
Appendix H

Noise Impact Analysis

Appendix H-1

Field Noise Data Sheets

FIELD NOISE MEASUREMENT DATA

PROJECT <u>APPLE VALLEY STODDARD WELLS W/NEIGH/SE</u>	PROJECT # <u>14239</u>
SITE ID _____	OBSERVER(S) <u>PEJE VITAN</u>
SITE ADDRESS _____	
START DATE <u>4/7/22</u>	END DATE <u>4/7/22</u>
START TIME _____	END TIME _____

METEOROLOGICAL CONDITIONS

TEMP 77 F HUMIDITY 5 % R.H. WIND CALM LIGHT MODERATE
 WINDSPD 10 MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY
 SKY SUNNY CLEAR OVRCAST PRTY CLDY FOG RAIN

WITH GUSTS TO 15 MPH

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT PICCOLLO SLM-P3 TYPE 1 2 SERIAL # 130927046
 CALIBRATION READ 158090 SERIAL # _____
 CALIBRATION CHECK _____ PRE-TEST _____ dBA SPL POST-TEST _____ dBA SPL WINDSCRN FES

SETTINGS A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER: _____

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC)
<u>ST1 65-85</u>	<u>11:03</u>	<u>11:23</u>							

COMMENTS READING TAKEN ON STODDARD WELLS RD, IN FRONT OF 19227 STODDARD WELLS RD (RESIDENCE/CHURCH?); PRIMARY NOISE SOURCE IS TRAFFIC ON STODDARD WELLS RD.

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE ROADWAY TYPE: ASPHALT TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER: APX 30' TO CURB ON

TRAFFIC COUNT DURATION: _____ MIN SPEED _____


COUNT 1 (OR RDWY 1)	SPEED				IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE	SPEED				
	DIRECTION	NB/EB	SB/WB	NB/EB		SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS		<u>31</u>								
MED TRKS		<u>2</u>								
HVY TRKS		<u>17</u>								
BUSES		<u>0</u>								
MOTRCLS		<u>1</u>								

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
 POSTED SPEED LIMIT SIGNS SAY: _____

OTHER NOISE SOURCES (BACKGROUND): OCCASIONAL DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
 DIST. KIDS PLAYING DIST. CONVERSATIONS/YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DIST. GARDENERS/LANDSCAPING NOISE
 OTHER: PAINT TRAFFIC NOISE FROM TS FURT TO THE NORTH;

DESCRIPTION / SKETCH

TERRAIN HARD MIXED FLAT OTHER: _____
 PHOTOS 3837; 3838; 3839; 3840
 OTHER COMMENTS / SKETCH _____



FIELD NOISE MEASUREMENT DATA

PROJECT APPLE VALLEY STOODAN WELLS WAREHOUSE PROJECT# 14239
 SITE ID _____
 SITE ADDRESS _____ OBSERVER(S) PEYE VITAN
 START DATE 4/7/22 END DATE 4/7/22
 START TIME _____ END TIME _____

METEOROLOGICAL CONDITIONS
 TEMP 73 F HUMIDITY 5 % R.H. WIND CALM LIGHT MODERATE - W 21 Gusts to 15 MPH
 WINDSPD 12 MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY
 SKY SUNNY CLEAR OVCAST PRTY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS
 MEAS. INSTRUMENT PICCOLLO SLM-P3 TYPE 1 2 SERIAL# 130927046
 CALIBRATOR REED R8090 SERIAL# _____
 CALIBRATION CHECK PRE-TEST NO SPL POST-TEST _____ NO SPL WINDSCREEN FES

SETTINGS A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER: _____

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC)
<u>97-117</u>	<u>11:42</u>	<u>12:03</u>							

COMMENTS
READING TAKEN ALONG STOODAN WELLS RD, IN FRONT OF 19414 STOODAN WELLS RD (RESIDENCE); PRIMARY NOISE SOURCE IS TRAFFIC ON STOODAN WELLS RD;


SOURCE INFO AND TRAFFIC COUNTS
 PRIMARY NOISE SOURCE TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER: _____
 ROADWAY TYPE: ASPHALT DIST. TO RDWY C/L OR EOP: APT 20' TO C/L ON: STOODAN WELLS RD

TRAFFIC COUNT DURATION:	MIN				SPEED			
	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS	4							
MED TRKS	1							
HVY TRKS	2							
BUSES	0							
MOTOCLS	0							

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
 POSTED SPEED LIMIT SIGNS SAY: _____

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVERSING/YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DIST. GARDENERS/LANDSCAPING NOISE
 OTHER: OCCASIONAL VERY FAINT SOUND OF TRAFFIC ON 15 FWT TO THE NORTH

DESCRIPTION / SKETCH
 TERRAIN HARD SOFT MIXED FLAT OTHER: _____
 PHOTOS 3842; 3843; 3844; 3845
 OTHER COMMENTS / SKETCH _____



FIELD NOISE MEASUREMENT DATA

DUDEK

PROJECT <u>APPLE VALLEY STANDARD WELLS WAREHOUSE</u>	PROJECT # <u>14239</u>
SITE ID _____	OBSERVER(S) <u>PEYE VITAL</u>
SITE ADDRESS _____	
START DATE <u>4/7/22</u>	END DATE <u>4/7/22</u>
START TIME _____	END TIME _____

METEOROLOGICAL CONDITIONS									
TEMP	<u>80</u> F	HUMIDITY	<u>5</u> % R.H.	WIND	CALM	LIGHT	<u>MODERATE</u>		
WINDSPD	<u>12</u> MPH	DIR.	N NE S SE S SW W NW		VARIABLE	STEADY	GUSTY		
SKY	<u>SUNNY</u> <u>CLEAR</u>	OVRCAST	PRTLY CLDY	FOG	RAIN				
ACOUSTIC MEASUREMENTS									
MEAS. INSTRUMENT	<u>PICCOLLO SLM-P3</u>			TYPE	1	2	SERIAL #	<u>130927046</u>	
CALIBRATOR	<u>LEED R8090</u>						SERIAL #		
CALIBRATION CHECK	PRE-TEST	dB A SPL	POST-TEST	dB A SPL	WINDSCREEN	<u>FES</u>			
SETTINGS									
	<u>A-WTD</u>	<u>SLOW</u>	FAST	FRONTAL	RANDOM	ANSI	OTHER:		
REC. #	BEGIN	END	Leq	L10	L50	L90	L50	L10	OTHER (SPECIFY METRIC)
<u>12-142</u>	<u>12:29</u>	<u>12:49</u>							
COMMENTS									
<u>READING TAKEN ALONG DALE EVANS PKWY BETWEEN JOHNSON RD & SHEPHERD RD ACROSS ROAD FROM 19350 DALE EVANS PKWY (RESIDENCE); PRIMARY NOISE SOURCE IS TRAFFIC ON DALE EVANS PKWY;</u>									

- WINDS TO 15 MPH

SOURCE INFO AND TRAFFIC COUNTS											
PRIMARY NOISE SOURCE		<u>TRAFFIC</u>		AIRCRAFT	RAIL	INDUSTRIAL	OTHER:				
ROADWAY TYPE: <u>ASPHALT</u>					DIST. TO RDWY	C/L OR EOP:	<u>APX 50' TO CLK ON DALE EVANS PKWY</u>				
TRAFFIC COUNT DURATION: <u>20</u> MIN		SPEED					MIN	SPEED			
COUNT 1 (E AND W)	DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB	COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB	SB/WB	
	AUTOS	<u>48</u>									
	MED TRKS	<u>1</u>									
	HVY TRKS	<u>10</u>									
	BUSES	<u>0</u>									
MOTOCLS	<u>2</u>										
SPEEDS ESTIMATED BY: <u>RADAR / DRIVING THE PACE</u>											
POSTED SPEED LIMIT SIGNS SAY:											
OTHER NOISE SOURCES (BACKGROUND): <u>DIST. AIRCRAFT</u> <u>RUSTLING LEAVES</u> <u>DIST. BARKING DOGS</u> <u>BIRDS</u> <u>DIST. INDUSTRIAL</u>											
<u>DIST. KIDS PLAYING</u> <u>DIST. CONVERSATIONS / YELLING</u> <u>DIST. TRAFFIC (LIST RDWYS BELOW)</u> <u>DIST. GARDENERS / LANDSCAPING NOISE</u>											
OTHER: _____											

EVANS PKWY

DESCRIPTION / SKETCH																																																						
TERRAIN	HARD	SOFT	<u>MIXED</u>	FLAT OTHER:																																																		
PHOTOS	<u>3847; 3848; 3849; 3850; 3851; 3853</u>																																																					
OTHER COMMENTS / SKETCH																																																						
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ST1

Rec 65 to 85	Slow Response	dBA weighting		2.0 dB resc	
Date hh:mm:ss	LeqPeriod Leq	SEL	Lmax	Lmin	
4/7/2022 11:03	1.0 min	65.9	83.7	78.8	48.7
4/7/2022 11:04	1.0 min	57.2	75	64.2	47.3
4/7/2022 11:05	1.0 min	67	84.8	77.4	43.7
4/7/2022 11:06	1.0 min	63.4	81.2	74.8	44.6
4/7/2022 11:07	1.0 min	59.8	77.6	71.7	47.8
4/7/2022 11:08	1.0 min	56.7	74.5	62	47.9
4/7/2022 11:09	1.0 min	58.6	76.4	68.3	49
4/7/2022 11:10	1.0 min	67.5	85.3	77.8	50.4
4/7/2022 11:11	1.0 min	53.1	70.9	62.4	44.5
4/7/2022 11:12	1.0 min	62.3	80.1	76.5	43.1
4/7/2022 11:13	1.0 min	66.9	84.7	79.4	50.8
4/7/2022 11:14	1.0 min	63.5	81.3	73.3	44
4/7/2022 11:15	1.0 min	60.4	78.2	72.9	41.5
4/7/2022 11:16	1.0 min	64	81.8	77.1	40.3
4/7/2022 11:17	1.0 min	60.5	78.3	74.6	39.3
4/7/2022 11:18	1.0 min	64.8	82.6	75.1	48.3
4/7/2022 11:19	1.0 min	50.9	68.7	57.8	40.8
4/7/2022 11:20	1.0 min	55.9	73.7	69.5	40.5
4/7/2022 11:21	1.0 min	59.6	77.4	72	46.5
4/7/2022 11:22	1.0 min	66	83.8	78.3	44.5
4/7/2022 11:23	12 sec	66.8	77.6	74.2	56.9
		L_{eq}		L_{max}	L_{min}
		63.2		79.4	39.3

ST2

Rec 97 to 117	Slow Response	dBA weighting		2.0 dB resc	
Date hh:mm:ss	LeqPeriod Leq	SEL	Lmax	Lmin	
4/7/2022 11:42	1.0 min	66.2	84	80.9	45.7
4/7/2022 11:43	1.0 min	59.5	77.3	67.7	46.6
4/7/2022 11:44	1.0 min	55.9	73.7	64.5	48.6
4/7/2022 11:45	1.0 min	51.9	69.7	57.7	44.8
4/7/2022 11:46	1.0 min	49.2	67	56.6	39.2
4/7/2022 11:47	1.0 min	47.8	65.6	53.2	41.8
4/7/2022 11:48	1.0 min	56.7	74.5	63.5	48.2
4/7/2022 11:49	1.0 min	68	85.8	83.2	40.5
4/7/2022 11:50	1.0 min	59.9	77.7	67.1	45.8
4/7/2022 11:51	1.0 min	50.6	68.4	57.1	39.7
4/7/2022 11:52	1.0 min	62.9	80.7	77.4	44.8
4/7/2022 11:53	1.0 min	63.7	81.5	78.2	49.7
4/7/2022 11:54	1.0 min	66.5	84.3	80	53.5
4/7/2022 11:55	1.0 min	60.6	78.4	68	51.6
4/7/2022 11:56	1.0 min	60.5	78.3	67.7	47.6
4/7/2022 11:57	1.0 min	57.2	75	66.4	46.1
4/7/2022 11:58	1.0 min	63.9	81.7	77.4	51.2
4/7/2022 11:59	1.0 min	58.9	76.7	64.6	49.9
4/7/2022 12:00	1.0 min	50	67.8	55.7	43.5
4/7/2022 12:01	1.0 min	54.5	72.3	60.9	41.9
4/7/2022 12:02	12 sec	52.9	63.7	57.4	48.6
		L_{eq}		L_{max}	L_{min}
		61.6		83.2	39.2

ST3

Rec 122 to 142	Slow Response	dBA weighting		2.0 dB resc	
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin
4/7/2022 12:29	1.0 min	64.5	82.3	75.8	46
4/7/2022 12:30	1.0 min	65.5	83.3	74.1	52.3
4/7/2022 12:31	1.0 min	64.7	82.5	75.1	50.8
4/7/2022 12:32	1.0 min	61.3	79.1	68.3	51.9
4/7/2022 12:33	1.0 min	60.4	78.2	68.6	43.1
4/7/2022 12:34	1.0 min	58.1	75.9	66.3	46.9
4/7/2022 12:35	1.0 min	59.7	77.5	68.7	50.5
4/7/2022 12:36	1.0 min	57.7	75.5	67	48.6
4/7/2022 12:37	1.0 min	68.9	86.7	78.9	51
4/7/2022 12:38	1.0 min	68.6	86.4	79	49.4
4/7/2022 12:39	1.0 min	68.4	86.2	81.3	53.4
4/7/2022 12:40	1.0 min	59	76.8	68.7	44
4/7/2022 12:41	1.0 min	62.8	80.6	70.8	48.7
4/7/2022 12:42	1.0 min	66	83.8	73.5	49.6
4/7/2022 12:43	1.0 min	61.9	79.7	70.2	48.1
4/7/2022 12:44	1.0 min	59.8	77.6	70	48.4
4/7/2022 12:45	1.0 min	75	92.8	84.6	48.6
4/7/2022 12:46	1.0 min	60.6	78.4	69.4	48.8
4/7/2022 12:47	1.0 min	58.8	76.6	71.1	43.2
4/7/2022 12:48	1.0 min	65.3	83.1	78.5	45.7
4/7/2022 12:49	12 sec	56.3	67.1	63.8	45.2
		L_{eq}		L_{max}	L_{min}
		66.1		84.6	43.1

Appendix H-2

Construction Noise Modeling Input And Output

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per Town of Apple Valley = **60**
 allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = **1**

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Barrier / Topo Insertion Loss (dB)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 1-hour Leq
Site Preparation	Tractor	1	40	84	Crawler Tractors	1100		57.2	1	60	53
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	1200		51.4	1	60	47
Total for Site Preparation Phase:											54.2
Mass Grading	Excavator	1	40	81		1100		54.2	1	60	50
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	1200		51.4	1	60	47
	Dozer	1	40	82	Rubber Tired Dozers	1300		53.7	1	60	50
	Scraper	1	40	84		1400		55.1	1	60	51
	Scraper	1	40	84		1500		54.5	1	60	50
	Scraper	1	40	84		1600		53.9	1	60	50
	Scraper	1	40	84		1700		53.4	1	60	49
	Grader	1	40	85		1800		53.9	1	60	50
Tractor	1	40	84	Tractors/Loaders/Backhoe	1900		52.4	1	60	48	
Total for Mass Grading Phase:											59.3
Building Construction	Crane	1	16	81		1100		54.2	1	60	46
	Man Lift	1	20	75	Forklifts	1200		47.4	1	60	40
	Man Lift	1	20	75	Forklifts	1300		46.7	1	60	40
	Man Lift	1	20	75	Forklifts	1400		46.1	1	60	39
	Man Lift	1	20	75	Forklifts	1500		45.5	1	60	38
	Man Lift	1	20	75	Forklifts	1600		44.9	1	60	38
	Man Lift	1	20	75	Forklifts	1700		44.4	1	60	37
	Man Lift	1	20	75	Forklifts	1800		43.9	1	60	37
	Generator	1	50	72	Generator Sets	1900		40.4	1	60	37
	Welder / Torch	1	40	73		2000		41.0	1	60	37
	Tractor	1	40	84	Tractors/Loaders/Backhoe	2100		51.5	1	60	48
	Tractor	1	40	84	Tractors/Loaders/Backhoe	1300		55.7	1	60	52
	Tractor	1	40	84	Tractors/Loaders/Backhoe	1400		55.1	1	60	51
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	1500		49.5	1	60	45
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	1600		48.9	1	60	45
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	1700		48.4	1	60	44
	Backhoe	1	40	78	Tractors/Loaders/Backhoe	1800		46.9	1	60	43
	Backhoe	1	40	78	Tractors/Loaders/Backhoe	1900		46.4	1	60	42
	Backhoe	1	40	78	Tractors/Loaders/Backhoe	2000		46.0	1	60	42
	Welder / Torch	1	40	73		2100		40.5	1	60	37
Total for Building Construction Phase:											57.7
Architectural Coating	Compressor (air)	1	40	78	Air Compressors	1100		51.2	1	60	47
	Compressor (air)	1	40	78	Air Compressors	1200		50.4	1	60	46
	Compressor (air)	1	40	78	Air Compressors	1300		49.7	1	60	46
	Man Lift	1	20	75	Aerial Lifts	1400		46.1	1	60	39
	Man Lift	1	20	75	Aerial Lifts	1500		45.5	1	60	38
	Man Lift	1	20	75	Aerial Lifts	1600		44.9	1	60	38
Total for Architectural Coating Phase:											49.8
Fine Grading	Excavator	1	40	81		1100		54.2	1	60	50
	Excavator	1	40	81		1200		53.4	1	60	49
	Grader	1	40	85		1300		56.7	1	60	53
	Dozer	1	40	82	Rubber Tired Dozers	1400		53.1	1	60	49

	Scraper	1	40	84		1500		54.5	1	60	50
	Scraper	1	40	84		1600		53.9	1	60	50
	Tractor	1	40	84	Tractors/Loaders/Backhoue	1700		53.4	1	60	49
	Front End Loader	1	40	79	Tractors/Loaders/Backhoue	1800		47.9	1	60	44
	Total for Fine Grading Phase: 58.9										
Concrete Laydown	Paver	1	50	77	Laser Screed	1100		50.2	1	60	47
	Paver	1	50	77	Laser Screed	1200		49.4	1	60	46
	Concrete Pump Truck	1	20	81	Concrete Finishing Machine	1300		52.7	1	60	46
	Concrete Pump Truck	1	20	81	Concrete Finishing Machine	1400		52.1	1	60	45
	All Other Equipment > 5 HP	1	50	85	Concrete Finishing Machine	1500		55.5	1	60	52
	All Other Equipment > 5 HP	1	50	85	Concrete Finishing Machine	1600		54.9	1	60	52
	All Other Equipment > 5 HP	1	50	85	Concrete Finishing Machine	1700		54.4	1	60	51
	Total for Concrete Laydown Phase: 58.0										

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per Town of Apple Valley = **60**
 allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = **1**

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Barrier / Topo Insertion Loss (dB)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 1-hour Leq
Site Preparation	Tractor	1	40	84	Crawler Tractors	2500		50.0	1	60	46
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	2500		45.0	1	60	41
Total for Site Preparation Phase:											47.2
Mass Grading	Excavator	1	40	81		2500		47.0	1	60	43
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	2500		45.0	1	60	41
	Dozer	1	40	82	Rubber Tired Dozers	2500		48.0	1	60	44
	Scraper	1	40	84		2500		50.0	1	60	46
	Scraper	1	40	84		2500		50.0	1	60	46
	Scraper	1	40	84		2500		50.0	1	60	46
	Scraper	1	40	84		2500		50.0	1	60	46
	Grader	1	40	85		2500		51.0	1	60	47
	Tractor	1	40	84	Tractors/Loaders/Backhoe	2500		50.0	1	60	46
Total for Mass Grading Phase:											54.9
Building Construction	Crane	1	16	81		2500		47.0	1	60	39
	Man Lift	1	20	75	Forklifts	2500		41.0	1	60	34
	Man Lift	1	20	75	Forklifts	2500		41.0	1	60	34
	Man Lift	1	20	75	Forklifts	2500		41.0	1	60	34
	Man Lift	1	20	75	Forklifts	2500		41.0	1	60	34
	Man Lift	1	20	75	Forklifts	2500		41.0	1	60	34
	Man Lift	1	20	75	Forklifts	2500		41.0	1	60	34
	Man Lift	1	20	75	Forklifts	2500		41.0	1	60	34
	Man Lift	1	20	75	Forklifts	2500		41.0	1	60	34
	Generator	1	50	72	Generator Sets	2500		38.0	1	60	35
	Welder / Torch	1	40	73		2500		39.0	1	60	35
	Tractor	1	40	84	Tractors/Loaders/Backhoe	2500		50.0	1	60	46
	Tractor	1	40	84	Tractors/Loaders/Backhoe	2500		50.0	1	60	46
	Tractor	1	40	84	Tractors/Loaders/Backhoe	2500		50.0	1	60	46
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	2500		45.0	1	60	41
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	2500		45.0	1	60	41
	Front End Loader	1	40	79	Tractors/Loaders/Backhoe	2500		45.0	1	60	41
	Backhoe	1	40	78	Tractors/Loaders/Backhoe	2500		44.0	1	60	40
	Backhoe	1	40	78	Tractors/Loaders/Backhoe	2500		44.0	1	60	40
	Backhoe	1	40	78	Tractors/Loaders/Backhoe	2500		44.0	1	60	40
Welder / Torch	1	40	73		2500		39.0	1	60	35	
Total for Building Construction Phase:											53.5
Architectural Coating	Compressor (air)	1	40	78	Air Compressors	2500		44.0	1	60	40
	Compressor (air)	1	40	78	Air Compressors	2500		44.0	1	60	40
	Compressor (air)	1	40	78	Air Compressors	2500		44.0	1	60	40
	Man Lift	1	20	75	Aerial Lifts	2500		41.0	1	60	34
	Man Lift	1	20	75	Aerial Lifts	2500		41.0	1	60	34
	Man Lift	1	20	75	Aerial Lifts	2500		41.0	1	60	34
Total for Architectural Coating Phase:											43.1
Fine Grading	Excavator	1	40	81		2500		47.0	1	60	43
	Excavator	1	40	81		2500		47.0	1	60	43
	Grader	1	40	85		2500		51.0	1	60	47
	Dozer	1	40	82	Rubber Tired Dozers	2500		48.0	1	60	44

	Scraper	1	40	84		2500		50.0	1	60	46
	Scraper	1	40	84		2500		50.0	1	60	46
	Tractor	1	40	84	Tractors/Loaders/Backhoue	2500		50.0	1	60	46
	Front End Loader	1	40	79	Tractors/Loaders/Backhoue	2500		45.0	1	60	41
Total for Fine Grading Phase: 54.0											
Concrete Laydown	Paver	1	50	77	Laser Screed	2500		43.0	1	60	40
	Paver	1	50	77	Laser Screed	2500		43.0	1	60	40
	Concrete Pump Truck	1	20	81	Concrete Finishing Machine	2500		47.0	1	60	40
	Concrete Pump Truck	1	20	81	Concrete Finishing Machine	2500		47.0	1	60	40
	All Other Equipment > 5 HP	1	50	85	Concrete Finishing Machine	2500		51.0	1	60	48
	All Other Equipment > 5 HP	1	50	85	Concrete Finishing Machine	2500		51.0	1	60	48
	All Other Equipment > 5 HP	1	50	85	Concrete Finishing Machine	2500		51.0	1	60	48
Total for Concrete Laydown Phase: 53.6											

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per Town of Apple Valley = **75**
 allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = **1**

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Barrier / Topo Insertion Loss (dB)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 1-hour Leq
Road Removal/ Pipeline Install	Excavator	1	40	81		280		66.0	1	60	62
	Concrete Saw	1	20	90		400		71.9	1	60	65
	Pumps	1	50	77		500		57.0	1	60	54
	Backhoe	1	40	78		600		56.4	1	60	52
Total for Road Removal/ Pipeline Install Phase:											67.1
Paving	Paver	1	50	77		1100		50.2	1	60	47
	Concrete Pump Truck	1	20	81		1200		53.4	1	60	46
	Roller	1	20	80		1300		51.7	1	60	45
Total for Paving Phase:											51.0
Restriping	Compressor (air)	1	40	78		1100		51.2	1	60	47
Total for Restriping Phase:											47.2
Pipeline Testing	Generator	1	50	72		1100		45.2	1	60	42
Total for Pipeline Testing Phase:											42.1

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per Town of Apple Valley = **75**
 allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = **1**

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Barrier / Topo Insertion Loss (dB)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 1-hour Leq
Road Removal/ Pipeline Install	Excavator	1	40	81		2000		49.0	1	60	45
	Concrete Saw	1	20	90		2000		58.0	1	60	51
	Pumps	1	50	77		2000		45.0	1	60	42
	Backhoe	1	40	78		2000		46.0	1	60	42
Total for Road Removal/ Pipeline Install Phase:											52.7
Paving	Paver	1	50	77		2000		45.0	1	60	42
	Concrete Pump Truck	1	20	81		2000		49.0	1	60	42
	Roller	1	20	80		2000		48.0	1	60	41
Total for Paving Phase:											46.4
Restriping	Compressor (air)	1	40	78		2000		46.0	1	60	42
Total for Restriping Phase:											42.0
Pipeline Testing	Generator	1	50	72		2000		40.0	1	60	37
Total for Pipeline Testing Phase:											36.9

Appendix H-3

Traffic Noise
Calculations

Dudek					18 November 2022					
MG					TNM 2.5					
INPUT: ROADWAYS					Average pavement type shall be used unless					
PROJECT/CONTRACT:		14239			a State highway agency substantiates the use					
RUN:		Stoddard / Apple Valley 143 - Existing			of a different type with the approval of FHWA					
Roadway Name	Width	Points			(pavement)	Flow Control			Segment Pvmt Type	On Struct?
		Name	No.	Coordinates		Control Device	Speed Constraint	Percent Vehicles Affected		
	ft			X	Y	Z		mph	%	
Stoddard Wells Road- e. of I-15	40.0	point1	1	722.1	704.0	2,500.00				Average
		point2	2	900.6	743.5	2,500.00				Average
Outer Hwy 15 N	45.0	point3	3	1,309.3	902.1	2,500.00				
		point4	4	638.6	262.9	2,500.00				Average
		point5	5	1,041.0	341.6	2,500.00				Average
		point6	6	1,207.2	429.1	2,500.00				Average
		point7	7	1,277.2	534.0	2,500.00				Average
		point8	8	1,303.4	717.8	2,500.00				Average
		point9	9	1,297.5	892.7	2,500.00				
I-15 NB Onramp	45.0	point10	10	1,312.5	922.6	2,500.00				Average
		point11	11	1,313.8	965.1	2,500.00				Average
		point12	12	1,308.6	1,090.0	2,500.00				Average
		point13	13	1,294.5	1,212.3	2,500.00				Average
		point14	14	1,276.1	1,355.5	2,500.00				Average
		point15	15	1,311.2	1,516.0	2,500.00				Average
		point16	16	1,348.6	1,623.2	2,500.00				Average
		point17	17	1,526.3	1,922.5	2,500.00				
I-15 NB Offramp	45.0	point18	18	677.6	687.3	2,500.00				Average
		point19	19	926.0	968.1	2,500.00				Average
		point20	20	1,047.2	1,105.8	2,500.00				Average
		point21	21	1,113.3	1,144.4	2,500.00				Average
		point22	22	1,190.5	1,149.9	2,500.00				Average
		point23	23	1,248.3	1,119.6	2,500.00				Average
		point24	24	1,281.4	1,056.2	2,500.00				Average
		point25	25	1,295.2	954.3	2,500.00				Average

INPUT: ROADWAYS

14239

		point26	26	1,289.7	918.5	2,500.00					
I-15 NB	75.0	point27	27	384.9	262.4	2,500.00					Average
		point28	28	708.5	769.8	2,500.00					Average
		point29	29	1,548.3	1,985.7	2,500.00					Average
		point30	30	2,283.1	3,122.9	2,500.00					Average
		point31	31	3,341.6	4,732.5	2,500.00					Average
		point32	32	4,277.6	6,114.6	2,500.00					
I-15 SB	75.0	point33	33	4,155.1	6,173.7	2,500.00					Average
		point34	34	3,604.0	5,333.9	2,500.00					Average
		point35	35	2,943.6	4,319.2	2,500.00					Average
		point36	36	2,388.1	3,466.3	2,500.00					Average
		point37	37	1,736.4	2,464.7	2,500.00					Average
		point38	38	1,229.6	1,680.1	2,500.00					Average
		point39	39	573.8	726.8	2,500.00					Average
		point40	40	268.3	275.5	2,500.00					
Stoddard Wells Road- e. of I-15 NB On	40.0	point41	41	1,309.3	902.1	2,500.00					Average
		point42	42	2,383.3	1,185.3	2,500.00					Average
		point43	43	3,209.0	1,398.8	2,500.00					
Driveway A	45.0	point44	44	3,150.9	1,622.0	2,500.00					Average
		point45	45	3,202.9	1,403.3	2,500.00					
Stoddard Wells Road- e. of Drvwy A	40.0	point46	46	3,209.0	1,398.8	2,500.00					Average
		point47	47	3,726.0	1,526.4	2,500.00					Average
		point48	48	4,338.8	1,680.9	2,500.00					Average
		point49	49	4,743.7	1,794.3	2,500.00					Average
		point50	50	4,746.2	1,795.1	2,500.00					
New Outer I-15 Alignment	45.0	point51	51	4,785.0	5,878.5	2,500.00					Average
		point52	52	4,752.8	4,559.8	2,500.00					Average
		point53	53	4,752.6	4,516.2	2,500.00					Average
		point54	54	4,742.1	1,804.0	2,500.00					
South of Driveway A	24.0	point62	62	3,210.2	1,385.7	2,500.00					Average
		point63	63	3,380.9	747.0	2,500.00					
Stoddard Wells Rd- e. of New Outer Alnmt	40.0	point55	55	4,746.2	1,795.1	2,500.00					Average
		point56	56	5,459.8	1,955.2	2,500.00					Average
		point57	57	5,977.8	2,081.9	2,500.00					Average
		point58	58	6,121.1	2,134.3	2,500.00					Average
		point59	59	6,442.0	2,274.4	2,500.00					Average
		point60	60	6,717.5	2,445.2	2,500.00					Average
		point67	67	12,777.3	6,675.1	2,500.00					

Dudek MG		18 November 2022 TNM 2.5												
INPUT: TRAFFIC FOR LAeq1h Volumes														
PROJECT/CONTRACT:		14239												
RUN:		Stoddard / Apple Valley 143 - Existing												
Roadway		Points												
Name	Name	No.	Segment										Motorcycles	
			Autos		MTrucks		HTrucks		Buses		V	S		
			V	S	V	S	V	S	V	S	V	S		
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph		
Stoddard Wells Road- e. of I-15	point1	1	223	45	59	45	15	40	0	0	0	0		
	point2	2	223	45	59	45	15	40	0	0	0	0		
	point3	3												
Outer Hwy 15 N	point4	4	80	55	21	50	5	45	0	0	0	0		
	point5	5	80	55	21	50	5	45	0	0	0	0		
	point6	6	80	55	21	50	5	45	0	0	0	0		
	point7	7	80	55	21	50	5	45	0	0	0	0		
	point8	8	80	55	21	50	5	45	0	0	0	0		
	point9	9												
I-15 NB Onramp	point10	10	180	55	48	50	12	45	0	0	0	0		
	point11	11	180	55	48	50	12	45	0	0	0	0		
	point12	12	180	55	48	50	12	45	0	0	0	0		
	point13	13	180	55	48	50	12	45	0	0	0	0		
	point14	14	180	55	48	50	12	45	0	0	0	0		
	point15	15	180	55	48	50	12	45	0	0	0	0		
	point16	16	180	55	48	50	12	45	0	0	0	0		
	point17	17												
I-15 NB Offramp	point18	18	0	0	0	0	0	0	0	0	0	0		
	point19	19	0	0	0	0	0	0	0	0	0	0		
	point20	20	0	0	0	0	0	0	0	0	0	0		
	point21	21	0	0	0	0	0	0	0	0	0	0		
	point22	22	0	0	0	0	0	0	0	0	0	0		
	point23	23	0	0	0	0	0	0	0	0	0	0		

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

	point24	24	0	0	0	0	0	0	0	0	0	0
	point25	25	0	0	0	0	0	0	0	0	0	0
	point26	26										
I-15 NB	point27	27	2252	70	162	65	536	60	0	0	0	0
	point28	28	2252	70	162	65	536	60	0	0	0	0
	point29	29	2252	70	162	65	536	60	0	0	0	0
	point30	30	2252	70	162	65	536	60	0	0	0	0
	point31	31	2252	70	162	65	536	60	0	0	0	0
	point32	32										
I-15 SB	point33	33	2252	70	162	65	536	60	0	0	0	0
	point34	34	2252	70	162	65	536	60	0	0	0	0
	point35	35	2252	70	162	65	536	60	0	0	0	0
	point36	36	2252	70	162	65	536	60	0	0	0	0
	point37	37	2252	70	162	65	536	60	0	0	0	0
	point38	38	2252	70	162	65	536	60	0	0	0	0
	point39	39	2252	70	162	65	536	60	0	0	0	0
	point40	40										
Stoddard Wells Road- e. of I-15 NB On	point41	41	359	45	96	45	24	40	0	0	0	0
	point42	42	359	45	96	45	24	40	0	0	0	0
	point43	43										
Driveway A	point44	44	0	0	0	0	0	0	0	0	0	0
	point45	45										
Stoddard Wells Road- e. of Drvwy A	point46	46	356	45	95	45	24	40	0	0	0	0
	point47	47	356	45	95	45	24	40	0	0	0	0
	point48	48	356	45	95	45	24	40	0	0	0	0
	point49	49	356	45	95	45	24	40	0	0	0	0
	point50	50										
New Outer I-15 Alignment	point51	51	0	0	0	0	0	0	0	0	0	0
	point52	52	0	0	0	0	0	0	0	0	0	0
	point53	53	0	0	0	0	0	0	0	0	0	0
	point54	54										
South of Driveway A	point62	62	0	0	0	0	0	0	0	0	0	0
	point63	63										
Stoddard Wells Rd- e. of New Outer Alnmt	point55	55	356	45	95	45	24	40	0	0	0	0
	point56	56	356	45	95	45	24	40	0	0	0	0
	point57	57	356	45	95	45	24	40	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes**14239**

	point58	58	356	45	95	45	24	40	0	0	0	0
	point59	59	356	45	95	45	24	40	0	0	0	0
	point60	60	356	45	95	45	24	40	0	0	0	0
	point67	67										

INPUT: RECEIVERS

14239

						18 November 2022					
Dudek						TNM 2.5					
MG											
INPUT: RECEIVERS											
PROJECT/CONTRACT:		14239									
RUN:		Stoddard / Apple Valley 143 - Existing									
Receiver											
Name	No.	#DUs	Coordinates (ground)		Height	Input Sound Levels and Criteria				Active	
			X	Y		Z	above	Existing	Impact Criteria		NR
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
M1 - Existing Residential	1	1	5,802.4	1,736.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M2 - Existing Residential	2	1	11,016.8	5,612.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M3 - Regional Commercial Zoning	3	1	4,256.1	1,555.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M4 - Estate Residential Zoning	4	1	4,888.8	1,722.1	2,500.00	5.00	0.00	66	10.0	8.0	Y
M5 - Office Professional Zoning	6	1	4,842.6	2,159.7	2,500.00	5.00	0.00	66	10.0	8.0	Y

RESULTS: SOUND LEVELS

14239

Dudek		18 November 2022										
MG		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		14239										
RUN:		Stoddard / Apple Valley 143 - Existing										
BARRIER DESIGN:		INPUT HEIGHTS										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing	No Barrier						With Barrier		
			LAeq1h	LAeq1h		Increase over existing	Type		Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated
						Sub'l Inc						minus
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
M1 - Existing Residential	1	1	0.0	52.6	66	52.6	10	----	52.6	0.0	8	-8.0
M2 - Existing Residential	2	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
M3 - Regional Commercial Zoning	3	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
M4 - Estate Residential Zoning	4	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
M5 - Office Professional Zoning	6	1	0.0	52.6	66	52.6	10	----	52.6	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		5	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

Dudek					18 November 2022					
MG					TNM 2.5					
INPUT: ROADWAYS					Average pavement type shall be used unless					
PROJECT/CONTRACT:		14239			a State highway agency substantiates the use					
RUN:		Stoddard / Apple Valley 143 - Ex w Prj			of a different type with the approval of FHWA					
Roadway Name	Width	Points			Coordinates (pavement)	Flow Control	Segment	On		
		Name	No.	X					Y	Z
	ft			ft	ft	ft	mph	%		
Stoddard Wells Road- e. of I-15	40.0	point1	1	722.1	704.0	2,500.00			Average	
		point2	2	900.6	743.5	2,500.00			Average	
Outer Hwy 15 N	45.0	point3	3	1,309.3	902.1	2,500.00				
		point4	4	638.6	262.9	2,500.00			Average	
		point5	5	1,041.0	341.6	2,500.00			Average	
		point6	6	1,207.2	429.1	2,500.00			Average	
		point7	7	1,277.2	534.0	2,500.00			Average	
		point8	8	1,303.4	717.8	2,500.00			Average	
		point9	9	1,297.5	892.7	2,500.00				
I-15 NB Onramp	45.0	point10	10	1,312.5	922.6	2,500.00			Average	
		point11	11	1,313.8	965.1	2,500.00			Average	
		point12	12	1,308.6	1,090.0	2,500.00			Average	
		point13	13	1,294.5	1,212.3	2,500.00			Average	
		point14	14	1,276.1	1,355.5	2,500.00			Average	
		point15	15	1,311.2	1,516.0	2,500.00			Average	
		point16	16	1,348.6	1,623.2	2,500.00			Average	
		point17	17	1,526.3	1,922.5	2,500.00				
I-15 NB Offramp	45.0	point18	18	677.6	687.3	2,500.00			Average	
		point19	19	926.0	968.1	2,500.00			Average	
		point20	20	1,047.2	1,105.8	2,500.00			Average	
		point21	21	1,113.3	1,144.4	2,500.00			Average	
		point22	22	1,190.5	1,149.9	2,500.00			Average	
		point23	23	1,248.3	1,119.6	2,500.00			Average	
		point24	24	1,281.4	1,056.2	2,500.00			Average	
		point25	25	1,295.2	954.3	2,500.00			Average	

INPUT: ROADWAYS

14239

		point26	26	1,289.7	918.5	2,500.00					
I-15 NB	75.0	point27	27	384.9	262.4	2,500.00					Average
		point28	28	708.5	769.8	2,500.00					Average
		point29	29	1,548.3	1,985.7	2,500.00					Average
		point30	30	2,283.1	3,122.9	2,500.00					Average
		point31	31	3,341.6	4,732.5	2,500.00					Average
		point32	32	4,277.6	6,114.6	2,500.00					
I-15 SB	75.0	point33	33	4,155.1	6,173.7	2,500.00					Average
		point34	34	3,604.0	5,333.9	2,500.00					Average
		point35	35	2,943.6	4,319.2	2,500.00					Average
		point36	36	2,388.1	3,466.3	2,500.00					Average
		point37	37	1,736.4	2,464.7	2,500.00					Average
		point38	38	1,229.6	1,680.1	2,500.00					Average
		point39	39	573.8	726.8	2,500.00					Average
		point40	40	268.3	275.5	2,500.00					
Stoddard Wells Road- e. of I-15 NB On	40.0	point41	41	1,309.3	902.1	2,500.00					Average
		point42	42	2,383.3	1,185.3	2,500.00					Average
		point43	43	3,209.0	1,398.8	2,500.00					
Driveway A	45.0	point44	44	3,150.9	1,622.0	2,500.00					Average
		point45	45	3,202.9	1,403.3	2,500.00					
Stoddard Wells Road- e. of Drvwy A	40.0	point46	46	3,209.0	1,398.8	2,500.00					Average
		point47	47	3,726.0	1,526.4	2,500.00					Average
		point48	48	4,338.8	1,680.9	2,500.00					Average
		point49	49	4,743.7	1,794.3	2,500.00					Average
		point50	50	4,746.2	1,795.1	2,500.00					
New Outer I-15 Alignment	45.0	point51	51	4,785.0	5,878.5	2,500.00					Average
		point52	52	4,752.8	4,559.8	2,500.00					Average
		point53	53	4,752.6	4,516.2	2,500.00					Average
		point54	54	4,742.1	1,804.0	2,500.00					
South of Driveway A	24.0	point62	62	3,210.2	1,385.7	2,500.00					Average
		point63	63	3,380.9	747.0	2,500.00					
Stoddard Wells Rd- e. of New Outer Alnmt	40.0	point55	55	4,746.2	1,795.1	2,500.00					Average
		point56	56	5,459.8	1,955.2	2,500.00					Average
		point57	57	5,977.8	2,081.9	2,500.00					Average
		point58	58	6,121.1	2,134.3	2,500.00					Average
		point59	59	6,442.0	2,274.4	2,500.00					Average
		point60	60	6,717.5	2,445.2	2,500.00					Average
		point67	67	12,777.3	6,675.1	2,500.00					

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

Dudek MG		18 November 2022 TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		14239										
RUN:		Stoddard / Apple Valley 143 - Ex w Prj										
Roadway	Points											
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Stoddard Wells Road- e. of I-15	point1	1	150	45	12	45	44	40	0	0	0	0
	point2	2	150	45	12	45	44	40	0	0	0	0
	point3	3										
Outer Hwy 15 N	point4	4	87	55	21	50	5	45	0	0	0	0
	point5	5	87	55	21	50	5	45	0	0	0	0
	point6	6	87	55	21	50	5	45	0	0	0	0
	point7	7	87	55	21	50	5	45	0	0	0	0
	point8	8	87	55	21	50	5	45	0	0	0	0
	point9	9										
I-15 NB Onramp	point10	10	281	55	57	50	49	45	0	0	0	0
	point11	11	281	55	57	50	49	45	0	0	0	0
	point12	12	281	55	57	50	49	45	0	0	0	0
	point13	13	281	55	57	50	49	45	0	0	0	0
	point14	14	281	55	57	50	49	45	0	0	0	0
	point15	15	281	55	57	50	49	45	0	0	0	0
	point16	16	281	55	57	50	49	45	0	0	0	0
I-15 NB Offramp	point17	17										
	point18	18	0	0	0	0	0	0	0	0	0	0
	point19	19	0	0	0	0	0	0	0	0	0	0
	point20	20	0	0	0	0	0	0	0	0	0	0
	point21	21	0	0	0	0	0	0	0	0	0	0
	point22	22	0	0	0	0	0	0	0	0	0	0
	point23	23	0	0	0	0	0	0	0	0	0	

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

	point24	24	0	0	0	0	0	0	0	0	0	0
	point25	25	0	0	0	0	0	0	0	0	0	0
	point26	26										
I-15 NB	point27	27	2533	70	219	65	585	60	0	0	0	0
	point28	28	2533	70	219	65	585	60	0	0	0	0
	point29	29	2533	70	219	65	585	60	0	0	0	0
	point30	30	2533	70	219	65	585	60	0	0	0	0
	point31	31	2533	70	219	65	585	60	0	0	0	0
	point32	32										
I-15 SB	point33	33	2252	70	162	65	536	60	0	0	0	0
	point34	34	2252	70	162	65	536	60	0	0	0	0
	point35	35	2252	70	162	65	536	60	0	0	0	0
	point36	36	2252	70	162	65	536	60	0	0	0	0
	point37	37	2252	70	162	65	536	60	0	0	0	0
	point38	38	2252	70	162	65	536	60	0	0	0	0
	point39	39	2252	70	162	65	536	60	0	0	0	0
	point40	40										
Stoddard Wells Road- e. of I-15 NB On	point41	41	617	45	117	45	105	40	0	0	0	0
	point42	42	617	45	117	45	105	40	0	0	0	0
	point43	43										
Driveway A	point44	44	24	25	5	25	23	20	0	0	0	0
	point45	45										
Stoddard Wells Road- e. of Drvwy A	point46	46	590	45	111	45	85	40	0	0	0	0
	point47	47	590	45	111	45	85	40	0	0	0	0
	point48	48	590	45	111	45	85	40	0	0	0	0
	point49	49	590	45	111	45	85	40	0	0	0	0
	point50	50										
New Outer I-15 Alignment	point51	51	236	35	16	35	65	30	0	0	0	0
	point52	52	236	35	16	35	65	30	0	0	0	0
	point53	53	236	35	16	35	65	30	0	0	0	0
	point54	54										
South of Driveway A	point62	62	0	0	0	0	0	0	0	0	0	0
	point63	63										
Stoddard Wells Rd- e. of New Outer Alnmt	point55	55	358	45	95	45	30	40	0	0	0	0
	point56	56	358	45	95	45	30	40	0	0	0	0
	point57	57	358	45	95	45	30	40	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes**14239**

	point58	58	358	45	95	45	30	40	0	0	0	0
	point59	59	358	45	95	45	30	40	0	0	0	0
	point60	60	358	45	95	45	30	40	0	0	0	0
	point67	67										

INPUT: RECEIVERS

14239

						18 November 2022					
						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:		14239									
RUN:		Stoddard / Apple Valley 143 - Ex w Prj									
Receiver											
Name	No.	#DUs	Coordinates (ground)		Height	Input Sound Levels and Criteria				Active	
			X	Y		Z	above	Existing	Impact Criteria		NR
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
M1 - Existing Residential	1	1	5,802.4	1,736.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M2 - Existing Residential	2	1	11,016.8	5,612.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M3 - Regional Commercial Zoning	3	1	4,256.1	1,555.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M4 - Estate Residential Zoning	4	1	4,888.8	1,722.1	2,500.00	5.00	0.00	66	10.0	8.0	Y
M5 - Office Professional Zoning	6	1	4,842.6	2,159.7	2,500.00	5.00	0.00	66	10.0	8.0	Y

RESULTS: SOUND LEVELS

14239

Dudek		18 November 2022											
MG		TNM 2.5											
		Calculated with TNM 2.5											
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		14239											
RUN:		Stoddard / Apple Valley 143 - Ex w Prj											
BARRIER DESIGN:		INPUT HEIGHTS Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated		Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB
M1 - Existing Residential	1	1	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0	
M2 - Existing Residential	2	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0	
M3 - Regional Commercial Zoning	3	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0	
M4 - Estate Residential Zoning	4	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0	
M5 - Office Professional Zoning	6	1	0.0	59.1	66	59.1	10	----	59.1	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

INPUT: ROADWAYS

14239

Dudek					18 November 2022						
MG					TNM 2.5						
INPUT: ROADWAYS					Average pavement type shall be used unless						
PROJECT/CONTRACT:		14239			a State highway agency substantiates the use						
RUN:		Stoddard / Apple Valley143-OpngYr 2025			of a different type with the approval of FHWA						
Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Stoddard Wells Road- e. of I-15	40.0	point1	1	722.1	704.0	2,500.00				Average	
		point2	2	900.6	743.5	2,500.00				Average	
Outer Hwy 15 N	45.0	point3	3	1,309.3	902.1	2,500.00					
		point4	4	638.6	262.9	2,500.00				Average	
		point5	5	1,041.0	341.6	2,500.00				Average	
		point6	6	1,207.2	429.1	2,500.00				Average	
		point7	7	1,277.2	534.0	2,500.00				Average	
		point8	8	1,303.4	717.8	2,500.00				Average	
		point9	9	1,297.5	892.7	2,500.00					
I-15 NB Onramp	45.0	point10	10	1,312.5	922.6	2,500.00				Average	
		point11	11	1,313.8	965.1	2,500.00				Average	
		point12	12	1,308.6	1,090.0	2,500.00				Average	
		point13	13	1,294.5	1,212.3	2,500.00				Average	
		point14	14	1,276.1	1,355.5	2,500.00				Average	
		point15	15	1,311.2	1,516.0	2,500.00				Average	
		point16	16	1,348.6	1,623.2	2,500.00				Average	
		point17	17	1,526.3	1,922.5	2,500.00					
I-15 NB Offramp	45.0	point18	18	677.6	687.3	2,500.00				Average	
		point19	19	926.0	968.1	2,500.00				Average	
		point20	20	1,047.2	1,105.8	2,500.00				Average	
		point21	21	1,113.3	1,144.4	2,500.00				Average	
		point22	22	1,190.5	1,149.9	2,500.00				Average	
		point23	23	1,248.3	1,119.6	2,500.00				Average	
		point24	24	1,281.4	1,056.2	2,500.00				Average	
		point25	25	1,295.2	954.3	2,500.00				Average	

INPUT: ROADWAYS

14239

		point26	26	1,289.7	918.5	2,500.00					
I-15 NB	75.0	point27	27	384.9	262.4	2,500.00					Average
		point28	28	708.5	769.8	2,500.00					Average
		point29	29	1,548.3	1,985.7	2,500.00					Average
		point30	30	2,283.1	3,122.9	2,500.00					Average
		point31	31	3,341.6	4,732.5	2,500.00					Average
		point32	32	4,277.6	6,114.6	2,500.00					
I-15 SB	75.0	point33	33	4,155.1	6,173.7	2,500.00					Average
		point34	34	3,604.0	5,333.9	2,500.00					Average
		point35	35	2,943.6	4,319.2	2,500.00					Average
		point36	36	2,388.1	3,466.3	2,500.00					Average
		point37	37	1,736.4	2,464.7	2,500.00					Average
		point38	38	1,229.6	1,680.1	2,500.00					Average
		point39	39	573.8	726.8	2,500.00					Average
		point40	40	268.3	275.5	2,500.00					
Stoddard Wells Road- e. of I-15 NB On	40.0	point41	41	1,309.3	902.1	2,500.00					Average
		point42	42	2,383.3	1,185.3	2,500.00					Average
		point43	43	3,209.0	1,398.8	2,500.00					
Driveway A	45.0	point44	44	3,150.9	1,622.0	2,500.00					Average
		point45	45	3,202.9	1,403.3	2,500.00					
Stoddard Wells Road- e. of Drvwy A	40.0	point46	46	3,209.0	1,398.8	2,500.00					Average
		point47	47	3,726.0	1,526.4	2,500.00					Average
		point48	48	4,338.8	1,680.9	2,500.00					Average
		point49	49	4,743.7	1,794.3	2,500.00					Average
		point50	50	4,746.2	1,795.1	2,500.00					
New Outer I-15 Alignment	45.0	point51	51	4,785.0	5,878.5	2,500.00					Average
		point52	52	4,752.8	4,559.8	2,500.00					Average
		point53	53	4,752.6	4,516.2	2,500.00					Average
		point54	54	4,742.1	1,804.0	2,500.00					
Stoddard Wells Rd- e. of New Outer Aln	40.0	point55	55	4,746.2	1,795.1	2,500.00					Average
		point56	56	5,459.8	1,955.2	2,500.00					Average
		point57	57	5,977.8	2,081.9	2,500.00					Average
		point58	58	6,121.1	2,134.3	2,500.00					Average
		point59	59	6,442.0	2,274.4	2,500.00					Average
		point60	60	6,717.5	2,445.2	2,500.00					Average
		point61	61	12,777.3	6,675.1	2,500.00					
South of Driveway A	24.0	point62	62	3,210.2	1,385.7	2,500.00					Average
		point63	63	3,380.9	747.0	2,500.00					

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

Dudek MG		18 November 2022 TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		14239										
RUN:		Stoddard / Apple Valley143-OpngYr 2025										
Roadway	Points											
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Stoddard Wells Road- e. of I-15	point1	1	352	45	94	45	23	40	0	0	0	0
	point2	2	352	45	94	45	23	40	0	0	0	0
	point3	3										
Outer Hwy 15 N	point4	4	91	55	24	50	6	45	0	0	0	0
	point5	5	91	55	24	50	6	45	0	0	0	0
	point6	6	91	55	24	50	6	45	0	0	0	0
	point7	7	91	55	24	50	6	45	0	0	0	0
	point8	8	91	55	24	50	6	45	0	0	0	0
	point9	9										
I-15 NB Onramp	point10	10	308	55	82	50	21	45	0	0	0	0
	point11	11	308	55	82	50	21	45	0	0	0	0
	point12	12	308	55	82	50	21	45	0	0	0	0
	point13	13	308	55	82	50	21	45	0	0	0	0
	point14	14	308	55	82	50	21	45	0	0	0	0
	point15	15	308	55	82	50	21	45	0	0	0	0
	point16	16	308	55	82	50	21	45	0	0	0	0
I-15 NB Offramp	point17	17										
	point18	18	0	0	0	0	0	0	0	0	0	0
	point19	19	0	0	0	0	0	0	0	0	0	0
	point20	20	0	0	0	0	0	0	0	0	0	0
	point21	21	0	0	0	0	0	0	0	0	0	0
	point22	22	0	0	0	0	0	0	0	0	0	0
	point23	23	0	0	0	0	0	0	0	0	0	

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

	point24	24	0	0	0	0	0	0	0	0	0	0
	point25	25	0	0	0	0	0	0	0	0	0	0
	point26	26										
I-15 NB	point27	27	2252	70	162	65	536	60	0	0	0	0
	point28	28	2252	70	162	65	536	60	0	0	0	0
	point29	29	2252	70	162	65	536	60	0	0	0	0
	point30	30	2252	70	162	65	536	60	0	0	0	0
	point31	31	2252	70	162	65	536	60	0	0	0	0
	point32	32										
I-15 SB	point33	33	2252	70	162	65	536	60	0	0	0	0
	point34	34	2252	70	162	65	536	60	0	0	0	0
	point35	35	2252	70	162	65	536	60	0	0	0	0
	point36	36	2252	70	162	65	536	60	0	0	0	0
	point37	37	2252	70	162	65	536	60	0	0	0	0
	point38	38	2252	70	162	65	536	60	0	0	0	0
	point39	39	2252	70	162	65	536	60	0	0	0	0
	point40	40										
Stoddard Wells Road- e. of I-15 NB On	point41	41	611	45	163	45	41	40	0	0	0	0
	point42	42	611	45	163	45	41	40	0	0	0	0
	point43	43										
Driveway A	point44	44	0	0	0	0	0	0	0	0	0	0
	point45	45										
Stoddard Wells Road- e. of Drvwy A	point46	46	366	45	98	45	24	40	0	0	0	0
	point47	47	366	45	98	45	24	40	0	0	0	0
	point48	48	366	45	98	45	24	40	0	0	0	0
	point49	49	366	45	98	45	24	40	0	0	0	0
	point50	50										
New Outer I-15 Alignment	point51	51	0	0	0	0	0	0	0	0	0	0
	point52	52	0	0	0	0	0	0	0	0	0	0
	point53	53	0	0	0	0	0	0	0	0	0	0
	point54	54										
Stoddard Wells Rd- e. of New Outer Aln	point55	55	366	45	98	45	24	40	0	0	0	0
	point56	56	366	45	98	45	24	40	0	0	0	0
	point57	57	366	45	98	45	24	40	0	0	0	0
	point58	58	366	45	98	45	24	40	0	0	0	0
	point59	59	366	45	98	45	24	40	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes**14239**

	point60	60	366	45	98	45	24	40	0	0	0	0
	point61	61										
South of Driveway A	point62	62	0	0	0	0	0	0	0	0	0	0
	point63	63										

INPUT: RECEIVERS

14239

						18 November 2022					
Dudek						TNM 2.5					
MG											
INPUT: RECEIVERS											
PROJECT/CONTRACT:		14239									
RUN:		Stoddard / Apple Valley143-OpngYr 2025									
Receiver											
Name	No.	#DUs	Coordinates (ground)		Height	Input Sound Levels and Criteria				Active	
			X	Y		Z	above	Existing	Impact Criteria		NR
						Ground	L _{Aeq} 1h	L _{Aeq} 1h	Sub'l	Goal	in
			ft	ft	ft	ft	dBA	dBA	dB	dB	Calc.
M1 - Existing Residential	1	1	5,802.4	1,736.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M2 - Existing Residential	2	1	11,016.8	5,612.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M3 - Regional Commercial Zoning	3	1	4,256.1	1,555.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M4 - Estate Residential Zoning	4	1	4,888.8	1,722.1	2,500.00	5.00	0.00	66	10.0	8.0	Y
M5 - Office Professional Zoning	6	1	4,842.6	2,159.7	2,500.00	5.00	0.00	66	10.0	8.0	Y

RESULTS: SOUND LEVELS

14239

Dudek		18 November 2022										
MG		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		14239										
RUN:		Stoddard / Apple Valley143-OpngYr 2025										
BARRIER DESIGN:		INPUT HEIGHTS										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing	No Barrier						With Barrier		
			LAeq1h	LAeq1h		Increase over existing	Type		Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated
						Sub'l Inc						minus
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
M1 - Existing Residential	1	1	0.0	52.7	66	52.7	10	----	52.7	0.0	8	-8.0
M2 - Existing Residential	2	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
M3 - Regional Commercial Zoning	3	1	0.0	61.0	66	61.0	10	----	61.0	0.0	8	-8.0
M4 - Estate Residential Zoning	4	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0
M5 - Office Professional Zoning	6	1	0.0	52.7	66	52.7	10	----	52.7	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		5	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

Dudek					18 November 2022						
MG					TNM 2.5						
INPUT: ROADWAYS					Average pavement type shall be used unless						
PROJECT/CONTRACT: 14239					a State highway agency substantiates the use						
RUN: Stoddard Apple Valley 143-Yr 2025 w Prj					of a different type with the approval of FHWA						
Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Stoddard Wells Road- e. of I-15	40.0	point1	1	722.1	704.0	2,500.00				Average	
		point2	2	900.6	743.5	2,500.00				Average	
Outer Hwy 15 N	45.0	point3	3	1,309.3	902.1	2,500.00					
		point4	4	638.6	262.9	2,500.00				Average	
		point5	5	1,041.0	341.6	2,500.00				Average	
		point6	6	1,207.2	429.1	2,500.00				Average	
		point7	7	1,277.2	534.0	2,500.00				Average	
		point8	8	1,303.4	717.8	2,500.00				Average	
		point9	9	1,297.5	892.7	2,500.00					
I-15 NB Onramp	45.0	point10	10	1,312.5	922.6	2,500.00				Average	
		point11	11	1,313.8	965.1	2,500.00				Average	
		point12	12	1,308.6	1,090.0	2,500.00				Average	
		point13	13	1,294.5	1,212.3	2,500.00				Average	
		point14	14	1,276.1	1,355.5	2,500.00				Average	
		point15	15	1,311.2	1,516.0	2,500.00				Average	
		point16	16	1,348.6	1,623.2	2,500.00				Average	
		point17	17	1,526.3	1,922.5	2,500.00					
I-15 NB Offramp	45.0	point18	18	677.6	687.3	2,500.00				Average	
		point19	19	926.0	968.1	2,500.00				Average	
		point20	20	1,047.2	1,105.8	2,500.00				Average	
		point21	21	1,113.3	1,144.4	2,500.00				Average	
		point22	22	1,190.5	1,149.9	2,500.00				Average	
		point23	23	1,248.3	1,119.6	2,500.00				Average	
		point24	24	1,281.4	1,056.2	2,500.00				Average	
		point25	25	1,295.2	954.3	2,500.00				Average	

INPUT: ROADWAYS

14239

		point26	26	1,289.7	918.5	2,500.00					
I-15 NB	75.0	point27	27	384.9	262.4	2,500.00					Average
		point28	28	708.5	769.8	2,500.00					Average
		point29	29	1,548.3	1,985.7	2,500.00					Average
		point30	30	2,283.1	3,122.9	2,500.00					Average
		point31	31	3,341.6	4,732.5	2,500.00					Average
		point32	32	4,277.6	6,114.6	2,500.00					
I-15 SB	75.0	point33	33	4,155.1	6,173.7	2,500.00					Average
		point34	34	3,604.0	5,333.9	2,500.00					Average
		point35	35	2,943.6	4,319.2	2,500.00					Average
		point36	36	2,388.1	3,466.3	2,500.00					Average
		point37	37	1,736.4	2,464.7	2,500.00					Average
		point38	38	1,229.6	1,680.1	2,500.00					Average
		point39	39	573.8	726.8	2,500.00					Average
		point40	40	268.3	275.5	2,500.00					
Stoddard Wells Road- e. of I-15 NB On	40.0	point41	41	1,309.3	902.1	2,500.00					Average
		point42	42	2,383.3	1,185.3	2,500.00					Average
		point43	43	3,209.0	1,398.8	2,500.00					
Driveway A	45.0	point44	44	3,150.9	1,622.0	2,500.00					Average
		point45	45	3,202.9	1,403.3	2,500.00					
Stoddard Wells Road- e. of Drvwy A	40.0	point46	46	3,209.0	1,398.8	2,500.00					Average
		point47	47	3,726.0	1,526.4	2,500.00					Average
		point48	48	4,338.8	1,680.9	2,500.00					Average
		point49	49	4,743.7	1,794.3	2,500.00					Average
		point50	50	4,746.2	1,795.1	2,500.00					
New Outer I-15 Alignment	45.0	point51	51	4,785.0	5,878.5	2,500.00					Average
		point52	52	4,752.8	4,559.8	2,500.00					Average
		point53	53	4,752.6	4,516.2	2,500.00					Average
		point54	54	4,742.1	1,804.0	2,500.00					
Stoddard Wells Rd- e. of New Outer Aln	40.0	point55	55	4,746.2	1,795.1	2,500.00					Average
		point56	56	5,459.8	1,955.2	2,500.00					Average
		point57	57	5,977.8	2,081.9	2,500.00					Average
		point58	58	6,121.1	2,134.3	2,500.00					Average
		point59	59	6,442.0	2,274.4	2,500.00					Average
		point60	60	6,717.5	2,445.2	2,500.00					Average
		point61	61	12,777.3	6,675.1	2,500.00					
South of Driveway A	24.0	point62	62	3,210.2	1,385.7	2,500.00					Average
		point63	63	3,380.9	747.0	2,500.00					

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

Dudek MG		18 November 2022 TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		14239										
RUN:		Stoddard Apple Valley 143-Yr 2025 w Prj										
Roadway		Points										
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			Autos		V	S	V	S	V	S	V	S
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Stoddard Wells Road- e. of I-15	point1	1	502	45	106	45	67	40	0	0	0	0
	point2	2	502	45	106	45	67	40	0	0	0	0
	point3	3										
Outer Hwy 15 N	point4	4	98	55	24	50	6	45	0	0	0	0
	point5	5	98	55	24	50	6	45	0	0	0	0
	point6	6	98	55	24	50	6	45	0	0	0	0
	point7	7	98	55	24	50	6	45	0	0	0	0
	point8	8	98	55	24	50	6	45	0	0	0	0
	point9	9										
I-15 NB Onramp	point10	10	409	55	91	50	58	45	0	0	0	0
	point11	11	409	55	91	50	58	45	0	0	0	0
	point12	12	409	55	91	50	58	45	0	0	0	0
	point13	13	409	55	91	50	58	45	0	0	0	0
	point14	14	409	55	91	50	58	45	0	0	0	0
	point15	15	409	55	91	50	58	45	0	0	0	0
	point16	16	409	55	91	50	58	45	0	0	0	0
I-15 NB Offramp	point17	17										
	point18	18	0	0	0	0	0	0	0	0	0	0
	point19	19	0	0	0	0	0	0	0	0	0	0
	point20	20	0	0	0	0	0	0	0	0	0	0
	point21	21	0	0	0	0	0	0	0	0	0	0
	point22	22	0	0	0	0	0	0	0	0	0	0
	point23	23	0	0	0	0	0	0	0	0	0	

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

	point24	24	0	0	0	0	0	0	0	0	0	0
	point25	25	0	0	0	0	0	0	0	0	0	0
	point26	26										
I-15 NB	point27	27	2628	70	249	65	573	60	0	0	0	0
	point28	28	2628	70	249	65	573	60	0	0	0	0
	point29	29	2628	70	249	65	573	60	0	0	0	0
	point30	30	2628	70	249	65	573	60	0	0	0	0
	point31	31	2628	70	249	65	573	60	0	0	0	0
	point32	32										
I-15 SB	point33	33	2320	70	167	65	552	60	0	0	0	0
	point34	34	2320	70	167	65	552	60	0	0	0	0
	point35	35	2320	70	167	65	552	60	0	0	0	0
	point36	36	2320	70	167	65	552	60	0	0	0	0
	point37	37	2320	70	167	65	552	60	0	0	0	0
	point38	38	2320	70	167	65	552	60	0	0	0	0
	point39	39	2320	70	167	65	552	60	0	0	0	0
	point40	40										
Stoddard Wells Road- e. of I-15 NB On	point41	41	869	45	184	45	122	40	0	0	0	0
	point42	42	869	45	184	45	122	40	0	0	0	0
	point43	43										
Driveway A	point44	44	24	25	5	25	23	20	0	0	0	0
	point45	45										
Stoddard Wells Road- e. of Drvwy A	point46	46	600	45	114	45	85	40	0	0	0	0
	point47	47	600	45	114	45	85	40	0	0	0	0
	point48	48	600	45	114	45	85	40	0	0	0	0
	point49	49	600	45	114	45	85	40	0	0	0	0
	point50	50										
New Outer I-15 Alignment	point51	51	236	35	16	35	65	30	0	0	0	0
	point52	52	236	35	16	35	65	30	0	0	0	0
	point53	53	236	35	16	35	65	30	0	0	0	0
	point54	54										
Stoddard Wells Rd- e. of New Outer Aln	point55	55	368	45	98	45	30	40	0	0	0	0
	point56	56	368	45	98	45	30	40	0	0	0	0
	point57	57	368	45	98	45	30	40	0	0	0	0
	point58	58	368	45	98	45	30	40	0	0	0	0
	point59	59	368	45	98	45	30	40	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes**14239**

	point60	60	368	45	98	45	30	40	0	0	0	0
South of Driveway A	point61	61										
	point62	62	0	0	0	0	0	0	0	0	0	0
	point63	63										

INPUT: RECEIVERS

14239

						18 November 2022					
Dudek						TNM 2.5					
MG											
INPUT: RECEIVERS											
PROJECT/CONTRACT:		14239									
RUN:		Stoddard Apple Valley 143-Yr 2025 w Prj									
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z		above	Existing	Impact Criteria	NR	
						Ground	L _{Aeq} 1h	L _{Aeq} 1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
M1 - Existing Residential	1	1	5,802.4	1,736.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M2 - Existing Residential	2	1	11,016.8	5,612.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M3 - Regional Commercial Zoning	3	1	4,256.1	1,555.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M4 - Estate Residential Zoning	4	1	4,888.8	1,722.1	2,500.00	5.00	0.00	66	10.0	8.0	Y
M5 - Office Professional Zoning	6	1	4,842.6	2,159.7	2,500.00	5.00	0.00	66	10.0	8.0	Y

RESULTS: SOUND LEVELS

14239

Dudek		18 November 2022										
MG		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		14239										
RUN:		Stoddard Apple Valley 143-Yr 2025 w Prj										
BARRIER DESIGN:		INPUT HEIGHTS										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing	No Barrier						With Barrier		
			LAeq1h	LAeq1h		Increase over existing	Type		Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated
						Sub'l Inc						minus
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
M1 - Existing Residential	1	1	0.0	53.2	66	53.2	10	----	53.2	0.0	8	-8.0
M2 - Existing Residential	2	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0
M3 - Regional Commercial Zoning	3	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0
M4 - Estate Residential Zoning	4	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
M5 - Office Professional Zoning	6	1	0.0	59.1	66	59.1	10	----	59.1	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		5	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

Dudek					18 November 2022						
MG					TNM 2.5						
INPUT: ROADWAYS					Average pavement type shall be used unless						
PROJECT/CONTRACT:		14239			a State highway agency substantiates the use						
RUN:		Stoddard Apple Valley 143-Yr 2025 w Prj			of a different type with the approval of FHWA						
Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Stoddard Wells Road- e. of I-15	40.0	point1	1	722.1	704.0	2,500.00				Average	
		point2	2	900.6	743.5	2,500.00				Average	
Outer Hwy 15 N	45.0	point3	3	1,309.3	902.1	2,500.00					
		point4	4	638.6	262.9	2,500.00				Average	
		point5	5	1,041.0	341.6	2,500.00				Average	
		point6	6	1,207.2	429.1	2,500.00				Average	
		point7	7	1,277.2	534.0	2,500.00				Average	
		point8	8	1,303.4	717.8	2,500.00				Average	
		point9	9	1,297.5	892.7	2,500.00					
I-15 NB Onramp	45.0	point10	10	1,312.5	922.6	2,500.00				Average	
		point11	11	1,313.8	965.1	2,500.00				Average	
		point12	12	1,308.6	1,090.0	2,500.00				Average	
		point13	13	1,294.5	1,212.3	2,500.00				Average	
		point14	14	1,276.1	1,355.5	2,500.00				Average	
		point15	15	1,311.2	1,516.0	2,500.00				Average	
		point16	16	1,348.6	1,623.2	2,500.00				Average	
		point17	17	1,526.3	1,922.5	2,500.00					
I-15 NB Offramp	45.0	point18	18	677.6	687.3	2,500.00				Average	
		point19	19	926.0	968.1	2,500.00				Average	
		point20	20	1,047.2	1,105.8	2,500.00				Average	
		point21	21	1,113.3	1,144.4	2,500.00				Average	
		point22	22	1,190.5	1,149.9	2,500.00				Average	
		point23	23	1,248.3	1,119.6	2,500.00				Average	
		point24	24	1,281.4	1,056.2	2,500.00				Average	
		point25	25	1,295.2	954.3	2,500.00				Average	

INPUT: ROADWAYS

14239

		point26	26	1,289.7	918.5	2,500.00					
I-15 NB	75.0	point27	27	384.9	262.4	2,500.00					Average
		point28	28	708.5	769.8	2,500.00					Average
		point29	29	1,548.3	1,985.7	2,500.00					Average
		point30	30	2,283.1	3,122.9	2,500.00					Average
		point31	31	3,341.6	4,732.5	2,500.00					Average
		point32	32	4,277.6	6,114.6	2,500.00					
I-15 SB	75.0	point33	33	4,155.1	6,173.7	2,500.00					Average
		point34	34	3,604.0	5,333.9	2,500.00					Average
		point35	35	2,943.6	4,319.2	2,500.00					Average
		point36	36	2,388.1	3,466.3	2,500.00					Average
		point37	37	1,736.4	2,464.7	2,500.00					Average
		point38	38	1,229.6	1,680.1	2,500.00					Average
		point39	39	573.8	726.8	2,500.00					Average
		point40	40	268.3	275.5	2,500.00					
Stoddard Wells Road- e. of I-15 NB On	40.0	point41	41	1,309.3	902.1	2,500.00					Average
		point42	42	2,383.3	1,185.3	2,500.00					Average
		point43	43	3,209.0	1,398.8	2,500.00					
Driveway A	45.0	point44	44	3,150.9	1,622.0	2,500.00					Average
		point45	45	3,202.9	1,403.3	2,500.00					
Stoddard Wells Road- e. of Drvwy A	40.0	point46	46	3,209.0	1,398.8	2,500.00					Average
		point47	47	3,726.0	1,526.4	2,500.00					Average
		point48	48	4,338.8	1,680.9	2,500.00					Average
		point49	49	4,743.7	1,794.3	2,500.00					Average
		point50	50	4,746.2	1,795.1	2,500.00					
New Outer I-15 Alignment	45.0	point51	51	4,785.0	5,878.5	2,500.00					Average
		point52	52	4,752.8	4,559.8	2,500.00					Average
		point53	53	4,752.6	4,516.2	2,500.00					Average
		point54	54	4,742.1	1,804.0	2,500.00					
Stoddard Wells Rd- e. of New Outer Aln	40.0	point55	55	4,746.2	1,795.1	2,500.00					Average
		point56	56	5,459.8	1,955.2	2,500.00					Average
		point57	57	5,977.8	2,081.9	2,500.00					Average
		point58	58	6,121.1	2,134.3	2,500.00					Average
		point59	59	6,442.0	2,274.4	2,500.00					Average
		point60	60	6,717.5	2,445.2	2,500.00					Average
		point61	61	12,777.3	6,675.1	2,500.00					
South of Driveway A	24.0	point62	62	3,210.2	1,385.7	2,500.00					Average
		point63	63	3,380.9	747.0	2,500.00					

Dudek MG		18 November 2022 TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		14239										
RUN:		Stoddard Apple Valley 143-Yr 2025 w Prj										
Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Stoddard Wells Road- e. of I-15	point1	1	540	45	144	45	36	40	0	0	0	0
	point2	2	540	45	144	45	36	40	0	0	0	0
	point3	3										
Outer Hwy 15 N	point4	4	117	55	31	50	8	45	0	0	0	0
	point5	5	117	55	31	50	8	45	0	0	0	0
	point6	6	117	55	31	50	8	45	0	0	0	0
	point7	7	117	55	31	50	8	45	0	0	0	0
	point8	8	117	55	31	50	8	45	0	0	0	0
	point9	9										
I-15 NB Onramp	point10	10	459	55	122	50	31	45	0	0	0	0
	point11	11	459	55	122	50	31	45	0	0	0	0
	point12	12	459	55	122	50	31	45	0	0	0	0
	point13	13	459	55	122	50	31	45	0	0	0	0
	point14	14	459	55	122	50	31	45	0	0	0	0
	point15	15	459	55	122	50	31	45	0	0	0	0
	point16	16	459	55	122	50	31	45	0	0	0	0
	point17	17										
I-15 NB Offramp	point18	18	0	0	0	0	0	0	0	0	0	0
	point19	19	0	0	0	0	0	0	0	0	0	0
	point20	20	0	0	0	0	0	0	0	0	0	0
	point21	21	0	0	0	0	0	0	0	0	0	0
	point22	22	0	0	0	0	0	0	0	0	0	0
	point23	23	0	0	0	0	0	0	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

	point24	24	0	0	0	0	0	0	0	0	0	0
	point25	25	0	0	0	0	0	0	0	0	0	0
	point26	26										
I-15 NB	point27	27	2694	70	194	65	641	60	0	0	0	0
	point28	28	2694	70	194	65	641	60	0	0	0	0
	point29	29	2694	70	194	65	641	60	0	0	0	0
	point30	30	2694	70	194	65	641	60	0	0	0	0
	point31	31	2694	70	194	65	641	60	0	0	0	0
	point32	32										
I-15 SB	point33	33	2694	70	194	65	641	60	0	0	0	0
	point34	34	2694	70	194	65	641	60	0	0	0	0
	point35	35	2694	70	194	65	641	60	0	0	0	0
	point36	36	2694	70	194	65	641	60	0	0	0	0
	point37	37	2694	70	194	65	641	60	0	0	0	0
	point38	38	2694	70	194	65	641	60	0	0	0	0
	point39	39	2694	70	194	65	641	60	0	0	0	0
	point40	40										
Stoddard Wells Road- e. of I-15 NB On	point41	41	921	45	246	45	61	40	0	0	0	0
	point42	42	921	45	246	45	61	40	0	0	0	0
	point43	43										
Driveway A	point44	44	0	0	0	0	0	0	0	0	0	0
	point45	45										
Stoddard Wells Road- e. of Drvwy A	point46	46	921	45	246	45	61	40	0	0	0	0
	point47	47	921	45	246	45	61	40	0	0	0	0
	point48	48	921	45	246	45	61	40	0	0	0	0
	point49	49	921	45	246	45	61	40	0	0	0	0
	point50	50										
New Outer I-15 Alignment	point51	51	0	0	0	0	0	0	0	0	0	0
	point52	52	0	0	0	0	0	0	0	0	0	0
	point53	53	0	0	0	0	0	0	0	0	0	0
	point54	54										
Stoddard Wells Rd- e. of New Outer Aln	point55	55	921	45	246	45	61	40	0	0	0	0
	point56	56	921	45	246	45	61	40	0	0	0	0
	point57	57	921	45	246	45	61	40	0	0	0	0
	point58	58	921	45	246	45	61	40	0	0	0	0
	point59	59	921	45	246	45	61	40	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes**14239**

	point60	60	921	45	246	45	61	40	0	0	0	0
South of Driveway A	point61	61										
	point62	62	0	0	0	0	0	0	0	0	0	0
	point63	63										

INPUT: RECEIVERS

14239

						18 November 2022					
Dudek						TNM 2.5					
MG											
INPUT: RECEIVERS											
PROJECT/CONTRACT:		14239									
RUN:		Stoddard Apple Valley 143-Yr 2025 w Prj									
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z		above	Existing	Impact	Criteria	
						Ground	L _{Aeq} 1h	L _{Aeq} 1h	Sub'l	Goal	in
			ft	ft	ft	ft	dBA	dBA	dB	dB	Calc.
M1 - Existing Residential	1	1	5,802.4	1,736.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M2 - Existing Residential	2	1	11,016.8	5,612.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M3 - Regional Commercial Zoning	3	1	4,256.1	1,555.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M4 - Estate Residential Zoning	4	1	4,888.8	1,722.1	2,500.00	5.00	0.00	66	10.0	8.0	Y
M5 - Office Professional Zoning	6	1	4,842.6	2,159.7	2,500.00	5.00	0.00	66	10.0	8.0	Y

RESULTS: SOUND LEVELS

14239

Dudek													18 November 2022	
MG													TNM 2.5	
													Calculated with TNM 2.5	
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:		14239												
RUN:		Stoddard Apple Valley 143-Yr 2025 w Prj												
BARRIER DESIGN:		INPUT HEIGHTS												
ATMOSPHERICS:		68 deg F, 50% RH												
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type	With Barrier		Noise Reduction			
						Calculated	Crit'n	Impact	Calculated LAeq1h	Calculated	Goal	Calculated	minus Goal	
							Sub'l Inc							
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	dB	
M1 - Existing Residential	1	1	0.0	56.2	66	56.2	10	----	56.2	0.0	8	-8.0		
M2 - Existing Residential	2	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0		
M3 - Regional Commercial Zoning	3	1	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0		
M4 - Estate Residential Zoning	4	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0		
M5 - Office Professional Zoning	6	1	0.0	55.4	66	55.4	10	----	55.4	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		5	0.0	0.0	0.0									
All Impacted		1	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

Dudek					18 November 2022						
MG					TNM 2.5						
INPUT: ROADWAYS					Average pavement type shall be used unless						
PROJECT/CONTRACT: 14239					a State highway agency substantiates the use						
RUN: Stoddard Apple Valley 143-Yr 2040 w Prj					of a different type with the approval of FHWA						
Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Stoddard Wells Road- e. of I-15	40.0	point1	1	722.1	704.0	2,500.00				Average	
		point2	2	900.6	743.5	2,500.00				Average	
Outer Hwy 15 N	45.0	point3	3	1,309.3	902.1	2,500.00					
		point4	4	638.6	262.9	2,500.00				Average	
		point5	5	1,041.0	341.6	2,500.00				Average	
		point6	6	1,207.2	429.1	2,500.00				Average	
		point7	7	1,277.2	534.0	2,500.00				Average	
		point8	8	1,303.4	717.8	2,500.00				Average	
		point9	9	1,297.5	892.7	2,500.00					
I-15 NB Onramp	45.0	point10	10	1,312.5	922.6	2,500.00				Average	
		point11	11	1,313.8	965.1	2,500.00				Average	
		point12	12	1,308.6	1,090.0	2,500.00				Average	
		point13	13	1,294.5	1,212.3	2,500.00				Average	
		point14	14	1,276.1	1,355.5	2,500.00				Average	
		point15	15	1,311.2	1,516.0	2,500.00				Average	
		point16	16	1,348.6	1,623.2	2,500.00				Average	
		point17	17	1,526.3	1,922.5	2,500.00					
I-15 NB Offramp	45.0	point18	18	677.6	687.3	2,500.00				Average	
		point19	19	926.0	968.1	2,500.00				Average	
		point20	20	1,047.2	1,105.8	2,500.00				Average	
		point21	21	1,113.3	1,144.4	2,500.00				Average	
		point22	22	1,190.5	1,149.9	2,500.00				Average	
		point23	23	1,248.3	1,119.6	2,500.00				Average	
		point24	24	1,281.4	1,056.2	2,500.00				Average	
		point25	25	1,295.2	954.3	2,500.00				Average	

INPUT: ROADWAYS

14239

		point26	26	1,289.7	918.5	2,500.00					
I-15 NB	75.0	point27	27	384.9	262.4	2,500.00					Average
		point28	28	708.5	769.8	2,500.00					Average
		point29	29	1,548.3	1,985.7	2,500.00					Average
		point30	30	2,283.1	3,122.9	2,500.00					Average
		point31	31	3,341.6	4,732.5	2,500.00					Average
		point32	32	4,277.6	6,114.6	2,500.00					
I-15 SB	75.0	point33	33	4,155.1	6,173.7	2,500.00					Average
		point34	34	3,604.0	5,333.9	2,500.00					Average
		point35	35	2,943.6	4,319.2	2,500.00					Average
		point36	36	2,388.1	3,466.3	2,500.00					Average
		point37	37	1,736.4	2,464.7	2,500.00					Average
		point38	38	1,229.6	1,680.1	2,500.00					Average
		point39	39	573.8	726.8	2,500.00					Average
		point40	40	268.3	275.5	2,500.00					
Stoddard Wells Road- e. of I-15 NB On	40.0	point41	41	1,309.3	902.1	2,500.00					Average
		point42	42	2,383.3	1,185.3	2,500.00					Average
		point43	43	3,209.0	1,398.8	2,500.00					
Driveway A	45.0	point44	44	3,150.9	1,622.0	2,500.00					Average
		point45	45	3,202.9	1,403.3	2,500.00					
Stoddard Wells Road- e. of Drvwy A	40.0	point46	46	3,209.0	1,398.8	2,500.00					Average
		point47	47	3,726.0	1,526.4	2,500.00					Average
		point48	48	4,338.8	1,680.9	2,500.00					Average
		point49	49	4,743.7	1,794.3	2,500.00					Average
		point50	50	4,746.2	1,795.1	2,500.00					
New Outer I-15 Alignment	45.0	point51	51	4,785.0	5,878.5	2,500.00					Average
		point52	52	4,752.8	4,559.8	2,500.00					Average
		point53	53	4,752.6	4,516.2	2,500.00					Average
		point54	54	4,742.1	1,804.0	2,500.00					
Stoddard Wells Rd- e. of New Outer Aln	40.0	point55	55	4,746.2	1,795.1	2,500.00					Average
		point56	56	5,459.8	1,955.2	2,500.00					Average
		point57	57	5,977.8	2,081.9	2,500.00					Average
		point58	58	6,121.1	2,134.3	2,500.00					Average
		point59	59	6,442.0	2,274.4	2,500.00					Average
		point60	60	6,717.5	2,445.2	2,500.00					Average
		point61	61	12,777.3	6,675.1	2,500.00					
South of Driveway A	24.0	point62	62	3,210.2	1,385.7	2,500.00					Average
		point63	63	3,380.9	747.0	2,500.00					

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

Dudek MG		18 November 2022 TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		14239										
RUN:		Stoddard Apple Valley 143-Yr 2040 w Prj										
Roadway	Points											
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			Autos		V	S	V	S	V	S	V	S
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Stoddard Wells Road- e. of I-15	point1	1	690	45	156	45	80	40	0	0	0	0
	point2	2	690	45	156	45	80	40	0	0	0	0
	point3	3										
Outer Hwy 15 N	point4	4	124	55	31	50	8	45	0	0	0	0
	point5	5	124	55	31	50	8	45	0	0	0	0
	point6	6	124	55	31	50	8	45	0	0	0	0
	point7	7	124	55	31	50	8	45	0	0	0	0
	point8	8	124	55	31	50	8	45	0	0	0	0
	point9	9										
I-15 NB Onramp	point10	10	560	55	131	50	68	45	0	0	0	0
	point11	11	560	55	131	50	68	45	0	0	0	0
	point12	12	560	55	131	50	68	45	0	0	0	0
	point13	13	560	55	131	50	68	45	0	0	0	0
	point14	14	560	55	131	50	68	45	0	0	0	0
	point15	15	560	55	131	50	68	45	0	0	0	0
	point16	16	560	55	131	50	68	45	0	0	0	0
I-15 NB Offramp	point17	17										
	point18	18	0	0	0	0	0	0	0	0	0	0
	point19	19	0	0	0	0	0	0	0	0	0	0
	point20	20	0	0	0	0	0	0	0	0	0	0
	point21	21	0	0	0	0	0	0	0	0	0	0
	point22	22	0	0	0	0	0	0	0	0	0	0
	point23	23	0	0	0	0	0	0	0	0	0	

INPUT: TRAFFIC FOR LAeq1h Volumes

14239

	point24	24	0	0	0	0	0	0	0	0	0	0
	point25	25	0	0	0	0	0	0	0	0	0	0
	point26	26										
I-15 NB	point27	27	3254	70	325	65	709	60	0	0	0	0
	point28	28	3254	70	325	65	709	60	0	0	0	0
	point29	29	3254	70	325	65	709	60	0	0	0	0
	point30	30	3254	70	325	65	709	60	0	0	0	0
	point31	31	3254	70	325	65	709	60	0	0	0	0
	point32	32										
I-15 SB	point33	33	2694	70	194	65	641	60	0	0	0	0
	point34	34	2694	70	194	65	641	60	0	0	0	0
	point35	35	2694	70	194	65	641	60	0	0	0	0
	point36	36	2694	70	194	65	641	60	0	0	0	0
	point37	37	2694	70	194	65	641	60	0	0	0	0
	point38	38	2694	70	194	65	641	60	0	0	0	0
	point39	39	2694	70	194	65	641	60	0	0	0	0
	point40	40										
Stoddard Wells Road- e. of I-15 NB On	point41	41	1179	45	267	45	143	40	0	0	0	0
	point42	42	1179	45	267	45	143	40	0	0	0	0
	point43	43										
Driveway A	point44	44	24	25	5	25	23	20	0	0	0	0
	point45	45										
Stoddard Wells Road- e. of Drvwy A	point46	46	1155	45	262	45	122	40	0	0	0	0
	point47	47	1155	45	262	45	122	40	0	0	0	0
	point48	48	1155	45	262	45	122	40	0	0	0	0
	point49	49	1155	45	262	45	122	40	0	0	0	0
	point50	50										
New Outer I-15 Alignment	point51	51	236	35	16	35	65	30	0	0	0	0
	point52	52	236	35	16	35	65	30	0	0	0	0
	point53	53	236	35	16	35	65	30	0	0	0	0
	point54	54										
Stoddard Wells Rd- e. of New Outer Aln	point55	55	923	45	246	45	67	40	0	0	0	0
	point56	56	923	45	246	45	67	40	0	0	0	0
	point57	57	923	45	246	45	67	40	0	0	0	0
	point58	58	923	45	246	45	67	40	0	0	0	0
	point59	59	923	45	246	45	67	40	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes**14239**

	point60	60	923	45	246	45	67	40	0	0	0	0
	point61	61										
South of Driveway A	point62	62	0	0	0	0	0	0	0	0	0	0
	point63	63										

INPUT: RECEIVERS

14239

						18 November 2022					
Dudek						TNM 2.5					
MG											
INPUT: RECEIVERS											
PROJECT/CONTRACT:		14239									
RUN:		Stoddard Apple Valley 143-Yr 2040 w Prj									
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	Z		Existing LAeq1h	Impact LAeq1h	Criteria Sub'l	NR Goal	
			ft	ft	ft	ft	dBA	dBA	dB	dB	
M1 - Existing Residential	1	1	5,802.4	1,736.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M2 - Existing Residential	2	1	11,016.8	5,612.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M3 - Regional Commercial Zoning	3	1	4,256.1	1,555.9	2,500.00	5.00	0.00	66	10.0	8.0	Y
M4 - Estate Residential Zoning	4	1	4,888.8	1,722.1	2,500.00	5.00	0.00	66	10.0	8.0	Y
M5 - Office Professional Zoning	6	1	4,842.6	2,159.7	2,500.00	5.00	0.00	66	10.0	8.0	Y

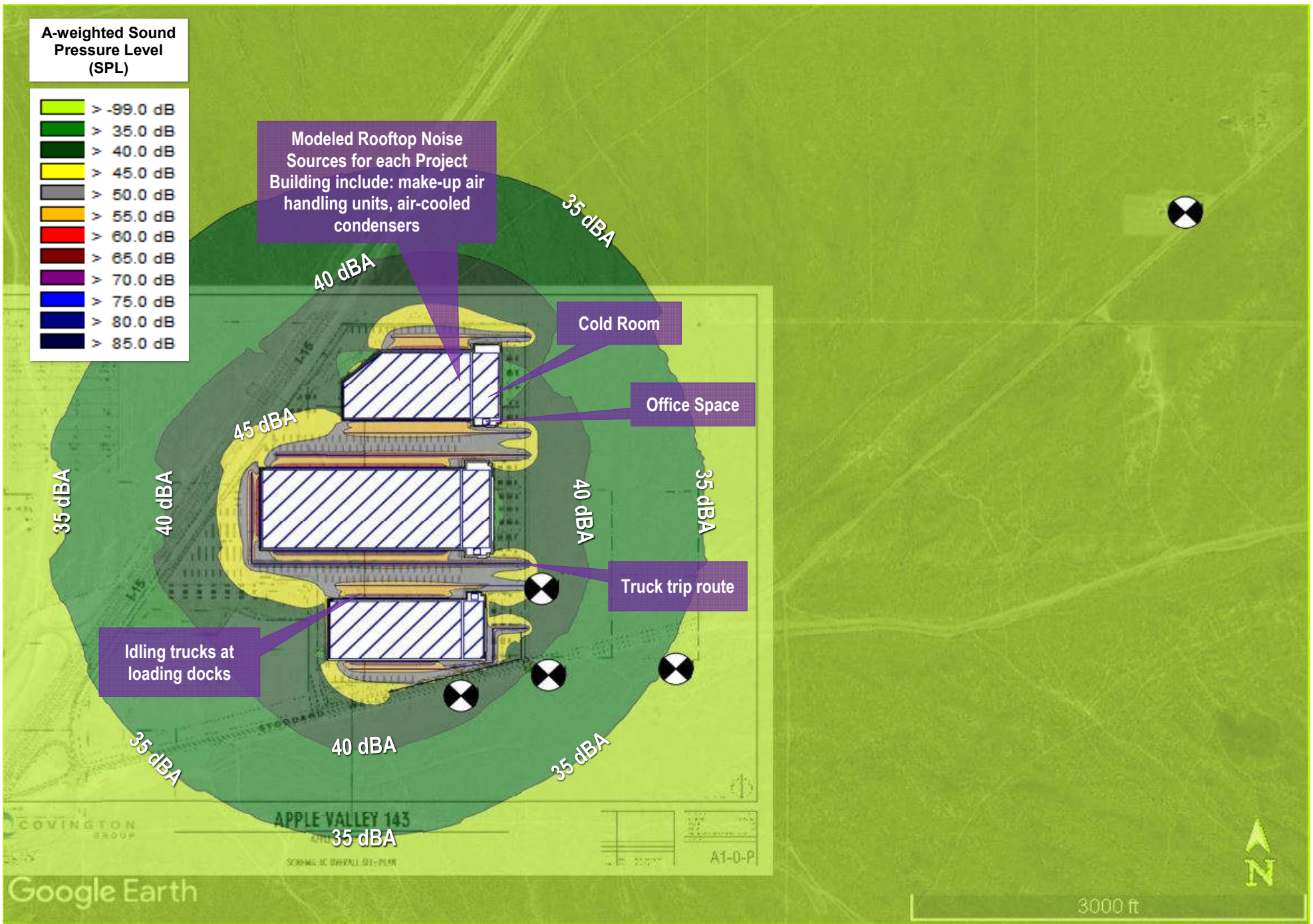
RESULTS: SOUND LEVELS

14239

Dudek		18 November 2022											
MG		TNM 2.5											
		Calculated with TNM 2.5											
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		14239											
RUN:		Stoddard Apple Valley 143-Yr 2040 w Prj											
BARRIER DESIGN:		INPUT HEIGHTS Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	With Barrier		Noise Reduction		Calculated minus Goal
						Calculated	Crit'n		Calculated LAeq1h	Calculated	Goal	Calculated minus Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
M1 - Existing Residential	1	1	0.0	56.4	66	56.4	10	----	56.4	0.0	8	-8.0	
M2 - Existing Residential	2	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0	
M3 - Regional Commercial Zoning	3	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0	
M4 - Estate Residential Zoning	4	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0	
M5 - Office Professional Zoning	6	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

Appendix H-4

Equipment Noise Calculations



SOURCE: Google 2020; Dudek 2022

DUDEK

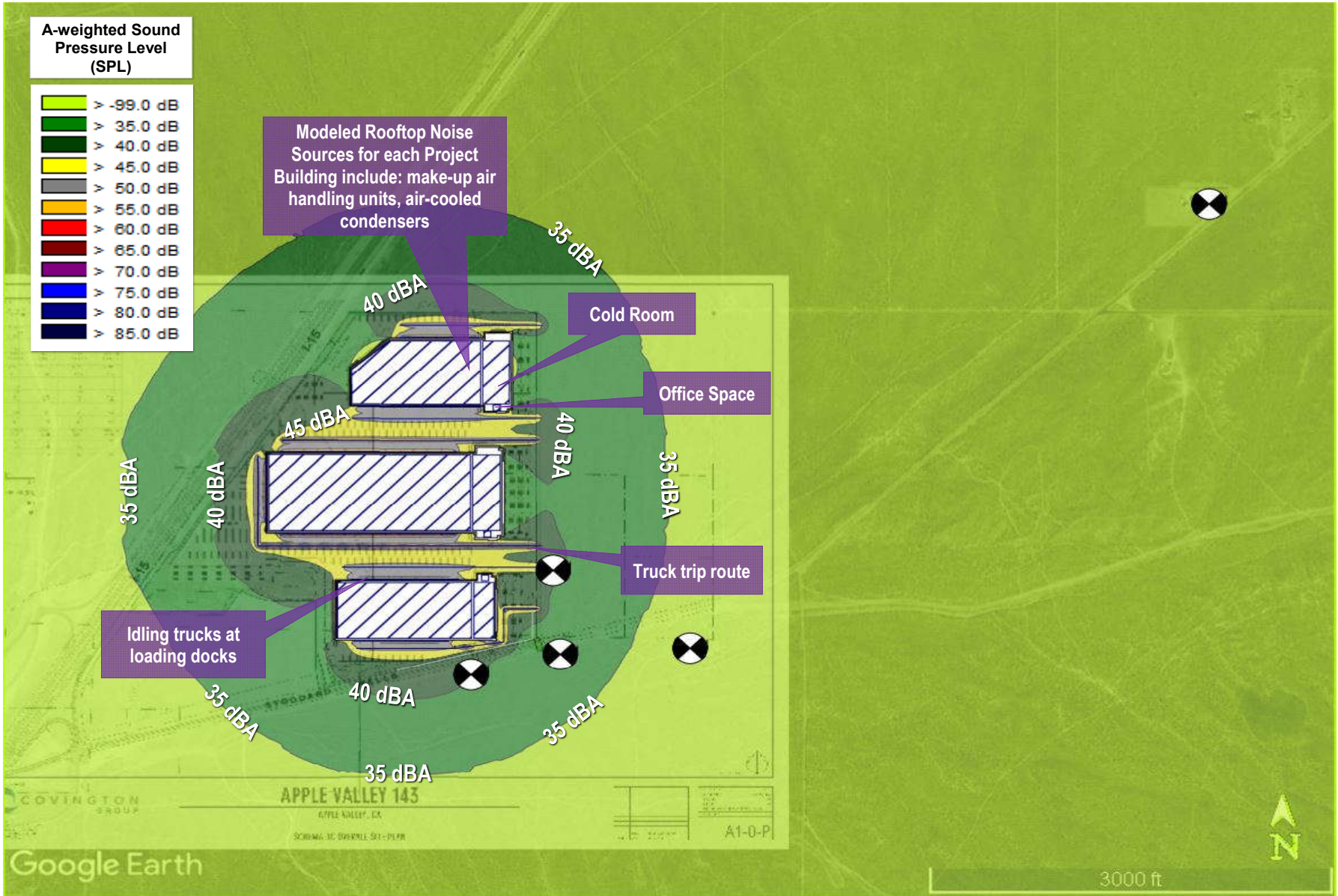


0 414 828 Feet

FIGURE H-4A

Aggregate On-Site Project Noise Emission

Apple Valley Stoddard Wells Warehouse Project (Dudek No. 14239)



SOURCE: Google 2020; Dudek 2022



FIGURE H-4B
Aggregate On-Site Project Noise Emission (Nighttime Scenario)

Apple Valley Stoddard Wells Warehouse Project (Dudek No. 14239)

