Attachment 14A

Acoustical Data Outputs

Noise Measurement Field Data

Project:	MST	**Job Number:**	97541001
Site No.:	ST-1	**Date:**	1/5/2021
Analyst:	Noemi Wyss	**Time:**	2:36 PM
Location:	Beach Range Rd		
Noise Sources:	US-101, pedestirans		
Comments:			

Results (dBA):

	Leq:	Lmin:	Lmax:	Peak:
Measurement 1:	67.2	58.4	83.6	97.7

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	55°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	71%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.016.s	Computer's File Name	LxTse_0006073-20210105 143617-LxT_Data.016.ldbin
Meter	LxT SE		
Firmware	2.402		
User		Location	
Job Description			
Note			

Start Time	2021-01-05 14:36:17	Duration	1:00:00.0		
End Time	2021-01-05 15:36:17	Run Time	1:00:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	67.2 dB		
LAE	102.8 dB	SEA	--- dB
EA	2.1 mPa²h		
LA_{peak}	97.7 dB	2021-01-05 14:54:11	
LAS_{max}	83.6 dB	2021-01-05 15:01:31	
LAS_{min}	58.4 dB	2021-01-05 15:05:31	
LA_{eq}	67.2 dB		
LC_{eq}	77.4 dB	LC_{eq} - LA_{eq}	10.2 dB
LAI_{eq}	68.4 dB	LAI_{eq} - LA_{eq}	1.2 dB

Exceedances

Exceedances	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
67.2 dB	67.2 dB	0.0 dB

LDEN	LDay	LEve	LNight
67.2 dB	67.2 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	67.2 dB		77.4 dB		--- dB	
$Ls_{(max)}$	83.6 dB	2021-01-05 15:01:31	--- dB		--- dB	
$LS_{(min)}$	58.4 dB	2021-01-05 15:05:31	--- dB		--- dB	
$L_{Peak(max)}$	97.7 dB	2021-01-05 14:54:11	--- dB		--- dB	

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	70.9 dB
LAS 10.0	69.3 dB
LAS 33.3	66.7 dB
LAS 50.0	65.6 dB
LAS 66.6	64.5 dB
LAS 90.0	62.5 dB

Noise Measurement Field Data

Project:	MST	**Job Number:**	97541001
Site No.:	ST-2	**Date:**	1/5/2021
Analyst:	Noemi Wyss	**Time:**	10:02 AM
Location:	Ord Ave		
Noise Sources:	US-101		
Comments:			

Results (dBA):

	Leq:	Lmin:	Lmax:	Peak:
Measurement 1:	62.2	52.8	73.7	89.4

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	52°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.07"
Humidity:	31%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.014.s	Computer's File Name	LxTse_0006073-20210105 110335-LxT_Data.014.ldbin
Meter	LxT SE		
Firmware	2.402		
User		Location	
Job Description			
Note			

Start Time	2021-01-05 11:03:35	Duration	1:00:00.0		
End Time	2021-01-05 12:03:35	Run Time	1:00:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	62.2 dB		
LAE	97.7 dB	SEA	--- dB
EA	656.3 µPa²h		
LA_{peak}	89.4 dB	2021-01-05 11:09:26	
LAS_{max}	73.7 dB	2021-01-05 12:00:45	
LAS_{min}	52.8 dB	2021-01-05 11:29:42	
LA_{eq}	62.2 dB		
LC_{eq}	69.9 dB	LC_{eq} - LA_{eq}	7.7 dB
LAI_{eq}	63.1 dB	LAI_{eq} - LA_{eq}	0.9 dB

Exceedances		Count	Duration
LAS >	85.0 dB	0	0:00:00.0
LAS >	115.0 dB	0	0:00:00.0
LApeak >	135.0 dB	0	0:00:00.0
LApeak >	137.0 dB	0	0:00:00.0
LApeak >	140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight	
	62.1 dB	62.1 dB	0.0 dB	
	LDEN	LDay	LEve	LNight
	62.1 dB	62.1 dB	--- dB	--- dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	62.2 dB		69.9 dB		--- dB	
$Ls_{(max)}$	73.7 dB	2021-01-05 12:00:45	--- dB		--- dB	
$LS_{(min)}$	52.8 dB	2021-01-05 11:29:42	--- dB		--- dB	
$L_{Peak(max)}$	89.4 dB	2021-01-05 11:09:26	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	65.2 dB
LAS 10.0	64.3 dB
LAS 33.3	62.5 dB
LAS 50.0	61.6 dB
LAS 66.6	60.7 dB
LAS 90.0	58.4 dB

Noise Measurement Field Data

Project:	MST	**Job Number:**	97541001
Site No.:	ST-3	**Date:**	1/5/2021
Analyst:	Noemi Wyss	**Time:**	12:07 PM
Location:	5th Ave - Future Transit Center		
Noise Sources:	US-101, planes		
Comments:			

Results (dBA):

	Leq:	Lmin:	Lmax:	Peak:
Measurement 1:	62.8	53.5	77.4	96.0

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp: (degrees F)	52°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.27"
Humidity:	59%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.015.s	Computer's File Name	LxTse_0006073-20210105 130444-LxT_Data.015.ldbin
Meter	LxT SE		
Firmware	2.402		
User		Location	
Job Description			
Note			

Start Time	2021-01-05 13:04:44	Duration	1:00:00.0		
End Time	2021-01-05 14:04:44	Run Time	1:00:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	62.8 dB		
LAE	98.3 dB	SEA	--- dB
EA	757.5 µPa²h		
LA_{peak}	96.0 dB	2021-01-05 13:52:31	
LAS_{max}	77.4 dB	2021-01-05 13:52:32	
LAS_{min}	53.5 dB	2021-01-05 14:03:17	
LA_{eq}	62.8 dB		
LC_{eq}	69.7 dB	LC_{eq} - LA_{eq}	6.9 dB
LAI_{eq}	63.7 dB	LAI_{eq} - LA_{eq}	0.9 dB

Exceedances

Exceedances	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
62.8 dB	62.8 dB	0.0 dB	
LDEN	**LDay**	**LEve**	**LNight**
62.8 dB	62.8 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	62.8 dB		69.7 dB		--- dB	
$Ls_{(max)}$	77.4 dB	2021-01-05 13:52:32	--- dB		--- dB	
$LS_{(min)}$	53.5 dB	2021-01-05 14:03:17	--- dB		--- dB	
$L_{Peak(max)}$	96.0 dB	2021-01-05 13:52:31	--- dB		--- dB	

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	66.4 dB
LAS 10.0	65.3 dB
LAS 33.3	62.9 dB
LAS 50.0	61.6 dB
LAS 66.6	60.4 dB
LAS 90.0	58.3 dB

Noise Measurement Field Data

Project:	MST	**Job Number:**	97541001
Site No.:	ST-4	**Date:**	1/5/2021
Analyst:	Noemi Wyss	**Time:**	3:40 PM
Location:	Marina Dr		
Noise Sources:	Dogs playing at school, US-101, and cars on Del Monte Blvd		
Comments:			

Results (dBA):

	Leq:	Lmin:	Lmax:	Peak:
Measurement 1:	60.3	53.2	80.5	97.0

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	56°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.23"
Humidity:	59%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.019.s	Computer's File Name	LxTse_0006073-20210105 164008-LxT_Data.019.ldbin
Meter	LxT SE		
Firmware	2.402		
User		Location	
Job Description			
Note			

Start Time	2021-01-05 16:40:08	Duration	1:00:00.0		
End Time	2021-01-05 17:40:08	Run Time	1:00:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	60.3 dB		
LAE	95.8 dB	SEA	--- dB
EA	424.1 µPa²h		
LA_{peak}	97.0 dB	2021-01-05 17:00:13	
LAS_{max}	80.5 dB	2021-01-05 17:00:14	
LAS_{min}	53.2 dB	2021-01-05 17:08:09	
LA_{eq}	60.3 dB		
LC_{eq}	70.5 dB	LC_{eq} - LA_{eq}	10.3 dB
LAI_{eq}	63.0 dB	LAI_{eq} - LA_{eq}	2.7 dB

Exceedances		Count	Duration
LAS >	85.0 dB	0	0:00:00.0
LAS >	115.0 dB	0	0:00:00.0
LApeak >	135.0 dB	0	0:00:00.0
LApeak >	137.0 dB	0	0:00:00.0
LApeak >	140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight	
	60.3 dB	60.3 dB	0.0 dB	
	LDEN	LDay	LEve	LNight
	60.3 dB	60.3 dB	--- dB	--- dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	60.3 dB		70.5 dB		--- dB	
$Ls_{(max)}$	80.5 dB	2021-01-05 17:00:14	--- dB		--- dB	
$LS_{(min)}$	53.2 dB	2021-01-05 17:08:09	--- dB		--- dB	
$L_{Peak(max)}$	97.0 dB	2021-01-05 17:00:13	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	62.4 dB
LAS 10.0	60.9 dB
LAS 33.3	59.0 dB
LAS 50.0	58.2 dB
LAS 66.6	57.6 dB
LAS 90.0	56.3 dB

Noise Measurement Field Data

Project:	MST	**Job Number:**	97541001
Site No.:	ST-5	**Date:**	1/6/2021
Analyst:	Noemi Wyss	**Time:**	4:34 PM
Location:	Holly Street		
Noise Sources:	US-101, traffic on Del Monte Blvd, dogs barking		
Comments:			

Results (dBA):

	Leq:	Lmin:	Lmax:	Peak:
Measurement 1:	80.5	57.7	110.4	126.0

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	50°
Wind (mph):	6
Sky:	Clear
Bar. Pressure:	30.27"
Humidity:	77%

Photo:

Measurement Report

Report Summary

Meter's File Name	LxT_Data.021.s	Computer's File Name	LxTse_0006073-20210106 163418-LxT_Data.021.ldbin
Meter	LxT SE		
Firmware	2.402		
User		Location	
Job Description			
Note			

Start Time	2021-01-06 16:34:18	Duration	1:00:00.0		
End Time	2021-01-06 17:34:18	Run Time	1:00:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	80.5 dB		
LAE	116.1 dB	SEA	139.0 dB
EA	44.9 mPa²h		
LA_{peak}	126.0 dB	2021-01-06 16:38:08	
LAS_{max}	110.4 dB	2021-01-06 16:38:09	
LAS_{min}	57.7 dB	2021-01-06 17:22:01	
LA_{eq}	80.5 dB		
LC_{eq}	88.8 dB	LC_{eq} - LA_{eq}	8.3 dB
LAI_{eq}	84.5 dB	LAI_{eq} - LA_{eq}	4.0 dB

Exceedances

Exceedances		Count	Duration
LAS >	85.0 dB	44	0:03:25.3
LAS >	115.0 dB	0	0:00:00.0
LApeak >	135.0 dB	0	0:00:00.0
LApeak >	137.0 dB	0	0:00:00.0
LApeak >	140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
80.5 dB	80.5 dB	0.0 dB	

LDEN	LDay	LEve	LNight
80.5 dB	80.5 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	80.5 dB		88.8 dB		--- dB	
$Ls_{(max)}$	110.4 dB	2021-01-06 16:38:09	--- dB		--- dB	
$LS_{(min)}$	57.7 dB	2021-01-06 17:22:01	--- dB		--- dB	
$L_{Peak(max)}$	126.0 dB	2021-01-06 16:38:08	--- dB		--- dB	

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	84.6 dB
LAS 10.0	80.8 dB
LAS 33.3	73.4 dB
LAS 50.0	69.7 dB
LAS 66.6	67.0 dB
LAS 90.0	62.8 dB

Noise Measurement Field Data				
Project:	MST		**Job Number:**	97541001
Site No.:	LT-1		**Date:**	1/5/2021
Analyst:	Noemi Wyss		**Time:**	2:30 PM
Location:	Afton Avenue & California Avenue			
Noise Sources:	US-101			
Comments:	Long term measurement			
Results (dBA):				
	Leq:	**Lmin:**	**Lmax:**	**Peak:**
Measurement 1:	63.2	46.9	94.0	118.8

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.25"
Humidity:	71%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.055.s	Computer's File Name	LxTse_0003364-20201211 203819-LxT_Data.055.ldbin
Meter	LxT SE		
Firmware	2.301		
User		Location	
Job Description			
Note			

Start Time	2020-12-11 20:38:19	Duration	24:13:36.2		
End Time	2020-12-12 20:51:55	Run Time	24:12:47.3	Pause Time	0:00:48.9

Results

Overall Metrics

LA_{eq}	63.2 dB		
LAE	112.6 dB	SEA	--- dB
EA	20.3 mPa²h		
LA_{peak}	118.8 dB	2020-12-11 20:38:47	
LAS_{max}	94.0 dB	2020-12-12 12:44:53	
LAS_{min}	46.9 dB	2020-12-12 08:51:51	
LA_{eq}	63.2 dB		
LC_{eq}	72.2 dB	LC_{eq} - LA_{eq}	9.0 dB
LAI_{eq}	65.8 dB	LAI_{eq} - LA_{eq}	2.6 dB

Exceedances	Count	Duration
LAS > 85.0 dB	7	0:00:44.10
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight	
	66.9 dB	64.5 dB	0.0 dB	
	LDEN	LDay	LEve	LNight
	67.6 dB	64.4 dB	64.8 dB	59.3 dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	63.2 dB		72.2 dB		--- dB	
$Ls_{(max)}$	94.0 dB	2020-12-12 12:44:53	--- dB		--- dB	
$LS_{(min)}$	46.9 dB	2020-12-12 08:51:51	--- dB		--- dB	
$L_{Peak(max)}$	118.8 dB	2020-12-11 20:38:47	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	68.7 dB
LAS 10.0	64.9 dB
LAS 33.3	57.1 dB
LAS 50.0	55.6 dB
LAS 66.6	54.5 dB
LAS 90.0	52.8 dB

Noise Measurement Field Data

Project:	MST	**Job Number:**	97541001
Site No.:	LT-2	**Date:**	1/5/2021
Analyst:	Noemi Wyss	**Time:**	4:01 PM
Location:	Cypress Avenue		
Noise Sources:	US-101, traffic from Del Monte Blvd		
Comments:	Long term measurement		

Results (dBA):

	Leq:	Lmin:	Lmax:	Peak:
Measurement 1:	62.0	36.6	106.2	124.9

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	56°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.23"
Humidity:	59%

Photo:

0

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LxT_Data.119.s	Computer's File Name	LxTse_0004201-20201211 124334-LxT_Data.119.ldbin
Meter	LxT SE		
Firmware	2.402		
User		Location	
Job Description			
Note			

Start Time	2020-12-11 12:43:34	Duration	24:13:45.6		
End Time	2020-12-12 12:57:19	Run Time	24:13:45.6	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	62.0 dB		
LAE	111.4 dB	SEA	134.9 dB
EA	15.4 mPa²h		
LA_{peak}	124.9 dB	2020-12-12 08:08:51	
LAS_{max}	106.2 dB	2020-12-12 08:08:51	
LAS_{min}	36.6 dB	2020-12-11 22:48:56	
LA_{eq}	62.0 dB		
LC_{eq}	68.7 dB	LC_{eq} - LA_{eq}	6.7 dB
LAI_{eq}	70.0 dB	LAI_{eq} - LA_{eq}	8.0 dB

Exceedances		Count	Duration
LAS >	85.0 dB	6	0:00:28.3
LAS >	115.0 dB	0	0:00:00.0
LApeak >	135.0 dB	0	0:00:00.0
LApeak >	137.0 dB	0	0:00:00.0
LApeak >	140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight	
	66.5 dB	63.0 dB	0.0 dB	
	LDEN	LDay	LEve	LNight
	66.5 dB	64.0 dB	46.9 dB	59.4 dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	62.0 dB		68.7 dB		--- dB	
$Ls_{(max)}$	106.2 dB	2020-12-12 08:08:51	--- dB		--- dB	
$LS_{(min)}$	36.6 dB	2020-12-11 22:48:56	--- dB		--- dB	
$L_{Peak(max)}$	124.9 dB	2020-12-12 08:08:51	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	1	0:00:02.0	1	0:00:02.0

Statistics

LAS 5.0	62.5 dB
LAS 10.0	59.3 dB
LAS 33.3	51.5 dB
LAS 50.0	48.7 dB
LAS 66.6	46.1 dB
LAS 90.0	40.3 dB

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/21/2021
Case Description: Grading

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Commercial	Commercial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		65.0	0.0
Dozer	No	40		81.7	65.0	0.0
Tractor	No	40	84.0		65.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	82.7	78.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	79.4	75.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.7	82.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Industrial	Industrial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		65.0	0.0
Dozer	No	40		81.7	65.0	0.0
Tractor	No	40	84.0		65.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	82.7	78.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	79.4	75.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.7	82.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	1.0	1.1	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)

Description	Device	(%)	(dBA)	(dBA)	(feet)	(dBA)
Grader	No	40	85.0		90.0	0.0
Dozer	No	40		81.7	90.0	0.0
Tractor	No	40	84.0		90.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	79.9	75.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	76.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78.9	74.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	79.9	79.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/21/2021
Case Description: Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Commercial	Commercial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80.0	65.0	0.0
Paver	No	50		77.2	65.0	0.0
Concrete Mixer Truck	No	40		78.8	65.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Roller	77.7	70.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	74.9	71.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	76.5	72.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.7	76.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Industrial	Industrial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80.0	65.0	0.0
Paver	No	50		77.2	65.0	0.0
Concrete Mixer Truck	No	40		78.8	65.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Roller	77.7	70.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	74.9	71.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	76.5	72.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.7	76.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	1.0	1.1	1.0

Equipment

	Impact	Usage	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding

Description	Device	(%)	(dBA)	(dBA)	(feet)	(dBA)
Roller	No	20		80.0	90.0	0.0
Paver	No	50		77.2	90.0	0.0
Concrete Mixer Truck	No	40		78.8	90.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Roller	74.9	67.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	72.1	69.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	73.7	69.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.9	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/21/2021
Case Description: Site Preparation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Commercial	Commercial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		65.0	0.0
Dozer	No	40		81.7	65.0	0.0
Scraper	No	40		83.6	65.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	82.7	78.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	79.4	75.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	81.3	77.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.7	82.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Industrial	Industrial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		65.0	0.0
Dozer	No	40		81.7	65.0	0.0
Scraper	No	40		83.6	65.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	82.7	78.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	79.4	75.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	81.3	77.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.7	82.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential	Residential	1.0	1.1	1.0

Equipment

	Impact	Usage	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding

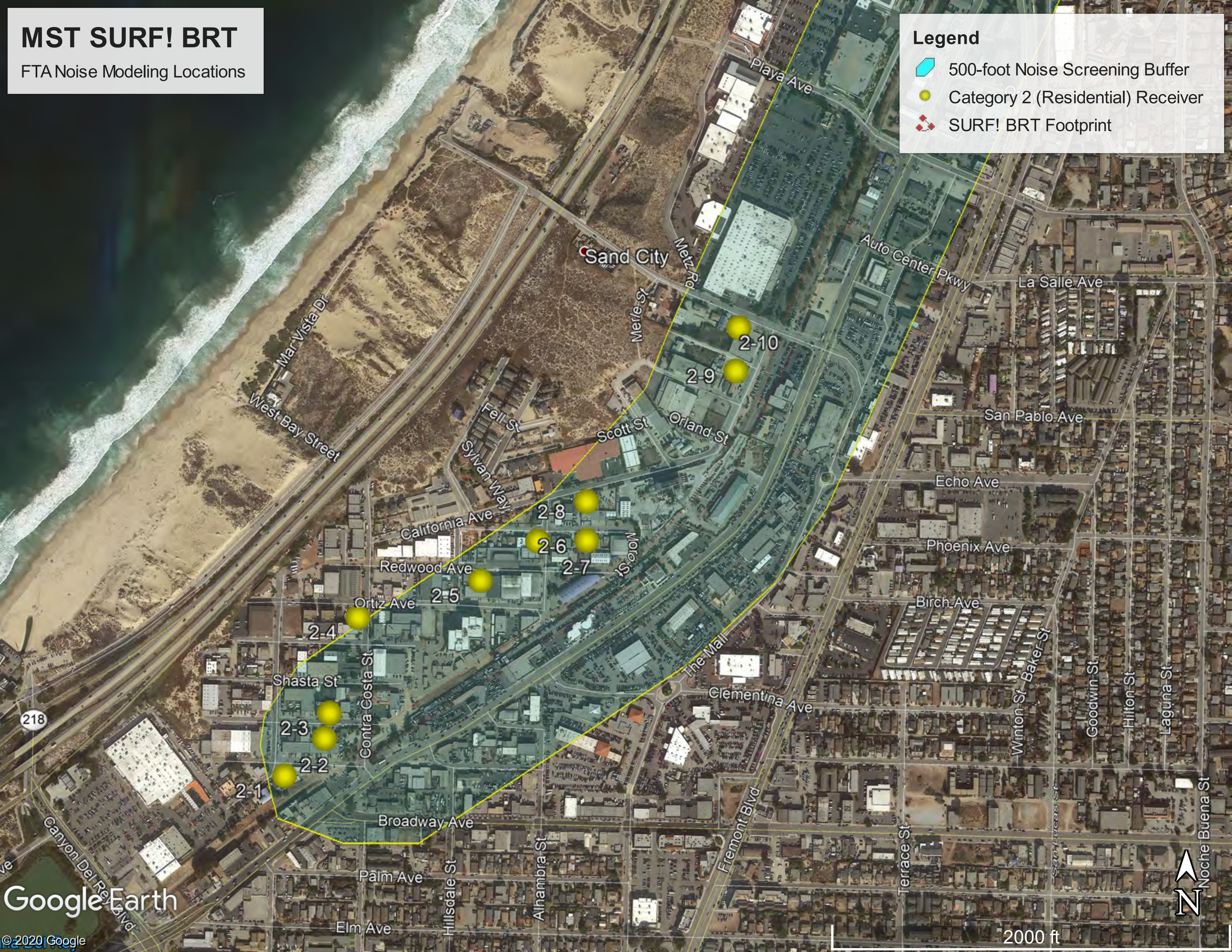
```
Description    Device   (%)     (dBA)   (dBA)      (feet)      (dBA)
-----------    ------  -----    -----   -----     --------    ---------
Grader             No     40     85.0                 90.0          0.0
Dozer              No     40             81.7         90.0          0.0
Scraper            No     40             83.6         90.0          0.0


                                     Results
                                     -------
                                                                Noise Limits (dBA)
                   Noise Limit Exceedance (dBA)

----------------------------------------------
----------------------------------------------
                        Calculated (dBA)         Day           Evening
Night                Day           Evening         Night
                        ----------------   --------------   -------------

--------------    --------------  --------------  --------------
Equipment                  Lmax     Leq        Lmax     Leq     Lmax     Leq      Lmax
 Leq        Lmax     Leq      Lmax     Leq     Lmax     Leq
----------------------  ------  ------     ------  ------  ------  ------  ------

------    ------  ------  ------  ------  ------  ------
Grader                    79.9     75.9        N/A     N/A     N/A     N/A     N/A
 N/A        N/A     N/A     N/A     N/A     N/A     N/A
Dozer                     76.6     72.6        N/A     N/A     N/A     N/A     N/A
 N/A        N/A     N/A     N/A     N/A     N/A     N/A
Scraper                   78.5     74.5        N/A     N/A     N/A     N/A     N/A
 N/A        N/A     N/A     N/A     N/A     N/A     N/A
               Total      79.9     79.3        N/A     N/A     N/A     N/A     N/A
 N/A        N/A     N/A     N/A     N/A     N/A     N/A
```



MST SURF! BRT
FTA Noise Modeling Locations
Legend
500-foot Noise Screening Buffer
Category 2 (Residential) Receiver
SURF! BRT Footprint
Sand City
Playa Ave
Auto Center Pkwy
La Salle Ave
Metz Rd
Merle St
Mar Vista Dr
West Bay Street
Fell St
Sylvan Way
Scott St
Orland St
San Pablo Ave
Echo Ave
California Ave
Phoenix Ave
Redwood Ave
Moro St
Birch Ave
Ortiz Ave
Shasta St
Contra Costa St
The Mall
Clementina Ave
Broadway Ave
Fremont Blvd
Canyon Del Rey Blvd
Palm Ave
Hillsdale St
Alhambra St
Elm Ave
Terrace St
Winton St
Baker St
Goodwin St
Hilton St
Laguna St
Noche Buena St
218
2-1
2-2
2-3
2-4
2-5
2-6
2-7
2-8
2-9
2-10
N
2000 ft
Google Earth
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MST SURF! BRT
FTA Noise Modeling Locations
Legend
500-foot Noise Screening Buffer
Category 2 (Residential) Receiver
Category 3 (Institutional) Receiver
SURF! BRT Footprint
2-12
3-1
2-11
Monterey Rd
Ord Ave
Sea Ridge Ct
Sea Crest Ct
Ficus Ct
Wisteria Way
Dahlia Dr
Crocus Ct
Cabrillo Hwy
California Ave
Del Monte Blvd
E Frontage Rd
Playa Ave
Ord Grove Ave
Noche Buena St
Cross St
Alta Vista Ct
Metz Ave
Mira Mar Ave
N
2000 ft
Google Earth
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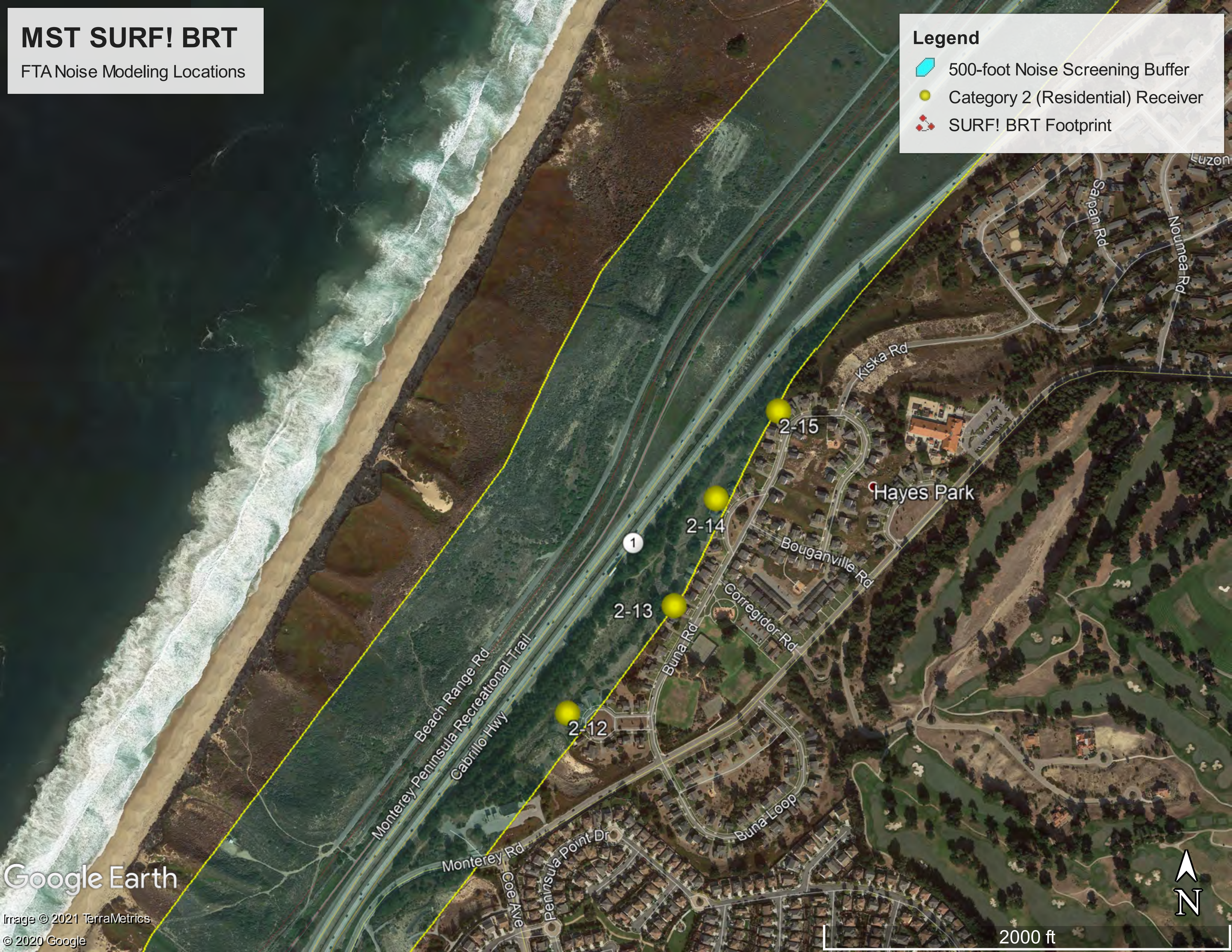
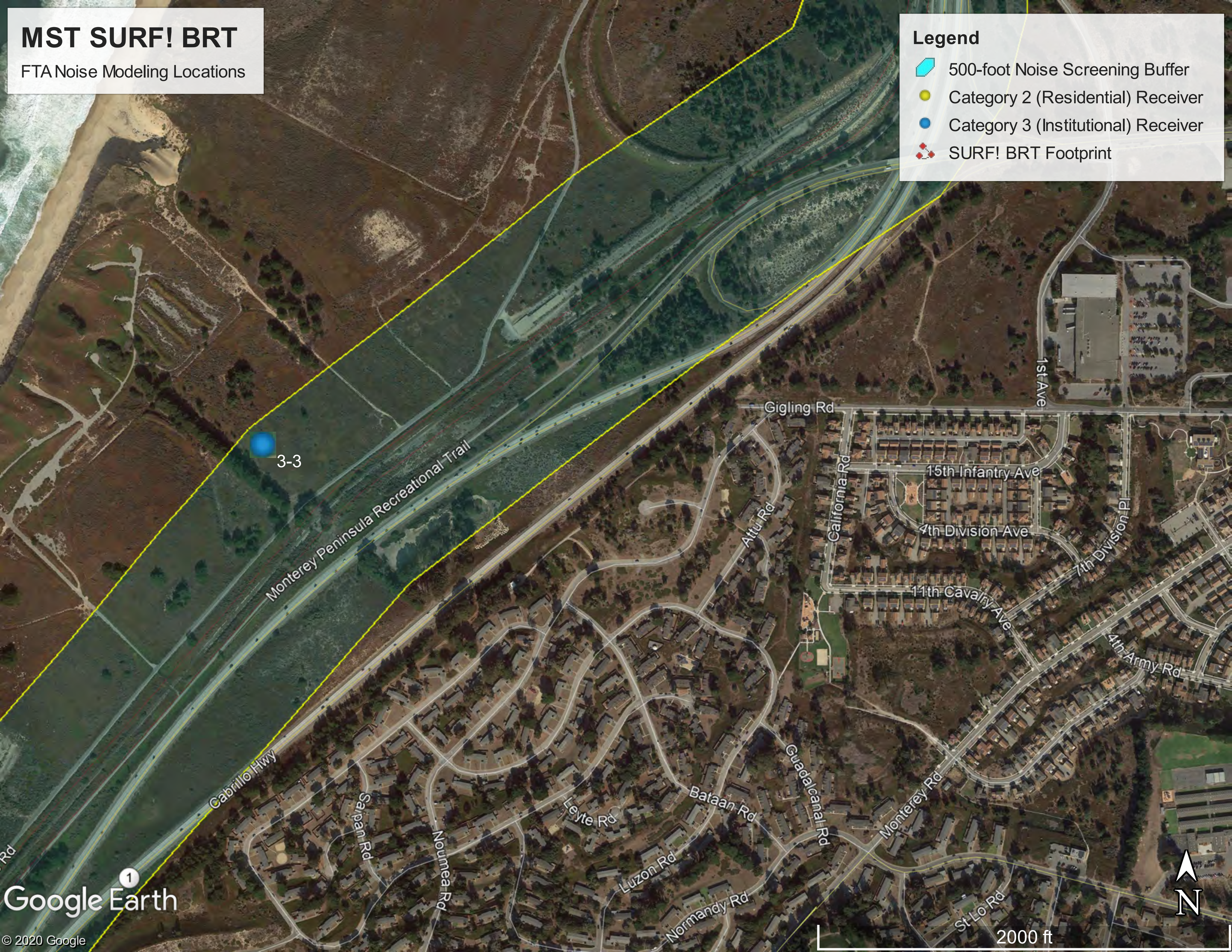
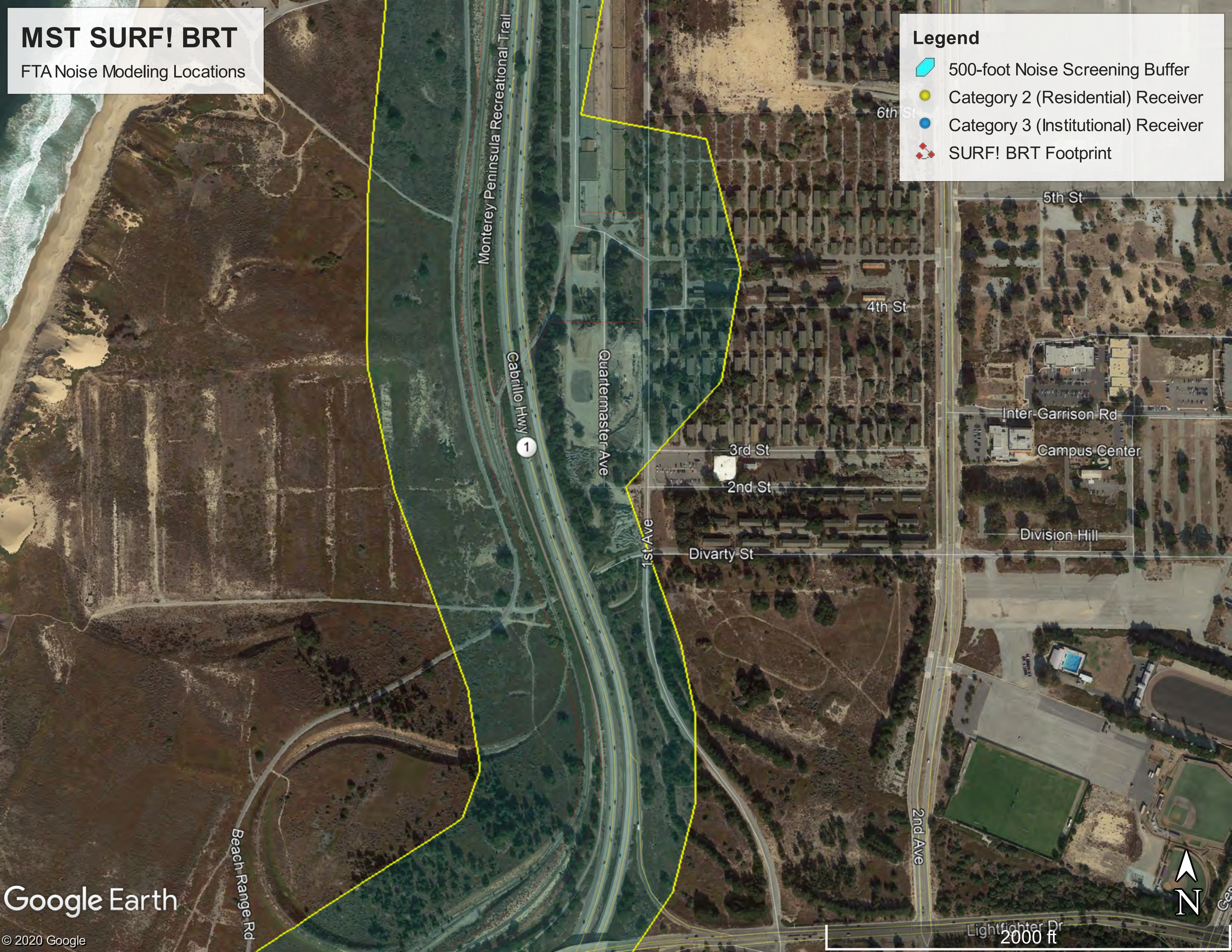


MST SURF! BRT
FTA Noise Modeling Locations
Legend
500-foot Noise Screening Buffer
Category 2 (Residential) Receiver
SURF! BRT Footprint
Luzon
Saipan Rd
Noumea Rd
Kiska Rd
2-15
Hayes Park
2-14
1
Bouganville Rd
2-13
Corregidor Rd
Buna Rd
Beach Range Rd
Monterey Peninsula Recreational Trail
Cabrillo Hwy
2-12
Buna Loop
Peninsula Point Dr
Monterey Rd
Coe Ave
Google Earth
Image © 2021 TerraMetrics
© 2020 Google
N
2000 ft


MST SURF! BRT
FTA Noise Modeling Locations
Legend
500-foot Noise Screening Buffer
Category 2 (Residential) Receiver
Category 3 (Institutional) Receiver
SURF! BRT Footprint
3-3
Monterey Peninsula Recreational Trail
Cabrillo Hwy
Gigling Rd
1st Ave
California Rd
15th Infantry Ave
4th Division Ave
7th Division Pl
11th Cavalry Ave
4th Army Rd
Attu Rd
Guadalcanal Rd
Bataan Rd
Leyte Rd
Saipan Rd
Noumea Rd
Luzon Rd
Normandy Rd
Monterey Rd
St Lo Rd
Rd
1
Google Earth
© 2020 Google
2000 ft
N



MST SURF! BRT
FTA Noise Modeling Locations
Legend
500-foot Noise Screening Buffer
Category 2 (Residential) Receiver
Category 3 (Institutional) Receiver
SURF! BRT Footprint
Monterey Peninsula Recreational Trail
Cabrillo Hwy
1
Quartermaster Ave
6th St
5th St
4th St
3rd St
2nd St
1st Ave
Divarty St
Inter-Garrison Rd
Campus Center
Division Hill
2nd Ave
Beach Range Rd
Lightfighter Dr
2000 ft
N
Google Earth
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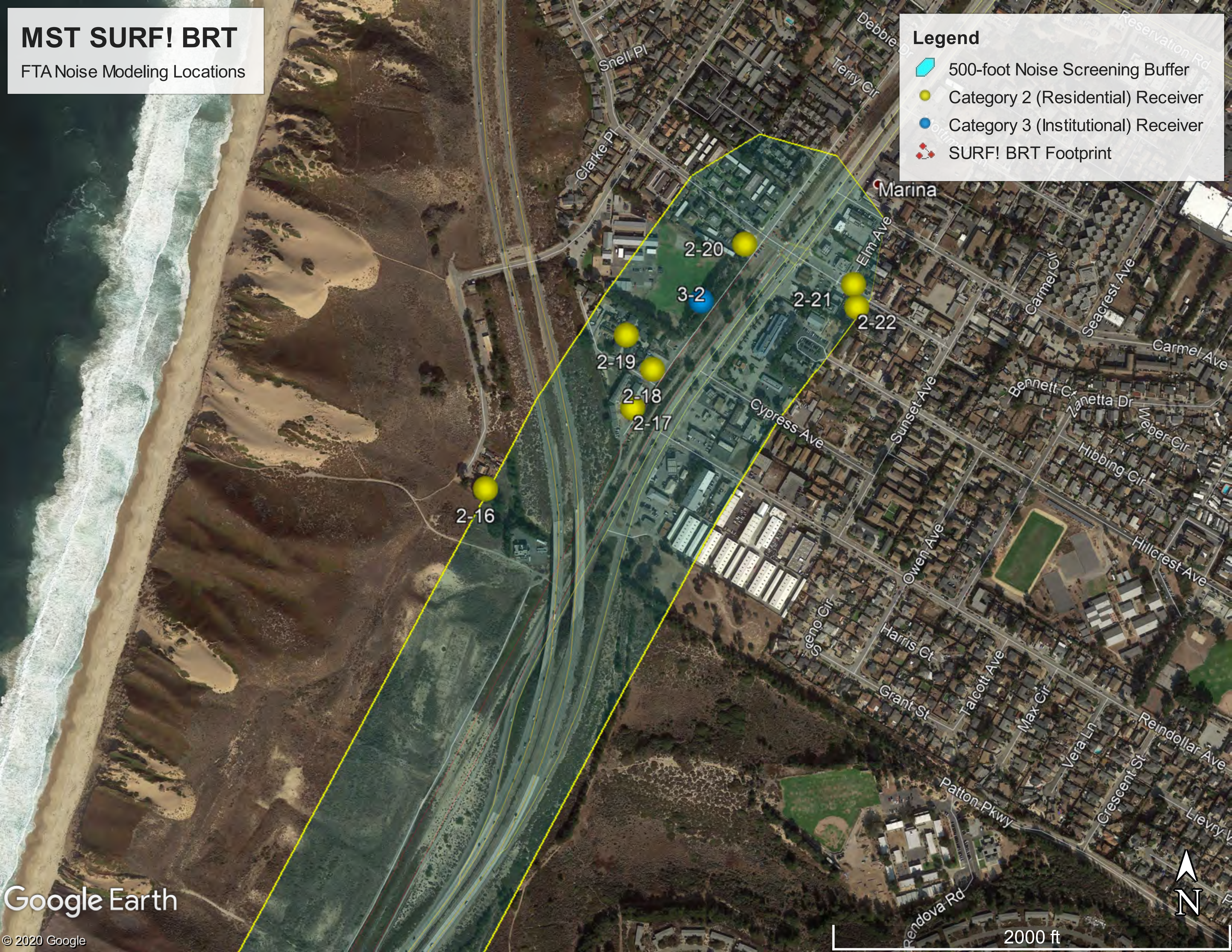
MST SURF! BRT
FTA Noise Modeling Locations
Legend
500-foot Noise Screening Buffer
Category 2 (Residential) Receiver
Category 3 (Institutional) Receiver
SURF! BRT Footprint
Monterey Peninsula Recreational Trail
Beach Range Rd
Cabrillo Hwy
1st Ave
2nd Ave
3rd Ave
General Stilwell Dr
Eleventh St
10th St
8th St
Shorebirds Pl
2000 ft
N
Google Earth
© 2020 Google


MST SURF! BRT
FTA Noise Modeling Locations
Legend
500-foot Noise Screening Buffer
Category 2 (Residential) Receiver
Category 3 (Institutional) Receiver
SURF! BRT Footprint
2-16
2-17
2-18
2-19
2-20
2-21
2-22
3-2
Marina
Snell Pl
Clarke Pl
Debbie Dr
Terry Cir
Reservation Rd
Elm Ave
Carmel Cir
Seacrest Ave
Carmel Ave
Bennett Ct
Zanetta Dr
Weber Cir
Hibbing Cir
Cypress Ave
Sunset Ave
Owen Ave
Hillcrest Ave
Harris Ct
Grant St
Talcott Ave
Max Cir
Vera Ln
Crescent St
Reindollar Ave
Patton Pkwy
Rendova Rd
Google Earth
© 2020 Google
2000 ft
N

Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	**MST SURF! BRT**

Receiver Parameters	
Receiver:	**Receiver 2-1**
Land Use Category:	**2. Residential**
Existing Noise (Measured or Generic Value):	**67 dBA**

Noise Source Parameters	
Number of Noise Sources:	**2**

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	**Distance from Source to Receiver (ft)**	370
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	**Avg. Number of Buses/hr**	12
Nighttime hrs	**Avg. Number of Buses/hr**	12
Distance	**Distance from Source to Receiver (ft)**	20000
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

Noise Barrier?	

Noise Barrier?	

Noise Barrier?	

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	52 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

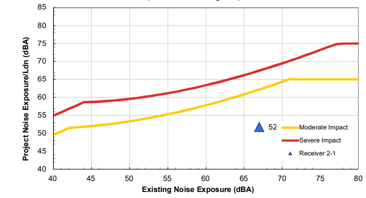
Source 1 Results

Leq(day):	45.3 dBA
Leq(night):	45.3 dBA
Ldn:	51.8 dBA

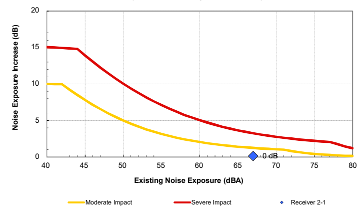
Source 2 Results

Leq(day):	1.1 dBA
Leq(night):	1.1 dBA
Ldn:	7.6 dBA
Incremental Ldn (Src 1-2):	51.8 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-2
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	175
	Number of Intervening Rows of Buildings	1
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	19865
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

	Noise Barrier?

	Noise Barrier?

	Noise Barrier?

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	52 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

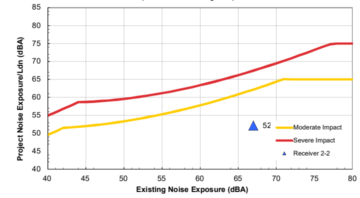
Source 1 Results

Leq(day):	45.7 dBA
Leq(night):	45.7 dBA
Ldn:	52.1 dBA

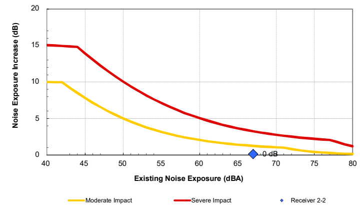
Source 2 Results

Leq(day):	1.2 dBA
Leq(night):	1.2 dBA
Ldn:	7.6 dBA
Incremental Ldn (Src 1-2):	52.1 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-3
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	185
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	19630
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

	Noise Barrier?	

	Noise Barrier?	

	Noise Barrier?	

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	56 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

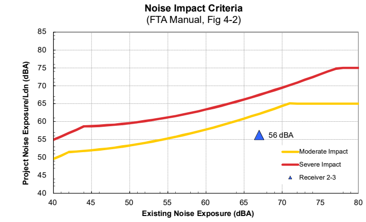
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

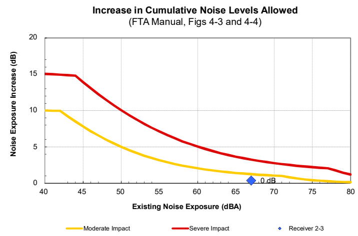
Source 1 Results

Leq(day):	49.9 dBA
Leq(night):	49.9 dBA
Ldn:	56.3 dBA

Source 2 Results

Leq(day):	1.3 dBA
Leq(night):	1.3 dBA
Ldn:	7.8 dBA
Incremental Ldn (Src 1-2):	56.3 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-4
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	45 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	500
	Number of Intervening Rows of Buildings	1
Adjustments	Noise Barrier?	No

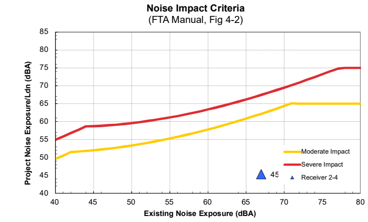
Source 1 Results

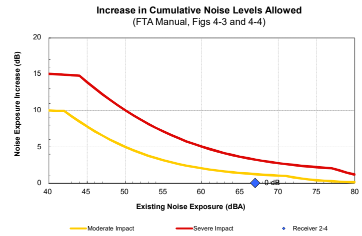
Leq(day):	38.9 dBA
Leq(night):	38.9 dBA
Ldn:	45.3 dBA

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	19175
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Source 2 Results

Leq(day):	1.6 dBA
Leq(night):	1.6 dBA
Ldn:	8.0 dBA
Incremental Ldn (Src 1-2):	45.3 dBA





	Noise Barrier?

	Noise Barrier?

	Noise Barrier?

Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters		
	Receiver:	Receiver 2-5
	Land Use Category:	2. Residential
	Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters		
	Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	310
	Number of Intervening Rows of Buildings	1
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	18680
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

	Noise Barrier?	

	Noise Barrier?	

	Noise Barrier?	

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	48 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

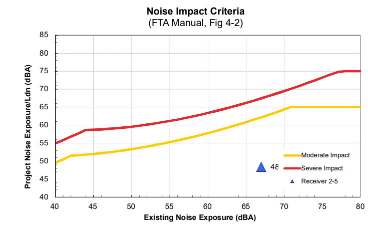
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

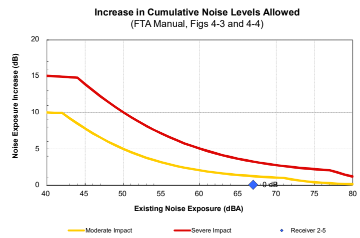
Source 1 Results

Leq(day):	42.0 dBA
Leq(night):	42.0 dBA
Ldn:	48.4 dBA

Source 2 Results

Leq(day):	1.9 dBA
Leq(night):	1.9 dBA
Ldn:	8.3 dBA
Incremental Ldn (Src 1-2):	48.4 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-6
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	335
	Number of Intervening Rows of Buildings	1
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	18380
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?

Noise Barrier?

Noise Barrier?

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	48 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

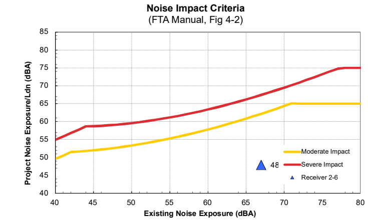
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

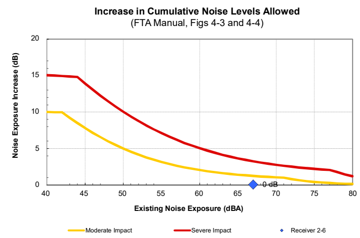
Source 1 Results

Leq(day):	41.5 dBA
Leq(night):	41.5 dBA
Ldn:	47.9 dBA

Source 2 Results

Leq(day):	2.1 dBA
Leq(night):	2.1 dBA
Ldn:	8.5 dBA
Incremental Ldn (Src 1-2):	47.9 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters

Receiver:	Receiver 2-7
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters

Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	185
	Number of Intervening Rows of Buildings	1
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	18250
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

	Noise Barrier?

	Noise Barrier?

	Noise Barrier?

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	52 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

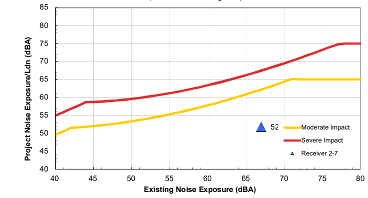
Source 1 Results

Leq(day):	45.4 dBA
Leq(night):	45.4 dBA
Ldn:	51.8 dBA

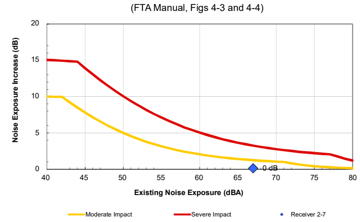
Source 2 Results

Leq(day):	2.1 dBA
Leq(night):	2.1 dBA
Ldn:	8.5 dBA
Incremental Ldn (Src 1-2):	51.8 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-8
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	350
	Number of Intervening Rows of Buildings	1
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	18000
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?	

Noise Barrier?	

Noise Barrier?	

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	48 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

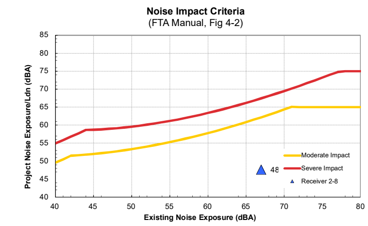
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

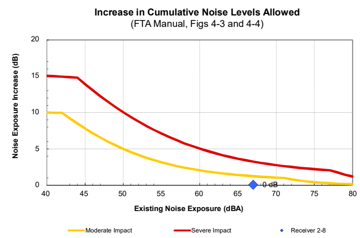
Source 1 Results

Leq(day):	41.2 dBA
Leq(night):	41.2 dBA
Ldn:	47.6 dBA

Source 2 Results

Leq(day):	2.3 dBA
Leq(night):	2.3 dBA
Ldn:	8.7 dBA
Incremental Ldn (Src 1-2):	47.6 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-9
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	100
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	17100
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?	

Noise Barrier?	

Noise Barrier?	

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	60 dBA
Total Noise Exposure:	68 dBA
Increase:	1 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

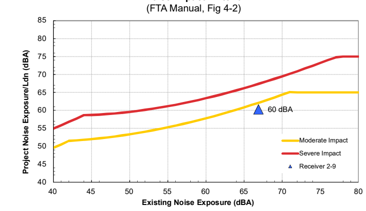
Source 1 Results

Leq(day):	53.9 dBA
Leq(night):	53.9 dBA
Ldn:	60.3 dBA

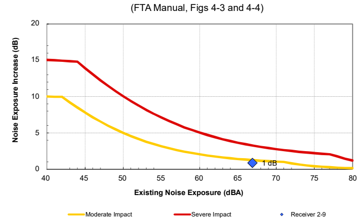
Source 2 Results

Leq(day):	2.8 dBA
Leq(night):	2.8 dBA
Ldn:	9.3 dBA
Incremental Ldn (Src 1-2):	60.3 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters		
	Receiver:	Receiver 2-10
	Land Use Category:	2. Residential
	Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters		
	Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	200
	Number of Intervening Rows of Buildings	1
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	16930
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?	

Noise Barrier?	

Noise Barrier?	

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	51 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

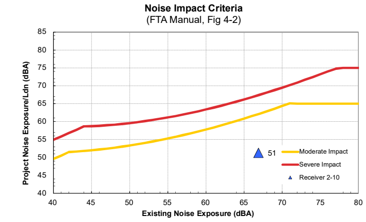
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

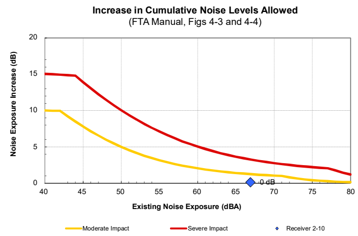
Source 1 Results

Leq(day):	44.9 dBA
Leq(night):	44.9 dBA
Ldn:	51.3 dBA

Source 2 Results

Leq(day):	2.9 dBA
Leq(night):	2.9 dBA
Ldn:	9.4 dBA
Incremental Ldn (Src 1-2):	51.3 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters

Receiver:	Receiver 2-11
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters

Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	475
	Number of Intervening Rows of Buildings	1
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	14350
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?	

Noise Barrier?	

Noise Barrier?	

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	46 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

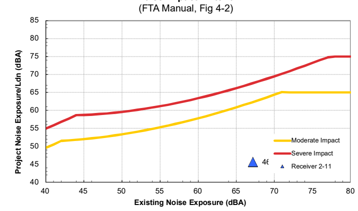
Source 1 Results

Leq(day):	39.2 dBA
Leq(night):	39.2 dBA
Ldn:	45.6 dBA

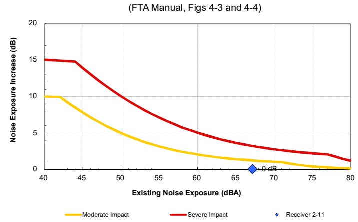
Source 2 Results

Leq(day):	4.7 dBA
Leq(night):	4.7 dBA
Ldn:	11.2 dBA
Incremental Ldn (Src 1-2):	45.6 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-12
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	385
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	10340
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?

Noise Barrier?

Noise Barrier?

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	51 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

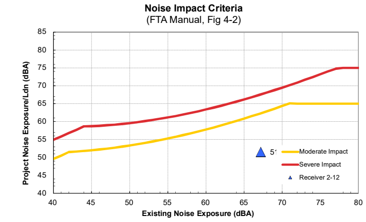
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

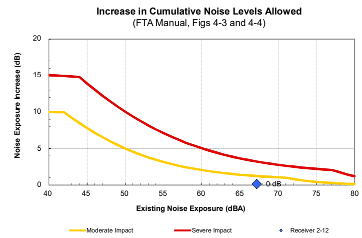
Source 1 Results

Leq(day):	45.1 dBA
Leq(night):	45.1 dBA
Ldn:	51.5 dBA

Source 2 Results

Leq(day):	8.3 dBA
Leq(night):	8.3 dBA
Ldn:	14.7 dBA
Incremental Ldn (Src 1-2):	51.5 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	**MST SURF! BRT**

Project Results Summary

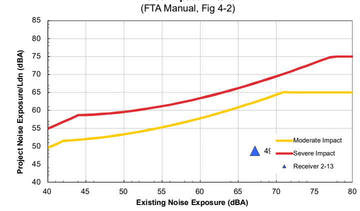
Existing Ldn:	67 dBA
Total Project Ldn:	49 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Receiver Parameters	
Receiver:	**Receiver 2-13**
Land Use Category:	**2. Residential**
Existing Noise (Measured or Generic Value):	**67 dBA**

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

Noise Impact Criteria
(FTA Manual, Fig 4-2)



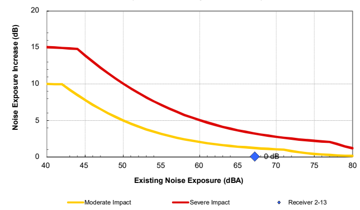
Noise Source Parameters	
Number of Noise Sources:	**2**

Noise Source Parameters		**Source 1**
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	**Distance from Source to Receiver (ft)**	590
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

Source 1 Results

Leq(day):	42.3 dBA
Leq(night):	42.3 dBA
Ldn:	48.7 dBA

Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Noise Source Parameters		**Source 2**
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	**Avg. Number of Buses/hr**	12
Nighttime hrs	**Avg. Number of Buses/hr**	12
Distance	**Distance from Source to Receiver (ft)**	9620
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

Source 2 Results

Leq(day):	9.1 dBA
Leq(night):	9.1 dBA
Ldn:	15.5 dBA
Incremental Ldn (Src 1-2):	48.7 dBA

	Noise Barrier?	

	Noise Barrier?	

	Noise Barrier?	

Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-14
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	415
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	9050
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?	

Noise Barrier?	

Noise Barrier?	

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	51 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

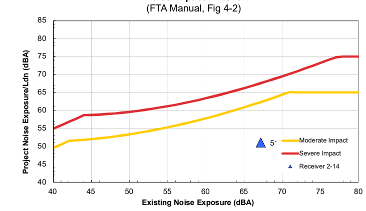
Source 1 Results

Leq(day):	44.6 dBA
Leq(night):	44.6 dBA
Ldn:	51.0 dBA

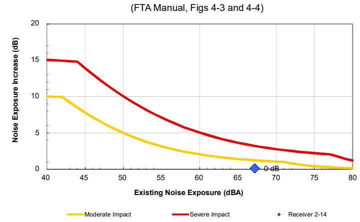
Source 2 Results

Leq(day):	9.7 dBA
Leq(night):	9.7 dBA
Ldn:	16.2 dBA
Incremental Ldn (Src 1-2):	51.0 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	50 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

Receiver Parameters	
Receiver:	Receiver 2-15
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	515
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Source 1 Results

Leq(day):	43.2 dBA
Leq(night):	43.2 dBA
Ldn:	49.6 dBA

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	8345
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Source 2 Results

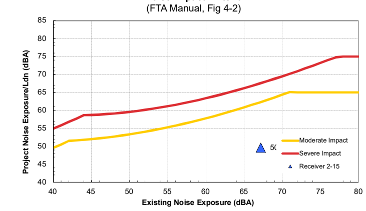
Leq(day):	10.6 dBA
Leq(night):	10.6 dBA
Ldn:	17.0 dBA
Incremental Ldn (Src 1-2):	49.6 dBA

	Noise Barrier?	

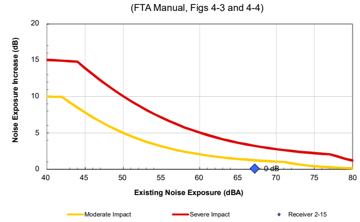
	Noise Barrier?	

	Noise Barrier?	

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	**MST SURF! BRT**

Receiver Parameters

Receiver:	**Receiver 2-16**
Land Use Category:	**2. Residential**
Existing Noise (Measured or Generic Value):	**60 dBA**

Noise Source Parameters

Number of Noise Sources:	**2**

Noise Source Parameters		**Source 1**
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	**Distance from Source to Receiver (ft)**	500
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

Noise Source Parameters		**Source 2**
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	**Avg. Number of Buses/hr**	12
Nighttime hrs	**Avg. Number of Buses/hr**	12
Distance	**Distance from Source to Receiver (ft)**	8375
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

	Noise Barrier?	

	Noise Barrier?	

	Noise Barrier?	

Project Results Summary

Existing Ldn:	60 dBA
Total Project Ldn:	50 dBA
Total Noise Exposure:	61 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

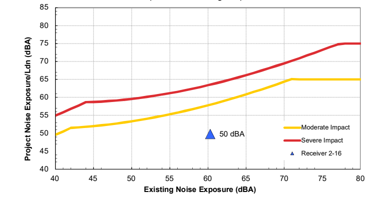
Source 1 Results

Leq(day):	43.4 dBA
Leq(night):	43.4 dBA
Ldn:	49.8 dBA

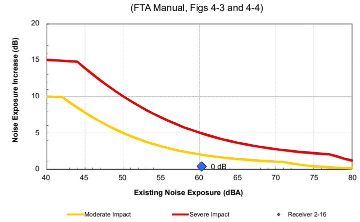
Source 2 Results

Leq(day):	10.6 dBA
Leq(night):	10.6 dBA
Ldn:	17.0 dBA
Incremental Ldn (Src 1-2):	49.8 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-17
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	60 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	75
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	8835
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

	Noise Barrier?	

	Noise Barrier?	

	Noise Barrier?	

Project Results Summary

Existing Ldn:	60 dBA
Total Project Ldn:	62 dBA
Total Noise Exposure:	64 dBA
Increase:	4 dB
Impact?:	Moderate

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

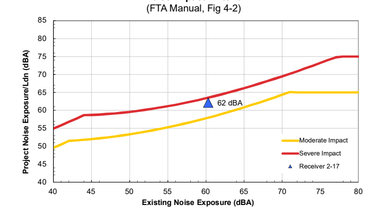
Source 1 Results

Leq(day):	55.7 dBA
Leq(night):	55.7 dBA
Ldn:	62.2 dBA

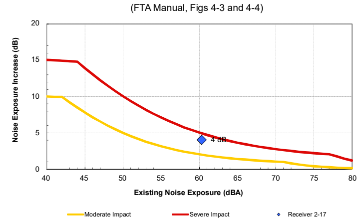
Source 2 Results

Leq(day):	10.0 dBA
Leq(night):	10.0 dBA
Ldn:	16.4 dBA
Incremental Ldn (Src 1-2):	62.2 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	**MST SURF! BRT**

Receiver Parameters	
Receiver:	**Receiver 2-18**
Land Use Category:	**2. Residential**
Existing Noise (Measured or Generic Value):	**60 dBA**

Noise Source Parameters	
Number of Noise Sources:	**2**

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	**Distance from Source to Receiver (ft)**	85
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	**Avg. Number of Buses/hr**	12
Nighttime hrs	**Avg. Number of Buses/hr**	12
Distance	**Distance from Source to Receiver (ft)**	9125
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

Noise Barrier?	

Noise Barrier?	

Noise Barrier?	

Project Results Summary

Existing Ldn:	60 dBA
Total Project Ldn:	61 dBA
Total Noise Exposure:	64 dBA
Increase:	4 dB
Impact?:	**Moderate**

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

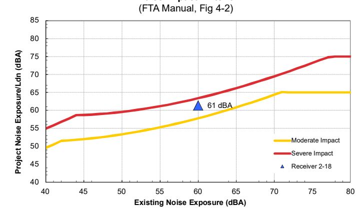
Source 1 Results

Leq(day):	54.9 dBA
Leq(night):	54.9 dBA
Ldn:	61.3 dBA

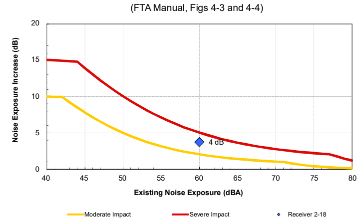
Source 2 Results

Leq(day):	9.7 dBA
Leq(night):	9.7 dBA
Ldn:	16.1 dBA
Incremental Ldn (Src 1-2):	61.3 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-19
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	60 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	190
	Number of Intervening Rows of Buildings	1
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	9180
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

	Noise Barrier?

	Noise Barrier?

	Noise Barrier?

Project Results Summary

Existing Ldn:	60 dBA
Total Project Ldn:	52 dBA
Total Noise Exposure:	61 dBA
Increase:	1 dB
Impact?:	None

Distance to Impact Contours

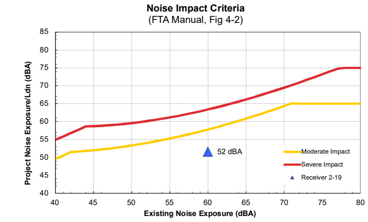
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

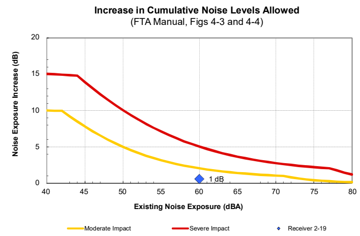
Source 1 Results

Leq(day):	45.2 dBA
Leq(night):	45.2 dBA
Ldn:	51.6 dBA

Source 2 Results

Leq(day):	9.6 dBA
Leq(night):	9.6 dBA
Ldn:	16.0 dBA
Incremental Ldn (Src 1-2):	51.6 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-20
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	60 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	100
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	9860
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

	Noise Barrier?	

	Noise Barrier?	

	Noise Barrier?	

Project Results Summary

Existing Ldn:	60 dBA
Total Project Ldn:	60 dBA
Total Noise Exposure:	63 dBA
Increase:	3 dB
Impact?:	Moderate

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

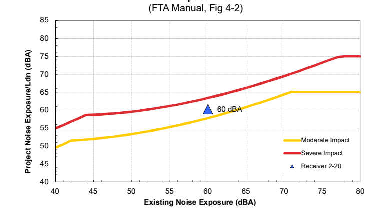
Source 1 Results

Leq(day):	53.9 dBA
Leq(night):	53.9 dBA
Ldn:	60.3 dBA

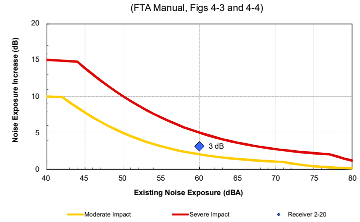
Source 2 Results

Leq(day):	8.8 dBA
Leq(night):	8.8 dBA
Ldn:	15.2 dBA
Incremental Ldn (Src 1-2):	60.3 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 2-21
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	390
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	Avg. Number of Buses/hr	12
Nighttime hrs	Avg. Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	9875
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

	Noise Barrier?

	Noise Barrier?

	Noise Barrier?

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	51 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

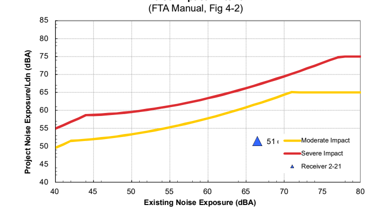
Source 1 Results

Leq(day):	45.0 dBA
Leq(night):	45.0 dBA
Ldn:	51.4 dBA

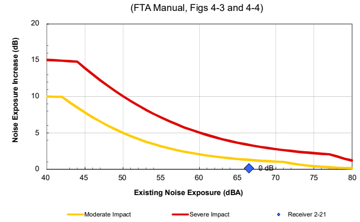
Source 2 Results

Leq(day):	8.8 dBA
Leq(night):	8.8 dBA
Ldn:	15.2 dBA
Incremental Ldn (Src 1-2):	51.4 dBA

Noise Impact Criteria
(FTA Manual, Fig 4-2)



Increase in Cumulative Noise Levels Allowed
(FTA Manual, Figs 4-3 and 4-4)



Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	**MST SURF! BRT**

Receiver Parameters	
Receiver:	**Receiver 2-22**
Land Use Category:	**2. Residential**
Existing Noise (Measured or Generic Value):	**67 dBA**

Noise Source Parameters	
Number of Noise Sources:	**2**

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Daytime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Nighttime hrs		
	Speed (mph)	65
	Avg. Number of Events/hr	12
Distance	**Distance from Source to Receiver (ft)**	470
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Daytime hrs	**Avg. Number of Buses/hr**	12
Nighttime hrs	**Avg. Number of Buses/hr**	12
Distance	**Distance from Source to Receiver (ft)**	9775
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No

	Noise Barrier?	

	Noise Barrier?	

	Noise Barrier?	

Project Results Summary

Existing Ldn:	67 dBA
Total Project Ldn:	50 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

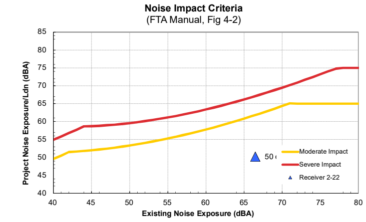
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

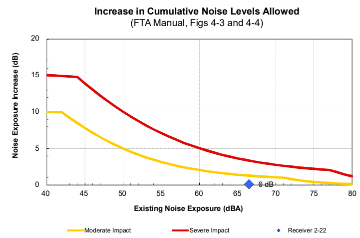
Source 1 Results

Leq(day):	43.8 dBA
Leq(night):	43.8 dBA
Ldn:	50.2 dBA

Source 2 Results

Leq(day):	8.9 dBA
Leq(night):	8.9 dBA
Ldn:	15.3 dBA
Incremental Ldn (Src 1-2):	50.2 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 3-1
Land Use Category:	3. Institutional
Existing Noise (Measured or Generic Value):	67 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Noisiest hr of Activity During Sensitive hrs	Speed (mph)	65
	Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	290
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Noisiest hr of Activity During Sensitive hrs	Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	12600
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?	

Noise Barrier?	

Noise Barrier?	

Project Results Summary

Existing Leqh:	67 dBA
Total Project Leqh:	47 dBA
Total Noise Exposure:	67 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

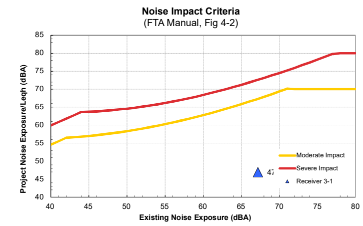
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

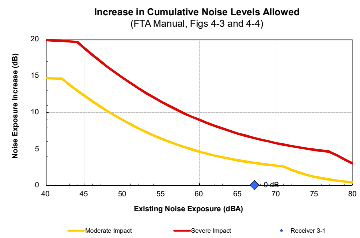
Source 1 Results

Leqh:	46.9 dBA

Source 2 Results

Leqh:	6.2 dBA
Incremental Leqh (Src 1-2):	46.9 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 3-2
Land Use Category:	3. Institutional
Existing Noise (Measured or Generic Value):	60 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		
	Source Type:	Source 1 Highway/Transit
	Specific Source:	Buses (electric)
Noisiest hr of Activity During Sensitive hrs	Speed (mph)	65
	Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	75
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		
	Source Type:	Source 2 Stationary Source
	Specific Source:	Bus Storage Yard
Noisiest hr of Activity During Sensitive hrs	Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	9350
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?	

Noise Barrier?	

Noise Barrier?	

Project Results Summary

Existing Leqh:	60 dBA
Total Project Leqh:	56 dBA
Total Noise Exposure:	61 dBA
Increase:	1 dB
Impact?:	None

Distance to Impact Contours

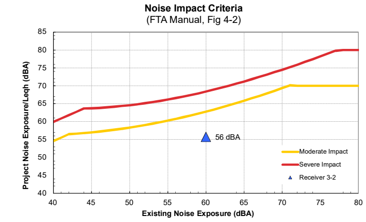
Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

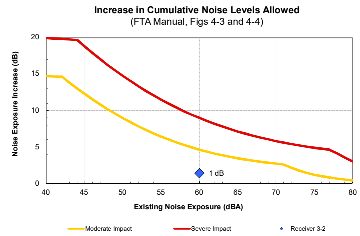
Source 1 Results

Leqh:	55.7 dBA

Source 2 Results

Leqh:	9.4 dBA
Incremental Leqh (Src 1-2):	55.7 dBA





Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	MST SURF! BRT

Receiver Parameters	
Receiver:	Receiver 3-3
Land Use Category:	3. Institutional
Existing Noise (Measured or Generic Value):	63 dBA

Noise Source Parameters	
Number of Noise Sources:	2

Noise Source Parameters		Source 1
	Source Type:	Highway/Transit
	Specific Source:	Buses (electric)
Noisiest hr of Activity During Sensitive hrs	Speed (mph)	65
	Number of Events/hr	12
Distance	Distance from Source to Receiver (ft)	520
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 2
	Source Type:	Stationary Source
	Specific Source:	Bus Storage Yard
Noisiest hr of Activity During Sensitive hrs	Number of Buses/hr	12
Distance	Distance from Source to Receiver (ft)	4500
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Barrier?

Noise Barrier?

Noise Barrier?

Project Results Summary

Existing Leqh:	63 dBA
Total Project Leqh:	43 dBA
Total Noise Exposure:	63 dBA
Increase:	0 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour (Sources 1+2):	--
Dist to Sev. Impact Contour (Sources 1+2):	--

Source 1 Results

Leqh: 43.1 dBA

Source 2 Results

Leqh: 17.3 dBA

Incremental Leqh (Src 1-2): 43.1 dBA