Appendix D

Air Quality and Greenhouse Gas Emissions

DRAFT

Air Quality & Greenhouse Gas (GHG) Construction Emissions Technical Memorandum

Supplemental EIR for Rehabilitation of Runway 8R-26L and Associated Improvements at ONT

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Construction Emissions Analysis

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1 Introduction

Construction-related emissions are typically associated with the exhaust from heavy equipment (e.g., backhoes, graders, etc.), delivery trucks (e.g., dump trucks, construction materials delivery), and construction worker vehicles traveling to and from the construction site. There are also emissions (i.e., dust) associated with site preparation, land clearing, and equipment traversing unpaved areas. Construction emissions are temporary in nature and generally confined to the construction site and roads used to enter and exit the construction site. Emissions of CO, NO_x, VOC, SO_x, PM_{2.5}, PM₁₀, as well as Greenhouse Gas Emissions (GHG) (i.e., CO₂, CH₄, N₂0, and CO_{2e}) were evaluated for the Proposed Project's three-year construction period, 2023, 2024 and 2025.

The Airport Construction Emissions Inventory Tool (ACEIT), developed by the Transportation Research Board (TRB) Airport Cooperative Research Program (ACRP) under Project 02-33, was used to identify the types of construction activities and equipment/vehicle activity data for the air quality analysis. For this analysis, ACEIT was also used to derive the hours of operation for off-road construction equipment and vehicle miles traveled (VMT) for on-road trucks and employee vehicles. Construction activities are based upon the phasing plans developed by HNTB, including the known areas (square feet) associated with the various project types (i.e., proposed pavement, pavement demolition, and building area). The construction activity levels developed in the ACEIT model were then used to model emissions in California Emissions Estimator Model® (CalEEMod) version 2020.4.0.1

A concrete batch plant is proposed to be located on Airport property in an industrial area along E. Avion Street. A concrete batch plant would reduce the total VMT needed for concrete delivery trucks, but would still require delivery of raw materials (i.e., portland cement and aggregate) to mix the concrete on-site. The construction activity levels developed in ACEIT and modeled in CalEEMod do not account for the use of a concrete batch plant and instead assume a conservative 40-mile roundtrip for concrete delivery. The health risk assessment completed as part of this Supplemental Environmental Impact Report (SEIR) includes an analysis of particulate matter (PM_{2.5} and PM₁₀) emissions associated with operation of the concrete batch plant. These emissions are summed with the construction emissions developed in CalEEMod to represent the full potential direct construction emissions for the Proposed Project.

2 ACEIT

ACEIT facilitates the modeling of emissions through user defined input of construction scenarios, project types, and overall project size inputs (i.e., cost and dimensions). Each construction scenario represents a specific year, season (winter or summer) and number of months. Associated with the user input project types, ACEIT provides default input data for construction activities, equipment types, fuel types, size details and emission factors. However, ACEIT allows the user to refine construction scenarios with specific activity data to reflect more accurate construction schedules and quantities. *Attachment 1-A* provides a summary of the project details

¹ CalEEMod emission factors include OFFROAD2011 emission factors for non-road equipment and EMFAC2017 emission factors for on-road vehicles.

(schedule, scenarios, project size and cost) utilized in the ACEIT model. *Attachment 1-B* provides the ACEIT input summary sheets.

2.1 Scenarios

ACEIT requires project activity to be grouped by Scenario. A Scenario includes the project year, number of months, season (summer/winter), and average weather temperature inputs (average daily temperature, maximum and minimum daily temperature change). The season and weather inputs are used to determine emission factors. Because ACEIT emission factors are not ultimately used to calculate construction emissions, weather data was not collected and default "summer" and temperature inputs were used to set up the scenarios. There are eight Scenarios for this project, based on the projected construction phasing schedule²:

- Scenario 1: 2023 January February (2 months)
- Scenario 2: 2023 January February (2 months)
- Scenario 3: 2023 February August (6 months)
- Scenario 4: 2023 August October (3 months)
- Scenario 5: 2023 January October (9 months)
- Scenario 6: 2024 January October (9 months)
- Scenario 7: 2025 January June (5 months)
- Scenario 8: 2025 June October (5 months)

2.2 Project Type

Project types, construction activity types, fuel type and equipment were then selected for each scenario. To be conservative, all default construction activity types and diesel equipment were selected for project types, with the exception of identifying pavement types and removing clearing and grubbing as a construction activity for taxiway projects. Default ACEIT construction activities includes both concrete and asphalt placement for pavement project types, allowing the user to define the proposed pavement type. The construction activities and project details were refined to include the placement of both concrete (mainline) and asphalt (shoulders) pavements for runway/taxiways and demolition of both concrete (mainline) and asphalt (shoulders) pavements for the existing taxiway pavements present. The following summaries the project types selected for each scenario. Unless noted otherwise, all default construction activity types were used for each project type.

- Scenario 1, 3 and 4 (2023): Taxiway improvement projects, including the following ACEIT project types, and associated construction activities were used in the model:
 - Taxiways: (asphalt placement, concrete placement, drainage, dust control, excavation, fencing, grading, hydroseeding, lighting, markings, soil erosion/sediment control, subbase placement, topsoil placement)
 - Demolition Asphalt: (concrete demolition)

² The construction phasing schedule does not align exactly with proposed runway closure periods, as it also includes time for mobilization and demobilization, as well as construction occurring when both runways are operational (June-October 2025).

- Demolition Concrete: (asphalt demolition)
- o NAVAIDS: Precision Approach Path Indicator (PAPI) (Scenario 3 only)
- Scenario 2 (2023): Taxiway improvement projects (partial depth reconstruction all concrete), including the following ACEIT project type, and associated construction activities were used in the model:
 - Taxiways: (concrete placement, drainage, dust control, excavation, grading, fencing, hydroseeding, lighting, markings, soil erosion/sediment control, subbase placement, topsoil placement)
 - Runway Markings: (marking removal, markings)
- Scenario 5 (2023): South Electrical Vault Relocation, including the following ACEIT project type, and associated construction activities were used in the model:
 - Building 10000 sqft- 1 story: (concrete foundations, construction mob & layout, exterior wall framing, interior build-out/finishes, roofing, security & safety systems, structural steel erection)
- Scenario 6 (2024): Runway 8R-26L rehabilitation, relocated vehicle service roadway and relocated localizer equipment building, including the following ACEIT project types, and associated construction activities were used in the model:
 - Runway Rehabilitation: (cold milling, concrete demo, concrete placement, asphalt placement, dust control, excavation, grading, hydroseeding, lighting, markings, sealing random cracks, soil erosion/sediment control, subbase placement, topsoil placement)
 - Service Road: (asphalt placement, drainage, dust control, excavation, grading, hydroseeding, markings, soil erosion/sediment control, subbase placement, topsoil placement)
 - NAVAIDS: (ILS Localizer)
- Scenario 7 (2025): Additional taxiway connector projects and relocated fencing, including the following ACEIT project types, and associated construction activities were used in the model:
 - Taxiways: (asphalt placement, concrete placement, drainage, dust control, excavation, grading, hydroseeding, lighting, markings, soil erosion/sediment control, subbase placement, topsoil placement)
 - Demolition Concrete: (concrete demolition)
 - Fencing: (clearing and grubbing, excavation, fencing, grading, hydroseeding, soil erosion/sediment control, topsoil placement)
- Scenario 8 (2025): Additional taxiway connector projects, including the following ACEIT project types, and associated construction activities were used in the model:
 - Taxiways: (asphalt placement, concrete placement, drainage, dust control, excavation, grading, hydroseeding, lighting, markings, soil erosion/sediment control, subbase placement, topsoil placement)
 - Demolition Concrete: (concrete demolition)

2.3 Overall Size

The ACEIT model requires a minimal set of overall project size and characteristic data to model each project type. Each project type requires input of estimated cost and dimensions (maximum length and width). Project dimensions were derived from project area quantities provided by design engineers. Cost estimates were based on a Cost/SY (determined from historical project costs for taxiway reconstruction) and the area quantities. Demolition costs were assumed to be 15% of the total reconstruction cost. Project dimensions were estimated based on area quantities provided by project designers, and assumed taxiway mainline and shoulder widths. The overall project size and characteristic data is utilized in ACEIT to estimate default size details (quantities) for construction activities.

2.4 Size Details

The ACEIT model generates size details for specific construction activities based on the overall project size data entered by the user (cost and dimensions). For example, ACEIT assumes default pavement depths to determine concrete volumes based on user input dimensions of a proposed taxiway. These size details were refined to reflect the known concrete depths of proposed pavements. *Attachment 1-A* provides the details of the construction scenarios, project types and user defined size details used in the model.

Size details can be modified by the user. While the majority of the ACEIT default size details were left unchanged, quantities associated with concrete and asphalt placement and demolition were modified to match preliminary design quantities (areas and volumes). For taxiway projects, both asphalt placement and concrete placement are selected construction activities to account for the taxiway surface (concrete) and the shoulder surface (asphalt). Based on the overall size inputs, the model assumes the full area (maximum length and width) of the project is constructed as both asphalt and concrete. These quantities were modified in the model to include volumes for concrete mainline and areas for asphalt shoulders based on quantities provided by project engineers.

2.5 Activity Data

ACEIT calculates activity levels for non-road equipment and on-road vehicles based on the defined scenarios and project size details. ACEIT makes the following assumptions for on-road activity:

- # employees based on the higher of two methods: (1) number of equipment and (2) multiplying the project cost in million by 11
- Average employee travels 30 miles round-trip from home to construction site each-day.
- Average on-road material delivery truck travels 40 miles round-trip

OIAA proposes to place a concrete batch plant on-Airport property, in an industrial area along E. Avion Street to minimize project costs, construction emissions and concrete material delivery vehicles on adjacent roadways. The assumed 40 mile round-trip for concrete delivery is a conservative estimate for VMT as it was estimated without consideration of a batch plant on-site.

Raw materials (i.e., Portland cement and aggregate) would still need to be delivered to the batch plant in order to mix the concrete on site however, it is expected that overall the VMT associated with concrete delivery will be less with a batch plant on-site.

The non-road equipment and on-road vehicle activity data developed in ACEIT for the proposed improvements in 2023, 2024 and 2025 are summarized in **Tables 1** and **2**.

Table 1

ACEIT Non-Road Equipment Activity Data

ACE	II NOII-RO		ment Activity L		
Equipment Type	Load Factor	Avg Rated HP	2023 Equipment hours	2024 Equipment hours	2025 Equipment hours
40 Ton Crane	0.43	300	240	0	0
Air Compressor	0.43	100	370	747	164
Asphalt Paver	0.59	175	43	121	27
Backhoe	0.21	100	320	0	0
Chain Saw	0.7	11	0	14	2
Chipper/Stump Grinder	0.43	100	0	14	2
Cold Planer	0.59	175	0	185	0
Concrete Ready Mix Trucks	0.59	600	60	0	0
Concrete Saws	0.59	40	354	1,761	164
Concrete Truck	0.59	600	1,537	3,093	726
Crack Cleaner	0.59	40	0	15	0
Crack Filler (Trailer Mounted)	0.43	100	0	15	0
Crane	0.43	300	0	8	0
Dozer	0.59	175	2,143	694	989
Dump Truck	0.59	600	1,025	1,942	562
Dump Truck (12 cy)	0.59	600	3,434	2,674	1,701
Excavator	0.59	175	672	1,186	260
Excavator with Bucket	0.59	175	177	0	25
Excavator with Hoe Ram	0.59	175	177	0	25
Flatbed Truck	0.59	600	2,253	3,172	1,106
Fork Truck	0.59	100	1,640	0	0
Grader	0.59	300	116	37	58
High Lift	0.59	100	440	0	0
Hydraulic Hammer	0.59	175	0	1,022	0
Hydroseeder	0.59	600	104	8	52
Loader	0.59	175	354	140	159
Man Lift	0.21	75	1,200	0	0
Man Lift (Fascia Construction)	0.21	75	120	0	0
Material Deliveries	0.59	600	8	0	0
Off-Road Truck	0.59	600	104	8	52
Other General Equipment	0.43	175	3,756	6,166	1,870

Table 1

ACEIT Non-Road Equipment Activity Data

Equipment Type	Load Factor	Avg Rated HP	2023 Equipment hours	2024 Equipment hours	2025 Equipment hours
Pickup Truck	0.59	600	6,243	7,541	2,832
Pressure Washer	0.43	25	3	0	0
Pumps	0.43	11	96	30	48
Roller	0.59	100	1,201	639	593
Rubber Tired Loader	0.59	175	354	4,088	164
Scraper	0.59	600	455	18	224
Skid Steer Loader	0.21	75	382	277	239
Slip Form Paver	0.59	175	354	4,088	164
Surfacing Equipment (Grooving)	0.59	25	410	4,242	199
Survey Crew Trucks	0.59	600	10	0	0
Sweepers	0.43	175	0	185	0
Sweepers/Scrubbers	0.43	175	3	0	0
Tool Truck	0.59	600	400	0	0
Tractor Trailer- Material Delivery	0.59	600	172	0	0
Tractor Trailer- Steel Deliveries	0.59	600	16	0	0
Tractor Trailers Temp Fac.	0.59	600	4	0	0
Tractors/Loader/Backhoe	0.21	100	532	210	303
Water Truck	0.59	600	3,123	3,545	2,160

Source: ACEIT input summary (derived from user defined project details), 2022.

Table 2

ACEIT On-road Vehicle Miles Traveled (VMT)

	7 (O E I I O I I I O G G T O I I I I O G		'''/	
On-road Activity	Vehicle	2023 VMT	2024 VMT	2025 VMT
	Asphalt 18 Wheeler	14,259	20,041	7,022
	Cement Mixer	229,562	319,400	115,394
Material Delivery	Dump Truck	37,719	0	1,161
(diesel)	Dump Truck - Asphalt	20,200	28,391	9,949
	Dump Truck Subbase Material	122,433	170,347	59,693
	Tractor Trailer	160	0	0
Employee Commute (gasoline)	Passenger Car	1,726,051	3,435,447	756,090

Source: ACEIT input summary (derived from user defined project details), 2022.

3 CalEEMod

The construction activity levels developed in the ACEIT model were used to model emissions in the California Emissions Estimator Model® (CalEEMod) version 2020.4.0.3 CalEEMod was developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts⁴. It can model criteria pollutants including ROG, NOx, CO, SO₂, PM₁₀, PM_{2.5}, Fugitive PM₁₀, and Fugitive PM_{2.5}. In addition, it can model GHGs including Biogenic Carbon Dioxide (Bio-CO₂), Non-Biogenic Carbon Dioxide (Nbio-CO₂), CO₂, CH₄, Nitrous Oxide (N2O), and CO2e. CalEEMod applies widely accepted methodologies for modeling emissions including the EPA AP-42 emission factors, California Air Resources Board (CARB) vehicle emission models, studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle. Default values are incorporated in the model to account for different policies and requirements for different California Air Districts. The ACEIT construction activity levels (equipment hours and VMT) were input into CalEEMod to determine construction emissions. ACEIT equipment types were matched to CalEEMod equipment types, and CalEEMod default equipment horsepower and load factors were used. ACEIT equipment hours by year were converted to hours/day in CalEEMod based on the total assumed days of work in each calendar year. Additionally, VMT derived in ACEIT were used to determine CalEEMod inputs for total number of trips and trip length by calendar year. CalEEMod also includes mitigated emission modeling which allows the user to define engine tier for equipment types included in the model.

See **Attachment 1-C** provides the CalEEMod Report including model inputs and construction emission summary.

Note that ONT requires the use of Tier 4 final engine emission standards for all off-road construction equipment. The construction emissions inventory was developed in CalEEMod with the assumption that all off-road construction equipment would use Tier 4 final engines (as indicated by "mitigated" emissions in *Attachment 1-C*). To ensure implementation, Tier 4 engine requirements would be included in construction contracts, plans and specifications as needed.

4 Regulatory Setting

ONT is located in San Bernardino County, California which is part of the South Coast Air Basin. The South Coast Air Quality Management District (SCAQMD) has jurisdiction over the South Coast Air Basin. The SCAQMD is responsible for ensuring that federal and state air quality standards are met by monitoring ambient air pollutant levels throughout the region and implementing strategies to attain the standards.

³ CalEEMod emission factors include OFFROAD2011 emission factors for non-road equipment and EMFAC2017 emission factors for on-road vehicles.

⁴ California Emissions Estimator Model (CalEEMod), http://www.caleemod.com/, accessed January 2022.

4.1 National Ambient Air Quality Standards (NAAQS)

Table 3 summarizes the attainment status for the National Ambient Air Quality Standards (NAAQS) in the South Coast Air Basin, according to the U.S. EPA Green Book dated December 31, 2021.

Table 3

Current Attainment / Non-attainment Designations

our one Attainment 7 Non attainment Beelghattene								
NAAQS	Designation							
1971 Standard	Maintenance (Serious)							
2008 (8-Hour) Standard	Non-attainment (Extreme)							
2015 (8-Hour) Standard	Non-attainment (Extreme)							
1971 Standard	Maintenance							
1971 Standard	Attainment							
2010 Standard	Attainment							
1987 Standard	Maintenance (Serious)							
1997 Standard	Non-attainment (Moderate)							
2006 Standard	Non-attainment (Serious)							
2012 Standard	Non-attainment (Moderate)							
1978 Standard	Attainment							
2008 Standard	Attainment							
	NAAQS 1971 Standard 2008 (8-Hour) Standard 2015 (8-Hour) Standard 1971 Standard 1971 Standard 2010 Standard 1987 Standard 1997 Standard 2006 Standard 2012 Standard 1978 Standard							

Source: Los Angeles – South Coast Air Basin, CA, EPA, Green Book at https://www.epa.gov/green-book, December 2021.

The General Conformity de minimis levels for these pollutants are summarized in Table 4.

Table 4

General Conformity de minimis Levels

	1
Pollutant	Tons per year
O. (avtrama)	10 for NO _x and 10 for
O ₃ (extreme)	VOCs
CO (maintenance)	100
NO ₂ (maintenance)	100
PM ₁₀	100
(maintenance)	100
PM _{2.5} (serious)	70

Source: EPA, de minimis emission levels,

https://www.epa.gov/general-conformity/de-minimis-

tables, December 2021.

4.2 SCAQMD Standards

CARB manages air quality, regulates mobile emissions sources, and oversees the activities of county and regional air districts within California. As it relates to California Ambient Air Quality Standards (CAAQS), the SCAQMD area does not meet standards for O₃, PM₁₀ and PM_{2.5}. The SCAQMD sets the criteria pollutant and precursors thresholds of significance for construction, shown in **Table 5**.

Table 5
SCAQMD Thresholds of Significance for Construction-Related
Criteria Air Pollutants and Precursors

Daily Thresholds (lbs/day)							
100							
75							
150							
55							
150							
550							

Notes:

VOC and NOx are precursors to ozone.

Source: South Coast AQMD CEQA Handbook (South Coast AQMD,

1993), https://www.aqmd.gov/docs/default-

source/ceqa/handbook/scaqmd-air-quality-significance-

thresholds.pdf?sfvrsn=2

4.3 Greenhouse Gases (GHG)

Neither EPA nor SCAQMD have adopted thresholds of significance for construction GHG emissions.

5 Proposed Project Construction Emissions

The Proposed Project Alternative assumes construction will occur over three years, with the following construction periods each year (and five workdays/week):

- 2023: January 15-October 15 (195 days)
- 2024: January 15-October 15 (197 days)
- 2025: January 15 -October 15 (196 days)

5.1 Air Quality Impacts

Table 6 summarizes the Proposed Project direct construction emissions in 2023, 2024 and 2025 resulting from construction activities developed in ACEIT and modeled in CalEEMod. These construction emissions assume implementation of Tier 4 final standards for all off-road equipment,

which serves to significantly reduce NO_x and PM emissions. To ensure implementation, Tier 4 engine requirements are included by ONT in all applicable construction contracts, plans and specifications. Therefore, the construction emissions inventory was developed in CalEEMod with a Tier 4 final engines input for all off-road construction equipment.

Table 7 summarizes the Proposed Project concrete batch plant operation emissions in 2023, 2024 and 2025 developed as part of the health risk assessment of this SEIR.⁵

Table 8 summarizes the total Proposed Project direct construction emissions in 2023, 2024 and 2025, as compared to the NAAQS and SCAQMD thresholds of significance. As shown, the direct construction-related emissions are below the applicable NAAQS and SCAQMD thresholds for all pollutants/precursors and construction years.

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⁵ Emissions from the concrete batch plant operation were determined using the controlled emission factors from USEPA AP-42 Chapter 11.12, *Concrete Batching*. "Controlled" emission factors assume typical control measures such as fabric filtration wherever possible for transfer of dry ingredients (a "baghouse") and spraying water in other areas.

Table 6
Proposed Project CalEEMod Direct Construction Emissions

V	Pollutants (tons/year)					Pollutants (lbs/day)						
Year	co	NO _x	voc	SO ₂	PM _{2.5}	PM ₁₀	СО	NΟ _x	voc	SO ₂	PM _{2.5}	PM ₁₀
2023 Proposed Project	12	2	<1	<1	<1	1	125	24	4	<1	3	9
2024 Proposed Project	18	3	1	<1	<1	2	178	32	7	1	5	16
2025 Proposed Project	5	1	<1	<1	<1	<1	56	11	2	<1	1	4

Notes:

Volatile organic compounds (VOCs) are referred as reactive organic gases (ROG) in CalEEMod.

Source: CalEEMod, HNTB analysis 2022.

Table 7 **Proposed Project Concrete Batch Plant PM Emissions**

Year	Pollutants (to	ons/year)	Pollutants (lbs/day)		
rear	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	
2023 Proposed Project	0.5	0.9	5	9	
2024 Proposed Project	0.4	0.7	4	7	
2025 Proposed Project	0.2	0.4	2	4	

Source: USEPA AP-42 Chapter 11.12, *Concrete Batching*, HNTB and HELIX analysis, 2022.

Table 8 **Proposed Project Total Direct Construction Emissions**

V	Pollutants (tons/year)					Pollutants (lbs/day)						
Year	СО	NO _x	voc	SO ₂	PM _{2.5}	PM ₁₀	СО	NO _x	voc	SO ₂	PM _{2.5}	PM ₁₀
2023 Proposed Project	12	2	<1	<1	1	2	125	24	4	<1	8	18
2024 Proposed Project	18	3	1	<1	1	2	178	32	7	1	9	23
2025 Proposed Project	5	1	<1	<1	<1	1	56	11	2	<1	4	8
NAAQS or SCAQMD threshold of significance	100	10	10		70	100	550	100	75	150	150	55
Exceeds Thresholds?	No	No	No		No	No	No	No			No	No

Notes:

Volatile organic compounds (VOCs) are referred as reactive organic gases (ROG) in CalEEMod.

Source: CalEEMod, HNTB analysis 2022.

The concrete batch plant proposed to be located on Airport property would likely reduce the total VMT assumed in the emissions analysis for concrete delivery trucks but would still include delivery of raw materials (i.e., portland cement and aggregate) to mix the concrete on-site. A closer look at the CalEEMod output indicates emissions specific to on-road hauling, as summarized in **Table 9**. While not insignificant, the on-road hauling emissions account for a fraction of the total emissions, with off-road equipment accounting for the majority of construction emissions.

Table 9 **Proposed Project - CalEEMod Emissions for On-Road Hauling (tons/year)**

Year	ROG/VOC1	NOx	СО	SO ₂	PM ₁₀	PM _{2.5}
2023	0.02	1.1	0.3	0.01	0.2	0.06
2024	0.02	1.4	0.3	0.01	0.3	0.08
2025	0.01	0.5	0.1	0.003	0.1	0.03

Notes:

Source: CalEEMod, HNTB analysis 2022.

5.2 GHG Impacts

Table 10 depicts the total construction GHG emissions on an annual basis in metric tons for all construction years.

Table 10 **Proposed Project - Total GHG Emissions (MT/Year)**

Year	CO ₂	CH₄	N ₂ O	CO _{2e}
2023	2,869	0.6	0.1	2,918
2024	4,086	0.8	0.1	4,147
2025	1,307	0.3	0.04	1,327

Sources: HNTB Analysis, 2022.

As noted previously, the concrete batch plant would likely reduce the total VMT assumed in the GHG emissions analysis for concrete delivery trucks but would still include delivery of raw materials (i.e., portland cement and aggregate) to mix the concrete on-site. As summarized in **Table 11**, a closer look at the CalEEMod output indicates GHG emissions specific to on-road hauling accounts for between 18-21% of the total direct GHG construction emissions in each construction year. Utilizing a concrete batch plant on-site would likely serve to reduce total on-road hauling VMT, and thus reduce total GHG emissions, but the Proposed Project would still result in a net increase in total GHG emissions during the construction period.

¹ Volatile organic gases (VOCs) are referred as Reactive organic gases (ROG) in CalEEMod.

Table 11

Proposed Project – GHG Emissions for On-Road Hauling Compared to Total GHG
Emissions (MT/Year)

		On-Roa	d Hauling	Total CO	% GHG		
Year	CO ₂	CH₄	N₂O	Total CO _{2e}	Total CO _{2e} (Table 10)	Emissions due to On-Road Hauling	
2023	573	0.02	0.09	601	2,918	21%	
2024	714	0.03	0.11	749	4,147	18%	
2025	251	0.01	0.04	263	1,327	20%	

Sources: HNTB Analysis, 2022.

6 Two-Year Program Alternative Construction Emissions

A reduced construction schedule alternative was carried forward for environmental analysis, the Two-Year Program Alternative. This alternative would include identical project components included as part of the Proposed Project, however would be implemented over a two-year schedule (2023 and 2024). The Two-Year Program Alternative assumes that the construction proposed in 2025 under the Proposed Project would occur in 2023. In order to analyze the impact on construction emissions, the ACEIT activity data calculated for 2023 and 2025 for the Proposed Project was combined and assumed to occur in 2023 for the Two-Year Program Alternative. Additionally, the concrete batch plant emissions calculated for 2023 and 2025 for the Proposed Project was combined and assumed to occur in 2023 for the Two-Year Program Alternative. Construction proposed in 2024 remains the same between alternatives. The Two-Year Program Alternative assumes construction will occur over two years, with the following construction periods each year (and five workdays/week):

- 2023: January 15 October 15 (195 days)
- 2024: January 15 October 15 (197 days)

6.1 Air Quality Impacts

Table 12 summarizes the Two-Year Program Alternative direct construction emissions in 2023 and 2024 resulting from construction activities developed in ACEIT and modeled in CalEEMod. These construction emissions assume implementation of Tier 4 final standards for all off-road equipment, which serves to significantly reduce NO_x and PM emissions. To ensure implementation, Tier 4 engine requirements are included by ONT in all applicable construction contracts, plans and specifications. Therefore, the construction emissions inventory was developed in CalEEMod with a Tier 4 final engines input for all off-road construction equipment.

Table 13 summarizes the Two-Year Program Alternative concrete batch plant operation emissions in 2023 and 2024 developed as part of the health risk assessment of this SEIR.⁶

Table 14 summarizes the total Two-Year Program Alternative direct construction emissions in 2023 and 2024, as compared to the NAAQS and SCAQMD thresholds of significance. As shown, the 2024 Two-Year Program Alternative emissions are identical to the 2024 Proposed Project emissions. The 2023 Two-Year Program Alternative emissions are slightly greater, but comparable, to the sum of the 2023 and 2025 Proposed Project emissions. As shown, the direct construction-related emissions are below the applicable NAAQS and SCAQMD thresholds for all pollutants/precursors and construction years.

⁶ Emissions from the concrete batch plant operation were determined using the controlled emission factors from USEPA AP-42 Chapter 11.12, *Concrete Batching*. "Controlled" emission factors assume typical control measures such as fabric filtration wherever possible for transfer of dry ingredients (a "baghouse") and spraying water in other areas.

Table 12 **Two-Year Program Alternative CalEEMod Direct Construction Emissions**

	Pollutants (tons/year)					Pollutants (lbs/day)						
Year	СО	NO _x	voc	SO ₂	PM _{2.5}	PM ₁₀	СО	NO _x	voc	SO ₂	PM _{2.5}	PM ₁₀
2023 Proposed Project	18	3	1	<1	<1	1	182	36	6	1	4	13
2024 Proposed Project	18	3	1	<1	<1	2	178	32	7	1	5	16

Notes:

Volatile organic compounds (VOCs) are referred as reactive organic gases (ROG) in CalEEMod.

Source: CalEEMod, HNTB analysis 2022.

Table 13 **Two-Year Program Alternative Concrete Batch Plant PM Emissions**

Veer	Pollutants (to	ns/year)	Pollutants (lbs/day)		
Year	PM _{2.5}	5 PM ₁₀ PM _{2.5}		PM ₁₀	
2023 Proposed Project	0.7	1.3	8	13	
2024 Proposed Project	0.4	0.7	4	7	

Source: USEPA AP-42 Chapter 11.12, *Concrete Batching*, HNTB and HELIX analysis, 2022.

Table 14 **Two-Year Program Alternative Total Direct Construction Emissions**

V	Pollutants (tons/year)					Pollutants (lbs/day)						
Year	co	NO _x	voc	SO ₂	PM _{2.5}	PM ₁₀	co	NO _x	voc	SO ₂	PM _{2.5}	PM ₁₀
2023 Proposed Project	18	3	1	<1	1	3	182	36	6	1	12	26
2024 Proposed Project	18	3	1	<1	1	2	178	32	7	1	9	23
NAAQS or SCAQMD threshold of significance	100	10	10		70	100	550	100	75	150	150	55
Exceeds Thresholds?	No	No	No		No	No	No	No			No	No

Notes:

Volatile organic compounds (VOCs) are referred as reactive organic gases (ROG) in CalEEMod.

Source: CalEEMod, HNTB analysis 2022.

6.2 GHG Impacts

Table 15 depicts the total construction GHG emissions on an annual basis in metric tons for all construction years of the Two-Year Program Alternative.

Table 15

Two Year Program Alternative - Total GHG Emissions (MT/Year)

Year	CO ₂	CH₄	N ₂ O	CO _{2e}
2023	4,199	0.9	0.1	4,266
2024	4,086	0.8	0.1	4,147

Sources: HNTB Analysis, 2022.

Attachment 1-A Project Schedule and ACEIT Scenarios Details

ACEIT Inputs

Scenario	Year	Months	# of Months	То	Total Cost (\$M)		Total Cost (\$)	
Scenario 1	2023	Jan-Feb	2	\$	1.17	\$	1,174,522	
Scenario 2	2023	Jan-Feb	2	\$	4.83	\$	4,829,533	
Scenario 3	2023	Feb-August	6	\$	27.09	\$	27,090,219	
Scenario 4	2023	Aug-Oct	3	\$	7.34	\$	7,343,099	
Scenario 5	2023	Jan-Oct	9	\$	3.00	\$	3,000,000	
Scenario 6	2024	Jan-Oct	9	\$	47.00	\$	47,003,115.56	
Scenario 7	2025	Jan-June	5	\$	8.28	\$	8,281,868.44	
Scenario 8	2025	June-Oct	5	\$	10.77	\$	10,769,546.67	
Total				\$	109.49	\$	109,491,904	

Project	Work Area	Scenario
1	4, 5	6 REHABILITATE RUNWAY 8R-26L
2	2, 2A	3 MODIFY EXISTING CONNECTOR TAXIWAY F AND REDESIGNATE AS TAXIWAY E
3	2, 3	3, 4 REMOVE EXISTING TAXIWAY F BETWEEN RUNWAYS 8L-26R AND 8R-26L AND CONSTRUCT NEW EXIT TAXIWAY F
4	2, 2A	3 CONSTRUCT EXIT TAXIWAY S5
5	1	1 RECONSTRUCT EXISTING EXIT TAXIWAY K
6	2, 2A	3 RECONSTRUCT EXISTING EXIT TAXIWAY P TO A HIGH-SPEED EXIT AND REDESIGNATE AS TAXIWAY S8
7	2, 3	3 REMOVE EXISTING TAXIWAY P BETWEEN RUNWAYS 8L-26R AND 8R-26L
8	2, 2A	3 CONSTRUCT BYPASS TAXIWAY S11
9	2, 3	3, 4 CONSTRUCT CROSSING TAXIWAY E BETWEEN RUNWAYS 8R-26L AND 8L-26R
10	2, 2A	3 CONSTRUCT BYPASS TAXIWAY S3
11	6, 10	7, 8 CONSTRUCT CROSSING TAXIWAY E BETWEEN RUNWAYS 8L-26R AND TAXIWAY N
12	6, 10	7, 8 RECONSTRUCT EXISTING TAXIWAY L AS A HIGH-SPEED EXIT TAXIWAY
13	6, 10	7, 8 CONSTRUCT BYPASS TAXIWAY N2
14	1	2 RESURFACE TAXIWAY D, TAXIWAY S1 AND TAXIWAY U PAVEMENT
15	6, 10	7, 8 CONSTRUCT FILLET MODIFICATIONS ON TAXIWAY F BETWEEN RUNWAY 8L-26R AND TAXIWAY N
16	7, 11	7, 8 CONSTRUCT FILLET MODIFICATIONS ON TAXIWAY K BETWEEN RUNWAY 8L-26R AND TAXIWAY N

ACEIT Model Notes and Assumptions

Project Setup

Weather data affects the emission factors used in ACEIT. ACEIT model is used to derive construction equipment hours and VMT, and MOVES emission factors are used to calculate emissions. Therefore, precise Weather data is not needed and Weather is set to Summer for all scenarios to run ACEIT model.

Scenario Years and months are based on preliminary phasing schedule.

Project Types

Taxiways - "Clearing and grubbing" construction activity type removed. All remaining default construction activity types used, including both asphalt placement (shoulders) and concrete placement (taxiways).

Demolition - Asphalt and Demolition - Concrete - All default activity types used.

Construction equipment fuel type assumed to be diesel and all default equipment used.

Overall Size

Taxiway and demolition size details are based on area quantities provided by design engineers.

Maximum width of "demolition - asphalt" assumed to be 50' to represent taxiway shoulders. Maximum length calculated based on area quantities provided by design engineers

Maximum width of "demolition - concrete" assumed to be 100' to represent taxiway mainline. Maximum length calculated based on area quantities provided by design engineers

Maximum width of "taxiways" assumed to be 200' to represent 100' taxiway mainline and 50' shoulders.

Cost details are rough order of magnitude costs based on historical reconstruction costs used to determine a cost/SY. Demolition costs are assumed to be 15% of total reconstruction cost.

Details Scenario 1 (Work Area 1)

New Pavement	2047
Area (SY):	2047
Demolition	
Pavement Area	2117
(SY):	

Projects Included

5 RECONSTRUCT EXISTING EXIT TAXIWAY K

TAXIWAY DEMOLITION						
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Cost
Taxiway K						
Asphalt Shoulders	191	50		9528.00	1058.67	\$88,089.13
Concrete Taxiway	95	100		9528.00	1058.67	\$88,089.13
			TOTAL	19,056	2117	\$176,178.27

Assume 50' wide shoulders and 100' wide taxiway (50% asphalt shoulders and 50% concrete taxiway)

TAXIWAY CONSTRUC	CTION (Taxiways)						
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
Taxiway K							
Full Depth			23	18418.00	2046.44	1307.45	\$730,580.67
Shoulders			14	11432.00	1270.22	493.98	\$267,762.84
	92	200	TOTAL	18418	2047		\$998,343.51

 Mainline-PCC
 \$859,506.67

 Shoulders-AC
 \$315,015.11

 TOTAL COST
 \$1,174,521.78

Scenario 2 (Work Area 1)

Projects Included

Reconstruction
Pavement Area
(SY):

20 RELOCATE HOLDING POSITION MARKINGS
14 RESURFACE TAXIWAY D, TAXIWAY S1 AND TAXIWAY U PAVEMENT

TAXIWAY RECONSTRUC	CTION (Taxiways)						
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
Partial Depth, D, S1, U	1,035	100	10	103490.00	11498.89	3194.14	\$4,829,533.33
			TOTAL	103490	11499		\$4,829,533.33

[&]quot;Concrete Placement" assumed for partial depth taxiway reconstruction. No asphalt placement.

HOLDING POSITION MARKINGS (Runway Markings Project Type)				50,000
--	--	--	--	--------

800 ft x 4 ft

TOTAL COST

\$4,829,533.33

Scenario 3 (Work Area 2 and 2A)

New Pavement Area (SY):	75761
Demolition Pavement Area (SY):	22545

Projects Included

- 2 MODIFY EXISTING CONNECTOR TAXIWAY F AND REDESIGNATE AS TAXIWAY E
- 3* REMOVE EXISTING TAXIWAY F BETWEEN RUNWAYS 8L-26R AND 8R-26L AND CONSTRUCT NEW EXIT TAXIWAY F
- 4 CONSTRUCT EXIT TAXIWAY S5
- 6 RECONSTRUCT EXISTING EXIT TAXIWAY P TO A HIGH-SPEED EXIT AND REDESIGNATE AS TAXIWAY S8
- 7 REMOVE EXISTING TAXIWAY P BETWEEN RUNWAYS 8L-26R AND 8R-26L
- 8 CONSTRUCT BYPASS TAXIWAY S11
- 9* CONSTRUCT CROSSING TAXIWAY E BETWEEN RUNWAYS 8R-26L AND 8L-26R
- 21 RELOCATE RUNWAY 8R PAPI
- 10 CONSTRUCT BYPASS TAXIWAY S3
- 17 REPLACE/REHABILITATE PANELS ON TAXIWAY K BETWEEN RUNWAYS
- 19 CONSTRUCT FILLET MODIFICATIONS ON TAXIWAY Q BETWEEN RUNWAYS

^{*}Project construction overlaps Scenario 3 and 4.

TAXIWAY DEMOLITION (Den						
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Cost
Taxiway Demolition, F, P						
Asphalt Shoulders	2,029	50		101452.00	11272.44	\$2,031,766.43
Concrete Taxiway	1,015	100		101452.00	11272.44	\$2,031,766.43
			TOTAL	202904	22545	\$4,063,533.00

Assume 50' wide shoulders and 100' wide taxiway (50% asphalt shoulders and 50% concrete taxiway)

TAXIWAY CONSTRUCTION (T							
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
Taxiways S3, E, F, S5, S8, Q, K, S11							
Full Depth			23	434389.00	48265.44	30836.26	\$17,230,763.67
Shoulders			14	247454.00	27494.89		\$5,795,922.58
	3,409	200	TOTAL	681843	75761		\$23,026,686.24

RELOCATE RUNWAY 8R PAPI (NAVAIDS - PAPI)

\$100,000

Mainline-PCC \$20,271,486.67

Details Scenario 4 (Work Area 3)

New Pavement	40000
Area (SY):	19890
Demolitión	
Pavement Area	4854
(SY):	

Projects Included

3* REMOVE EXISTING TAXIWAY F BETWEEN RUNWAYS 8L-26R AND 8R-26L AND CONSTRUCT NEW EXIT TAXIWAY F

9* CONSTRUCT CROSSING TAXIWAY E

^{*}Project construction overlaps Scenario 3 and 4.

TAXIWAY DEMOLITION						
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Cost
Taxiways P,Q, F						
Asphalt Shoulders	437	50		21844.00	2427.11	\$550,732.40
Concrete Taxiway	218	100		21844.00	2427.11	\$550,732.40
			TOTAL	43,688	4854.22	\$1,101,465.00

Assume 50' wide shoulders and 100' wide taxiway (50% asphalt shoulders and 50% concrete taxiway)

TAXIWAY CONSTRUCTION (Taxiways)							
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
Taxiways E, F, P and T							
Full Depth			23	126136.00	14015.11	8954.10	\$5,003,394.67
Shoulders			14	52866.00	5874.00		\$1,238,239.20
	895	200	TOTAL	179002	19890		\$6,241,634.00

Mainline-PCC	\$5,886,346.67
Shoulders-AC	\$1,456,752.00
TOTAL COST	\$7,343,099,00

Attachment 1-A - Project Schedule and Scenarios

Details Scenario 5 (Work Area 3A)

Projects Included

25 RELOCATE SOUTH ELECTRICAL VAULT

RELOCATED ELECTRICAL VAULT (Building - 10000 sqft - 1 story)

TOTAL COST

\$3,000,000.00

Scenario 6 (Work Area 4 and 5)

New Pavement Area (SY): Demolition Pavement Area (SY): Reconstruction Pavement Area (SY): 56774

Projects Included

- 1 REHABILITATE RUNWAY 8R-26L
- 23 RELOCATE RUNWAY 26L (8R END) LOCALIZER EQUIPMENT BUILDING
- 24 MODIFY EXISTING VEHICLE SERVICE ROAD

RUNWAY8R/26L DEMO/CONSTRUCTION (Rehabilitate Runway)							
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
RNWY 8R/26L Keel (concrete)	3,406	150	23	510966.00	56774.00	36272.28	\$23,845,080.00
Shoulders (asphalt)	12,648	50	14	632417.00	70268.56	27326.66	\$17,426,601.78
Blast Pads (asphalt)	796	250	23	198923.00	22102.56	14121.08	\$5,481,433.78
	5,369	250	TOTAL	1342306.00	56774		\$46,753,115.56

VSR (Service Road)							
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
VSR Pavement (asphalt)	1,298	30	12	38946.00	4327.33	1442.44	\$150,000.00
				TOTAL	4328		\$150,000.00

^{*}Approximately 700 SY of 4328 SY is new VSR pavement.

Relocated Localizer (NAVAIDS - ILS Localizer)

\$100,000 Cost

Scenario 7 (Work Area 6 and 7)

New Pavement Area (SY):	13757
Demolition	
Pavement Area (SY):	501

Projects Included

- 11* CONSTRUCT CROSSING TAXIWAY E BETWEEN RUNWAYS 8L-26R AND TAXIWAY N
- 15* CONSTRUCT FILLET MODIFICATIONS ON TAXIWAY F BETWEEN RUNWAY 8L-26R AND TAXIWAY N
- 16* CONSTRUCT FILLET MODIFICATIONS ON TAXIWAY K BETWEEN RUNWAY 8L-26R AND TAXIWAY N
- 12* RECONSTRUCT EXISTING TAXIWAY L AS A HIGH-SPEED TAXIWAY
- 18* CONSTRUCT FILLET MODIFICATIONS ON TAXIWAY Q BETWEEN RUNWAY 8L-26R AND TAXIWAY N
- 13* CONSTRUCT BYPASS TAXIWAY N2
- 22 RELOCATE PERIMETER FENCE AND REMOVE OBJECTS WITHIN ROFA

^{*}Project construction overlaps Scenario 2 and 3.

TAXIWAY DEMOLITION (Demolition - concrete)							
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
Taxiway K (concrete)	45	100		4505.00	500.56		\$1,212,280.27
				TOTAL	501		\$1,212,280.27

TAXIWAY CONSTRUCTION (Taxiways)							
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
Taxiways N2, E, F, K, L and Q							
Full depth	1,238	100	23	123812.00	13756.89	8789.12	\$4,911,209.33
Shoulders	1,672	50	14	83612.00	9290.22	3612.86	\$1,958,378.84
	1,037	200	TOTAL	207424.00	13757		\$6,869,588.18

Perimeter Fence (Fencing)

Cost \$200,000

Length 1500 ft

Mainline-PCC \$ 5,777,893.33 Shoulders-AC \$ 2,303,975.11

Scenario 8 (Work Areas 10 and 11)

New Pavement	20726
Area (SY):	30726
Demolition	
Pavement Area	1586
(SY):	

Projects Included

11* CONSTRUCT CROSSING TAXIWAY E

15* CONSTRUCT FILLET MODIFICATIONS ON TAXIWAY F BETWEEN RUNWAY 8L-26R AND TAXIWAY N
16* CONSTRUCT FILLET MODIFICATIONS ON TAXIWAY K BETWEEN RUNWAY 8L-26R AND TAXIWAY N

12* RECONSTRUCT EXISTING TAXIWAY L AS A HIGH-SPEED TAXIWAY

18* CONSTRUCT FILLET MODIFICATIONS ON TAXIWAY P BETWEEN RUNWAY 8L-26R AND TAXIWAY N

13* CONSTRUCT BYPASS TAXIWAY N2

^{*}Project construction overlaps Scenario 2 and 3.

TAXIWAY DEMOLITION (Demolition - Concrete)							
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
Taxiway L (concrete)	143	100		14270.00	1585.56		\$ 1,615,432.00
				TOTAL	1586		\$ 1,615,432.00

TAXIWAY CONNECTOR CONSTR	UCTION (Taxiways)						
Location	Length (ft)	Width (ft)	Thickness (in)	Area (SF)	Area (SY)	Volume (CY)	Cost
Taxiways N2, E, F, K, L and P							
Full Depth	1,648	100	23	164808.00	18312.00	11699.33	\$ 6,537,384.00
Shoulder	2,234	50	14	111720.00	12413.33	4827.41	\$ 2,616,730.67
	1,383	200	TOTAL	276528.00	30726		\$ 9,154,114.67

Mainline-PCC \$ 7,691,040.00 Shoulders-AC \$ 3,078,506.67 **TOTAL COST** \$ **10,769,546.67**

Attachment 1-B ACEIT Input Summary

Attachment 1-B

```
Airport Constrcution Emission Inventory Tool (ACEIT) Version 1.0
Setup
Study Name
ONT Supplemental EIR
ONT Supplemental EIR for the the Rehabilitation of Runway 8R-26L and Associated Airfield Improvements
State/County
California
San Bernardino County
Scenarios
Scenario ID Year
                                                                   Number of Months
                                                                                                                                                                                     Season
2 Summer
2 Summer
                                                                                                                                                                                                                                                     Average Daily Max Daily Temp Chang Min Daily Temp Change (degF)
                                                          2023
                                                                                                                                                                                                                                                    2023
                                                          2023
                                                                                                                                                                                     6 Summer
                                                                                                                                                                                                                                                    50 < T <= 80 10 <= Change in T < 2010 <= Change in T < 20
                                                          2023
                                                                                                                                                                                     3 Summer
                                                                                                                                                                                                                                                    2023
                                                                                                                                                                                     9 Summer
                                                          2024
                                                                                                                                                                                     9 Summer
                                                                                                                                                                                                                                                    50 < T <= 80  10 <= Change in T < 2010 <= Change in T < 20
                                                          2025
                                                                                                                                                                                     5 Summer
                                                                                                                                                                                                                                                     50 < T <= 80 10 <= Change in T < 2010 <= Change in T < 20
                                                          2025
                                                                                                                                                                                                                                                    50 < T <= 80  10 <= Change in T < 2010 <= Change in T < 20
Scenario ID
 Selected Project
             d Project

1 Demolition - Asphalt

1 Demolition - Concrete

1 Taxiways

2 Runway Markings

2 Taxiways

3 Demolition - Asphalt

3 Demolition - Concrete

3 NAVAIDS

3 Taxiways

4 Demolition - Asphalt

4 Demolition - Concrete
                                                                   SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
                                                                   SetSelected
               4 Demolition - Concrete
                                                                   SetSelected
               4 Taxiways
                                                                   SetSelected
              5 Building - 10000 saft- 1 story
                                                                   SetSelected
              6 NAVAIDS
                                                                   SetSelected
              6 Rehabilitate Runway
                                                                   SetSelected
              6 Service Road
7 Fencing
8 Demolition - Concrete
8 Taxiways
                                                                   SetSelected
SetSelected
                                                                   SetSelected
SetSelected
 Selected Construction Activities

1 Demolition - Asphalt
1 Demolition - Concrete
                                                                                                                                                                                        SetSelected
SetSelected
SetSelected
SetSelected
              1 Taxiways
1 Taxiways
                                                                   Asphalt Placement
Concrete Placement
              1 Taxiways
                                                                   Drainage - 24 inch SICPP
                                                                                                                                                                                        SetSelected
              1 Taxiways
                                                                   Drainage - 6 inch Perforated Underdrain
                                                                                                                                                                                        SetSelected
              1 Taxiways
                                                                   Dust Control
                                                                                                                                                                                        SetSelected
              1 Taxiways
                                                                   Excavation (Borrow)
                                                                                                                                                                                        SetSelected
              1 Taxiways
                                                                   Excavation (Cut to Fill)
                                                                                                                                                                                        SetSelected
               1 Taxiways
                                                                   Excavation (Topsoil Stripping)
                                                                                                                                                                                        SetSelected
                                                                   Fencing
Grading
Hydroseeding
              1 Taxiways
                                                                                                                                                                                        SetSelected
               1 Taxiways
1 Taxiways
                                                                                                                                                                                         SetSelected
SetSelected
                                                                                                                                                                                       SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
             1 Taxiways
1 Taxiways
1 Taxiways
1 Taxiways
1 Taxiways
1 Taxiways
2 Runway Markings
2 Runway Markings
2 Taxiways
                                                                   Hydroseeding
Lighting
Markings
Soil Erosion/Sediment Control
Subbase Placement
Topsoil Placement
Marking Removal
                                                                   Markings
Asphalt Placement
              2 Taxiways
                                                                   Concrete Placement
                                                                   Drainage - 24 inch SICPP
              2 Taxiways
                                                                  Drainage - 6 inch Perforated Underdrain
Dust Control
              2 Taxiways
                                                                                                                                                                                         SetSelected
              2 Taxiways
                                                                                                                                                                                        SetSelected
                                                                   Excavation (Borrow)
                                                                                                                                                                                       SetSelected
              2 Taxiways
              2 Taxiways
                                                                   Excavation (Cut to Fill)
             2 Taxiways
3 Demolition - Asphalt
3 Demolition - Concrete
                                                                   Excavation (Topsoil Stripping)
                                                                  Excavation (Topsoil Stripping)
Fencing
Grading
Hydroseeding
Lighting
Markings
Soil Erosion/Sediment Control
Subbase Placement
Topsoil Placement
                                                                   Topsoil Placement
Asphalt Demolition
Concrete Demolition
                                                                   Precision Approach Path Indicator (PAPI)
              3 NAVAIDS
                                                                                                                                                                                        SetSelected
              3 Taxiways
                                                                   Asphalt Placement
                                                                                                                                                                                        SetSelected
              3 Taxiways
                                                                   Concrete Placement
                                                                                                                                                                                        SetSelected
              3 Taxiways
                                                                   Drainage - 24 inch SICPP
                                                                                                                                                                                        SetSelected
              3 Taxiways
                                                                   Drainage - 6 inch Perforated Underdrain
Dust Control
                                                                                                                                                                                        SetSelected
              3 Taxiways
                                                                                                                                                                                        SetSelected
               3 Taxiway
                                                                   Excavation (Borrow)
                                                                                                                                                                                         SetSelected
SetSelected
               3 Taxiway
                                                                   Excavation (Cut to Fill)
                                                                                                                                                                                       SetSelected
              3 Taxiways
                                                                  Excavation (Cut to Fill)
Excavation (Topsoil Stripping)
Fencing
Grading
Hydroseeding
Lighting
Markings
                                                                   Markings
                                                                   Soil Erosion/Sediment Control
Subbase Placement
              3 Taxiways
                                                                   Topsoil Placement
                                                                   Asphalt Demolition
               4 Demolition - Asphalt
              4 Demolition - Concrete
                                                                   Concrete Demolition
                                                                                                                                                                                         SetSelected
              4 Taxiways
                                                                   Asphalt Placement
                                                                                                                                                                                        SetSelected
                                                                                                                                                                                       SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
              4 Taxiways
                                                                   Concrete Placement
                                                                  Drainage - 24 inch SICPP
Drainage - 6 inch Perforated Underdrain
Dust Control
              4 Taxiways
              4 Taxiways
              4 Taxiways
4 Taxiways
                                                                   Excavation (Borrow)
              4 Taxiways
                                                                                                                                                                                        SetSelected
SetSelected
SetSelected
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SetSelected
SetSelected
SetSelected
                                                                   Excavation (Cut to Fill)
Excavation (Topsoil Stripping)
Fencing
Grading
                                                                   Lighting
                                                                   Markings
              4 Taxiways
                                                                   Soil Erosion
              4 Taxiways
                                                                  Subbase Placement
                                                                                                                                                                                        SetSelected
               4 Taxiways
                                                                   Topsoil Placement
                                                                                                                                                                                        SetSelected
              5 Building - 10000 sqft- 1 story Concrete Foundations
5 Building - 10000 sqft- 1 story Construction Mob & Layout
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            SetSelected
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SetSelected
              6 Rehabilitate Runway
                                                                   Grading
                                                                   Hydroseeding
              6 Rehabilitate Runway
              6 Rehabilitate Runway
                                                                   Lighting
Markings
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              6 Rehabilitate Runway
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                                                                  Sealing Random Cracks
Soil Erosion/Sediment Control
Subbase Placement
Topsoil Placement
              6 Rehabilitate Runway
              6 Rehabilitate Runway
               6 Rehabilitate Runway
               6 Rehabilitate Runway
                                                                  Topsoil Placement
Asphalt Placement
Clearing and Grubbing
Concrete Placement
Drainage - 24 inch SICPP
Drainage - 64 inch SICPP
Drainage - 6. inch Perforated Underdrain
Dust Control
Excavation (Borrow)
Excavation (Cut to Fill)
Fxvavation (Topsoil Stripping)
              6 Rehabilitate F
6 Service Road
              6 Service Road
6 Service Road
              6 Service Road
                                                                   Excavation (Topsoil Stripping)
                                                                                                                                                                                        SetSelected
              6 Service Road
                                                                   Fencing
                                                                                                                                                                                        SetSelected
              6 Service Road
                                                                   Grading
                                                                                                                                                                                        SetSelected
                                                                   Hydroseeding
              6 Service Road
                                                                                                                                                                                        SetSelected
              6 Service Road
                                                                   Markings
Soil Erosion/Sediment Control
                                                                                                                                                                                        SetSelected
               6 Service Road
                                                                                                                                                                                        SetSelected
```

Subbase Placement

Topsoil Placement Concrete Demolition

Clearing and Grubbing

6 Service Road

6 Service Road

7 Fencing

1-B-1

SetSelected

SetSelected SetSelected

Attachment 1-B

7 Fencing 7 Fencing Excavation (Cut to Fill) SetSelected SetSelected Fencing Grading 7 Fencing 7 Fencing SetSelected 7 Fencing Soil Erosion/Sediment Control SetSelected 7 Fencing Topsoil Placement SetSelected 7 Taxiway Asphalt Placement SetSelected 7 Taxiway Concrete Placement SetSelected 7 Taxiway Drainage - 24 inch SICPP SetSelected 7 Taxiways Drainage - 6 inch Perforated Underdrain Dust Control SetSelected 7 Taxiway Excavation (Borrow) 7 Taxiways
7 Taxiways SetSelected
SetSelected Excavation (Cut to Fill)
Excavation (Topsoil Stripping)
Fencing
Grading Hydroseeding Lighting Markings Soil Erosion/Sediment Control 7 Taxiways SetSelected Subbase Placement 7 Taxiways Topsoil Placement SetSelected 8 Demolition Concrete Demolition SetSelected 8 Taxiways Asphalt Placement SetSelected 8 Taxiways Concrete Placement SetSelected Drainage - 24 inch SICPP
Drainage - 6 inch Perforated Underdrain
Dust Control 8 Taxiways SetSelected 8 Taxiways 8 Taxiways 8 Taxiways SetSelected SetSelected SetSelected Excavation (Borrow) 8 Taxiways SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected Excavation (Cut to Fill)
Excavation (Topsoil Stripping)
Fencing
Grading Lighting Markings Soil Erosion/Sediment Control SetSelected SetSelected 8 Taxiways Subbase Placement SetSelected 8 Taxiways Topsoil Placement SetSelected Selected Fuel Types 1 Diesel 2 Diesel

Asphalt Demolition 1 Demolition - Asphalt 1 Demolition - Asphalt Asphalt Demolition Asphalt Demolition Concrete Demolition 1 Demolition - Concrete Concrete Demolition 1 Demolition - Concrete 1 Demolition - Concrete Concrete Demolition 1 Taxiways Asphalt Placement 1 Taxiways Asphalt Placement 1 Taxiways Asphalt Placement Asphalt Placement
Asphalt Placement
Asphalt Placement
Asphalt Placement
Asphalt Placement
Concrete Placement
Concrete Placement
Concrete Placement
Concrete Placement
Concrete Placement 1 Taxiways Concrete Placement Concrete Placement 1 Taxiways

1 Taxiways Concrete Placement 1 Taxiways Drainage - 24 inch SICPP 1 Taxiways Drainage - 24 inch SICPP
Drainage - 6 inch Perforated Underdrain
Dust Control
Excavation (Borrow)
Excavation (Borrow)
Excavation (Borrow) Drainage - 24 inch SICPP 1 Taxiways 1 Taxiways 1 Taxiways 1 Taxiway 1 Taxiways Excavation (Borrow) 1 Taxiways Excavation (Borrow) 1 Taxiways Excavation (Cut to Fill) Excavation (Cut to Fill)

1 Taxiways 1 Taxiways Excavation (Cut to Fill) 1 Taxiways Excavation (Cut to Fill) 1 Taxiways Excavation (Cut to Fill) Excavation (Cut to Fill) 1 Taxiways Excavation (Cut to Fill)
Excavation (Topsoil Stripping)
Fencing
Fencing Fencing Fencing Fencing Grading Grading 1 Taxiways Grading 1 Taxiways Hydroseeding 1 Taxiways Hydroseeding 1 Taxiways Lighting 1 Taxiways Lighting 1 Taxiways Lighting

Lighting
Lighting
Lighting
Lighting
Lighting
Markings
Markings
Markings
Markings
Markings
Markings
Soill Erosion/Sediment Control
Soill Erosion/Sediment Control
Soil Erosion/Sediment Control
Soil Erosion/Sediment Control
Subbase Placement 1 Taxiway 1 Taxiways Subbase Placement 1 Taxiways Subbase Placement 1 Taxiways Subbase Placement 1 Taxiways Subbase Placement 1 Taxiways Topsoil Placement Topsoil Placement 1 Taxiways 1 Taxiways Topsoil Placement Topsoil Placement
Marking Removal
Marking Removal
Marking Removal
Marking Removal
Markings
Markings
Markings
Markings
Asphalt Placement
Asphalt Placement 1 Taxiways 2 Runway Markings 2 Taxiways 2 Taxiways

2 Taxiways Asphalt Placement Asphalt Placement 2 Taxiway 2 Taxiways Concrete Placement 2 Taxiways Concrete Placement 2 Taxiways 2 Taxiways Concrete Placement
Concrete Placement
Concrete Placement
Concrete Placement
Concrete Placement
Drainage - 24 inch SICPP
Drainage - 24 inch SICPP 2 Taxiways Drainage - 24 inch SICPP 2 Taxiways Drainage - 24 inch SICPP 2 Taxiways Drainage - 6 inch Perforated Underdrain 2 Taxiways Drainage - 6 inch Perforated Underdrain

2 Taxiways Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain 2 Taxiways 2 Taxiways 2 Taxiways Drainage - 6 inch Perforated Underdrain Dust Control 2 Taxiways
2 Taxiways Dust Control
Excavation (Borrow)
Excavation (Borrow)
Excavation (Borrow)
Excavation (Borrow)
Excavation (Cut to Fill)
Excavation (Cut to Fill)
Excavation (Cut to Fill) Excavation (Cut to Fill) 2 Taxiways 2 Taxiways Excavation (Cut to Fill) Excavation (Cut to Fill) Excavation (Topsoil Stripping) 2 Taxiways 2 Taxiways Fencing 2 Taxiways Fencing 2 Taxiways Fencing 2 Taxiways Fencing

2 Taxiway

Dozer Excavator Pickup Truck Excavator with Bucket Excavator with Hoe Ram Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller

SetSelected

SetSelected SetSelected

SetSelected

SetSelected

SetSelected

SetSelected

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SetSelected

SetSelected SetSelected

SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected

SetSelected SetSelected

SetSelected

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SetSelected

SetSelected

SetSelected

SetSelected

SetSelected

SetSelected

Roller
Skid Steer Loader
Surfacing Equipment (Grooving)
Air Compressor
Concrete Saws
Concrete Truck
Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer **Dump Truck** Excavator Other General Equipment Pickup Truck Roller

Roller
Dump Truck
Loader
Other General Equipment
Pickup Truck
Tractors/Loader/Backhoe
Water Truck
Dozer SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected Dozer Dump Truck (12 cy) SetSelected Pickup Truck Roller SetSelected Dozer SetSelected Dump Truck (12 cy) SetSelected Excavator
Pickup Truck
Roller
Scraper
Dozer
Concrete Truck
Dump Truck
Other General Equipment
Pickup Truck
Skid Steer Loader
Tractors/Loader/Backhoe
Dozer Excavator SetSelected Dozer SetSelected SetSelected Grader Roller SetSelected

Off-Road Truck SetSelected Dump Truck SetSelected Loader SetSelected Other General Equipment SetSelected Pickup Truck Skid Steer Loader Skid Steer Loader
Tractors/Loader/Backhoe
Flatbed Truck
Other General Equipment
Pickup Truck
Other General Equipment
Pickup Truck
Pickup Truck SetSelected
SetSelected Pumps Tractors/Loader/Backhoe SetSelected Dozer Dump Truck (12 cy) SetSelected Pickup Truck SetSelected Roller SetSelected Dozer SetSelected Dump Truck SetSelected Pickup Truck SetSelected Pickup Truck Pressure Washe SetSelected SetSelected

Hydroseeder

Pressure Washer Sweepers/Scrubbers Water Truck Flatbed Truck Other General Equip Pickup Truck

SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected Dump Truck Other General SetSelected Pickup Truck SetSelected Roller SetSelected Skid Steer Loade SetSelected Surfacing Equipment (Grooving) SetSelected Air Compresso SetSelected Concrete Saws SetSelected Other General Equ SetSelected SetSelected
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SetSelected
SetSelected
SetSelected
SetSelected Pickup Truck
Rubber Tired Loader
Slip Form Paver
Surfacing Equipment Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck SetSelected Roller SetSelected Dump Truck SetSelected Loader SetSelected Other General Equipment SetSelected Pickup Truck SetSelected SetSelected SetSelected

Dozer
Dump Truck (12 cy)
Pickup Truck
Roller Dozer Dump Truck (12 cy) Excavator Pickup Truck Roller Scraper Dozer Concrete Truck Dump Truck Other General Equipment Pickup Truck Tractors/Loader/Backho

SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected SetSelected

SetSelected

SetSelected

SetSelected

SetSelected

SetSelected

SetSelected

SetSelected

SetSelected

Water Truck

1-B-2

2 Taxiways	Grading	Grader	SetSelected
2 Taxiways	Grading	Roller	SetSelected
2 Taxiways	Hydroseeding	Hydroseeder	SetSelected
2 Taxiways 2 Taxiways 2 Taxiways	Hydroseeding Lighting	Off-Road Truck Dump Truck	SetSelected SetSelected
2 Taxiways	Lighting	Loader	SetSelected
2 Taxiways	Lighting	Other General Equipment	SetSelected
2 Taxiways	Lighting	Pickup Truck	SetSelected
2 Taxiways	Lighting	Skid Steer Loader	SetSelected
2 Taxiways	Lighting	Tractors/Loader/Backhoe	SetSelected
2 Taxiways	Markings	Flatbed Truck	SetSelected
2 Taxiways	Markings	Other General Equipment	SetSelected
2 Taxiways 2 Taxiways	Markings Soil Erosion/Sediment Control	Pickup Truck Other General Equipment	SetSelected SetSelected
2 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pickup Truck	SetSelected
2 Taxiways		Pumps	SetSelected
2 Taxiways		Tractors/Loader/Backhoe	SetSelected
2 Taxiways 2 Taxiways	Subbase Placement Subbase Placement	Dozer Dump Truck (12 cy)	SetSelected SetSelected
2 Taxiways	Subbase Placement	Pickup Truck	SetSelected
2 Taxiways	Subbase Placement	Roller	SetSelected
2 Taxiways	Topsoil Placement	Dozer	SetSelected
2 Taxiways	Topsoil Placement	Dump Truck	SetSelected
2 Taxiways	Topsoil Placement	Pickup Truck	SetSelected
3 Demolition - Asphalt	Asphalt Demolition	Dozer	SetSelected
3 Demolition - Asphalt	Asphalt Demolition	Excavator	SetSelected
3 Demolition - Asphalt	Asphalt Demolition Concrete Demolition Concrete Demolition	Pickup Truck	SetSelected
3 Demolition - Concrete		Excavator with Bucket	SetSelected
3 Demolition - Concrete		Excavator with Hoe Ram	SetSelected
3 Demolition - Concrete 3 NAVAIDS	Concrete Demolition Precision Approach Path Indicator (PAPI)	Pickup Truck Air Compressor	SetSelected SetSelected
3 NAVAIDS	Precision Approach Path Indicator (PAPI)	Dump Truck	SetSelected
3 NAVAIDS	Precision Approach Path Indicator (PAPI)	Other General Equipment	SetSelected
3 NAVAIDS 3 NAVAIDS 3 NAVAIDS	Precision Approach Path Indicator (PAPI) Precision Approach Path Indicator (PAPI)	Pickup Truck Skid Steer Loader	SetSelected SetSelected SetSelected
3 NAVAIDS	Precision Approach Path Indicator (PAPI) Asphalt Placement Asphalt Placement	Tractors/Loader/Backhoe	SetSelected
3 Taxiways		Asphalt Paver	SetSelected
3 Taxiways		Dump Truck	SetSelected
3 Taxiways	Asphalt Placement	Other General Equipment	SetSelected
3 Taxiways	Asphalt Placement	Pickup Truck	SetSelected
3 Taxiways 3 Taxiways 3 Taxiways	Asphalt Placement Asphalt Placement Asphalt Placement	Roller Skid Steer Loader Surfacing Equipment (Grooving)	SetSelected SetSelected
3 Taxiways 3 Taxiways 3 Taxiways	Concrete Placement Concrete Placement	Air Compressor Concrete Saws	SetSelected SetSelected SetSelected
3 Taxiways 3 Taxiways	Concrete Placement Concrete Placement	Concrete Truck Other General Equipment	SetSelected SetSelected
3 Taxiways	Concrete Placement Concrete Placement	Pickup Truck	SetSelected
3 Taxiways		Rubber Tired Loader	SetSelected
3 Taxiways	Concrete Placement	Slip Form Paver	SetSelected
3 Taxiways	Concrete Placement	Surfacing Equipment (Grooving)	SetSelected
3 Taxiways	Drainage - 24 inch SICPP	Dozer	SetSelected
3 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Dump Truck	SetSelected
3 Taxiways		Excavator	SetSelected
3 Taxiways	Drainage - 24 inch SICPP	Loader	SetSelected
3 Taxiways	Drainage - 24 inch SICPP	Other General Equipment	SetSelected
3 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP Drainage - 6 inch Perforated Underdrain	Pickup Truck	SetSelected
3 Taxiways		Roller	SetSelected
3 Taxiways		Dump Truck	SetSelected
3 Taxiways 3 Taxiways 3 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Loader Other General Equipment	SetSelected SetSelected
3 Taxiways	Drainage - 6 inch Perforated Underdrain	Pickup Truck	SetSelected
3 Taxiways	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	SetSelected
3 Taxiways	Dust Control Excavation (Borrow)	Water Truck	SetSelected
3 Taxiways		Dozer	SetSelected
3 Taxiways	Excavation (Borrow) Excavation (Borrow) Excavation (Borrow)	Dump Truck (12 cy)	SetSelected
3 Taxiways		Pickup Truck	SetSelected
3 Taxiways		Roller	SetSelected
3 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dozer	SetSelected
3 Taxiways		Dump Truck (12 cy)	SetSelected
3 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Excavator	SetSelected
3 Taxiways		Pickup Truck	SetSelected
3 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill) Excavation (Topsoil Stripping)	Roller	SetSelected
3 Taxiways		Scraper	SetSelected
3 Taxiways		Dozer	SetSelected
3 Taxiways 3 Taxiways 3 Taxiways	Fencing Fencing	Concrete Truck Dump Truck	SetSelected SetSelected
3 Taxiways	Fencing	Other General Equipment	SetSelected
3 Taxiways	Fencing	Pickup Truck	SetSelected
3 Taxiways	Fencing Fencing Grading	Skid Steer Loader	SetSelected
3 Taxiways		Tractors/Loader/Backhoe	SetSelected
3 Taxiways		Dozer	SetSelected
3 Taxiways 3 Taxiways 3 Taxiways	Grading Grading Grading	Grader Roller	SetSelected SetSelected
3 Taxiways	Hydroseeding	Hydroseeder	SetSelected
3 Taxiways	Hydroseeding	Off-Road Truck	SetSelected
3 Taxiways	Lighting	Dump Truck	SetSelected
3 Taxiways	Lighting	Loader	SetSelected
3 Taxiways	Lighting	Other General Equipment	SetSelected
3 Taxiways 3 Taxiways 3 Taxiways	Lighting Lighting	Pickup Truck Skid Steer Loader	SetSelected SetSelected
3 Taxiways	Lighting	Tractors/Loader/Backhoe	SetSelected
3 Taxiways	Markings	Flatbed Truck	SetSelected
3 Taxiways 3 Taxiways	Markings Markings	Other General Equipment Pickup Truck	SetSelected SetSelected
3 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Other General Equipment	SetSelected
3 Taxiways		Pickup Truck	SetSelected
3 Taxiways		Pumps	SetSelected
3 Taxiways	Soil Erosion/Sediment Control Subbase Placement	Tractors/Loader/Backhoe	SetSelected
3 Taxiways		Dozer	SetSelected
3 Taxiways	Subbase Placement	Dump Truck (12 cy)	SetSelected
3 Taxiways	Subbase Placement	Pickup Truck	SetSelected
3 Taxiways	Subbase Placement	Roller	SetSelected
3 Taxiways	Topsoil Placement	Dozer	SetSelected
3 Taxiways	Topsoil Placement	Dump Truck	SetSelected
3 Taxiways 3 Taxiways 4 Demolition - Asphalt	Topsoil Placement Asphalt Demolition	Pickup Truck Dozer	SetSelected SetSelected
4 Demolition - Asphalt	Asphalt Demolition Asphalt Demolition	Excavator	SetSelected
4 Demolition - Asphalt		Pickup Truck	SetSelected
4 Demolition - Concrete	Concrete Demolition Concrete Demolition Concrete Demolition	Excavator with Bucket	SetSelected
4 Demolition - Concrete		Excavator with Hoe Ram	SetSelected
4 Demolition - Concrete		Pickup Truck	SetSelected
4 Taxiways 4 Taxiways	Asphalt Placement Asphalt Placement	Asphalt Paver Dump Truck	SetSelected SetSelected
4 Taxiways	Asphalt Placement	Other General Equipment	SetSelected
4 Taxiways	Asphalt Placement	Pickup Truck	SetSelected
4 Taxiways	Asphalt Placement Asphalt Placement Asphalt Placement	Roller	SetSelected
4 Taxiways		Skid Steer Loader	SetSelected
4 Taxiways		Surfacing Equipment (Grooving)	SetSelected
4 Taxiways 4 Taxiways 4 Taxiways	Concrete Placement Concrete Placement	Air Compressor Concrete Saws	SetSelected SetSelected
4 Taxiways	Concrete Placement	Concrete Truck Other General Equipment	SetSelected
4 Taxiways	Concrete Placement		SetSelected
4 Taxiways	Concrete Placement Concrete Placement Concrete Placement	Pickup Truck	SetSelected
4 Taxiways		Rubber Tired Loader	SetSelected
4 Taxiways		Slip Form Paver	SetSelected
4 Taxiways 4 Taxiways 4 Taxiways	Concrete Placement Drainage - 24 inch SICPP	Surfacing Equipment (Grooving) Dozer	SetSelected SetSelected
4 Taxiways	Drainage - 24 inch SICPP	Dump Truck	SetSelected
4 Taxiways	Drainage - 24 inch SICPP	Excavator	SetSelected
4 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Loader	SetSelected
4 Taxiways		Other General Equipment	SetSelected
4 Taxiways		Pickup Truck	SetSelected
4 Taxiways 4 Taxiways 4 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP Drainage - 6 inch Perforated Underdrain	Roller Dump Truck	SetSelected SetSelected
4 Taxiways	Drainage - 6 inch Perforated Underdrain	Loader	SetSelected
4 Taxiways	Drainage - 6 inch Perforated Underdrain	Other General Equipment	SetSelected
4 Taxiways	Drainage - 6 inch Perforated Underdrain	Pickup Truck	SetSelected
4 Taxiways	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	SetSelected
4 Taxiways	Dust Control	Water Truck	SetSelected
4 Taxiways 4 Taxiways 4 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dozer Dump Truck (12 cy)	SetSelected SetSelected
4 Taxiways	Excavation (Borrow) Excavation (Borrow)	Pickup Truck	SetSelected
4 Taxiways		Roller	SetSelected
4 Taxiways 4 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dozer Dump Truck (12 cy)	SetSelected SetSelected SetSelected
4 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill) Excavation (Cut to Fill)	Excavator	SetSelected
4 Taxiways		Pickup Truck	SetSelected
4 Taxiways		Roller	SetSelected
4 Taxiways	Excavation (Cut to Fill) Excavation (Topsoil Stripping)	Scraper	SetSelected
4 Taxiways		Dozer	SetSelected
4 Taxiways	Fencing	Concrete Truck	SetSelected
4 Taxiways	Fencing	Dump Truck	SetSelected
4 Taxiways	Fencing	Other General Equipment	SetSelected
4 Taxiways	Fencing	Pickup Truck	SetSelected
4 Taxiways	Fencing	Skid Steer Loader	SetSelected
4 Taxiways 4 Taxiways 4 Taxiways	Fencing Grading	Tractors/Loader/Backhoe Dozer	SetSelected SetSelected
4 Taxiways	Grading	Grader	SetSelected
4 Taxiways	Grading	Roller	SetSelected
4 Taxiways	Hydroseeding	Hydroseeder	SetSelected
4 Taxiways	Hydroseeding	Off-Road Truck	SetSelected
4 Taxiways	Lighting	Dump Truck	SetSelected
4 Taxiways	Lighting	Loader	SetSelected
4 Taxiways	Lighting	Other General Equipment	SetSelected
4 Taxiways 4 Taxiways 4 Taxiways	Lighting Lighting Lighting	Pickup Truck Skid Steer Loader	SetSelected SetSelected
4 Taxiways	Lighting	Tractors/Loader/Backhoe	SetSelected
4 Taxiways	Markings	Flatbed Truck	SetSelected
4 Taxiways	Markings	Other General Equipment Pickup Truck Other General Equipment	SetSelected
4 Taxiways	Markings		SetSelected
4 Taxiways	Soil Erosion/Sediment Control		SetSelected
4 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Other General Equipment	SetSelected
4 Taxiways		Pickup Truck	SetSelected
4 Taxiways		Pumps	SetSelected
4 Taxiways	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	SetSelected
4 Taxiways	Subbase Placement	Dozer	SetSelected
4 Taxiways	Subbase Placement	Dump Truck (12 cy)	SetSelected
4 Taxiways	Subbase Placement	Pickup Truck	SetSelected
4 Taxiways	Subbase Placement	Roller	SetSelected
4 Taxiways 4 Taxiways	Topsoil Placement	Roller Dozer	SetSelected

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4 Taxiways
4 Taxiways
5 Building - 10000 sqft- 1 story
5 Building - 10000 sqft- 1 story
                                                                                                                                                                                                                                         Dump Truck
Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                         Concrete Foundation
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                          Concrete Ready Mix Trucks
 5 Building - 10000 sqft- 1 story Concrete Foundations
                                                                                                                                                                                                                                         Fork Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  5 Building - 10000 sqft- 1 story
                                                                        Concrete Foundations
                                                                                                                                                                                                                                         Tool Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  5 Building - 10000 sqft- 1 story Concrete Foundations
                                                                                                                                                                                                                                          Tractor Trailer- Material Delivery
                                                                                                                                                                                                                                                                                                                            SetSelected
  5 Building - 10000 sqft- 1 story Construction Mob & Layout
                                                                                                                                                                                                                                          Survey Crew Trucks
                                                                                                                                                                                                                                                                                                                            SetSelected
  5 Building - 10000 sqft- 1 story Construction Mob & Layout 5 Building - 10000 sqft- 1 story Exterior Wall Framing
                                                                                                                                                                                                                                         Tractor Trailers Temp Fac
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                         Fork Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
5 Building - 10000 sqft-1 story Exterior Wall Framing 5 Building - 10000 sqft-1 story Exterior Wall Framing 5 Building - 10000 sqft-1 story Exterior Wall Framing 5 Building - 10000 sqft-1 story Exterior Wall Framing 5 Building - 10000 sqft-1 story Interior Build-Out/ Finishes 5 Building - 10000 sqft-1 story Interior Build-Out/ Finishes 5 Building - 10000 sqft-1 story Interior Build-Out/ Finishes 5 Building - 10000 sqft-1 story Roofing 6 Building - 10000 sqft-1 story Roofing 7 Building - 10000 sqft-1 story Roofing 7 Building - 10000 sqft-1 story Roofing 8 Building - 10000 sqft-1 story Roofing 9 Build
                                                                                                                                                                                                                                         Man Lift
                                                                                                                                                                                                                                          Tool Truck
                                                                                                                                                                                                                                         Tool Truck
Tractor Trailer- Material Delivery
Fork Truck
Man Lift
Tool Truck
Tractor Trailer- Material Delivery
High Lift
Man Lift (Fascia Construction)
Material Deliveries
                                                                                                                                                                                                                                                                                                                           SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
                                                                                                                                                                                                                                          Material Deliveries
Tractor Trailer- Material Delivery
  5 Building - 10000 sqft- 1 story
                                                                        Roofing
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                        Security & Safety Systems
  5 Building - 10000 sqft- 1 story
                                                                                                                                                                                                                                          High Lift
                                                                                                                                                                                                                                                                                                                            SetSelected
  5 Building - 10000 sqft- 1 story
                                                                        Security & Safety Systems
                                                                                                                                                                                                                                          Tool Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  5 Building - 10000 saft- 1 story
                                                                        Structural Steel Erection
                                                                                                                                                                                                                                          40 Ton Crane
                                                                                                                                                                                                                                                                                                                            SetSelected
  5 Building - 10000 sqft- 1 story Structural Steel Erection
                                                                                                                                                                                                                                         Fork Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  5 Building - 10000 sqft- 1 story Structural Steel Erection
5 Building - 10000 sqft- 1 story Structural Steel Erection
                                                                                                                                                                                                                                          Tool Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                          Tractor Trailer- Steel Deliveries
                                                                                                                                                                                                                                                                                                                           SetSelected
                                                                       Structural Steel Erection
Instrument Landing System (ILS) Localizer
                                                                                                                                                                                                                                         Air Compr
  6 NAVAIDS
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
                                                                                                                                                                                                                                        Air Compressor
Crane
Dozer
Dump Truck
Excavator
Other General Equipi
Pickup Truck
Skid Steer Loader
Tractors/Loader/Bacl
  6 NAVAIDS
 6 NAVAIDS
6 NAVAIDS
6 NAVAIDS
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6 NAVAIDS
6 NAVAIDS
                                                                                                                                                                                                                                                                                                                           SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
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SetSelected
                                                                          Instrument Landing System (ILS) Localizer
 6 NAVAIDS
                                                                                                                                                                                                                                          Tractors/Loader/Backhoe
Asphalt Paver
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
  6 Rehabilitate Runway
                                                                          Asphalt Placement
 6 Rehabilitate Runway
                                                                          Asphalt Placement
                                                                                                                                                                                                                                         Dump Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Rehabilitate Runway
                                                                          Asphalt Placement
                                                                                                                                                                                                                                         Other General Equipment
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Rehabilitate Runway
                                                                          Asphalt Placement
                                                                                                                                                                                                                                         Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Asphalt Placement
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Asphalt Placement
                                                                                                                                                                                                                                         Skid Steer Loade
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Rehabilitate Runway
                                                                          Asphalt Placement
                                                                                                                                                                                                                                          Surfacing Equipment (Grooving)
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Rehabilitate Runwa
                                                                          Cold Milling
Cold Milling
                                                                                                                                                                                                                                          Cold Plan
                                                                                                                                                                                                                                         Cold Planer
Dump Truck
Pickup Truck
Sweepers
Water Truck
Concrete Saws
Dump Truck
Excavator
Hydralic Hammer
Other General Equ
  6 Rehabilitate Runway
                                                                                                                                                                                                                                                                                                                            SetSelected
6 Rehabilitate Runway
                                                                        Cold Milling
Cold Milling
Cold Milling
Cold Milling
Cold Milling
Concrete Demolition
Concrete Demolition
Concrete Demolition
Concrete Demolition
Concrete Demolition
                                                                                                                                                                                                                                                                                                                           SetSelected
  6 Rehabilitate Runway
6 Rehabilitate Runway
                                                                          Concrete Demolition 
Concrete Demolition
                                                                                                                                                                                                                                         Other General Equipme
Pickup Truck
 6 Rehabilitate Runway
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                          Concrete Placement
                                                                                                                                                                                                                                         Air Compressor
  6 Rehabilitate Runway
                                                                          Concrete Placemen
                                                                                                                                                                                                                                         Concrete Saws
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Rehabilitate Runway
                                                                          Concrete Placemen
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                                                                                                                                                                                                                                         Other General Equip
 6 Rehabilitate Runway
                                                                          Concrete Placemen
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Concrete Placement
                                                                                                                                                                                                                                          Pickup Truck
Rubber Tired Loader
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Concrete Placement
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                         Rubber Tired Loader
Slip Form Paver
Surfacing Equipment
Water Truck
Dozer
Dump Truck (12 cy)
Excavator
Pickup Truck
Roller
Dozer
  6 Rehabilitate Runway
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
  6 Rehabilitate Runwa
                                                                          Concrete Placemen
                                                                        Concrete Placement
Dust Control
Excavation (Cut to Fill) (Assume 20% reconstruction)
Excavation (Lot to Fill) (Assume 20% reconstruction)
Excavation (Lot to Fill) (Assume 20% reconstruction)
Excavation (Lot to Fill) (Assume 20% reconstruction)
Excavation (Cut to Fill) (Assume 20% reconstruction)
Excavation (Cut to Fill) (Assume 20% reconstruction)
Excavation (Excavation (Excavation) Excavation (Excavation) Exca
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SetSelected
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SetSelected
 6 Rehabilitate Runway
6 Rehabilitate Runway
 6 Rehabilitate Runway
                                                                          Excavation (Topsoil Stripping)
                                                                                                                                                                                                                                         Dozer
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
                                                                          Grading
                                                                                                                                                                                                                                         Dozei
 6 Rehabilitate Runway
                                                                          Grading
                                                                                                                                                                                                                                         Grader
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Grading
                                                                                                                                                                                                                                          Roller
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Hydrose
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Hydroseeding
                                                                                                                                                                                                                                         Off-Road Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Lighting
                                                                                                                                                                                                                                         Dump Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Lighting
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                        Lighting
Lighting
Lighting
Lighting
Lighting
Lighting
Markings
Markings
Markings
Markings
Sealing Random Cracks
Sealing Random Cracks
                                                                                                                                                                                                                                         Other General Equipment
  6 Rehabilitate Runway
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Rehabilitate Runwa
                                                                                                                                                                                                                                          Pickup Truck
Skid Steer Loader
  6 Rehabilitate Runwa
 6 Rehabilitate Runway
6 Rehabilitate Runway
6 Rehabilitate Runway
                                                                                                                                                                                                                                         Skid Steer Loader
Tractors/Loader/Backhoe
Flatbed Truck
Other General Equipment
Pickup Truck
Crack Cleaner
Crack Filler (Trailer Mounted)
                                                                                                                                                                                                                                                                                                                           SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
  6 Rehabilitate Runway
  6 Rehabilitate Runway
6 Rehabilitate Runway
                                                                          Sealing Random Cracks
Sealing Random Cracks
                                                                                                                                                                                                                                          Flatbed Truck
Other General Equipment
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
                                                                                                                                                                                                                                          Pickup Truck
 6 Rehabilitate Runway
                                                                          Sealing Random Cracks
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                         Other General Equipment
  6 Rehabilitate Runway
                                                                          Soil Erosion/Sediment Contro
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Rehabilitate Runway
                                                                          Soil Erosion/Sediment Control
                                                                                                                                                                                                                                          Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Rehabilitate Runway
                                                                          Soil Erosion/Sediment Control
                                                                                                                                                                                                                                         Pumps
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Rehabilitate Runway
                                                                          Soil Erosion/Sediment Control
                                                                                                                                                                                                                                          Tractors/Loader/Backhoe
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Rehabilitate Runway
                                                                          Subbase Placement
                                                                                                                                                                                                                                         Dozer
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                        Dozer
Dump Truck (12 cy)
Pickup Truck
Roller
Dozer
Dump Truck
Pickup Truck
Pickup Truck
Asphalt Paver
Dump Truck
Other General Equipment
Pickup Truck
  6 Rehabilitate Runway
                                                                          Subbase Placement
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
  6 Rehabilitate Runwa
                                                                          Subbase Placement
                                                                         Subbase Placement
Subbase Placement
Topsoil Placement
Topsoil Placement
Topsoil Placement
Asphalt Placement
Asphalt Placement
Asphalt Placement
Asphalt Placement
Asphalt Placement
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SetSelected
SetSelected
SetSelected
SetSelected
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SetSelected
  6 Rehabilitate Runwa
6 Rehabilitate Runwa
6 Rehabilitate Runway
6 Rehabilitate Runway
6 Rehabilitate Runway
6 Service Road
6 Service Road
6 Service Road
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SetSelected
 6 Service Road
6 Service Road
                                                                          Asphalt Placement
Asphalt Placement
                                                                                                                                                                                                                                         Pickup Truck
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 6 Service Road
                                                                          Asphalt Placement
                                                                                                                                                                                                                                         Skid Steer Loader
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Asphalt Placement
                                                                                                                                                                                                                                          Surfacing Equipment (Grooving)
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                          Clearing and Grubbing
                                                                                                                                                                                                                                         Chain Saw
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                          Clearing and Grubbing
                                                                                                                                                                                                                                         Chipper/Stump Grinde
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                          Clearing and Grubbing
                                                                                                                                                                                                                                         Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Concrete Placemen
                                                                                                                                                                                                                                          Air Compressor
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Concrete Placemen
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Concrete Placemen
                                                                                                                                                                                                                                          Concrete Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                       Concrete Placement
Concrete Placement
Concrete Placement
Concrete Placement
Concrete Placement
Concrete Placement
Drainage - 24 inch SICPP
Drainage - 24 inch SICPP
Drainage - 24 inch SICPP
6 Service Road
                                                                                                                                                                                                                                         Concrete Truck
Other General Equipment
Pickup Truck
Rubber Tired Loader
Slip Form Paver
Surfacing Equipment (Grooving)
                                                                                                                                                                                                                                                                                                                           SetSelected
                                                                                                                                                                                                                                          Dozer
                                                                                                                                                                                                                                         Dump Truck
Excavator
  6 Service Road
6 Service Road
  6 Service Road
                                                                          Drainage - 24 inch SICPF
                                                                                                                                                                                                                                         Loader
Other General Equipment
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Drainage - 24 inch SICPF
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Drainage - 24 inch SICPP
Drainage - 24 inch SICPP
                                                                                                                                                                                                                                          Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                                                                                                                                                                                         Roller
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                          Drainage - 6 inch Perforated Underdrain
Drainage - 6 inch Perforated Underdrain
                                                                                                                                                                                                                                         Dump Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                                                                                                                                                                                         Loader
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Drainage - 6 inch Perforated Underdrain
                                                                                                                                                                                                                                         Other General Equipment
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                         Drainage - 6 inch Perforated Underdrain
Drainage - 6 inch Perforated Underdrain
Drainage - 6 inch Perforated Underdrain
Dust Control
Excavation (Borrow)
Excavation (Borrow)
Excavation (Borrow)
Excavation (Borrow)
  6 Service Road
6 Service Road
                                                                                                                                                                                                                                          Pickup Truck
Tractors/Loader/Backhoe
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
6 Service Road
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SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
                                                                                                                                                                                                                                         Water Truck
Dozer
Dump Truck (12 cy)
Pickup Truck
                                                                          Excavation (Borrow)
Excavation (Cut to Fill)
                                                                                                                                                                                                                                         Dozer
                                                                                                                                                                                                                                         Dump Truck (12 cy)
 6 Service Road
                                                                          Excavation (Cut to Fill)
  6 Service Road
                                                                          Excavation (Cut to Fill)
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                          Excavation (Cut to Fill)
                                                                                                                                                                                                                                         Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Excavation (Cut to Fill)
                                                                                                                                                                                                                                         Roller
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                          Excavation (Cut to Fill)
 6 Service Road
                                                                                                                                                                                                                                         Scraper
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                          Excavation (Topsoil Stripping)
                                                                                                                                                                                                                                         Dozer
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                          Fencing
                                                                                                                                                                                                                                         Concrete Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                          Fencing
                                                                                                                                                                                                                                         Dump Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                          Fencing
Fencing
Fencing
Fencing
Grading
Grading
Grading
Hydroses
  6 Service Road
                                                                                                                                                                                                                                          Other General Equip
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                         Pickup Truck
Skid Steer Loader
Tractors/Loader/Backhoe
  6 Service Road
                                                                                                                                                                                                                                                                                                                            SetSelected
6 Service Road
                                                                                                                                                                                                                                                                                                                           SetSelected
                                                                                                                                                                                                                                         Tractors/Loader/Backhoe
Dozer
Grader
Roller
Hydroseeder
Off-Road Truck
Flatbed Truck
Other General Equipment
Pickun Truck
                                                                          Hydroseeding
Hydroseeding
Markings
Markings
  6 Service Road
  6 Service Road
  6 Service Road
                                                                          Markings
                                                                                                                                                                                                                                          Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                         Other General Equipment
                                                                          Soil Erosion/Sediment Control
  6 Service Road
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                          Soil Erosion/Sediment Control
  6 Service Road
                                                                                                                                                                                                                                          Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Soil Erosion/Sediment Contro
                                                                                                                                                                                                                                                                                                                            SetSelected
 6 Service Road
                                                                          Soil Erosion/Sediment Control
                                                                                                                                                                                                                                          Tractors/Loader/Backhoe
                                                                                                                                                                                                                                                                                                                            SetSelected
  6 Service Road
                                                                          Subbase Placement
                                                                                                                                                                                                                                         Dozer
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                        Dozer
Dump Truck (12 cy)
Pickup Truck
Roller
Dozer
Dump Truck
Pickup Truck
Excavator with Bucket
Excavator with Hoe Ram
Pickub Truck
  6 Service Road
6 Service Road
                                                                          Subbase Placement
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
                                                                          Subbase Placement
                                                                         Subbase Placement
Subbase Placement
Topsoil Placement
Topsoil Placement
Topsoil Placement
Topsoil Placement
Concrete Demolition
Concrete Demolition
 6 Service Road
6 Service Road
6 Service Road
6 Service Road
                                                                                                                                                                                                                                                                                                                           SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
SetSelected
   7 Demolition - Concrete
7 Demolition - Concrete
                                                                          Concrete Demolition
Clearing and Grubbing
                                                                                                                                                                                                                                          Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
SetSelected
  7 Fencing
  7 Fencing
                                                                          Clearing and Grubbing
                                                                                                                                                                                                                                         Chipper/Stump Grinder
                                                                                                                                                                                                                                                                                                                            SetSelected
  7 Fencing
                                                                          Clearing and Grubbing
                                                                                                                                                                                                                                          Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
  7 Fencing
                                                                          Excavation (Cut to Fill)
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                         Dump Truck (12 cy)
  7 Fencing
                                                                          Excavation (Cut to Fill)
                                                                                                                                                                                                                                                                                                                            SetSelected
  7 Fencing
                                                                          Excavation (Cut to Fill)
                                                                                                                                                                                                                                         Excavator
                                                                                                                                                                                                                                                                                                                            SetSelected
   7 Fencing
                                                                          Excavation (Cut to Fill)
                                                                                                                                                                                                                                          Pickup Truck
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                          Excavation (Cut to Fill)
  7 Fencing
                                                                                                                                                                                                                                         Roller
                                                                                                                                                                                                                                                                                                                            SetSelected
                                                                                                                                                                                                                                          Concrete Truck
                                                                                                                                                                                                                                          Dump Truck
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Other General Equipment

7 Fencing	Fencing	Pickup Truck	SetSelecte
7 Fencing	Fencing	Skid Steer Loader	SetSelecte
7 Fencing	Fencing	Tractors/Loader/Backhoe	SetSelecte
7 Fencing	Grading	Dozer	SetSelecte
7 Fencing	Grading	Grader	SetSelecte
7 Fencing	Grading	Roller	SetSelecte
7 Fencing	Hydroseeding	Hydroseeder	SetSelecte
7 Fencing	Hydroseeding	Off-Road Truck	SetSelecte
7 Fencing	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Other General Equipment	SetSelecte
7 Fencing		Pickup Truck	SetSelecte
7 Fencing	Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsoil Placement	Pumps	SetSelecte
7 Fencing		Tractors/Loader/Backhoe	SetSelecte
7 Fencing		Dozer	SetSelecte
7 Fencing	Topsoil Placement Topsoil Placement	Dump Truck	SetSelecte
7 Fencing		Pickup Truck	SetSelecte
7 Taxiways	Asphalt Placement	Asphalt Paver	SetSelecte
7 Taxiways	Asphalt Placement	Dump Truck	SetSelecte
7 Taxiways	Asphalt Placement	Other General Equipment	SetSelecte
7 Taxiways	Asphalt Placement	Pickup Truck	SetSelecte
7 Taxiways	Asphalt Placement Asphalt Placement	Roller	SetSelecte
7 Taxiways		Skid Steer Loader	SetSelecte
7 Taxiways 7 Taxiways	Asphalt Placement Concrete Placement	Surfacing Equipment (Grooving) Air Compressor	SetSelecte SetSelecte
7 Taxiways	Concrete Placement Concrete Placement Concrete Placement	Concrete Saws	SetSelecte
7 Taxiways		Concrete Truck	SetSelecte
7 Taxiways		Other General Equipment	SetSelecte
7 Taxiways	Concrete Placement Concrete Placement	Pickup Truck	SetSelecte
7 Taxiways		Rubber Tired Loader	SetSelecte
7 Taxiways	Concrete Placement	Slip Form Paver	SetSelecte
7 Taxiways	Concrete Placement	Surfacing Equipment (Grooving)	SetSelecte
7 Taxiways	Drainage - 24 inch SICPP	Dozer	SetSelecte
7 Taxiways	Drainage - 24 inch SICPP	Dump Truck	SetSelecte
7 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Excavator	SetSelecte
7 Taxiways		Loader	SetSelecte
7 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Other General Equipment	SetSelecte
7 Taxiways		Pickup Truck	SetSelecte
7 Taxiways		Roller	SetSelecte
7 Taxiways 7 Taxiways 7 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Dump Truck Loader	SetSelecte SetSelecte
7 Taxiways	Drainage - 6 inch Perforated Underdrain	Other General Equipment	SetSelecte
7 Taxiways	Drainage - 6 inch Perforated Underdrain	Pickup Truck	SetSelecte
7 Taxiways	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	SetSelecte
7 Taxiways	Dust Control	Water Truck	SetSelecte
7 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dozer	SetSelecte
7 Taxiways		Dump Truck (12 cy)	SetSelecte
7 Taxiways	Excavation (Borrow) Excavation (Borrow)	Pickup Truck	SetSelecte
7 Taxiways		Roller	SetSelecte
7 Taxiways 7 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dozer Dump Truck (12 cy) Excavator	SetSelecte SetSelecte SetSelecte
7 Taxiways 7 Taxiways 7 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill) Excavation (Cut to Fill)	Pickup Truck Roller	SetSelecte SetSelecte
7 Taxiways 7 Taxiways 7 Taxiways	Excavation (Cut to Fill) Excavation (Topsoil Stripping)	Scraper Dozer	SetSelecte SetSelecte
7 Taxiways	Fencing	Concrete Truck	SetSelecte
7 Taxiways	Fencing	Dump Truck	SetSelecte
7 Taxiways	Fencing	Other General Equipment	SetSelecte
7 Taxiways	Fencing	Pickup Truck	SetSelecte
7 Taxiways 7 Taxiways 7 Taxiways	Fencing Fencing Grading	Skid Steer Loader Tractors/Loader/Backhoe	SetSelecte SetSelecte
7 Taxiways	Grading	Dozer	SetSelecte
7 Taxiways	Grading	Grader	SetSelecte
7 Taxiways	Grading	Roller	SetSelecte
7 Taxiways 7 Taxiways 7 Taxiways	Hydroseeding Hydroseeding	колег Hydroseeder Off-Road Truck	SetSelecte SetSelecte
7 Taxiways	Lighting Lighting	Dump Truck	SetSelecte
7 Taxiways		Loader	SetSelecte
7 Taxiways	Lighting	Other General Equipment	SetSelecte
7 Taxiways	Lighting	Pickup Truck	SetSelecte
7 Taxiways 7 Taxiways 7 Taxiways	Lighting Lighting Markings	Skid Steer Loader Tractors/Loader/Backhoe	SetSelecte SetSelecte SetSelecte
7 Taxiways	Markings	Flatbed Truck	SetSelecte
7 Taxiways	Markings	Other General Equipment	SetSelecte
7 Taxiways	Markings	Pickup Truck	SetSelecte
7 Taxiways 7 Taxiways 7 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Other General Equipment Pickup Truck	SetSelecte SetSelecte
7 Taxiways	Soil Erosion/Sediment Control	Pumps	SetSelecte
7 Taxiways	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	SetSelecte
7 Taxiways	Subbase Placement	Dozer	SetSelecte
7 Taxiways	Subbase Placement	Dump Truck (12 cy)	SetSelecte
7 Taxiways	Subbase Placement	Pickup Truck	SetSelecte
7 Taxiways	Subbase Placement	Roller	SetSelecte
7 Taxiways	Topsoil Placement	Dozer	SetSelecte
7 Taxiways	Topsoil Placement	Dump Truck	SetSelecte
7 Taxiways	Topsoil Placement	Pickup Truck	SetSelecte
8 Demolition - Concrete 8 Demolition - Concrete	Concrete Demolition Concrete Demolition	Excavator with Bucket Excavator with Hoe Ram	SetSelecte SetSelecte
8 Demolition - Concrete	Concrete Demolition	Pickup Truck	SetSelecte
8 Taxiways	Asphalt Placement	Asphalt Paver	SetSelecte
8 Taxiways	Asphalt Placement	Dump Truck	SetSelecte
8 Taxiways	Asphalt Placement	Other General Equipment	SetSelecte
8 Taxiways	Asphalt Placement	Pickup Truck	SetSelecte
8 Taxiways	Asphalt Placement	Roller	SetSelecte
8 Taxiways	Asphalt Placement	Skid Steer Loader	SetSelecte
8 Taxiways 8 Taxiways 8 Taxiways	Asphalt Placement Concrete Placement	Surfacing Equipment (Grooving) Air Compressor	SetSelecte SetSelecte
8 Taxiways	Concrete Placement	Concrete Saws	SetSelecte
8 Taxiways	Concrete Placement	Concrete Truck	SetSelecte
8 Taxiways	Concrete Placement	Other General Equipment	SetSelecte
8 Taxiways	Concrete Placement	Pickup Truck	SetSelecte
8 Taxiways	Concrete Placement Concrete Placement	Rubber Tired Loader	SetSelecte
8 Taxiways		Slip Form Paver	SetSelecte
8 Taxiways	Concrete Placement Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Surfacing Equipment (Grooving)	SetSelecte
8 Taxiways		Dozer	SetSelecte
8 Taxiways		Dump Truck	SetSelecte
8 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Excavator	SetSelecte
8 Taxiways		Loader	SetSelecte
8 Taxiways	Drainage - 24 inch SICPP	Other General Equipment	SetSelecte
8 Taxiways	Drainage - 24 inch SICPP	Pickup Truck	SetSelecte
8 Taxiways	Drainage - 24 inch SICPP Drainage - 6 inch Perforated Underdrain	Roller	SetSelecte
8 Taxiways		Dump Truck	SetSelecte
8 Taxiways	Drainage - 6 inch Perforated Underdrain	Loader	SetSelecte
8 Taxiways	Drainage - 6 inch Perforated Underdrain	Other General Equipment	SetSelecte
8 Taxiways	Drainage - 6 inch Perforated Underdrain	Pickup Truck	SetSelecte
8 Taxiways 8 Taxiways 8 Taxiways	Drainage - 6 inch Perforated Underdrain Dust Control	Tractors/Loader/Backhoe Water Truck	SetSelecte SetSelecte
8 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dozer	SetSelecte
8 Taxiways		Dump Truck (12 cy)	SetSelecte
8 Taxiways	Excavation (Borrow) Excavation (Borrow)	Pickup Truck	SetSelecte
8 Taxiways		Roller	SetSelecte
8 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dozer	SetSelecte
8 Taxiways		Dump Truck (12 cy)	SetSelecte
8 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill) Excavation (Cut to Fill)	Excavator	SetSelecte
8 Taxiways		Pickup Truck	SetSelecte
8 Taxiways		Roller	SetSelecte
8 Taxiways 8 Taxiways 8 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill) Excavation (Topsoil Stripping)	Scraper Dozer	SetSelecte SetSelecte
8 Taxiways	Fencing Fencing	Concrete Truck	SetSelecte
8 Taxiways		Dump Truck	SetSelecte
8 Taxiways	Fencing	Other General Equipment	SetSelecte
8 Taxiways	Fencing	Pickup Truck	SetSelecte
8 Taxiways	Fencing Fencing Grading	Skid Steer Loader	SetSelecte
8 Taxiways		Tractors/Loader/Backhoe	SetSelecte
8 Taxiways 8 Taxiways 8 Taxiways	Grading Grading Grading	Dozer Grader Roller	SetSelecte SetSelecte
8 Taxiways	Grading Hydroseeding Hydroseeding	Roller	SetSelecte
8 Taxiways		Hydroseeder	SetSelecte
8 Taxiways		Off-Road Truck	SetSelecte
8 Taxiways	Hydroseeding	Off-Road Truck	SetSelecte
8 Taxiways	Lighting	Dump Truck	SetSelecte
8 Taxiways	Lighting	Loader	SetSelecte
8 Taxiways	Lighting	Other General Equipment	SetSelecte
8 Taxiways	Lighting	Pickup Truck	SetSelecte
8 Taxiways	Lighting	Skid Steer Loader	SetSelecte
8 Taxiways	Lighting	Tractors/Loader/Backhoe	SetSelecte
8 Taxiways 8 Taxiways 8 Taxiways	Markings Markings	Flatbed Truck Other General Equipment	SetSelecte SetSelecte
8 Taxiways	Markings Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pickup Truck	SetSelecte
8 Taxiways		Other General Equipment	SetSelecte
8 Taxiways		Pickup Truck	SetSelecte
8 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pickup Truck	SetSelecte
8 Taxiways		Pumps	SetSelecte
8 Taxiways		Tractors/Loader/Backhoe	SetSelecte
8 Taxiways	Subbase Placement	Dozer	SetSelecte
8 Taxiways	Subbase Placement	Dump Truck (12 cy)	SetSelecte
8 Taxiways	Subbase Placement	Pickup Truck	SetSelecte
8 Taxiways	Subbase Placement	Roller	SetSelecte
8 Taxiways	Topsoil Placement	Dozer	SetSelecte
8 Taxiways	Topsoil Placement	Dump Truck	SetSelecte
8 Taxiways	Topsoil Placement	Pickup Truck	SetSelecte
elections 1 Demolition - Asphalt 1 Demolition - Asphalt 1 Demolition - Asphalt	Asphalt Demolition Asphalt Demolition Asphalt Demolition	Dozer Excavator Pickup Truck	Diesel Diesel Diesel
1 Demolition - Concrete	Concrete Demolition	Excavator with Bucket Excavator with Hoe Ram	Diesel
1 Demolition - Concrete	Concrete Demolition		Diesel
1 Demolition - Concrete	Concrete Demolition	Pickup Truck	Diesel
1 Taxiways	Asphalt Placement	Asphalt Paver	Diesel
1 Taxiways	Asphalt Placement	Dump Truck	Diesel
1 Taxiways	Asphalt Placement	Other General Equipment	Diesel
1 Taxiways	Asphalt Placement Asphalt Placement	Pickup Truck	Diesel
1 Taxiways		Roller	Diesel
1 Taxiways	Asphalt Placement Asphalt Placement Concrete Placement	Skid Steer Loader	Diesel
1 Taxiways		Surfacing Equipment (Grooving)	Diesel
1 Taxiways		Air Compressor	Diesel
1 Taxiways	Concrete Placement Concrete Placement Concrete Placement	Air Compressor	Diesel
1 Taxiways		Concrete Saws	Diesel
1 Taxiways		Concrete Truck	Diesel
	Concrete Placement	Other General Equipment	Diesel
1 Taxiways 1 Taxiways	Concrete Placement	Pickup Truck	Diesel

1-B-5

1 Taxiways 1 Taxiways	Concrete Placement Drainage - 24 inch SICPP	Surfacing Equipment (Grooving) Diese Dozer Diese
1 Taxiways 1 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Dump Truck Diese Excavator Diese
1 Taxiways	Drainage - 24 inch SICPP	Loader Diese
1 Taxiways 1 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Other General Equipment Diese Pickup Truck Diese
1 Taxiways 1 Taxiways	Drainage - 24 inch SICPP Drainage - 6 inch Perforated Underdrain	Roller Diese Dump Truck Diese
1 Taxiways 1 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Loader Diese Other General Equipment Diese
1 Taxiways 1 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Pickup Truck Diese Tractors/Loader/Backhoe Diese
1 Taxiways 1 Taxiways	Dust Control Excavation (Borrow)	Water Truck Diese Dozer Diese
1 Taxiways 1 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dump Truck (12 cy) Dies Pickup Truck Dies
1 Taxiways	Excavation (Borrow)	Roller Diese Dozer Diese
1 Taxiways 1 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dump Truck (12 cy) Diese
1 Taxiways 1 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Excavator Diese Pickup Truck Diese
1 Taxiways 1 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Roller Diese Scraper Diese
1 Taxiways 1 Taxiways	Excavation (Topsoil Stripping) Fencing	Dozer Diese Concrete Truck Diese
1 Taxiways 1 Taxiways	Fencing Fencing	Dump Truck Diese Other General Equipment Diese
1 Taxiways 1 Taxiways	Fencing Fencing	Pickup Truck Diese Skid Steer Loader Diese
1 Taxiways	Fencing	Tractors/Loader/Backhoe Diese Dozer Diese
1 Taxiways 1 Taxiways	Grading Grading	Grader Diese
1 Taxiways 1 Taxiways	Grading Hydroseeding	Roller Diese Hydroseeder Diese
1 Taxiways 1 Taxiways	Hydroseeding Lighting	Off-Road Truck Diese Dump Truck Diese
1 Taxiways 1 Taxiways	Lighting Lighting	Loader Diese Other General Equipment Diese
1 Taxiways 1 Taxiways	Lighting Lighting	Pickup Truck Dies Skid Steer Loader Dies
1 Taxiways 1 Taxiways	Lighting Markings	Tractors/Loader/Backhoe Diese Flatbed Truck Diese
1 Taxiways	Markings	Other General Equipment Diese
1 Taxiways 1 Taxiways	Markings Soil Erosion/Sediment Control	Other General Equipment Diese
1 Taxiways 1 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pickup Truck Diese Pumps Diese
1 Taxiways 1 Taxiways	Soil Erosion/Sediment Control Subbase Placement	Tractors/Loader/Backhoe Diese Dozer Diese
1 Taxiways 1 Taxiways	Subbase Placement Subbase Placement	Dump Truck (12 cy) Diesi Pickup Truck Diesi
1 Taxiways 1 Taxiways	Subbase Placement Topsoil Placement	Roller Dies Dozer Dies
1 Taxiways 1 Taxiways	Topsoil Placement Topsoil Placement	Dump Truck Diesc Pickup Truck Diesc
2 Runway Markings	Marking Removal	Pickup Truck Diese
2 Runway Markings 2 Runway Markings	Marking Removal Marking Removal	Pressure Washer Diese Sweepers/Scrubbers Diese
2 Runway Markings 2 Runway Markings	Marking Removal Markings	Water Truck Diese Flatbed Truck Diese
2 Runway Markings 2 Runway Markings	Markings Markings	Other General Equipment Diese Pickup Truck Diese
2 Taxiways 2 Taxiways	Asphalt Placement Asphalt Placement	Asphalt Paver Diese Dump Truck Diese
2 Taxiways 2 Taxiways	Asphalt Placement Asphalt Placement	Other General Equipment Diese Pickup Truck Diese
2 Taxiways 2 Taxiways 2 Taxiways	Asphalt Placement Asphalt Placement	Roller Diesc Skid Steer Loader Diesc
2 Taxiways	Asphalt Placement	Surfacing Equipment (Grooving) Diese
2 Taxiways 2 Taxiways	Concrete Placement Concrete Placement	Air Compressor Diese Concrete Saws Diese
2 Taxiways 2 Taxiways	Concrete Placement Concrete Placement	Concrete Truck Diese Other General Equipment Diese
2 Taxiways 2 Taxiways	Concrete Placement Concrete Placement	Pickup Truck Diese Rubber Tired Loader Diese
2 Taxiways 2 Taxiways	Concrete Placement Concrete Placement	Slip Form Paver Diese Surfacing Equipment (Grooving) Diese
2 Taxiways 2 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Dozer Dies Dump Truck Dies
2 Taxiways 2 Taxiways 2 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Excavator Diese Loader Diese
2 Taxiways	Drainage - 24 inch SICPP	Other General Equipment Diese
2 Taxiways 2 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Pickup Truck Diese Roller Diese
2 Taxiways 2 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Dump Truck Diese Loader Diese
2 Taxiways 2 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Other General Equipment Diese Pickup Truck Diese
2 Taxiways 2 Taxiways	Drainage - 6 inch Perforated Underdrain Dust Control	Tractors/Loader/Backhoe Diese Water Truck Diese
2 Taxiways 2 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dozer Diese Dump Truck (12 cy) Diese
2 Taxiways	Excavation (Borrow)	Pickup Truck Diese
2 Taxiways 2 Taxiways	Excavation (Borrow) Excavation (Cut to Fill)	Roller Diese Dozer Diese
2 Taxiways 2 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dump Truck (12 cy) Diese Excavator Diese
2 Taxiways 2 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Pickup Truck Diese Roller Diese
2 Taxiways 2 Taxiways	Excavation (Cut to Fill) Excavation (Topsoil Stripping)	Scraper Dies Dozer Dies
2 Taxiways 2 Taxiways	Fencing Fencing	Concrete Truck Diese Dump Truck Diese
2 Taxiways 2 Taxiways	Fencing Fencing	Other General Equipment Diesc Pickup Truck Diesc
2 Taxiways	Fencing	Skid Steer Loader Diese
2 Taxiways 2 Taxiways	Fencing Grading	Tractors/Loader/Backhoe Diese Dozer Diese
2 Taxiways 2 Taxiways	Grading Grading	Grader Diese Roller Diese
2 Taxiways 2 Taxiways	Hydroseeding Hydroseeding	Hydroseeder Diese Off-Road Truck Diese
2 Taxiways 2 Taxiways	Lighting Lighting	Dump Truck Dies Loader Dies
2 Taxiways 2 Taxiways	Lighting Lighting	Other General Equipment Diese Pickup Truck Diese
2 Taxiways	Lighting	Skid Steer Loader Diese
2 Taxiways 2 Taxiways 2 Taxiways	Lighting Markings Markings	Tractors/Loader/Backhoe Diese Flatbed Truck Diese Other General Equipment Diese
2 Taxiways 2 Taxiways	Markings Markings	Other General Equipment Diese Pickup Truck Diese
2 Taxiways 2 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Other General Equipment Diese Pickup Truck Diese
2 Taxiways 2 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pumps Dies Tractors/Loader/Backhoe Dies
2 Taxiways 2 Taxiways	Subbase Placement Subbase Placement	Dozer Dies Dump Truck (12 cy) Dies
2 Taxiways 2 Taxiways	Subbase Placement Subbase Placement	Pickup Truck Diese Roller Diese
2 Taxiways 2 Taxiways 2 Taxiways	Topsoil Placement Topsoil Placement	Dozer Diese Dump Truck Diese
2 Taxiways 2 Taxiways 3 Demolition - Asphalt	Topsoil Placement Asphalt Demolition	Pickup Truck Diese Pickup Truck Diese Dozer Diese
3 Demolition - Asphalt	Asphalt Demolition	Excavator Diese
3 Demolition - Asphalt 3 Demolition - Concrete	Asphalt Demolition Concrete Demolition	Pickup Truck Diese Excavator with Bucket Diese
3 Demolition - Concrete 3 Demolition - Concrete	Concrete Demolition Concrete Demolition	Excavator with Hoe Ram Diese Pickup Truck Diese
3 NAVAIDS 3 NAVAIDS	Precision Approach Path Indicator (PAPI) Precision Approach Path Indicator (PAPI)	Air Compressor Diese Dump Truck Diese
3 NAVAIDS 3 NAVAIDS	Precision Approach Path Indicator (PAPI) Precision Approach Path Indicator (PAPI)	Other General Equipment Diese Pickup Truck Diese
3 NAVAIDS 3 NAVAIDS	Precision Approach Path Indicator (PAPI) Precision Approach Path Indicator (PAPI)	Skid Steer Loader Diess Tractors/Loader/Backhoe Diess
3 Taxiways 3 Taxiways	Asphalt Placement Asphalt Placement	Asphalt Paver Diese Dump Truck Diese
3 Taxiways	Asphalt Placement Asphalt Placement Asphalt Placement	Other General Equipment Diese
3 Taxiways 3 Taxiways	Asphalt Placement	Roller Diese
3 Taxiways 3 Taxiways	Asphalt Placement Asphalt Placement	Skid Steer Loader Diese Surfacing Equipment (Grooving) Diese
3 Taxiways 3 Taxiways	Concrete Placement Concrete Placement	Air Compressor Diese Concrete Saws Diese
3 Taxiways 3 Taxiways	Concrete Placement Concrete Placement	Concrete Truck Diese Other General Equipment Diese
3 Taxiways 3 Taxiways	Concrete Placement Concrete Placement	Pickup Truck Diese Rubber Tired Loader Diese
3 Taxiways 3 Taxiways 3 Taxiways	Concrete Placement Concrete Placement	Slip Form Paver Diese Surfacing Equipment (Grooving) Diese
3 Taxiways	Drainage - 24 inch SICPP	Dozer Diese
3 Taxiways 3 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Dump Truck Diese Excavator Diese
3 Taxiways 3 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Loader Diese Other General Equipment Diese
3 Taxiways 3 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Pickup Truck Diese Roller Diese
3 Taxiways 3 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Dump Truck Dies Loader Dies
3 Taxiways 3 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Other General Equipment Diese Pickup Truck Diese
3 Taxiways 3 Taxiways 3 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain Dust Control	Tractors/Loader/Backhoe Diese Water Truck Diese
3 Taxiways	Excavation (Borrow)	Dozer Diese
3 Taxiways 3 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dump Truck (12 cy) Diese Pickup Truck Diese
3 Taxiways 3 Taxiways	Excavation (Borrow) Excavation (Cut to Fill)	Roller Diese Dozer Diese
3 Taxiways 3 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dump Truck (12 cy) Diese Excavator Diese

Faxiways Faxiways Faxiways	Excavation (Cut to Fill) Excavation (Cut to Fill) Excavation (Cut to Fill)	Pickup Truck Roller Scraper	Die Die Die
Taxiways Faxiways Faxiways	Excavation (Cut to Fill) Excavation (Topsoil Stripping) Fencing	Dozer Concrete Truck	Die
Faxiways Faxiways	Fencing Fencing	Dump Truck Other General Equipment	Die
Faxiways Faxiways	Fencing Fencing	Pickup Truck Skid Steer Loader	Die
Faxiways Faxiways	Fencing Grading	Tractors/Loader/Backhoe Dozer	Die
Faxiways Faxiways	Grading Grading	Grader Roller	Die
Faxiways Faxiways	Hydroseeding Hydroseeding	Hydroseeder Off-Road Truck	Die
Faxiways Faxiways	Lighting Lighting	Dump Truck Loader	Die
Faxiways Faxiways	Lighting Lighting	Other General Equipment Pickup Truck	Die
Faxiways .	Lighting	Skid Steer Loader	Die
Faxiways Faxiways	Lighting Markings	Tractors/Loader/Backhoe Flatbed Truck	Die
Гахіways Гахіways	Markings Markings	Other General Equipment Pickup Truck	Die Die
Faxiways Faxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Other General Equipment Pickup Truck	Die Die
Faxiways Faxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pumps Tractors/Loader/Backhoe	Die Die
Faxiways Faxiways	Subbase Placement Subbase Placement	Dozer Dump Truck (12 cy)	Die
Faxiways	Subbase Placement Subbase Placement	Pickup Truck Roller	Die
Faxiways Faxiways	Topsoil Placement	Dozer	Die
Гахіways Гахіways	Topsoil Placement Topsoil Placement	Dump Truck Pickup Truck	Die Die
Demolition - Asphalt Demolition - Asphalt	Asphalt Demolition Asphalt Demolition	Dozer Excavator	Die Die
Demolition - Asphalt Demolition - Concrete	Asphalt Demolition Concrete Demolition	Pickup Truck Excavator with Bucket	Die Die
Demolition - Concrete Demolition - Concrete	Concrete Demolition Concrete Demolition	Excavator with Hoe Ram	Die
Faxiways	Asphalt Placement	Asphalt Paver	Die
Faxiways Faxiways	Asphalt Placement Asphalt Placement	Dump Truck Other General Equipment	Die
Гахіways Гахіways	Asphalt Placement Asphalt Placement	Pickup Truck Roller	Die Die
Faxiways Faxiways	Asphalt Placement Asphalt Placement	Skid Steer Loader Surfacing Equipment (Grooving)	Die Die
Faxiways Faxiways	Concrete Placement Concrete Placement	Air Compressor Concrete Saws	Die
Faxiways Faxiways	Concrete Placement Concrete Placement	Concrete Truck Other General Equipment	Die
Faxiways	Concrete Placement	Pickup Truck	Die
Faxiways Faxiways	Concrete Placement Concrete Placement	Rubber Tired Loader Slip Form Paver	Die
Гахіways Гахіways	Concrete Placement Drainage - 24 inch SICPP	Surfacing Equipment (Grooving) Dozer	Die
Taxiways Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Dump Truck Excavator	Di:
Faxiways Faxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Loader Other General Equipment	Die
Faxiways Faxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Pickup Truck Roller	Die
Faxiways	Drainage - 6 inch Perforated Underdrain	Dump Truck	Die
Faxiways Faxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Loader Other General Equipment	Die
Гахіways Гахіways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Pickup Truck Tractors/Loader/Backhoe	Di:
Faxiways Faxiways	Dust Control Excavation (Borrow)	Water Truck Dozer	Di Di
Faxiways Faxiways	Excavation (Borrow) Excavation (Borrow)	Dump Truck (12 cy) Pickup Truck	Die Die
Taxiways	Excavation (Borrow) Excavation (Cut to Fill)	Roller	Die
Faxiways Faxiways	Excavation (Cut to Fill)	Dump Truck (12 cy)	Die
「axiways 「axiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Excavator Pickup Truck	Die
Taxiways Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Roller Scraper	Die Die
Гахіways Гахіways	Excavation (Topsoil Stripping) Fencing	Dozer Concrete Truck	Die Die
Faxiways Faxiways	Fencing	Dump Truck	Die
Faxiways	Fencing Fencing	Other General Equipment Pickup Truck	Die
Гахіways Гахіways	Fencing Fencing	Skid Steer Loader Tractors/Loader/Backhoe	Die Die
Faxiways Faxiways	Grading Grading	Dozer Grader	Di Di
Faxiways Faxiways	Grading Hydroseeding	Roller Hydroseeder	Die Die
Taxiways	Hydroseeding Lighting	Off-Road Truck	Die
Faxiways Faxiways	Lighting	Dump Truck Loader	Di
Faxiways Faxiways	Lighting Lighting	Other General Equipment Pickup Truck	Di:
Faxiways Faxiways	Lighting Lighting	Skid Steer Loader Tractors/Loader/Backhoe	Di Di
Faxiways Faxiways	Markings Markings	Flatbed Truck Other General Equipment	Die Die
Faxiways Faxiways	Markings Soil Erosion/Sediment Control	Pickup Truck Other General Equipment	Die
Taxiways	Soil Erosion/Sediment Control	Pickup Truck	Die
Faxiways Faxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pumps Tractors/Loader/Backhoe	Die
īaxiways īaxiways	Subbase Placement Subbase Placement	Dozer Dump Truck (12 cy)	Di Di
「axiways 「axiways	Subbase Placement Subbase Placement	Pickup Truck Roller	Di:
「axiways 「axiways	Topsoil Placement Topsoil Placement	Dozer Dump Truck	Di
Taxiways	Topsoil Placement	Pickup Truck	Di
Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story	Concrete Foundations	Backhoe Concrete Ready Mix Trucks	Di:
Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story		Fork Truck Tool Truck	Di Di
Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story	Concrete Foundations Construction Mob & Layout	Tractor Trailer- Material Delivery Survey Crew Trucks	Die Die
	Construction Mob & Layout	Tractor Trailers Temp Fac. Fork Truck	Die
Building - 10000 sqft- 1 story	Exterior Wall Framing	Man Lift Tool Truck	Die
Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story	Exterior Wall Framing	Tractor Trailer- Material Delivery	Die
Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story	Interior Build-Out/ Finishes	Fork Truck Man Lift	Die
Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story	Interior Build-Out/ Finishes	Tool Truck Tractor Trailer- Material Delivery	Die
Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story	Roofing	High Lift Man Lift (Fascia Construction)	Di Di
Building - 10000 sqft- 1 story	Roofing	Material Deliveries Tractor Trailer- Material Delivery	Die
Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story	Security & Safety Systems	High Lift Tool Truck	Die
Building - 10000 sqft- 1 story	Structural Steel Erection	40 Ton Crane	Die
Building - 10000 sqft- 1 story Building - 10000 sqft- 1 story	Structural Steel Erection	Fork Truck Tool Truck	Die
Building - 10000 sqft- 1 story NAVAIDS	Instrument Landing System (ILS) Localizer	Tractor Trailer- Steel Deliveries Air Compressor	Die Die
IAVAIDS IAVAIDS	Instrument Landing System (ILS) Localizer Instrument Landing System (ILS) Localizer	Crane Dozer	Die Die
NAVAIDS NAVAIDS	Instrument Landing System (ILS) Localizer Instrument Landing System (ILS) Localizer Instrument Landing System (ILS) Localizer	Dump Truck Excavator	Di
NAVAIDS	Instrument Landing System (ILS) Localizer	Other General Equipment	Die
NAVAIDS	Instrument Landing System (ILS) Localizer Instrument Landing System (ILS) Localizer	Pickup Truck Skid Steer Loader	Die
NAVAIDS Rehabilitate Runway	Instrument Landing System (ILS) Localizer Asphalt Placement	Tractors/Loader/Backhoe Asphalt Paver	Die
ehabilitate Runway ehabilitate Runway	Asphalt Placement Asphalt Placement	Dump Truck Other General Equipment	Di Di
ehabilitate Runway ehabilitate Runway	Asphalt Placement Asphalt Placement	Pickup Truck Roller	Di
Rehabilitate Runway	Asphalt Placement Asphalt Placement Asphalt Placement	Skid Steer Loader Surfacing Equipment (Grooving)	Die
Rehabilitate Runway Rehabilitate Runway	Cold Milling	Cold Planer	Die
Rehabilitate Runway Rehabilitate Runway	Cold Milling Cold Milling	Dump Truck Pickup Truck	Die
tehabilitate Runway tehabilitate Runway	Cold Milling Cold Milling	Sweepers Water Truck	Die Die
Rehabilitate Runway Rehabilitate Runway	Concrete Demolition Concrete Demolition	Concrete Saws Dump Truck	Die
Rehabilitate Runway	Concrete Demolition	Excavator	Die
Rehabilitate Runway Rehabilitate Runway	Concrete Demolition Concrete Demolition	Hydralic Hammer Other General Equipment	Die
Rehabilitate Runway Rehabilitate Runway	Concrete Demolition Concrete Placement	Pickup Truck Air Compressor	Die Die
Rehabilitate Runway Rehabilitate Runway	Concrete Placement Concrete Placement	Concrete Saws Concrete Truck	Die
Rehabilitate Runway	Concrete Placement	Other General Equipment	Die
Rehabilitate Runway Rehabilitate Runway	Concrete Placement Concrete Placement	Pickup Truck Rubber Tired Loader	Die
Rehabilitate Runway Rehabilitate Runway	Concrete Placement Concrete Placement	Slip Form Paver Surfacing Equipment (Grooving)	Die Die
	Dust Control Excavation (Cut to Fill) (Assume 20% reconstruction)	Water Truck Dozer	Die
Rehabilitate Runway Rehabilitate Runway			
Rehabilitate Runway Rehabilitate Runway	Excavation (Cut to Fill) (Assume 20% reconstruction)	Dump Truck (12 cy) Excavator	Die
Rehabilitate Runway		Dump Truck (12 cy) Excavator Pickup Truck Roller	Di Di Di Di

Diesel Diesel Diesel Diesel Grading Hydroseeder Off-Road Truck 6 Rehabilitate Runway Lighting Dump Truck 6 Rehabilitate Runway Lighting Loader Diesel 6 Rehabilitate Runway Lighting Other General Equipment Diesel 6 Rehabilitate Runway Lighting Pickup Truck Diesel 6 Rehabilitate Runway Lighting Skid Steer Loader Diesel 6 Rehabilitate Runway Lighting Markings Tractors/Loader/Backhoe Diesel 6 Rehabilitate Runway Flatbed Truck 6 Rehabilitate Runwa 6 Rehabilitate Runwa Pickup Truck Markings
Sealing Random Cracks
Soil Erosion/Sediment Control
Soil Erosion/Sediment Control
Soil Erosion/Sediment Control
Soil Erosion/Sediment Control
Soil Erosion/Sediment Control Pickup Truck
Crack Cleaner
Crack Filler (Trailer Mounted)
Flatbed Truck
Other General Equipment
Pickup Truck
Other General Equipment Diesel Diesel Diesel Diesel Diesel Diesel 6 Rehabilitate Runway Pickup Truck 6 Rehabilitate Runway 6 Rehabilitate Runway Diesel Diesel Pumps Tractors/Loader/Backhoe Soil Erosion/Sediment Control 6 Rehabilitate Runway Diesel 6 Rehabilitate Runway Subbase Placement Dozer Diesel 6 Rehabilitate Runway Subbase Placement Dump Truck (12 cy) Diesel 6 Rehabilitate Runway Subbase Placement Pickup Truck Diesel 6 Rehabilitate Runway Subbase Placement Roller Dozer Diesel 6 Rehabilitate Runway Topsoil Placement Topsoil Placement Diesel 6 Rehabilitate Runway Dump Truck Diesel Topsoil Placement
Topsoil Placement
Asphalt Placement
Clearing and Grubbi 6 Rehabilitate Runwa Pickup Truck Asphalt Pave 6 Service Road Asphalt Pawer
Dump Truck
Other General Equipment
Pickup Truck
Roller
Skid Steer Loader
Surfacing Equipment (Grooving) Clearing and Grubbing Clearing and Grubbing 6 Service Road 6 Service Road Chain Saw Chipper/Stump Grinde 6 Service Road Clearing and Grubbing Pickup Truck Diesel 6 Service Road Concrete Placement Air Compressor Diesel 6 Service Road Concrete Placement Concrete Saws Diesel 6 Service Road Concrete Placement Concrete Truck Diesel 6 Service Road Concrete Placement Other General Equipment Diesel 6 Service Road Concrete Placement Pickup Truck Concrete Placemen Rubber Tired Loade Concrete Placemen Slip Form Paver Concrete Placement
Concrete Placement
Drainage - 24 inch SICPP
Drainage - 6 inch Perforated Underdrain
Drainage - 6 inch Perforated Underdrain 6 Service Road Slip Form Paver
Surfacing Equipment (Groov
Dozer
Dump Truck
Excavator
Loader
Other General Equipment
Pickup Truck
Roller Diesel Diesel Diesel Diesel Diesel Diesel 6 Service Road 6 Service Road Roller Dump Truck Diesel Diesel 6 Service Road Loader Other General Equipment Diesel 6 Service Road Diesel Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain Dust Control 6 Service Road Pickup Truck Diesel Tractors/Loader/Backhoe 6 Service Road Diesel 6 Service Road 6 Service Road Water Truck Diesel Excavation (Borrow) Dozer Diesel Dozer
Dump Truck (12 cy)
Pickup Truck
Roller
Dozer
Dump Truck (12 cy)
Excavator
Pickup Truck
Roller
Scraper 6 Service Road 6 Service Road Excavation (Borrow) Excavation (Borrow) 6 Service Road Excavation (Borrow)
Excavation (Cut to Fill)
Excavation (Cut to Fill) Diesel Diesel Diesel Diesel Diesel Diesel 6 Service Road 6 Service Road Excavation (Cut to Fill) Scraper Dozer Excavation (Topsoil Stripping) 6 Service Road Fencing Concrete Truck Diesel 6 Service Road Fencing Dump Truck Diesel 6 Service Road Fencing Other General Equi Diesel 6 Service Road Fencing Pickup Truck Diesel Skid Steer Loade 6 Service Road Fencing Diesel 6 Service Road Tractors/Loader/Backhoe 6 Service Road Grading Dozer Diesel Grading
Grading
Grading
Hydroseeding
Hydroseeding
Markings
Markings
Markings
Soil Erosion/Sediment Control
Soil Erosion/Sediment Control 6 Service Road 6 Service Road Roller Roller
Hydroseder
Off-Road Truck
Flatbed Truck
Other General Equipment
Pickup Truck
Other General Equipment
Pickup Truck
Pumps 6 Service Road Diesel Diesel Diesel Diesel Diesel Diesel 6 Service Road 6 Service Road Soil Erosion/Sediment Control Soil Erosion/Sediment Control Diesel Diesel Pumps Tractors/Loader/Backhoe Soil Erosion/Sediment Contro 6 Service Road Diesel 6 Service Road Subbase Placement Dozer Diesel Dump Truck (12 cy) 6 Service Road Subbase Placement Diesel 6 Service Road Subbase Placement Pickup Truck Diesel 6 Service Road 6 Service Road Subbase Placement Roller Dozer Diesel Topsoil Placement Diesel Dozer
Dump Truck
Pickup Truck
Excavator with Bucket
Excavator with Hoe Ram
Pickup Truck
Chain Saw
Chipper/Stump Grinder
Pickup Truck
Dozer 6 Service Road 6 Service Road Topsoil Placement Topsoil Placement 6 Service Road
7 Demolition - Concrete
7 Demolition - Concrete
7 Demolition - Concrete
7 Fencing
7 Fencing
7 Fencing
7 Fencing
7 Fencing Topsoil Placement
Concrete Demolition
Concrete Demolition
Concrete Demolition
Clearing and Grubbing
Clearing and Grubbing
Clearing and Grubbing
Excavation (Cut to Fill)
Excavation (Cut to Fill) Diesel Diesel Diesel Diesel Diesel Diesel Dump Truck (12 cy) 7 Fencing 7 Fencing Excavation (Cut to Fill) Excavation (Cut to Fill) Pickup Truck 7 Fencing Excavation (Cut to Fill) Diesel 7 Fencing Excavation (Cut to Fill) Diesel Concrete Truck 7 Fencing Fencing Diesel 7 Fencing Fencing **Dump Truck** Diesel 7 Fencing Fencing Other General Equipment Diesel 7 Fencing Fencing Pickup Truck Fencing
Fencing
Grading
Grading
Grading
Hydroseeding
Hydroseeding
Hydroseeding
Soil Erosion/Sediment Control
Soil Erosion/Sediment Control
Soil Erosion/Sediment Control Tractors/Loader/Backho Tractors/Loader/Backhoe
Dozer
Grader
Roller
Hydroseeder
Off-Road Truck
Other General Equipment
Pickup Truck
Pumms 7 Fencing Diesel Diesel Diesel Diesel Diesel Diesel 7 Fencing 7 Fencing Diesel Diesel Pumps Tractors/Loader/Backhoe Soil Erosion/Sediment Contro 7 Fencing Diesel 7 Fencing Topsoil Placement Dozer Diesel Dump Truck 7 Fencing Topsoil Placement Diesel 7 Fencing Topsoil Placement Pickup Truck Diesel 7 Taxiway Asphalt Placement Asphalt Paver Diesel 7 Taxiway Asphalt Placement Dump Truck Diesel 7 Taxiway Asphalt Placement Other General Equipment Diesel Asphalt Placement Asphalt Placement 7 Taxiway 7 Taxiway Pickup Truck Roller 7 Taxiways
7 Taxiways Roller
Surfacing Equipment (Grooving)
Air Compressor
Concrete Saws
Concrete Truck
Other General Equipment Concrete Placement Concrete Placement Concrete Placemen Pickup Truck 7 Taxiway Concrete Placement Rubber Tired Loade Concrete Placement Slip Form Paver 7 Taxiways 7 Taxiways Concrete Placement Diesel Surfacing Equipment (Grooving) 7 Taxiways Drainage - 24 inch SICPP Dozer Diesel Drainage - 24 inch SICPP
Drainage - 6 inch Perforated Underdrain
Dust Control
Excavation (Borrow)
Excavation (Borrow)
Excavation (Borrow) 7 Taxiway Drainage - 24 inch SICPP **Dump Truck** Diesel 7 Taxiways Excavator Diesel 7 Taxiways Loader Other General Equipment 7 Taxiway: 7 Taxiway: Other General Equipment
Pickup Truck
Roller
Dump Truck
Loader
Other General Equipment
Pickup Truck
Tractors/Loader/Backhoe
Water Truck
Dozer 7 Taxiways
7 Taxiways Diesel Diesel Diesel Diesel Diesel Diesel Diesel Dozer Dump Truck (12 cy) Diesel Diesel Excavation (Borrow) Pickup Truck Diesel Excavation (Borrow) 7 Taxiways Roller Diesel Excavation (Cut to Fill) 7 Taxiways Dozer Diesel 7 Taxiways Excavation (Cut to Fill) Dump Truck (12 cy) Diesel 7 Taxiways Excavation (Cut to Fill) Excavator Diesel Excavator
Pickup Truck
Roller
Scraper
Dozer
Concrete Truck
Dump Truck
Other General Equi
Pickup Truck
Skid Steer Loader
Tractors/Loader/Ba Excavation (Cut to Fill) 7 Taxiways Diesel 7 Taxiways
7 Taxiways Excavation (Cut to Fill)
Excavation (Cut to Fill) Diesel Diesel Diesel Diesel Diesel Diesel Fencing Fencing Fencing Grading Tractors/Loader/Backhoe 7 Taxiways Grading Grader Diesel 7 Taxiways Grading Roller Diesel 7 Taxiways Hydrose Diesel 7 Taxiways Hydroseeding Off-Road Truck Diesel Lighting Lighting Lighting Lighting Lighting Lighting Lighting 7 Taxiways Dump Truck Diesel 7 Taxiways Other General Equipment 7 Taxiways Diesel 7 Taxiway Pickup Truck Skid Steer Loader

Tractors/Loader/Backhoe

7 Taxiways	Markings	Flatbed Truck	Diesel	
7 Taxiways 7 Taxiways 7 Taxiways	Markings Markings	Other General Equipment Pickup Truck	Diesel Diesel	
7 Taxiways	Soil Erosion/Sediment Control	Other General Equipment	Diesel	
7 Taxiways 7 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pickup Truck Pumps	Diesel Diesel	
7 Taxiways 7 Taxiways	Soil Erosion/Sediment Control Subbase Placement	Tractors/Loader/Backhoe Dozer	Diesel Diesel	
7 Taxiways 7 Taxiways	Subbase Placement Subbase Placement	Dump Truck (12 cy) Pickup Truck	Diesel Diesel	
7 Taxiways 7 Taxiways	Subbase Placement Topsoil Placement	Roller Dozer	Diesel Diesel	
7 Taxiways 7 Taxiways	Topsoil Placement Topsoil Placement	Dump Truck Pickup Truck	Diesel Diesel	
8 Demolition - Concrete	Concrete Demolition	Excavator with Bucket Excavator with Hoe Ram	Diesel	
8 Demolition - Concrete 8 Demolition - Concrete	Concrete Demolition Concrete Demolition	Pickup Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Asphalt Placement Asphalt Placement	Asphalt Paver Dump Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Asphalt Placement Asphalt Placement	Other General Equipment Pickup Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Asphalt Placement Asphalt Placement	Roller Skid Steer Loader	Diesel Diesel	
8 Taxiways 8 Taxiways	Asphalt Placement Concrete Placement	Surfacing Equipment (Groovin Air Compressor	ng) Diesel Diesel	
8 Taxiways 8 Taxiways	Concrete Placement Concrete Placement	Concrete Saws Concrete Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Concrete Placement Concrete Placement	Other General Equipment Pickup Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Concrete Placement Concrete Placement	Rubber Tired Loader Slip Form Paver	Diesel Diesel	
8 Taxiways	Concrete Placement	Surfacing Equipment (Groovin	ng) Diesel	
8 Taxiways 8 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Dozer Dump Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Excavator Loader	Diesel Diesel	
8 Taxiways 8 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Other General Equipment Pickup Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Drainage - 24 inch SICPP Drainage - 6 inch Perforated Underdrain	Roller Dump Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Loader Other General Equipment	Diesel Diesel	
8 Taxiways 8 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Pickup Truck Tractors/Loader/Backhoe	Diesel Diesel	
8 Taxiways 8 Taxiways	Dust Control Excavation (Borrow)	Water Truck Dozer	Diesel Diesel	
8 Taxiways	Excavation (Borrow)	Dump Truck (12 cy)	Diesel	
8 Taxiways 8 Taxiways	Excavation (Borrow) Excavation (Borrow)	Pickup Truck Roller	Diesel Diesel	
8 Taxiways 8 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dozer Dump Truck (12 cy)	Diesel Diesel	
8 Taxiways 8 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Excavator Pickup Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Roller Scraper	Diesel Diesel	
8 Taxiways 8 Taxiways	Excavation (Topsoil Stripping) Fencing	Dozer Concrete Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Fencing Fencing	Dump Truck Other General Equipment	Diesel Diesel	
8 Taxiways 8 Taxiways	Fencing Fencing	Pickup Truck Skid Steer Loader	Diesel Diesel	
8 Taxiways	Fencing	Tractors/Loader/Backhoe	Diesel	
8 Taxiways 8 Taxiways	Grading Grading	Dozer Grader	Diesel Diesel	
8 Taxiways 8 Taxiways	Grading Hydroseeding	Roller Hydroseeder	Diesel Diesel	
8 Taxiways 8 Taxiways	Hydroseeding Lighting	Off-Road Truck Dump Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Lighting Lighting	Loader Other General Equipment	Diesel Diesel	
8 Taxiways 8 Taxiways	Lighting Lighting	Pickup Truck Skid Steer Loader	Diesel Diesel	
8 Taxiways 8 Taxiways	Lighting Markings	Tractors/Loader/Backhoe Flatbed Truck	Diesel Diesel	
8 Taxiways	Markings	Other General Equipment	Diesel	
8 Taxiways 8 Taxiways	Markings Soil Erosion/Sediment Control	Pickup Truck Other General Equipment	Diesel Diesel	
8 Taxiways 8 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pickup Truck Pumps	Diesel Diesel	
8 Taxiways 8 Taxiways	Soil Erosion/Sediment Control Subbase Placement	Tractors/Loader/Backhoe Dozer	Diesel Diesel	
8 Taxiways 8 Taxiways	Subbase Placement Subbase Placement	Dump Truck (12 cy) Pickup Truck	Diesel Diesel	
8 Taxiways 8 Taxiways	Subbase Placement Topsoil Placement	Roller Dozer	Diesel Diesel	
8 Taxiways 8 Taxiways	Topsoil Placement Topsoil Placement	Dump Truck Pickup Truck	Diesel Diesel	
		rickup rruck	Diesei	
Overall Size				
-				
Scenario ID Project 1 Demolition - Asphalt	Project Size Questions What is the estimated cost of the project?	User Input	Unit 0.088 \$ Million(s)	
1 Demolition - Asphalt 1 Demolition - Asphalt	What is the maximum length of demolition area (L) in feet? What is the maximum width of demolition area (W) in feet?		191 Feet 50 Feet	
1 Demolition - Concrete 1 Demolition - Concrete	What is the estimated cost of the project? What is the maximum length of demolition area (L) in feet?		0.088 \$ Million(s) 95 Feet	
1 Demolition - Concrete 1 Taxiways	What is the maximum width of demolition area (W) in feet? What is the estimated cost of the project?		100 Feet 0.998 \$ Million(s)	
1 Taxiways 1 Taxiways 1 Taxiways	What is the maximum length of the taxiway (L) in feet?		92 Feet 200 Feet	
	What is the maximum width of the taxiway (W) in feet?			
2 Runway Markings	What is the estimated cost of the project?		0.05 \$ Million(s)	
2 Runway Markings 2 Runway Markings 2 Runway Markings	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet?		0.05 \$ Million(s) 800 Feet 4 Feet	
2 Runway Markings 2 Runway Markings	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet?		0.05 \$ Million(s) 800 Feet	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Taxiways	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project?		0.05 \$ Million(s) 800 Feet 4 Feet 4.829 \$ Million(s)	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Taxiways 2 Taxiways 2 Taxiways 3 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the maximum length of the taxiway (L) in feet? What is the maximum length of the taxiway (W) in feet? What is the estimated cost of the project? What is the estimated cost of the project?		0.05 \$ Million(s) 800 Feet 4 Feet 4.829 \$ Million(s) 1035 Feet 100 Feet 2.032 \$ Million(s) 2029 Feet	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Taxiways 2 Taxiways 2 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Concrete	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the maximum length of the taxiway (L) in feet? What is the maximum width of the taxiway (W) in feet? What is the estimated cost of the project? What is the maximum length of demolition area (L) in feet? What is the maximum width of demolition area (W) in feet? What is the estimated cost of the project?		0.05 \$ Million(s) 800 Feet 4 Feet 4.829 \$ Million(s) 1035 Feet 100 Feet 2.032 \$ Million(s) 2029 Feet 50 Feet 2.032 \$ Million(s)	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Taxiways 2 Taxiways 3 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the estimated cost of the traiway (L) in feet? What is the maximum length of the taxiway (W) in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of demolition area (L) in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of demolition area (L) in feet? What is the maximum length of demolition area (W) in feet?		0.05 \$ Million(s) 800 Feet 4 Feet 4.829 \$ Million(s) 1035 Feet 100 Feet 2.032 \$ Million(s) 2029 Feet 50 Feet 2.032 \$ Million(s) 1015 Feet 100 Feet	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Taxiways 2 Taxiways 2 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete 3 NaVAIDS	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the maximum length of the taxiway (L) in feet? What is the maximum width of the taxiway (W) in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of demolition area (L) in feet? What is the maximum length of demolition area (W) in feet? What is the estimated cost of the project? What is the maximum length of demolition area (W) in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of the project area (L) in feet?		0.05 \$ Million(s) 800 Feet 4 Feet 4 Re29 \$ Million(s) 1035 Feet 100 Feet 2.032 \$ Million(s) 2029 Feet 50 Feet 2.032 \$ Million(s) 1015 Feet 100 Feet 0.1 \$ Million(s)	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Taxiways 2 Taxiways 2 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete 3 NAVAIDS 3 NAVAIDS 3 NAVAIDS 3 NAVAIDS	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the maximum length of the taxiway (L) in feet? What is the maximum length of the taxiway (W) in feet? What is the estimated cost of the project? What is the maximum length of demolition area (L) in feet? What is the maximum length of demolition area (W) in feet? What is the estimated cost of the project? What is the maximum length of demolition area (W) in feet? What is the maximum length of the project? What is the maximum length of the project area (L) in feet? What is the maximum width of the project area (L) in feet? What is the maximum width of the project area (L) in feet? What is the maximum width of the project area (L) in feet? What is the maximum width of the project area (L) in feet?		0.05 \$ Million(s) 800 Feet 4 Feet 4.829 \$ Million(s) 1035 Feet 100 Feet 2.032 \$ Million(s) 2029 Feet 50 Feet 2.032 \$ Million(s) 1015 Feet 100 Feet 0.1 \$ Million(s) 150 Feet 6 Feet 0	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Taxiways 2 Taxiways 2 Taxiways 3 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete 3 NAVAIDS	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of the taxiway (L) in feet? What is the maximum length of the taxiway (W) in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of demolition area (L) in feet? What is the maximum length of demolition area (U) in feet? What is the maximum width of demolition area (U) in feet? What is the maximum width of demolition area (U) in feet? What is the maximum width of the project? What is the maximum width of the project area (L) in feet? What is the number of approach lighting (AL) lights indicated to be insta What is the number of instrument landing system glide slopes (ILS-GS) it What is the number of instrument landing system localizers (ILS-GS) it What is the number of instrument landing system localizers (ILS-GS) it	i	0.05 \$ Million(s) 800 Feet 4 Feet 4 Re29 \$ Million(s) 1035 Feet 100 Feet 2.032 \$ Million(s) 2029 Feet 50 Feet 100 Feet 100 Feet 100 Feet 0 -1 \$ Million(s) 150 Feet 0 0 0	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Rawiways 2 Taxiways 2 Taxiways 2 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete 3 NAVAIDS	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the asmirum length of the taxiway (L) in feet? What is the maximum length of the taxiway (W) in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of demolition area (W) in feet? What is the maximum length of demolition area (W) in feet? What is the maximum length of demolition area (L) in feet? What is the maximum length of demolition area (L) in feet? What is the maximum width of demolition area (L) in feet? What is the maximum width of the project? What is the maximum length of the project area (W) in feet? What is the number of approach lighting (AL) lights indicated to be instal what is the number of instrument landing system glide slopes (ILS-GS) to What is the number of instrument landing system localizers (ILS-L) to be What is the number of precision approach path indicators (PAPI) to be in What is the number of instrument pacons (R8) to be installed?	i	0.05 \$ Million(s) 800 Feet 4 Feet 4 Re29 \$ Million(s) 1035 Feet 100 Feet 2.032 \$ Million(s) 2029 Feet 50 Feet 100 Feet 0.13 \$ Million(s) 1015 Feet 0.15 Million(s) 150 Feet 6 Feet 0 0 4 0 100 Feet	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Taxiways 2 Taxiways 2 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete 3 NAVAIDS	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of the taxiway (L) in feet? What is the maximum width of the taxiway (W) in feet? What is the estimated cost of the project? What is the aximum length of demolition area (L) in feet? What is the maximum length of demolition area (W) in feet? What is the maximum width of demolition area (W) in feet? What is the estimated cost of the project? What is the maximum length of the project area (L) in feet? What is the estimated cost of the project? What is the maximum length of the project area (W) in feet? What is the maximum length of the project area (W) in feet? What is the number of proston lipiting (A) lights indicated to be instal. What is the number of instrument landing system localizers (ILS-L) to be what is the number of proston approach path indicators (PAP) to be in What is the number of rotating beacons (RB) to be installed? What is the number of vindcones (WC) to be installed?	o i is	0.05 \$ Million(s) 800 Feet 4 Feet 4 829 \$ Million(s) 1035 Feet 100 Feet 50 Feet 50 Feet 100 Feet 1015 Feet 1015 Feet 105 Feet 106 Feet 107 Feet 108 Feet 109 Feet 109 Feet 109 Feet 100	
2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Taxiways 2 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete 3 Demolition - Concrete 3 NAVAIDS 3 Taxiways 3 Taxiways 3 Taxiways	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of the taxiway (L) in feet? What is the maximum length of the taxiway (W) in feet? What is the estimated cost of the project? What is the maximum length of demolition area (L) in feet? What is the maximum length of demolition area (W) in feet? What is the estimated cost of the project? What is the maximum length of demolition area (W) in feet? What is the maximum length of demolition area (W) in feet? What is the maximum length of the project area (L) in feet? What is the maximum width of the project area (W) in feet? What is the maximum width of the project area (W) in feet? What is the number of protable lighting (AL) lights indicated to be install what is the number of protable paperach path indicators (PAPI) to be in What is the number of precision approach path indicators (PAPI) to be in What is the number of rotating beacons (RB) to be installed? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of the taxiway (L) in feet?	o i is	0.05 \$ Million(s) 800 Feet 4 Feet 4 Re29 \$ Million(s) 1035 Feet 100 Feet 50 Feet 50 Feet 100 Feet 50 Feet 100 Feet 0.15 Million(s) 1015 Feet 100 Feet 0 0 0 0 0 0 0 0 0 23.027 \$ Million(s) 3409 Feet 200 Feet	
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2 Runway Markings 2 Runway Markings 2 Runway Markings 2 Rawways 2 Taxiways 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Asphalt 3 Demolition - Concrete 4 Demolition - Asphalt 4 Demolition - Concrete 4 Taxiways 5 Building - 10000 sqft - 1 story 6 NAVAIDS 6 Rehabilitate Runway 6 Rehabilitate Runway 6 Rehabilitate Runway 6 Rehabilitate Runway 7 Rencing 7 Fencing 7 Fencing 7 Fencing 7 Taxiways 8 Demolition - Concrete 7 Demolition - Concrete 7 Demolition - Concrete 8 Demolition - Concrete 8 Demolition - Concrete 9 Demolition - Concrete 9 Demolition - Concrete 9 Demolition - Concrete 1 Taxiways 8 Taxiways 8 Taxiways 8 Taxiways 8 Taxiways 8 Taxiways 1 Taxiways	What is the estimated cost of the project? What is the maximum length (L) of the markings in feet? What is the maximum width (W) of the markings in feet? What is the estimated cost of the project? What is the asmimum length of the taxiway (U) in feet? What is the maximum length of the taxiway (W) in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of demolition area (W) in feet? What is the maximum length of demolition area (U) in feet? What is the maximum length of demolition area (L) in feet? What is the maximum length of demolition area (U) in feet? What is the maximum length of demolition area (U) in feet? What is the maximum length of the project area (U) in feet? What is the maximum length of the project area (U) in feet? What is the maximum length of the project area (U) in feet? What is the number of approach lighting (AL) lights indicated to be installed? What is the number of instrument landing system glide slopes (ILS-GS) to least the standard cost of the project? What is the number of rioritument landing system localizers (ILS-G) to be what is the number of rotating beacons (RB) to be installed? What is the maximum length of the taxiway (U) in feet? What is the maximum length of the taxiway (U) in feet? What is the maximum length of demolition area (U) in feet? What is the maximum length of demolition area (U) in feet? What is the estimated cost of the project? What is the estimated cost of the project? What is the maximum length of demolition area (U) in feet? What is the maximum length of the taxiway (W) in feet? What is the maximum length of the taxiway (W) in feet? What is the maximum width of the taxiway (U) in feet? What is the maximum length of the project? What is the maximum length of the project? What is the number of instrument landing system localizers (ILS-L) to be what is the number of instrument landing system localizers (ILS-L) to be what is the number of instrument landing system localizers (ILS-GS) to What is the		0.05 \$ Million(s) 800 Feet 4 Feet 4 Re29 \$ Million(s) 1035 Feet 100 Feet 2.032 \$ Million(s) 2029 Feet 50 Feet 2.032 \$ Million(s) 115 Feet 100 Feet 0.1 \$ Million(s) 150 Feet 0 0 0 23.027 \$ Million(s) 3409 Feet 200 Feet 100 Feet 200 Feet 100 Feet 100 Feet 200 Feet 100 Feet	User Activit

ctivity Size 851 Cubic Yards 851 Cubic Yards 1 Taxiways 1 Taxiways Excavation (Borrow)
Excavation (Cut to Fill)

Taxiways Taxiways	Excavation (Topsoil Stripping)	2042.4 Square
Taxiways Taxiways	Fencing Grading	92 Linear 2377.6 Square
Taxiways Taxiwavs	Hydroseeding Lighting	21420 Square 584 Linear
Taxiways	Markings	18400 Square
Taxiways Taxiways	Soil Erosion/Sediment Control Subbase Placement	0.5 Acres 2042.4 Square
Taxiways Taxiways	Subbase Placement Topsoil Placement	680.8 Cubic \ 396.3 Cubic \
Runway Markings Runway Markings	Marking Removal Markings	3200 Square 3200 Square
Taxiways	Asphalt Placement	0 Square
Taxiways Taxiways	Concrete Placement Drainage - 24 inch SICPP	3194 Cubic \ 1045 Linear
Taxiways	Drainage - 6 inch Perforated Underdrain Dust Control	2090 Linear
Taxiways Taxiways	Excavation (Borrow)	60 Days 4786.9 Cubic \
Taxiways Taxiways	Excavation (Cut to Fill) Excavation (Topsoil Stripping)	4786.9 Cubic \ 11488.5 Square
Taxiways	Fencing	1035 Linear
Taxiways Taxiways	Grading Hydroseeding	12759.5 Square 114950 Square
Taxiways Taxiways	Lighting Markings	2270 Linear 103500 Square
Taxiways	Soil Erosion/Sediment Control	2.6 Acres
Taxiways Taxiways	Subbase Placement Subbase Placement	11488.5 Square 3829.5 Cubic \
Taxiways Demolition - Asphalt	Topsoil Placement Asphalt Demolition	2126.6 Cubic \ 101450 Square
Demolition - Concrete	Concrete Demolition	101500 Square 4 Units
NAVAIDS Taxiways	Precision Approach Path Indicator (PAPI) Asphalt Placement	4 Units 27495 Square
Taxiways Taxiways	Concrete Placement Drainage - 24 inch SICPP	30836 Cubic 3419 Linear
Taxiways	Drainage - 6 inch Perforated Underdrain	6838 Linear
Faxiways Faxiways	Dust Control Excavation (Borrow)	180 Days 31533.3 Cubic
Faxiways	Excavation (Cut to Fill)	31533.3 Cubic
Faxiways Faxiways	Excavation (Topsoil Stripping) Fencing	75679.8 Squari 3409 Linear
Faxiways Faxiways	Grading Hydroseeding	79696.9 Square 717990 Square
Taxiways	Lighting	7218 Linear
「axiways 「axiways	Markings Soil Erosion/Sediment Control	681800 Squar 16.5 Acres
Taxiways Taxiways	Subbase Placement Subbase Placement	75679.8 Squar 25226.6 Cubic
Faxiways	Topsoil Placement	13282.8 Cubic
Demolition - Asphalt Demolition - Concrete	Asphalt Demolition Concrete Demolition	21850 Squar 21800 Squar
l'axiways	Asphalt Placement	5874 Squar
Гахіways Гахіways	Concrete Placement Drainage - 24 inch SICPP	8954 Cubic 905 Linear
Faxiways Faxiways	Drainage - 6 inch Perforated Underdrain Dust Control	1810 Linear 90 Davs
Faxiways	Excavation (Borrow)	8278.8 Cubic
Faxiways Faxiways	Excavation (Cut to Fill) Excavation (Topsoil Stripping)	8278.8 Cubic 19869 Squar
Faxiways .	Fencing	895 Linear
Faxiways Faxiways	Grading Hydroseeding	21095.6 Squar 190050 Squar
Faxiways Faxiways	Lighting Markings	2190 Linear 179000 Squar
Гахіways	Soil Erosion/Sediment Control	4.4 Acres
Faxiways Faxiways	Subbase Placement Subbase Placement	19869 Squar 6623 Cubic
Taxiways	Topsoil Placement	3515.9 Cubic
NAVAIDS Rehabilitate Runway	Instrument Landing System (ILS) Localizer Asphalt Placement	1 Units 92371 Squar
Rehabilitate Runway Rehabilitate Runway	Cold Milling Concrete Demolition	92371 Squar O Squar
Rehabilitate Runway	Concrete Demolition	510966 Squar
Rehabilitate Runway Rehabilitate Runway	Concrete Placement Dust Control	36272 Cubic 210 Days
Rehabilitate Runway	Excavation (Cut to Fill) (Assume 20% reconstruction)	12415.8 Cubic
Rehabilitate Runway Rehabilitate Runway	Excavation (Topsoil Stripping) Grading	29798 Squar 31047.6 Squar
Rehabilitate Runway Rehabilitate Runway	Hydroseeding Lighting	31047.6 Squar 11238 Linea
Rehabilitate Runway	Markings	1342250 Squar
Rehabilitate Runway Rehabilitate Runway	Sealing Random Cracks Soil Erosion/Sediment Control	5369 Linear 6.4 Acres
Rehabilitate Runway Rehabilitate Runway	Subbase Placement Subbase Placement	148989.8 Squar 49663.3 Cubic
Rehabilitate Runway	Topsoil Placement	5174.6 Cubic
Service Road Service Road	Asphalt Placement Clearing and Grubbing	4322.3 Squar 1.2 Acres
Service Road	Concrete Placement	0 Cubic
Service Road Service Road	Drainage - 24 inch SICPP Drainage - 6 inch Perforated Underdrain	1308 Linea 2616 Linea
Service Road Service Road	Dust Control Excavation (Borrow)	210 Days 1801 Cubic
Service Road	Excavation (Cut to Fill)	1801 Cubic
Service Road Service Road	Excavation (Topsoil Stripping) Fencing	4322.3 Squar 1298 Linea
Service Road	Grading	5807.5 Squar
Service Road Service Road	Hydroseeding Markings	52320 Squar 38940 Squar
Service Road Service Road	Soil Erosion/Sediment Control Subbase Placement	1.2 Acres 4322.3 Squar
Service Road	Subbase Placement	1440.8 Cubic
Service Road Demolition - Concrete	Topsoil Placement Concrete Demolition	967.9 Cubio 4500 Squar
encing encing	Clearing and Grubbing Excavation (Cut to Fill)	0.2 Acres 346.9 Cubic
encing	Fencing	1500 Linea
encing encing	Grading Hydroseeding	838.1 Squar 7550 Squar
encing	Soil Erosion/Sediment Control	0.2 Acres
encing Faxiways	Topsoil Placement Asphalt Placement	349.2 Cubio 9290 Squai
Taxiways	Concrete Placement	8789 Cubio
Taxiways Taxiways	Drainage - 24 inch SICPP Drainage - 6 inch Perforated Underdrain	1047 Linea 2094 Linea
「axiways 「axiways	Dust Control Excavation (Borrow)	120 Days 9592.3 Cubic
Taxiways	Excavation (Cut to Fill)	9592.3 Cubic
Гахіways Гахіways	Excavation (Topsoil Stripping) Fencing	23021.4 Squar 1037 Linea
Taxiways Taxiways	Grading Hydroseeding	24405.6 Squar 219870 Squar
Faxiways	Lighting	2474 Linea
「axiways 「axiways	Markings Soil Erosion/Sediment Control	207400 Squar 5.1 Acres
Taxiways	Subbase Placement	23021.4 Squar
Faxiways Faxiways	Subbase Placement Topsoil Placement	7673.8 Cubic 4067.6 Cubic
Demolition - Concrete	Concrete Demolition	14300 Squar
Faxiways Faxiways	Asphalt Placement Concrete Placement	12413 Squar 11699 Cubic
Faxiways Faxiways	Drainage - 24 inch SICPP Drainage - 6 inch Perforated Underdrain	1393 Linea 2786 Linea
Taxiways	Dust Control	150 Days
Faxiways Faxiways	Excavation (Borrow) Excavation (Cut to Fill)	12792.8 Cubic 12792.8 Cubic
Taxiways	Excavation (Topsoil Stripping)	30702.6 Squar
Taxiways Taxiways	Fencing Grading	1383 Linea 32470.8 Squar
Taxiways	Hydroseeding	292530 Squar
Taxiways Taxiways	Lighting Markings	3166 Linear 276600 Squar
	Soil Erosion/Sediment Control	6.7 Acres
		20
Faxiways Faxiways Faxiways	Subbase Placement Subbase Placement Topsoil Placement	30702.6 Squar 10234.2 Cubic 5411.8 Cubic

Activity

Scenario IC Project	Construction Activity	Equipment	Fuel Type	Activity Size	Activity Ra	Default Act Activity L	In User Activity Data
1 Demolition - Asphalt	Asphalt Demolition	Dozer	Diesel	9550.00 SF	8 Hours pe	9.55 hours	21.85
1 Demolition - Asphalt	Asphalt Demolition	Excavator	Diesel	9550.00 SF	8 Hours pe	9.55 hours	21.85
1 Demolition - Asphalt	Asphalt Demolition	Pickup Truck	Diesel	9550.00 SF	8 Hours pe	19.1 hours	43.7
1 Demolition - Concrete	Concrete Demolition	Excavator with Bucket	Diesel	9500.00 SF	8 Hours pe	12.66667 hours	19.07
1 Demolition - Concrete	Concrete Demolition	Excavator with Hoe Ram	Diesel	9500.00 SF	8 Hours pe	12.66667 hours	19.07
1 Demolition - Concrete	Concrete Demolition	Pickup Truck	Diesel	9500.00 SF	8 Hours pe	25.33333 hours	38.13
1 Taxiways	Asphalt Placement	Asphalt Paver	Diesel	2042.40 SY	8 Hours pe	2.553 hours	15.52
1 Taxiways	Asphalt Placement	Dump Truck	Diesel	2042.40 SY	8 Hours pe	9.194823 hours	55.88
1 Taxiways	Asphalt Placement	Other General Equipment	Diesel	2042.40 SY	16 Hours p	5.106 hours	31.03
1 Taxiways	Asphalt Placement	Pickup Truck	Diesel	2042.40 SY	8 Hours pe	2.553 hours	15.52
1 Taxiways	Asphalt Placement	Roller	Diesel	2042.40 SY	8 Hours pe	2.553 hours	15.52
1 Taxiways	Asphalt Placement	Skid Steer Loader	Diesel	2042.40 SY	8 Hours pe	2.553 hours	15.52
1 Taxiways	Asphalt Placement	Surfacing Equipment (Grooving)	Diesel	2042.40 SY	8 Hours pe	3.26784 hours	19.86
1 Taxiways	Concrete Placement	Air Compressor	Diesel	851.00 CY	8 Hours pe	6.808 hours	93.59
1 Taxiways	Concrete Placement	Concrete Saws	Diesel	851.00 CY	8 Hours pe	6.808 hours	93.59
1 Taxiways	Concrete Placement	Concrete Truck	Diesel	851.00 CY	8 Hours pe	28.36667 hours	389.97
1 Taxiways	Concrete Placement	Other General Equipment	Diesel	851.00 CY	16 Hours p	13.616 hours	187.18
1 Taxiways	Concrete Placement	Pickup Truck	Diesel	851.00 CY	24 Hours p	20.424 hours	280.78
1 Taxiways	Concrete Placement	Rubber Tired Loader	Diesel	851.00 CY	8 Hours pe	6.808 hours	93.59
1 Taxiways	Concrete Placement	Slip Form Paver	Diesel	851.00 CY	8 Hours pe	6.808 hours	93.59
1 Taxiways	Concrete Placement	Surfacing Equipment (Grooving)	Diesel	851.00 CY	8 Hours pe	6.808 hours	93.59
1 Taxiways	Drainage - 24 inch SICPP	Dozer	Diesel	102.00 LF	8 Hours pe	3.264 hours	44.58
1 Taxiways	Drainage - 24 inch SICPP	Dump Truck	Diesel	102.00 LF	8 Hours pe	3.264 hours	44.58
1 Taxiways	Drainage - 24 inch SICPP	Excavator	Diesel	102.00 LF	8 Hours pe	3.264 hours	44.58
1 Taxiways	Drainage - 24 inch SICPP	Loader	Diesel	102.00 LF	8 Hours pe	3.264 hours	44.58
1 Taxiways	Drainage - 24 inch SICPP	Other General Equipment	Diesel	102.00 LF	8 Hours pe	3.264 hours	44.58
1 Taxiways	Drainage - 24 inch SICPP	Pickup Truck	Diesel	102.00 LF	8 Hours pe	3.264 hours	44.58
1 Taxiways	Drainage - 24 inch SICPP	Roller	Diesel	102.00 LF	8 Hours pe	3.264 hours	44.58

1 Taxiways	Drainage - 6 inch Perforated Underdrain	Dump Truck	Diesel	204.00 LF	8 Hours pe 1.813333 hours	24.76
1 Taxiways	Drainage - 6 inch Perforated Underdrain	Loader	Diesel	204.00 LF	8 Hours pe 1.813333 hours	24.76
1 Taxiways	Drainage - 6 inch Perforated Underdrain	Other General Equipment	Diesel	204.00 LF	8 Hours pe 1.813333 hours	24.76
1 Taxiways	Drainage - 6 inch Perforated Underdrain	Pickup Truck	Diesel	204.00 LF	8 Hours pe 1.813333 hours	24.76
1 Taxiways	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	Diesel	204.00 LF	8 Hours pe 1.813333 hours	24.76
1 Taxiways	Dust Control	Water Truck	Diesel	60.00 Day	8 Hours pe 480 hours	1200
1 Taxiways	Excavation (Borrow)	Dozer	Diesel	851.00 CY	8 Hours pe 11.34667 hours	170.57
1 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dump Truck (12 cy)	Diesel	851.00 CY	8 Hours pe 11.34667 hours	170.57
1 Taxiways		Pickup Truck	Diesel	851.00 CY	8 Hours pe 11.34667 hours	170.57
1 Taxiways	Excavation (Borrow) Excavation (Cut to Fill)	Roller	Diesel	851.00 CY	8 Hours pe 5.236923 hours	78.73
1 Taxiways		Dozer	Diesel	851.00 CY	8 Hours pe 8.51 hours	127.93
1 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dump Truck (12 cy)	Diesel	851.00 CY	8 Hours pe 22.69333 hours	341.14
1 Taxiways		Excavator	Diesel	851.00 CY	8 Hours pe 6.808 hours	102.34
1 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Pickup Truck	Diesel	851.00 CY	8 Hours pe 6.808 hours	102.34
1 Taxiways		Roller	Diesel	851.00 CY	8 Hours pe 6.808 hours	102.34
1 Taxiways	Excavation (Cut to Fill) Excavation (Topsoil Stripping)	Scraper	Diesel	851.00 CY	8 Hours pe 8.51 hours	127.93
1 Taxiways		Dozer	Diesel	2042.40 SY	8 Hours pe 3.203765 hours	48.16
1 Taxiways	Fencing	Concrete Truck Dump Truck	Diesel	92.00 LF 92.00 LF	2 Hours pe 1.022222 hours	15.37 61.47
1 Taxiways 1 Taxiways	Fencing Fencing	Other General Equipment	Diesel	92.00 LF	8 Hours pe 4.088889 hours 8 Hours pe 4.088889 hours	61.47
1 Taxiways	Fencing	Pickup Truck	Diesel	92.00 LF	8 Hours pe 4.088889 hours	61.47
1 Taxiways	Fencing	Skid Steer Loader	Diesel	92.00 LF	8 Hours pe 4.088889 hours	61.47
1 Taxiways	Fencing	Tractors/Loader/Backhoe	Diesel	92.00 LF	8 Hours pe 4.088889 hours	61.47
1 Taxiways	Grading	Dozer	Diesel	2377.60 SY	8 Hours pe 2.3776 hours	32.47
1 Taxiways	Grading	Grader	Diesel	2377.60 SY	8 Hours pe 2.3776 hours	32.47
1 Taxiways	Grading	Roller	Diesel	2377.60 SY	8 Hours pe 2.3776 hours	32.47
1 Taxiways	Hydroseeding	Hydroseeder	Diesel	21420.00 SF	8 Hours pe 2.142 hours	29.25
1 Taxiways	Hydroseeding	Off-Road Truck	Diesel	21420.00 SF	8 Hours pe 2.142 hours	29.25
1 Taxiways 1 Taxiways	Lighting Lighting	Dump Truck Loader	Diesel Diesel	584.00 LF 584.00 LF	8 Hours pe 3.893333 hours 8 Hours pe 3.893333 hours	21.11
1 Taxiways	Lighting	Other General Equipment	Diesel	584.00 LF 584.00 LF	8 Hours pe 3.893333 hours 8 Hours pe 3.893333 hours	21.11
1 Taxiways 1 Taxiways	Lighting Lighting	Pickup Truck Skid Steer Loader	Diesel	584.00 LF	8 Hours pe 3.893333 hours	21.11
1 Taxiways	Lighting	Tractors/Loader/Backhoe	Diesel	584.00 LF	8 Hours pe 3.893333 hours	21.11
1 Taxiways	Markings	Flatbed Truck	Diesel	18400.00 SF	8 Hours pe 42.05714 hours	632.23
1 Taxiways	Markings	Other General Equipment	Diesel	18400.00 SF	8 Hours pe 42.05714 hours	632.23
1 Taxiways	Markings	Pickup Truck	Diesel	18400.00 SF	8 Hours pe 42.05714 hours	632.23
1 Taxiways	Soil Erosion/Sediment Control	Other General Equipment	Diesel	0.50 Acre	4 Hours pe 2 hours	26.8
1 Taxiways	Soil Erosion/Sediment Control	Pickup Truck	Diesel	0.50 Acre	8 Hours pe 4 hours	53.6
1 Taxiways	Soil Erosion/Sediment Control	Pumps	Diesel	0.50 Acre	4 Hours pe 2 hours	26.8
1 Taxiways	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	Diesel	0.50 Acre	4 Hours pe 2 hours	26.8
1 Taxiways	Subbase Placement	Dozer	Diesel	2042.40 SY	8 Hours pe 4.299789 hours	64.64
1 Taxiways	Subbase Placement	Dump Truck (12 cy)	Diesel	680.80 CY	8 Hours pe 30.25778 hours	454.85
1 Taxiways	Subbase Placement	Pickup Truck	Diesel	2042.40 SY	8 Hours pe 4.299789 hours	64.64
1 Taxiways	Subbase Placement	Roller	Diesel	680.80 CY	8 Hours pe 4.189538 hours	62.98
1 Taxiways	Topsoil Placement	Dozer	Diesel	396.30 CY	8 Hours pe 5.284 hours	72.16
1 Taxiways	Topsoil Placement	Dump Truck	Diesel	396.30 CY	8 Hours pe 5.284 hours	72.16
1 Taxiways	Topsoil Placement	Pickup Truck	Diesel	396.30 CY	8 Hours pe 5.284 hours	72.16
2 Runway Markings	Marking Removal	Pickup Truck	Diesel	3200.00 SF	8 Hours pe 3.2 hours	
2 Runway Markings	Marking Removal	Pressure Washer	Diesel	3200.00 SF	8 Hours pe 3.2 hours	
2 Runway Markings	Marking Removal	Sweepers/Scrubbers	Diesel	3200.00 SF	8 Hours pe 3.2 hours	
2 Runway Markings	Marking Removal	Water Truck	Diesel	3200.00 SF	8 Hours pe 3.2 hours	
2 Runway Markings	Markings	Flatbed Truck	Diesel	3200.00 SF	8 Hours pe 7.314286 hours	
2 Runway Markings	Markings	Other General Equipment	Diesel	3200.00 SF	8 Hours pe 7.314286 hours	
2 Runway Markings	Markings	Pickup Truck	Diesel	3200.00 SF	8 Hours pe 7.314286 hours	15.52
2 Taxiways	Asphalt Placement	Asphalt Paver	Diesel	11488.50 SY	8 Hours pe 14.36063 hours	
2 Taxiways	Asphalt Placement	Dump Truck	Diesel	11488.50 SY	8 Hours pe 51.72088 hours	55.88
2 Taxiways 2 Taxiways	Asphalt Placement Asphalt Placement	Other General Equipment Pickup Truck	Diesel Diesel	11488.50 SY 11488.50 SY	16 Hours p 28.72125 hours 8 Hours pe 14.36063 hours	31.03 15.52
2 Taxiways	Asphalt Placement Asphalt Placement	Roller	Diesel	11488.50 SY	8 Hours pe 14.36063 hours	15.52
2 Taxiways		Skid Steer Loader	Diesel	11488.50 SY	8 Hours pe 14.36063 hours	15.52
2 Taxiways 2 Taxiways	Asphalt Placement Concrete Placement	Surfacing Equipment (Grooving) Air Compressor	Diesel Diesel	11488.50 SY 4786.90 CY	8 Hours pe 18.3816 hours 8 Hours pe 38.2952 hours	19.86 93.59
2 Taxiways	Concrete Placement Concrete Placement	Concrete Saws	Diesel	4786.90 CY	8 Hours pe 38.2952 hours	93.59
2 Taxiways		Concrete Truck	Diesel	4786.90 CY	8 Hours pe 159.5633 hours	389.97
2 Taxiways	Concrete Placement Concrete Placement	Other General Equipment Pickup Truck	Diesel Diesel	4786.90 CY 4786.90 CY	16 Hours p 76.5904 hours 24 Hours p 114.8856 hours	187.18 280.78
2 Taxiways	Concrete Placement	Rubber Tired Loader	Diesel	4786.90 CY	8 Hours pe 38.2952 hours	93.59
2 Taxiways	Concrete Placement	Slip Form Paver	Diesel	4786.90 CY	8 Hours pe 38.2952 hours	93.59
2 Taxiways	Concrete Placement	Surfacing Equipment (Grooving)	Diesel	4786.90 CY	8 Hours pe 38.2952 hours	93.59
2 Taxiways	Drainage - 24 inch SICPP	Dozer	Diesel	1045.00 LF	8 Hours pe 33.44 hours	44.58
2 Taxiways	Drainage - 24 inch SICPP	Dump Truck	Diesel	1045.00 LF	8 Hours pe 33.44 hours	44.58
2 Taxiways	Drainage - 24 inch SICPP	Excavator	Diesel	1045.00 LF	8 Hours pe 33.44 hours	44.58
2 Taxiways	Drainage - 24 inch SICPP	Loader	Diesel	1045.00 LF	8 Hours pe 33.44 hours	44.58
2 Taxiways	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Other General Equipment	Diesel	1045.00 LF	8 Hours pe 33.44 hours	44.58
2 Taxiways		Pickup Truck	Diesel	1045.00 LF	8 Hours pe 33.44 hours	44.58
2 Taxiways	Drainage - 24 inch SICPP Drainage - 6 inch Perforated Underdrain	Roller	Diesel	1045.00 LF	8 Hours pe 33.44 hours	44.58
2 Taxiways		Dump Truck	Diesel	2090.00 LF	8 Hours pe 18.57778 hours	24.76
2 Taxiways	Drainage - 6 inch Perforated Underdrain	Loader	Diesel	2090.00 LF	8 Hours pe 18.57778 hours	24.76
2 Taxiways	Drainage - 6 inch Perforated Underdrain	Other General Equipment	Diesel	2090.00 LF	8 Hours pe 18.57778 hours	24.76
2 Taxiways	Drainage - 6 inch Perforated Underdrain	Pickup Truck	Diesel	2090.00 LF	8 Hours pe 18.57778 hours	24.76
2 Taxiways	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	Diesel	2090.00 LF	8 Hours pe 18.57778 hours	24.76
2 Taxiways	Dust Control	Water Truck	Diesel	60.00 Day	8 Hours pe 480 hours	1200
2 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dozer	Diesel	4786.90 CY	8 Hours pe 63.82533 hours	170.57
2 Taxiways		Dump Truck (12 cy)	Diesel	4786.90 CY	8 Hours pe 63.82533 hours	170.57
2 Taxiways	Excavation (Borrow) Excavation (Borrow)	Pickup Truck	Diesel	4786.90 CY	8 Hours pe 63.82533 hours	170.57
2 Taxiways		Roller	Diesel	4786.90 CY	8 Hours pe 29.45785 hours	78.73
2 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dozer	Diesel	4786.90 CY	8 Hours pe 47.869 hours	127.93
2 Taxiways 2 Taxiways	Excavation (Cut to Fill)	Dump Truck (12 cy) Excavator	Diesel Diesel	4786.90 CY 4786.90 CY	8 Hours pe 127.6507 hours 8 Hours pe 38.2952 hours	341.14 102.34
2 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Pickup Truck	Diesel	4786.90 CY	8 Hours pe 38.2952 hours	102.34
2 Taxiways		Roller	Diesel	4786.90 CY	8 Hours pe 38.2952 hours	102.34
2 Taxiways	Excavation (Cut to Fill) Excavation (Topsoil Stripping)	Scraper	Diesel	4786.90 CY	8 Hours pe 47.869 hours	127.93
2 Taxiways		Dozer	Diesel	11488.50 SY	8 Hours pe 18.02118 hours	48.16
2 Taxiways	Fencing	Concrete Truck	Diesel	1035.00 LF	2 Hours pe 11.5 hours	15.37
2 Taxiways	Fencing	Dump Truck	Diesel	1035.00 LF	8 Hours pe 46 hours	61.47
2 Taxiways	Fencing	Other General Equipment	Diesel Diesel	1035.00 LF 1035.00 LF	8 Hours pe 46 hours	61.47 61.47
2 Taxiways 2 Taxiways	Fencing Fencing	Pickup Truck Skid Steer Loader	Diesel	1035.00 LF	8 Hours pe 46 hours	61.47
2 Taxiways	Fencing	Tractors/Loader/Backhoe	Diesel	1035.00 LF	8 Hours pe 46 hours	61.47
2 Taxiways	Grading	Dozer	Diesel	12759.50 SY	8 Hours pe 12.7595 hours	32.47
2 Taxiways	Grading	Grader	Diesel	12759.50 SY	8 Hours pe 12.7595 hours	32.47
2 Taxiways	Grading	Roller	Diesel	12759.50 SY	8 Hours pe 12.7595 hours	32.47
2 Taxiways	Hydroseeding	Hydroseeder	Diesel	114950.00 SF	8 Hours pe 11.495 hours	29.25
2 Taxiways	Hydroseeding	Off-Road Truck	Diesel	114950.00 SF	8 Hours pe 11.495 hours	29.25
2 Taxiways 2 Taxiways	Lighting Lighting	Dump Truck Loader	Diesel Diesel	2270.00 LF 2270.00 LF	8 Hours pe 15.13333 hours 8 Hours pe 15.13333 hours	21.11
2 Taxiways	Lighting	Other General Equipment	Diesel	2270.00 LF	8 Hours pe 15.13333 hours	21.11
2 Taxiways	Lighting	Pickup Truck	Diesel	2270.00 LF	8 Hours pe 15.13333 hours	21.11
2 Taxiways	Lighting	Skid Steer Loader	Diesel	2270.00 LF	8 Hours pe 15.13333 hours	21.11
2 Taxiways	Lighting	Tractors/Loader/Backhoe	Diesel	2270.00 LF	8 Hours pe 15.13333 hours	21.11
2 Taxiways	Markings	Flatbed Truck	Diesel	103500.00 SF	8 Hours pe 236.5714 hours	632.23
2 Taxiways	Markings	Other General Equipment	Diesel	103500.00 SF	8 Hours pe 236.5714 hours	632.23
2 Taxiways	Markings	Pickup Truck	Diesel	103500.00 SF	8 Hours pe 236.5714 hours	632.23
2 Taxiways	Soil Erosion/Sediment Control	Other General Equipment	Diesel	2.60 Acre	4 Hours pe 10.4 hours	26.8
2 Taxiways	Soil Erosion/Sediment Control	Pickup Truck	Diesel	2.60 Acre	8 Hours pe 20.8 hours	53.6
2 Taxiways	Soil Erosion/Sediment Control	Pumps	Diesel	2.60 Acre	4 Hours pe 10.4 hours	26.8
2 Taxiways	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	Diesel	2.60 Acre	4 Hours pe 10.4 hours	26.8
2 Taxiways	Subbase Placement	Dozer	Diesel	11488.50 SY 3829.50 CY	8 Hours pe 24.18632 hours	64.64
2 Taxiways 2 Taxiways	Subbase Placement Subbase Placement	Dump Truck (12 cy) Pickup Truck	Diesel Diesel	11488.50 SY	8 Hours pe 170.2 hours 8 Hours pe 24.18632 hours	454.85 64.64
2 Taxiways	Subbase Placement	Roller	Diesel	3829.50 CY	8 Hours pe 23.56615 hours	62.98
2 Taxiways	Topsoil Placement	Dozer	Diesel	2126.60 CY	8 Hours pe 28.35467 hours	72.16
2 Taxiways	Topsoil Placement	Dump Truck	Diesel	2126.60 CY	8 Hours pe 28.35467 hours	72.16
2 Taxiways	Topsoil Placement	Pickup Truck	Diesel	2126.60 CY	8 Hours pe 28.35467 hours	72.16
3 Demolition - Asphalt	Asphalt Demolition Asphalt Demolition	Dozer	Diesel	101450.00 SF	8 Hours pe 101.45 hours	21.85
3 Demolition - Asphalt		Excavator	Diesel	101450.00 SF	8 Hours pe 101.45 hours	21.85
3 Demolition - Asphalt	Asphalt Demolition Concrete Demolition	Pickup Truck	Diesel	101450.00 SF	8 Hours pe 202.9 hours	43.7
3 Demolition - Concrete		Excavator with Bucket	Diesel	101500.00 SF	8 Hours pe 135.3333 hours	19.07
3 Demolition - Concrete	Concrete Demolition Concrete Demolition	Excavator with Hoe Ram	Diesel	101500.00 SF	8 Hours pe 135.3333 hours	19.07
3 Demolition - Concrete		Pickup Truck	Diesel	101500.00 SF	8 Hours pe 270.6667 hours	38.13
3 NAVAIDS 3 NAVAIDS	Precision Approach Path Indicator (PAPI) Precision Approach Path Indicator (PAPI)	Air Compressor Dump Truck	Diesel Diesel	4.00 Unit 4.00 Unit	4 Hours pe 16 hours 4 Hours pe 16 hours	-
3 NAVAIDS 3 NAVAIDS	Precision Approach Path Indicator (PAPI) Precision Approach Path Indicator (PAPI) Precision Approach Path Indicator (PAPI)	Other General Equipment Pickup Truck	Diesel Diesel	4.00 Unit 4.00 Unit	4 Hours pe 16 hours 4 Hours pe 16 hours	
3 NAVAIDS	Precision Approach Path Indicator (PAPI)	Skid Steer Loader	Diesel	4.00 Unit	4 Hours pe 16 hours	
3 NAVAIDS 3 Taxiways	Precision Approach Path Indicator (PAPI) Asphalt Placement	Tractors/Loader/Backhoe Asphalt Paver	Diesel Diesel	4.00 Unit 75679.80 SY	4 Hours pe 16 hours 8 Hours pe 94.59975 hours	15.52
3 Taxiways 3 Taxiways	Asphalt Placement Asphalt Placement	Dump Truck Other General Equipment	Diesel Diesel	75679.80 SY 75679.80 SY	8 Hours pe 340.7082 hours 16 Hours p 189.1995 hours	55.88 31.03
3 Taxiways	Asphalt Placement	Pickup Truck	Diesel	75679.80 SY	8 Hours pe 94.59975 hours	15.52
3 Taxiways	Asphalt Placement	Roller	Diesel	75679.80 SY	8 Hours pe 94.59975 hours	15.52
3 Taxiways	Asphalt Placement Asphalt Placement	Skid Steer Loader	Diesel	75679.80 SY	8 Hours pe 94.59975 hours	15.52
3 Taxiways		Surfacing Equipment (Grooving)	Diesel	75679.80 SY	8 Hours pe 121.0877 hours	19.86
3 Taxiways 3 Taxiways	Concrete Placement Concrete Placement	Air Compressor Concrete Saws	Diesel Diesel	31533.30 CY 31533.30 CY	8 Hours pe 252.2664 hours 8 Hours pe 252.2664 hours	93.59 93.59
3 Taxiways 3 Taxiways	Concrete Placement Concrete Placement	Concrete Truck Other General Equipment	Diesel	31533.30 CY 31533.30 CY	8 Hours pe 1051.11 hours 16 Hours p 504.5328 hours	389.97 187.18
3 Taxiways 3 Taxiways 3 Taxiways	Concrete Placement Concrete Placement Concrete Placement	Pickup Truck Rubber Tired Loader	Diesel Diesel	31533.30 CY 31533.30 CY	24 Hours p 756.7992 hours 8 Hours pe 252.2664 hours	280.78 93.59
3 Taxiways	Concrete Placement	Slip Form Paver Surfacing Equipment (Grooving)	Diesel Diesel	31533.30 CY 31533.30 CY 31533.30 CY	8 Hours pe 252.2664 hours	93.59 93.59 93.59
3 Taxiways 3 Taxiways	Concrete Placement Drainage - 24 inch SICPP	Dozer	Diesel	3419.00 LF	8 Hours pe 252.2664 hours 8 Hours pe 109.408 hours	44.58
3 Taxiways	Drainage - 24 inch SICPP	Dump Truck	Diesel	3419.00 LF	8 Hours pe 109.408 hours	44.58
3 Taxiways	Drainage - 24 inch SICPP	Excavator	Diesel	3419.00 LF	8 Hours pe 109.408 hours	44.58
3 Taxiways	Drainage - 24 inch SICPP	Loader	Diesel	3419.00 LF	8 Hours pe 109.408 hours	44.58
3 Taxiways	Drainage - 24 inch SICPP	Other General Equipment	Diesel	3419.00 LF	8 Hours pe 109.408 hours	44.58
3 Taxiways	Drainage - 24 inch SICPP	Pickup Truck	Diesel	3419.00 LF	8 Hours pe 109.408 hours	44.58
3 Taxiways	Drainage - 24 inch SICPP	Roller	Diesel	3419.00 LF	8 Hours pe 109.408 hours	44.58
3 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Dump Truck	Diesel	6838.00 LF	8 Hours pe 60.78222 hours	24.76
3 Taxiways		Loader	Diesel	6838.00 LF	8 Hours pe 60.78222 hours	24.76
3 Taxiways	Drainage - 6 inch Perforated Underdrain	Other General Equipment	Diesel	6838.00 LF	8 Hours pe 60.78222 hours	24.76
3 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Pickup Truck	Diesel	6838.00 LF	8 Hours pe 60.78222 hours	24.76
3 Taxiways		Tractors/Loader/Backhoe	Diesel	6838.00 LF	8 Hours pe 60.78222 hours	24.76
3 Taxiways	Dust Control	Water Truck	Diesel	180.00 Day	8 Hours pe 1440 hours	1200
3 Taxiways	Excavation (Borrow)	Dozer	Diesel	31533.30 CY	8 Hours pe 420.444 hours	170.57
3 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dump Truck (12 cy)	Diesel	31533.30 CY	8 Hours pe 420.444 hours	170.57
3 Taxiways		Pickup Truck	Diesel	31533.30 CY	8 Hours pe 420.444 hours	170.57
3 Taxiways	Excavation (Borrow) Excavation (Cut to Fill)	Roller	Diesel	31533.30 CY	8 Hours pe 194.0511 hours	78.73
3 Taxiways		Dozer	Diesel	31533.30 CY	8 Hours pe 315.333 hours	127.93
3 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dump Truck (12 cy)	Diesel	31533.30 CY	8 Hours pe 840.888 hours	341.14
3 Taxiways		Excavator	Diesel	31533.30 CY	8 Hours pe 252.2664 hours	102.34
3 Taxiways	Excavation (Cut to Fill)	Pickup Truck	Diesel	31533.30 CY	8 Hours pe 252.2664 hours	102.34
3 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Roller	Diesel	31533.30 CY	8 Hours pe 252.2664 hours	102.34
3 Taxiways		Scraper	Diesel	31533.30 CY	8 Hours pe 315.333 hours	127.93
3 Taxiways	Excavation (Topsoil Stripping) Fencing	Dozer	Diesel	75679.80 SY	8 Hours pe 118.7134 hours	48.16
3 Taxiways		Concrete Truck	Diesel	3409.00 LF	2 Hours pe 37.87778 hours	15.37
3 Taxiways	Fencing	Dump Truck	Diesel	3409.00 LF	8 Hours pe 151.5111 hours	61.47
3 Taxiways	Fencing	Other General Equipment	Diesel	3409.00 LF	8 Hours pe 151.5111 hours	61.47
3 Taxiways	Fencing	Pickup Truck	Diesel	3409.00 LF	8 Hours pe 151.5111 hours	61.47

3 Taxiways	Fencing	Skid Steer Loader	Diesel	3409.00 LF	8 Hours pe 151.5111 hours	61.47
3 Taxiways 3 Taxiways 3 Taxiways	Fencing Fencing Grading	Tractors/Loader/Backhoe Dozer	Diesel Diesel	3409.00 LF 79696.90 SY	8 Hours pe 151.5111 hours 8 Hours pe 79.6969 hours	61.47 32.47
3 Taxiways	Grading	Grader	Diesel	79696.90 SY	8 Hours pe 79.6969 hours	32.47
3 Taxiways	Grading	Roller	Diesel	79696.90 SY	8 Hours pe 79.6969 hours	32.47
3 Taxiways	Hydroseeding	Hydroseeder	Diesel	717990.00 SF	8 Hours pe 71.799 hours	29.25
3 Taxiways	Hydroseeding	Off-Road Truck	Diesel	717990.00 SF	8 Hours pe 71.799 hours	29.25
3 Taxiways	Lighting	Dump Truck	Diesel	7218.00 LF	8 Hours pe 48.12 hours	21.11
3 Taxiways	Lighting	Loader	Diesel	7218.00 LF	8 Hours pe 48.12 hours	21.11
3 Taxiways	Lighting	Other General Equipment	Diesel	7218.00 LF	8 Hours pe 48.12 hours	21.11
3 Taxiways	Lighting	Pickup Truck	Diesel	7218.00 LF	8 Hours pe 48.12 hours	21.11
3 Taxiways	Lighting	Skid Steer Loader	Diesel	7218.00 LF	8 Hours pe 48.12 hours	21.11
3 Taxiways	Lighting	Tractors/Loader/Backhoe	Diesel	7218.00 LF	8 Hours pe 48.12 hours	21.11
3 Taxiways	Markings	Flatbed Truck	Diesel	681800.00 SF	8 Hours pe 1558.4 hours	632.23
3 Taxiways	Markings	Other General Equipment Pickup Truck	Diesel	681800.00 SF	8 Hours pe 1558.4 hours	632.23
3 Taxiways	Markings		Diesel	681800.00 SF	8 Hours pe 1558.4 hours	632.23
3 Taxiways	Soil Erosion/Sediment Control	Other General Equipment	Diesel	16.50 Acre	4 Hours pe 66 hours	26.8
3 Taxiways	Soil Erosion/Sediment Control	Pickup Truck	Diesel	16.50 Acre	8 Hours pe 132 hours	53.6
3 Taxiways	Soil Erosion/Sediment Control	Pumps	Diesel	16.50 Acre	4 Hours pe 66 hours	26.8
3 Taxiways	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	Diesel	16.50 Acre	4 Hours pe 66 hours	26.8
3 Taxiways	Subbase Placement	Dozer	Diesel	75679.80 SY	8 Hours pe 159.3259 hours	64.64
3 Taxiways	Subbase Placement	Dump Truck (12 cy)	Diesel	25226.60 CY	8 Hours pe 1121.182 hours	454.85
3 Taxiways	Subbase Placement	Pickup Truck	Diesel	75679.80 SY	8 Hours pe 159.3259 hours	64.64
3 Taxiways	Subbase Placement	Roller	Diesel	25226.60 CY	8 Hours pe 155.2406 hours	62.98
3 Taxiways	Topsoil Placement	Dozer	Diesel	13282.80 CY	8 Hours pe 177.104 hours	72.16
3 Taxiways	Topsoil Placement Topsoil Placement	Dump Truck	Diesel	13282.80 CY	8 Hours pe 177.104 hours	72.16
3 Taxiways		Pickup Truck	Diesel	13282.80 CY	8 Hours pe 177.104 hours	72.16
4 Demolition - Asphalt	Asphalt Demolition	Dozer	Diesel	21850.00 SF	8 Hours pe 21.85 hours	
4 Demolition - Asphalt	Asphalt Demolition	Excavator	Diesel	21850.00 SF	8 Hours pe 21.85 hours	
4 Demolition - Asphalt 4 Demolition - Concrete	Asphalt Demolition	Pickup Truck Excavator with Bucket	Diesel Diesel	21850.00 SF 21800.00 SF	8 Hours pe 43.7 hours 8 Hours pe 29.06667 hours	19.07
4 Demolition - Concrete	e Concrete Demolition	Excavator with Hoe Ram	Diesel	21800.00 SF	8 Hours pe 29.06667 hours	19.07
4 Demolition - Concrete	Asphalt Placement	Pickup Truck	Diesel	21800.00 SF	8 Hours pe 58.13333 hours	38.13
4 Taxiways		Asphalt Paver	Diesel	19869.00 SY	8 Hours pe 24.83625 hours	15.52
4 Taxiways	Asphalt Placement Asphalt Placement	Dump Truck	Diesel	19869.00 SY	8 Hours pe 89.44963 hours	55.88
4 Taxiways		Other General Equipment	Diesel	19869.00 SY	16 Hours p 49.6725 hours	31.03
4 Taxiways	Asphalt Placement Asphalt Placement	Pickup Truck	Diesel	19869.00 SY	8 Hours pe 24.83625 hours	15.52
4 Taxiways		Roller	Diesel	19869.00 SY	8 Hours pe 24.83625 hours	15.52
4 Taxiways 4 Taxiways	Asphalt Placement Asphalt Placement	Skid Steer Loader Surfacing Equipment (Grooving)	Diesel Diesel	19869.00 SY 19869.00 SY	8 Hours pe 24.83625 hours 8 Hours pe 31.7904 hours	15.52 19.86
4 Taxiways	Concrete Placement Concrete Placement	Air Compressor	Diesel	8278.80 CY	8 Hours pe 66.2304 hours	93.59
4 Taxiways		Concrete Saws	Diesel	8278.80 CY	8 Hours pe 66.2304 hours	93.59
4 Taxiways	Concrete Placement	Concrete Truck Other General Equipment	Diesel	8278.80 CY	8 Hours pe 275.96 hours	389.97
4 Taxiways	Concrete Placement		Diesel	8278.80 CY	16 Hours p 132.4608 hours	187.18
4 Taxiways	Concrete Placement	Pickup Truck	Diesel	8278.80 CY	24 Hours p 198.6912 hours	280.78
4 Taxiways	Concrete Placement	Rubber Tired Loader	Diesel	8278.80 CY	8 Hours pe 66.2304 hours	93.59
4 Taxiways	Concrete Placement	Slip Form Paver	Diesel	8278.80 CY	8 Hours pe 66.2304 hours	93.59
4 Taxiways	Concrete Placement Drainage - 24 inch SICPP	Surfacing Equipment (Grooving)	Diesel	8278.80 CY	8 Hours pe 66.2304 hours	93.59
4 Taxiways		Dozer	Diesel	905.00 LF	8 Hours pe 28.96 hours	44.58
4 Taxiways	Drainage - 24 inch SICPP	Dump Truck	Diesel	905.00 LF	8 Hours pe 28.96 hours	44.58
4 Taxiways	Drainage - 24 inch SICPP	Excavator	Diesel	905.00 LF	8 Hours pe 28.96 hours	44.58
4 Taxiways	Drainage - 24 inch SICPP	Loader	Diesel	905.00 LF	8 Hours pe 28.96 hours	44.58
4 Taxiways	Drainage - 24 inch SICPP	Other General Equipment	Diesel	905.00 LF	8 Hours pe 28.96 hours	44.58
4 Taxiways	Drainage - 24 inch SICPP	Pickup Truck	Diesel	905.00 LF	8 Hours pe 28.96 hours	44.58
4 Taxiways	Drainage - 24 inch SICPP	Roller	Diesel	905.00 LF	8 Hours pe 28.96 hours	44.58
4 Taxiways	Drainage - 6 inch Perforated Underdrain	Dump Truck	Diesel	1810.00 LF	8 Hours pe 16.08889 hours	24.76
4 Taxiways	Drainage - 6 inch Perforated Underdrain	Loader	Diesel	1810.00 LF	8 Hours pe 16.08889 hours	24.76
4 Taxiways	Drainage - 6 inch Perforated Underdrain	Other General Equipment Pickup Truck	Diesel Diesel	1810.00 LF 1810.00 LF 1810.00 LF	8 Hours pe 16.08889 hours	24.76 24.76 24.76
4 Taxiways 4 Taxiways	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	Diesel	1810.00 LF	8 Hours pe 16.08889 hours 8 Hours pe 16.08889 hours	24.76
4 Taxiways 4 Taxiways	Dust Control Excavation (Borrow)	Water Truck Dozer	Diesel	90.00 Day 8278.80 CY	8 Hours pe 720 hours 8 Hours pe 110.384 hours	1200 170.57
4 Taxiways	Excavation (Borrow) Excavation (Borrow)	Dump Truck (12 cy)	Diesel	8278.80 CY	8 Hours pe 110.384 hours	170.57
4 Taxiways		Pickup Truck	Diesel	8278.80 CY	8 Hours pe 110.384 hours	170.57
4 Taxiways	Excavation (Borrow) Excavation (Cut to Fill)	Roller	Diesel	8278.80 CY	8 Hours pe 50.94646 hours	78.73
4 Taxiways		Dozer	Diesel	8278.80 CY	8 Hours pe 82.788 hours	127.93
4 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dump Truck (12 cy)	Diesel	8278.80 CY	8 Hours pe 220.768 hours	341.14
4 Taxiways		Excavator	Diesel	8278.80 CY	8 Hours pe 66.2304 hours	102.34
4 Taxiways	Excavation (Cut to Fill) Excavation (Cut to Fill)	Pickup Truck	Diesel	8278.80 CY	8 Hours pe 66.2304 hours	102.34
4 Taxiways		Roller	Diesel	8278.80 CY	8 Hours pe 66.2304 hours	102.34
4 Taxiways	Excavation (Cut to Fill)	Scraper	Diesel	8278.80 CY	8 Hours pe 82.788 hours	127.93
4 Taxiways	Excavation (Topsoil Stripping) Fencing	Dozer	Diesel	19869.00 SY	8 Hours pe 31.16706 hours	48.16
4 Taxiways		Concrete Truck	Diesel	895.00 LF	2 Hours pe 9.944444 hours	15.37
4 Taxiways	Fencing	Dump Truck	Diesel	895.00 LF	8 Hours pe 39.77778 hours	61.47
4 Taxiways	Fencing	Other General Equipment	Diesel	895.00 LF	8 Hours pe 39.77778 hours	61.47
4 Taxiways	Fencing	Pickup Truck	Diesel	895.00 LF	8 Hours pe 39.77778 hours	61.47
4 Taxiways	Fencing	Skid Steer Loader	Diesel	895.00 LF	8 Hours pe 39.77778 hours	61.47
4 Taxiways	Fencing	Tractors/Loader/Backhoe	Diesel	895.00 LF	8 Hours pe 39.77778 hours	61.47
4 Taxiways	Grading	Dozer	Diesel	21095.60 SY	8 Hours pe 21.0956 hours	32.47
4 Taxiways	Grading	Grader	Diesel	21095.60 SY	8 Hours pe 21.0956 hours	32.47
4 Taxiways	Grading	Roller	Diesel	21095.60 SY	8 Hours pe 21.0956 hours	32.47
4 Taxiways	Hydroseeding	Hydroseeder	Diesel	190050.00 SF	8 Hours pe 19.005 hours	29.25
4 Taxiways	Hydroseeding	Off-Road Truck	Diesel	190050.00 SF	8 Hours pe 19.005 hours	29.25
4 Taxiways	Lighting	Dump Truck	Diesel	2190.00 LF	8 Hours pe 14.6 hours	21.11
4 Taxiways	Lighting	Loader	Diesel	2190.00 LF	8 Hours pe 14.6 hours	21.11
4 Taxiways	Lighting	Other General Equipment	Diesel	2190.00 LF	8 Hours pe 14.6 hours	21.11
4 Taxiways	Lighting	Pickup Truck	Diesel	2190.00 LF	8 Hours pe 14.6 hours	21.11
4 Taxiways	Lighting	Skid Steer Loader	Diesel	2190.00 LF	8 Hours pe 14.6 hours	21.11
4 Taxiways	Lighting	Tractors/Loader/Backhoe	Diesel	2190.00 LF	8 Hours pe 14.6 hours	21.11
4 Taxiways	Markings	Flatbed Truck	Diesel	179000.00 SF	8 Hours pe 409.1429 hours	632.23
4 Taxiways	Markings	Other General Equipment	Diesel	179000.00 SF	8 Hours pe 409.1429 hours	632.23
4 Taxiways	Markings	Pickup Truck	Diesel	179000.00 SF	8 Hours pe 409.1429 hours	632.23
4 Taxiways 4 Taxiways	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Other General Equipment Pickup Truck	Diesel	4.40 Acre 4.40 Acre	4 Hours pe 17.6 hours 8 Hours pe 35.2 hours	26.8 53.6
4 Taxiways	Soil Erosion/Sediment Control	Pumps	Diesel	4.40 Acre	4 Hours pe 17.6 hours	26.8
4 Taxiways	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	Diesel	4.40 Acre	4 Hours pe 17.6 hours	26.8
4 Taxiways	Subbase Placement	Dozer	Diesel	19869.00 SY	8 Hours pe 41.82947 hours	64.64
4 Taxiways	Subbase Placement	Dump Truck (12 cy)	Diesel	6623.00 CY	8 Hours pe 294.3556 hours	454.85
4 Taxiways	Subbase Placement	Pickup Truck	Diesel	19869.00 SY	8 Hours pe 41.82947 hours	64.64
4 Taxiways	Subbase Placement Topsoil Placement	Roller	Diesel	6623.00 CY	8 Hours pe 40.75692 hours	62.98
4 Taxiways		Dozer	Diesel	3515.90 CY	8 Hours pe 46.87867 hours	72.16
4 Taxiways	Topsoil Placement	Dump Truck	Diesel	3515.90 CY	8 Hours pe 46.87867 hours	72.16
4 Taxiways	Topsoil Placement	Pickup Truck	Diesel	3515.90 CY	8 Hours pe 46.87867 hours	72.16
5 Building - 10000 sqft-	1 story Concrete Foundations	Backhoe	Diesel	10000.00 SF 10000.00 SF	0.032 Hour 320 hours 0.006 Hour 60 hours	72.10
5 Building - 10000 sqft- 5 Building - 10000 sqft-	1 story Concrete Foundations	Concrete Ready Mix Trucks Fork Truck	Diesel Diesel	10000.00 SF	0.032 Hour 320 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft-	1 story Concrete Foundations	Tool Truck Tractor Trailer- Material Delivery	Diesel Diesel	10000.00 SF 10000.00 SF	0.008 Hour 80 hours 0.0016 Hot 16 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft-		Survey Crew Trucks Tractor Trailers Temp Fac.	Diesel Diesel	10000.00 SF 10000.00 SF	0.001 Hour 10 hours 0.0004 Hou 4 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft-		Fork Truck Man Lift	Diesel Diesel	10000.00 SF 10000.00 SF	0.024 Hour 240 hours 0.024 Hour 240 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft-		Tool Truck Tractor Trailer- Material Delivery	Diesel Diesel	10000.00 SF 10000.00 SF	0.006 Hour 60 hours 0.0024 Hot 24 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft-	1 story Interior Build-Out/ Finishes	Fork Truck Man Lift	Diesel Diesel	10000.00 SF 10000.00 SF	0.096 Hour 960 hours 0.096 Hour 960 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft-	1 story Interior Build-Out/ Finishes	Tool Truck Tractor Trailer- Material Delivery	Diesel Diesel	10000.00 SF 10000.00 SF	0.012 Hour 120 hours 0.012 Hour 120 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft- 5 Building - 10000 sqft-	1 story Roofing	High Lift Man Lift (Fascia Construction)	Diesel Diesel	10000.00 SF 10000.00 SF 10000.00 SF	0.012 Hour 120 hours 0.012 Hour 120 hours 0.012 Hour 120 hours	
5 Building - 10000 sqft-	1 story Roofing	Material Deliveries	Diesel	10000.00 SF	0.0008 Hou 8 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft-	1 story Security & Safety Systems	Tractor Trailer- Material Delivery High Lift	Diesel	10000.00 SF 10000.00 SF	0.0012 Hot 12 hours 0.032 Hour 320 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft-		Tool Truck 40 Ton Crane	Diesel Diesel	10000.00 SF 10000.00 SF	0.008 Hour 80 hours 0.024 Hour 240 hours	
5 Building - 10000 sqft- 5 Building - 10000 sqft-	1 story Structural Steel Erection	Fork Truck Tool Truck	Diesel Diesel	10000.00 SF 10000.00 SF	0.012 Hour 120 hours 0.006 Hour 60 hours	
5 Building - 10000 sqft-	1 story Structural Steel Erection	Tractor Trailer- Steel Deliveries	Diesel	10000.00 SF	0.0016 Hot 16 hours	
6 NAVAIDS	Instrument Landing System (ILS) Localizer	Air Compressor	Diesel	1.00 Unit	8 Hours pe 8 hours	
6 NAVAIDS	Instrument Landing System (ILS) Localizer	Crane	Diesel	1.00 Unit	8 Hours pe 8 hours	
6 NAVAIDS	Instrument Landing System (ILS) Localizer	Dozer	Diesel	1.00 Unit	16 Hours p 16 hours	
6 NAVAIDS	Instrument Landing System (ILS) Localizer	Dump Truck	Diesel	1.00 Unit	20 Hours p 20 hours	
6 NAVAIDS	Instrument Landing System (ILS) Localizer	Excavator	Diesel	1.00 Unit	8 Hours pe 8 hours	
6 NAVAIDS	Instrument Landing System (ILS) Localizer	Other General Equipment	Diesel	1.00 Unit	24 Hours p 24 hours	
6 NAVAIDS	Instrument Landing System (ILS) Localizer	Pickup Truck	Diesel	1.00 Unit	4 Hours pe 4 hours	
6 NAVAIDS 6 NAVAIDS	Instrument Landing System (ILS) Localizer Instrument Landing System (ILS) Localizer Instrument Landing System (ILS) Localizer	Skid Steer Loader Tractors/Loader/Backhoe	Diesel Diesel	1.00 Unit 1.00 Unit 1.00 Unit	24 Hours p 24 hours 24 Hours p 24 hours	
6 Rehabilitate Runway	Asphalt Placement	Asphalt Paver	Diesel	148989.80 SY	8 Hours pe 186.2373 hours	115.46
6 Rehabilitate Runway 6 Rehabilitate Runway	Asphalt Placement Asphalt Placement	Dump Truck Other General Equipment	Diesel	148989.80 SY 148989.80 SY	8 Hours pe 670.7476 hours 16 Hours p 372.4745 hours	415.85 230.93
6 Rehabilitate Runway	Asphalt Placement Asphalt Placement	Pickup Truck	Diesel	148989.80 SY	8 Hours pe 186.2373 hours	115.46
6 Rehabilitate Runway		Roller	Diesel	148989.80 SY	8 Hours pe 186.2373 hours	115.46
6 Rehabilitate Runway	Asphalt Placement	Skid Steer Loader	Diesel	148989.80 SY	8 Hours pe 186.2373 hours	115.46
6 Rehabilitate Runway	Asphalt Placement	Surfacing Equipment (Grooving)	Diesel	148989.80 SY	8 Hours pe 238.3837 hours	147.79
6 Rehabilitate Runway 6 Rehabilitate Runway	Cold Milling Cold Milling	Cold Planer Dump Truck	Diesel Diesel	148989.80 SY 148989.80 SY	8 Hours pe 297.9796 hours 8 Hours pe 297.9796 hours	184.74 184.74
6 Rehabilitate Runway	Cold Milling Cold Milling	Pickup Truck	Diesel	148989.80 SY	8 Hours pe 297.9796 hours	184.74
6 Rehabilitate Runway		Sweepers	Diesel	148989.80 SY	8 Hours pe 297.9796 hours	184.74
6 Rehabilitate Runway 6 Rehabilitate Runway	Cold Milling Concrete Demolition	Sweepers Water Truck Concrete Saws	Diesel Diesel	148989.80 SY 148989.80 SY 1342250.00 SF	8 Hours pe 297.9796 hours 8 Hours pe 297.9796 hours 8 Hours pe 2684.5 hours	184.74 184.74 1021.93
6 Rehabilitate Runway	Concrete Demolition	Dump Truck	Diesel	1342250.00 SF 1342250.00 SF 1342250.00 SF	8 Hours pe 2684.5 hours	1021.93
6 Rehabilitate Runway 6 Rehabilitate Runway	Concrete Demolition Concrete Demolition	Excavator Hydralic Hammer	Diesel Diesel	1342250.00 SF	8 Hours pe 2684.5 hours 8 Hours pe 2684.5 hours	1021.93
6 Rehabilitate Runway 6 Rehabilitate Runway	Concrete Demolition Concrete Demolition	Other General Equipment Pickup Truck	Diesel	1342250.00 SF 1342250.00 SF	8 Hours pe 2684.5 hours 8 Hours pe 2684.5 hours	1021.93 1021.93
6 Rehabilitate Runway	Concrete Placement	Air Compressor	Diesel	62079.10 CY	8 Hours pe 496.6328 hours	290.18
6 Rehabilitate Runway	Concrete Placement	Concrete Saws	Diesel	62079.10 CY	8 Hours pe 496.6328 hours	290.18
6 Rehabilitate Runway	Concrete Placement	Concrete Truck Other General Equipment	Diesel	62079.10 CY	8 Hours pe 2069.303 hours	1209.07
6 Rehabilitate Runway	Concrete Placement		Diesel	62079.10 CY	16 Hours p 993.2656 hours	580.35
6 Rehabilitate Runway	Concrete Placement Concrete Placement	Pickup Truck	Diesel	62079.10 CY	24 Hours p 1489.898 hours	870.53
6 Rehabilitate Runway		Rubber Tired Loader	Diesel	62079.10 CY	8 Hours pe 496.6328 hours	290.18
6 Rehabilitate Runway 6 Rehabilitate Runway	Concrete Placement Concrete Placement	Slip Form Paver Surfacing Equipment (Grooving)	Diesel Diesel	62079.10 CY 62079.10 CY	8 Hours pe 496.6328 hours 8 Hours pe 496.6328 hours	290.18 290.18
6 Rehabilitate Runway 6 Rehabilitate Runway	Dust Control Excavation (Cut to Fill) (Assume 20% reconstruction)	Water Truck	Diesel	210.00 Day	8 Hours pe 1680 hours	250.10
6 Rehabilitate Runway	Excavation (Cut to Fill) (Assume 20% reconstruction)	Dozer Dump Truck (12 cy)	Diesel Diesel	12415.80 CY 12415.80 CY	8 Hours pe 331.088 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Excavation (Cut to Fill) (Assume 20% reconstruction) Excavation (Cut to Fill) (Assume 20% reconstruction)	Excavator Pickup Truck	Diesel	12415.80 CY 12415.80 CY	8 Hours pe 99.3264 hours 8 Hours pe 99.3264 hours	
6 Rehabilitate Runway	Excavation (Cut to Fill) (Assume 20% reconstruction)	Roller	Diesel	12415.80 CY	8 Hours pe 99.3264 hours	
6 Rehabilitate Runway	Excavation (Topsoil Stripping)	Dozer	Diesel	29798.00 SY	8 Hours pe 46.74196 hours	
6 Rehabilitate Runway	Grading	Dozer	Diesel	31047.60 SY	8 Hours pe 31.0476 hours	
6 Rehabilitate Runway	Grading	Grader	Diesel	31047.60 SY	8 Hours pe 31.0476 hours	
6 Rehabilitate Runway	Grading	Roller	Diesel	31047.60 SY	8 Hours pe 31.0476 hours	
6 Rehabilitate Runway	Hydroseeding	Hydroseeder	Diesel	31047.60 SF	8 Hours pe 3.10476 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Hydroseeding Lighting	Off-Road Truck Dump Truck	Diesel Diesel	31047.60 SF 11238.00 LF	8 Hours pe 3.10476 hours 8 Hours pe 74.92 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Lighting Lighting Lighting	Loader Other General Equipment	Diesel Diesel	11238.00 LF 11238.00 LF 11238.00 LF	8 Hours pe 74.92 hours 8 Hours pe 74.92 hours 8 Hours pe 74.92 hours	
6 Rehabilitate Runway	Lighting	Other General Equipment Pickup Truck Skid Steer Loader	Diesel	11238.00 LF 11238.00 LF 11238.00 LF	8 Hours pe 74.92 hours	
6 Rehabilitate Runway	Lighting	Skin Steel Fogget	Diesel	21230.UU LF	8 Hours pe 74.92 hours	

6 Rehabilitate Runway 6 Rehabilitate Runway	Lighting	Tractors/Loader/Backhoe	Diesel	11238.00 LF	8 Hours pe 74.92 hours	
	Markings Markings	Flatbed Truck	Diesel Diesel	1342250.00 SF 1342250.00 SF	8 Hours pe 3068 hours 8 Hours pe 3068 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Markings	Other General Equipment Pickup Truck	Diesel	1342250.00 SF	8 Hours pe 3068 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Sealing Random Cracks Sealing Random Cracks	Crack Cleaner Crack Filler (Trailer Mounted)	Diesel Diesel	5369.00 LF 5369.00 LF	8 Hours pe 15.34 hours 8 Hours pe 15.34 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Sealing Random Cracks Sealing Random Cracks	Flatbed Truck Other General Equipment	Diesel Diesel	5369.00 LF 5369.00 LF	8 Hours pe 15.34 hours 8 Hours pe 15.34 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Sealing Random Cracks Soil Erosion/Sediment Control	Pickup Truck Other General Equipment	Diesel Diesel	5369.00 LF 6.40 Acre	8 Hours pe 15.34 hours 4 Hours pe 25.6 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pickup Truck Pumps	Diesel Diesel	6.40 Acre 6.40 Acre	8 Hours pe 51.2 hours 4 Hours pe 25.6 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Soil Erosion/Sediment Control Subbase Placement	Tractors/Loader/Backhoe Dozer	Diesel Diesel	6.40 Acre 148989.80 SY	4 Hours pe 25.6 hours 8 Hours pe 313.6627 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Subbase Placement Subbase Placement	Dump Truck (12 cy) Pickup Truck	Diesel Diesel	49663.30 CY 148989.80 SY	8 Hours pe 2207.258 hours 8 Hours pe 313.6627 hours	
6 Rehabilitate Runway	Subbase Placement	Roller	Diesel	49663.30 CY	8 Hours pe 305.6203 hours	
6 Rehabilitate Runway 6 Rehabilitate Runway	Topsoil Placement Topsoil Placement	Dozer Dump Truck	Diesel Diesel	5174.60 CY 5174.60 CY	8 Hours pe 68.99467 hours 8 Hours pe 68.99467 hours	
6 Rehabilitate Runway 6 Service Road	Topsoil Placement Asphalt Placement	Pickup Truck Asphalt Paver	Diesel Diesel	5174.60 CY 4322.30 SY	8 Hours pe 68.99467 hours 8 Hours pe 5.402875 hours	
6 Service Road 6 Service Road	Asphalt Placement Asphalt Placement	Dump Truck Other General Equipment	Diesel Diesel	4322.30 SY 4322.30 SY	8 Hours pe 19.45886 hours 16 Hours p 10.80575 hours	
6 Service Road 6 Service Road	Asphalt Placement Asphalt Placement	Pickup Truck Roller	Diesel Diesel	4322.30 SY 4322.30 SY	8 Hours pe 5.402875 hours 8 Hours pe 5.402875 hours	
6 Service Road 6 Service Road	Asphalt Placement Asphalt Placement	Skid Steer Loader Surfacing Equipment (Grooving)	Diesel	4322.30 SY 4322.30 SY	8 Hours pe 5.402875 hours 8 Hours pe 6.91568 hours	
6 Service Road 6 Service Road	Clearing and Grubbing	Chain Saw	Diesel Diesel	1.20 Acre 1.20 Acre	12 Hours p 14.4 hours 12 Hours p 14.4 hours	
6 Service Road	Clearing and Grubbing Clearing and Grubbing	Chipper/Stump Grinder Pickup Truck	Diesel	1.20 Acre	16 Hours p 19.2 hours	
6 Service Road 6 Service Road	Concrete Placement Concrete Placement	Air Compressor Concrete Saws	Diesel Diesel	1801.00 CY 1801.00 CY	8 Hours pe 14.408 hours 8 Hours pe 14.408 hours	0 0
6 Service Road 6 Service Road	Concrete Placement Concrete Placement	Concrete Truck Other General Equipment	Diesel Diesel	1801.00 CY 1801.00 CY	8 Hours pe 60.03333 hours 16 Hours p 28.816 hours	0
6 Service Road 6 Service Road	Concrete Placement Concrete Placement	Pickup Truck Rubber Tired Loader	Diesel Diesel	1801.00 CY 1801.00 CY	24 Hours p 43.224 hours 8 Hours pe 14.408 hours	0
6 Service Road 6 Service Road	Concrete Placement Concrete Placement	Slip Form Paver Surfacing Equipment (Grooving)	Diesel Diesel	1801.00 CY 1801.00 CY	8 Hours pe 14.408 hours 8 Hours pe 14.408 hours	0
6 Service Road 6 Service Road	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Dozer Dump Truck	Diesel Diesel	1308.00 LF 1308.00 LF	8 Hours pe 41.856 hours 8 Hours pe 41.856 hours	
6 Service Road 6 Service Road	Drainage - 24 inch SICPP Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Excavator Loader	Diesel	1308.00 LF 1308.00 LF	8 Hours pe 41.856 hours 8 Hours pe 41.856 hours	
6 Service Road	Drainage - 24 inch SICPP	Other General Equipment	Diesel	1308.00 LF	8 Hours pe 41.856 hours	
6 Service Road 6 Service Road	Drainage - 24 inch SICPP Drainage - 24 inch SICPP	Pickup Truck Roller	Diesel Diesel	1308.00 LF 1308.00 LF	8 Hours pe 41.856 hours 8 Hours pe 41.856 hours	
6 Service Road 6 Service Road	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Dump Truck Loader	Diesel Diesel	2616.00 LF 2616.00 LF	8 Hours pe 23.25333 hours 8 Hours pe 23.25333 hours	
6 Service Road 6 Service Road	Drainage - 6 inch Perforated Underdrain Drainage - 6 inch Perforated Underdrain	Other General Equipment Pickup Truck	Diesel Diesel	2616.00 LF 2616.00 LF	8 Hours pe 23.25333 hours 8 Hours pe 23.25333 hours	
6 Service Road 6 Service Road	Drainage - 6 inch Perforated Underdrain Dust Control	Tractors/Loader/Backhoe Water Truck	Diesel Diesel	2616.00 LF 210.00 Day	8 Hours pe 23.25333 hours 8 Hours pe 1680 hours	
6 Service Road 6 Service Road	Excavation (Borrow) Excavation (Borrow)	Dozer Dump Truck (12 cy)	Diesel Diesel	1801.00 CY 1801.00 CY	8 Hours pe 24.01333 hours 8 Hours pe 24.01333 hours	
6 Service Road 6 Service Road	Excavation (Borrow) Excavation (Borrow)	Pickup Truck Roller	Diesel	1801.00 CY 1801.00 CY	8 Hours pe 24.01333 hours 8 Hours pe 11.08308 hours	
6 Service Road	Excavation (Cut to Fill)	Dozer	Diesel	1801.00 CY	8 Hours pe 18.01 hours	
6 Service Road 6 Service Road	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dump Truck (12 cy) Excavator	Diesel Diesel	1801.00 CY 1801.00 CY	8 Hours pe 48.02667 hours 8 Hours pe 14.408 hours	
6 Service Road 6 Service Road	Excavation (Cut to Fill) Excavation (Cut to Fill)	Pickup Truck Roller	Diesel Diesel	1801.00 CY 1801.00 CY	8 Hours pe 14.408 hours 8 Hours pe 14.408 hours	
6 Service Road 6 Service Road	Excavation (Cut to Fill) Excavation (Topsoil Stripping)	Scraper Dozer	Diesel Diesel	1801.00 CY 4322.30 SY	8 Hours pe 18.01 hours 8 Hours pe 6.780078 hours	
6 Service Road 6 Service Road	Fencing Fencing	Concrete Truck Dump Truck	Diesel Diesel	1298.00 LF 1298.00 LF	2 Hours pe 14.42222 hours 8 Hours pe 57.68889 hours	
6 Service Road	Fencing	Other General Equipment	Diesel	1298.00 LF	8 Hours pe 57.68889 hours	
6 Service Road 6 Service Road	Fencing Fencing	Pickup Truck Skid Steer Loader	Diesel Diesel	1298.00 LF 1298.00 LF	8 Hours pe 57.68889 hours 8 Hours pe 57.68889 hours	
6 Service Road 6 Service Road	Fencing Grading	Tractors/Loader/Backhoe Dozer	Diesel Diesel	1298.00 LF 5807.50 SY	8 Hours pe 57.68889 hours 8 Hours pe 5.8075 hours	
6 Service Road 6 Service Road	Grading Grading	Grader Roller	Diesel Diesel	5807.50 SY 5807.50 SY	8 Hours pe 5.8075 hours 8 Hours pe 5.8075 hours	
6 Service Road 6 Service Road	Hydroseeding Hydroseeding	Hydroseeder Off-Road Truck	Diesel Diesel	52320.00 SF 52320.00 SF	8 Hours pe 5.232 hours 8 Hours pe 5.232 hours	
6 Service Road 6 Service Road	Markings Markings	Flatbed Truck Other General Equipment	Diesel Diesel	38940.00 SF 38940.00 SF	8 Hours pe 89.00571 hours 8 Hours pe 89.00571 hours	
6 Service Road 6 Service Road	Markings Soil Erosion/Sediment Control	Pickup Truck Other General Equipment	Diesel	38940.00 SF 1.20 Acre	8 Hours pe 89.00571 hours 4 Hours pe 4.8 hours	
6 Service Road	Soil Erosion/Sediment Control	Pickup Truck	Diesel	1.20 Acre	8 Hours pe 9.6 hours	
6 Service Road 6 Service Road	Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Pumps Tractors/Loader/Backhoe	Diesel Diesel	1.20 Acre 1.20 Acre	4 Hours pe 4.8 hours 4 Hours pe 4.8 hours	
6 Service Road 6 Service Road	Subbase Placement Subbase Placement	Dozer Dump Truck (12 cy)	Diesel Diesel	4322.30 SY 1440.80 CY	8 Hours pe 9.099579 hours 8 Hours pe 64.03556 hours	
6 Service Road 6 Service Road	Subbase Placement Subbase Placement	Pickup Truck Roller	Diesel Diesel	4322.30 SY 1440.80 CY	8 Hours pe 9.099579 hours 8 Hours pe 8.866462 hours	
6 Service Road 6 Service Road	Topsoil Placement Topsoil Placement	Dozer Dump Truck	Diesel Diesel	967.90 CY 967.90 CY	8 Hours pe 12.90533 hours 8 Hours pe 12.90533 hours	
6 Service Road 7 Demolition - Concrete	Topsoil Placement Concrete Demolition	Pickup Truck Excavator with Bucket	Diesel	967.90 CY 4500.00 SF	8 Hours pe 12.90533 hours 8 Hours pe 6 hours	19.07
7 Demolition - Concrete	Concrete Demolition	Excavator with Hoe Ram	Diesel	4500.00 SF	8 Hours pe 6 hours	19.07
7 Demolition - Concrete 7 Fencing	Concrete Demolition Clearing and Grubbing	Pickup Truck Chain Saw	Diesel Diesel	4500.00 SF 0.20 Acre	8 Hours pe 12 hours 12 Hours p 2.4 hours	38.13
7 Fencing 7 Fencing	Clearing and Grubbing Clearing and Grubbing	Chipper/Stump Grinder Pickup Truck	Diesel Diesel	0.20 Acre 0.20 Acre	12 Hours p 2.4 hours 16 Hours p 3.2 hours	
7 Fencing 7 Fencing	Excavation (Cut to Fill) Excavation (Cut to Fill)	Dozer Dump Truck (12 cy)	Diesel Diesel	346.90 CY 346.90 CY	8 Hours pe 2.7752 hours 8 Hours pe 9.250667 hours	
7 Fencing 7 Fencing	Excavation (Cut to Fill) Excavation (Cut to Fill)	Excavator Pickup Truck	Diesel Diesel	346.90 CY 346.90 CY	8 Hours pe 2.7752 hours 8 Hours pe 2.7752 hours	
7 Fencing	Excavation (Cut to Fill)		Diesel	346.90 CY	8 Hours pe 2.7752 hours	
7 Fencing		Roller Concrete Truck			2 Hours pe 16.66667 hours	
7 Fencing 7 Fencing	Fencing Fencing	Concrete Truck Dump Truck	Diesel Diesel	1500.00 LF 1500.00 LF	2 Hours pe 16.66667 hours 8 Hours pe 66.66667 hours	
7 Fencing 7 Fencing 7 Fencing	Fencing Fencing Fencing Fencing	Concrete Truck Dump Truck Other General Equipment Pickup Truck	Diesel Diesel Diesel Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours	
7 Fencing 7 Fencing 7 Fencing 7 Fencing 7 Fencing 7 Fencing	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe	Diesel Diesel Diesel Diesel Diesel Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours	
7 Fencing	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader	Diesel Diesel Diesel Diesel Diesel Diesel Diesel Diesel Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 838.10 SY 838.10 SY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours	
7 Fencing	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer	Diesel Diesel Diesel Diesel Diesel Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 838.10 SY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours	
7 Fencing	Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Grading	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller	Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 838.10 SY 838.10 SY 838.10 SY	8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 0.3831 hours 8 Hours pe 0.3831 hours 8 Hours pe 0.8381 hours	
7 Fencing	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck	Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 838.10 SY 838.10 SY 838.10 SY 7550.00 SF	8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 1.66 hours 8 Hours pe 1.66 hours	
7 Fencing	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Tooli Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe	Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 838.10 SY 838.10 SY 838.10 SY 7550.00 SF 7550.00 SF 7550.00 SF 7550.00 Acre 0.20 Acre 0.20 Acre	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 8 Hours pe 0.8 hours 8 Hours pe 1.6 hours 4 Hours pe 1.6 hours 4 Hours pe 0.8 hours 4 Hours pe 0.8 hours	
7 Fencing	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dozer	Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 838.10 SY 838.10 SY 838.10 SY 7550.00 SF 7550.00 SF 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 349.20 CY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 4 Hours pe 0.755 hours 4 Hours pe 0.8 hours 8 Hours pe 1.6 hours 4 Hours pe 0.8 hours 8 Hours pe 4.656 hours 8 Hours pe 4.656 hours	
7 Fencing	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsiol Placement Topsoil Placement Topsoil Placement Topsoil Placement Topsoil Placement Topsoil Placement Topsoil Placement	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver	Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 838.10 SY 838.10 SY 838.10 SY 7550.00 SF 7550.00 SF 0.20 Acre 0.20 Acr	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 4 Hours pe 0.755 hours 4 Hours pe 1.6 hours 8 Hours pe 0.8 hours 4 Hours pe 0.8 hours 8 Hours pe 4.656 hours 8 Hours pe 4.656 hours 8 Hours pe 4.656 hours 8 Hours pe 28.77675 hours	15.52 55.88
7 Fencing 7 Tencing 7 Textways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Osil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topiol Placement Topiol Placement Asphalt Placement Asphalt Placement Asphalt Placement Asphalt Placement	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Other General Equipment Pickup Truck Other General Equipment	Diesel	1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 1500.00 LF 838.10 SY 838.10 SY 838.10 SY 838.10 SY 7550.00 SF 7550.00 SF 0.20 Acre 0.20 Acr	8 Hours pe 66.66667 hours 8 Hours pe 06.86667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 4 Hours pe 0.755 hours 4 Hours pe 1.6 hours 4 Hours pe 0.8 hours 8 Hours pe 1.6 hours 4 Hours pe 0.8 hours 8 Hours pe 4.656 hours 8 Hours pe 37.7575 hours 8 Hours pe 57.5535 hours	55.88 31.03
7 Fencing 7 Taxiways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topiol Placement Topiol Placement Topiol Placement Asphath Placement	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Roller Hydroseeder Off-Road Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Other General Equipment Pickup Truck	Diesel	1500.00 LF 838.10 SY 838.10 SY 838.10 SY 838.10 SY 638.10 SY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.8 hours 8 Hours pe 0.8 hours 8 Hours pe 0.8 hours 8 Hours pe 10.8 hours 8 Hours pe 4.656 hours 8 Hours pe 10.6416 hours 8 Hours pe 10.6416 hours 16 Hours pe 10.6416 hours 16 Hours pe 10.6416 hours 16 Hours pe 28.77675 hours 8 Hours pe 28.77675 hours	55.88 31.03 15.52 15.52
7 Fencing 7 Tencing 7 Taxiways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Toolie Frosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topiol Placement Topsoil Placement Topsoil Placement Asphath Placement	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Skid Steer Loader	Diesel	1500.00 LF 1500.00 SP 1500.00 SP 1550.00 SF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 8 Hours pe 0.8 hours 8 Hours pe 4.656 hours 8 Hours pe 4.656 hours 8 Hours pe 28.77675 hours	55.88 31.03 15.52 15.52 15.52 19.86
7 Fencing 7 Taxiways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Asphat Placement Asphat Placement Asphat Placement Asphat Placement Asphat Placement Asphat Placement Concrete Placement Concrete Placement Concrete Placement	Concrete Truck Dump Truck Other General Equipment Pickup Truck Sidi Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Vaver Dump Truck Other General Equipment Pickup Truck Other General Equipment Pickup Truck Roller Sidi Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 4 Hours pe 0.755 hours 4 Hours pe 0.8 hours 4 Hours pe 0.8 hours 8 Hours pe 4.656 hours 8 Hours pe 4.656 hours 8 Hours pe 28.77675 hours 8 Hours pe 38.83424 hours 8 Hours pe 76.7384 hours 8 Hours pe 76.7384 hours 8 Hours pe 76.7384 hours	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59
7 Fencing 7 Taxiways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsiol Placement Topsoil Placement Topsoil Placement Asphalt Placement Concrete Placement	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader	Diesel	1500.00 LF 838.10 SY 838.10 SY 838.10 SY 838.10 SY 7550.00 SF 0.20 Acre 0.20 Acr	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 8 Hours pe 0.8 hours 9 Hours pe 0.8 hours 9 Hours pe 1.66 hours 9 Hours pe 1.66 hours 9 Hours pe 1.66 hours 16 Hours pe 1.656 hours 16 Hours pe 28.77675 hours 16 Hours pe 28.77675 hours 16 Hours pe 36.83424 hours 18 Hours pe 36.83424 hours 18 Hours pe 36.83424 hours 18 Hours pe 76.7384 hours 18 Hours pe 319.7433 hours 18 Hours pe 131.7433 hours 18 Hours pe 131.7433 hours	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 389.97 187.18
7 Fencing 7 Tencing	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphath Placement Concrete Placement Concrete Placement Concrete Placement Concrete Placement Concrete Placement	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 8 Hours pe 0.8 hours 8 Hours pe 0.8 hours 8 Hours pe 10.8 hours 8 Hours pe 4.656 hours 8 Hours pe 4.656 hours 8 Hours pe 28.77675 hours 8 Hours pe 76.7384 hours	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 389.97
7 Fencing 7 Tencing 7 Tencing 7 Tencing 7 Tencing 7 Tencing 7 Taxiways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Fencing Fenci	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Pickup Truck Asphalt Paver Dump Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.7755 hours 4 Hours pe 0.7755 hours 4 Hours pe 0.8 hours 8 Hours pe 4.656 hours 8 Hours pe 4.656 hours 8 Hours pe 4.656 hours 8 Hours pe 28.77675 hours 8 Hours pe 103.6416 hours 16 Hours p 28.77675 hours 8 Hours pe 36.83424 hours 8 Hours pe 319.7433 hours 8 Hours pe 319.7433 hours 8 Hours pe 319.7433 hours	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 93.59 389.97 187.18 280.78
7 Fencing 7 Taxiways	Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Grading Grading Grading Grading Hydroseeding Topsiol Placement Topsiol Placement Topsiol Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Placement Concre	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Cother General Equipment Pickup Truck Cother General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Sulp Form Paver	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 4 Hours pe 0.755 hours 4 Hours pe 0.8 hours 4 Hours pe 0.8 hours 8 Hours pe 4.656 hours 8 Hours pe 4.656 hours 8 Hours pe 28.77675 hours 8 Hours pe 28.77675 hours 8 Hours pe 103.6416 hours 16 Hours pe 28.77675 hours 8 Hours pe 36.83424 hours 8 Hours pe 36.83424 hours 8 Hours pe 319.7433 hours 16 Hours p 133.4768 hours 8 Hours pe 76.7384 hours	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 38.97 187.18 280.78 93.59 93.59 93.59
7 Fencing 7 Tencing 7 Taxiways	Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Fencing Fenci	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Other General Equipment Pickup Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 9 Hours pe 0.755 hours 10.755 hours 10.7	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 389.97 187.18 280.78 93.59 93.59 93.59 94.58 44.58
7 Fencing 7 Taxiways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tiruck Other General Equipment Pickup Truck Surfacing Equipment Pickup Truck Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tiruck	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 06.86667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 0.755 hours 10.8 Hours pe 1.6 hours 10.8 hours 11.8 Hours pe 28.77675 hours 11.8 Hours pe 36.83424 hours 11.8 Hours pe 76.7384 hours 11.8 Hours pe 33.504 hours	55.88 31.03 15.52 15.52 15.52 19.86 93.59 38.99 187.18 280.78 93.59 93.59 93.59 44.58 44.58 44.58
7 Fencing 7 Tencing 7 Fencing 7 Tencing 7 Tenc	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Placement Con	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment	Diesel	1500.00 LF 1500.00 SF 7550.00 SF 7550.00 SF 7550.00 SF 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 10.20	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 4 Hours pe 0.755 hours 4 Hours pe 0.755 hours 4 Hours pe 0.755 hours 8 Hours pe 1.66 hours 8 Hours pe 1.66 hours 8 Hours pe 1.656 hours 8 Hours pe 28.77675 hours 8 Hours pe 28.767384 hours 8 Hours pe 319.7433 hours 16 Hours pe 76.7384 hours 8 Hours pe 76.7384 hours 8 Hours pe 76.7384 hours 8 Hours pe 33.504 hours	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58
7 Fencing 7 Taxiways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Grading Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topic In Erosion/Sediment Control Topic In Erosion/Sediment Topic Topic In Interest Topic Topic In Interest Topic Topic Interest Asphat Placement Asphat Placement Asphat Placement Asphat Placement Asphat Placement Asphat Placement Concrete Placemen	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Surfacing Equipment (Grooving) Air Compressor Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Excavator Loader Other General Equipment Pickup Truck Excavator Loader Other General Equipment	Diesel	1500.00 LF 1500.00 SF 7550.00 SF 7550.00 SF 7550.00 SF 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 10.20	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 9 Hours pe 0.8 hours 9 Hours pe 1.66 hours 9 Hours pe 1.66 hours 9 Hours pe 1.66 hours 9 Hours pe 1.656 hours 16 Hours pe 1.656 hours 16 Hours pe 28.77675 hours 16 Hours pe 1.676 hours 16 Hours pe 1.67784 hours 16 Hours pe 1.67384 hours 18 Hours pe 1.67384 hours 18 Hours pe 1.87486 hours	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58 44.58 44.58
7 Fencing 7 Taxiways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Toposi Placement Toposi Placement Toposi Placement Toposi Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Placeme	Concrete Truck Dump Truck Other General Equipment Pickup Truck Sidi Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Asphalt Paver Dump Truck Pickup Truck Roller Sidi Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Roller Sidi Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Silp Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Roller	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 9 0.8381 hours 9 0.8381 hours 9 0.755 hours 9 0.7553 hours 9 0.	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58
7 Fencing 7 Tencing 7 Tenc	Fencing Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Pla	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Surfacing Equipment (Grooving) Air Compressor Concrete Truck Other General Equipment Pickup Truck Rubber Tiruck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Loader	Diesel Diesel Diesel Diesesel Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 06.86667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 4 Hours pe 0.8 hours 8 Hours pe 1.6 hours 4 Hours pe 1.6 hours 8 Hours pe 2.8 hours 9 Hours pe 4.656 hours 8 Hours pe 4.656 hours 8 Hours pe 28.77675 hours 16 Hours pe 103.6416 hours 16 Hours pe 28.77675 hours 8 Hours pe 32.77675 hours 8 Hours pe 32.77675 hours 8 Hours pe 32.77675 hours 8 Hours pe 76.7384 hours 8 Hours pe 33.504 hours 8 Hours pe 18.61333 hours 8 Hours pe 18.61333 hours 8 Hours pe 18.61333 hours	55.88 31.03 15.52 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 94.458 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58
7 Fencing 7 Tencing 7 Tenc	Fencing Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Place	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Roller Dump Truck Roller	Diesel	1500.00 LF 1500.00 SF 7550.00 SF 7550.00 SF 7550.00 SF 7550.00 SF 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 10.20 Acre 10.2	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.8 hours 16 hours pe 16.666667 hours 8 Hours pe 10.755 hours 8 Hours pe 10.755 hours 8 Hours pe 10.8 hours 16 hours pe 10.8 hours 16 Hours pe 28.77675 hours 8 Hours pe 36.83424 hours 8 Hours pe 36.83424 hours 8 Hours pe 319.7433 hours 8 Hours pe 319.7433 hours 8 Hours pe 76.7384 hours 8 Hours pe 33.504 hours 8 Hours pe 18.61333 hours	55.88 31.03 15.52 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58
7 Fencing 7 Textiways 7 Taxiways	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Toposi Placement Toposi Placement Toposi Placement Toposi Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Placement	Concrete Truck Dump Truck Other General Equipment Pickup Truck Sidi Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Pickup Truck Asphalt Paver Dump Truck Roller Sidi Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Truck Rubber Tiruck Rubber Truck Roller Rupp Rupp Rupp Rupp Rupp Rupp Rupp Rupp	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 9 0.8381 hours 9 0.8381 hours 9 0.755 hours 9 0.7553 hours 9 0.	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 47.6 24.76 2
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7 Fencing 7 Taxiways	Fencing Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Foolit Forsion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphate Placement Asphate Placement Asphate Placement Asphate Placement Asphate Placement Asphate Placement Concrete Placement Conc	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dower Dower Dower Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dump Truck Tractors/Loader/Backhoe Water Truck Dozer Dump Truck Roller Dozer Dump Truck Roller	Diesel	1500.00 LF 1500.00 SF 7550.00 CY 7550.30 CY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 0.755 hours 0.755 hours 1.65 h	55.88 31.03 15.52 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58 44.58 44.58 24.76 24.76 24.76 1200 170.57
7 Fencing 7 Taxiways	Fencing Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Fencing/Fencing Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsiol Placement Topsiol Placement Topsiol Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Placement Co	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Surfacing Equipment Pickup Truck Rubber Tired Loader Silp Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Silp Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dump Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller	Diesel	1500.00 LF 1500.00 SF 7550.00 SF 7550.30 CY 23021.40 SY 23021.40 SY 23021.40 SY 23021.40 SY 23021.40 SY 23021.40 SY 2592.30 CY 9592.30 CY 9592.30 CY 9592.30 CY 9592.30 CY 1047.00 LF 1049.00 LF 1049.00 LF 1099.00 LF 10999.00 LF 109999.30 CY 109992.30 CY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 4 Hours pe 1.6 hours 4 Hours pe 1.6 hours 8 Hours pe 1.6 hours 8 Hours pe 2.8.77675 hours 8 Hours pe 32.77675 hours 8 Hours pe 36.83424 hours 8 Hours pe 76.7384 hours 8 Hours pe 76.7384 hours 8 Hours pe 319.7433 hours 16 Hours pe 319.7433 hours 16 Hours pe 76.7384 hours 8 Hours pe 76.7384 hours 8 Hours pe 33.504 hours 8 Hours pe 18.61333 hours 8 Hours pe 127.8973 hours 8 Hours pe 25.79474 hours 8 Hours pe 30.02954 hours 8 Hours pe 30.02954 hours 8 Hours pe 76.7384 hours	55.88 31.03 15.52 15.52 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58 44.58 44.58 64.76 624.76 624.76 624.76 1200 710.57 170.57
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7 Fencing 7 Fenc	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Placement Concret	Concrete Truck Dump Truck Other General Equipment Pickup Truck Sidi Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Sulfacing Equipment Pickup Truck Rubber Tired Loader Sulfacing Equipment Pickup Truck Rubber Tired Loader Sulfacing Equipment Pickup Truck Rubber Tired Loader Sulfa Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck Roller Scraper Dozer Concrete Truck Dump Truck Roller	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 9 0.8381 hours 9 0.8381 hours 9 0.755 hours 9 0.7553 hours 9 0.75535 hours 9 0.7555	55.88 31.03 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 93.59 44.58 44.58 44.58 44.58 44.58 44.58 44.58 64.76 624.76 624.76 624.76 624.76 70.07 70.57 70
7 Fencing 7 Taxiways	Fencing Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Frosion/Sediment Control Soil Frosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Placement Co	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Surfacing Equipment (Grooving) Air Compressor Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Slip Form Paver Concrete Truck Cother General Equipment Pickup Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Corcrete Truck Roller	Diesel	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 9 0.8 hours 9 0.8 hours 9 1.6 hours	55.88 31.03 15.52 15.52 15.52 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 14.76 24.76 24.76 24.76 1200 170.57 17
7 Fencing 7 Tencing 7 Tenc	Fencing Grading Fencing Grading Grading Hydroseeding Fencing	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment Pickup Truck Roller Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Roller Dump Truck Roller Dump Truck Roller Dump Truck Roller Dozer Dump Truck Roller Dozer Dump Truck Roller R	Diesel	1500.00 LF 1500.00 SF 7550.00 CY 7509.30 CY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 0.755 hours 0.755 hours 0.755 hours 1.6 hours pe 1.6 hours 1.6 hours pe 2.8.77675 hours 1.6 hours pe 103.6416 hours 1.6 hours pe 2.8.77675 hours 1.6 hours pe 3.7.5335 hours 1.6 hours pe 3.7.67384 hours 1.6 hours pe 3.7.67384 hours 1.6 hours pe 3.3.504 hours 1.6 hours pe 1.6 hours 1.6 hours 1.6 hours pe 1.6 hours 1.6 hour	55.88 31.03 15.52 15.52 15.52 15.52 15.52 15.52 15.52 15.86 93.59 93.59 93.59 93.59 93.59 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 14.58 14.76 120.7 170.57 1
7 Fencing 7 Fenc	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Grading Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphatt Placement Asphatt Placement Asphatt Placement Asphatt Placement Asphatt Placement Asphatt Placement Concrete Placement Concr	Concrete Truck Dump Truck Other General Equipment Pickup Truck Sidi Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Asphalt Paver Dump Truck Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dozer Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck Roller Dozer Dozer Concrete Truck Dump Truck Roller Dozer Dozer Concrete Truck Dump Truck Roller Scraper Dozer Concrete Truck Cother General Equipment Pickup Truck Roller Scraper Dozer Concrete Truck Dump Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer	Diesel	1500.00 LF 1500.00 SF 7550.00 SF 7550.00 SF 7550.00 SF 0.20 Acre	8 Hours pe 9 C6.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 9 C755 hours 9 C757 hour	55.88 31.03 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 93.59 44.58 44.58 44.58 44.58 44.58 44.58 44.58 14.76 24.76
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7 Fencing 7 Taxiways	Fencing Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Fencing	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Silp Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Silp Form Paver Surfacing Equipment Pickup Truck Rubber Tired Loader Other General Equipment Pickup Truck Roller Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Pozer Concrete Truck Dump Truck Roller Fuckup Truck Fuckup Truck Roller Fuckup Truck Fuckup Truck	Diesel	1500.00 LF 1500.00 SF 7550.00 CF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 0.755 hours 0.755 hours 0.755 hours 0.755 hours 1.6 hours pe 1.6 hours 1.6 hours pe 2.8.77675 hours 1.6 Hours pe 3.76.7384 hours 1.6 Hours pe 7.6.7384 hours 1.6 Hours pe 7.6.7384 hours 1.6 Hours pe 7.6.7384 hours 1.6 Hours pe 3.3.504 hours 1.6 Hours pe 3.3.504 hours 1.6 Hours pe 3.3.504 hours 1.6 Hours pe 1.6 hours 1.	55.88 31.03 15.52 17.87 187.18 280.78 93.59 93.59 93.59 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 44.58 14.76 24.76 24.76 24.76 24.76 1200 78.73 170.57
7 Fencing 7 Taxiways	Fencing Grading Fencing Grading Hydroseeding Fencing Fenc	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Core Concrete Truck Dozer Dump Truck Roller Dozer Concrete Truck Dump Truck Roller Core Concrete Truck Dump Truck Roller Dozer Concrete Truck Dump Truck Roller Core Concrete Truck Dump Truck Roller Core Concrete Truck Dump Truck Cother General Equipment Pickup Truck Roller Core Concrete Truck Dump Truck Other General Equipment Pickup Truck Dozer Concrete Truck Dump Truck Other General Equipment Pickup Truck Dozer Concrete Truck Dump Truck Loader Other General Equipment Pickup Truck Dump Truck Loader Other General Equipment Pickup Truck Dump Truck Loader Other General Equipment Pickup Truck Dump Truck Loader Other General Equipment	Diesel Di	1500.00 LF 1500.00 SF 7550.00 SF 7550.00 SF 7550.00 SF 7550.00 SF 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 10.20	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 0.755 hours 0.755 hours 0.755 hours 1.6 hou	55.88 31.03 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58 44.58 44.58 64.76 62.76
7 Fencing 7 Fenc	Fencing Fencing Fencing Fencing Fencing Fencing Fencing Fencing Grading Grading Grading Grading Hydroseeding Fencing	Concrete Truck Dump Truck Other General Equipment Pickup Truck Sidi Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Pickup Truck Asphalt Paver Dump Truck Roller Sid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Roller Sid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Silp Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck Roller Dozer Dump Truck Roller Dozer Dump Truck Roller Dozer Concrete Truck Dozer Dump Truck Roller Roller Roller Roller Rorraper Dozer Concrete Truck Dump Truck Roller Roller Rorraper Dozer Concrete Truck Dump Truck Roller Rorraper Dozer Concrete Truck Dump Truck Roller Rorraper Dozer Concrete Truck Dump Truck Roller Rorraper Ro	Diesel Di	1500.00 LF	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 9 Hours pe 0.755 hours 9 Hours pe 0.8 hours 9 Hours pe 0.8 hours 9 Hours pe 1.66 hours 9 Hours pe 1.66 hours 9 Hours pe 1.656 hours 16 Hours pe 28.77675 hours 16 Hours pe 10.34616 hours 16 Hours pe 10.3484 hours 16 Hours pe 119.7433 hours 16 Hours pe 176.7384 hours 16 Hours pe 176.7384 hours 16 Hours pe 176.7384 hours 176.738	55.88 31.03 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 93.59 93.59 44.58 44.58 44.58 44.58 44.58 44.58 44.58 14.76 24.76 24.76 24.76 24.76 1200 170.57 1
7 Fencing 7 Fenc	Fencing Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Fencing Fenci	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Silp Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Silp Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dozer Domp Truck (12 cy) Pickup Truck Roller Former Dozer Concrete Truck Domp Truck Roller Former Dozer Dozer Concrete Truck Domp Truck Roller Former Dozer Concrete Truck Dump Truck Roller Former Dozer Concrete Truck Dump Truck Roller Former Dozer Concrete Truck Dump Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Dump Truck Skid Steer Loader	Diesel	1500.00 LF 1500.00 SF 7550.00 CY 75592.30 CY 7592.30 CY 75592.30 CY 7592.30 CY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 9 Hours pe 0.755 hours 16 Hours pe 1.6 hours 17 Hours pe 1.6 hours 18 Hours pe 2.7675 hours 18 Hours pe 2.77675 hours 18 Hours pe 2.767384 hours 18 Hours pe 2.767384 hours 19 Hours pe 15.34768 hours 19 Hours pe 18 Hours p	55.88 31.03 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 93.59 93.59 93.59 14.58 44.58 44.58 44.58 44.58 44.58 14.58 24.76 24.76 24.76 24.76 24.76 24.76 1200 170.57 170
7 Fencing 7 Taxiways 7	Fencing Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Topsoil Placement Asphatt Placement Asphatt Placement Asphatt Placement Asphatt Placement Asphatt Placement Concrete Placement Co	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Core Core Core Core Core Core Core Core	Diesel Di	1500.00 LF 1500.00 SF 7550.00 CY 75592.30 CY 7592.30 CY 7592.3	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 0.755 hours 0.8 Hours pe 1.6 hours 1 Hours pe 2.877675 hours 8 Hours pe 36.83424 hours 8 Hours pe 36.7384 hours 8 Hours pe 76.7384 hours 8 Hours pe 76.7384 hours 8 Hours pe 319.7433 hours 16 Hours pe 33.504 hours 8 Hours pe 18.61333 hours 8 Hours pe 2.78973 hours 8 Hours pe 18.61333 hours 8 Hours pe 2.78973 hours 8 Hours pe 18.61333 hours 8 Hours pe 2.78973 hours 8 Hours pe 2.78974 hours 8 Hours pe 3.902954 hours 8 Hours pe 4.608889 hours 8 Hours pe 46.08889 hours 8 Hours pe 474.0571 hours	55.88 31.03 15.52 16.67 120.78 14.58 15.37 170.57 17
7 Fencing 7 Fenc	Fencing Grading Grading Grading Hydroseeding Tosile Frosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphatt Placement Asphatt Placement Asphatt Placement Asphatt Placement Asphatt Placement Asphatt Placement Concrete Placement Conc	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Saws Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dozer Dump Truck Loader Other General Equipment Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dump Truck Roller Dozer Dump Truck Roller Dozer Dump Truck Roller Dozer Concrete Truck Other General Equipment Pickup Truck Roller Roller Scraper Dozer Concrete Truck Dozer Tractors/Loader/Backhoe Vater Truck Other General Equipment Pickup Truck Roller Roll	Diesel Di	1500.00 LF 1500.00 SF 7550.00 SF 7550.00 SF 7550.00 SF 0.20 Acre 0.20 Acre 0.20 Acre 0.20 Acre 349.20 CY 23021.40 SY 2592.30 CY 9592.30 CY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 9 Hours pe 0.755 hours 9 Hours pe 0.8 hours 9 Hours pe 0.8 hours 9 Hours pe 1.66 hours 9 Hours pe 1.66 hours 9 Hours pe 1.656 hours 9 Hours pe 1.656 hours 9 Hours pe 1.656 hours 16 Hours pe 2.877675 hours 18 Hours pe 3.8344 hours 18 Hours pe 3.8344 hours 18 Hours pe 3.8504 hours 18 Hours pe 3.3504 hours 18 Hours pe 18.61333 hours 18 Hours pe 29.9224 hours 18 Hours pe 29.9224 hours 18 Hours pe 40.08889 hours 18 Hours pe 40.08889 hours 18 Hours pe 41.69333 hours 18 Hours pe 40.08889 hours 18 Hours	55.88 31.03 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 93.59 94.58 44.58 44.58 44.58 44.58 44.58 64.76 62.76
7 Fencing 7 Fenc	Fencing Grading Hydroseeding Hydroseeding Hydroseeding Hydroseeding Hydroseeding Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Soil Erosion/Sediment Control Topsoil Placement Topsoil Placement Topsoil Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Asphath Placement Concrete Placement Concr	Concrete Truck Dump Truck Other General Equipment Pickup Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Other General Equipment Pickup Truck Pumps Tractors/Loader/Backhoe Dozer Dump Truck Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Asphalt Paver Dump Truck Other General Equipment Pickup Truck Other General Equipment Pickup Truck Roller Skid Steer Loader Surfacing Equipment (Grooving) Air Compressor Concrete Truck Other General Equipment Pickup Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Rubber Tired Loader Slip Form Paver Surfacing Equipment (Grooving) Dozer Dump Truck Excavator Loader Other General Equipment Pickup Truck Roller Dump Truck Loader Other General Equipment Pickup Truck Roller Dozer Dump Truck (12 cy) Pickup Truck Roller Dozer Dozer Dump Truck (12 cy) Pickup Truck Roller Scraper Dozer Concrete Truck Domp Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Concrete Truck Dump Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Dump Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Dump Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Dump Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Dump Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Hydroseeder Off-Road Truck Dump Truck Skid Steer Loader Tractors/Loader/Backhoe Dozer Grader Roller Greneral Equipment Pickup Truck Nickup Truck Nickup Truck Other General Equipment Pickup Truck Other General Equipment	Diesel Di	1500.00 LF 1500.00 SF 7550.00 CY 75592.30 CY	8 Hours pe 66.66667 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.8381 hours 8 Hours pe 0.755 hours 8 Hours pe 0.755 hours 9 Hours pe 0.755 hours 9 Hours pe 0.8 hours 9 Hours pe 0.8 hours 9 Hours pe 1.66 hours 9 Hours pe 1.66 hours 9 Hours pe 1.656 hours 9 Hours pe 1.656 hours 9 Hours pe 1.656 hours 16 Hours pe 2.877675 hours 18 Hours pe 3.8344 hours 18 Hours pe 3.8344 hours 18 Hours pe 3.8504 hours 18 Hours pe 3.3504 hours 18 Hours pe 18.61333 hours 18 Hours pe 29.9224 hours 18 Hours pe 29.9224 hours 18 Hours pe 40.08889 hours 18 Hours pe 40.08889 hours 18 Hours pe 41.69333 hours 18 Hours pe 40.08889 hours 18 Hours	55.88 31.03 15.52 15.52 19.86 93.59 93.59 93.59 93.59 93.59 93.59 93.59 93.59 93.59 93.59 93.59 14.58 44.58 44.58 44.58 44.58 44.58 44.58 15.58 16.47

7 Taxiways	Subbase Placement	Dump Truck (12 cy)	Diesel	7673.80 CY		341.0578 hours	454.85
7 Taxiways	Subbase Placement	Pickup Truck	Diesel	23021.40 SY		48.46611 hours	64.64
7 Taxiways	Subbase Placement	Roller	Diesel	7673.80 CY	8 Hours pe	47.22338 hours	62.98
7 Taxiways	Topsoil Placement	Dozer	Diesel	4067.60 CY		54.23467 hours	72.16
7 Taxiways	Topsoil Placement	Dump Truck	Diesel	4067.60 CY	8 Hours pe	54.23467 hours	72.16
7 Taxiways	Topsoil Placement	Pickup Truck	Diesel	4067.60 CY	8 Hours pe	54.23467 hours	72.16
8 Demolition - Concrete	Concrete Demolition	Excavator with Bucket	Diesel	14300.00 SF	8 Hours pe	19.06667 hours	
8 Demolition - Concrete	Concrete Demolition	Excavator with Hoe Ram	Diesel	14300.00 SF	8 Hours pe	19.06667 hours	
8 Demolition - Concrete	Concrete Demolition	Pickup Truck	Diesel	14300.00 SF	8 Hours pe	38.13333 hours	
8 Taxiways	Asphalt Placement	Asphalt Paver	Diesel	30702.60 SY	8 Hours pe	38.37825 hours	15.52
8 Taxiways	Asphalt Placement	Dump Truck	Diesel	30702.60 SY	8 Hours pe	138.2222 hours	55.88
8 Taxiways	Asphalt Placement	Other General Equipment	Diesel	30702.60 SY	16 Hours p	76.7565 hours	31.03
8 Taxiways	Asphalt Placement	Pickup Truck	Diesel	30702.60 SY	8 Hours pe	38.37825 hours	15.52
8 Taxiways	Asphalt Placement	Roller	Diesel	30702.60 SY	8 Hours pe	38.37825 hours	15.52
8 Taxiways	Asphalt Placement	Skid Steer Loader	Diesel	30702.60 SY	8 Hours pe	38.37825 hours	15.52
8 Taxiways	Asphalt Placement	Surfacing Equipment (Grooving)	Diesel	30702.60 SY	8 Hours pe	49.12416 hours	19.86
8 Taxiways	Concrete Placement	Air Compressor	Diesel	12792.80 CY		102.3424 hours	93.59
8 Taxiways	Concrete Placement	Concrete Saws	Diesel	12792.80 CY	8 Hours pe	102.3424 hours	93.59
8 Taxiways	Concrete Placement	Concrete Truck	Diesel	12792.80 CY	8 Hours pe	426.4267 hours	389.97
8 Taxiways	Concrete Placement	Other General Equipment	Diesel	12792.80 CY	16 Hours p	204.6848 hours	187.18
8 Taxiways	Concrete Placement	Pickup Truck	Diesel	12792.80 CY	24 Hours p	307.0272 hours	280.78
8 Taxiways	Concrete Placement	Rubber Tired Loader	Diesel	12792.80 CY	8 Hours pe	102.3424 hours	93.59
8 Taxiways	Concrete Placement	Slip Form Paver	Diesel	12792.80 CY	8 Hours pe	102.3424 hours	93.59
8 Taxiways	Concrete Placement	Surfacing Equipment (Grooving)	Diesel	12792.80 CY		102.3424 hours	93.59
8 Taxiways	Drainage - 24 inch SICPP	Dozer	Diesel	1393.00 LF	8 Hours pe	44.576 hours	
8 Taxiways	Drainage - 24 inch SICPP	Dump Truck	Diesel	1393.00 LF	8 Hours pe	44.576 hours	
8 Taxiways	Drainage - 24 inch SICPP	Excavator	Diesel	1393.00 LF	8 Hours pe	44.576 hours	
8 Taxiways	Drainage - 24 inch SICPP	Loader	Diesel	1393.00 LF	8 Hours pe	44.576 hours	
8 Taxiways	Drainage - 24 inch SICPP	Other General Equipment	Diesel	1393.00 LF	8 Hours pe	44.576 hours	
8 Taxiways	Drainage - 24 inch SICPP	Pickup Truck	Diesel	1393.00 LF	8 Hours pe	44.576 hours	
8 Taxiways	Drainage - 24 inch SICPP	Roller	Diesel	1393.00 LF	8 Hours pe	44.576 hours	
8 Taxiways	Drainage - 6 inch Perforated Underdrain	Dump Truck	Diesel	2786.00 LF	8 Hours pe	24.76444 hours	
8 Taxiways	Drainage - 6 inch Perforated Underdrain	Loader	Diesel	2786.00 LF	8 Hours pe	24.76444 hours	
8 Taxiways	Drainage - 6 inch Perforated Underdrain	Other General Equipment	Diesel	2786.00 LF	8 Hours pe	24.76444 hours	
8 Taxiways	Drainage - 6 inch Perforated Underdrain	Pickup Truck	Diesel	2786.00 LF	8 Hours pe	24.76444 hours	
8 Taxiways	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	Diesel	2786.00 LF	8 Hours pe	24.76444 hours	
8 Taxiways	Dust Control	Water Truck	Diesel	150.00 Day	8 Hours pe	1200 hours	
8 Taxiways	Excavation (Borrow)	Dozer	Diesel	12792.80 CY	8 Hours pe	170.5707 hours	
8 Taxiways	Excavation (Borrow)	Dump Truck (12 cy)	Diesel	12792.80 CY	8 Hours pe	170.5707 hours	
8 Taxiways	Excavation (Borrow)	Pickup Truck	Diesel	12792.80 CY	8 Hours pe	170.5707 hours	
8 Taxiways	Excavation (Borrow)	Roller	Diesel	12792.80 CY	8 Hours pe	78.72492 hours	
8 Taxiways	Excavation (Cut to Fill)	Dozer	Diesel	12792.80 CY	8 Hours pe	127.928 hours	
8 Taxiways	Excavation (Cut to Fill)	Dump Truck (12 cy)	Diesel	12792.80 CY		341.1413 hours	
8 Taxiways	Excavation (Cut to Fill)	Excavator	Diesel	12792.80 CY	8 Hours pe	102.3424 hours	
8 Taxiways	Excavation (Cut to Fill)	Pickup Truck	Diesel	12792.80 CY	8 Hours pe	102.3424 hours	
8 Taxiways	Excavation (Cut to Fill)	Roller	Diesel	12792.80 CY	8 Hours pe	102.3424 hours	
8 Taxiways	Excavation (Cut to Fill)	Scraper	Diesel	12792.80 CY	8 Hours pe	127.928 hours	
8 Taxiways	Excavation (Topsoil Stripping)	Dozer	Diesel	30702.60 SY	8 Hours pe	48.16094 hours	
8 Taxiways	Fencing	Concrete Truck	Diesel	1383.00 LF	2 Hours pe	15.36667 hours	
8 Taxiways	Fencing	Dump Truck	Diesel	1383.00 LF	8 Hours pe	61.46667 hours	
8 Taxiways	Fencing	Other General Equipment	Diesel	1383.00 LF		61.46667 hours	
8 Taxiways	Fencing	Pickup Truck	Diesel	1383.00 LF	8 Hours pe	61.46667 hours	
8 Taxiways	Fencing	Skid Steer Loader	Diesel	1383.00 LF	8 Hours pe	61.46667 hours	
8 Taxiways	Fencing	Tractors/Loader/Backhoe	Diesel	1383.00 LF		61.46667 hours	
8 Taxiways	Grading	Dozer	Diesel	32470.80 SY		32.4708 hours	
8 Taxiways	Grading	Grader	Diesel	32470.80 SY	8 Hours pe	32.4708 hours	
8 Taxiways	Grading	Roller	Diesel	32470.80 SY	8 Hours pe	32.4708 hours	
8 Taxiways	Hydroseeding	Hydroseeder	Diesel	292530.00 SF	8 Hours pe	29.253 hours	
8 Taxiways	Hydroseeding	Off-Road Truck	Diesel	292530.00 SF	8 Hours pe	29.253 hours	
8 Taxiways	Lighting	Dump Truck	Diesel	3166.00 LF		21.10667 hours	
8 Taxiways	Lighting	Loader	Diesel	3166.00 LF	8 Hours pe	21.10667 hours	
8 Taxiways	Lighting	Other General Equipment	Diesel	3166.00 LF		21.10667 hours	
8 Taxiways	Lighting	Pickup Truck	Diesel	3166.00 LF		21.10667 hours	
8 Taxiways	Lighting	Skid Steer Loader	Diesel	3166.00 LF		21.10667 hours	
8 Taxiways	Lighting	Tractors/Loader/Backhoe	Diesel	3166.00 LF		21.10667 hours	
8 Taxiways	Markings	Flatbed Truck	Diesel	276600.00 EF		632.2286 hours	
8 Taxiways	Markings	Other General Equipment	Diesel	276600.00 SF		632.2286 hours	
8 Taxiways	Markings	Pickup Truck	Diesel	276600.00 SF		632.2286 hours	
8 Taxiways	Soil Erosion/Sediment Control	Other General Equipment	Diesel	6.70 Acre	4 Hours pe	26.8 hours	
8 Taxiways	Soil Erosion/Sediment Control	Other General Equipment Pickup Truck	Diesel	6.70 Acre 6.70 Acre	4 Hours pe 8 Hours pe	53.6 hours	
8 Taxiways 8 Taxiways	Soil Erosion/Sediment Control	Pickup Truck Pumps	Diesel	6.70 Acre 6.70 Acre	8 Hours pe 4 Hours pe	26.8 hours	
			Diesel	6.70 Acre 6.70 Acre		26.8 hours 26.8 hours	
8 Taxiways	Soil Erosion/Sediment Control Subbase Placement	Tractors/Loader/Backhoe		6.70 Acre 30702.60 SY	4 Hours pe		
8 Taxiways		Dozer	Diesel			64.63705 hours	
8 Taxiways	Subbase Placement Subbase Placement	Dump Truck (12 cy)	Diesel Diesel	10234.20 CY 30702.60 SY		454.8533 hours	
8 Taxiways		Pickup Truck				64.63705 hours	
8 Taxiways	Subbase Placement	Roller	Diesel	10234.20 CY		62.97969 hours	
8 Taxiways	Topsoil Placement Topsoil Placement	Dozer Dump Truck	Diesel	5411.80 CY		72.15733 hours	
0 T			Diesel	5411.80 CY	X Hours ne	72.15733 hours	
8 Taxiways 8 Taxiways	Topsoil Placement Topsoil Placement	Pickup Truck	Diesel	5411.80 CY		72.15733 hours	

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Scenari	o IC Project	Equipment	On-road Activity	Fuel	Roadway Type R	ound Trip	Number of N	umber of Pro	oject Len Pro	ject WicProjec	Build /	Open	ı Num	ıl Acti	vi Activ	Default VM
	1 Demolition - Asphalt	Dump Truck	Material Delivery	Diesel	Urban Unrestricted Ac	40			191	50						2122
	1 Demolition - Asphalt	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		43								3870
	1 Demolition - Concrete	Dump Truck	Material Delivery	Diesel	Urban Unrestricted Ac	40			95	100						586
	1 Demolition - Concrete	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		43								3870
	1 Taxiways	Asphalt 18 Wheeler	Material Delivery	Diesel	Urban Unrestricted Ac	40			92	200						267
	1 Taxiways	Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40			92	200						4255
	1 Taxiways	Dump Truck - Asphalt	Material Delivery	Diesel	Urban Unrestricted Ac	40			92	200						378
	1 Taxiways	Dump Truck Subbase Material	Material Delivery	Diesel	Urban Unrestricted Ac	40			92	200						2269
	1 Taxiways	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		43								90300
	2 Runway Markings	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30	7	43								9030
	2 Taxiways	Asphalt 18 Wheeler	Material Delivery	Diesel	Urban Unrestricted Ac	40			1035	100						1502
	2 Taxiways	Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40			1035	100						23934
	2 Taxiways	Dump Truck - Asphalt	Material Delivery	Diesel	Urban Unrestricted Ac	40			1035	100						2128
	2 Taxiways	Dump Truck Subbase Material	Material Delivery	Diesel	Urban Unrestricted Ac	40			1035	100						12765
	2 Taxiways	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30	70	43								90300
	3 Demolition - Asphalt	Dump Truck	Material Delivery	Diesel	Urban Unrestricted Ac	40			2029	50						22544
	3 Demolition - Asphalt	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30	22.352	129								86502
	3 Demolition - Concrete	Dump Truck	Material Delivery	Diesel	Urban Unrestricted Ac	40			1015	100						6265
	3 Demolition - Concrete	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30	22.352	129								86502
	3 NAVAIDS	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30	6	129								23220
	3 Taxiways	Asphalt 18 Wheeler	Material Delivery	Diesel	Urban Unrestricted Ac	40			3409	200						9893
	3 Taxiways	Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40			3409	200						157666
	3 Taxiways	Dump Truck - Asphalt	Material Delivery	Diesel	Urban Unrestricted Ac	40			3409	200						14015
	3 Taxiways	Dump Truck Subbase Material	Material Delivery	Diesel	Urban Unrestricted Ac	40			3409	200						84089
	3 Taxiways	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		129								980259
	4 Demolition - Asphalt	Dump Truck	Material Delivery	Diesel	Urban Unrestricted Ac	40			437	50						4856
	4 Demolition - Asphalt	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		65								11819
	4 Demolition - Concrete	Dump Truck	Material Delivery	Diesel	Urban Unrestricted Ac	40		05	218	100						1346
	4 Demolition - Concrete	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		65	210	100		_		_		11819
	4 Taxiways	Asphalt 18 Wheeler	Material Delivery	Diesel	Urban Unrestricted Ac	40		05	895	200		-		-		2597
	4 Taxiways	Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40			895							41394
	4 Taxiways	Dump Truck - Asphalt	Material Delivery	Diesel	Urban Unrestricted Ac	40			895					_		3679
	4 Taxiways	Dump Truck - Asphalt Dump Truck Subbase Material	Material Delivery	Diesel	Urban Unrestricted Ac	40			895	200		-				22077
	,		,					65	893		- :	-				
	4 Taxiways	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		65				-				136500
		Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40				####		-				2313
		Dump Truck Subbase Material	Material Delivery	Diesel	Urban Unrestricted Ac	40		245		####		-		-		1233
	5 Building - 10000 sqft- 1 story	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		215				-				212850
		Tractor Trailer	Material Delivery	Diesel	Urban Unrestricted Ac	40				####					0	160
	6 NAVAIDS	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		150								40500
	6 Rehabilitate Runway	Asphalt 18 Wheeler	Material Delivery	Diesel	Urban Unrestricted Ac	40			5369	250						19476
	6 Rehabilitate Runway	Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40			5369	250						310395
	6 Rehabilitate Runway	Dump Truck - Asphalt	Material Delivery	Diesel	Urban Unrestricted Ac	40			5369	250						27591
	6 Rehabilitate Runway	Dump Truck Subbase Material	Material Delivery	Diesel	Urban Unrestricted Ac	40			5369	250						165544
	6 Rehabilitate Runway	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		150								2314274
	6 Service Road	Asphalt 18 Wheeler	Material Delivery	Diesel	Urban Unrestricted Ac	40			1298	50						565
	6 Service Road	Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40			1298	30						9005
	6 Service Road	Dump Truck - Asphalt	Material Delivery	Diesel	Urban Unrestricted Ac	40			1298	30						800
	6 Service Road	Dump Truck Subbase Material	Material Delivery	Diesel	Urban Unrestricted Ac	40			1298	30						4803
	6 Service Road	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30	67	150								301500
	7 Demolition - Concrete	Dump Truck	Material Delivery	Diesel	Urban Unrestricted Ac	40			45	100						278
	7 Demolition - Concrete	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30	13.332	86								34397
	7 Fencing	Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40			1500	10						3469
	7 Fencing	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30	26	86								67080
	7 Taxiways	Asphalt 18 Wheeler	Material Delivery	Diesel	Urban Unrestricted Ac	40			1037	200						3009
	7 Taxiways	Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40			1037	200						47961
	7 Taxiways	Dump Truck - Asphalt	Material Delivery	Diesel	Urban Unrestricted Ac	40			1037	200						4263
	7 Taxiways	Dump Truck Subbase Material	Material Delivery	Diesel	Urban Unrestricted Ac	40			1037	200						25579
	7 Taxiways	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30	75.57	86								194971
	8 Demolition - Concrete	Dump Truck	Material Delivery	Diesel	Urban Unrestricted Ac	40			143	100						883
	8 Demolition - Concrete	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac	30		108								57559
	8 Taxiways	Asphalt 18 Wheeler	Material Delivery	Diesel	Urban Unrestricted Ac	40			1383	200						4013
	8 Taxiways	Cement Mixer	Material Delivery	Diesel	Urban Unrestricted Ac	40			1383	200						63964
	8 Taxiways	Dump Truck - Asphalt	Material Delivery	Diesel	Urban Unrestricted Ac	40			1383	200						5686
	8 Taxiways	Dump Truck Subbase Material	Material Delivery	Diesel	Urban Unrestricted Ac	40			1383				_	_		34114
	8 Taxiways	Passenger Car	Employee Commute	Gasoline	Urban Unrestricted Ac		100.694	108								326249
			, -,			50										

Attachment 1-CCalEEMod Report

ONT Runway 8R-26L Rehabilitation and Additional Airfield Improvements - San Bernardino-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

ONT Runway 8R-26L Rehabilitation and Additional Airfield Improvements San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Urbanization

(lb/MWhr)

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	434.00	19,000,000.00	0

Precipitation Freq (Days)

(lb/MWhr)

32

1.2 Other Project Characteristics

Urban

		. , ,			•
Climate Zone	10			Operational Year	2026
Utility Company	Southern California Edisor	n			
CO2 Intensity	390.98	CH4 Intensity	0.033	N2O Intensity	0.004

2.2

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Airport

Construction Phase - Runway and taxiway paving in 2023, 2024 and 2025 (Proposed Project)

(lb/MWhr)

Wind Speed (m/s)

Off-road Equipment - ffff

Off-road Equipment - ACEIT estimated hours

Trips and VMT - ACEIT VMT assumptions

Construction Off-road Equipment Mitigation - Assume Tier 4 equipment for mitigation

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Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	36.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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1			
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	7,750.00	195.00
tblConstructionPhase	NumDays	550.00	195.00
tblConstructionPhase	NumDays	550.00	197.00
tblConstructionPhase	NumDays	550.00	196.00
tblLandUse	LandUseSquareFeet	0.00	19,000,000.00
tblLandUse	LotAcreage	0.00	434.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	7.00	1.20
tblOffRoadEquipment	UsageHours	8.00	6.80
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	5.60
tblOffRoadEquipment	UsageHours	8.00	1.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	8.00	6.20
tblOffRoadEquipment	UsageHours	8.00	3.20
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	7.00	1.60
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripNumber	0.00	93.00
tblTripsAndVMT	HaulingTripNumber	0.00	10,516.00
tblTripsAndVMT	HaulingTripNumber	0.00	13,454.00
tblTripsAndVMT	HaulingTripNumber	0.00	4,830.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripLength	6.90	40.00
tblTripsAndVMT	VendorTripNumber	3,114.00	0.00
tblTripsAndVMT	WorkerTripLength	14.70	30.00
tblTripsAndVMT	WorkerTripLength	14.70	30.00
tblTripsAndVMT	WorkerTripLength	14.70	30.00
tblTripsAndVMT	WorkerTripLength	14.70	30.00
tblTripsAndVMT	WorkerTripNumber	7,980.00	33.00
tblTripsAndVMT	WorkerTripNumber	70.00	262.00
tblTripsAndVMT	WorkerTripNumber	123.00	581.00
tblTripsAndVMT	WorkerTripNumber	53.00	129.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					ton	s/yr							МТ	-/yr		
2023	1.0593	8.3701	8.5917	0.0317	0.8259	0.3025	1.1284	0.2210	0.2792	0.5002	0.0000	2,869.2244	2,869.2244	0.6118	0.1028	2,915.1503
2024	1.4307	10.2305	12.5189	0.0452	1.5116	0.3661	1.8777	0.4035	0.3387	0.7422	0.0000	4,086.4143	4,086.4143	0.8103	0.1351	4,146.9401
2025	0.4559	3.2618	3.6797	0.0145	0.3659	0.1138	0.4797	0.0979	0.1050	0.2030	0.0000	1,306.9682	1,306.9682	0.2873	0.0443	1,327.3408
Maximum	1.4307	10.2305	12.5189	0.0452	1.5116	0.3661	1.8777	0.4035	0.3387	0.7422	0.0000	4,086.4143	4,086.4143	0.8103	0.1351	4,146.9401

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					ton	s/yr							МТ	⁻ /yr		
2023	0.4343	2.3719	12.1662	0.0317	0.8259	0.0488	0.8747	0.2210	0.0480	0.2690	0.0000	2,869.2223	2,869.2223	0.6118	0.1028	2,915.1481
2024	0.6649	3.1586	17.5556	0.0452	1.5116	0.0661	1.5776	0.4035	0.0649	0.4684	0.0000	4,086.4114	4,086.4114	0.8103	0.1351	4,146.9372
2025	0.1900	1.0847	5.4904	0.0145	0.3659	0.0225	0.3884	0.0979	0.0222	0.1201	0.0000	1,306.9672	1,306.9672	0.2873	0.0443	1,327.3398
Maximum	0.6649	3.1586	17.5556	0.0452	1.5116	0.0661	1.5776	0.4035	0.0649	0.4684	0.0000	4,086.4114	4,086.4114	0.8103	0.1351	4,146.9372

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	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	56.24	69.74	-42.04	0.00	0.00	82.44	18.50	0.00	81.31	40.67	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-16-2023	4-15-2023	3.1050	0.9215
2	4-16-2023	7-15-2023	3.1225	0.9148
3	7-16-2023	10-15-2023	3.1602	0.9282
4	10-16-2023	1-15-2024	0.0423	0.0139
5	1-16-2024	4-15-2024	3.8449	1.2588
6	4-16-2024	7-15-2024	3.8221	1.2361
7	7-16-2024	10-15-2024	3.8686	1.2541
8	10-16-2024	1-15-2025	0.0135	0.0046
9	1-16-2025	4-15-2025	1.2177	0.4164
10	4-16-2025	7-15-2025	1.2238	0.4136
11	7-16-2025	9-30-2025	1.0355	0.3499
		Highest	3.8686	1.2588

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Area	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	77.4630	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Area	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	77.4630	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	2023 - South Elec Vault, Scenario 5	Building Construction	1/15/2023	10/15/2023	5	195	
2	2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Paving	1/15/2023	10/15/2023	5	195	

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3		2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Paving	1/15/2024	10/15/2024	5	197	
2	4	2025 - Paving/Demo, Scenario 7 & 8	•	1/15/2025	10/15/2025	5	196	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
2023 - South Elec Vault, Scenario 5	Cranes	1	1.20	231	0.29
2023 - South Elec Vault, Scenario 5	Forklifts	1	6.80	89	0.20
2023 - South Elec Vault, Scenario 5	Off-Highway Trucks	1	3.40	402	0.38
2023 - South Elec Vault, Scenario 5	Rough Terrain Forklifts	2	5.30	100	0.40
2023 - South Elec Vault, Scenario 5	Tractors/Loaders/Backhoes	1	1.60	97	0.37
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Air Compressors	1	1.90	78	0.48
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Concrete/Industrial Saws	1	1.80	81	0.73
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Excavators	1	5.30	158	0.38
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Graders	1	0.60	187	0.41
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Off-Highway Trucks	11	8.30	402	0.38
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Other Construction Equipment	3	6.40	172	0.42
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Pavers	1	2.00	130	0.42
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Pumps	1	0.50	84	0.74
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Rollers	1	6.20	80	0.38
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Rubber Tired Dozers	2	5.50	247	0.40

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	-		_		
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Rubber Tired Loaders	1	3.60	203	0.36
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Scrapers	1	2.30	367	0.48
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Skid Steer Loaders	1	2.00	65	0.37
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Surfacing Equipment	1	2.10	263	0.30
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Tractors/Loaders/Backhoes	1	2.70	97	0.37
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Air Compressors	1	3.80	78	0.48
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Concrete/Industrial Saws	2	4.50	81	0.73
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Cranes	1	0.10	231	0.29
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Excavators	1	6.00	158	0.38
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Graders	1	0.20	187	0.41
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Off-Highway Trucks	18	6.20	402	0.38
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Other Construction Equipment	6	6.10	172	0.42
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Pavers	4	5.60	130	0.42
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Pumps	1	0.20	84	0.74
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Rollers	1	3.20	80	0.38
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Rubber Tired Dozers	1	3.50	247	0.40
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Rubber Tired Loaders	4	5.40	203	0.36
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Scrapers	1	0.10	367	0.48
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Skid Steer Loaders	1	1.40	65	0.37
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Surfacing Equipment	4	5.40	263	0.30
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Sweepers/Scrubbers	1	0.90	64	0.46
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Tractors/Loaders/Backhoes	1	1.10	97	0.37
2025 - Paving/Demo, Scenario 7 & 8	Air Compressors	1	0.80	78	0.48
2025 - Paving/Demo, Scenario 7 & 8	Concrete/Industrial Saws	1	0.80	81	0.73

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2025 - Paving/Demo, Scenario 7 & 8	Excavators	1	1.60	158	0.38
2025 - Paving/Demo, Scenario 7 & 8	Graders	1	0.30	187	0.41
2025 - Paving/Demo, Scenario 7 & 8	Off-Highway Trucks	6	7.80	402	0.38
2025 - Paving/Demo, Scenario 7 & 8	Other Construction Equipment	2	4.80	172	0.42
2025 - Paving/Demo, Scenario 7 & 8	Pavers	1	1.00	130	0.42
2025 - Paving/Demo, Scenario 7 & 8	Pumps	1	0.20	84	0.74
2025 - Paving/Demo, Scenario 7 & 8	Rollers	1	3.00	80	0.38
2025 - Paving/Demo, Scenario 7 & 8	Rubber Tired Dozers	1	5.00	247	0.40
2025 - Paving/Demo, Scenario 7 & 8	Rubber Tired Loaders	1	1.60	203	0.36
2025 - Paving/Demo, Scenario 7 & 8	Scrapers	1	1.10	367	0.48
2025 - Paving/Demo, Scenario 7 & 8	Skid Steer Loaders	1	1.20	65	0.37
2025 - Paving/Demo, Scenario 7 & 8	Surfacing Equipment	1	1.00	263	0.30
2025 - Paving/Demo, Scenario 7 & 8	Tractors/Loaders/Backhoes	1	1.50	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
2023 - South Elec	6	33.00	0.00	93.00	30.00	40.00	40.00	LD_Mix	HDT_Mix	HHDT
2023 - Paving/Demo,	28	262.00	0.00	10,516.00	30.00	40.00	40.00	LD_Mix	HDT_Mix	HHDT
2024- Runway Rehab,	49	581.00	0.00	13,454.00	30.00	40.00	40.00	LD_Mix	HDT_Mix	HHDT
2025 - Paving/Demo,	21	129.00	0.00	4,830.00	30.00	40.00	40.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 2023 - South Elec Vault, Scenario 5 - 2023 <u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category		tons/yr											MT	-/yr		
Off-Road	0.0511	0.4939	0.5970	1.2700e- 003		0.0199	0.0199		0.0183	0.0183	0.0000	111.1121	111.1121	0.0359	0.0000	112.0105
Total	0.0511	0.4939	0.5970	1.2700e- 003		0.0199	0.0199		0.0183	0.0183	0.0000	111.1121	111.1121	0.0359	0.0000	112.0105

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr				МТ	/yr					
Hauling	1.6000e- 004	9.8300e- 003	2.2500e- 003	5.0000e- 005	1.6000e- 003	1.1000e- 004	1.7100e- 003	4.4000e- 004	1.0000e- 004	5.4000e- 004	0.0000	5.0234	5.0234	2.2000e- 004	8.0000e- 004	5.2661
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0184	0.0153	0.1955	6.0000e- 004	0.0720	3.5000e- 004	0.0723	0.0191	3.2000e- 004	0.0194	0.0000	54.9515	54.9515	1.0700e- 003	1.3400e- 003	55.3765
Total	0.0186	0.0252	0.1977	6.5000e- 004	0.0736	4.6000e- 004	0.0740	0.0196	4.2000e- 004	0.0200	0.0000	59.9749	59.9749	1.2900e- 003	2.1400e- 003	60.6426

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 2023 - South Elec Vault, Scenario 5 - 2023 Mitigated Construction On-Site

ROG PM2.5 Total Bio- CO2 NBio- CO2 Total CO2 CH4 N20 CO2e NOx CO SO₂ Fugitive Exhaust PM10 **Fugitive** Exhaust PM10 PM10 Total PM2.5 PM2.5 MT/yr Category tons/yr 0.0155 0.0672 2.0700e-111.1120 111.1120 0.0359 Off-Road 0.7628 1.2700e-2.0700e-2.0700e-2.0700e-0.0000 0.0000 112.0104 003 003 003 003 0.0155 0.0672 0.7628 1.2700e-2.0700e-2.0700e-0.0000 111.1120 111.1120 0.0359 0.0000 112.0104 Total 2.0700e-2.0700e-003 003 003 003 003

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr				МТ	/yr					
Hauling	1.6000e- 004	9.8300e- 003	2.2500e- 003	5.0000e- 005	1.6000e- 003	1.1000e- 004	1.7100e- 003	4.4000e- 004	1.0000e- 004	5.4000e- 004	0.0000	5.0234	5.0234	2.2000e- 004	8.0000e- 004	5.2661
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0184	0.0153	0.1955	6.0000e- 004	0.0720	3.5000e- 004	0.0723	0.0191	3.2000e- 004	0.0194	0.0000	54.9515	54.9515	1.0700e- 003	1.3400e- 003	55.3765
Total	0.0186	0.0252	0.1977	6.5000e- 004	0.0736	4.6000e- 004	0.0740	0.0196	4.2000e- 004	0.0200	0.0000	59.9749	59.9749	1.2900e- 003	2.1400e- 003	60.6426

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 2023 - Paving/Demo, Scenarios 1, 2, 3 and 4 - 2023 Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.8257	6.6181	5.9910	0.0193		0.2673	0.2673		0.2464	0.2464	0.0000	1,693.8367	1,693.8367	0.5416	0.0000	1,707.3756
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.8257	6.6181	5.9910	0.0193		0.2673	0.2673		0.2464	0.2464	0.0000	1,693.8367	1,693.8367	0.5416	0.0000	1,707.3756

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category		tons/yr											МТ	¯/yr		
Hauling	0.0177	1.1110	0.2540	5.7400e- 003	0.1810	0.0121	0.1931	0.0497	0.0116	0.0613	0.0000	568.0190	568.0190	0.0245	0.0901	595.4654
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1462	0.1218	1.5520	4.7600e- 003	0.5714	2.7400e- 003	0.5741	0.1517	2.5200e- 003	0.1542	0.0000	436.2817	436.2817	8.5100e- 003	0.0106	439.6562
Total	0.1640	1.2329	1.8060	0.0105	0.7524	0.0149	0.7672	0.2014	0.0141	0.2155	0.0000	1,004.3007	1,004.3007	0.0330	0.1007	1,035.1216

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 2023 - Paving/Demo, Scenarios 1, 2, 3 and 4 - 2023 Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr												MT	[⊺] /yr		
Off-Road	0.2363	1.0467	9.3997	0.0193		0.0314	0.0314		0.0314	0.0314	0.0000	1,693.8347	1,693.8347	0.5416	0.0000	1,707.3735
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2363	1.0467	9.3997	0.0193		0.0314	0.0314		0.0314	0.0314	0.0000	1,693.8347	1,693.8347	0.5416	0.0000	1,707.3735

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	¯/yr		
Hauling	0.0177	1.1110	0.2540	5.7400e- 003	0.1810	0.0121	0.1931	0.0497	0.0116	0.0613	0.0000	568.0190	568.0190	0.0245	0.0901	595.4654
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1462	0.1218	1.5520	4.7600e- 003	0.5714	2.7400e- 003	0.5741	0.1517	2.5200e- 003	0.1542	0.0000	436.2817	436.2817	8.5100e- 003	0.0106	439.6562
Total	0.1640	1.2329	1.8060	0.0105	0.7524	0.0149	0.7672	0.2014	0.0141	0.2155	0.0000	1,004.3007	1,004.3007	0.0330	0.1007	1,035.1216

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 2024- Runway Rehab, Service Road, NAVAID, Scenario 6 - 2024

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	1.1031	8.5625	8.9668	0.0276		0.3449	0.3449		0.3186	0.3186	0.0000	2,423.2840	2,423.2840	0.7627	0.0000	2,442.3505
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1031	8.5625	8.9668	0.0276		0.3449	0.3449		0.3186	0.3186	0.0000	2,423.2840	2,423.2840	0.7627	0.0000	2,442.3505

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
Hauling	0.0224	1.4272	0.3263	7.2200e- 003	0.2316	0.0153	0.2469	0.0636	0.0146	0.0782	0.0000	714.0614	714.0614	0.0304	0.1132	748.5539
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3052	0.2409	3.2257	0.0104	1.2800	5.9000e- 003	1.2859	0.3399	5.4300e- 003	0.3453	0.0000	949.0688	949.0688	0.0172	0.0219	956.0357
Total	0.3276	1.6680	3.5520	0.0176	1.5116	0.0212	1.5328	0.4035	0.0201	0.4235	0.0000	1,663.1302	1,663.1302	0.0476	0.1351	1,704.5896

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3.4 2024- Runway Rehab, Service Road, NAVAID, Scenario 6 - 2024

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
Off-Road	0.3373	1.4906	14.0036	0.0276		0.0449	0.0449		0.0449	0.0449	0.0000	2,423.2812	2,423.2812	0.7627	0.0000	2,442.3476
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.3373	1.4906	14.0036	0.0276		0.0449	0.0449		0.0449	0.0449	0.0000	2,423.2812	2,423.2812	0.7627	0.0000	2,442.3476

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	-/yr		
Hauling	0.0224	1.4272	0.3263	7.2200e- 003	0.2316	0.0153	0.2469	0.0636	0.0146	0.0782	0.0000	714.0614	714.0614	0.0304	0.1132	748.5539
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3052	0.2409	3.2257	0.0104	1.2800	5.9000e- 003	1.2859	0.3399	5.4300e- 003	0.3453	0.0000	949.0688	949.0688	0.0172	0.0219	956.0357
Total	0.3276	1.6680	3.5520	0.0176	1.5116	0.0212	1.5328	0.4035	0.0201	0.4235	0.0000	1,663.1302	1,663.1302	0.0476	0.1351	1,704.5896

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 2025 - Paving/Demo, Scenario 7 & 8 - 2025 Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
Off-Road	0.3851	2.7073	2.9038	9.7200e- 003		0.1071	0.1071		0.0987	0.0987	0.0000	853.6037	853.6037	0.2733	0.0000	860.4365
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.3851	2.7073	2.9038	9.7200e- 003		0.1071	0.1071		0.0987	0.0987	0.0000	853.6037	853.6037	0.2733	0.0000	860.4365

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	-/yr		
Hauling	7.9600e- 003	0.5073	0.1170	2.5400e- 003	0.0831	5.4600e- 003	0.0886	0.0228	5.2300e- 003	0.0281	0.0000	250.8621	250.8621	0.0106	0.0398	262.9779
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0629	0.0472	0.6588	2.2100e- 003	0.2828	1.2400e- 003	0.2840	0.0751	1.1400e- 003	0.0762	0.0000	202.5023	202.5023	3.3900e- 003	4.4900e- 003	203.9265
Total	0.0709	0.5545	0.7758	4.7500e- 003	0.3659	6.7000e- 003	0.3726	0.0979	6.3700e- 003	0.1043	0.0000	453.3645	453.3645	0.0140	0.0443	466.9043

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 2025 - Paving/Demo, Scenario 7 & 8 - 2025 Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
Off-Road	0.1192	0.5302	4.7146	9.7200e- 003		0.0158	0.0158		0.0158	0.0158	0.0000	853.6027	853.6027	0.2733	0.0000	860.4355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1192	0.5302	4.7146	9.7200e- 003		0.0158	0.0158		0.0158	0.0158	0.0000	853.6027	853.6027	0.2733	0.0000	860.4355

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	-/yr		
Hauling	7.9600e- 003	0.5073	0.1170	2.5400e- 003	0.0831	5.4600e- 003	0.0886	0.0228	5.2300e- 003	0.0281	0.0000	250.8621	250.8621	0.0106	0.0398	262.9779
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0629	0.0472	0.6588	2.2100e- 003	0.2828	1.2400e- 003	0.2840	0.0751	1.1400e- 003	0.0762	0.0000	202.5023	202.5023	3.3900e- 003	4.4900e- 003	203.9265
Total	0.0709	0.5545	0.7758	4.7500e- 003	0.3659	6.7000e- 003	0.3726	0.0979	6.3700e- 003	0.1043	0.0000	453.3645	453.3645	0.0140	0.0443	466.9043

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	te	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C- W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.545300	0.056532	0.173573	0.132281	0.025040	0.006914	0.012148	0.017464	0.000548	0.000245	0.024607	o. 04095 8	ientol.064391

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGa s Use	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr		tons/yr MT/yr														
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGa s Use	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr		tons/yr MT/yr														
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity <u>Unmitigated</u>

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

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	/yr	
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
1	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							MT	/yr		
Architectural Coating	8.8065					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	68.6565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
Total	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	-/yr		
Architectural Coating	8.8065					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	68.6565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
Total	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category		МТ	Γ/yr	
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	-/yr	
User Defined Industrial	0/0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	-/yr	
User Defined Industrial	0/0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

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

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	-/yr	
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

I Equipment I voe I Number I Hours/Dav I Davs/Year I Horse Power I Loag Facto	Environment Tons	Managara	Harris /Day	Days Mass	Hansa Davien	Land Faster	Free! Trees
= -y=	Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

|--|

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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1.0 Project Characteristics

1.1 Land Usage

Urbanization

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	434.00	19,000,000.00	0

Precipitation Freq (Days)

32

1.2 Other Project Characteristics

Urban

Climate Zone	10		Operational Year	2025	
Utility Company	Southern California Ediso	n			
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

2.2

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Airport

Construction Phase - Runway and taxiway paving in 2023 and 2024 (Two-Year Alternative)

Wind Speed (m/s)

Off-road Equipment - ffff

Off-road Equipment - ACEIT input

Off-road Equipment - ACEIT estimated hours

Off-road Equipment - ACEIT estimated hours

Off-road Equipment - ACEIT estimated hours

Trips and VMT - ACEIT VMT assumptions

Construction Off-road Equipment Mitigation - Assume Tier 4 equipment for mitigation

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	36.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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tblConstEquipMitigation Tier No Change Tier 4 Final tblConstructionPhase NumDays 7,750.00 195.0	tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase NumDays 550.00 197.00 tblLandUse LandUseSquareFeet 0.00 19,000,000.00 tblLandUse LotAcreage 0.00 434.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 3.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 4.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 3.00 1.00 tblOffRoadEquipment UsageHours 7.00 1.20 tblOffRoadEquipment UsageHours 8.00 6.80	tblConstructionPhase	NumDays	550.00	196.00
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tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 4.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 3.00 1.00 tblOffRoadEquipment UsageHours 7.00 1.20 tblOffRoadEquipment UsageHours 8.00 6.80	tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
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tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 3.00 1.00 tblOffRoadEquipment UsageHours 7.00 1.20 tblOffRoadEquipment UsageHours 8.00 6.80	tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment OffRoadEquipmentUnitAmount 2.00 1.00 tblOffRoadEquipment OffRoadEquipmentUnitAmount 3.00 1.00 tblOffRoadEquipment UsageHours 7.00 1.20 tblOffRoadEquipment UsageHours 8.00 6.80	tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipmentOffRoadEquipmentUnitAmount3.001.00tblOffRoadEquipmentUsageHours7.001.20tblOffRoadEquipmentUsageHours8.006.80	tblOffRoadEquipment		2.00	1.00
tblOffRoadEquipment UsageHours 7.00 1.20 tblOffRoadEquipment UsageHours 8.00 6.80	tblOffRoadEquipment		3.00	1.00
tblOffRoadEquipment UsageHours 8.00 6.80	tblOffRoadEquipment	UsageHours	7.00	1.20
	tblOffRoadEquipment	UsageHours	8.00	6.80
	tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment UsageHours 8.00 1.00	tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment UsageHours 8.00 5.60			8.00	5.60

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	8.00	6.20		
tblOffRoadEquipment	UsageHours	8.00	3.00		
tblOffRoadEquipment	UsageHours	8.00	3.20		
tblOffRoadEquipment	UsageHours	7.00	1.60		
tblTripsAndVMT	HaulingTripLength	20.00	40.00		
tblTripsAndVMT	HaulingTripLength	20.00	40.00		
tblTripsAndVMT	HaulingTripLength	20.00	40.00		
tblTripsAndVMT	HaulingTripLength	20.00	40.00		
tblTripsAndVMT	HaulingTripNumber	0.00	93.00		
tblTripsAndVMT	HaulingTripNumber	0.00	10,516.00		
tblTripsAndVMT	HaulingTripNumber	0.00	4,830.00		
tblTripsAndVMT	HaulingTripNumber	0.00	13,454.00		
tblTripsAndVMT	VendorTripLength	6.90	40.00		
tblTripsAndVMT	VendorTripLength	6.90	40.00		
tblTripsAndVMT	VendorTripLength	6.90	40.00		
tblTripsAndVMT	VendorTripLength	6.90	40.00		
tblTripsAndVMT	VendorTripNumber	3,114.00	0.00		
tblTripsAndVMT	WorkerTripLength	14.70	30.00		
tblTripsAndVMT	WorkerTripLength	14.70	30.00		
tblTripsAndVMT	WorkerTripLength	14.70	30.00		
tblTripsAndVMT	WorkerTripLength	14.70	30.00		
tblTripsAndVMT	WorkerTripNumber	7,980.00	33.00		
tblTripsAndVMT	WorkerTripNumber	70.00	262.00		
tblTripsAndVMT	WorkerTripNumber	53.00	129.00		
tblTripsAndVMT	WorkerTripNumber	123.00	581.00		

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					ton	s/yr							MT	/yr		
2023	1.5532	12.2355	12.4583	0.0464	1.1918	0.4419	1.6337	0.3189	0.4078	0.7267	0.0000	4,199.7244	4,199.7244	0.9006	0.1494	4,266.7612
2024	1.4307	10.2305	12.5189	0.0452	1.5116	0.3661	1.8777	0.4035	0.3387	0.7422	0.0000	4,086.4143	4,086.4143	0.8103	0.1351	4,146.9401
Maximum	1.5532	12.2355	12.5189	0.0464	1.5116	0.4419	1.8777	0.4035	0.4078	0.7422	0.0000	4,199.7244	4,199.7244	0.9006	0.1494	4,266.7612

Mitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					ton	s/yr							MT	/yr		
2023	0.6340	3.4727	17.7655	0.0464	1.1918	0.0715	1.2634	0.3189	0.0704	0.3893	0.0000	4,199.7212	4,199.7212	0.9006	0.1494	4,266.7581
2024	0.6649	3.1586	17.5556	0.0452	1.5116	0.0661	1.5776	0.4035	0.0649	0.4684	0.0000	4,086.4114	4,086.4114	0.8103	0.1351	4,146.9372
Maximum	0.6649	3.4727	17.7655	0.0464	1.5116	0.0715	1.5776	0.4035	0.0704	0.4684	0.0000	4,199.7212	4,199.7212	0.9006	0.1494	4,266.7581

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	56.47	70.48	-41.41	0.00	0.00	82.97	19.09	0.00	81.87	41.61	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-16-2023	4-15-2023	4.5331	1.3463
2	4-16-2023	7-15-2023	4.5589	1.3368
3	7-16-2023	10-15-2023	4.6138	1.3563
4	10-16-2023	1-15-2024	0.0582	0.0186
5	1-16-2024	4-15-2024	3.8449	1.2588
6	4-16-2024	7-15-2024	3.8221	1.2361
7	7-16-2024	9-30-2024	3.2341	1.0459
		Highest	4.6138	1.3563

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	MT/yr										
Area	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	77.4630	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	MT/yr										
Area	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	77.4630	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	2023 - South Elec Vault, Scenario 5	Building Construction	1/15/2023	10/15/2023	5	195	
2	2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Paving	1/15/2023	10/15/2023	5	195	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	2023 - Paving/Demo, Scenario 7 & 8	•	1/15/2023	10/16/2023	5	196	
4	2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Paving	1/15/2024	10/15/2024	5	197	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
2023 - South Elec Vault, Scenario 5	Cranes	1	1.20	231	0.29
2023 - South Elec Vault, Scenario 5	Forklifts	1	6.80	89	0.20
2023 - South Elec Vault, Scenario 5	Off-Highway Trucks	1	3.40	402	0.38
2023 - South Elec Vault, Scenario 5	Rough Terrain Forklifts	2	5.30	100	0.40
2023 - South Elec Vault, Scenario 5	Tractors/Loaders/Backhoes	1	1.60	97	0.37
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Air Compressors	1	1.90	78	0.48
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Concrete/Industrial Saws	1	1.80	81	0.73
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Excavators	1	5.30	158	0.38
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Graders	1	0.60	187	0.41
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Off-Highway Trucks	11	8.30	402	0.38
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Other Construction Equipment	3	6.40	172	0.42
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Pavers	1	2.00	130	0.42
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Pumps	1	0.50	84	0.74
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Rollers	1	6.20	80	0.38
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Rubber Tired Dozers	2	5.50	247	0.40

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2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Rubber Tired Loaders	1	3.60	203	0.36
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Scrapers	1	2.30	367	0.48
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Skid Steer Loaders	1	2.00	65	0.37
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Surfacing Equipment	1	2.10	263	0.30
2023 - Paving/Demo, Scenarios 1, 2, 3 and 4	Tractors/Loaders/Backhoes	1	2.70	97	0.37
2023 - Paving/Demo, Scenario 7 & 8	Air Compressors	1	0.80	78	0.48
2023 - Paving/Demo, Scenario 7 & 8	Concrete/Industrial Saws	1	0.80	81	0.73
2023 - Paving/Demo, Scenario 7 & 8	Excavators	1	1.60	158	0.38
2023 - Paving/Demo, Scenario 7 & 8	Graders	1	0.30	187	0.41
2023 - Paving/Demo, Scenario 7 & 8	Off-Highway Trucks	6	7.80	402	0.38
2023 - Paving/Demo, Scenario 7 & 8	Other Construction Equipment	2	4.80	172	0.42
2023 - Paving/Demo, Scenario 7 & 8	Pavers	1	1.00	130	0.42
2023 - Paving/Demo, Scenario 7 & 8	Pumps	1	0.20	84	0.74
2023 - Paving/Demo, Scenario 7 & 8	Rollers	1	3.00	80	0.38
2023 - Paving/Demo, Scenario 7 & 8	Rubber Tired Dozers	1	5.00	247	0.40
2023 - Paving/Demo, Scenario 7 & 8	Rubber Tired Loaders	1	1.60	203	0.36
2023 - Paving/Demo, Scenario 7 & 8	Scrapers	1	1.10	367	0.48
2023 - Paving/Demo, Scenario 7 & 8	Skid Steer Loaders	1	1.20	65	0.37
2023 - Paving/Demo, Scenario 7 & 8	Surfacing Equipment	1	1.00	263	0.30
2023 - Paving/Demo, Scenario 7 & 8	Tractors/Loaders/Backhoes	1	1.50	97	0.37
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Air Compressors	1	3.80	78	0.48
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Concrete/Industrial Saws	2	4.50	81	0.73
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Cranes	1	0.10	231	0.29
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Excavators	1	6.00	158	0.38
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Graders	1	0.20	187	0.41
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Off-Highway Trucks	18	6.20	402	0.38

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2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Other Construction Equipment	6	6.10	172	0.42
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Pavers	4	5.60	130	0.42
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Pumps	1	0.20	84	0.74
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Rollers	1	3.20	80	0.38
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Rubber Tired Dozers	1	3.50	247	0.40
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Rubber Tired Loaders	4	5.40	203	0.36
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Scrapers	1	0.10	367	0.48
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Skid Steer Loaders	1	1.40	65	0.37
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Surfacing Equipment	4	5.40	263	0.30
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Sweepers/Scrubbers	1	0.90	64	0.46
2024- Runway Rehab, Service Road, NAVAID, Scenario 6	Tractors/Loaders/Backhoes	1	1.10	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
2023 - South Elec	6	33.00	0.00	93.00	30.00	40.00	40.00	LD_Mix	HDT_Mix	HHDT
2023 - Paving/Demo,	28	262.00	0.00	10,516.00	30.00	40.00	40.00	LD_Mix	HDT_Mix	HHDT
2023 - Paving/Demo,	21	129.00	0.00	4,830.00	30.00	40.00	40.00	LD_Mix	HDT_Mix	HHDT
2024- Runway Rehab,	49	581.00	0.00	13,454.00	30.00	40.00	40.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 2023 - South Elec Vault, Scenario 5 - 2023 <u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
Off-Road	0.0511	0.4939	0.5970	1.2700e- 003		0.0199	0.0199		0.0183	0.0183	0.0000	111.1121	111.1121	0.0359	0.0000	112.0105
Total	0.0511	0.4939	0.5970	1.2700e- 003		0.0199	0.0199		0.0183	0.0183	0.0000	111.1121	111.1121	0.0359	0.0000	112.0105

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	1.6000e- 004	9.8300e- 003	2.2500e- 003	5.0000e- 005	1.6000e- 003	1.1000e- 004	1.7100e- 003	4.4000e- 004	1.0000e- 004	5.4000e- 004	0.0000	5.0234	5.0234	2.2000e- 004	8.0000e- 004	5.2661
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0184	0.0153	0.1955	6.0000e- 004	0.0720	3.5000e- 004	0.0723	0.0191	3.2000e- 004	0.0194	0.0000	54.9515	54.9515	1.0700e- 003	1.3400e- 003	55.3765
Total	0.0186	0.0252	0.1977	6.5000e- 004	0.0736	4.6000e- 004	0.0740	0.0196	4.2000e- 004	0.0200	0.0000	59.9749	59.9749	1.2900e- 003	2.1400e- 003	60.6426

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 2023 - South Elec Vault, Scenario 5 - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr												МТ	√yr		
Off-Road	0.0155	0.0672	0.7628	1.2700e- 003		2.0700e- 003	2.0700e- 003		2.0700e- 003	2.0700e- 003	0.0000	111.1120	111.1120	0.0359	0.0000	112.0104
Total	0.0155	0.0672	0.7628	1.2700e- 003		2.0700e- 003	2.0700e- 003		2.0700e- 003	2.0700e- 003	0.0000	111.1120	111.1120	0.0359	0.0000	112.0104

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category					ton	s/yr					MT/yr						
Hauling	1.6000e- 004	9.8300e- 003	2.2500e- 003	5.0000e- 005	1.6000e- 003	1.1000e- 004	1.7100e- 003	4.4000e- 004	1.0000e- 004	5.4000e- 004	0.0000	5.0234	5.0234	2.2000e- 004	8.0000e- 004	5.2661	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	0.0184	0.0153	0.1955	6.0000e- 004	0.0720	3.5000e- 004	0.0723	0.0191	3.2000e- 004	0.0194	0.0000	54.9515	54.9515	1.0700e- 003	1.3400e- 003	55.3765	
Total	0.0186	0.0252	0.1977	6.5000e- 004	0.0736	4.6000e- 004	0.0740	0.0196	4.2000e- 004	0.0200	0.0000	59.9749	59.9749	1.2900e- 003	2.1400e- 003	60.6426	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 2023 - Paving/Demo, Scenarios 1, 2, 3 and 4 - 2023 Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	-/yr		
Off-Road	0.8257	6.6181	5.9910	0.0193		0.2673	0.2673		0.2464	0.2464	0.0000	1,693.8367	1,693.8367	0.5416	0.0000	1,707.3756
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.8257	6.6181	5.9910	0.0193		0.2673	0.2673		0.2464	0.2464	0.0000	1,693.8367	1,693.8367	0.5416	0.0000	1,707.3756

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	¯/yr		
Hauling	0.0177	1.1110	0.2540	5.7400e- 003	0.1810	0.0121	0.1931	0.0497	0.0116	0.0613	0.0000	568.0190	568.0190	0.0245	0.0901	595.4654
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1462	0.1218	1.5520	4.7600e- 003	0.5714	2.7400e- 003	0.5741	0.1517	2.5200e- 003	0.1542	0.0000	436.2817	436.2817	8.5100e- 003	0.0106	439.6562
Total	0.1640	1.2329	1.8060	0.0105	0.7524	0.0149	0.7672	0.2014	0.0141	0.2155	0.0000	1,004.3007	1,004.3007	0.0330	0.1007	1,035.1216

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 2023 - Paving/Demo, Scenarios 1, 2, 3 and 4 - 2023 Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.2363	1.0467	9.3997	0.0193		0.0314	0.0314		0.0314	0.0314	0.0000	1,693.8347	1,693.8347	0.5416	0.0000	1,707.3735
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2363	1.0467	9.3997	0.0193		0.0314	0.0314		0.0314	0.0314	0.0000	1,693.8347	1,693.8347	0.5416	0.0000	1,707.3735

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	¯/yr		
Hauling	0.0177	1.1110	0.2540	5.7400e- 003	0.1810	0.0121	0.1931	0.0497	0.0116	0.0613	0.0000	568.0190	568.0190	0.0245	0.0901	595.4654
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1462	0.1218	1.5520	4.7600e- 003	0.5714	2.7400e- 003	0.5741	0.1517	2.5200e- 003	0.1542	0.0000	436.2817	436.2817	8.5100e- 003	0.0106	439.6562
Total	0.1640	1.2329	1.8060	0.0105	0.7524	0.0149	0.7672	0.2014	0.0141	0.2155	0.0000	1,004.3007	1,004.3007	0.0330	0.1007	1,035.1216

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 2023 - Paving/Demo, Scenario 7 & 8 - 2023 Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
0	0.4134	3.2948	2.9818	9.7200e- 003		0.1325	0.1325		0.1221	0.1221	0.0000	853.6967	853.6967	0.2734	0.0000	860.5316
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.4134	3.2948	2.9818	9.7200e- 003		0.1325	0.1325		0.1221	0.1221	0.0000	853.6967	853.6967	0.2734	0.0000	860.5316

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	-/yr		
Hauling	8.1400e- 003	0.5103	0.1167	2.6400e- 003	0.0831	5.5600e- 003	0.0887	0.0228	5.3200e- 003	0.0282	0.0000	260.8912	260.8912	0.0113	0.0414	273.4973
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0603	0.7681	2.3500e- 003	0.2828	1.3600e- 003	0.2841	0.0751	1.2500e- 003	0.0763	0.0000	215.9121	215.9121	4.2100e- 003	5.2500e- 003	217.5821
Total	0.0805	0.5706	0.8847	4.9900e- 003	0.3659	6.9200e- 003	0.3728	0.0979	6.5700e- 003	0.1045	0.0000	476.8032	476.8032	0.0155	0.0466	491.0794

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 2023 - Paving/Demo, Scenario 7 & 8 - 2023 Mitigated Construction On-Site

ROG CO Fugitive PM2.5 Total Bio- CO2 NBio- CO2 Total CO2 CH4 N20 CO2e NOx SO₂ Exhaust PM10 **Fugitive** Exhaust PM10 PM10 Total PM2.5 PM2.5 MT/yr Category tons/yr 0.1192 9.7200e-853.6957 853.6957 0.2734 Off-Road 0.5302 4.7146 0.0158 0.0158 0.0158 0.0158 0.0000 0.0000 860.5306 003 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 Paving 0.1192 0.0158 853.6957 0.2734 0.5302 4.7146 9.7200e-0.0158 0.0158 0.0158 0.0000 853.6957 0.0000 860.5306 Total 003

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	√yr		
Hauling	8.1400e- 003	0.5103	0.1167	2.6400e- 003	0.0831	5.5600e- 003	0.0887	0.0228	5.3200e- 003	0.0282	0.0000	260.8912	260.8912	0.0113	0.0414	273.4973
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0724	0.0603	0.7681	2.3500e- 003	0.2828	1.3600e- 003	0.2841	0.0751	1.2500e- 003	0.0763	0.0000	215.9121	215.9121	4.2100e- 003	5.2500e- 003	217.5821
Total	0.0805	0.5706	0.8847	4.9900e- 003	0.3659	6.9200e- 003	0.3728	0.0979	6.5700e- 003	0.1045	0.0000	476.8032	476.8032	0.0155	0.0466	491.0794

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 2024- Runway Rehab, Service Road, NAVAID, Scenario 6 - 2024

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	1.1031	8.5625	8.9668	0.0276		0.3449	0.3449		0.3186	0.3186	0.0000	2,423.2840	2,423.2840	0.7627	0.0000	2,442.3505
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1031	8.5625	8.9668	0.0276		0.3449	0.3449		0.3186	0.3186	0.0000	2,423.2840	2,423.2840	0.7627	0.0000	2,442.3505

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0224	1.4272	0.3263	7.2200e- 003	0.2316	0.0153	0.2469	0.0636	0.0146	0.0782	0.0000	714.0614	714.0614	0.0304	0.1132	748.5539
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3052	0.2409	3.2257	0.0104	1.2800	5.9000e- 003	1.2859	0.3399	5.4300e- 003	0.3453	0.0000	949.0688	949.0688	0.0172	0.0219	956.0357
Total	0.3276	1.6680	3.5520	0.0176	1.5116	0.0212	1.5328	0.4035	0.0201	0.4235	0.0000	1,663.1302	1,663.1302	0.0476	0.1351	1,704.5896

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 2024- Runway Rehab, Service Road, NAVAID, Scenario 6 - 2024

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
Off-Road	0.3373	1.4906	14.0036	0.0276		0.0449	0.0449		0.0449	0.0449	0.0000	2,423.2812	2,423.2812	0.7627	0.0000	2,442.3476
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.3373	1.4906	14.0036	0.0276		0.0449	0.0449		0.0449	0.0449	0.0000	2,423.2812	2,423.2812	0.7627	0.0000	2,442.3476

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	-/yr		
Hauling	0.0224	1.4272	0.3263	7.2200e- 003	0.2316	0.0153	0.2469	0.0636	0.0146	0.0782	0.0000	714.0614	714.0614	0.0304	0.1132	748.5539
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3052	0.2409	3.2257	0.0104	1.2800	5.9000e- 003	1.2859	0.3399	5.4300e- 003	0.3453	0.0000	949.0688	949.0688	0.0172	0.0219	956.0357
Total	0.3276	1.6680	3.5520	0.0176	1.5116	0.0212	1.5328	0.4035	0.0201	0.4235	0.0000	1,663.1302	1,663.1302	0.0476	0.1351	1,704.5896

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	te	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C- W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543085	0.056300	0.173085	0.134258	0.025645	0.007009	0.011926	0.017481	0.000552	0.000248	0.024848	0. A00256	ent01. 90 4606

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	-/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity <u>Unmitigated</u>

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tons/yr MT/yr						/yr					
Mitigated	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
1	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	SubCategory tons/yr									MT	/yr					
Architectural Coating	8.8065					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	68.6565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
Total	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory											МТ	-/yr				
Architectural Coating	8.8065					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	68.6565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005
Total	77.4630	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e- 005	2.0000e- 005	0.0000	0.0000	3.0000e- 005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category		МТ	⁻/yr	
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	-/yr	
User Defined Industrial	0/0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0/0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

		/5	5 0/	5		
Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

E : (F		11 (1 (/5)	11 (1 (8)	D " D "	E 1.E
Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 2

Operational Emissions Analysis

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ATTACHMENTS

Attachment 2-A: Fleet Mix

1 Introduction

This document presents the overall data, assumptions, approach, and methodology for preparing criteria pollutant and pollutant precursor, and greenhouse gas (GHG) emissions inventories for operations at Ontario International Airport (ONT). The aircraft emissions inventories were prepared for the following scenarios:

- Baseline Conditions (2019/2020 Hybrid)
- No Project Alternative (2023)
- Proposed Project (2023)
- Two-Year Program Alternative (2023)
- No Project Alternative (2024)
- Proposed Project / Two-Year Program Alternative (2024)
- No Project Alternative (2025)
- Proposed Project (2025)

The 2019/2020 Hybrid Baseline Conditions represents the existing environment in 2019 and 2020. The hybrid base year (2019/2020) fleet mix was based on the ONT Airport Noise Monitoring System (ANOMS) radar data from 2019 and 2020, and FAA's Traffic Flow Management System Count (TFMSC). Passenger air carriers, air taxi, and General Aviation (GA) operations were obtained from the 2019 ANOMS data and the all-cargo operations were obtained from the 2020 ANOMS data. This approach represents Baseline Conditions which recognizes the reduction in passenger carrier and air taxi operations, and the increase in all-cargo operations, attributable to the COVID-19 pandemic.

The future scenarios include years 2023, 2024, and 2025, encompassing the entire proposed construction period. This study analyzed three alternatives including the no project alternative (No Project), a three-year construction alternative (Proposed Project) and a two-year construction alternative (Two-Year Program Alternative). The Proposed Project assumed the following runway rehabilitation phasing:

- 2023 maximum nine months of runway closure
 - o Runway 8L-26R will be closed for four months (from mid-January to mid-May)
 - o Runway 8R-26L will be closed for five months (from June to October)
- 2024 maximum nine months of runway closure
 - o Runway 8R-26L will be closed for nine months (from mid-January to mid-October)
- 2025 maximum five months of runway closure
 - o Runway 8L-26R will be closed for five months (from mid-January to mid-June)

The Two-Year Program Alternative assumed the following runway rehabilitation phasing:

- 2023 maximum nine months of runway closure
 - o Runway 8L-26R will be closed for six months (mid-Jan to mid-July)

- o Runway 8R-26L will be closed for three months (mid-July to mid-October)
- 2024 maximum nine months of runway closure
 - o Runway 8R-26L will be closed for nine months (mid-Jan to mid-October)

In 2024, the Proposed Project construction phasing is identical to the Two-Year Program Alternative construction phasing. Therefore, the 2024 air quality model outputs of the two alternatives are expected to be identical.

The air quality emissions inventories were prepared for carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO₂), particulate matter less than 10 micrometers in diameter (coarse or PM_{10}), and particulate matter less than 2.5 micrometers in diameter (fine or $PM_{2.5}$).

The climate emissions inventory was prepared for carbon dioxide (CO₂). As is customary for greenhouse gas (GHG) emissions inventories, the results are reported in units of metric tons (MT) of carbon dioxide equivalents (CO₂e), by source, on an annual basis.

For the purpose of disclosing the increase or decrease in pollutant and pollutant precursor emissions with the improvements to the airport, the inventories were prepared only for the emission sources that would be affected by the improvements – aircraft (including Ground Support Equipment (GSE), Auxiliary Power Units (APU)), and construction activity (see Attachment 1, Construction Emissions Analysis).

2 Operations

Emissions produced from airport operations include those from aircraft, engine maintenance runup, GSE, and APU.

2.1 Aircraft

The aircraft-related emission inventories were prepared using FAA's Aviation Environmental Design Tool (AEDT, Version 3d). With the exception of the number of operations, and for consistency, the aircraft operational data (i.e., fleet, aircraft engine assignments, and runway use) input to the AEDT were data developed in support of the analysis for Noise and Noise Compatible Land Use of this SEIR. Aircraft with at least 183 operations annually (more than 0.5 operations daily) were retained in the fleet mix for air quality analysis as they represent the majority of the operations. The retained operations were scaled up to match the total number of operations developed in the fleet mix. The average weighted departure stage lengths were applied. Default GSE and APU assignments in AEDT were applied. Because it is customary for criteria air pollutant and pollutant precursor inventories to be reported in tons on an annual basis, the number of operations used in the noise analysis were factored to reflect the actual annual (year 2019/2020) and future forecast (year 2023, 2024, and 2025) level of operations for the air quality analysis Detailed fleet mixes are included in *Attachment 2-A of this Appendix*.

Except for ground-based taxi-in/taxi-out, including apron idling and departure runway queue delay, the default aircraft operating times in AEDT by aircraft mode (e.g., approach, take-off,

climbout) were used. For the Baseline Conditions, airport-specific times-in-mode for taxi-in and taxi-out were obtained from the FAA Aviation System Performance Metrics (ASPM) database. It was determined that the Baseline Conditions airfield-wide average taxi-in time was 5 minutes and 17 seconds and the average taxi-out time was 12 minutes and 11 seconds.

Future scenario taxi-in/taxi-out times were obtained through simulations using AirTOP. AirTOP is a gate-to-gate air traffic and airport simulation and assessment software. Future scenario simulations were set up in a way that was consistent with the proposed runway closures, temporary suspension of Contra Flow during construction, and taxiway improvements in the future years. The taxi time outputs from future scenario simulations were compared with the Baseline Conditions simulation output and adjustment factors were calculated. The adjustment factors were applied to the Baseline Conditions annual average taxi times from FAA ASPM database to obtain the future scenario taxi times.

Table 1 provides the aircraft operation, engine run-up, and taxi-in/taxi-out time inputs to AEDT by year and alternative. As shown, the runway rehabilitation would increase the taxi-in times and decrease taxi-out times. This is a result of the suspension of Contra Flow, which improves departure taxi efficiency. With the proposed taxiway improvements, the 2025 taxi-in times are expected to decrease compared with the 2024 taxi-in times.

Table 1: Air Quality Model Inputs

Year	Year Scenario		Run-up	Taxi-in	Taxi-out
2019/2020	Baseline Conditions	106,026	95.0	5:17	12:11
	No Project Alternative	110,368	99.5	5:17	13:32
2023	Proposed Project	110,368	99.5	5:43	11:02
	Two-Year Program Alternative	110,368	99.5	5:43	11:01
2024	No Project Alternative	113,826	103.2	5:21	13:35
2024	Proposed Project	113,826	103.2	5:44	11:10
0005	No Project Alternative	117,625	107.2	5:20	13:36
2025	Proposed Project	117,625	107.2	5:36	12:15

Source: FAA ASPM and HNTB analysis, 2022.

2.2 Engine Maintenance Run-up

Aircraft maintenance engine run-ups emissions can be modeled in AEDT 3d. The Airport provided detailed engine 2019 run-up logs for use in the Baseline Conditions engine run-up emission modeling. Future scenario run-up operations were adjusted based on growth of each aircraft in the fleet mix from the Baseline Conditions to the future scenarios. **Table 2** summarizes the run-up operation inputs. Run-up inputs are the same for the same year.

Table 2: Run-up Operation Inputs

AEDT Aircraft	Engines	Baseline Conditions	2023	2024	2025
Boeing 737-700 Series	CFM56-7B24	2.2	1.8	1.9	2.0
Boeing 737-800 Series	CFM56-7B27	0.5	0.3	0.4	0.4
Boeing 757-200 Series	PW2040	9.2	9.3	9.7	10.0
Airbus A300B4-600 Series	PW4158	1.6	1.6	1.7	1.7
Airbus A320-200 Series	CFM56-5B4/2	1.0	0.4	0.4	0.4
Airbus A320-200 Series	V2527-A5	1.1	0.9	0.9	0.9
Dassault Falcon 900	TFE731-3	2.3	2.5	2.5	2.6
Cessna 750 Citation X	AE3007C	2.8	3.6	3.8	3.9
Boeing 747-400 Series Freighter	CF6-80C2B1F	1.1	1.1	1.1	1.2
Boeing 757-200 Series Freighter	RB211-535E4	9.0	9.1	9.5	9.8
Boeing MD-11 Freighter	CF6-80C2D1F	6.4	4.6	4.7	4.9
Boeing MD-11 Freighter	PW4460	12.4	7.8	8.1	8.4
Boeing 767-300 ER Freighter	CF6-80C2B6F	45.3	56.4	58.5	60.8
Grand Tota	ıl	95.0	99.5	103.2	107.2

Source: ONT run-up logs and HNTB analysis, 2022

2.3 GSE and APU

GSE includes ground equipment essential for passenger and aircraft services, such as air conditioner, baggage tractor, and various service trucks. APU provides power to sufficiently large commercial aircraft. In addition to aircraft emissions, GSE and APU are also sources of CO, VOC, NO_x, SO₂, PM_{2.5}, and PM₁₀, among other parameters.

AEDT provides default APU and GSE assignment to commercial aircraft, as well as emission factors. The default assignment and emission factors were applied to the aircraft in the Baseline Conditions, No Project, and Proposed Project and annual emissions for criteria pollutants and GHGs were calculated. There are three freighters that do not have default AEDT GSE equipment assignments, which include Boeing 767-200 Freighter, Boeing 767-300 ER Freighter, and Boeing MD-11 Freighter. For these three aircraft types, default AEDT GSE assignments of similar freighter aircraft were applied.

2.4 Operational Emissions

Table 3 provides the Baseline Conditions, No Project, Proposed Project, and Two-Year Program Alternative operational emissions for criteria pollutants.

Table 3: Operation Emissions (tons per year)

Year	Alternative	Category	СО	NOx	VOC	SO ₂	PM _{2.5}	PM ₁₀
		Aircraft	578.3	581.7	120.3	48.0	4.1	4.1
0040/0000	Baseline	GSE	102.7	11.4	4.0	0.1	0.6	0.7
2019/2020	Conditions	APU	9.5	11.3	0.7	1.4	1.3	1.3
		Total	690.5	604.4	125.0	49.4	6.0	6.1
		Aircraft	616.0	622.0	125.3	49.3	4.0	4.0
	No Project	GSE	94.0	9.8	3.7	0.1	0.6	0.6
	No Project	APU	9.8	12.1	0.7	1.5	1.3	1.3
		Total	719.8	643.9	129.7	50.9	5.9	5.9
		Aircraft	555.9	614.4	114.2	47.1	3.8	3.8
2023	Proposed	GSE	94.0	9.8	3.7	0.1	0.6	0.6
2023	Project	APU	9.8	12.1	0.7	1.5	1.3	1.3
		Total	659.7	636.3	118.6	48.6	5.7	5.7
	Two-Year Program	Aircraft	555.4	614.3	114.1	47.1	3.8	3.8
		GSE	94.0	9.8	3.7	0.1	0.6	0.6
		APU	9.8	12.1	0.7	1.5	1.3	1.3
		Total	659.2	636.2	118.6	48.6	5.7	5.7
	No Project	Aircraft	638.9	643.5	129.8	51.0	4.1	4.1
		GSE	93.1	9.5	3.7	0.1	0.6	0.6
		APU	10.1	12.5	0.8	1.5	1.4	1.4
2024		Total	742.1	665.5	134.3	52.6	6.1	6.1
2024	Proposed	Aircraft	577.5	636.0	118.6	48.8	4.0	4.0
	Project/	GSE	93.1	9.5	3.7	0.1	0.6	0.6
	Two-Year	APU	10.1	12.5	0.8	1.5	1.4	1.4
	Program	Total	680.7	657.9	123.0	50.4	5.9	5.9
		Aircraft	665.7	679.3	134.8	53.3	4.3	4.3
	Na Dasia at	GSE	93.3	9.3	3.7	0.1	0.6	0.6
	No Project	APU	10.3	12.9	0.8	1.6	1.4	1.4
2225		Total	769.3	701.5	139.3	55.0	6.3	6.3
2025		Aircraft	631.6	675.1	128.6	52.1	4.2	4.2
	Proposed	GSE	93.3	9.3	3.7	0.1	0.6	0.6
	Project	APU	10.3	12.9	0.8	1.6	1.4	1.4
		Total	735.2	697.3	133.1	53.8	6.2	6.2

Source: FAA ASPM and HNTB analysis, 2022.

In 2023, the No Project Alternative emissions are expected to increase from the Baseline Conditions as a result of higher operations and higher taxi-out times. The Proposed Project emissions are expected to be lower than the No Project Alternative as a result of lower taxi-out times. Although the taxi-in times are projected to increase under the Proposed Project, they would

be offset by the substantial decrease in the taxi-out times as departure taxi movements improve without Contra Flow during the runway rehabilitation. The Two-Year Program Alternative air emissions are very close to the Proposed Project emissions because of the identical fleet mix, identical run-up operations, and similar taxi times.

In 2024 and 2025, the Proposed Project emissions are expected to be lower than the No Project Alternative. Since the Proposed Project and the No Project Alternatives have identical fleet mixes and run-up operations, the main cause of the decrease in the emissions is the lower taxi-out times. When the runway is under rehabilitation, Contra Flow is not implemented, which improves the departure flight taxi efficiency that reduces taxi-out times. Although the taxi-in times are expected to increase slightly, they would be offset by the decrease in taxi-out times. In addition, the proposed taxiway improvements are expected to reduce taxi times as well.

Table 4 provides the GHG emissions for all alternatives.

Table 4: Aircraft Operation CO₂e Emissions (MT per year)

Year	Alternative	Total (CO₂e)
2019/2020	Baseline Conditions	129,183
	No Project Alternative	132,600
2023	Proposed Project	126,829
	Two-Year Program Alternative	126,782
2004	No Project Alternative	137,476
2024	Proposed Project / Two-Year Program Alternative	131,586
0005	No Project Alternative	143,695
2025	Proposed Project	140,421

Note: MT = metric ton; CO₂e = carbon dioxide equivalent

The product of each GHG emission and its Global Warming Potential (GWP) is known as "carbon dioxide equivalent" (CO₂e). GWPs used for this analysis are 1 for CO₂.

There are no CO₂ emissions from GSEs or APUs.

Source: AEDT and HNTB analysis, 2022.

2.5 Aircraft Taxiing / Indirect Construction Emissions

While Table 3 and Table 4 present the total operational emissions of the Baseline Conditions and future scenarios, it should be noted that the analysis of air quality and GHG emissions in this SEIR is focused on the indirect impacts of aircraft taxiing times from the proposed temporary runway and taxiway closures. Because aircraft operational levels would be identical whether or not a project is implemented, the emissions from APU/GSE and aircraft landings/take-offs is not impacted by the Proposed Project or Two-Year Program Alternative. **Table 5** and **Table 6** present criteria pollutant and CO₂ emissions from aircraft taxiing for all alternatives, which is used in the analysis of indirect construction emissions in air quality and GHG analysis of this SEIR.

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Table 5: Aircraft Taxiing Emissions

Veer	Alternative	Pollutants (tons/year)					Pollutants (lbs/day)						
Year	Alternative	СО	NOx	voc	SO ₂	PM _{2.5}	PM ₁₀	СО	NOx	VOC	SO ₂	PM _{2.5}	PM ₁₀
2019/2020	Baseline Conditions	517	63	96	18	2	2	2,832	346	527	101	9	9
	No Project	551	67	101	20	2	2	3,019	369	554	107	9	9
2023	Proposed Project	490	60	90	17	1	1	2,686	328	493	95	8	8
	Two-Year Program	490	60	90	17	1	1	2,686	328	493	95	8	8
	No Project	572	70	105	20	2	2	3,125	383	573	111	9	9
2024	Proposed Project / Two-Year Program Alternative	510	63	94	18	2	2	2,790	342	511	99	8	8
2025	No Project	597	73	109	21	2	2	3,270	402	596	116	10	10
2025	Proposed Project	563	69	103	20	2	2	3,083	379	562	110	9	9

Source: AEDT and HNTB analysis, 2022.

7 Attachment 2

Table 6: Aircraft Taxiing CO₂e Emissions (MT per year)

Year	Alternative	CO₂e
2019/2020	Baseline Conditions	49,520
	No Project Alternative	52,700
2023	Proposed Project	46,919
	Two-Year Program Alternative	46,872
	No Project Alternative	54,849
2024	Proposed Project / Two-Year Program Alternative	48,958
2005	No Project Alternative	57,217
2025	Proposed Project	53,944

Note: MT = metric ton; CO₂e = carbon dioxide equivalent

The product of each GHG emission and its Global Warming Potential (GWP) is known as "carbon dioxide equivalent" (CO_2e). GWPs used for this analysis are 1 for CO_2 .

There are no CO₂ emissions from GSEs or APUs.

Source: AEDT and HNTB analysis, 2022.

8 Attachment 2

Attachment 2-A

Fleet Mix

Table A-1: Fleet Mixes

Aircraft	Engine	Operation Type	Stage Length	Baseline Conditions	2023	2024	2025
Airbus A320NEO Series	LEAP-1A26/26E1	А	1	524	761	786	811
Airbus A320NEO Series	LEAP-1A26/26E1	D	3	524	761	786	811
Airbus A321NEO Series	LEAP-1A35A/33/33B2/32/30	Α	1	-	1,216	1,254	1,296
Airbus A321NEO Series	LEAP-1A35A/33/33B2/32/30	D	2	-	1,216	1,254	1,296
Airbus A321NEO Series	PW1133G-JM	А	1	-	403	404	404
Airbus A321NEO Series	PW1133G-JM	D	2	-	403	404	404
Airbus A300-600/622R	PW4158	A	1	2,884	2,921	3,013	3,113
Airbus A300-600/622R	PW4158	D	3	2,884	2,921	3,013	3,113
Airbus A319 series	CFM56-5B6/2P	A	1	227	244	252	261
Airbus A319 series	CFM56-5B6/2P	D	2	-	244	252	261
Airbus A320 series	V2527-A5	A	1	339	342	353	365
Airbus A320 series	V2527-A5	D	2	-	342	353	365
Airbus A320 series	CFM56-5B4/2	A	1	725	541	559	578
Airbus A320 series	CFM56-5B4/2	D	2	-	541	559	578
Airbus A320 series	V2527-A5 SelectOne Package	А	1	472	389	401	415
Airbus A320 series	V2527-A5 SelectOne Package	D	2	-	389	401	415
Beechcraft 1900D	PT6A-67B	A	1	258	260	269	278
Beechcraft 1900D	PT6A-67B	D	1	258	260	269	278
Beechcraft Super King Air 350/300B	PT6A-60AG	Α	1	-	234	234	233
Beechcraft Super King Air 350/300B	PT6A-60AG	D	1	-	234	234	233
Boeing 737 MAX 8	LEAP-1B27	A	1	-	2,158	2,226	2,301
Boeing 737 MAX 8	LEAP-1B27	D	3	-	2,158	2,226	2,301
Boeing 737 MAX 8	LEAP-1B28B2C	A	1	-	2,212	2,281	2,357
Boeing 737 MAX 8	LEAP-1B28B2C	D	3	-	2,212	2,281	2,357
Boeing 737 MAX 9	LEAP-1B28/28B2/28B1/28B3	А	1	-	215	222	230
Boeing 737 MAX 9	LEAP-1B28/28B2/28B1/28B3	D	1	-	215	222	230
Boeing 737-700	CFM56-7B20	Α	1	7,742	6,477	6,681	6,904

Aircraft	Engine	Operation Type	Stage Length	Baseline Conditions	2023	2024	2025
Boeing 737-700	CFM56-7B20	D	1	7,742	6,477	6,681	6,904
Boeing 737-700	CFM56-7B22	A	1	731	610	629	651
Boeing 737-700	CFM56-7B22	D	1	731	610	629	651
Boeing 737-700	CFM56-7B24	A	1	2,954	2,467	2,544	2,629
Boeing 737-700	CFM56-7B24	D	1	2,954	2,467	2,544	2,629
Boeing 737-700	CFM56-7B24/3	A	1	791	661	682	704
Boeing 737-700	CFM56-7B24/3	D	1	791	661	682	704
Boeing 737-800	CFM56-7B24	A	1	1,220	482	497	515
Boeing 737-800	CFM56-7B24	D	2	1,220	482	497	515
Boeing 737-800	CFM56-7B27	A	1	2,583	1,404	1,448	1,497
Boeing 737-800	CFM56-7B27	D	2	2,583	1,404	1,448	1,497
Boeing 737-800	CFM56-7B27E/B1	А	1	1,935	1,954	2,015	2,084
Boeing 737-800	CFM56-7B27E/B1	D	2	1,935	1,954	2,015	2,084
Boeing 737-900	CFM56-7B27E/B1	A	1	1,178	551	567	587
Boeing 737-900	CFM56-7B27E/B1	D	2	1,178	551	567	587
Boeing 747-400	CF6-80C2B1F	A	1	372	377	390	403
Boeing 747-400	CF6-80C2B1F	D	4	372	377	390	403
Boeing 747-800	GEnx-2B67	А	1	463	468	483	500
Boeing 747-800	GEnx-2B67	D	4	463	468	483	500
Boeing 757-200	RB211-535E4	A	1	1,205	1,220	1,258	1,301
Boeing 757-200	RB211-535E4	D	3	1,205	1,220	1,258	1,301
Boeing 757-200	PW2040	А	1	1,060	1,072	1,107	1,144
Boeing 757-200	PW2040	D	3	1,060	1,072	1,107	1,144
Boeing 767-200	CF6-80A	А	1	687	696	718	742
Boeing 767-200	CF6-80A	D	4	687	696	718	742
Boeing 767-200	CF6-80A2	A	1	419	425	437	452
Boeing 767-200	CF6-80A2	D	4	419	425	437	452
Boeing 767-300	CF6-80C2B6F	A	1	5,951	7,635	7,875	8,138

Aircraft	Engine	Operation Type	Stage Length	Baseline Conditions	2023	2024	2025
Boeing 767-300	CF6-80C2B6F	D	3	5,951	7,635	7,875	8,139
Boeing 767-300	CF6-80C2B7F	А	1	217	221	228	236
Boeing 767-300	CF6-80C2B7F	D	3	217	221	228	236
Boeing 767-300	PW4062	А	1	537	544	561	580
Boeing 767-300	PW4062	D	3	537	544	561	580
Boeing 777F	GE90-110B1	А	1	-	465	480	495
Boeing 777F	GE90-110B1	D	3	-	465	480	495
Beechcraft Airliner Model 99	PT6A-28	А	1	1,168	1,183	1,220	1,261
Beechcraft Airliner Model 99	PT6A-28	D	1	1,168	1,183	1,220	1,261
Cessna 172 Single Engine SEPF	IO-360-B	А	1	1,061	1,245	1,242	1,240
Cessna 172 Single Engine SEPF	IO-360-B	D	1	1,061	1,245	1,242	1,240
Cessna 206 Stationair	TIO-540-J2B2	A	1	220	241	240	240
Cessna 206 Stationair	TIO-540-J2B2	D	2	220	241	240	240
Cessna 208 Caravan I	PT6A-114A	А	1	2,865	2,910	2,999	3,097
Cessna 208 Caravan I	PT6A-114A	D	1	2,865	2,910	2,999	3,097
Cessna CitationJet CJ3, 525B	JT15D-1 series	А	1	253	592	591	592
Cessna CitationJet CJ3, 525B	JT15D-1 series	D	1	253	592	591	592
Cessna CitationJet CJ4, 525C	UNKNOWN	А	1	-	231	231	231
Cessna CitationJet CJ4, 525C	UNKNOWN	D	1	-	231	231	231
Cessna 560XL Citation Excel	PW530	А	1	331	481	481	480
Cessna 560XL Citation Excel	PW530	D	1	331	481	481	480
Cessna 750 series/Citation X	AE3007C	А	1	248	349	349	348
Cessna 750 series/Citation X	AE3007C	D	2	248	349	349	348
Bombardier Challenger 300	AE3007A1	Α	1	349	546	545	547
Bombardier Challenger 300	AE3007A1	D	2	349	546	545	547
Canadair Bombardier CL600/610 Challenger Twin Jet	CF34-3B/-3B1	А	1	325	316	315	315
Canadair Bombardier CL600/610 Challenger Twin Jet	CF34-3B/-3B1	D	1	325	316	315	315

Aircraft	Engine	Operation Type	Stage Length	Baseline Conditions	2023	2024	2025
Bombardier CRJ 200 Regional Jet	CF34-3A1	А	1	1,470	902	929	958
Bombardier CRJ 200 Regional Jet	CF34-3A1	D	1	1,470	902	929	958
Bombardier CRJ 900 Regional Jet	CF34-8C5	А	1	1,158	1,017	1,049	1,084
Bombardier CRJ 900 Regional Jet	CF34-8C5	D	1	1,158	1,017	1,049	1,084
Embraer EMB-120 Brasilia	PW118	А	1	282	286	294	304
Embraer EMB-120 Brasilia	PW118	D	1	282	286	294	304
Embraer ERJ-145	AE3007A1/1	А	1	-	435	432	430
Embraer ERJ-145	AE3007A1/1	D	1	-	435	432	430
Embraer ERJ-175	CF34-8E5	А	1	655	574	590	609
Embraer ERJ-175	CF34-8E5	D	2	655	574	590	609
Embraer ERJ-175	CF34-8E5	А	1	800	701	722	745
Embraer ERJ-175	CF34-8E5	D	2	800	701	722	745
Dassault Falcon 900	TFE731-3	А	1	219	243	243	242
Dassault Falcon 900	TFE731-3	D	2	219	243	243	242
Dassault Falcon 50	TFE731-3	А	1	289	311	311	310
Dassault Falcon 50	TFE731-3	D	2	289	311	311	310
McDonnell Douglas MD-11 (Mixed)	CF6-80C2D1F	А	1	938	623	643	664
McDonnell Douglas MD-11 (Mixed)	CF6-80C2D1F	D	3	938	623	643	664
McDonnell Douglas MD-11 (Mixed)	PW4460	А	1	709	437	451	467
McDonnell Douglas MD-11 (Mixed)	PW4460	D	3	709	437	451	467
McDonnell Douglas MD-11 (Mixed)	CF6-80C2D1F	Α	1	462	350	361	374
McDonnell Douglas MD-11 (Mixed)	CF6-80C2D1F	D	3	462	350	361	374
McDonnell Douglas MD-11 (Mixed)	PW4062	А	1	859	551	568	587
McDonnell Douglas MD-11 (Mixed)	PW4062	D	3	859	551	568	587
Piper PA-31 Navajo	TIO-540-J2B2	А	1	295	300	308	319
Piper PA-31 Navajo	TIO-540-J2B2	D	1	295	300	308	319
Pilatus PC-12	PT6A-67B	А	1	-	220	220	220
Pilatus PC-12	PT6A-67B	D	1	-	220	220	220

Aircraft	Engine	Operation Type	Stage Length	Baseline Conditions	2023	2024	2025
Raytheon 390 Premier	JT15D-1 series	A	1	297	303	303	302
Raytheon 390 Premier	JT15D-1 series	D	1	297	303	303	302
Cirrus SR22	TIO-540-J2B2	A	1	-	212	212	212
Cirrus SR22	TIO-540-J2B2	D	1	-	212	212	212
Airbus A319 series	CFM56-5B6/2P	D	1	227	-	-	-
Airbus A319 series	V2522-A5	A	1	279	-	-	-
Airbus A319 series	V2522-A5	D	1	279	-	-	-
Airbus A320 series	V2527-A5	D	3	339	-	-	-
Airbus A320 series	CFM56-5B4/2	D	3	725	-	-	-
Airbus A320 series	CFM56-5B4/3	A	1	263	-	-	-
Airbus A320 series	CFM56-5B4/3	D	3	263	-	-	-
Airbus A320 series	V2527-A5 SelectOne Package	D	3	472	-	-	_
Airbus A321 series	V2530-A5	Α	1	237	-	-	-
Airbus A321 series	V2530-A5	D	2	237	-	-	-
Airbus A350-900	Trent XWB-84	A	1	317	-	-	-
Airbus A350-900	Trent XWB-84	D	8	317	-	-	-
Boeing 737-800	CFM56-7B24/3	А	1	517	-	-	-
Boeing 737-800	CFM56-7B24/3	D	2	517	-	-	-
Boeing 737-900	CFM56-7B26/3	А	1	233	-	-	-
Boeing 737-900	CFM56-7B26/3	D	2	233	-	-	-
McDonnell Douglas DC-10	CF6-6D	A	1	440	-	-	-
McDonnell Douglas DC-10	CF6-6D	D	2	440	-	-	-
Boeing 737-800	CFM56-7B26	A	1	-	-	210	217
Boeing 737-800	CFM56-7B26	D	2	-	-	210	217
Boeing 777-300ER	GE90-115B	A	1	-	-	-	213
Boeing 777-300ER	GE90-115B	D	8	-	-	-	213
	Total	<u> </u>		106,026	110,368	113,826	117,625

Source: HNTB analysis 2022.