





Build - SC6 to Longs Pond		Sheet 1 of 1	2 Sep 2015
Barrier View-Hidden Springs Barrier		ICA Engineering	
Run name: Wall Hidden Springs		Project/Contract No. I-20 Widening	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Will Kerr/Wayne Hall	
Roadway:	—————>	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	┤—————>	Contour Zone:	polygon
Building Row:	—— ———	Parallel Barrier:	=====
Terrain Line:	—————	Skew Section:	—— ———>

**RESULTS: SOUND LEVELS**
**I-20 Widening**

ICA Engineering												
Will Kerr/Wayne Hall												
2 September 2015												
TNM 2.5												
Calculated with TNM 2.5												
<b>RESULTS: SOUND LEVELS</b>												
<b>PROJECT/CONTRACT:</b>												
I-20 Widening												
<b>RUN:</b>												
Build - SC6 to Longs Pond												
<b>BARRIER DESIGN:</b>												
Hidden Springs Barrier												
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
<b>ATMOSPHERICS:</b>												
68 deg F, 50% RH												
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing Calculated</b>	<b>Crit'n Sub'l Inc</b>	<b>With Barrier</b>				
								<b>Type Impact</b>	<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		
										<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver37	37	1	64.0	64.8	66	0.8	15	----	59.5	5.3	8	-2.7
Receiver36	36	1	67.0	69.0	66	2.0	15	Snd Lvl	60.9	8.1	8	0.1
Receiver35	35	1	66.0	68.4	66	2.4	15	Snd Lvl	60.3	8.1	8	0.1
Receiver33	33	1	66.0	68.8	66	2.8	15	Snd Lvl	59.9	8.9	8	0.9
Receiver32	32	1	67.0	69.0	66	2.0	15	Snd Lvl	59.8	9.2	8	1.2
Receiver31	31	1	67.0	69.1	66	2.1	15	Snd Lvl	59.7	9.4	8	1.4
Receiver30	30	1	67.0	67.4	66	0.4	15	Snd Lvl	60.5	6.9	8	-1.1
<b>Dwelling Units</b>												
			# DUs	<b>Noise Reduction</b>								
				Min	Avg							
				dB	dB							
All Selected			7	5.3	8.0	9.4						
All Impacted			6	6.9	8.4	9.4						
All that meet NR Goal			5	8.1	8.7	9.4						

**RESULTS: BARRIER-SEGMENT DESCRIPTIONS**
**I-20 Widening**

ICA Engineering												
Will Kerr/Wayne Hall											2 September 2015	
											TNM 2.5	

**RESULTS: BARRIER-SEGMENT DESCRIPTIONS**

**PROJECT/CONTRACT:** I-20 Widening  
**RUN:** Build - SC6 to Longs Pond  
**BARRIER DESIGN:** INPUT HEIGHTS

Barriers		Segments											
Name	Type	Name	No.	Heights	Average	Second Point	Length	If Wall	Area	On Struc?	Important Reflections?	If Berm Volume	Cost
				First Point									
				ft	ft	ft	ft	sq ft				cu yd	\$
Barr 2	W	655+00.00	1	25.00	25.00	25.00	100	2496					0
		654+00.00	3	25.00	25.00	25.00	100	2499					0
		653+00.00	4	25.00	25.00	25.00	100	2501					0
		652+00.00	5	25.00	25.00	25.00	100	2496					0
		651+00.00	6	25.00	25.00	25.00	100	2501					0
		650+00.00	7	25.00	25.00	25.00	100	2498					0
		649+00.00	8	25.00	25.00	25.00	100	2496					0
		648+00.00	9	25.00	25.00	25.00	100	2501					0
		647+00.00	10	25.00	25.00	25.00	100	2498					0
		646+00.00	11	25.00	25.00	25.00	100	2502					0
		645+00.00	12	25.00	25.00	25.00	100	2503					0
		644+00.00	13	25.00	25.00	25.00	100	2501					0
		643+00.00	14	25.00	25.00	25.00	100	2504					0
		642+00.00	15	25.00	25.00	25.00	100	2502					0
		641+00.00	16	25.00	25.00	25.00	100	2502					0
		640+00.00	17	25.00	25.00	25.00	100	2503					0
		639+00.00	18	25.00	25.00	25.00	100	2502					0
		638+00.00	19	25.00	25.00	25.00	100	2504					0
		637+00.00	20	25.00	25.00	25.00	100	2500					0
		636+00.00	21	25.00	25.00	25.00	100	2504					0
		635+00.00	22	25.00	25.00	25.00	100	2502					0
		634+00.00	23	25.00	25.00	25.00	100	2495					0
		633+00.00	24	25.00	25.00	25.00	100	2497					0
		632+00.00	25	25.00	25.00	25.00	100	2495					0
		631+00.00	26	25.00	25.00	25.00	100	2497					0
		630+00.00	27	25.00	25.00	25.00	100	2495					0

**RESULTS: BARRIER-SEGMENT DESCRIPTIONS****I-20 Widening**

		629+00.00	28	25.00	25.00	25.00	100	2495				0
		628+00.00	29	25.00	25.00	25.00	100	2497				0
		627+00.00	30	25.00	25.00	25.00	100	2498				0
		626+00.00	31	25.00	25.00	25.00	100	2495				0
		625+00.00	32	25.00	25.00	25.00	100	2497				0
		624+00.00	33	25.00	25.00	25.00	100	2495				0
		623+00.00	34	25.00	25.00	25.00	100	2495				0
		622+00.00	35	25.00	25.00	25.00	100	2497				0
		621+00.00	36	25.00	25.00	25.00	100	2495				0
		620+00.00	37	25.00	25.00	25.00	100	2496				0
		619+00.00	38	25.00	25.00	25.00	100	2495				0
		618+00.00	41	25.00	25.00	25.00	100	2501				0

## INPUT: BARRIERS

## I-20 Widening

ICA Engineering				2 September 2015															
Will Kerr/Wayne Hall				TNM 2.5															
INPUT: BARRIERS																			
PROJECT/CONTRACT:				I-20 Widening															
RUN:				Build - SC6 to Longs Pond															
Barrier								Points											
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates	(bottom)	Height	Segment					
		Min	Max	\$ per	\$ per	Top	Run:Rise	\$ per			X	Y	Z	at	Seg Ht	Perturbs	On	Important	
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				
Barr 2	W	0.00	99.99	0.00				0.00	655+00.00	1	1,917,179.8	765,171.9	387.80	25.00	2.00	0	7		
									654+00.00	3	1,917,263.4	765,226.4	389.40	25.00	2.00	0	7		
									653+00.00	4	1,917,347.0	765,281.2	391.10	25.00	2.00	0	7		
									652+00.00	5	1,917,430.8	765,335.9	392.70	25.00	2.00	0	7		
									651+00.00	6	1,917,514.4	765,390.4	394.30	25.00	2.00	0	7		
									650+00.00	7	1,917,598.1	765,445.2	393.00	25.00	2.00	0	7		
									649+00.00	8	1,917,681.8	765,499.9	394.00	25.00	2.00	0	7		
									648+00.00	9	1,917,765.4	765,554.4	397.00	25.00	2.00	0	7		
									647+00.00	10	1,917,849.1	765,609.2	398.00	25.00	2.00	0	7		
									646+00.00	11	1,917,932.8	765,663.9	399.00	25.00	2.00	0	7		
									645+00.00	12	1,918,017.0	765,717.9	400.00	25.00	2.00	0	7		
									644+00.00	13	1,918,101.4	765,771.8	403.00	25.00	2.00	0	7		
									643+00.00	14	1,918,185.6	765,825.7	404.00	25.00	2.00	0	7		
									642+00.00	15	1,918,270.0	765,879.7	405.00	25.00	2.00	0	7		
									641+00.00	16	1,918,354.2	765,933.7	405.00	25.00	2.00	0	7		
									640+00.00	17	1,918,438.5	765,987.7	405.00	25.00	2.00	0	7		
									639+00.00	18	1,918,522.9	766,041.6	405.00	25.00	2.00	0	7		
									638+00.00	19	1,918,607.1	766,095.6	405.00	25.00	2.00	0	7		
									637+00.00	20	1,918,691.5	766,149.6	404.80	25.00	2.00	0	7		
									636+00.00	21	1,918,775.8	766,203.4	403.20	25.00	2.00	0	7		
									635+00.00	22	1,918,860.1	766,257.4	400.00	25.00	2.00	0	7		
									634+00.00	23	1,918,944.4	766,311.4	399.00	25.00	2.00	0	7		
									633+00.00	24	1,919,028.1	766,365.8	396.50	25.00	2.00	0	7		
									632+00.00	25	1,919,111.9	766,420.2	394.00	25.00	2.00	0	7		
									631+00.00	26	1,919,195.6	766,474.4	390.00	25.00	2.00	0	7		
									630+00.00	27	1,919,279.4	766,528.9	389.00	25.00	2.00	0	7		
									629+00.00	28	1,919,363.1	766,583.2	385.00	25.00	2.00	0	7		
									628+00.00	29	1,919,446.9	766,637.4	381.00	25.00	2.00	0	7		
									627+00.00	30	1,919,530.6	766,691.9	373.00	25.00	2.00	0	7		
									626+00.00	31	1,919,614.5	766,746.2	373.00	25.00	2.00	0	7		
									625+00.00	32	1,919,698.2	766,800.4	370.00	25.00	2.00	0	7		
									624+00.00	33	1,919,782.0	766,854.9	370.00	25.00	2.00	0	7		
									623+00.00	34	1,919,865.8	766,909.2	372.00	25.00	2.00	0	7		
									622+00.00	35	1,919,949.5	766,963.4	374.00	25.00	2.00	0	7		
									621+00.00	36	1,920,033.2	767,017.9	374.70	25.00	2.00	0	7		

INPUT: BARRIERS

I-20 Widening

									620+00.00	37	1,920,117.0	767,072.2	375.00	25.00	2.00	0	7		
									619+00.00	38	1,920,200.8	767,126.6	381.00	25.00	2.00	0	7		
									618+00.00	41	1,920,284.5	767,180.9	380.00	25.00	2.00	0	7		
									617+00.00	39	1,920,368.5	767,235.2	380.00	25.00					

**RESULTS: BARRIER DESCRIPTIONS**
**I-20 Widening**

ICA Engineeriing				2 September 2015						
Will Kerr/Wayne Hall				TNM 2.5						
RESULTS: BARRIER DESCRIPTIONS										
PROJECT/CONTRACT:	I-20 Widening									
RUN:	Build - SC6 to Longs Pond									
BARRIER DESIGN:	INPUT HEIGHTS									
Barriers										
Name	Type	Heights along Barrier			Length	If Wall	If Berm			Cost
		Min	Avg	Max		Area	Volume	Top	Run:Rise	
								Width		
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$
Barr 2	W	25.00	25.00	25.00	3798	94953				0
									Total Cost:	0