LSC TRANSPORTATION CONSULTANTS, INC.
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March 19, 2021

Mr. Jeff Mark
President
The Landhuis Company
212 North Wahsatch Avenue, Suite 301
Colorado Springs, CO 80903

RE: The Ridges at Lorson Ranch
El Paso County, CO
Noise Impact Study
LSC #214081

Dear Mr. Mark,

In response to your request, LSC Transportation Consultants, Inc. has completed a detailed analysis of the noise impacts of Fontaine Boulevard on the proposed Ridges at Lorson Ranch residential development, to be located within the Lorson Ranch development in El Paso County, Colorado. LSC has completed an evaluation of the noise exposure for submittal to El Paso County in accordance with the Federal Highway Administration (FHWA) requirements.

LSC used the software program Traffic Noise Model Version 2.5—developed by FHWA—to predict the noise levels for each lot within the Ridges at Lorson Ranch development that is located adjacent to Fontaine Boulevard. A site plan with the lot numbers identified on it is attached for your reference. The receiver for each lot was placed at the midpoint of the setback line adjacent to the arterial. An elevation of five feet was assumed for the receivers.

The input data for the noise predictions included traffic volumes, roadway geometry, topographic elevations, and the locations of the receivers. The analysis was completed using the projected 2040 afternoon peak-hour traffic volumes on Fontaine Boulevard. These volumes are estimated by LSC, based on the 2040 total traffic volumes shown in the *Ridges at Lorson Ranch Traffic Impact Study* by LSC, dated March 19, 2021. The analysis assumes the interim Urban Non-Residential Collector cross section of Fontaine Boulevard with one through lane in each direction.

The results of the noise prediction show that, in the year 2040, all locations have predicted noise levels that would not exceed 67 decibels Leq. Based on the criteria contained in the El Paso

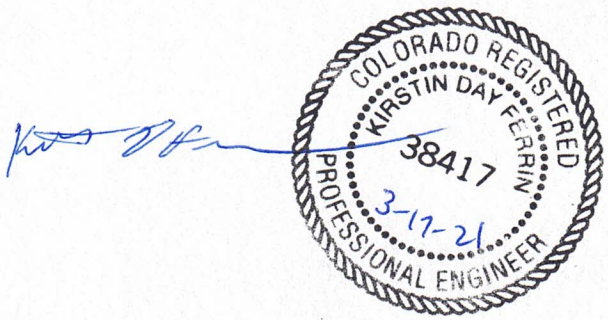
County *Engineering Criteria Manual* no noise mitigation would be needed. The noise analysis inputs and outputs are attached.

* * * * *

Please contact me if you have any questions regarding this report.

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.



By: Kirstin D. Ferrin, P.E.
Senior Transportation Engineer

KDF:jas

Enclosures: Site Plan
Traffic Noise Model Input and Output

Site Plan

TRANSPORTATION
CONSULTANTS, INC.

REGAN RIDGE DRIVE
LOGANS RIDGE LANE
RIKERS RIDGE LANE
CODY RIDGE WAY
WALLEYE DRIVE
DANIS DRIVE
JASONS RIDGE WAY
MEREDITH RIDGE WAY
SANDERLING STREET
GRAY WOLF COURT
SNOWFIELD COURT
FONTAINE BLVD.
FORAKER LANE
LOOKOUT PEAK LANE
LAKE TROUT DRIVE
LOST PEAK LANE
PEARSOLL STREET
MISSION PEAK PLACE
COPPER BUTTE WAY
ASPEN BUTTE TERRACE
LORSON BLVD
KINGSTON PEAK PLACE
PEARSOLL STREET
BROKEN TOP DRIVE
ALPINE RIDGE LANE
GRAYLING DRIVE
DONNAS DRIVE
BUCKNER WAY
NYSTROM TERRACE
RAVEN RIDGE TERRACE
DRAGONTAIL TERRACE
SPLIT MOUNTAIN DRIVE
SPLAKE STREET

TRACT A 392383 SF
TRACT B 54972 SF
TRACT C 125666 SF
TRACT D 7528 SF
TRACT E 8174 SF
TRACT F 9155 SF
TRACT G 7050 SF
TRACT H 56345 SF
TRACT I 86585 SF
TRACT J 2906 SF
TRACT K 43595 SF
TRACT L 15717 SF
TRACT M 2953 SF
TRACT N 2906 SF
TRACT O 350272 SF
TRACT P 37349 SF
TRACT Q 15983 SF
TRACT R 5000 SF
TRACT S 36787 SF
TRACT T 14940 SF
TRACT U 227304 SF
TRACT V 180169 SF

Lots north of Fontaine Blvd included in the analysis

Lots south of Fontaine Blvd included in the analysis

N

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

Exhibit 1
The Ridges at Lorson Ranch Site Plan

RIDGE AT LORSON RANCH

Matrix
Excellence by Design
2435 Research Parkway, Suite 300
Colorado Springs, CO 80920
Contact: Jason Alwine
Phone (719) 575-0100
Fax (719) 575-0208

OVERALL SITE PLAN

MARCH 9, 2021

Noise Analysis Inputs/Outputs

TRANSPORTATION
CONSULTANTS, INC.

LSC Transportation Consultants, Inc. 19 March 2021
KDF TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Ridges at Lorson Ranch
RUN: 2040 PM Peak Hour
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	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
N/O Fontaine Lot 357	1	1	0.0	55.7	67	55.7	10	----	55.7	0.0	8	-8.0
N/O Fontaine Lot 459	2	1	0.0	56.6	67	56.6	10	----	56.6	0.0	8	-8.0
N/O Fontaine Lot 458	3	1	0.0	56.3	67	56.3	10	----	56.3	0.0	8	-8.0
N/O Fontaine Lot 457	4	1	0.0	56.2	67	56.2	10	----	56.2	0.0	8	-8.0
N/O Fontaine Lot 456	5	1	0.0	56.0	67	56.0	10	----	56.0	0.0	8	-8.0
N/O Fontaine Lot 455	6	1	0.0	55.9	67	55.9	10	----	55.9	0.0	8	-8.0
N/O Fontaine Lot 454	7	1	0.0	55.9	67	55.9	10	----	55.9	0.0	8	-8.0
N/O Fontaine Lot 453	8	1	0.0	55.8	67	55.8	10	----	55.8	0.0	8	-8.0
N/O Fontaine Lot 452	9	1	0.0	55.8	67	55.8	10	----	55.8	0.0	8	-8.0
N/O Fontaine Lot 451	10	1	0.0	55.6	67	55.6	10	----	55.6	0.0	8	-8.0
N/O Fontaine Lot 450	11	1	0.0	55.5	67	55.5	10	----	55.5	0.0	8	-8.0
N/O Fontaine Lot 449	12	1	0.0	55.6	67	55.6	10	----	55.6	0.0	8	-8.0
N/O Fontaine Lot 448	13	1	0.0	55.6	67	55.6	10	----	55.6	0.0	8	-8.0
N/O Fontaine Lot 447	14	1	0.0	55.5	67	55.5	10	----	55.5	0.0	8	-8.0
N/O Fontaine Lot 446	15	1	0.0	55.6	67	55.6	10	----	55.6	0.0	8	-8.0
N/O Fontaine Lot 445	16	1	0.0	55.8	67	55.8	10	----	55.8	0.0	8	-8.0
N/O Fontaine Lot 444	17	1	0.0	55.7	67	55.7	10	----	55.7	0.0	8	-8.0
N/O Fontaine Lot 443	18	1	0.0	55.4	67	55.4	10	----	55.4	0.0	8	-8.0
N/O Fontaine Lot 442	19	1	0.0	55.5	67	55.5	10	----	55.5	0.0	8	-8.0
N/O Fontaine Lot 441	20	1	0.0	55.6	67	55.6	10	----	55.6	0.0	8	-8.0
N/O Fontaine Lot 440	21	1	0.0	55.7	67	55.7	10	----	55.7	0.0	8	-8.0
N/O Fontaine Lot 439	22	1	0.0	55.7	67	55.7	10	----	55.7	0.0	8	-8.0
N/O Fontaine Lot 438	23	1	0.0	55.8	67	55.8	10	----	55.8	0.0	8	-8.0
N/O Fontaine Lot 437	24	1	0.0	55.8	67	55.8	10	----	55.8	0.0	8	-8.0

N/O Fontaine Lot 436	25	1	0.0	55.8	67	55.8	10	----	55.8	0.0	8	-8.0
N/O Fontaine Lot 435	26	1	0.0	55.9	67	55.9	10	----	55.9	0.0	8	-8.0
S/O Fontaine Lot 689	27	1	0.0	56.0	67	56.0	10	----	56.0	0.0	8	-8.0
S/O Fontaine Lot 672	28	1	0.0	56.5	67	56.5	10	----	56.5	0.0	8	-8.0
S/O Fontaine Lot 671	29	1	0.0	56.4	67	56.4	10	----	56.4	0.0	8	-8.0
S/O Fontaine Lot 670	30	1	0.0	56.2	67	56.2	10	----	56.2	0.0	8	-8.0
S/O Fontaine Lot 669	31	1	0.0	56.2	67	56.2	10	----	56.2	0.0	8	-8.0
S/O Fontaine Lot 668	32	1	0.0	56.2	67	56.2	10	----	56.2	0.0	8	-8.0
S/O Fontaine Lot 667	33	1	0.0	56.2	67	56.2	10	----	56.2	0.0	8	-8.0
S/O Fontaine Lot 666	34	1	0.0	56.2	67	56.2	10	----	56.2	0.0	8	-8.0
S/O Fontaine Lot 665	35	1	0.0	56.3	67	56.3	10	----	56.3	0.0	8	-8.0
S/O Fontaine Lot 664	36	1	0.0	56.2	67	56.2	10	----	56.2	0.0	8	-8.0
S/O Fontaine Lot 663	37	1	0.0	56.1	67	56.1	10	----	56.1	0.0	8	-8.0
S/O Fontaine Lot 662	38	1	0.0	56.1	67	56.1	10	----	56.1	0.0	8	-8.0
S/O Fontaine Lot 661	39	1	0.0	56.3	67	56.3	10	----	56.3	0.0	8	-8.0
S/O Fontaine Lot 660	40	1	0.0	56.3	67	56.3	10	----	56.3	0.0	8	-8.0
S/O Fontaine Lot 659	41	1	0.0	56.5	67	56.5	10	----	56.5	0.0	8	-8.0
S/O Fontaine Lot 658	42	1	0.0	56.7	67	56.7	10	----	56.7	0.0	8	-8.0
S/O Fontaine Lot 460	43	1	0.0	57.0	67	57.0	10	----	57.0	0.0	8	-8.0
S/O Fontaine Lot 461	44	1	0.0	57.2	67	57.2	10	----	57.2	0.0	8	-8.0
S/O Fontaine Lot 462	45	1	0.0	57.3	67	57.3	10	----	57.3	0.0	8	-8.0
S/O Fontaine Lot 463	46	1	0.0	57.3	67	57.3	10	----	57.3	0.0	8	-8.0
S/O Fontaine Lot 464	47	1	0.0	57.1	67	57.1	10	----	57.1	0.0	8	-8.0
S/O Fontaine Lot 465	48	1	0.0	56.8	67	56.8	10	----	56.8	0.0	8	-8.0
S/O Fontaine Lot 466	49	1	0.0	56.9	67	56.9	10	----	56.9	0.0	8	-8.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	49	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

LSC Transportation Consultants, Inc. **19 March 2021**
KDF **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Ridges at Lorson Ranch**
RUN: **2040 PM Peak Hour**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
EB Fontaine Blvd W/O Walleye Dr	point1	1	575	45	12	45	6	45	0	0	0	0
	point2	2	575	45	12	45	6	45	0	0	0	0
	point3	3										
EB Fontaine Blvd E/O Walleye Dr	point4	4	123	45	3	45	1	45	0	0	0	0
	point6	6	123	45	3	45	1	45	0	0	0	0
	point7	7	123	45	3	45	1	45	0	0	0	0
	point8	8	123	45	3	45	1	45	0	0	0	0
	point9	9	123	45	3	45	1	45	0	0	0	0
	point10	10	123	45	3	45	1	45	0	0	0	0
	point11	11	123	45	3	45	1	45	0	0	0	0
	point5	5										
WB Fontaine Blvd E/O Walleye Dr	point12	12	72	45	2	45	1	45	0	0	0	0
	point14	14	72	45	2	45	1	45	0	0	0	0
	point15	15	72	45	2	45	1	45	0	0	0	0
	point16	16	72	45	2	45	1	45	0	0	0	0
	point17	17	72	45	2	45	1	45	0	0	0	0
	point18	18	72	45	2	45	1	45	0	0	0	0
	point19	19	72	45	2	45	1	45	0	0	0	0
	point13	13										
WB Fontaine Blvd W/O Walleye Dr	point20	20	342	45	7	45	4	45	0	0	0	0
	point21	21	342	45	7	45	4	45	0	0	0	0
	point22	22										

LSC Transportation Consultants, Inc. 19 March 2021
KDF TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Ridges at Lorson Ranch
RUN: 2040 PM Peak Hour

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

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
EB Fontaine Blvd W/O Walleye Dr	12.0	point1	1	29,431.5	23,084.4	5,770.00				Average	
		point2	2	29,799.8	22,957.4	5,780.00				Average	
		point3	3	29,853.8	22,938.9	5,784.00					
EB Fontaine Blvd E/O Walleye Dr	12.0	point4	4	29,865.1	22,935.0	5,784.00	Stop	0.00	100	Average	
		point6	6	30,046.8	22,872.4	5,790.00				Average	
		point7	7	30,209.5	22,817.6	5,800.00				Average	
		point8	8	30,384.4	22,776.0	5,810.00				Average	
		point9	9	30,563.3	22,754.7	5,820.00				Average	
		point10	10	30,820.8	22,756.0	5,830.00				Average	
		point11	11	31,060.3	22,756.0	5,840.00				Average	
		point5	5	31,740.0	22,772.5	5,845.00					
WB Fontaine Blvd E/O Walleye Dr	12.0	point12	12	31,739.8	22,796.5	5,845.00				Average	
		point14	14	31,074.9	22,784.6	5,840.00				Average	
		point15	15	30,852.2	22,780.6	5,830.00				Average	
		point16	16	30,575.5	22,778.8	5,820.00				Average	
		point17	17	30,385.0	22,801.1	5,810.00				Average	
		point18	18	30,207.4	22,843.3	5,800.00				Average	
		point19	19	30,042.2	22,899.4	5,790.00				Average	
		point13	13	29,872.9	22,957.6	5,784.00					
WB Fontaine Blvd W/O Walleye Dr	12.0	point20	20	29,844.7	22,976.1	0.00	Stop	0.00	100	Average	
		point21	21	29,617.1	23,067.5	0.00				Average	
		point22	22	29,460.5	23,119.7	0.00					

LSC Transportation Consultants, Inc. 19 March 2021
KDF TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Ridges at Lorson Ranch
RUN: 2040 PM Peak Hour

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
N/O Fontaine Lot 357	1	1	29,993.1	23,063.3	5,787.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 459	2	1	30,115.9	22,951.2	5,794.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 458	3	1	30,172.2	22,931.8	5,798.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 457	4	1	30,221.8	22,915.6	5,801.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 456	5	1	30,273.2	22,900.5	5,803.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 455	6	1	30,325.1	22,887.4	5,805.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 454	7	1	30,380.1	22,875.7	5,808.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 453	8	1	30,435.6	22,866.2	5,811.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 452	9	1	30,488.7	22,859.2	5,813.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 451	10	1	30,542.1	22,854.3	5,815.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 450	11	1	30,595.5	22,851.3	5,817.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 449	12	1	30,649.0	22,850.4	5,819.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 448	13	1	30,700.7	22,850.8	5,822.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 447	14	1	30,750.7	22,851.7	5,824.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 446	15	1	30,802.6	22,851.7	5,826.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 445	16	1	30,850.7	22,851.7	5,828.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 444	17	1	30,906.6	22,851.7	5,830.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 443	18	1	31,018.6	22,856.6	5,835.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 442	19	1	31,074.6	22,857.6	5,838.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 441	20	1	31,124.6	22,858.4	5,841.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 440	21	1	31,174.6	22,859.3	5,842.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 439	22	1	31,224.6	22,860.2	5,843.00	4.92	0.00	67	10.0	8.0	Y

N/O Fontaine Lot 438	23	1	31,274.6	22,861.1	5,844.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 437	24	1	31,324.6	22,862.0	5,845.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 436	25	1	31,374.6	22,862.9	5,846.00	4.92	0.00	67	10.0	8.0	Y
N/O Fontaine Lot 435	26	1	31,424.6	22,862.9	5,847.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 689	27	1	29,882.2	22,818.6	5,783.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 672	28	1	30,132.6	22,765.6	5,795.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 671	29	1	30,214.8	22,740.9	5,801.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 670	30	1	30,295.8	22,719.3	5,805.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 669	31	1	30,345.0	22,709.1	5,808.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 668	32	1	30,398.8	22,699.4	5,812.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 667	33	1	30,444.1	22,693.1	5,815.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 666	34	1	30,494.1	22,687.4	5,817.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 665	35	1	30,549.3	22,683.2	5,821.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 664	36	1	30,604.5	22,680.6	5,823.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 663	37	1	30,654.5	22,680.0	5,825.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 662	38	1	30,704.5	22,680.0	5,827.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 661	39	1	30,754.5	22,681.5	5,830.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 660	40	1	30,808.1	22,681.5	5,832.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 659	41	1	30,854.5	22,683.3	5,834.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 658	42	1	30,910.1	22,684.3	5,836.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 460	43	1	31,021.7	22,686.3	5,842.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 461	44	1	31,077.7	22,687.3	5,844.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 462	45	1	31,127.7	22,688.2	5,846.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 463	46	1	31,177.7	22,689.1	5,846.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 464	47	1	31,227.6	22,689.1	5,844.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 465	48	1	31,308.1	22,689.1	5,842.00	4.92	0.00	67	10.0	8.0	Y
S/O Fontaine Lot 466	49	1	31,412.5	22,693.3	5,838.00	4.92	0.00	67	10.0	8.0	Y