	0.00501	316.12011	318.08758
LDGT	0.01712	0.00653	389.38864	391.76017
HDGV	0.05452	0.02495	895.16633	903.95485
LDDV	0.06297	0.00065	361.41708	363.18512
LDDT	0.04527	0.00093	407.30979	408.71823
HDDV	0.03047	0.16468	1257.03162	1306.86902
MC	0.10610	0.00275	394.22518	397.69667

2.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (0.00042 * BA * BH) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

0.00042: Emission Factor (lb/ft³)

BA: Area of Building to be demolished (ft²)

BH: Height of Building to be demolished (ft)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

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WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building being demolish (ft²)
BH: Height of Building being demolish (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)
0.25: Volume reduction factor (material reduced by 75% to account for air space)
HC: Average Hauling Truck Capacity (yd³)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

2.2 Paving Phase

2.2.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2026

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- Phase Duration

Number of Month: 9

Number of Days: 0

2.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 1800400

- Paving Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Pavers Composite	1	8
Paving Equipment Composite	2	8
Rollers Composite	2	6

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.23717	0.00486	2.53335	3.43109	0.12904	0.11872
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18995	0.00487	2.06537	3.40278	0.08031	0.07388
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.54202	0.00541	3.61396	4.09268	0.15387	0.14156

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.80405	527.60847
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e

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Emission Factors	0.02141	0.00428	527.70636	529.51732
Rollers Composite [HP: 36] [LF: 0.38]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02381	0.00476	586.91372	588.92786

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27651	0.00160	0.14084	4.06469	0.00617	0.00546	0.04866
LDGT	0.22002	0.00197	0.17021	3.45019	0.00691	0.00611	0.04109
HDGV	0.72816	0.00453	0.61714	10.26309	0.02393	0.02117	0.08975
LDDV	0.12269	0.00122	0.15218	5.20953	0.00368	0.00339	0.01619
LDDT	0.17071	0.00138	0.42147	4.50853	0.00559	0.00514	0.01672
HDDV	0.11502	0.00422	2.29648	1.41581	0.04134	0.03803	0.06689
MC	2.38585	0.00195	0.71398	12.80058	0.02350	0.02079	0.05503

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01915	0.00501	316.12011	318.08758
LDGT	0.01712	0.00653	389.38864	391.76017
HDGV	0.05452	0.02495	895.16633	903.95485
LDDV	0.06297	0.00065	361.41708	363.18512
LDDT	0.04527	0.00093	407.30979	408.71823
HDDV	0.03047	0.16468	1257.03162	1306.86902
MC	0.10610	0.00275	394.22518	397.69667

2.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560 / 2000$$

VOC_P : Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft²)
43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)
2000: Conversion Factor square pounds to TONS (2000 lb / TON)

3. Construction / Demolition

3.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Taxiway D Widening

- Activity Description:

Widening of Taxiway D

- Activity Start Date

Start Month: 4
Start Month: 2026

- Activity End Date

Indefinite: False

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End Month: 10
End Month: 2026

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.056387
SO _x	0.000841
NO _x	0.445610
CO	0.561059

Pollutant	Total Emissions (TONs)
PM 10	3.203103
PM 2.5	0.018171
Pb	0.000000
NH ₃	0.001231

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.003858
N ₂ O	0.002072

Pollutant	Total Emissions (TONs)
CO ₂	97.690694
CO ₂ e	98.404660

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.003858
N ₂ O	0.002072

Pollutant	Total Emissions (TONs)
CO ₂	97.690694
CO ₂ e	98.404660

3.1 Site Grading Phase

3.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2026

- Phase Duration

Number of Month: 2
Number of Days: 0

3.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 160000
Amount of Material to be Hauled On-Site (yd³): 5767.54
Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)

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Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

3.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.31292	0.00490	2.52757	3.39734	0.14041	0.12918
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.28160	0.00487	2.73375	3.50416	0.15811	0.14546
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.35280	0.00491	3.22260	2.72624	0.14205	0.13069
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18406	0.00489	1.88476	3.48102	0.06347	0.05839

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02153	0.00431	530.81500	532.63663
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02140	0.00428	527.54121	529.35159
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.54993	534.37751
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02149	0.00430	529.70686	531.52468

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27651	0.00160	0.14084	4.06469	0.00617	0.00546	0.04866
LDGT	0.22002	0.00197	0.17021	3.45019	0.00691	0.00611	0.04109
HDGV	0.72816	0.00453	0.61714	10.26309	0.02393	0.02117	0.08975
LDDV	0.12269	0.00122	0.15218	5.20953	0.00368	0.00339	0.01619
LDDT	0.17071	0.00138	0.42147	4.50853	0.00559	0.00514	0.01672
HDDV	0.11502	0.00422	2.29648	1.41581	0.04134	0.03803	0.06689
MC	2.38585	0.00195	0.71398	12.80058	0.02350	0.02079	0.05503

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

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	CH ₄	N ₂ O	CO ₂	CO _{2e}
LDGV	0.01915	0.00501	316.12011	318.08758
LDGT	0.01712	0.00653	389.38864	391.76017
HDGV	0.05452	0.02495	895.16633	903.95485
LDDV	0.06297	0.00065	361.41708	363.18512
LDDT	0.04527	0.00093	407.30979	408.71823
HDDV	0.03047	0.16468	1257.03162	1306.86902
MC	0.10610	0.00275	394.22518	397.69667

3.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM_{10FD} = (20 * ACRE * WD) / 2000$$

PM_{10FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

3.2 Paving Phase

3.2.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 9
Start Quarter: 1
Start Year: 2026

- Phase Duration

Number of Month: 2
Number of Days: 0

3.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 160000

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

3.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.55280	0.00854	4.19778	3.25481	0.16332	0.15025
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.23717	0.00486	2.53335	3.43109	0.12904	0.11872
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18995	0.00487	2.06537	3.40278	0.08031	0.07388
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.54202	0.00541	3.61396	4.09268	0.15387	0.14156

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02313	0.00463	570.16326	572.11992
Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.80405	527.60847
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02141	0.00428	527.70636	529.51732
Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02381	0.00476	586.91372	588.92786

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27651	0.00160	0.14084	4.06469	0.00617	0.00546	0.04866
LDGT	0.22002	0.00197	0.17021	3.45019	0.00691	0.00611	0.04109
HDGV	0.72816	0.00453	0.61714	10.26309	0.02393	0.02117	0.08975
LDDV	0.12269	0.00122	0.15218	5.20953	0.00368	0.00339	0.01619
LDDT	0.17071	0.00138	0.42147	4.50853	0.00559	0.00514	0.01672
HDDV	0.11502	0.00422	2.29648	1.41581	0.04134	0.03803	0.06689
MC	2.38585	0.00195	0.71398	12.80058	0.02350	0.02079	0.05503

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01915	0.00501	316.12011	318.08758
LDGT	0.01712	0.00653	389.38864	391.76017
HDGV	0.05452	0.02495	895.16633	903.95485
LDDV	0.06297	0.00065	361.41708	363.18512
LDDT	0.04527	0.00093	407.30979	408.71823
HDDV	0.03047	0.16468	1257.03162	1306.86902
MC	0.10610	0.00275	394.22518	397.69667

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

3.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Off-Gassing Emissions per Phase

$$\text{VOC}_p = (2.62 * \text{PA}) / 43560 / 2000$$

VOC_p: Paving VOC Emissions (TONs)

2.62: Emission Factor (lb/acre)

PA: Paving Area (ft²)

43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)

2000: Conversion Factor square pounds to TONs (2000 lb / TON)

4. Construction / Demolition

4.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Taxiway F Reconstruction

- Activity Description:

Reconstruction of Taxiway F

- Activity Start Date

Start Month: 3

Start Month: 2026

- Activity End Date

Indefinite: False

End Month: 9

End Month: 2026

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.027249
SO _x	0.000463
NO _x	0.208952
CO	0.331781

Pollutant	Total Emissions (TONs)
PM 10	0.007884
PM 2.5	0.007250
Pb	0.000000
NH ₃	0.000669

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.002006
N ₂ O	0.000493

Pollutant	Total Emissions (TONs)
CO ₂	48.294748
CO ₂ e	48.491654

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.002006
N ₂ O	0.000493

Pollutant	Total Emissions (TONs)
CO ₂	48.294748
CO ₂ e	48.491654

4.1 Demolition Phase

4.1.1 Demolition Phase Timeline Assumptions

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2026

- Phase Duration

Number of Month: 2
Number of Days: 0

4.1.2 Demolition Phase Assumptions

- General Demolition Information

Area of Building to be demolished (ft²): 37500
Height of Building to be demolished (ft): 0

- Default Settings Used: Yes

- Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	8
Rubber Tired Dozers Composite	1	1
Tractors/Loaders/Backhoes Composite	2	6

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

4.1.3 Demolition Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.41257	0.00743	3.52633	4.31513	0.08509	0.07828
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.35280	0.00491	3.22260	2.72624	0.14205	0.13069
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18406	0.00489	1.88476	3.48102	0.06347	0.05839

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]				
	CH ₄	N ₂ O	CO ₂	CO _{2e}
Emission Factors	0.02330	0.00466	574.35707	576.32812
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO _{2e}
Emission Factors	0.02160	0.00432	532.54993	534.37751
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO _{2e}
Emission Factors	0.02149	0.00430	529.70686	531.52468

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27651	0.00160	0.14084	4.06469	0.00617	0.00546	0.04866
LDGT	0.22002	0.00197	0.17021	3.45019	0.00691	0.00611	0.04109
HDGV	0.72816	0.00453	0.61714	10.26309	0.02393	0.02117	0.08975
LDDV	0.12269	0.00122	0.15218	5.20953	0.00368	0.00339	0.01619
LDDT	0.17071	0.00138	0.42147	4.50853	0.00559	0.00514	0.01672
HDDV	0.11502	0.00422	2.29648	1.41581	0.04134	0.03803	0.06689
MC	2.38585	0.00195	0.71398	12.80058	0.02350	0.02079	0.05503

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO _{2e}
LDGV	0.01915	0.00501	316.12011	318.08758
LDGT	0.01712	0.00653	389.38864	391.76017
HDGV	0.05452	0.02495	895.16633	903.95485
LDDV	0.06297	0.00065	361.41708	363.18512
LDDT	0.04527	0.00093	407.30979	408.71823
HDDV	0.03047	0.16468	1257.03162	1306.86902
MC	0.10610	0.00275	394.22518	397.69667

4.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (0.00042 * BA * BH) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

0.00042: Emission Factor (lb/ft³)

BA: Area of Building to be demolished (ft²)

BH: Height of Building to be demolished (ft)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

BA: Area of Building being demolish (ft²)

BH: Height of Building being demolish (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

0.25: Volume reduction factor (material reduced by 75% to account for air space)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

4.2 Paving Phase

4.2.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 8

Start Quarter: 1

Start Year: 2026

- Phase Duration

Number of Month: 2

Number of Days: 0

4.2.2 Paving Phase Assumptions

- General Paving Information

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Paving Area (ft²): 37500

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	1	8
Rollers Composite	1	7
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

4.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.55280	0.00854	4.19778	3.25481	0.16332	0.15025
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.23717	0.00486	2.53335	3.43109	0.12904	0.11872
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18995	0.00487	2.06537	3.40278	0.08031	0.07388
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.54202	0.00541	3.61396	4.09268	0.15387	0.14156
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18406	0.00489	1.88476	3.48102	0.06347	0.05839

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH ₄	N ₂ O	CO ₂	CO _{2e}
Emission Factors	0.02313	0.00463	570.16326	572.11992
Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO _{2e}

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Emission Factors	0.02133	0.00427	525.80405	527.60847
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02141	0.00428	527.70636	529.51732
Rollers Composite [HP: 36] [LF: 0.38]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02381	0.00476	586.91372	588.92786
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02149	0.00430	529.70686	531.52468

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH₃
LDGV	0.27651	0.00160	0.14084	4.06469	0.00617	0.00546	0.04866
LDGT	0.22002	0.00197	0.17021	3.45019	0.00691	0.00611	0.04109
HDGV	0.72816	0.00453	0.61714	10.26309	0.02393	0.02117	0.08975
LDDV	0.12269	0.00122	0.15218	5.20953	0.00368	0.00339	0.01619
LDDT	0.17071	0.00138	0.42147	4.50853	0.00559	0.00514	0.01672
HDDV	0.11502	0.00422	2.29648	1.41581	0.04134	0.03803	0.06689
MC	2.38585	0.00195	0.71398	12.80058	0.02350	0.02079	0.05503

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH₄	N₂O	CO₂	CO₂e
LDGV	0.01915	0.00501	316.12011	318.08758
LDGT	0.01712	0.00653	389.38864	391.76017
HDGV	0.05452	0.02495	895.16633	903.95485
LDDV	0.06297	0.00065	361.41708	363.18512
LDDT	0.04527	0.00093	407.30979	408.71823
HDDV	0.03047	0.16468	1257.03162	1306.86902
MC	0.10610	0.00275	394.22518	397.69667

4.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

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0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)
HC: Average Hauling Truck Capacity (yd³)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560 / 2000$$

VOC_P : Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft²)
43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)
2000: Conversion Factor square pounds to TONs (2000 lb / TON)

5. Construction / Demolition

5.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Fiber Optic Cable Replacement

- Activity Description:

The replacement of 8,000ft of fiber optic cables.

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- Activity Start Date

Start Month: 4
Start Month: 2026

- Activity End Date

Indefinite: False
End Month: 7
End Month: 2026

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.009546
SO _x	0.000148
NO _x	0.075078
CO	0.124331

Pollutant	Total Emissions (TONs)
PM 10	0.356478
PM 2.5	0.002143
Pb	0.000000
NH ₃	0.000214

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.000699
N ₂ O	0.000150

Pollutant	Total Emissions (TONs)
CO ₂	16.789881
CO ₂ e	16.852081

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.000699
N ₂ O	0.000150

Pollutant	Total Emissions (TONs)
CO ₂	16.789881
CO ₂ e	16.852081

5.1 Trenching/Excavating Phase

5.1.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date

Start Month: 6
Start Quarter: 1
Start Year: 2026

- Phase Duration

Number of Month: 2
Number of Days: 0

5.1.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information

Area of Site to be Trenched/Excavated (ft²): 17800
Amount of Material to be Hauled On-Site (yd³): 0
Amount of Material to be Hauled Off-Site (yd³): 0

- Trenching Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8

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Other General Industrial Equipmen Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

5.1.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.39317	0.00542	3.40690	4.22083	0.09860	0.09071
Other General Industrial Equipmen Composite [HP: 35] [LF: 0.34]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.45335	0.00542	3.58824	4.59368	0.11309	0.10404
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18406	0.00489	1.88476	3.48102	0.06347	0.05839

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02381	0.00476	587.02896	589.04350
Other General Industrial Equipmen Composite [HP: 35] [LF: 0.34]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02385	0.00477	587.87714	589.89459
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02149	0.00430	529.70686	531.52468

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27651	0.00160	0.14084	4.06469	0.00617	0.00546	0.04866
LDGT	0.22002	0.00197	0.17021	3.45019	0.00691	0.00611	0.04109
HDGV	0.72816	0.00453	0.61714	10.26309	0.02393	0.02117	0.08975
LDDV	0.12269	0.00122	0.15218	5.20953	0.00368	0.00339	0.01619
LDDT	0.17071	0.00138	0.42147	4.50853	0.00559	0.00514	0.01672
HDDV	0.11502	0.00422	2.29648	1.41581	0.04134	0.03803	0.06689
MC	2.38585	0.00195	0.71398	12.80058	0.02350	0.02079	0.05503

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
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DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

LDGV	0.01915	0.00501	316.12011	318.08758
LDGT	0.01712	0.00653	389.38864	391.76017
HDGV	0.05452	0.02495	895.16633	903.95485
LDDV	0.06297	0.00065	361.41708	363.18512
LDDT	0.04527	0.00093	407.30979	408.71823
HDDV	0.03047	0.16468	1257.03162	1306.86902
MC	0.10610	0.00275	394.22518	397.69667

5.1.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)

VMT_{VE} : Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL} : Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

6. Construction / Demolition

6.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Runway 13 End Extension

- Activity Description:

The extension of Runway 13, replacement of the localizer, MALSR and relocation of NAVAIDs shelter.

- Activity Start Date

Start Month: 4

Start Month: 2027

- Activity End Date

Indefinite: False

End Month: 10

End Month: 2027

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.069842
SO _x	0.001147
NO _x	0.551978
CO	0.765036

Pollutant	Total Emissions (TONs)
PM 10	4.001173
PM 2.5	0.020223
Pb	0.000000
NH ₃	0.001774

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.005213
N ₂ O	0.003081

Pollutant	Total Emissions (TONs)
CO ₂	132.944013
CO ₂ e	133.992426

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.005213
N ₂ O	0.003081

Pollutant	Total Emissions (TONs)
CO ₂	132.944013
CO ₂ e	133.992426

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

6.1 Demolition Phase

6.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2027

- Phase Duration

Number of Month: 2
Number of Days: 0

6.1.2 Demolition Phase Assumptions

- General Demolition Information

Area of Building to be demolished (ft²): 200000
Height of Building to be demolished (ft): 0

- Default Settings Used: Yes

- Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	8
Rubber Tired Dozers Composite	1	1
Tractors/Loaders/Backhoes Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

6.1.3 Demolition Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.38980	0.00742	3.42957	4.29108	0.07071	0.06505
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.34288	0.00492	3.09108	2.65644	0.13550	0.12466

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Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17717	0.00489	1.80740	3.48712	0.05440	0.05005

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02330	0.00466	574.33236	576.30332
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.55942	534.38703
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.61807	531.43559

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

6.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (0.00042 * BA * BH) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

0.00042: Emission Factor (lb/ft³)

BA: Area of Building to be demolished (ft²)

BH: Height of Building to be demolished (ft)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

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LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building being demolish (ft²)
BH: Height of Building being demolish (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)
0.25: Volume reduction factor (material reduced by 75% to account for air space)
HC: Average Hauling Truck Capacity (yd³)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

6.2 Site Grading Phase

6.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2027

- Phase Duration

Number of Month: 2

Number of Days: 0

- General Site Grading Information

Area of Site to be Graded (ft²):	200000
Amount of Material to be Hauled On-Site (yd³):	9459.02
Amount of Material to be Hauled Off-Site (yd³):	0

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

Average Worker Round Trip Commute (mile): 20 (default)

	LDGV	LDGT	HDBGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.29535	0.00490	2.28401	3.40565	0.12705	0.11688
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.25231	0.00487	2.49971	3.48392	0.13245	0.12186
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.34288	0.00492	3.09108	2.65644	0.13550	0.12466
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17717	0.00489	1.80740	3.48712	0.05440	0.05005

Graders Composite [HP: 148] [LF: 0.41]

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	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02155	0.00431	531.25291	533.07604
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02140	0.00428	527.44206	529.25211
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.55942	534.38703
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.61807	531.43559

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

6.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite} : Amount of Material to be Hauled On-Site (yd³)

$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)

VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL} : Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL} : Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

6.3 Paving Phase

6.3.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 9

Start Quarter: 1

Start Year: 2027

- Phase Duration

Number of Month: 2

Number of Days: 0

6.3.2 Paving Phase Assumptions

- General Paving Information

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Paving Area (ft²): 200000

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

6.3.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.55279	0.00855	4.19775	3.25549	0.16311	0.15007
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.22921	0.00486	2.45013	3.43821	0.11941	0.10986
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18341	0.00488	2.01586	3.40316	0.07465	0.06867
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.52865	0.00542	3.57666	4.10537	0.14602	0.13434

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02313	0.00463	570.32048	572.27767
Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.80912	527.61356
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02142	0.00428	528.06776	529.87995

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Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO _{2e}
Emission Factors	0.02382	0.00476	587.12246	589.13732

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO _{2e}
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

6.3.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560 / 2000$$

VOC_P : Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft²)
43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)
2000: Conversion Factor square pounds to TONS (2000 lb / TON)

7. Construction / Demolition

7.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Runway 13 End Blast Pad

- Activity Description:

Construction of Runway 13 End 1,000 foot blast pad.

- Activity Start Date

Start Month: 4
Start Month: 2027

- Activity End Date

Indefinite: False
End Month: 6

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End Month: 2027

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.031089
SO _x	0.000431
NO _x	0.217409
CO	0.280947

Pollutant	Total Emissions (TONs)
PM 10	1.998809
PM 2.5	0.008477
Pb	0.000000
NH ₃	0.000779

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.001999
N ₂ O	0.001464

Pollutant	Total Emissions (TONs)
CO ₂	51.886526
CO ₂ e	52.372767

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.001999
N ₂ O	0.001464

Pollutant	Total Emissions (TONs)
CO ₂	51.886526
CO ₂ e	52.372767

7.1 Site Grading Phase

7.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2027

- Phase Duration

Number of Month: 1
Number of Days: 0

7.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 200000
Amount of Material to be Hauled On-Site (yd³): 4095.82
Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

7.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.29535	0.00490	2.28401	3.40565	0.12705	0.11688
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.25231	0.00487	2.49971	3.48392	0.13245	0.12186
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.34288	0.00492	3.09108	2.65644	0.13550	0.12466
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17717	0.00489	1.80740	3.48712	0.05440	0.05005

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02155	0.00431	531.25291	533.07604
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02140	0.00428	527.44206	529.25211
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.55942	534.38703
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.61807	531.43559

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
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DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

7.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM_{10FD} = (20 * ACRE * WD) / 2000$$

PM_{10FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

7.2 Paving Phase

7.2.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 6
Start Quarter: 1
Start Year: 2027

- Phase Duration

Number of Month: 1
Number of Days: 0

7.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 200000

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

7.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.55279	0.00855	4.19775	3.25549	0.16311	0.15007
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.22921	0.00486	2.45013	3.43821	0.11941	0.10986
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18341	0.00488	2.01586	3.40316	0.07465	0.06867
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.52865	0.00542	3.57666	4.10537	0.14602	0.13434

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02313	0.00463	570.32048	572.27767
Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.80912	527.61356
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02142	0.00428	528.06776	529.87995
Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02382	0.00476	587.12246	589.13732

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

7.2.4 Paving Phase Formula(s)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Off-Gassing Emissions per Phase

$$\text{VOC}_P = (2.62 * \text{PA}) / 43560 / 2000$$

VOC_P : Paving VOC Emissions (TONs)

2.62: Emission Factor (lb/acre)

PA: Paving Area (ft²)

43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)

2000: Conversion Factor square pounds to TONs (2000 lb / TON)

8. Construction / Demolition

8.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Runway 13 End Taxiway

- Activity Description:

Extending parallel Taxiway A to be a full parallel taxiway on the Runway 13 end.

- Activity Start Date

Start Month: 3

Start Month: 2027

- Activity End Date

Indefinite: False

End Month: 10

End Month: 2027

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.063944
SO _x	0.000935
NO _x	0.469791
CO	0.630792

Pollutant	Total Emissions (TONs)
PM 10	7.181887
PM 2.5	0.017802
Pb	0.000000
NH ₃	0.001570

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.004414
N ₂ O	0.003160

Pollutant	Total Emissions (TONs)
CO ₂	114.574522
CO ₂ e	115.626439

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.004414
N ₂ O	0.003160

Pollutant	Total Emissions (TONs)
CO ₂	114.574522
CO ₂ e	115.626439

8.1 Site Grading Phase

8.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Start Month: 5
Start Quarter: 1
Start Year: 2027

- Phase Duration

Number of Month: 2
Number of Days: 0

8.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 360000
Amount of Material to be Hauled On-Site (yd³): 9420.19
Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	1	8
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

8.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.37809	0.00542	3.36699	4.21640	0.08879	0.08169
Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.29535	0.00490	2.28401	3.40565	0.12705	0.11688
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Emission Factors	0.25231	0.00487	2.49971	3.48392	0.13245	0.12186
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.34288	0.00492	3.09108	2.65644	0.13550	0.12466
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.17717	0.00489	1.80740	3.48712	0.05440	0.05005

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02383	0.00477	587.39431	589.41010
Graders Composite [HP: 148] [LF: 0.41]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02155	0.00431	531.25291	533.07604
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02140	0.00428	527.44206	529.25211
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02160	0.00432	532.55942	534.38703
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02148	0.00430	529.61807	531.43559

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH₄	N₂O	CO₂	CO₂e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

8.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

8.2 Paving Phase

8.2.1 Paving Phase Timeline Assumptions

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Phase Start Date

Start Month: 9
Start Quarter: 1
Start Year: 2027

- Phase Duration

Number of Month: 2
Number of Days: 0

8.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 360000

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Pavers Composite	1	8
Paving Equipment Composite	2	6
Rollers Composite	2	6

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

8.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.22921	0.00486	2.45013	3.43821	0.11941	0.10986
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18341	0.00488	2.01586	3.40316	0.07465	0.06867
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.52865	0.00542	3.57666	4.10537	0.14602	0.13434

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.80912	527.61356
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02142	0.00428	528.06776	529.87995
Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02382	0.00476	587.12246	589.13732

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

8.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)

VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL} : Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)

VMT_{VE} : Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL} : Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560 / 2000$$

VOC_P : Paving VOC Emissions (TONs)

2.62: Emission Factor (lb/acre)

PA: Paving Area (ft²)

43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)

2000: Conversion Factor square pounds to TONs (2000 lb / TON)

9. Construction / Demolition

9.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Runway 13 End Warm Up/Hold Pad

- Activity Description:

Constructing a new aircraft warm up/holding pad east of Taxiway A

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Activity Start Date

Start Month: 4
Start Month: 2029

- Activity End Date

Indefinite: False
End Month: 8
End Month: 2029

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.061601
SO _x	0.000911
NO _x	0.420672
CO	0.617394

Pollutant	Total Emissions (TONs)
PM 10	7.974946
PM 2.5	0.015244
Pb	0.000000
NH ₃	0.001187

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.004233
N ₂ O	0.002309

Pollutant	Total Emissions (TONs)
CO ₂	107.684846
CO ₂ e	108.478801

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.004233
N ₂ O	0.002309

Pollutant	Total Emissions (TONs)
CO ₂	107.684846
CO ₂ e	108.478801

9.1 Site Grading Phase

9.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2029

- Phase Duration

Number of Month: 2
Number of Days: 0

9.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 400000
Amount of Material to be Hauled On-Site (yd³): 4349.62
Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	1	8

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

9.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.35719	0.00543	3.31224	4.22477	0.07444	0.06848
Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.26603	0.00490	1.89100	3.42562	0.10323	0.09497
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.23936	0.00487	2.35910	3.49263	0.11535	0.10612
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.33414	0.00491	2.85677	2.62663	0.12779	0.11756
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17058	0.00489	1.70745	3.50145	0.04350	0.04002

- Construction Exhaust Greenhouse Gases Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02385	0.00477	588.06593	590.08402
Graders Composite [HP: 148] [LF: 0.41]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02154	0.00431	531.04687	532.86928
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02137	0.00427	526.88032	528.68844
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.42500	534.25214
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e

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Emission Factors	0.02147	0.00429	529.26401	531.08031
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- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.25136	0.00153	0.10437	3.61577	0.00611	0.00540	0.04468
LDGT	0.19477	0.00189	0.11015	2.97733	0.00664	0.00587	0.03646
HDGV	0.61180	0.00453	0.47419	8.35802	0.02293	0.02028	0.08436
LDDV	0.11802	0.00120	0.14797	5.76058	0.00439	0.00404	0.01631
LDDT	0.07760	0.00125	0.09041	3.00456	0.00369	0.00340	0.01754
HDDV	0.08908	0.00402	1.73495	1.30565	0.02429	0.02234	0.06818
MC	2.31021	0.00195	0.70890	12.42343	0.02350	0.02079	0.05603

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01676	0.00463	303.01288	304.80845
LDGT	0.01469	0.00576	374.22014	376.29965
HDGV	0.04592	0.02250	896.15031	903.99499
LDDV	0.06174	0.00065	355.92204	357.65788
LDDT	0.04756	0.00092	374.13069	375.59519
HDDV	0.03015	0.16747	1198.20613	1248.86650
MC	0.10223	0.00274	394.51473	397.88717

9.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

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$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

9.2 Paving Phase

9.2.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 7
Start Quarter: 1
Start Year: 2029

- Phase Duration

Number of Month: 2
Number of Days: 0

9.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 400000

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Pavers Composite	1	8
Paving Equipment Composite	2	6

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Rollers Composite	2	6
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- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

9.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.20960	0.00486	2.24447	3.43144	0.09838	0.09051
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.16367	0.00487	1.84528	3.38442	0.05354	0.04925
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.48930	0.00542	3.48000	4.09412	0.12533	0.11530

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.84285	527.64741
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02140	0.00428	527.61090	529.42153
Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02382	0.00476	587.11055	589.12536

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.25136	0.00153	0.10437	3.61577	0.00611	0.00540	0.04468
LDGT	0.19477	0.00189	0.11015	2.97733	0.00664	0.00587	0.03646
HDGV	0.61180	0.00453	0.47419	8.35802	0.02293	0.02028	0.08436
LDDV	0.11802	0.00120	0.14797	5.76058	0.00439	0.00404	0.01631
LDDT	0.07760	0.00125	0.09041	3.00456	0.00369	0.00340	0.01754
HDDV	0.08908	0.00402	1.73495	1.30565	0.02429	0.02234	0.06818
MC	2.31021	0.00195	0.70890	12.42343	0.02350	0.02079	0.05603

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01676	0.00463	303.01288	304.80845
LDGT	0.01469	0.00576	374.22014	376.29965

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HDGV	0.04592	0.02250	896.15031	903.99499
LDDV	0.06174	0.00065	355.92204	357.65788
LDDT	0.04756	0.00092	374.13069	375.59519
HDDV	0.03015	0.16747	1198.20613	1248.86650
MC	0.10223	0.00274	394.51473	397.88717

9.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

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V_{POL} : Vehicle Emissions (TONs)
 VM_{TVE} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560 / 2000$$

VOC_P : Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft²)
43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)
2000: Conversion Factor square pounds to TONs (2000 lb / TON)

10. Construction / Demolition

10.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Runway 13 End Access Road and Fence Realignment

- Activity Description:

Realigning the Airport perimeter fence on the Runway 13 end and realigning the access road.

- Activity Start Date

Start Month: 3
Start Month: 2027

- Activity End Date

Indefinite: False
End Month: 5
End Month: 2027

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.059241
SO _x	0.000959
NO _x	0.482628
CO	0.635732

Pollutant	Total Emissions (TONs)
PM 10	3.005197
PM 2.5	0.019139
Pb	0.000000
NH ₃	0.001447

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.004409
N ₂ O	0.002507

Pollutant	Total Emissions (TONs)
CO ₂	112.169374
CO ₂ e	113.026755

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.004409

Pollutant	Total Emissions (TONs)
CO ₂	112.169374

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N ₂ O	0.002507
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CO ₂ e	113.026755
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10.1 Site Grading Phase

10.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 3
Start Quarter: 1
Start Year: 2027

- Phase Duration

Number of Month: 3
Number of Days: 0

10.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 100000
Amount of Material to be Hauled On-Site (yd³): 8084.2
Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

10.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5

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Emission Factors	0.29535	0.00490	2.28401	3.40565	0.12705	0.11688
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.25231	0.00487	2.49971	3.48392	0.13245	0.12186
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.34288	0.00492	3.09108	2.65644	0.13550	0.12466
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.17717	0.00489	1.80740	3.48712	0.05440	0.05005

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02155	0.00431	531.25291	533.07604
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02140	0.00428	527.44206	529.25211
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02160	0.00432	532.55942	534.38703
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02148	0.00430	529.61807	531.43559

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH₄	N₂O	CO₂	CO₂e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

10.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

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2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

10.2 Paving Phase

10.2.1 Paving Phase Timeline Assumptions

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- Phase Start Date

Start Month: 3
Start Quarter: 1
Start Year: 2027

- Phase Duration

Number of Month: 2
Number of Days: 0

10.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 100000

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

10.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.55279	0.00855	4.19775	3.25549	0.16311	0.15007
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.22921	0.00486	2.45013	3.43821	0.11941	0.10986
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18341	0.00488	2.01586	3.40316	0.07465	0.06867

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Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.52865	0.00542	3.57666	4.10537	0.14602	0.13434
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17717	0.00489	1.80740	3.48712	0.05440	0.05005

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02313	0.00463	570.32048	572.27767
Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.80912	527.61356
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02142	0.00428	528.06776	529.87995
Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02382	0.00476	587.12246	589.13732
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.61807	531.43559

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

10.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

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WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft²)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)
HC: Average Hauling Truck Capacity (yd³)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560 / 2000$$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft²)
43560: Conversion Factor square feet to acre (43560 ft² / acre)
2000: Conversion Factor square pounds to TONS (2000 lb / TON)

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11. Construction / Demolition

11.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Pavement Demolition

- Activity Description:

Removing the existing aircraft warm up/holding pad at Runway 13 end.

- Activity Start Date

Start Month: 3
Start Month: 2027

- Activity End Date

Indefinite: False
End Month: 3
End Month: 2027

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.024162
SO _x	0.000428
NO _x	0.208589
CO	0.286318

Pollutant	Total Emissions (TONs)
PM 10	1.301763
PM 2.5	0.007844
Pb	0.000000
NH ₃	0.000274

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.001895
N ₂ O	0.000428

Pollutant	Total Emissions (TONs)
CO ₂	46.372105
CO ₂ e	46.546936

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.001895
N ₂ O	0.000428

Pollutant	Total Emissions (TONs)
CO ₂	46.372105
CO ₂ e	46.546936

11.1 Demolition Phase

11.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date

Start Month: 3
Start Quarter: 1
Start Year: 2027

- Phase Duration

Number of Month: 1
Number of Days: 0

11.1.2 Demolition Phase Assumptions

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- General Demolition Information

Area of Building to be demolished (ft²): 130000

Height of Building to be demolished (ft): 0

- Default Settings Used: Yes

- Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	8
Rubber Tired Dozers Composite	1	1
Tractors/Loaders/Backhoes Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

11.1.3 Demolition Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.38980	0.00742	3.42957	4.29108	0.07071	0.06505
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.34288	0.00492	3.09108	2.65644	0.13550	0.12466
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17717	0.00489	1.80740	3.48712	0.05440	0.05005

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02330	0.00466	574.33236	576.30332
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.55942	534.38703
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.61807	531.43559

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- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

11.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (0.00042 * BA * BH) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)
 0.00042: Emission Factor (lb/ft³)
 BA: Area of Building to be demolished (ft²)
 BH: Height of Building to be demolished (ft)
 2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)
 NE: Number of Equipment
 WD: Number of Total Work Days (days)
 H: Hours Worked per Day (hours)
 HP: Equipment Horsepower
 LF: Equipment Load Factor
 EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
 0.002205: Conversion Factor grams to pounds
 2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
 BA: Area of Building being demolish (ft²)
 BH: Height of Building being demolish (ft)
 (1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)
 0.25: Volume reduction factor (material reduced by 75% to account for air space)
 HC: Average Hauling Truck Capacity (yd³)
 (1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

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HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)

VMT_{VE} : Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL} : Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL} : Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

11.2 Site Grading Phase

11.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 3

Start Quarter: 1

Start Year: 2027

- Phase Duration

Number of Month: 1

Number of Days: 0

11.2.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 130000

Amount of Material to be Hauled On-Site (yd³): 202.96

Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

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Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

11.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.29535	0.00490	2.28401	3.40565	0.12705	0.11688
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.25231	0.00487	2.49971	3.48392	0.13245	0.12186
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.34288	0.00492	3.09108	2.65644	0.13550	0.12466
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17717	0.00489	1.80740	3.48712	0.05440	0.05005

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02155	0.00431	531.25291	533.07604
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02140	0.00428	527.44206	529.25211
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.55942	534.38703
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.61807	531.43559

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
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LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657
HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

11.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

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VM_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

12. Construction / Demolition

12.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Runway 31 End Extension

- Activity Description:

Adding 1,000ft to the Runway 31 end. Replacement of localizers (LOC), glideslope (GS), and replacing the Runway 31 Medium-Intensity Approach Lighting System with Runway Alignment Indicator (MALSR)

- Activity Start Date

Start Month: 3
Start Month: 2028

- Activity End Date

Indefinite: False
End Month: 9
End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.108849
SO _x	0.002118
NO _x	0.991842
CO	1.265951

Pollutant	Total Emissions (TONs)
PM 10	6.002602
PM 2.5	0.031110
Pb	0.000000
NH ₃	0.009728

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- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.010839
N ₂ O	0.021915

Pollutant	Total Emissions (TONs)
CO ₂	322.706531
CO ₂ e	329.508199

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.010839
N ₂ O	0.021915

Pollutant	Total Emissions (TONs)
CO ₂	322.706531
CO ₂ e	329.508199

12.1 Demolition Phase

12.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2028

- Phase Duration

Number of Month: 2
Number of Days: 0

12.1.2 Demolition Phase Assumptions

- General Demolition Information

Area of Building to be demolished (ft²): 200000
Height of Building to be demolished (ft): 0

- Default Settings Used: Yes

- Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	8
Rubber Tired Dozers Composite	1	1
Tractors/Loaders/Backhoes Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

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12.1.3 Demolition Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.37038	0.00743	3.34376	4.27147	0.05770	0.05308
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.34206	0.00492	3.04082	2.66346	0.13374	0.12304
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17299	0.00489	1.74942	3.49553	0.04787	0.04404

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02330	0.00466	574.37549	576.34660
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02162	0.00432	532.85820	534.68684
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.56544	531.38277

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548
LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

12.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (0.00042 * BA * BH) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

0.00042: Emission Factor (lb/ft³)

BA: Area of Building to be demolished (ft²)

BH: Height of Building to be demolished (ft)

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2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

BA: Area of Building being demolish (ft²)

BH: Height of Building being demolish (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

0.25: Volume reduction factor (material reduced by 75% to account for air space)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

12.2 Site Grading Phase

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12.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 3
Start Quarter: 1
Start Year: 2028

- Phase Duration

Number of Month: 3
Number of Days: 0

12.2.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 200000
Amount of Material to be Hauled On-Site (yd³): 109116.04
Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

12.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.28126	0.00491	2.08618	3.41790	0.11550	0.10626
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5

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Emission Factors	0.24470	0.00487	2.43300	3.48645	0.12364	0.11375
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.34206	0.00492	3.04082	2.66346	0.13374	0.12304
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.17299	0.00489	1.74942	3.49553	0.04787	0.04404

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02155	0.00431	531.33158	533.15497
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02137	0.00427	526.92217	528.73043
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02162	0.00432	532.85820	534.68684
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02148	0.00430	529.56544	531.38277

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH₃
LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548
LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH₄	N₂O	CO₂	CO₂e
LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

12.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

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$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

12.3 Paving Phase

12.3.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 6

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Start Quarter: 1
Start Year: 2028

- Phase Duration

Number of Month: 4
Number of Days: 0

12.3.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 200000

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

12.3.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.55275	0.00855	4.19697	3.25556	0.16292	0.14989
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.21588	0.00486	2.33827	3.43520	0.10542	0.09699
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.16337	0.00488	1.88314	3.37709	0.05778	0.05316
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.50057	0.00542	3.50905	4.08429	0.13206	0.12150

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- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02314	0.00463	570.33256	572.28980
Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.89644	527.70118
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02141	0.00428	527.90982	529.72147
Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02382	0.00476	587.11688	589.13172

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548
LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

12.3.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

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VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft²)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)
HC: Average Hauling Truck Capacity (yd³)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560 / 2000$$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft²)
43560: Conversion Factor square feet to acre (43560 ft² / acre)
2000: Conversion Factor square pounds to TONs (2000 lb / TON)

13. Construction / Demolition

13.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Runway 31 End Warm up/Hold Pad

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- Activity Description:

Constructing 1,000-foot blast pad adjacent to the extended Runway 31 pavement ends.

- Activity Start Date

Start Month: 3

Start Month: 2028

- Activity End Date

Indefinite: False

End Month: 4

End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.029949
SO _x	0.000413
NO _x	0.201335
CO	0.274120

Pollutant	Total Emissions (TONs)
PM 10	1.998067
PM 2.5	0.007795
Pb	0.000000
NH ₃	0.000487

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.001867
N ₂ O	0.000774

Pollutant	Total Emissions (TONs)
CO ₂	46.659203
CO ₂ e	46.936606

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.001867
N ₂ O	0.000774

Pollutant	Total Emissions (TONs)
CO ₂	46.659203
CO ₂ e	46.936606

13.1 Site Grading Phase

13.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 4

Start Quarter: 1

Start Year: 2028

- Phase Duration

Number of Month: 1

Number of Days: 0

13.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 200000

Amount of Material to be Hauled On-Site (yd³): 316.6

Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

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Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

13.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.28126	0.00491	2.08618	3.41790	0.11550	0.10626
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.24470	0.00487	2.43300	3.48645	0.12364	0.11375
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.34206	0.00492	3.04082	2.66346	0.13374	0.12304
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17299	0.00489	1.74942	3.49553	0.04787	0.04404

- Construction Exhaust Greenhouse Gases Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02155	0.00431	531.33158	533.15497
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02137	0.00427	526.92217	528.73043
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02162	0.00432	532.85820	534.68684
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.56544	531.38277

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
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LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548
LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

13.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

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VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

13.2 Paving Phase

13.2.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2028

- Phase Duration

Number of Month: 1
Number of Days: 0

13.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 200000

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7

- Vehicle Exhaust

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Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

13.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.55275	0.00855	4.19697	3.25556	0.16292	0.14989
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.21588	0.00486	2.33827	3.43520	0.10542	0.09699
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.16337	0.00488	1.88314	3.37709	0.05778	0.05316
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.50057	0.00542	3.50905	4.08429	0.13206	0.12150

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02314	0.00463	570.33256	572.28980
Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.89644	527.70118
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02141	0.00428	527.90982	529.72147
Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02382	0.00476	587.11688	589.13172

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548
LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

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	CH ₄	N ₂ O	CO ₂	CO _{2e}
LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

13.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{VE} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_P = (2.62 * PA) / 43560 / 2000$$

VOC_P : Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft²)
43560: Conversion Factor square feet to acre (43560 ft² / acre)
2000: Conversion Factor square pounds to TONS (2000 lb / TON)

14. Construction / Demolition

14.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Taxiway A Realignment

- Activity Description:

Realigning Taxiway A to right angle runway connectors at the Runway 31 end.

- Activity Start Date

Start Month: 3
Start Month: 2028

- Activity End Date

Indefinite: False
End Month: 7
End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.081606
SO _x	0.001211
NO _x	0.477061
CO	0.608652

Pollutant	Total Emissions (TONs)
PM 10	8.772431
PM 2.5	0.016762
Pb	0.000000
NH ₃	0.001647

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.005634
N ₂ O	0.003872

Pollutant	Total Emissions (TONs)
CO ₂	146.111451
CO ₂ e	147.405999

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- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.005634
N ₂ O	0.003872

Pollutant	Total Emissions (TONs)
CO ₂	146.111451
CO ₂ e	147.405999

14.1 Site Grading Phase

14.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 5
Start Quarter: 1
Start Year: 2028

- Phase Duration

Number of Month: 1
Number of Days: 0

14.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 880000
Amount of Material to be Hauled On-Site (yd³): 7188.83
Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	1	8
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Scrapers Composite	3	8
Tractors/Loaders/Backhoes Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

14.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.36597	0.00542	3.33858	4.22211	0.08125	0.07475
Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.28126	0.00491	2.08618	3.41790	0.11550	0.10626
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.24470	0.00487	2.43300	3.48645	0.12364	0.11375
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.34206	0.00492	3.04082	2.66346	0.13374	0.12304
Scrapers Composite [HP: 423] [LF: 0.48]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18502	0.00488	1.49320	1.50033	0.05914	0.05441
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17299	0.00489	1.74942	3.49553	0.04787	0.04404

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02383	0.00477	587.54144	589.55773
Graders Composite [HP: 148] [LF: 0.41]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02155	0.00431	531.33158	533.15497
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02137	0.00427	526.92217	528.73043
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02162	0.00432	532.85820	534.68684
Scrapers Composite [HP: 423] [LF: 0.48]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02144	0.00429	528.60870	530.42275
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.56544	531.38277

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548
LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
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LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

14.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM_{10FD} = (20 * ACRE * WD) / 2000$$

PM_{10FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

14.2 Paving Phase

14.2.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 6
Start Quarter: 1
Start Year: 2028

- Phase Duration

Number of Month: 2
Number of Days: 0

14.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 880000

- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Pavers Composite	1	8
Paving Equipment Composite	2	8
Rollers Composite	2	6

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
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POVs	50.00	50.00	0	0	0	0	0
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14.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.21588	0.00486	2.33827	3.43520	0.10542	0.09699
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.16337	0.00488	1.88314	3.37709	0.05778	0.05316
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.50057	0.00542	3.50905	4.08429	0.13206	0.12150

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.89644	527.70118
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02141	0.00428	527.90982	529.72147
Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02382	0.00476	587.11688	589.13172

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548
LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

14.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

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CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$\text{VMT}_{\text{VE}} = \text{PA} * 0.25 * (1 / 27) * (1 / \text{HC}) * \text{HT}$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$\text{V}_{\text{POL}} = (\text{VMT}_{\text{VE}} * 0.002205 * \text{EF}_{\text{POL}} * \text{VM}) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$\text{VMT}_{\text{WT}} = \text{WD} * \text{WT} * 1.25 * \text{NE}$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$\text{V}_{\text{POL}} = (\text{VMT}_{\text{WT}} * 0.002205 * \text{EF}_{\text{POL}} * \text{VM}) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$\text{VOC}_\text{P} = (2.62 * \text{PA}) / 43560 / 2000$$

VOC_P: Paving VOC Emissions (TONs)

2.62: Emission Factor (lb/acre)

PA: Paving Area (ft²)

43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)

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2000: Conversion Factor square pounds to TONs (2000 lb / TON)

15. Construction / Demolition

15.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Runway 31 End Access Road and Fence Realignment

- Activity Description:

Realigning the Airport perimeter fence on Runway 31 end and realigning the perimeter road.

- Activity Start Date

Start Month: 3
Start Month: 2028

- Activity End Date

Indefinite: False
End Month: 4
End Month: 2028

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.029134
SO _x	0.000443
NO _x	0.215195
CO	0.283784

Pollutant	Total Emissions (TONs)
PM 10	1.500871
PM 2.5	0.007980
Pb	0.000000
NH ₃	0.000979

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.002087
N ₂ O	0.001985

Pollutant	Total Emissions (TONs)
CO ₂	55.491443
CO ₂ e	56.135275

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.002087
N ₂ O	0.001985

Pollutant	Total Emissions (TONs)
CO ₂	55.491443
CO ₂ e	56.135275

15.1 Site Grading Phase

15.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 4
Start Quarter: 1
Start Year: 2028

- Phase Duration

Number of Month: 1
Number of Days: 0

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

15.1.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 150000
 Amount of Material to be Hauled On-Site (yd³): 7363.12
 Amount of Material to be Hauled Off-Site (yd³): 0

- Site Grading Default Settings

Default Settings Used: Yes
 Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)
 Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

15.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.28126	0.00491	2.08618	3.41790	0.11550	0.10626
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.24470	0.00487	2.43300	3.48645	0.12364	0.11375
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.34206	0.00492	3.04082	2.66346	0.13374	0.12304
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17299	0.00489	1.74942	3.49553	0.04787	0.04404

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Emission Factors	0.02155	0.00431	531.33158	533.15497
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02137	0.00427	526.92217	528.73043
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02162	0.00432	532.85820	534.68684
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02148	0.00430	529.56544	531.38277

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH₃
LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548
LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH₄	N₂O	CO₂	CO₂e
LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

15.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

15.2 Paving Phase

15.2.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 4

Start Quarter: 1

Start Year: 2028

- Phase Duration

Number of Month: 1

Number of Days: 0

15.2.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 150000

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- Paving Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

15.2.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.55275	0.00855	4.19697	3.25556	0.16292	0.14989
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.21588	0.00486	2.33827	3.43520	0.10542	0.09699
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.16337	0.00488	1.88314	3.37709	0.05778	0.05316
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.50057	0.00542	3.50905	4.08429	0.13206	0.12150

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02314	0.00463	570.33256	572.28980
Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.89644	527.70118
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02141	0.00428	527.90982	529.72147
Rollers Composite [HP: 36] [LF: 0.38]				

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	CH ₄	N ₂ O	CO ₂	CO _{2e}
Emission Factors	0.02382	0.00476	587.11688	589.13172

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548
LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO _{2e}
LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

15.2.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

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VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$\text{VMT}_{\text{WT}} = \text{WD} * \text{WT} * 1.25 * \text{NE}$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$\text{V}_{\text{POL}} = (\text{VMT}_{\text{WT}} * 0.002205 * \text{EF}_{\text{POL}} * \text{VM}) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$\text{VOC}_P = (2.62 * \text{PA}) / 43560 / 2000$$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft²)
43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)
2000: Conversion Factor square pounds to TONS (2000 lb / TON)

16. Construction / Demolition

16.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Airfield Painting

- Activity Description:

Paint Runway and Taxiways with airfield markings.

- Activity Start Date

Start Month: 3
Start Month: 2028

- Activity End Date

Indefinite: False
End Month: 4
End Month: 2028

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- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	5.700110
SO _x	0.000001
NO _x	0.000056
CO	0.001531

Pollutant	Total Emissions (TONs)
PM 10	0.000003
PM 2.5	0.000003
Pb	0.000000
NH ₃	0.000018

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.000007
N ₂ O	0.000002

Pollutant	Total Emissions (TONs)
CO ₂	0.150758
CO ₂ e	0.151648

- Global Scale Activity Emissions for SCGHG:

Pollutant	Total Emissions (TONs)
CH ₄	0.000004
N ₂ O	0.000001

Pollutant	Total Emissions (TONs)
CO ₂	0.075379
CO ₂ e	0.075824

16.1 Architectural Coatings Phase

16.1.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date

Start Month: 3
Start Quarter: 1
Start Year: 2028

- Phase Duration

Number of Month: 2
Number of Days: 0

16.1.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information

Building Category: Non-Residential
Total Square Footage (ft²): 491380
Number of Units: N/A

- Architectural Coatings Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

16.1.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.25932	0.00155	0.11482	3.79563	0.00612	0.00541	0.04548

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LDGT	0.20283	0.00191	0.13729	3.14818	0.00675	0.00597	0.03809
HDGV	0.63146	0.00454	0.49859	8.62598	0.02279	0.02016	0.08644
LDDV	0.12140	0.00120	0.15418	5.57927	0.00414	0.00381	0.01624
LDDT	0.07976	0.00126	0.09760	3.05162	0.00367	0.00337	0.01775
HDDV	0.09485	0.00408	1.90961	1.33143	0.02779	0.02557	0.06789
MC	2.33098	0.00195	0.71051	12.54359	0.02350	0.02079	0.05571

- Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01750	0.00477	306.31121	308.16703
LDGT	0.01539	0.00605	377.39735	379.58060
HDGV	0.04660	0.02331	897.10697	905.20802
LDDV	0.06204	0.00065	357.69038	359.43410
LDDT	0.04848	0.00092	376.91859	378.40610
HDDV	0.03024	0.16687	1216.83480	1267.31861
MC	0.10346	0.00274	394.40376	397.80761

16.1.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$$VMT_{WT} = (1 * WT * PA) / 800$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

1: Conversion Factor man days to trips (1 trip / 1 man * day)

WT: Average Worker Round Trip Commute (mile)

PA: Paint Area (ft²)

800: Conversion Factor square feet to man days (1 ft² / 1 man * day)

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)

BA: Area of Building (ft²)

2.0: Conversion Factor total area to coated area (2.0 ft² coated area / total area)

0.0116: Emission Factor (lb/ft²)

2000: Conversion Factor pounds to tons

17. Construction / Demolition

17.1 General Information & Timeline Assumptions

- Activity Location

County: Woodbury

Regulatory Area(s): NOT IN A REGULATORY AREA

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- **Activity Title:** Drainage Ditch

- **Activity Description:**

Realigning the drainage ditch on Runway 13 end

- **Activity Start Date**

Start Month: 3

Start Month: 2027

- **Activity End Date**

Indefinite: False

End Month: 4

End Month: 2027

- **Activity Emissions:**

Pollutant	Total Emissions (TONs)
VOC	0.873193
SO _x	0.034463
NO _x	17.421391
CO	11.468605

Pollutant	Total Emissions (TONs)
PM 10	10.241825
PM 2.5	0.270377
Pb	0.000000
NH ₃	0.557521

- **Activity Emissions of GHG:**

Pollutant	Total Emissions (TONs)
CH ₄	0.251404
N ₂ O	1.371025

Pollutant	Total Emissions (TONs)
CO ₂	10234.696973
CO ₂ e	10649.557621

- **Global Scale Activity Emissions for SCGHG:**

Pollutant	Total Emissions (TONs)
CH ₄	0.251404
N ₂ O	1.371025

Pollutant	Total Emissions (TONs)
CO ₂	10234.696973
CO ₂ e	10649.557621

17.1 Trenching/Excavating Phase

17.1.1 Trenching / Excavating Phase Timeline Assumptions

- **Phase Start Date**

Start Month: 3

Start Quarter: 1

Start Year: 2027

- **Phase Duration**

Number of Month: 2

Number of Days: 0

17.1.2 Trenching / Excavating Phase Assumptions

- **General Trenching/Excavating Information**

Area of Site to be Trenched/Excavated (ft²): 500000

Amount of Material to be Hauled On-Site (yd³): 7500000

Amount of Material to be Hauled Off-Site (yd³): 0

- **Trenching Default Settings**

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipmen Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

17.1.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.37809	0.00542	3.36699	4.21640	0.08879	0.08169
Other General Industrial Equipmen Composite [HP: 35] [LF: 0.34]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.43579	0.00542	3.52468	4.59651	0.09918	0.09125
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.17717	0.00489	1.80740	3.48712	0.05440	0.05005

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02383	0.00477	587.39431	589.41010
Other General Industrial Equipmen Composite [HP: 35] [LF: 0.34]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02385	0.00477	587.92708	589.94470
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02148	0.00430	529.61807	531.43559

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.27133	0.00157	0.13125	3.93639	0.00604	0.00535	0.04760
LDGT	0.21063	0.00194	0.15278	3.30394	0.00686	0.00607	0.03924
HDGV	0.69005	0.00454	0.55632	9.63373	0.02316	0.02049	0.08764
LDDV	0.11948	0.00121	0.14635	5.32170	0.00374	0.00345	0.01631
LDDT	0.14774	0.00137	0.40418	4.45459	0.00593	0.00545	0.01657

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HDDV	0.10449	0.00415	2.09802	1.37202	0.03529	0.03247	0.06740
MC	2.37447	0.00195	0.71217	12.66620	0.02350	0.02079	0.05538

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01838	0.00490	310.81833	312.73407
LDGT	0.01603	0.00631	382.62164	384.89972
HDGV	0.05163	0.02401	897.09784	905.53288
LDDV	0.06294	0.00065	359.01737	360.78409
LDDT	0.04453	0.00093	404.06182	405.45151
HDDV	0.03032	0.16579	1235.72885	1285.89348
MC	0.10472	0.00275	394.31871	397.75484

17.1.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

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- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT} : Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)

VMT_{VE} : Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL} : Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

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