URBAN CROSSROADS

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April 17, 2019

Mr. Todd Pendergrass
Chandler Aggregates, Inc.
P.O. Box 77850
Corona, CA 92877

SUBJECT: GILMAN SPRINGS MINE SUPPLEMENTAL NOISE ASSESSMENT

Dear Mr. Todd Pendergrass:

This letter serves as a supplement to the Gilman Springs Mine Noise Impact Analysis (May 29, 2018) (referred to as "NIA"). Specifically, this focused noise assessment evaluates the Project-related off-site traffic noise level increases based on a new Opening Year of 2019. The Gilman Springs Mine Traffic Impact Analysis (April 5, 2018) (referred to as "TIA") and NIA both previously assumed and evaluated an Opening Year of 2018. The limits of the mining have also changed, although there are no changes to the proposed mining operations and resulting daily and annual tonnage (see Exhibit A). As such, the same Project trip generation and trip distribution patterns utilized in the TIA and NIA have also been utilized for the purposes of this Supplemental Noise Assessment. A comparison is also provided with the prior results of the NIA.

OFF-SITE TRAFFIC NOISE ANALYSIS

Appendix A includes the updated roadway segment average daily traffic volumes and vehicle mix data based on the Gilman Springs Mine Supplemental Traffic Assessment (March 29, 2019). In addition, the off-site traffic noise level contours are provided in Appendix A for each without and with Project scenario, respectively.

EXISTING CONDITION PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 1 presents the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 67.3 to 78.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 1 shows the Existing with Project conditions will range from 67.9 to 79.2 dBA CNEL. As shown on Table 1 the Project will generate a noise level increase of up to 0.6 dBA CNEL on the study area roadway segments. Based on the off-site traffic noise level increase significance criteria in Section 4 of the NIA, the Project-related noise level increases are considered *less than significant* under Existing conditions at the land uses adjacent to roadways conveying Project traffic. This finding is consistent with that of the NIA.

EXISTING PLUS AMBIENT (EA) GROWTH PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 2 presents the EA without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 67.5 to 79.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 2 shows the EA with Project conditions will range from 68.1 to 79.4 dBA CNEL. As shown on Table 2 the Project will generate a noise level increase of up to 0.6 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4 of the NIA, the Project-related noise level increases are considered *less than significant* under EA conditions at the land uses adjacent to roadways conveying Project traffic. This finding is consistent with that of the NIA.

EA PLUS CUMULATIVE DEVELOPMENT (EAC) PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 3 presents the EAC without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 67.9 to 79.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 3 shows the EAC with Project conditions will range from 68.4 to 79.4 dBA CNEL. As shown on Table 3 the Project will generate a noise level increase of up to 0.5 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4 of the NIA, the Project-related noise level increases are considered *less than significant* under EAC conditions at the land uses adjacent to roadways conveying Project traffic. This finding is consistent with that of the NIA.

TABLE 1: EXISTING CONDITION OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive Land Use?	Threshold Exceeded?[2]
			No Project	With Project	Project Addition		
1	Gilman Springs Rd.	s/o SR-60	78.2	78.6	0.4	Yes	No
2	Gilman Springs Rd.	s/o Allesandro Bl.	78.9	79.2	0.3	Yes	No
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	76.7	77.0	0.3	Yes	No
4	Gilman Springs Rd.	s/o Bridge St.	76.1	76.5	0.4	No	No
5	Gilman Springs Rd.	n/o SR-79	76.5	76.7	0.2	No	No
6	Bridge St.	w/o Gilman Springs Rd.	67.3	67.9	0.6	No	No

[1] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[2] Based on the off-site traffic noise level impact significance criteria (Section 4 of the NIA).

TABLE 2: EA OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive Land Use?	Threshold Exceeded?[2]
			No Project	With Project	Project Addition		
1	Gilman Springs Rd.	s/o SR-60	78.3	78.7	0.4	Yes	No
2	Gilman Springs Rd.	s/o Allesandro Bl.	79.1	79.4	0.3	Yes	No
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	76.9	77.2	0.3	Yes	No
4	Gilman Springs Rd.	s/o Bridge St.	76.3	76.7	0.4	No	No
5	Gilman Springs Rd.	n/o SR-79	76.7	76.8	0.2	No	No
6	Bridge St.	w/o Gilman Springs Rd.	67.5	68.1	0.6	No	No

[1] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[2] Based on the off-site traffic noise level impact significance criteria (Section 4 of the NIA).

TABLE 3: EAC OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive Land Use?	Threshold Exceeded?[2]
			No Project	With Project	Project Addition		
1	Gilman Springs Rd.	s/o SR-60	78.4	78.8	0.4	Yes	No
2	Gilman Springs Rd.	s/o Allesandro Bl.	79.1	79.4	0.3	Yes	No
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	76.9	77.2	0.3	Yes	No
4	Gilman Springs Rd.	s/o Bridge St.	76.3	76.7	0.4	No	No
5	Gilman Springs Rd.	n/o SR-79	76.7	76.9	0.2	No	No
6	Bridge St.	w/o Gilman Springs Rd.	67.9	68.4	0.5	No	No

[1] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[2] Based on the off-site traffic noise level impact significance criteria (Section 4 of the NIA).

MINING AREA LIMITS

Exhibit A shows the previous physical disturbance limits used in the analysis provided in the NIA, in addition to the proposed physical disturbance limits for this Supplemental Noise Assessment. Based on the proposed physical disturbance limits, Project operational and construction noise sources are expected to be located at the same or greater distances than those originally analyzed in the NIA. As such, impacts related to Project operational and construction noise and vibration impacts would be equal to or less than those identified in the NIA. For comparison, the distances to the nearby receiver locations under with the previous and proposed physical disturbance limits are provide below:

R1:

- Previous Distance used in the NIA: approximately 7,656 feet
- New Distance with Proposed Limits: approximately 7,950 feet

R2:

- Previous Distance used in the NIA: approximately 3,196 feet
- New Distance with Proposed Limits: approximately 3,600 feet

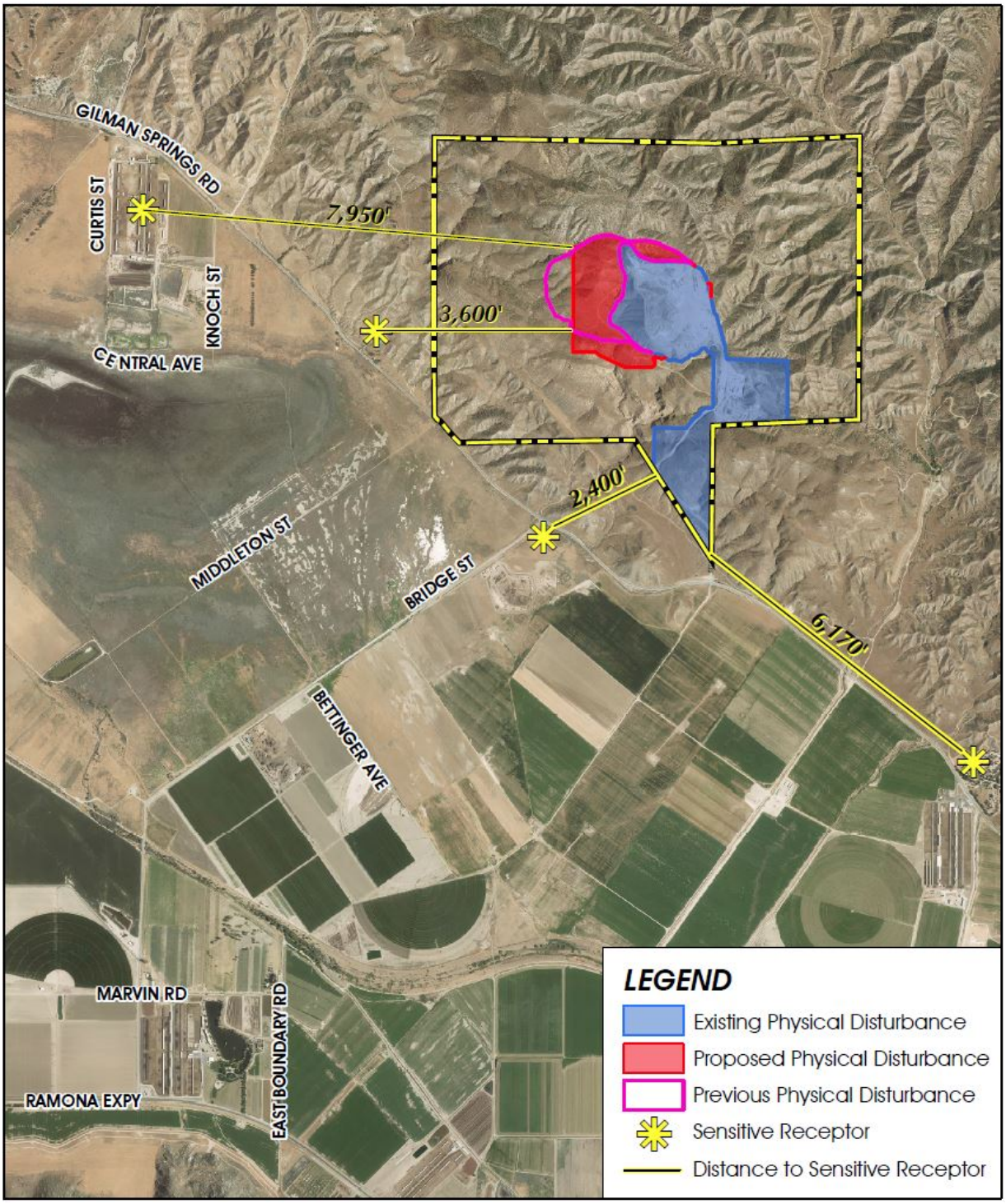
R3:

- Previous Distance used in the NIA: approximately 2,400 feet
- New Distance with Proposed Limits: approximately 2,400 feet

R4:

- Previous Distance used in the NIA: approximately 6,170 feet
- New Distance with Proposed Limits: approximately 6,170 feet

EXHIBIT A: PREVIOUS AND PROPOSED LIMITS OF PHYSICAL DISTURBANCE



Source: Surface Mining Permit No. 159R2 Environmental Impact Report.

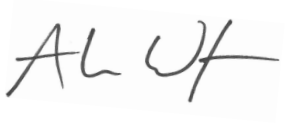
CONCLUSIONS

This Supplemental Noise Assessment indicates that the Gilman Springs Mine Project would result in the same less than significant off-site traffic noise level impacts as previously identified in the NIA. In addition, Project operational and construction noise and vibration impacts would be equal to or less than those identified in the NIA with the equal or greater distances to nearby receiver locations due to the proposed physical disturbance limits. If you have any questions, please contact Alex Wolfe directly at (949) 366-5977 or Bill Lawson directly at (949) 336-5979.

Respectfully submitted,

URBAN CROSSROADS, INC.

Bill Lawson, P.E., INCE
Principal



Alex Wolfe, INCE
Senior Analyst

APPENDIX A

OFF-SITE TRAFFIC METHODS AND ANALYSIS

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Table A1

Off-Site Roadway Parameters

ID	Roadway	Segment	Adjacent Planned (Existing if Different) Land Use[1]	Distance from Centerline to Nearest Adjacent Land Use (Feet)[2]	Vehicle Speed (mph)[3]
1	Gilman Springs Rd.	s/o SR-60	Residential/Business Park (Vacant)	50'	55
2	Gilman Springs Rd.	s/o Allesandro Bl.	Residential/Business Park (Vacant)	50'	55
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	Agriculture/Open Space (Residential)	64'	55
4	Gilman Springs Rd.	s/o Bridge St.	Agriculture/Open Space	64'	55
5	Gilman Springs Rd.	n/o SR-79	Commercial/Agriculture	64'	55
6	Bridge St.	w/o Gilman Springs Rd.	Agriculture/Open Space	50'	55

[1] Sources: County of Riverside Reche Canyon/Badlands and San Jacinto Valley Land Use Plans, and the City of Moreno Valley Land Use Map.

[2] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Elements of the County of Riverside and City of Moreno Valley.

[3] Source: Gilman Springs Mine Supplemental Traffic Assessment.

Table A2

Average Daily Traffic Volumes

ID	Roadway	Segment	Average Daily Traffic Volumes[1]					
			Existing		Existing plus Ambient Growth (EA)		EA plus Cumulative Development (EAC)	
			Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Gilman Springs Rd.	s/o SR-60	24,989	25,195	25,488	25,694	26,262	26,468
2	Gilman Springs Rd.	s/o Allesandro Bl.	29,420	29,629	30,608	30,817	30,892	31,101
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	29,402	29,612	30,590	30,800	30,881	31,091
4	Gilman Springs Rd.	s/o Bridge St.	25,484	25,726	26,513	26,755	26,677	26,919
5	Gilman Springs Rd.	n/o SR-79	27,943	28,051	29,072	29,180	29,238	29,346
6	Bridge St.	w/o Gilman Springs Rd.	2,507	2,539	2,608	2,640	2,852	2,884

[1] Source: Gilman Springs Mine Supplemental Traffic Assessment.

Table A3

Time of Day Vehicle Splits

Vehicle Type	Time of Day Splits			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	66.90%	11.92%	21.17%	100.00%
Medium Trucks	64.84%	8.49%	26.68%	100.00%
Heavy Trucks	72.54%	4.69%	22.77%	100.00%

Based on an existing 24-hour vehicle count taken at Gilman Springs Road south of Bridge Street (Gilman Springs Mine Traffic Impact Analysis, April 2018.). Vehicle mix percentage values rounded to the nearest one-hundredth.

"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table A4

Existing Without Project Distribution of Traffic Flow by Vehicle Type (Vehicle Mix)

Classification	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	90.41%	7.53%	2.06%	100.00%

Based on an existing 24-hour vehicle count taken at Gilman Springs Road south of Bridge Street (Gilman Springs Mine Traffic Impact Analysis, April 2018.). Vehicle mix percentage values rounded to the nearest one-hundredth.

Table A5

Existing Conditions Vehicle Mix

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Gilman Springs Rd.	s/o SR-60	89.73%	7.47%	2.80%	100.00%
2	Gilman Springs Rd.	s/o Allesandro Bl.	89.83%	7.48%	2.69%	100.00%
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	89.83%	7.48%	2.69%	100.00%
4	Gilman Springs Rd.	s/o Bridge St.	89.63%	7.46%	2.91%	100.00%
5	Gilman Springs Rd.	n/o SR-79	90.11%	7.50%	2.39%	100.00%
6	Bridge St.	w/o Gilman Springs Rd.	89.27%	7.43%	3.29%	100.00%

[1] Source: Gilman Springs Mine Supplemental Traffic Assessment.

[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

Table A6

Existing plus Ambient Growth (EA) Conditions Vehicle Mix

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Gilman Springs Rd.	s/o SR-60	89.74%	7.47%	2.79%	100.00%
2	Gilman Springs Rd.	s/o Allesandro Bl.	89.85%	7.48%	2.67%	100.00%
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	89.85%	7.48%	2.67%	100.00%
4	Gilman Springs Rd.	s/o Bridge St.	89.66%	7.46%	2.88%	100.00%
5	Gilman Springs Rd.	n/o SR-79	90.12%	7.50%	2.38%	100.00%
6	Bridge St.	w/o Gilman Springs Rd.	89.32%	7.44%	3.25%	100.00%

[1] Source: Gilman Springs Mine Supplemental Traffic Assessment.

[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

Table A7

EA plus Cumulative Development (EAC)

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Gilman Springs Rd.	s/o SR-60	89.76%	7.47%	2.77%	100.00%
2	Gilman Springs Rd.	s/o Allesandro Bl.	89.86%	7.48%	2.66%	100.00%
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	89.86%	7.48%	2.66%	100.00%
4	Gilman Springs Rd.	s/o Bridge St.	89.67%	7.46%	2.87%	100.00%
5	Gilman Springs Rd.	n/o SR-79	90.12%	7.50%	2.38%	100.00%
6	Bridge St.	w/o Gilman Springs Rd.	89.41%	7.45%	3.15%	100.00%

[1] Source: Gilman Springs Mine Supplemental Traffic Assessment.

[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

Table A8

Existing

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gilman Springs Rd.	s/o SR-60	Residential/Business Park (Vacant)	78.2	176	379	817
2	Gilman Springs Rd.	s/o Allesandro Bl.	Residential/Business Park (Vacant)	78.9	196	423	911
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	Agriculture/Open Space (Residential)	76.7	180	387	834
4	Gilman Springs Rd.	s/o Bridge St.	Agriculture/Open Space	76.1	163	352	758
5	Gilman Springs Rd.	n/o SR-79	Commercial/Agriculture	76.5	174	374	806
6	Bridge St.	w/o Gilman Springs Rd.	Agriculture/Open Space	67.3	RW	72	154

[1] Sources: County of Riverside Reche Canyon/Badlands and San Jacinto Valley Land Use Plans, and the City of Moreno Valley Land Use Map.

[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table A9

Existing+Project

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gilman Springs Rd.	s/o SR-60	Residential/Business Park (Vacant)	78.6	186	402	866
2	Gilman Springs Rd.	s/o Allesandro Bl.	Residential/Business Park (Vacant)	79.2	206	444	957
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	Agriculture/Open Space (Residential)	77.0	189	407	876
4	Gilman Springs Rd.	s/o Bridge St.	Agriculture/Open Space	76.5	174	376	809
5	Gilman Springs Rd.	n/o SR-79	Commercial/Agriculture	76.7	178	384	828
6	Bridge St.	w/o Gilman Springs Rd.	Agriculture/Open Space	67.9	RW	79	169

[1] Sources: County of Riverside Reche Canyon/Badlands and San Jacinto Valley Land Use Plans, and the City of Moreno Valley Land Use Map.

[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table A10

Existing plus Ambient Growth (EA)

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gilman Springs Rd.	s/o SR-60	Residential/Business Park (Vacant)	78.3	178	384	828
2	Gilman Springs Rd.	s/o Allesandro Bl.	Residential/Business Park (Vacant)	79.1	202	434	936
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	Agriculture/Open Space (Residential)	76.9	185	398	857
4	Gilman Springs Rd.	s/o Bridge St.	Agriculture/Open Space	76.3	168	361	779
5	Gilman Springs Rd.	n/o SR-79	Commercial/Agriculture	76.7	178	384	828
6	Bridge St.	w/o Gilman Springs Rd.	Agriculture/Open Space	67.5	RW	74	158

[1] Sources: County of Riverside Reche Canyon/Badlands and San Jacinto Valley Land Use Plans, and the City of Moreno Valley Land Use Map.

[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table A11

Existing plus Ambient Growth (EA)+Project

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gilman Springs Rd.	s/o SR-60	Residential/Business Park (Vacant)	78.7	189	407	876
2	Gilman Springs Rd.	s/o Allesandro Bl.	Residential/Business Park (Vacant)	79.4	211	455	981
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	Agriculture/Open Space (Residential)	77.2	193	417	898
4	Gilman Springs Rd.	s/o Bridge St.	Agriculture/Open Space	76.7	179	385	829
5	Gilman Springs Rd.	n/o SR-79	Commercial/Agriculture	76.8	183	394	849
6	Bridge St.	w/o Gilman Springs Rd.	Agriculture/Open Space	68.1	RW	80	173

[1] Sources: County of Riverside Reche Canyon/Badlands and San Jacinto Valley Land Use Plans, and the City of Moreno Valley Land Use Map.

[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table A12

EA plus Cumulative Development (EAC)

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gilman Springs Rd.	s/o SR-60	Residential/Business Park (Vacant)	78.4	182	392	845
2	Gilman Springs Rd.	s/o Allesandro Bl.	Residential/Business Park (Vacant)	79.1	203	437	942
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	Agriculture/Open Space (Residential)	76.9	186	400	862
4	Gilman Springs Rd.	s/o Bridge St.	Agriculture/Open Space	76.3	168	363	782
5	Gilman Springs Rd.	n/o SR-79	Commercial/Agriculture	76.7	179	386	831
6	Bridge St.	w/o Gilman Springs Rd.	Agriculture/Open Space	67.9	RW	78	168

[1] Sources: County of Riverside Reche Canyon/Badlands and San Jacinto Valley Land Use Plans, and the City of Moreno Valley Land Use Map.

[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table A13

EA plus Cumulative Development (EAC)+Project

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gilman Springs Rd.	s/o SR-60	Residential/Business Park (Vacant)	78.8	192	414	892
2	Gilman Springs Rd.	s/o Allesandro Bl.	Residential/Business Park (Vacant)	79.4	213	458	987
3	Gilman Springs Rd.	s/o Jack Rabbit Tr.	Agriculture/Open Space (Residential)	77.2	195	419	903
4	Gilman Springs Rd.	s/o Bridge St.	Agriculture/Open Space	76.7	179	386	832
5	Gilman Springs Rd.	n/o SR-79	Commercial/Agriculture	76.9	184	396	852
6	Bridge St.	w/o Gilman Springs Rd.	Agriculture/Open Space	68.4	RW	85	182

[1] Sources: County of Riverside Reche Canyon/Badlands and San Jacinto Valley Land Use Plans, and the City of Moreno Valley Land Use Map.

[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Gilman Springs Rd.
Road Segment: s/o SR-60

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,989 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,499 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.83	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.96	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-15.59	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.6	70.1	68.6	66.3	73.4	73.8
Medium Trucks:	72.5	69.8	67.0	67.2	74.0	74.2
Heavy Trucks:	70.8	68.6	62.8	64.8	71.9	72.0
Vehicle Noise:	76.8	74.3	71.5	71.0	77.9	78.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	169	365	786	1,693
CNEL:	176	379	817	1,761

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Gilman Springs Rd.
Road Segment: s/o Allesandro Bl.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,420 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,942 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.54	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.26	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-14.89	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.3	70.8	69.3	67.0	74.1	74.5
Medium Trucks:	73.2	70.5	67.7	67.9	74.7	74.9
Heavy Trucks:	71.5	69.3	63.5	65.6	72.6	72.7
Vehicle Noise:	77.5	75.0	72.2	71.7	78.7	78.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	189	407	876	1,887
CNEL:	196	423	911	1,964

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Gilman Springs Rd.
Road Segment: s/o Jack Rabbit Tr.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,402 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,940 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.54	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.26	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-14.89	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.1	68.6	67.1	64.8	72.0	72.3
Medium Trucks:	71.0	68.3	65.5	65.7	72.5	72.7
Heavy Trucks:	69.3	67.2	61.3	63.4	70.4	70.5
Vehicle Noise:	75.3	72.8	70.0	69.5	76.5	76.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	173	372	802	1,728
CNEL:	180	387	834	1,797

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Gilman Springs Rd.
Road Segment: s/o Bridge St.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,484 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,548 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.92	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.88	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-15.51	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.5	68.0	66.5	64.2	71.3	71.7
Medium Trucks:	70.4	67.7	64.9	65.1	71.9	72.1
Heavy Trucks:	68.7	66.5	60.7	62.7	69.8	69.9
Vehicle Noise:	74.7	72.2	69.4	68.9	75.8	76.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	157	338	729	1,570
CNEL:	163	352	758	1,634

Wednesday, April 17, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Gilman Springs Rd.
Road Segment: n/o SR-79

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,943 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,794 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.32	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.48	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-15.11	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.9	68.4	66.9	64.6	71.7	72.1
Medium Trucks:	70.8	68.1	65.3	65.5	72.3	72.5
Heavy Trucks:	69.1	66.9	61.1	63.1	70.2	70.3
Vehicle Noise:	75.1	72.6	69.8	69.3	76.2	76.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	167	360	775	1,670
CNEL:	174	374	806	1,737

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Bridge St.
Road Segment: w/o Gilman Springs Rd.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,507 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	251 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-9.16	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-19.95	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-25.58	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.7	59.2	57.7	55.5	62.6	62.9
Medium Trucks:	61.6	58.9	56.1	56.3	63.1	63.3
Heavy Trucks:	60.0	57.8	51.9	54.0	61.0	61.1
Vehicle Noise:	65.9	63.4	60.6	60.1	67.1	67.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	69	148	319
CNEL:	33	72	154	332

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Gilman Springs Rd.
Road Segment: s/o SR-60

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,195 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,519 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.73%
Medium Trucks:	64.8%	8.5%	26.7%	7.47%
Heavy Trucks:	72.5%	4.7%	22.8%	2.80%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.83	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.96	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-14.22	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.6	70.1	68.6	66.3	73.4	73.8
Medium Trucks:	72.5	69.8	67.0	67.2	74.0	74.2
Heavy Trucks:	72.2	70.0	64.1	66.2	73.2	73.4
Vehicle Noise:	77.2	74.7	71.7	71.4	78.3	78.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	180	387	833	1,795
CNEL:	186	402	866	1,865

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Gilman Springs Rd.
Road Segment: s/o Allesandro Bl.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,629 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,963 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.83%
Medium Trucks:	64.8%	8.5%	26.7%	7.48%
Heavy Trucks:	72.5%	4.7%	22.8%	2.69%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.54	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.26	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-13.69	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.3	70.8	69.3	67.0	74.1	74.5
Medium Trucks:	73.2	70.5	67.7	67.9	74.7	74.9
Heavy Trucks:	72.7	70.5	64.7	66.8	73.8	73.9
Vehicle Noise:	77.8	75.4	72.4	72.0	79.0	79.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	198	428	921	1,985
CNEL:	206	444	957	2,062

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Gilman Springs Rd.
Road Segment: s/o Jack Rabbit Tr.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,612 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,961 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.83%
Medium Trucks:	64.8%	8.5%	26.7%	7.48%
Heavy Trucks:	72.5%	4.7%	22.8%	2.69%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.54	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.26	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-13.69	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.1	68.6	67.1	64.8	72.0	72.3
Medium Trucks:	71.0	68.3	65.5	65.7	72.5	72.7
Heavy Trucks:	70.5	68.3	62.5	64.6	71.6	71.7
Vehicle Noise:	75.7	73.2	70.2	69.8	76.8	77.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	182	391	843	1,817
CNEL:	189	407	876	1,887

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Gilman Springs Rd.
Road Segment: s/o Bridge St.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,726 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,573 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.63%
Medium Trucks:	64.8%	8.5%	26.7%	7.46%
Heavy Trucks:	72.5%	4.7%	22.8%	2.91%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.92	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.88	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-13.97	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.5	68.0	66.5	64.2	71.3	71.7
Medium Trucks:	70.4	67.7	64.9	65.1	71.9	72.1
Heavy Trucks:	70.3	68.1	62.2	64.3	71.3	71.4
Vehicle Noise:	75.1	72.7	69.6	69.3	76.3	76.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	168	362	779	1,679
CNEL:	174	376	809	1,744

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Gilman Springs Rd.
Road Segment: n/o SR-79

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,051 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,805 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.11%
Medium Trucks:	64.8%	8.5%	26.7%	7.50%
Heavy Trucks:	72.5%	4.7%	22.8%	2.39%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.32	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.48	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-14.44	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.9	68.4	66.9	64.6	71.7	72.1
Medium Trucks:	70.8	68.1	65.3	65.5	72.3	72.5
Heavy Trucks:	69.8	67.6	61.7	63.8	70.8	71.0
Vehicle Noise:	75.3	72.8	69.9	69.5	76.4	76.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	172	370	796	1,715
CNEL:	178	384	828	1,784

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Bridge St.
Road Segment: w/o Gilman Springs Rd.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,539 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	254 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.27%
Medium Trucks:	64.8%	8.5%	26.7%	7.43%
Heavy Trucks:	72.5%	4.7%	22.8%	3.29%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-9.16	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-19.95	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-23.49	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.7	59.2	57.7	55.5	62.6	62.9
Medium Trucks:	61.6	58.9	56.1	56.3	63.1	63.3
Heavy Trucks:	62.0	59.9	54.0	56.1	63.1	63.2
Vehicle Noise:	66.6	64.1	61.0	60.7	67.7	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	35	76	163	351
CNEL:	36	79	169	364

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Gilman Springs Rd.
Road Segment: s/o SR-60

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,488 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,549 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.92	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.88	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-15.51	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.7	70.1	68.7	66.4	73.5	73.9
Medium Trucks:	72.5	69.9	67.1	67.3	74.1	74.3
Heavy Trucks:	70.9	68.7	62.8	64.9	71.9	72.1
Vehicle Noise:	76.9	74.4	71.6	71.1	78.0	78.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	172	370	796	1,715
CNEL:	178	384	828	1,784

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Gilman Springs Rd.
Road Segment: s/o Allesandro Bl.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,608 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,061 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.71	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.08	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-14.71	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.5	70.9	69.5	67.2	74.3	74.7
Medium Trucks:	73.3	70.7	67.9	68.1	74.9	75.1
Heavy Trucks:	71.7	69.5	63.6	65.7	72.7	72.9
Vehicle Noise:	77.7	75.2	72.4	71.9	78.8	79.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	194	418	899	1,938
CNEL:	202	434	936	2,016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Gilman Springs Rd.
Road Segment: s/o Jack Rabbit Tr.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,590 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,059 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.71	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.09	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-14.72	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.3	68.8	67.3	65.0	72.1	72.5
Medium Trucks:	71.1	68.5	65.7	65.9	72.7	72.9
Heavy Trucks:	69.5	67.3	61.4	63.5	70.5	70.7
Vehicle Noise:	75.5	73.0	70.2	69.7	76.6	76.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	177	382	823	1,774
CNEL:	185	398	857	1,845

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Gilman Springs Rd.
Road Segment: s/o Bridge St.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,513 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,651 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.09	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.71	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-15.34	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.1	66.7	64.4	71.5	71.9
Medium Trucks:	70.5	67.9	65.0	65.2	72.0	72.3
Heavy Trucks:	68.9	66.7	60.8	62.9	69.9	70.1
Vehicle Noise:	74.9	72.4	69.6	69.1	76.0	76.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	161	347	748	1,612
CNEL:	168	361	779	1,678

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Gilman Springs Rd.
Road Segment: n/o SR-79

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,072 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,907 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.49	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.31	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-14.94	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.1	68.5	67.1	64.8	71.9	72.3
Medium Trucks:	70.9	68.3	65.4	65.6	72.4	72.7
Heavy Trucks:	69.3	67.1	61.2	63.3	70.3	70.5
Vehicle Noise:	75.3	72.8	70.0	69.5	76.4	76.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	171	369	796	1,715
CNEL:	178	384	828	1,784

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Bridge St.
Road Segment: w/o Gilman Springs Rd.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,608 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	261 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-8.98	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-19.78	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-25.41	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.9	59.4	57.9	55.6	62.7	63.1
Medium Trucks:	61.8	59.1	56.3	56.5	63.3	63.5
Heavy Trucks:	60.1	57.9	52.1	54.2	61.2	61.3
Vehicle Noise:	66.1	63.6	60.8	60.3	67.3	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	33	71	152	328
CNEL:	34	74	158	341

Wednesday, April 17, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Gilman Springs Rd.
Road Segment: s/o SR-60

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,694 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,569 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.74%
Medium Trucks:	64.8%	8.5%	26.7%	7.47%
Heavy Trucks:	72.5%	4.7%	22.8%	2.79%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.92	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.88	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-14.16	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.7	70.1	68.7	66.4	73.5	73.9
Medium Trucks:	72.5	69.9	67.1	67.3	74.1	74.3
Heavy Trucks:	72.3	70.1	64.2	66.3	73.3	73.4
Vehicle Noise:	77.3	74.8	71.8	71.4	78.4	78.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	182	391	843	1,817
CNEL:	189	407	876	1,888

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Gilman Springs Rd.
Road Segment: s/o Allesandro Bl.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,817 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,082 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.85%
Medium Trucks:	64.8%	8.5%	26.7%	7.48%
Heavy Trucks:	72.5%	4.7%	22.8%	2.67%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.71	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.08	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-13.56	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.5	70.9	69.5	67.2	74.3	74.7
Medium Trucks:	73.3	70.7	67.9	68.1	74.9	75.1
Heavy Trucks:	72.9	70.7	64.8	66.9	73.9	74.0
Vehicle Noise:	78.0	75.5	72.5	72.2	79.1	79.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	203	438	944	2,034
CNEL:	211	455	981	2,113

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Gilman Springs Rd.
Road Segment: s/o Jack Rabbit Tr.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,080 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.85%
Medium Trucks:	64.8%	8.5%	26.7%	7.48%
Heavy Trucks:	72.5%	4.7%	22.8%	2.67%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.71	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.09	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-13.56	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.3	68.8	67.3	65.0	72.1	72.5
Medium Trucks:	71.1	68.5	65.7	65.9	72.7	72.9
Heavy Trucks:	70.7	68.5	62.6	64.7	71.7	71.8
Vehicle Noise:	75.8	73.3	70.4	70.0	77.0	77.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	186	401	864	1,862
CNEL:	193	417	898	1,934

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Gilman Springs Rd.
Road Segment: s/o Bridge St.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,755 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,676 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.66%
Medium Trucks:	64.8%	8.5%	26.7%	7.46%
Heavy Trucks:	72.5%	4.7%	22.8%	2.88%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.09	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.71	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-13.84	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.1	66.7	64.4	71.5	71.9
Medium Trucks:	70.5	67.9	65.0	65.2	72.0	72.3
Heavy Trucks:	70.4	68.2	62.3	64.4	71.4	71.6
Vehicle Noise:	75.3	72.8	69.8	69.5	76.4	76.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	172	370	798	1,719
CNEL:	179	385	829	1,786

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Gilman Springs Rd.
Road Segment: n/o SR-79

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,180 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,918 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.12%
Medium Trucks:	64.8%	8.5%	26.7%	7.50%
Heavy Trucks:	72.5%	4.7%	22.8%	2.38%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.49	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.31	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-14.29	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.1	68.5	67.1	64.8	71.9	72.3
Medium Trucks:	70.9	68.3	65.4	65.6	72.4	72.7
Heavy Trucks:	69.9	67.7	61.9	64.0	71.0	71.1
Vehicle Noise:	75.4	73.0	70.1	69.6	76.6	76.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	176	379	817	1,760
CNEL:	183	394	849	1,829

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Bridge St.
Road Segment: w/o Gilman Springs Rd.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,640 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	264 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.32%
Medium Trucks:	64.8%	8.5%	26.7%	7.44%
Heavy Trucks:	72.5%	4.7%	22.8%	3.25%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-8.98	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-19.78	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-23.38	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.9	59.4	57.9	55.6	62.7	63.1
Medium Trucks:	61.8	59.1	56.3	56.5	63.3	63.5
Heavy Trucks:	62.2	60.0	54.1	56.2	63.2	63.3
Vehicle Noise:	66.7	64.3	61.1	60.9	67.8	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	77	167	359
CNEL:	37	80	173	373

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC
Road Name: Gilman Springs Rd.
Road Segment: s/o SR-60

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,262 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,626 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.05	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.75	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-15.38	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.8	70.3	68.8	66.5	73.6	74.0
Medium Trucks:	72.7	70.0	67.2	67.4	74.2	74.4
Heavy Trucks:	71.0	68.8	63.0	65.1	72.1	72.2
Vehicle Noise:	77.0	74.5	71.7	71.2	78.2	78.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	175	377	812	1,750
CNEL:	182	392	845	1,820

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC
Road Name: Gilman Springs Rd.
Road Segment: s/o Allesandro Bl.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,892 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,089 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.75	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.04	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-14.67	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.5	71.0	69.5	67.2	74.3	74.7
Medium Trucks:	73.4	70.7	67.9	68.1	74.9	75.1
Heavy Trucks:	71.7	69.6	63.7	65.8	72.8	72.9
Vehicle Noise:	77.7	75.2	72.4	71.9	78.9	79.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	195	420	905	1,950
CNEL:	203	437	942	2,029

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC
Road Name: Gilman Springs Rd.
Road Segment: s/o Jack Rabbit Tr.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,881 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,088 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.75	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.04	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-14.68	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.3	68.8	67.3	65.1	72.2	72.5
Medium Trucks:	71.2	68.5	65.7	65.9	72.7	72.9
Heavy Trucks:	69.5	67.4	61.5	63.6	70.6	70.7
Vehicle Noise:	75.5	73.0	70.2	69.7	76.7	76.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	179	385	829	1,785
CNEL:	186	400	862	1,857

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC
Road Name: Gilman Springs Rd.
Road Segment: s/o Bridge St.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,677 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,668 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.11	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.68	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-15.31	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.2	66.7	64.4	71.5	71.9
Medium Trucks:	70.6	67.9	65.1	65.3	72.1	72.3
Heavy Trucks:	68.9	66.7	60.9	62.9	70.0	70.1
Vehicle Noise:	74.9	72.4	69.6	69.1	76.0	76.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	162	349	752	1,619
CNEL:	168	363	782	1,684

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC
Road Name: Gilman Springs Rd.
Road Segment: n/o SR-79

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,238 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,924 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.51	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.28	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-14.91	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.1	68.6	67.1	64.8	71.9	72.3
Medium Trucks:	71.0	68.3	65.5	65.7	72.5	72.7
Heavy Trucks:	69.3	67.1	61.2	63.3	70.4	70.5
Vehicle Noise:	75.3	72.8	70.0	69.5	76.4	76.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	172	371	799	1,721
CNEL:	179	386	831	1,791

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC
Road Name: Bridge St.
Road Segment: w/o Gilman Springs Rd.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,852 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	285 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.53%
Heavy Trucks:	72.5%	4.7%	22.8%	2.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-8.60	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-19.39	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-25.02	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.3	59.8	58.3	56.0	63.1	63.5
Medium Trucks:	62.2	59.5	56.7	56.9	63.7	63.9
Heavy Trucks:	60.5	58.3	52.4	54.5	61.6	61.7
Vehicle Noise:	66.5	64.0	61.2	60.7	67.6	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	35	75	162	348
CNEL:	36	78	168	362

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC
Road Name: Gilman Springs Rd.
Road Segment: s/o SR-60

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,468 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,647 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.76%
Medium Trucks:	64.8%	8.5%	26.7%	7.47%
Heavy Trucks:	72.5%	4.7%	22.8%	2.77%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.05	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.75	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-14.06	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.8	70.3	68.8	66.5	73.6	74.0
Medium Trucks:	72.7	70.0	67.2	67.4	74.2	74.4
Heavy Trucks:	72.4	70.2	64.3	66.4	73.4	73.5
Vehicle Noise:	77.4	74.9	71.9	71.6	78.5	78.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	185	399	859	1,851
CNEL:	192	414	892	1,923

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC
Road Name: Gilman Springs Rd.
Road Segment: s/o Allesandro Bl.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,101 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,110 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.86%
Medium Trucks:	64.8%	8.5%	26.7%	7.48%
Heavy Trucks:	72.5%	4.7%	22.8%	2.66%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.037
Medium Trucks:	40.820
Heavy Trucks:	40.841

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.75	1.18	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-9.04	1.22	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-13.53	1.21	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.5	71.0	69.5	67.2	74.3	74.7
Medium Trucks:	73.4	70.7	67.9	68.1	74.9	75.1
Heavy Trucks:	72.9	70.7	64.8	66.9	73.9	74.1
Vehicle Noise:	78.0	75.6	72.6	72.2	79.2	79.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	205	441	949	2,046
CNEL:	213	458	987	2,126

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC
Road Name: Gilman Springs Rd.
Road Segment: s/o Jack Rabbit Tr.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,091 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,109 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.86%
Medium Trucks:	64.8%	8.5%	26.7%	7.48%
Heavy Trucks:	72.5%	4.7%	22.8%	2.66%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.75	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.04	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-13.53	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.3	68.8	67.3	65.1	72.2	72.5
Medium Trucks:	71.2	68.5	65.7	65.9	72.7	72.9
Heavy Trucks:	70.7	68.5	62.6	64.7	71.7	71.9
Vehicle Noise:	75.9	73.4	70.4	70.0	77.0	77.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	187	403	869	1,873
CNEL:	195	419	903	1,946

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC
Road Name: Gilman Springs Rd.
Road Segment: s/o Bridge St.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,919 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,692 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.67%
Medium Trucks:	64.8%	8.5%	26.7%	7.46%
Heavy Trucks:	72.5%	4.7%	22.8%	2.87%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.12	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.68	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-13.83	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.2	66.7	64.4	71.5	71.9
Medium Trucks:	70.6	67.9	65.1	65.3	72.1	72.3
Heavy Trucks:	70.4	68.2	62.3	64.4	71.4	71.6
Vehicle Noise:	75.3	72.9	69.8	69.5	76.5	76.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	173	372	801	1,726
CNEL:	179	386	832	1,793

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC
Road Name: Gilman Springs Rd.
Road Segment: n/o SR-79

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,346 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,935 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	58 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	64.0 feet
Centerline Dist. to Observer:	64.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	90.12%
Medium Trucks:	64.8%	8.5%	26.7%	7.50%
Heavy Trucks:	72.5%	4.7%	22.8%	2.38%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	57.271
Medium Trucks:	57.117
Heavy Trucks:	57.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.51	-0.99	-1.20	*-4.70*	0.000	0.000
Medium Trucks:	82.40	-9.28	-0.97	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-14.27	-0.97	-1.20	*-5.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.1	68.6	67.1	64.8	71.9	72.3
Medium Trucks:	71.0	68.3	65.5	65.7	72.5	72.7
Heavy Trucks:	70.0	67.8	61.9	64.0	71.0	71.1
Vehicle Noise:	75.5	73.0	70.1	69.7	76.6	76.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	177	380	820	1,766
CNEL:	184	396	852	1,836

Wednesday, April 17, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC
Road Name: Bridge St.
Road Segment: w/o Gilman Springs Rd.

Project Name: Gilman Mine
Job Number: 11381

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,884 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	288 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	66.9%	11.9%	21.2%	89.41%
Medium Trucks:	64.8%	8.5%	26.7%	7.45%
Heavy Trucks:	72.5%	4.7%	22.8%	3.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	46.915
Medium Trucks:	46.726
Heavy Trucks:	46.744

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-8.60	0.31	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	82.40	-19.39	0.34	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	86.40	-23.13	0.34	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.3	59.8	58.3	56.0	63.1	63.5
Medium Trucks:	62.2	59.5	56.7	56.9	63.7	63.9
Heavy Trucks:	62.4	60.2	54.3	56.4	63.4	63.6
Vehicle Noise:	67.1	64.6	61.5	61.2	68.2	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	38	82	176	379
CNEL:	39	85	182	393