Appendix I
Noise Modeling Documentation

FIELD NOISE MEASUREMENT DATA

Jones & Stokes

PROJECT: Sun Pointe Residential Project PROJ. # 00406.15

SITE IDENTIFICATION: ST-1 (Onsite) OBSERVER(S): Eric Moskus
ADDRESS: East of Remolina / Ejos Road Jonathan Higginson
START DATE / TIME: 8/11/15 2:00 pm END DATE / TIME: 8/11/15 2:25 pm

METEROLOGICAL CONDITIONS:
TEMP: 84 °F HUMIDITY: 47.8 %R.H. WIND: CALM LIGHT (MODERATE) VARIABLE
WINDSPEED: 3-10 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY (CLEAR) OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD 831 TYPE: (1) 2 SERIAL #: 0003786
CALIBRATOR: LD CAL 200 SERIAL #: 6645
CALIBRATION CHECK: PRE-TEST 114.0 dBA SPL POST-TEST 113.82 dBA SPL WINDSCREEN

SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

REC #	START	END	L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}	L8.33 ~~OTHER:~~	L1.67 ~~(TYPE?)~~	L25
.007	2:00	2:05	61.8	65.1	57.2	58.9	61.7	63.3	63.5	64.7	62.4
.008	2:05	2:10	60.2	64.2	56.5	57.9	60.1	61.8	61.9	63	61.2
.009	2:10	2:15	61.9	65.4	56.8	58.8	61.9	63.7	63.9	64.8	62.9
.010	2:15	2:20	61.2	64	57.7	59.1	61.2	62.7	62.8	63.3	62.0
.011	2:20	2:25	62	65.8	57.7	59.2	61.9	63.4	63.7	65.4	62.8

COMMENTS: - train @ 1:59:15
- train pulls up to and stops at nearby station @ 2:17:12 - does not leave station until after measurements
- two trucks enter site @ 2:18:42; leave @ 2:34:40 - hardly audible pickup

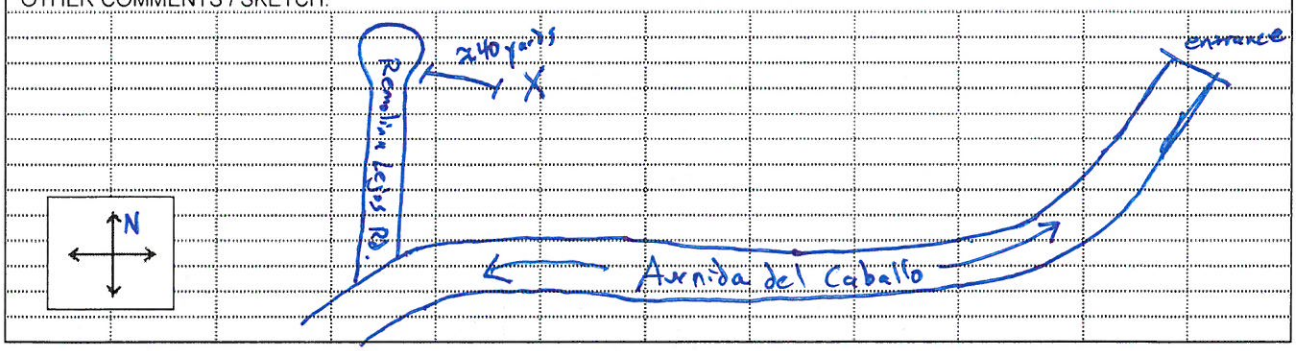
SOURCE INFO AND TRAFFIC COUNTS:
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL AMBIENT (OTHER): train
ROADWAY TYPE:
TRAFFIC COUNT DURATION: ____-MIN

	SPEED NB / EB	SPEED SB / WB	SPEED NB / EB	SPEED SB / WB	#2 COUNT NB / EB	#2 COUNT SB / WB	SPEED NB / EB	SPEED SB / WB
AUTOS:								
MED. TRUCKS:								
HVY TRUCKS:								
BUSES:								
MOTORCYCLES:								

SPEED ESTIMATED BY: RADAR / DRIVING / OBSERVER

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD (SOFT) MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

Jones & Stokes

PROJECT: Sun Pointe Residential Project PROJ. # 00406.15

SITE IDENTIFICATION: ST-2 (Onsite) OBSERVER(S): Eric Moskus
ADDRESS: East of the bend in Calle de Cambio Rd.
START DATE / TIME: 8/13/15 10:55 am END DATE / TIME: 8/13/15 11:20 am

METEROLOGICAL CONDITIONS:
TEMP: 93.5 °F HUMIDITY: 42.6 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 3-8 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 0003786
CALIBRATOR: LD CAL 200 SERIAL #: 6645
CALIBRATION CHECK: PRE-TEST 114.0 dBA SPL POST-TEST 113.94 dBA SPL WINDSCREEN ✓

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC #	START	END	L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}	~~OTHER:~~ L8.33	~~(TYPE?)~~ L1.67	L25
.017	10:55	11:00	65.4	68.1	63.9	64.5	65.4	66.3	66.3	66.6	65.9
.018	11:00	11:05	66.3	77.9	64	64.8	65.7	66.8	66.9	69.6	66.3
.019	11:05	11:10	65.2	66.8	63.5	64.3	65.2	65.9	65.9	66.3	65.6
.020	11:10	11:15	67.1	71.8	62.8	64.1	65.3	66.6	66.8	76.8	66.1
.021	11:15	11:20	65.6	67.9	63.8	64.7	65.5	66.5	66.5	67.2	66

COMMENTS: - activity w/ variable noise levels @ Mercedes Benz dealer throughout measurements
- several car horns from Mercedes dealer present in ".017" measurement and @ 11:10:50 am
- southbound Amtrak w/ horns @ 11:12:08; northbound Amtrak @ 11:01:30 w/ horns inaudible by 11:02 am

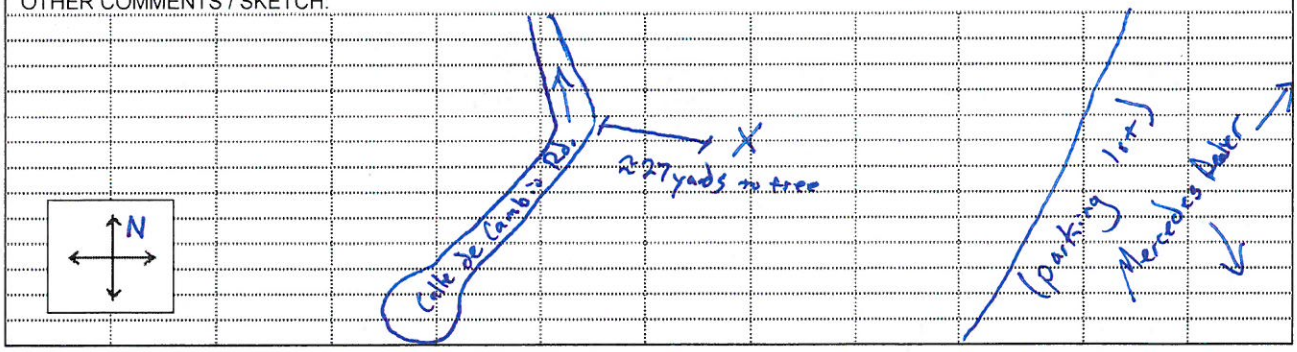
SOURCE INFO AND TRAFFIC COUNTS:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: Train/Mercedes Benz Carwash Body Shop
ROADWAY TYPE:
TRAFFIC COUNT DURATION: ____-MIN

	SPEED NB / EB	SPEED SB / WB	#2 COUNT NB / EB	#2 COUNT SB / WB	SPEED NB / EB	SPEED SB / WB
AUTOS:						
MED. TRUCKS:						
HVY TRUCKS:						
BUSES:						
MOTORCYCLES:						

SPEED ESTIMATED BY: RADAR / DRIVING / OBSERVER

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

Jones & Stokes

PROJECT: Sun Point Residential Project PROJ. # 00406.15

SITE IDENTIFICATION: ST-3 (offsite) OBSERVER(S): Eric Moskus
ADDRESS: ≈ 30 ft. east of 25834 Avator
START DATE / TIME: 8/13/15 11:46 am END DATE / TIME: 8/13/15 12:01 pm

METEROLOGICAL CONDITIONS:
TEMP: 94.9 °F HUMIDITY: 39.5 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 1-4.6 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 0003786
CALIBRATOR: LD CAL 200 SERIAL #: 6645
CALIBRATION CHECK: PRE-TEST 114.0 dBA SPL POST-TEST 113.99 dBA SPL WINDSCREEN ✓

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC #	START	END	L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}	~~OTHER:~~ L8.33	~~(TYPE?)~~ L1.67	L25
.022	11:46	12:01	55.7	65.5	51.4	53.2	55.1	57.5	57.6	59.7	56.5

COMMENTS: - paused for aircrafts overhead
- location has line-of-sight to elevated SR-73

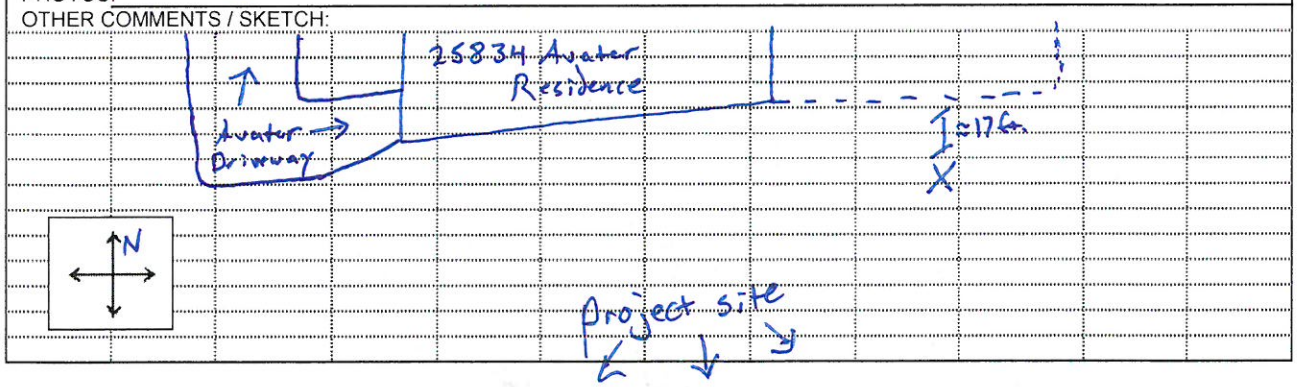
SOURCE INFO AND TRAFFIC COUNTS:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
TRAFFIC COUNT DURATION: ____-MIN

	SPEED NB / EB	SPEED SB / WB	SPEED NB / EB	SPEED SB / WB	#2 COUNT NB / EB	#2 COUNT SB / WB	SPEED NB / EB	SPEED SB / WB
AUTOS:								
MED. TRUCKS:								
HVY TRUCKS:								
BUSES:								
MOTORCYCLES:								

SPEED ESTIMATED BY: RADAR / DRIVING / OBSERVER

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

Jones & Stokes

PROJECT: Sun Pointe Residential Project PROJ. # 00466.15

SITE IDENTIFICATION: ST-4 (off site) OBSERVER(S): Eric Moskus
ADDRESS: ≈ 50-100 feet behind residence @ 28792 Mira Vista
START DATE / TIME: 8/13/15 12:57 pm END DATE / TIME: 8/13/15 13:13 pm

METEROLOGICAL CONDITIONS:
TEMP: 101 °F HUMIDITY: 34.7 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 1-3.7 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 0003786
CALIBRATOR: LD CAL 200 SERIAL #: 66645
CALIBRATION CHECK: PRE-TEST 114.0 dBA SPL POST-TEST 113.99 dBA SPL WINDSCREEN ✓

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC #	START	END	L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}	~~OTHER:~~ L8.33	~~(TYPE?)~~ L1.67	L25
.023	12:57	13:13	55.6	60.4	51.6	53.7	55.3	57.1	57.2	58.6	56.3

COMMENTS: - paused for aircrafts overhead
- location @ lower grade than residences on Mira Vista, though likely similar line-of-sight to highways

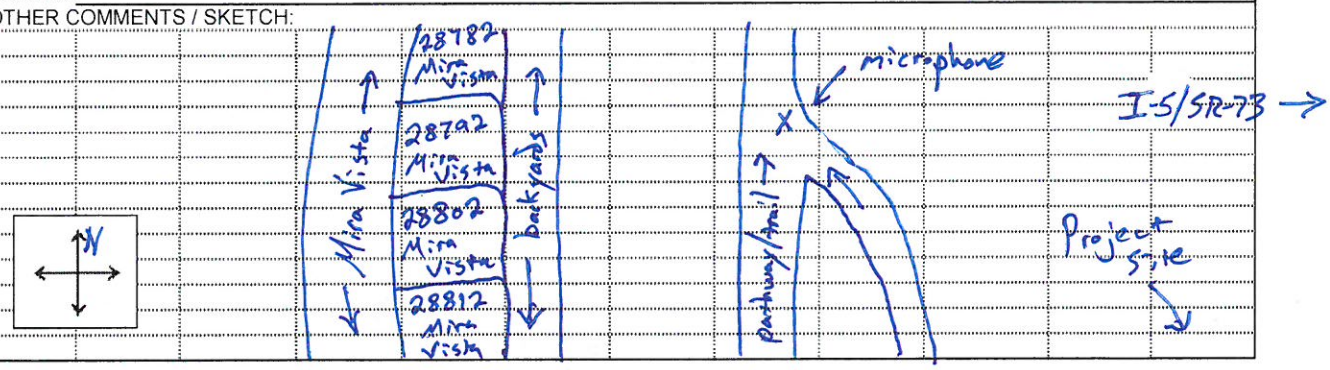
SOURCE INFO AND TRAFFIC COUNTS:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
TRAFFIC COUNT DURATION: ____-MIN

	SPEED NB / EB	SPEED SB / WB	SPEED NB / EB	SPEED SB / WB	#2 COUNT NB / EB	#2 COUNT SB / WB	SPEED NB / EB	SPEED SB / WB
AUTOS:								
MED. TRUCKS:								
HVY TRUCKS:								
BUSES:								
MOTORCYCLES:								

SPEED ESTIMATED BY: RADAR / DRIVING / OBSERVER

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

Jones & Stokes

PROJECT: Sun Pointe Residential Project PROJ. # 00406.15

SITE IDENTIFICATION: LT-1 OBSERVER(S): Eric Moskus
ADDRESS: East of Hombre de Guerra Jonathan Higginson
START DATE / TIME: 8/11/15 11:00am END DATE / TIME: 8/13/15 11:00 am

METEROLOGICAL CONDITIONS:
TEMP: °F HUMIDITY: ____ %R.H. WIND: (CALM) LIGHT MODERATE VARIABLE
WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY (CLEAR) OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: Rion NL-21 TYPE: 1 2 SERIAL #: 00676771
CALIBRATOR: LO CAL 200 SERIAL #: 6645
CALIBRATION CHECK: PRE-TEST 114.0 dBA SPL POST-TEST 114.0 dBA SPL WINDSCREEN ____

SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER: ____

REC #	START	END	L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}	OTHER:	(TYPE?)	
.1885											

COMMENTS: - train w/ horn @ 11:10:50 on 8/11/15
- mic height ≈ 5'
- left the site @ 11:18 am

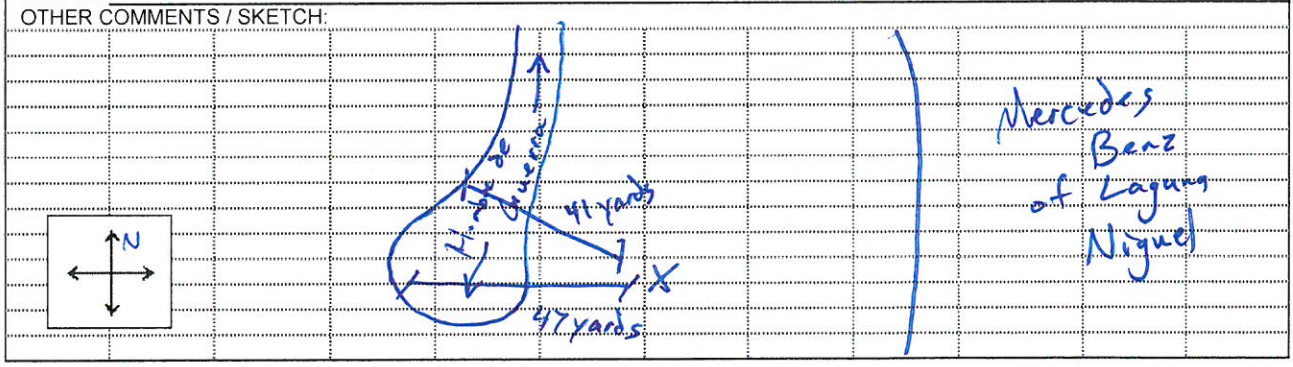
SOURCE INFO AND TRAFFIC COUNTS:
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL AMBIENT (OTHER:) rail; car wash/auto body shop
ROADWAY TYPE: ____
TRAFFIC COUNT DURATION: ____-MIN

	SPEED NB / EB	SPEED SB / WB	#2 COUNT NB / EB	#2 COUNT SB / WB	SPEED NB / EB	SPEED SB / WB
AUTOS:						
MED. TRUCKS:						
HVY TRUCKS:						
BUSES:						
MOTORCYCLES:						

SPEED ESTIMATED BY: RADAR / DRIVING / OBSERVER

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD (SOFT) MIXED FLAT OTHER: ____
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

Jones & Stokes

PROJECT: Sun Pointe Residential Project PROJ. # 00406.15

SITE IDENTIFICATION: LT-2
ADDRESS: East of Avenida del Caballo
START DATE / TIME: 8/11/15 10:20 am

OBSERVER(S): Eric Moskus, Jonathan Higginson
END DATE / TIME: 8/13/15 12:30 pm

METEROLOGICAL CONDITIONS:
TEMP: °F HUMIDITY: %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: Rion NL-21 TYPE: 1 (2) SERIAL #: 00776887
CALIBRATOR: 20 CAL 200 SERIAL #: 6645
CALIBRATION CHECK: PRE-TEST 114.0 dBA SPL POST-TEST 114.0 dBA SPL WINDSCREEN ✓

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC #	START	END	L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}	OTHER:	(TYPE?)
.7230	10:20am									

COMMENTS: - left LT site around 10:40
- train w/ horn @ 11:10:50 am on 8/11/15

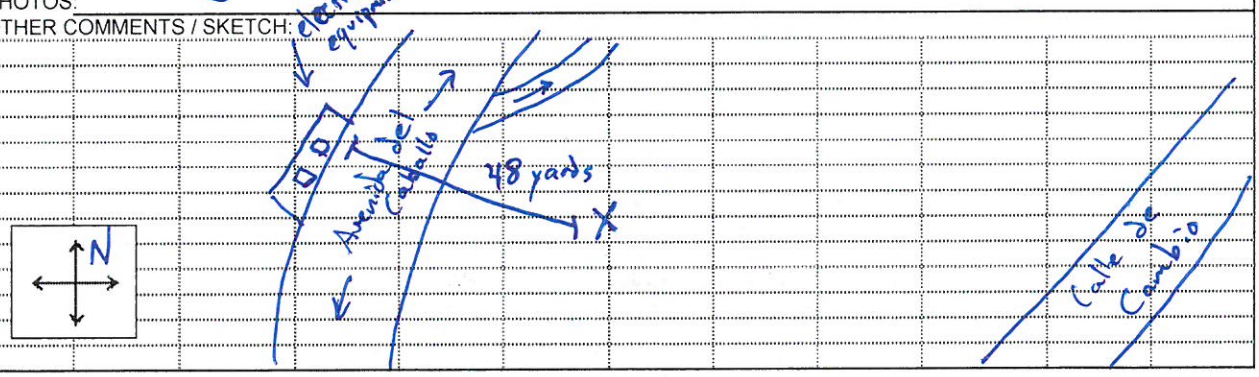
SOURCE INFO AND TRAFFIC COUNTS:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: rail; car wash/auto body shop
ROADWAY TYPE:
TRAFFIC COUNT DURATION: -MIN

	NB / EB	SB / WB	SPEED NB / EB	SPEED SB / WB	#2 COUNT NB / EB	#2 COUNT SB / WB	SPEED NB / EB	SPEED SB / WB
AUTOS:								
MED. TRUCKS:								
HVY TRUCKS:								
BUSES:								
MOTORCYCLES:								

SPEED ESTIMATED BY: RADAR / DRIVING / OBSERVER

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

Jones & Stokes

PROJECT: Sun Pointe Residential Project PROJ. # 00406.15

SITE IDENTIFICATION: Mercedes #1 OBSERVER(S): Eric Moskus
ADDRESS: ≈ 175 ft. north of car wash Jonathan Higginson
START DATE / TIME: 12:01 pm 8/11/15 END DATE / TIME: 12:21 pm 8/11/15

METEROLOGICAL CONDITIONS:
TEMP: 77 °F HUMIDITY: 55 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 0-5 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 0003786
CALIBRATOR: LD CAL 200 SERIAL #: 6645
CALIBRATION CHECK: PRE-TEST 114.0 dBA SPL POST-TEST 114.0 dBA SPL WINDSCREEN ✓

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC #	START	END	L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}	~~OTHER:~~ L8.33	~~(TYPE?)~~ L1.67	L25
.005	12:01	12:21	60.8	76	54.9	57.3	60.3	62.3	62.4	63.3	61.6

COMMENTS: ≈ 5/6 LAS @ quietest times
- car screech at 6:21 into measurement

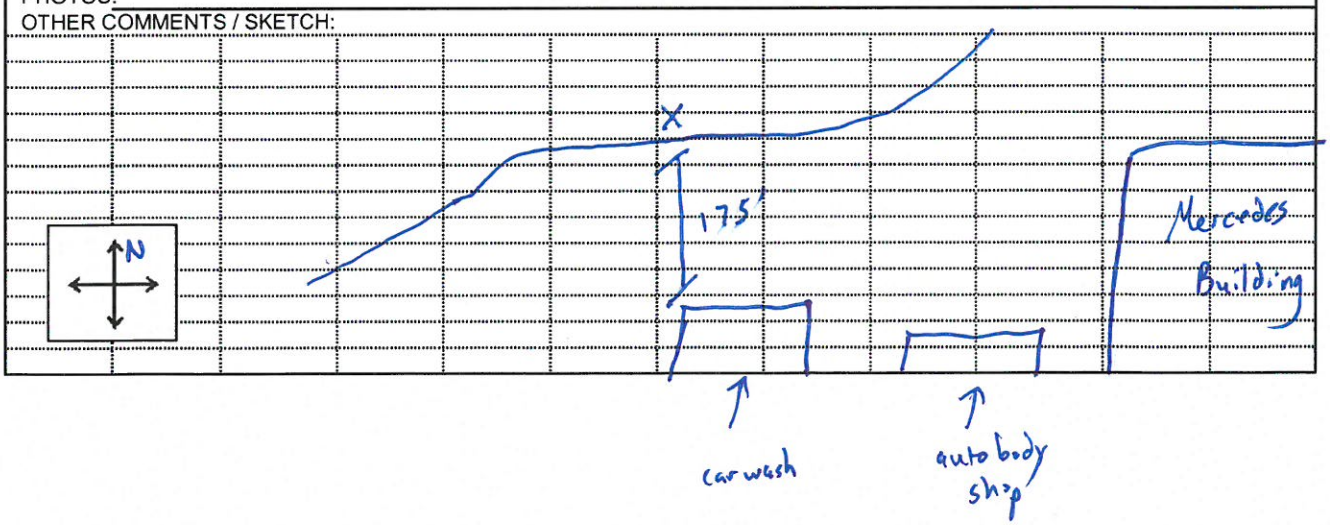
SOURCE INFO AND TRAFFIC COUNTS:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: car wash / auto body shop
ROADWAY TYPE:
TRAFFIC COUNT DURATION: ____-MIN

	SPEED NB / EB	SPEED SB / WB	SPEED NB / EB	SPEED SB / WB	#2 COUNT NB / EB	#2 COUNT SB / WB	SPEED NB / EB	SPEED SB / WB
AUTOS:								
MED. TRUCKS:								
HVY TRUCKS:								
BUSES:								
MOTORCYCLES:								

SPEED ESTIMATED BY: RADAR / DRIVING / OBSERVER

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

Jones & Stokes

PROJECT: Sun Pointe Residential Project PROJ. # 00406.15

SITE IDENTIFICATION: Mercedes #2 OBSERVER(S): Eric Moskus
ADDRESS: ≈ 180 feet to west of car wash Jonathan Higginson
START DATE / TIME: 12:36 pm 8/11/15 END DATE / TIME: 12:52 8/11/15

METEROLOGICAL CONDITIONS:
TEMP: 78 °F HUMIDITY: 51 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 2-4 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 0003786
CALIBRATOR: LD CAL 200 SERIAL #: 6645
CALIBRATION CHECK: PRE-TEST 114.0 dBA SPL POST-TEST 114.0 dBA SPL WINDSCREEN

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC #	START	END	L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L_{10}	OTHER: L8.33	~~(TYPE?)~~ L1.67	L25
.006	12:36	12:52	59.3	63.5	55.5	56.6	58.8	61.4	61.5	62	60.7

COMMENTS: ≈ 57 LAS when quiet

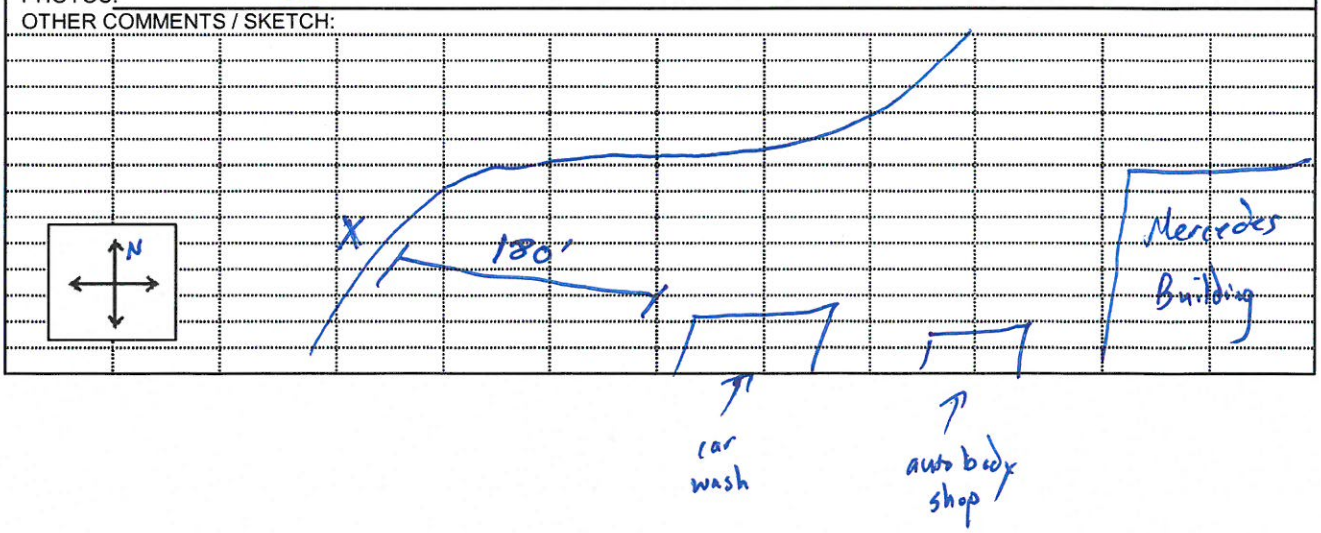
SOURCE INFO AND TRAFFIC COUNTS:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: car wash / auto body shop
ROADWAY TYPE:
TRAFFIC COUNT DURATION: ____-MIN

	SPEED NB / EB	SPEED SB / WB	SPEED NB / EB	SPEED SB / WB	#2 COUNT NB / EB	#2 COUNT SB / WB	SPEED NB / EB	SPEED SB / WB
AUTOS:								
MED. TRUCKS:								
HVY TRUCKS:								
BUSES:								
MOTORCYCLES:								

SPEED ESTIMATED BY: RADAR / DRIVING / OBSERVER

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:

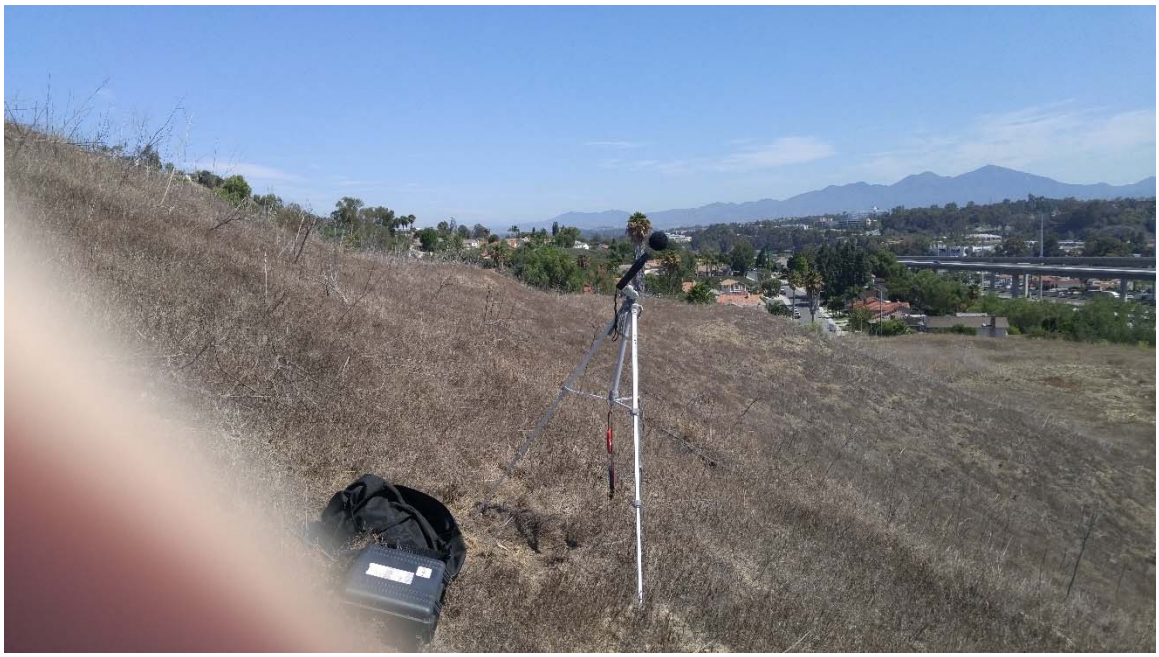


Photograph 1. ST1 – Camera facing north

Photograph 2. ST1 – Camera facing south

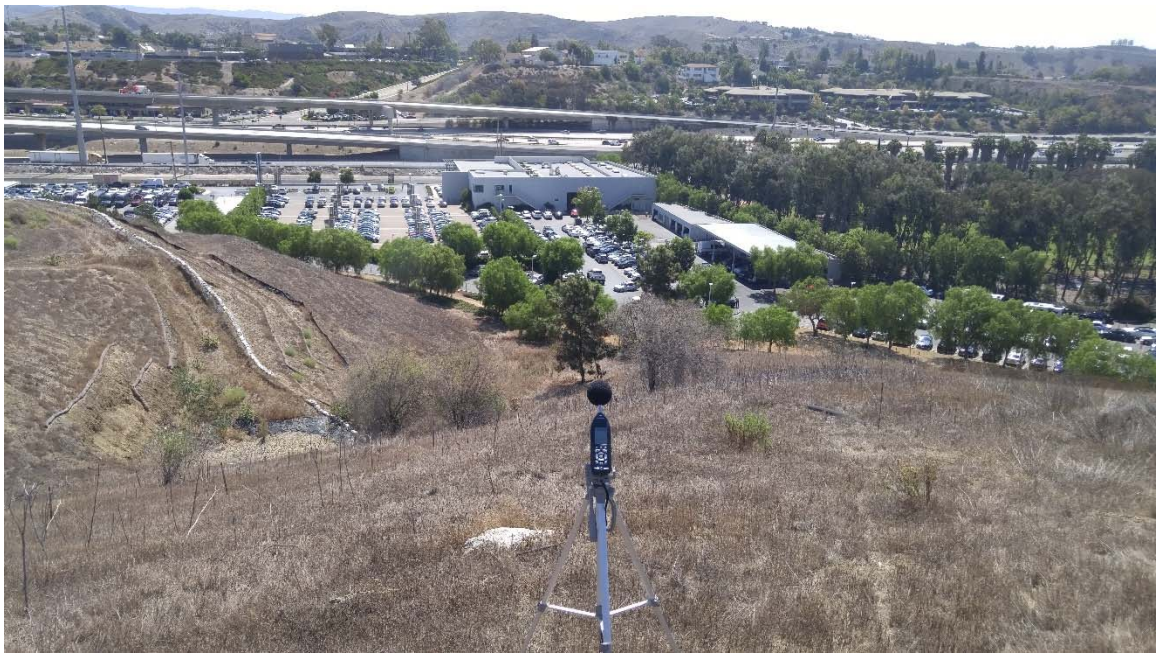
Photograph 3. ST1 – Camera facing east

Photograph 4. ST1 – Camera facing west



Photograph 5. ST2 – Camera facing north

Photograph 6. ST2 – Camera facing south



Photograph 7. ST2 – Camera facing southeast

Photograph 8. ST2 – Camera facing west

Photograph 9. ST3 – Camera facing north

Photograph 10. ST3 – Camera facing south

Photograph 11. ST3 – Camera facing northeast

Photograph 12. ST3 – Camera facing west

Photograph 13. ST4 – Camera facing north

Photograph 14. ST4 – Camera facing south

Photograph 15. ST4 – Camera facing east

Photograph 16. ST4 – Camera facing west

Photograph 17. LT1 – Camera facing north

Photograph 18. LT1 – Camera facing south

Photograph 19. LT1 – Camera facing east

Photograph 20. LT1 – Camera facing west

Photograph 21. LT2 – Camera facing northeast

Photograph 22. LT2 – Camera facing south

Photograph 23. LT2 – Camera facing east

Photograph 24. LT2 – Camera facing west

Project Construction Phasing and Equipment

Construction Phase	Equipment (Number of Pieces)
Phase 1: Site Preparation	Tractor (1) Front-End Loader (2) Backhoe (1) Dozer (3) Excavators (2) Graders (1) Crusher (1)
Phase 2: Grading	Backhoe (1) Front-End Loader (1) Scraper (2) Dozer (1) Crane (1) Forklift (3) Generator Sets (1)
Phase 3: Building Construction	Tractor (1) Front-End Loader (1) Backhoe (1) Welder/Torch (1) Paver (2)
Phase 4: Paving	Roller (2) Paving Equipment (2)
Phase 5: Architectural Coating	Air Compressor (1)

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/12/2016
Case Description: Phase 1- Site Preparation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 1	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	615	0
Front End Loader	No	40		79.1	615	0
Tractor	No	40	84		615	0
Dozer	No	40		81.7	615	0
Front End Loader	No	40		79.1	615	0
Dozer	No	40		81.7	615	0
Dozer	No	40		81.7	615	0
Crushing Plant	No	100		87	1200	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
Backhoe	55.8	51.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	57.3	53.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	62.2	58.2	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	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	57.3	53.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	59.9	55.9	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	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crushing Plant	59.4	59.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	62.2	65.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 2	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	140	0
Front End Loader	No	40		79.1	140	0
Tractor	No	40	84		140	0
Dozer	No	40		81.7	140	0
Front End Loader	No	40		79.1	140	0
Dozer	No	40		81.7	140	0
Dozer	No	40		81.7	140	0
Crushing Plant	No	100		87	630	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
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.2	66.2	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	75.1	71.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.2	66.2	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	72.7	68.7	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	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crushing Plant	65	65	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	75.1	77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 3	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	850	0
Front End Loader	No	40		79.1	850	0
Tractor	No	40	84		850	0
Dozer	No	40		81.7	850	0
Front End Loader	No	40		79.1	850	0
Dozer	No	40		81.7	850	0
Dozer	No	40		81.7	850	0
Crushing Plant	No	100		87	1470	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
Backhoe	53	49	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	54.5	50.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	59.4	55.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	57.1	53.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	54.5	50.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	57.1	53.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	57.1	53.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crushing Plant	57.6	57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	59.4	62.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 4	Commercial	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	692	0
Front End Loader	No	40		79.1	692	0
Tractor	No	40	84		692	0
Dozer	No	40		81.7	692	0
Front End Loader	No	40		79.1	692	0
Dozer	No	40		81.7	692	0
Dozer	No	40		81.7	692	0
Crushing Plant	No	100		87	790	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
Backhoe	54.7	50.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56.3	52.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	61.2	57.2	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	58.8	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56.3	52.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	58.8	54.9	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	58.8	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crushing Plant	63	63	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	63	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/12/2016
Case Description: Phase 2 - Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 1	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	615	0
Excavator	No	40		80.7	615	0
Grader	No	40	85		615	0
Front End Loader	No	40		79.1	615	0
Backhoe	No	40		77.6	615	0
Dozer	No	40		81.7	615	0
Scraper	No	40		83.6	615	0
Scraper	No	40		83.6	615	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
Excavator	58.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	58.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	63.2	59.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	57.3	53.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	55.8	51.8	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	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	61.8	57.8	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	61.8	57.8	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	63.2	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 2	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	140	0
Excavator	No	40		80.7	140	0
Grader	No	40	85		140	0
Front End Loader	No	40		79.1	140	0
Backhoe	No	40		77.6	140	0
Dozer	No	40		81.7	140	0
Scraper	No	40		83.6	140	0
Scraper	No	40		83.6	140	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
Excavator	71.8	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	71.8	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	76.1	72.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	70.2	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.7	68.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	74.6	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
Scraper	74.6	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
Total	76.1	78.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 3	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	850	0
Excavator	No	40		80.7	850	0
Grader	No	40	85		850	0
Front End Loader	No	40		79.1	850	0
Backhoe	No	40		77.6	850	0
Dozer	No	40		81.7	850	0
Scraper	No	40		83.6	850	0
Scraper	No	40		83.6	850	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
Excavator	56.1	52.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	56.1	52.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	60.4	56.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	54.5	50.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	53	49	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	57.1	53.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	59	55	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	59	55	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	60.4	62.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 4	Commercial	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	692	0
Excavator	No	40		80.7	692	0
Grader	No	40	85		692	0
Front End Loader	No	40		79.1	692	0
Backhoe	No	40		77.6	692	0
Dozer	No	40		81.7	692	0
Scraper	No	40		83.6	692	0
Scraper	No	40		83.6	692	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
Excavator	57.9	53.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	57.9	53.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	62.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56.3	52.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	54.7	50.8	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	58.8	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	60.8	56.8	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	60.8	56.8	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	62.2	64.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/12/2016
Case Description: Phase 3 - Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 1	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	685	0
Front End Loader	No	40		79.1	685	0
Front End Loader	No	40		79.1	685	0
Front End Loader	No	40		79.1	685	0
Generator	No	50		80.6	685	0
Tractor	No	40	84		685	0
Front End Loader	No	40		79.1	685	0
Backhoe	No	40		77.6	685	0
Welder / Torch	No	40		74	685	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
Crane	57.8	49.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56.4	52.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56.4	52.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56.4	52.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	57.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	61.3	57.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56.4	52.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	54.8	50.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	51.3	47.3	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	61.3	62.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 2	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	310	0
Front End Loader	No	40		79.1	310	0
Front End Loader	No	40		79.1	310	0
Front End Loader	No	40		79.1	310	0
Generator	No	50		80.6	310	0
Tractor	No	40	84		310	0
Front End Loader	No	40		79.1	310	0
Backhoe	No	40		77.6	310	0
Welder / Torch	No	40		74	310	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
Crane	64.7	56.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.3	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.3	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.3	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	64.8	61.8	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	68.2	64.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	63.3	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	61.7	57.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	58.2	54.2	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	68.2	69.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 3	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	915	0
Front End Loader	No	40		79.1	915	0
Front End Loader	No	40		79.1	915	0
Front End Loader	No	40		79.1	915	0
Generator	No	50		80.6	915	0
Tractor	No	40	84		915	0
Front End Loader	No	40		79.1	915	0
Backhoe	No	40		77.6	915	0
Welder / Torch	No	40		74	915	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
Crane	55.3	47.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.9	49.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.9	49.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.9	49.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	55.4	52.4	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	58.8	54.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.9	49.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	52.3	48.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	48.8	44.8	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	58.8	60.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 4	Commercial	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	715	0
Front End Loader	No	40		79.1	715	0
Front End Loader	No	40		79.1	715	0
Front End Loader	No	40		79.1	715	0
Generator	No	50		80.6	715	0
Tractor	No	40	84		715	0
Front End Loader	No	40		79.1	715	0
Backhoe	No	40		77.6	715	0
Welder / Torch	No	40		74	715	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
Crane	57.4	49.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	57.5	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	60.9	56.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	56	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	54.5	50.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	50.9	46.9	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	60.9	62.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/12/2016
Case Description: Phase 4 - Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 1	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	735	0
Paver	No	50		77.2	735	0
Roller	No	20		80	735	0
Roller	No	20		80	735	0
Paver	No	50		77.2	735	0
Paver	No	50		77.2	735	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
Paver	53.9	50.9	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	53.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	56.7	49.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	56.7	49.7	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	53.9	50.9	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	53.9	50.9	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	56.7	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 2	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	360	0
Paver	No	50		77.2	360	0
Roller	No	20		80	360	0
Roller	No	20		80	360	0
Paver	No	50		77.2	360	0
Paver	No	50		77.2	360	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
Paver	60.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	60.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	62.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	62.9	55.9	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	60.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	60.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	62.9	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 3	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	940	0
Paver	No	50		77.2	940	0
Roller	No	20		80	940	0
Roller	No	20		80	940	0
Paver	No	50		77.2	940	0
Paver	No	50		77.2	940	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
Paver	51.7	48.7	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	51.7	48.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	54.5	47.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	54.5	47.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	51.7	48.7	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	51.7	48.7	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	54.5	56.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 4	Commercial	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	720	0
Paver	No	50		77.2	720	0
Roller	No	20		80	720	0
Roller	No	20		80	720	0
Paver	No	50		77.2	720	0
Paver	No	50		77.2	720	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
Paver	54.1	51	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	54.1	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	56.8	49.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	56.8	49.8	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	54.1	51	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	54.1	51	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	56.8	58.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/12/2016
Case Description: Phase 5 - Architectural Coating

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 1	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	685	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
Compressor (air)	54.9	51	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	54.9	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 2	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	310	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
Compressor (air)	61.8	57.8	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	61.8	57.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 3	Residential	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	915	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
Compressor (air)	52.4	48.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	52.4	48.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Receptor 4	Commercial	45	45	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	715	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
Compressor (air)	54.6	50.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	54.6	50.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

On-Site Traffic Noise Modeling Methodology

Traffic noise levels at the project site were predicted using FHWA's Traffic Noise Model (TNM®), version 2.5. The TNM® is FHWA's computer program for highway traffic noise prediction and analysis. The parameters used to estimate vehicular traffic noise were equivalent hourly traffic volumes, vehicle mix (i.e., percentage of automobiles, medium trucks, and heavy trucks), posted speed limits, and 3-dimensional geometry for roadways, receivers, terrain, and barriers. Average daily traffic (ADT) volumes on the I-5 and SR-73 highways used for the analysis of Existing (2015) traffic noise levels were gathered using the *Caltrans Performance Measurement System* data for August 11, 2015. An assumed 2% annual increase in traffic volumes was applied to the Existing (2015) ADT volumes to attain Opening Year 2018 and Future Year 2035 ADT volumes. In order for TNM® to predict CNEL noise levels, all ADT volumes were converted to equivalent hourly traffic volumes using Equation 15 in Appendix C of the *FHWA TNM® Technical Manual* (FHWA 1998). Vehicle mix data were attained using the Caltrans document *Annual Average Daily Truck Traffic on California State Highways* (Caltrans 2013b). Horizontal and vertical geometry for existing and future roadways, receivers, buildings, and other TNM® features were derived using Google Earth and scaled plans of the proposed site contained in the *SunPointe Vesting Tentative Tract Map No. 17433 & Site Development Permit SP 12-07P* (Hunsaker & Associates 2015).

To validate the accuracy of the TNM®, measured traffic noise levels at the on-site short-term and long-term field measurement locations were compared with modeled traffic noise levels for those same locations. For each measurement, the corresponding daily *Caltrans Performance Measurement System* (PeMS) traffic volumes on the I-5 and SR-73 highways were used. These volumes were assigned to the modeled roadways to simulate the sound power of the noise source during the actual measurement period. Modeled and measured sound levels were then compared to determine the accuracy of the model and if additional calibration was necessary. Results indicated that modeled and measured sound levels agree within 2 dB CNEL. To account for deviations between the measured and modeled noise levels found during the model validation process, a correction factor (calibration constant) was included to adjust modeled noise levels to within 1 dB CNEL of the measured noise level. A K-factor of +0.7 dB (i.e., an increase of 0.7 dB) was applied to the noise levels at all modeled receiver locations.

It is noted that the validated TNM® was calibrated to the overall measured noise levels, which were dominated by traffic noise but also included all contributions from secondary sources such as the nearby railroad. As a result, the noise model was calibrated to effectively incorporate all the relevant noise sources affecting the project site.

The validated model was updated to reflect the proposed future site plan geometry and grading and future traffic data, as described above. Future traffic noise levels at the proposed project site were then analyzed at 26 different modeled receiver locations across the project site.

ICF International 14 October 2015
Eric Moskus TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 00406.15 - Sun Pointe
RUN: Existing Site
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 Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST2	1	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
ST1	2	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
LT2	3	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
LT1	4	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	3	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

ICF International
Eric Moskus

14 October 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 00406.15 - Sun Pointe
RUN: Opening Year (2018)
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 Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
M1	1	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0
M2	2	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
M3	3	1	0.0	70.5	66	70.5	10	Snd Lvl	70.5	0.0	8	-8.0
M4	4	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
M5	5	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
M6	6	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
M7	7	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
M8	8	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0
M9	9	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0
M10	10	1	0.0	47.5	66	47.5	10	----	47.5	0.0	8	-8.0
M11	11	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
M12	12	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
M13	13	1	0.0	49.6	66	49.6	10	----	49.6	0.0	8	-8.0
M14	14	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
M15	15	1	0.0	55.6	66	55.6	10	----	55.6	0.0	8	-8.0
M16	16	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0
M17	17	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
M18	18	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0
M19	19	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
M20	20	1	0.0	44.7	66	44.7	10	----	44.7	0.0	8	-8.0
M21	21	1	0.0	47.4	66	47.4	10	----	47.4	0.0	8	-8.0
M22	22	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
M23	23	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0
M24	24	1	0.0	53.4	66	53.4	10	----	53.4	0.0	8	-8.0
M25	25	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0

M26	26	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	26	0.0	0.0	0.0
All Impacted	11	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

ICF International
Eric Moskus

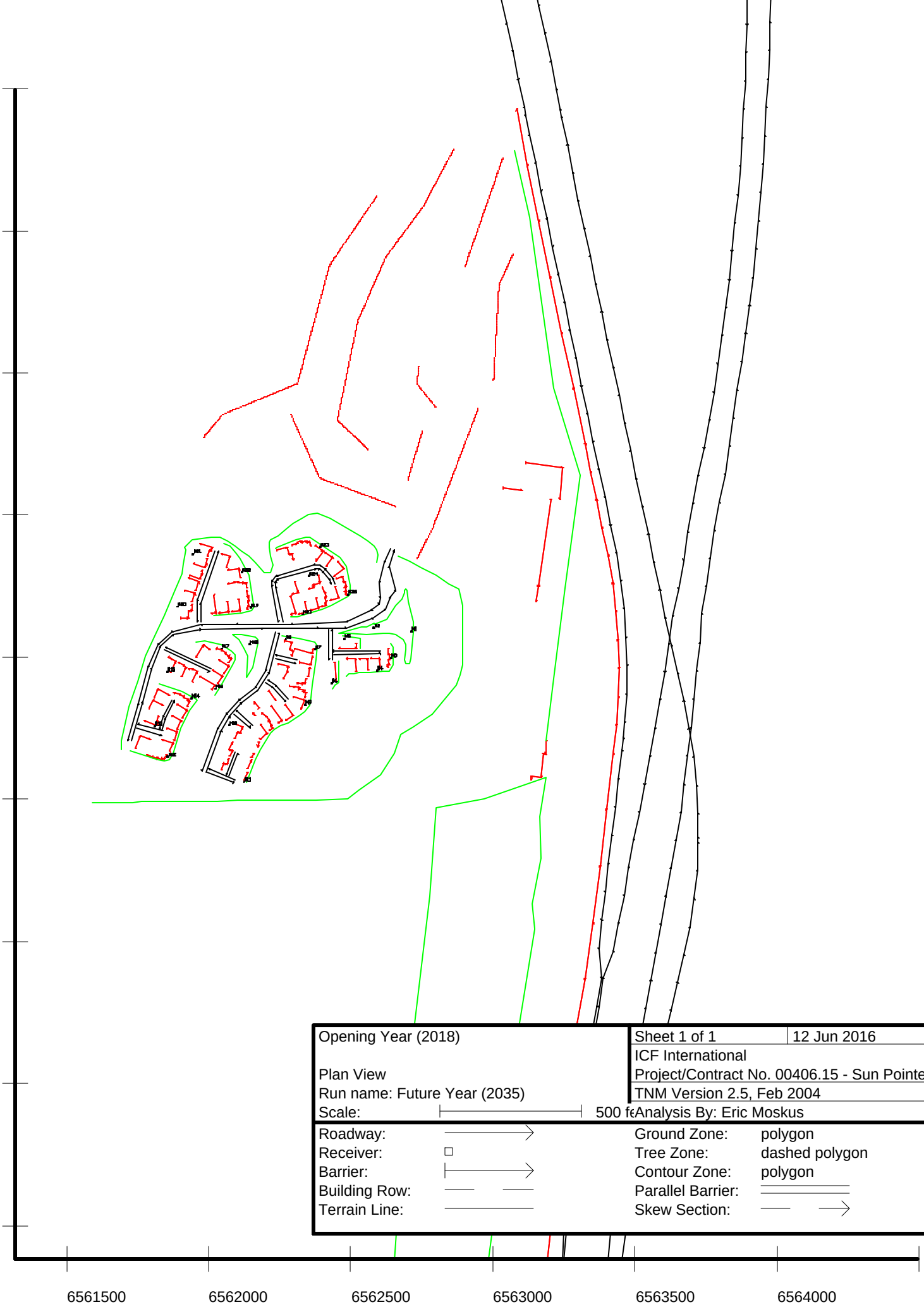
14 October 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 00406.15 - Sun Pointe
RUN: Future Year (2035)
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.

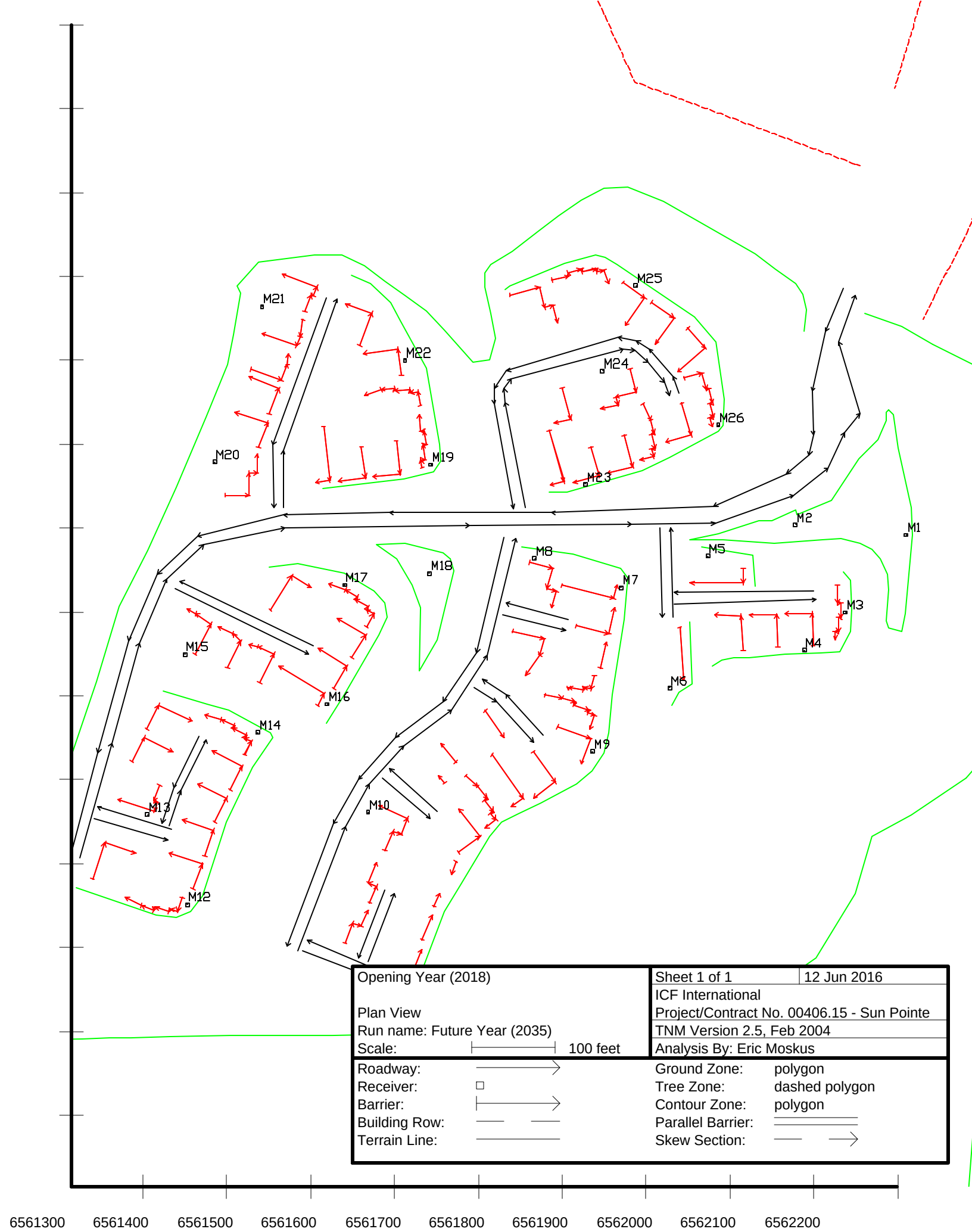
Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
M1	1	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
M2	2	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
M3	3	1	0.0	72.3	66	72.3	10	Snd Lvl	72.3	0.0	8	-8.0
M4	4	1	0.0	70.2	66	70.2	10	Snd Lvl	70.2	0.0	8	-8.0
M5	5	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
M6	6	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0
M7	7	1	0.0	68.8	66	68.8	10	Snd Lvl	68.8	0.0	8	-8.0
M8	8	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
M9	9	1	0.0	69.9	66	69.9	10	Snd Lvl	69.9	0.0	8	-8.0
M10	10	1	0.0	49.1	66	49.1	10	----	49.1	0.0	8	-8.0
M11	11	1	0.0	68.8	66	68.8	10	Snd Lvl	68.8	0.0	8	-8.0
M12	12	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
M13	13	1	0.0	51.1	66	51.1	10	----	51.1	0.0	8	-8.0
M14	14	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
M15	15	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0
M16	16	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0
M17	17	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
M18	18	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0
M19	19	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
M20	20	1	0.0	46.1	66	46.1	10	----	46.1	0.0	8	-8.0
M21	21	1	0.0	49.0	66	49.0	10	----	49.0	0.0	8	-8.0
M22	22	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0
M23	23	1	0.0	65.2	66	65.2	10	----	65.2	0.0	8	-8.0
M24	24	1	0.0	55.2	66	55.2	10	----	55.2	0.0	8	-8.0
M25	25	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0

M26	26	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	-8.0
Dwelling Units		**# DUs**	**Noise Reduction**									
			Min	**Avg**	**Max**							
			dB	**dB**	**dB**							
All Selected		26	0.0	0.0	0.0							
All Impacted		16	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							



Opening Year (2018)	Sheet 1 of 1	12 Jun 2016
	ICF International	
Plan View	Project/Contract No. 00406.15 - Sun Pointe	
Run name: Future Year (2035)	TNM Version 2.5, Feb 2004	
Scale: 500 fe	Analysis By: Eric Moskus	

Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	



Opening Year (2018)	Sheet 1 of 1 — 12 Jun 2016
	ICF International
Plan View	Project/Contract No. 00406.15 - Sun Pointe
Run name: Future Year (2035)	TNM Version 2.5, Feb 2004
Scale: 100 feet	Analysis By: Eric Moskus

Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	