

Revised F Modified MIT2

MITc	20ft x			
300	1	5.1	5.1	
301	1	4.8	4.8	
302	1	3.3	3.3	
MIT n				
63	1	<3		
65	1	3.2	3.2	
66	1	<3		
67	1	<3		
312	1	3.2	3.2	
318	1	<3		19.6
MITs		<3		
304	1	<3		
305	1	<3		
306	1	3.8	3.8	not feasible
307	1	<3		
309	1	<3		
310	1	<3		
311	1	<3		
315	1	<3		
Wall Ht	Wall Length	Unit Cost	Decibel Red	CBI
16	680	45*		
16	650	45*		
16	800	45*		
20	1620	45*		
20	900	45*		

*Could not achieve 7 dBA minimum at 1 receptor

2011 Guidelines

Revised F Modified MIT2

MITc	20ft x			
300	1	5.1	5.1	
301	1	4.8	4.8	
302	1	3.3	3.3	
MIT n			13.2	
63	1	<3		
65	1	3.2	3.2	
66	1	<3		
67	1	<3		
312	1	3.2	3.2	
318	1	<3		19.6
MITs		<3		
304	1	<3		
305	1	<3		
306	1	3.8	3.8	not feasible
307	1	<3		
309	1	<3		
310	1	<3		
311	1	<3		
315	1	<3		
Wall Ht	Wall Length	Unit Cost	Decibel Red	CBI
16	680	30	*	
16	650	30	*	
16	800	30	*	
20	1620	30	*	
20	900	30	19.6	\$27,551

*Could not achieve 5 dBA minimum at 1 receptor

$$20 \times 900 \times 30 \times 13.2 =$$

2002 Guidelines



RESULTS: SOUND LEVELS

Supplemental EIS US160/550 Grandview

CDOT filename: SEISModF

10 May 2011
TNM 2.5
Calculated with TNM 2.5

its 110510 2030traffic 4f reeval;220count

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Supplemental EIS US160/550 Grandview

RUN: MIT2 ModF only n.s.c 20ft along US160

BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

No.	#DUs	Existing LAeq1h dBA	No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB	
			Calculated LAeq1h dBA	Crit'n dBA	Calculated dBA	Crit'n Sub'l Inc dB		Calculated LAeq1h dBA	Noise Reduction Calculated dB		
25	3	56.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
29	4	53.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
29a	3	59.8	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
30	2	53.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
34	2	54.8	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
37	10	53.7	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
38	11	54.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C39	12	60.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C40	13	55.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
41	14	53.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
42	15	51.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
43	16	56.3	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
52	20	56.7	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
55	23	51.7	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
56	24	50.1	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C57	25	56.1	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0
58	26	53.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
63	31	67.6	67.3	66	-0.3	10	Snd Lvl	67.3	0.0	5	0.0
65	33	68.6	65.4	66	-3.2	10	---	65.4	0.0	5	-5.0
66	34	70.9	70.8	66	-0.1	10	Snd Lvl	70.8	0.0	5	-5.0
67	35	72.9	72.5	66	-0.4	10	Snd Lvl	72.5	0.0	5	-5.0
70	38	56.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
71	39	50.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0

RESULTS: SOUND LEVELS

Supplemental EIS US160/550 Grandview

	132	1	69.4	69.3	66	-0.1	10	Snd Lvl	69.3	0.0	5	-5.0
	134	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
	135	4	59.1	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
	136	1	54.5	67.9	66	13.4	10	Both	67.9	0.0	5	0.0
	137	1	63.7	0.0	71	0.0	10	inactive	0.0	0.0	5	-5.0
Grand2	138	1	52.4	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
Grand4	139	1	45.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
42a	140	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
56a	141	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
58a	142	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
58b	143	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
311	144	1	61.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C325	146	1	63.8	63.7	66	-0.1	10	---	63.7	0.0	5	-5.0
68	147	1	72.0	72.0	66	0.0	10	Snd Lvl	72.0	0.0	5	-5.0
69	148	1	71.8	71.8	66	0.0	10	Snd Lvl	71.8	0.0	5	-5.0
75d	149	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
75a	150	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
75b	151	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
75c	152	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
90c	153	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
105	154	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
cemetery	155	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
115	156	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
107b	157	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
93a	158	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
93b	159	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
93c	160	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
81a	161	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
81b	162	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C120b hotel	163	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
44a	164	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
1	165	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
Dwelling Units	# DUs Noise Reduction											
	# DUs		Min	Avg	Max							
			dB	dB	dB							
All Selected	132	1	0.0	0.0	0.0							
All Impacted	11	1	0.0	0.0	0.0							
All that meet NR Goal	0	0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

CDOT filename: SEISModF
jts 110506 2030traffic 4f reeval;220count

RESULTS: SOUND LEVELS
PROJECT/CONTRACT:

RUN:
BARRIER DESIGN:

ATMOSPHERICS:

10 May 2011
TNM 2.5
Calculated with TNM 2.5

Supplemental EIS US160/550 Grandview
MIT2 ModF only n,s,c 12ft along US160
INPUT HEIGHTS
14ft x 1620ft

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h dBA	No Barrier		Increase over existing Calculated dB	Type Impact	With Barrier		Calculated minus Goal dB	
				LAeq1h Calculated dBA	Crit'n dBA			LAeq1h Calculated dBA	Noise Reduction Calculated dB		
25	3	5	56.0	0.0	66	10	inactive	0.0	0.0	5	0.0
29	4	3	53.2	0.0	66	10	inactive	0.0	0.0	5	0.0
29a	5	3	59.8	0.0	66	10	inactive	0.0	0.0	5	0.0
30	6	2	53.9	0.0	66	10	inactive	0.0	0.0	5	0.0
34	8	2	54.8	0.0	66	10	inactive	0.0	0.0	5	0.0
37	10	1	53.7	0.0	66	10	inactive	0.0	0.0	5	0.0
38	11	1	54.2	0.0	66	10	inactive	0.0	0.0	5	0.0
C39	12	1	60.2	0.0	66	10	inactive	0.0	0.0	5	0.0
C40	13	1	55.9	0.0	66	10	inactive	0.0	0.0	5	0.0
41	14	1	53.0	0.0	66	10	inactive	0.0	0.0	5	0.0
42	15	2	51.9	0.0	66	10	inactive	0.0	0.0	5	0.0
43	16	1	56.3	0.0	66	10	inactive	0.0	0.0	5	0.0
52	20	1	56.7	0.0	66	10	inactive	0.0	0.0	5	0.0
55	23	1	51.7	0.0	66	10	inactive	0.0	0.0	5	0.0
56	24	3	50.1	0.0	66	10	inactive	0.0	0.0	5	0.0
C57	25	1	56.1	0.0	71	10	inactive	0.0	0.0	5	0.0
58	26	3	53.0	0.0	66	10	inactive	0.0	0.0	5	0.0
63	31	1	67.6	67.4	66	10	inactive	67.4	67.4	5	0.0
65	33	1	68.6	66.5	66	10	Snd Lvl	66.5	66.5	5	-5.0
66	34	1	70.9	70.8	66	10	Snd Lvl	70.8	70.8	5	-5.0
67	35	1	72.9	72.5	66	10	Snd Lvl	72.5	72.5	5	-5.0
70	38	6	56.0	0.0	66	10	inactive	0.0	0.0	5	0.0
71	39	4	50.9	0.0	66	10	inactive	0.0	0.0	5	0.0

*16 ft barrier height
not acceptable
Complete redesign
not acceptable*

RESULTS: SOUND LEVELS

										Supplemental EIS US160/550 Grandview				
72	40	3	57.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
73	41	2	49.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
74	42	1	55.1	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
C75	43	1	52.4	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0		
C79	47	1	53.8	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0		
81	49	2	57.8	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
82	50	1	60.3	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
83	51	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
84	52	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
85	53	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
86	54	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
87	55	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
88	56	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
89	57	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
90	58	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
91	59	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
92	60	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
93	61	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
C116	85	1	53.8	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0		
118	87	3	56.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
119	88	2	54.6	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
C120	89	1	55.6	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0		
C121	90	1	49.2	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0		
122	91	1	47.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
151	93	1	49.5	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
152	94	1	51.3	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
153	95	1	53.3	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
154	96	1	48.3	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
155	97	1	51.5	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0		
300	121	1	63.5	58.8	66	-4.7	10	---	58.8	0.0	5	-5.0		
301	122	1	63.9	60.5	66	-3.4	10	---	60.5	0.0	5	-5.0		
302	123	1	57.6	55.1	66	-2.5	10	---	55.1	0.0	5	-5.0		
304	124	1	63.1	60.9	66	-2.2	10	---	60.9	0.0	5	-5.0		
305	125	1	61.7	60.1	66	-1.6	10	---	60.1	0.0	5	-5.0		
306	126	1	65.5	62.2	66	-3.3	10	---	62.2	0.0	5	-5.0		
307	127	1	62.0	60.4	66	-1.6	10	---	60.4	0.0	5	-5.0		
309	128	1	63.8	62.2	66	-1.6	10	---	62.2	0.0	5	-5.0		
310	129	1	62.9	62.5	66	-0.4	10	---	62.5	0.0	5	-5.0		
312	130	1	67.0	64.4	66	-2.6	10	---	64.4	0.0	5	-5.0		
315	131	1	64.4	64.2	66	-0.2	10	---	64.2	0.0	5	-5.0		

RESULTS: SOUND LEVELS

Supplemental EIS US160/550 Grandview

Dwelling Units	# DUs	Noise Reduction			10	Snd Lvl	69.3	66	-0.1	10	Snd Lvl	69.3	0.0	5	-5.0
		Min dB	Avg dB	Max dB											
318	132	1	69.4	69.3	66	-0.1	10	Snd Lvl	69.3	0.0	5	-5.0			
320	133	4	68.6	68.6	66	0.0	10	Snd Lvl	68.6	0.0	5	-5.0			
322	134	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
323	135	4	59.1	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
324	136	1	54.5	67.9	66	13.4	10	Both	67.9	0.0	5	0.0			
C326	137	1	63.7	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0			
Grand2	138	1	52.4	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
Grand4	139	1	45.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
42a	140	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
56a	141	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
58a	142	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
58b	143	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
311	144	1	61.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
C325	146	1	63.8	63.8	66	0.0	10	---	63.8	0.0	5	-5.0			
68	147	1	72.0	72.0	66	0.0	10	Snd Lvl	72.0	0.0	5	-5.0			
69	148	1	71.8	71.8	66	0.0	10	Snd Lvl	71.8	0.0	5	-5.0			
75d	149	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
75a	150	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
75b	151	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
75c	152	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
90c	153	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
105	154	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
cemetery	155	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
115	156	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
107b	157	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
93a	158	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
93b	159	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
93c	160	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
81a	161	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
81b	162	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
C120b hotel	163	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
44a	164	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
1	165	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0			
Dwelling Units	# DUs	Noise Reduction													
		Min	Avg	Max											
		dB	dB	dB											
All Selected	132	0.0	0.0	0.0											
All Impacted	12	0.0	0.0	0.0											
All that meet NR Goal	0	0.0	0.0	0.0											

INPUT: BARRIERS

Supplemental EIS US160/550 Grandview

10 May 2011
TNM 2.5

CDOT filename: SEISModF
Jfs 110506 2030traffic 4f reeval;220cour

INPUT: BARRIERS

PROJECT/CONTRACT: Supplemental EIS US160/550 Grandview
RUN: MIT2 ModF only n.s.c 12ft along US160

Barrier Name	Type	Height		If Wall \$ per Unit Area	If Berm \$ per Unit Vol.	Top Width	Run: Rise	Add'l \$ per Unit Length	Points Name	Coordinates (bottom)			Height at Point	Segment Incre- ment	Sag Ht Perturbs #Up #Dn	On Struc- ture?	Important Reflec- tions?
		Min	Max							X	Y	Z					
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft		ft	ft	ft	ft	ft			
Barrier 2	W	0.00	99.99	0.00				0.00	point1	2,319,001.2	1,212,836.5	6,604.00	20.00	0.00	0	0	
									point2	2,319,214.8	1,212,958.9	6,608.00	20.00	0.00	0	0	
Barrier1-2	W	0.00	99.99	0.00				0.00	point3	2,319,494.0	1,213,048.4	6,610.00	20.00	0.00	0	0	
									point4	2,319,629.0	1,213,084.2	6,632.00	20.00	0.00	0	0	
									point5	2,319,773.2	1,213,113.1	6,642.00	20.00	0.00	0	0	
									point6	2,319,918.8	1,213,145.2	6,651.00	15.00	0.00	0	0	
Barrier2	W	0.00	99.99	0.00				0.00	point7	2,320,574.8	1,213,315.8	6,661.00	15.00	0.00	0	0	
									point8	2,321,113.5	1,213,413.6	6,672.00	20.00	0.00	0	0	
Barrier3	W	0.00	99.99	0.00				0.00	point9	2,321,338.0	1,213,482.2	6,684.00	25.00	0.00	0	0	
									point10	2,321,641.8	1,213,538.4	6,700.00	20.00	0.00	0	0	
									point11	2,321,876.0	1,213,559.4	6,998.00	20.00	0.00	0	0	
									point12	2,322,680.0	1,213,531.0	6,706.00	20.00	0.00	0	0	
									point13	2,322,879.8	1,213,497.0	6,710.00	20.00	0.00	0	0	
									point14	2,323,017.8	1,213,469.6	6,719.00	20.00	0.00	0	0	
									point15	2,323,148.0	1,213,436.0	6,722.00	15.00	0.00	0	0	
									point16	2,323,280.5	1,213,397.9	6,725.00	15.00	0.00	0	0	
									point17	2,323,429.8	1,213,348.9	6,755.00	10.00	0.00	0	0	
									point18	2,323,575.0	1,213,296.2	6,755.00	10.00	0.00	0	0	
Barrier4	W	0.00	99.99	0.00				0.00	point19	2,330,026.2	1,213,390.5	6,920.00	8.00	0.00	0	0	
									point20	2,330,152.0	1,213,418.1	6,925.00	8.00	0.00	0	0	
MIT central F	W	0.00	99.99	0.00				0.00	point21	2,330,298.8	1,213,456.1	6,934.00	8.00	0.00	0	0	
									point22	2,330,457.5	1,213,491.5	6,932.00	8.00	0.00	0	0	
MIT2 s-MIT2n	W	0.00	99.99	0.00				0.00	point35	2,323,979.5	1,209,899.2	6,880.00	14.00	0.00	0	0	
									point40	2,323,824.8	1,209,867.6	6,884.50	14.00	0.00	0	0	
									point36	2,323,616.0	1,209,843.2	6,889.00	14.00	0.00	0	0	
									point37	2,323,420.5	1,209,821.5	6,890.00	14.00	0.00	0	0	
									point38	2,323,220.0	1,209,792.5	6,890.00	14.00	0.00	0	0	
									point39	2,323,082.2	1,209,781.1	6,890.00	14.00	0.00	0	0	
									point25	2,325,206.8	1,212,685.0	6,777.00	14.00	0.00	0	0	
									point26	2,325,168.8	1,212,448.4	6,780.00	14.00	0.00	0	0	
									point27	2,325,148.8	1,212,239.9	6,784.00	14.00	0.00	0	0	
									point28	2,325,147.0	1,212,106.8	6,786.00	14.00	0.00	0	0	
MIT2 s-MIT2n	W	0.00	99.99	0.00				0.00	point29	2,325,147.5	1,211,945.8	6,789.00	14.00	0.00	0	0	
									point34	2,325,148.0	1,211,900.2	6,792.00	14.00	0.00	0	0	

RESULTS: SOUND LEVELS

CDOT filename: SEISModF

jts 110506 2030traffic 4f reeval;220count

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RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

ATMOSPHERICS:

Receiver

10 May 2011

TNM 2.5

Calculated with TNM 2.5

Supplemental EIS US160/550 Grandview

MIT2 ModF only

INPUT HEIGHTS

68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact		With Barrier		Calculated minus Goal
			LAeq1h	Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	LAeq1h	Calculated	
		dBA	dBA	dBA	dBA	dB	dB	dB	dB	dB	dB
25	3	56.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
29	4	53.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
29a	3	59.8	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
30	2	53.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
34	2	54.8	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
37	1	53.7	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
38	1	54.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C39	1	60.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C40	1	55.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
41	1	53.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
42	2	51.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
43	1	56.3	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
52	1	56.7	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
55	1	51.7	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
56	3	50.1	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C57	1	56.1	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0
58	3	53.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
63	1	67.6	67.5	66	-0.1	10	Snd Lvl	67.5	67.5	5	-5.0
65	1	68.6	67.5	66	-1.1	10	Snd Lvl	67.5	67.5	5	-5.0
66	1	70.9	70.9	66	0.0	10	Snd Lvl	70.9	70.9	5	-5.0
67	1	72.9	72.6	66	-0.3	10	Snd Lvl	72.6	72.6	5	-5.0
70	6	56.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
71	4	50.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0

Supplemental EIS US160/550 Grandview
Not back
10 May 2011
TNM 2.5
Calculated with TNM 2.5
12/11

N = 6800
5 = 6800
5 = 6800

RESULTS: SOUND LEVELS

Supplemental EIS US160/550 Grandview

Dwelling Units	# DUs	Noise Reduction			# DUs	1	69.4	69.4	66	0.0	10	Snd Lvl	69.4	0.0	5	-5.0
		Min	Avg	Max												
		dB	dB	dB												
All Selected	132	0.0	0.0	0.0												
All Impacted	13	0.0	0.0	0.0												
All that meet NR Goal	0	0.0	0.0	0.0												
318	132	1	69.4	69.4	66	0.0	10	Snd Lvl	69.4	0.0	10	Snd Lvl	69.4	0.0	5	-5.0
320	133	4	68.6	68.6	66	0.0	10	Snd Lvl	68.6	0.0	10	Snd Lvl	68.6	0.0	5	-5.0
322	134	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
323	135	4	59.1	59.1	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
324	136	1	54.5	54.5	66	13.4	10	Both	67.9	0.0	10	Both	67.9	0.0	5	-5.0
C326	137	1	63.7	63.7	71	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
Grand2	138	1	52.4	52.4	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
Grand4	139	1	45.0	45.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
42a	140	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
56a	141	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
58a	142	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
58b	143	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
311	144	1	61.9	61.9	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
C325	146	1	63.8	63.8	66	0.0	10	-----	63.8	0.0	10	-----	63.8	0.0	5	-5.0
68	147	1	72.0	72.0	66	0.0	10	Snd Lvl	72.0	0.0	10	Snd Lvl	72.0	0.0	5	-5.0
69	148	1	71.8	71.8	66	0.0	10	Snd Lvl	71.8	0.0	10	Snd Lvl	71.8	0.0	5	-5.0
75d	149	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
75a	150	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
75b	151	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
75c	152	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
90c	153	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
105	154	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
cemetery	155	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
115	156	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
107b	157	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
93a	158	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
93b	159	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
93c	160	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
81a	161	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
81b	162	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
C120b hotel	163	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
44a	164	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0
1	165	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	10	inactive	0.0	0.0	5	0.0

INPUT: BARRIERS

Supplemental EIS US160/550 Grandview

10 May 2011
TNM 2.5

CDOT filename: SEISModF
ifits 110506 2030traffic 4f reeval;220coun

INPUT: BARRIERS

Supplemental EIS US160/550 Grandview
PROJECT/CONTRACT:
RUN: MIT2 ModF only

Barrier Name	Type	Height		Max ft	If Wall \$ per Unit Area	If Berm \$ per Unit Area	Top Width ft	Run:Rise	Add'l \$ per Unit Length	Points Name	Coordinates (bottom)			Height at Point ft	Segment		Important Reflec-tions?	
		Min ft	ft								X ft	Y ft	Z ft		Incre- ment	#Up #Dn		Struct? On
MIT2 n	W	0.00	99.99	0.00	0.00	0.00	0.00	0.00	0.00	point1	1	2,319,001.2	1,212,836.5	6,604.00	20.00	0.00	0	0
											2	2,319,214.8	1,212,966.9	6,608.00	20.00	0.00	0	0
											3	2,319,494.0	1,213,048.4	6,610.00	20.00	0.00	0	0
											4	2,319,628.0	1,213,084.2	6,632.00	20.00	0.00	0	0
											5	2,319,773.2	1,213,113.1	6,642.00	20.00	0.00	0	0
											6	2,319,918.8	1,213,145.2	6,651.00	15.00	0.00	0	0
											7	2,320,574.8	1,213,315.6	6,661.00	15.00	0.00	0	0
											8	2,321,113.5	1,213,413.6	6,672.00	20.00	0.00	0	0
											9	2,321,338.0	1,213,482.2	6,694.00	25.00	0.00	0	0
											10	2,321,641.8	1,213,538.4	6,700.00	20.00	0.00	0	0
Barrier3	W	0.00	99.99	0.00	0.00	0.00	0.00	0.00	0.00	point11	11	2,321,876.0	1,213,559.4	6,998.00	20.00	0.00	0	0
											12	2,322,680.0	1,213,531.0	6,706.00	20.00	0.00	0	0
											13	2,322,879.8	1,213,497.0	6,710.00	20.00	0.00	0	0
											14	2,323,017.8	1,213,469.6	6,718.00	20.00	0.00	0	0
											15	2,323,148.0	1,213,436.0	6,722.00	15.00	0.00	0	0
											16	2,323,280.5	1,213,397.9	6,725.00	15.00	0.00	0	0
											17	2,323,429.6	1,213,348.9	6,755.00	10.00	0.00	0	0
											18	2,323,575.0	1,213,296.2	6,755.00	10.00	0.00	0	0
											19	2,330,026.2	1,213,390.5	6,920.00	8.00	0.00	0	0
											20	2,330,152.0	1,213,418.1	6,925.00	8.00	0.00	0	0
MIT2n	W	0.00	99.99	0.00	0.00	0.00	0.00	0.00	0.00	point21	21	2,330,298.8	1,213,456.1	6,934.00	8.00	0.00	0	0
											22	2,330,457.5	1,213,491.5	6,932.00	8.00	0.00	0	0
											25	2,325,036.2	1,212,537.0	6,777.00	12.00	0.00	0	0
											26	2,325,089.8	1,212,430.4	6,780.00	12.00	0.00	0	0
											27	2,325,090.0	1,212,303.2	6,784.00	12.00	0.00	0	0
											28	2,325,081.0	1,212,198.8	6,786.00	12.00	0.00	0	0
											29	2,325,083.2	1,211,953.5	6,789.00	12.00	0.00	0	0
											34	2,325,085.0	1,211,839.6	6,792.00	12.00	0.00	0	0
											30	2,325,087.0	1,211,714.5	6,805.00	12.00	0.00	0	0
											31	2,325,087.0	1,211,573.6	6,820.00	12.00	0.00	0	0
MIT2 s	W	0.00	99.99	0.00	0.00	0.00	0.00	0.00	0.00	point32	32	2,325,089.5	1,211,438.4	6,830.00	12.00	0.00	0	0
											33	2,325,073.0	1,211,315.5	6,825.00	12.00	0.00	0	0
											35	2,323,977.2	1,209,817.0	0.00	0.00	0.00	0	0
											40	2,323,822.5	1,209,785.4	3,444.50	0.00	0.00	0	0

RESULTS: SOUND LEVELS

Supplemental EIS US160/550 Grandview

CDOT filename: SEISModF

Jts 110506 2030traffic 4f rceval;220count

10

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Supplemental EIS US160/550 Grandview

RUN: MIT2 ModF only n,s,c 12ft along US160

BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 68 deg F, 50% RH

10 May 2011

TNM 2.5

Calculated with TNM 2.5

reductor
can not find

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver	No.	#DUs	Existing LAeq1h dBA	No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB	
				Calculated LAeq1h dBA	Crit'n	Calculated dB	Crit'n Sub'l Inc dB		Calculated LAeq1h dBA	Noise Reduction Calculated Goal dB		
25	3	5	56.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
29	4	3	53.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
29a	5	3	59.8	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
30	6	2	53.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
34	8	2	54.8	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
37	10	1	53.7	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
38	11	1	54.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C39	12	1	60.2	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C40	13	1	55.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
41	14	1	53.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
42	15	2	51.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
43	16	1	56.3	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
52	20	1	56.7	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
55	23	1	51.7	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
56	24	3	50.1	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C57	25	1	56.1	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0
58	26	3	53.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
63	31	1	67.6	67.4	66	-0.2	10	Snd Lvl	67.4	66.9	5	-0.5
65	33	1	68.6	66.9	66	-1.7	10	Snd Lvl	66.9	66.9	5	-0.0
66	34	1	70.9	70.8	66	-0.1	10	Snd Lvl	70.8	70.8	5	-0.0
67	35	1	72.9	72.6	66	-0.3	10	Snd Lvl	72.6	72.6	5	-0.0
70	38	6	56.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
71	39	4	50.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0

RESULTS: SOUND LEVELS

										Supplemental EIS US160/550 Grandview									
72	40	3	57.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
73	41	2	49.9	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
74	42	1	55.1	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
C75	43	1	52.4	0.0	71	0.0	10	Inactive	0.0	0.0	5	0.0							
C79	47	1	53.8	0.0	71	0.0	10	Inactive	0.0	0.0	5	0.0							
81	49	2	57.8	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
82	50	1	60.3	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
83	51	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
84	52	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
85	53	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
86	54	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
87	55	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
88	56	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
89	57	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
90	58	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
91	59	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
92	60	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
93	61	1	0.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
C116	85	1	53.8	0.0	71	0.0	10	Inactive	0.0	0.0	5	0.0							
118	87	3	56.0	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
119	88	2	54.6	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
C120	89	1	55.6	0.0	71	0.0	10	Inactive	0.0	0.0	5	0.0							
C121	90	1	49.2	0.0	71	0.0	10	Inactive	0.0	0.0	5	0.0							
122	91	1	47.2	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
151	93	1	49.5	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
152	94	1	51.3	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
153	95	1	53.3	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
154	96	1	48.3	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
155	97	1	51.5	0.0	66	0.0	10	Inactive	0.0	0.0	5	0.0							
300	121	1	63.5	59.5	66	0.0	10	---	59.5	0.0	5	-5.0							
301	122	1	63.9	61.0	66	0.0	10	---	61.0	0.0	5	-5.0							
302	123	1	57.6	55.6	66	0.0	10	---	55.6	0.0	5	-5.0							
304	124	1	63.1	61.3	66	0.0	10	---	61.3	0.0	5	-5.0							
305	125	1	61.7	60.6	66	0.0	10	---	60.6	0.0	5	-5.0							
306	126	1	65.5	62.7	66	0.0	10	---	62.7	0.0	5	-5.0							
307	127	1	62.0	60.8	66	0.0	10	---	60.8	0.0	5	-5.0							
309	128	1	63.8	62.5	66	0.0	10	---	62.5	0.0	5	-5.0							
310	129	1	62.9	62.5	66	0.0	10	---	62.5	0.0	5	-5.0							
312	130	1	67.0	64.8	66	0.0	10	---	64.8	0.0	5	-5.0							
315	131	1	64.4	64.2	66	0.0	10	---	64.2	0.0	5	-5.0							

RESULTS: SOUND LEVELS

Supplemental EIS US160/550 Grandview

	132	1	69.4	69.3	66	-0.1	10	Snd Lvl	69.3	0.0	5	-5.0
	134	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
	135	4	59.1	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
	136	1	54.5	67.9	66	13.4	10	Both	67.9	0.0	5	-5.0
	137	1	63.7	0.0	71	0.0	10	inactive	0.0	0.0	5	0.0
Grand2	138	1	52.4	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
Grand4	139	1	45.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
42a	140	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
56a	141	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
58a	142	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
58b	143	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
311	144	1	61.9	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C325	146	1	63.8	63.8	66	0.0	10	---	63.8	0.0	5	-5.0
68	147	1	72.0	72.0	66	0.0	10	Snd Lvl	72.0	0.0	5	-5.0
69	148	1	71.8	71.8	66	0.0	10	Snd Lvl	71.8	0.0	5	-5.0
75d	149	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
75a	150	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
75b	151	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
75c	152	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
90c	153	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
105	154	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
cemetery	155	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
115	156	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
107b	157	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
93a	158	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
93b	159	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
93c	160	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
81a	161	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
81b	162	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
C120b hotel	163	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
44a	164	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
1	165	1	0.0	0.0	66	0.0	10	inactive	0.0	0.0	5	0.0
Dwelling Units	# DUs		Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected	132		0.0	0.0	0.0							
All Impacted	12		0.0	0.0	0.0							
All that meet NR Goal	0		0.0	0.0	0.0							

