



NOISE MONITORING SUMMARY REPORT

April 2014

Prepared by:
HDR



**EB I-70 Peak Period
Shoulder Lane**
CATEGORICAL EXCLUSION



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Section 1. Introduction

This document provides a summary discussion of noise monitoring and attenuation analyses associated with the I-70 Peak Period Shoulder Lane project between the I-70/US 40 interchange and Idaho Springs, Colorado.

Section 2. Regulatory Setting

The Federal Noise Control Act of 1972 (Public Law 92-574) requires that all federal agencies administer their programs in a manner that promotes an environment free from noises that could jeopardize public health or welfare. The federal regulation that FHWA uses to assess noise impacts is 23 Code of Federal Regulations (CFR) 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. The Colorado Department of Transportation (CDOT) Noise Abatement Criteria are summarized in Table 1. As defined by CDOT, a design-year noise level greater than or equal to the CDOT NAC is considered to exceed the NAC, and a 10-dBA increase over existing noise levels is considered to substantially exceed the NAC.

Table 1. CDOT's Noise-Abatement Criteria

Activity Category	Leq Noise Levels (dBA)	Description of Activity Category
A	56 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	66 (exterior)	Residential.
C	66 (exterior)	Active sports areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings.
D	51 (interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting room, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	71 (exterior)	Hotels, motels, offices, restaurants/bars, and other undeveloped lands, properties, or activities not included in categories A–D or F.
F	—	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	—	Undeveloped lands that are not permitted.

Source: CDOT Noise Fundamentals and Traffic Noise Impact Criteria, February 8, 2013

Section 3. Type III Project Classification

The PPSL project meets the criteria for a Type III project established in 23 CFR 772. Therefore, the project requires no analysis for highway traffic noise impacts. Type III projects do not involve added capacity, construction of new through lanes or auxiliary lanes (other than turn lanes), changes in the horizontal or vertical alignment of the roadway, exposure of noise sensitive land uses to a new or existing highway noise source, or any other activity classified as a Type I or Type II project. CDOT acknowledges that a noise analysis is required if changes to the proposed project result in reclassification to a Type I project as outlined in the accompanying MOU.

This determination has been based on the following information:

- The project is a temporary occupancy of the shoulder and not considered by FHWA to qualify as a permanent through lane or capacity addition. The operation of the PPSL is limited to 20 percent of the annual days per year including holidays (73 days) or 7.5 percent of the annual hourly time. The operation is planned for Saturdays and Sundays during the months from December through March and July through September and on holidays throughout the year.
- There are no new auxiliary lanes or acceleration and deceleration lanes.
- There are no additional interchange ramps nor is there relocation of ramps. The minor ramp improvements planned as part of the PPSL project are sliver widening to some acceleration ramps, minor shifts in two deceleration ramps (loop ramps shifted to the inside) and changes to the connecting streets at Exit 241, including conversions to two roundabouts.
- The project does not include changes in the vertical profile of I-70.
- The project does not remove or alter shielding, such as a berm.
- No alteration of any highway lanes would result in a halving of distance between the nearest edge of the eastbound lanes and existing sensitive receptors.

CDOT and FHWA are preparing a Memorandum of Understanding that states these agreements about operations. If these operational limitations are not met, it is understood that a reanalysis of the appropriateness of classification of the project as a Type III project will be initiated.

Section 4. Measured Noise Levels

Land uses in the I-70 corridor are residential and commercial. Some areas have a greater density of homes than others. Existing noise levels in the residential areas adjacent to I-70 were determined by taking short-term (10-minute) sound-level measurements at 13 locations throughout the project area. Noise monitoring locations are listed in Table 2 and illustrated on maps in Appendix A of this technical memorandum. Field sheets showing sketch map of site, distance from edge-of-pavement, and traffic counts are included in Appendix B of this technical memorandum.

Table 2. Measured Noise Levels in the I-70 PPSL Corridor Area

Monitoring Location	Approximate Address	Activity Category	Land Use	Measured Noise Level (dBA)*
ML-1	Lawson—Whitewater Park	C	Recreational	67
ML-2	Lawson—Mobile Home Park	B	Residential	67
ML-3	Downieville	B	Residential	71
ML-4	Silver Lake Drive	B	Residential	73
ML-5	15 th Avenue Parking Lot	B	Residential	72
ML-6	NW Corner of Football Field	B	Residential	67
ML-7	Idaho Springs—Mobile Home Park	B	Residential	70
ML-8	Dumont	B	Residential	69
ML-9	Willow Drive/Silver Lake Drive	B	Residential	66
ML-10	Mobile Home Park	B	Residential	69
ML-11	Idaho Springs—Mobile Home Park North	B	Residential	67
ML-12	Dumont—Mobile Home Park	B	Residential	71
ML-13	Dumont —Mobile Home Park	B	Residential	67

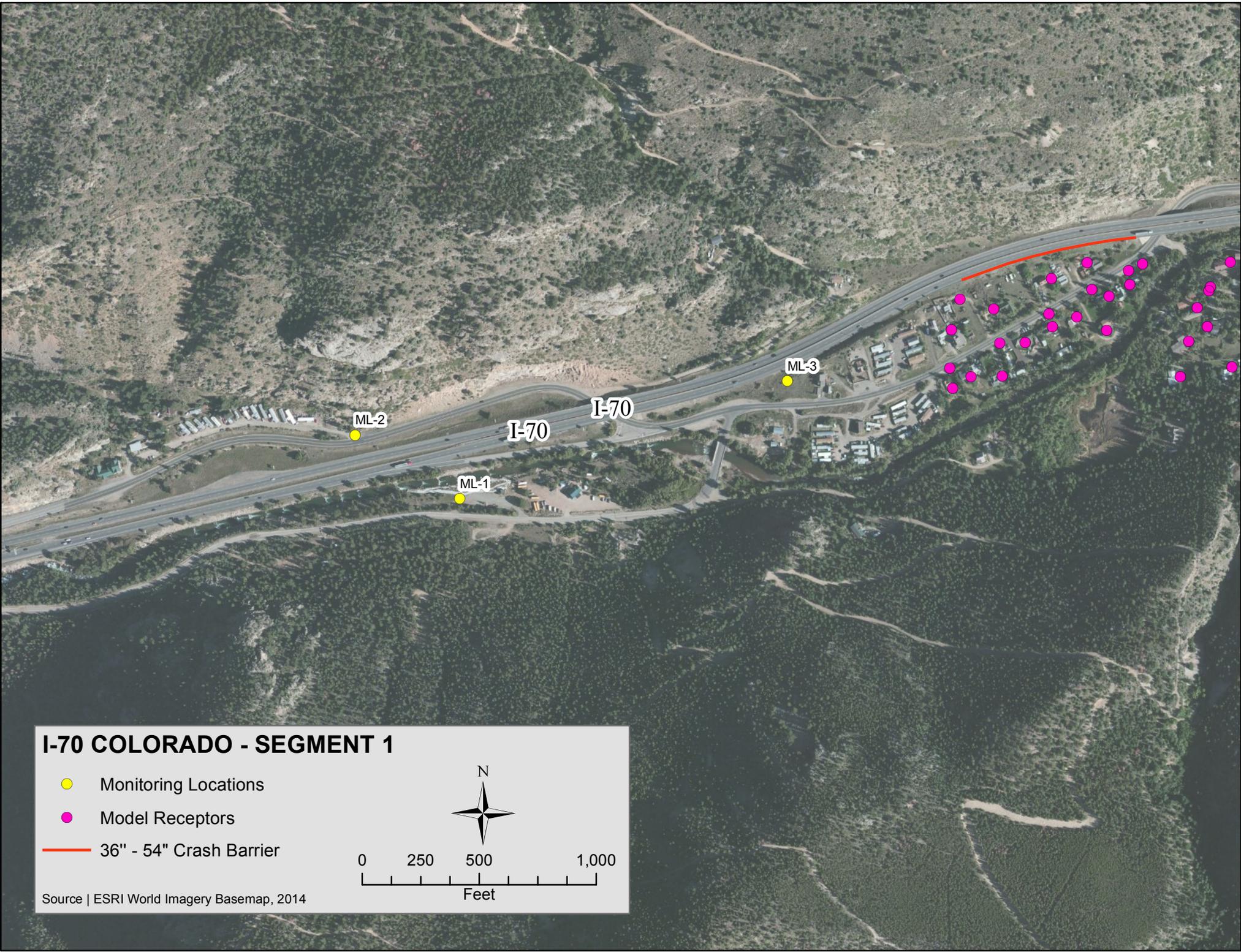
*Locations that exceed the residential CDOT NAC are shown in bold.

Section 5. Noise Attenuation

Because the project has been classified as a Type III project (that is, no traffic noise analysis required), traffic noise impacts and the feasibility of noise abatement measures were not evaluated in detail. At one location near the I-70/County Road 308 in Lawson overcrossing a retaining wall will be constructed. At this location where eastbound I-70 is above the residences, a 45-inch crash barrier was modeled on top of the retaining wall to determine if the barrier could provide a noise benefit to residences below the roadway. Traffic volumes used in the preliminary modeling were based on CDOT Noise Analysis and Abatement Guidelines (CDOT 2013). Receptor elevations were estimated from available GIS information. To enhance the accuracy of the noise model, a terrain line was included at the toe of the slope to account for the substantial change in elevation between the nearest residences and the edge of the roadway. Modeling of the 45-inch crash barrier would provide 2 dBA to 4 dBA of noise abatement at the nearest residences to I-70 where the line-of-sight between the receptor location and vehicle traffic on I-70 was blocked. A 4 dBA insertion loss due to the 45-inch crash barrier could be perceptible to some individuals.



Appendix A. Noise Monitoring Locations

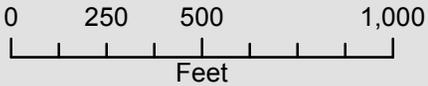


I-70 COLORADO - SEGMENT 1

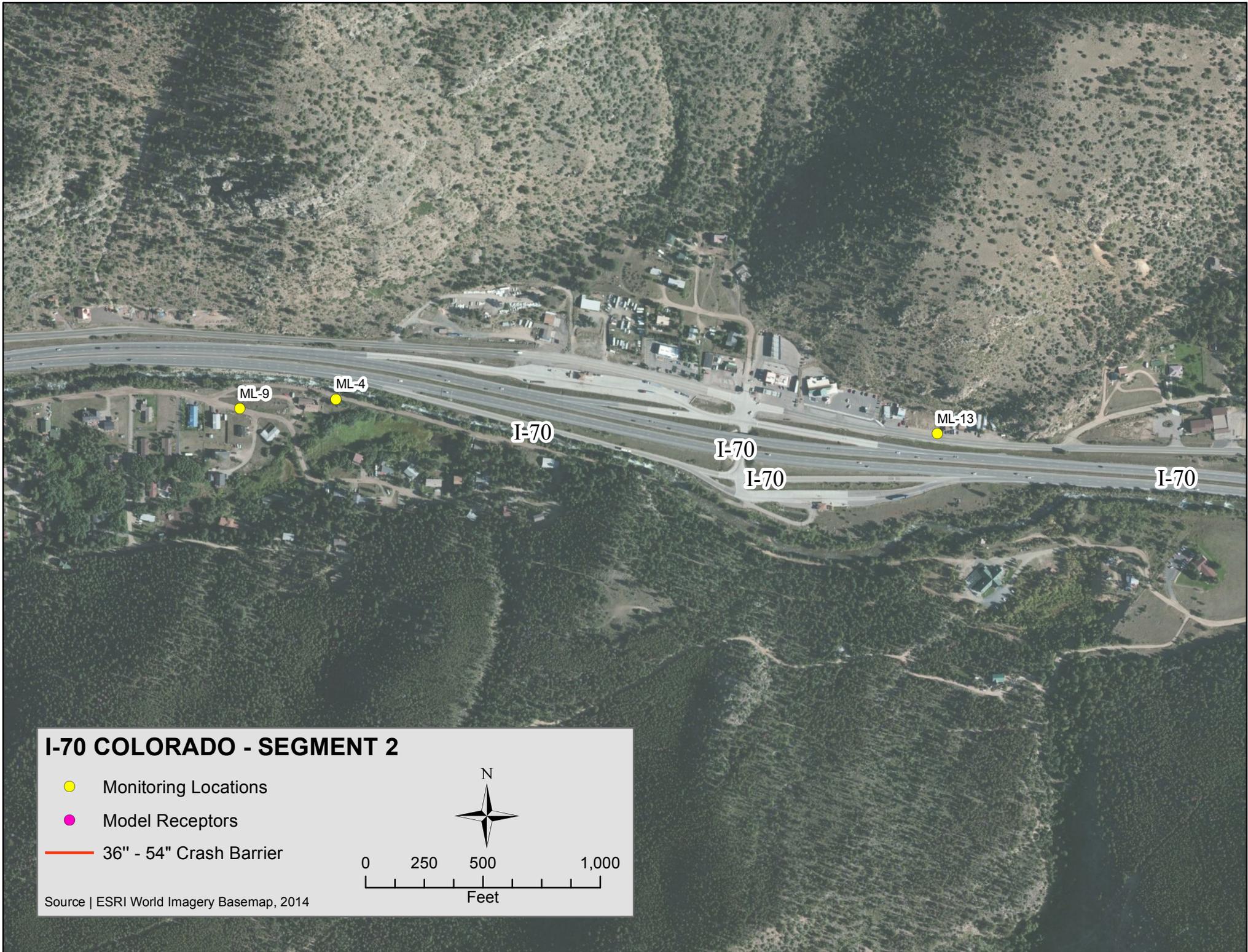
● Monitoring Locations

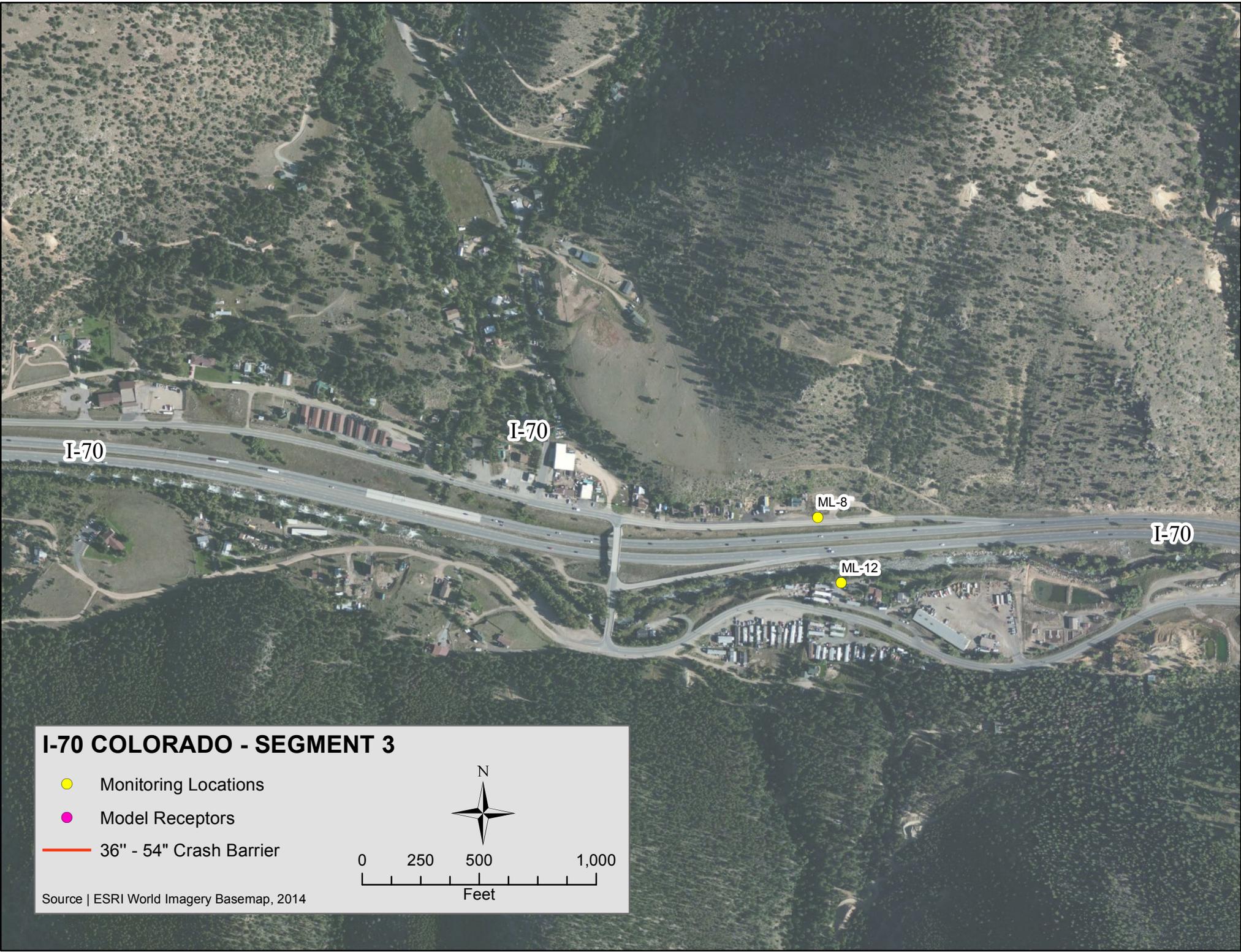
● Model Receptors

— 36" - 54" Crash Barrier



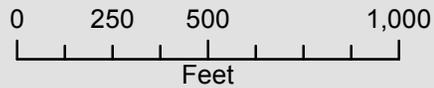
Source | ESRI World Imagery Basemap, 2014



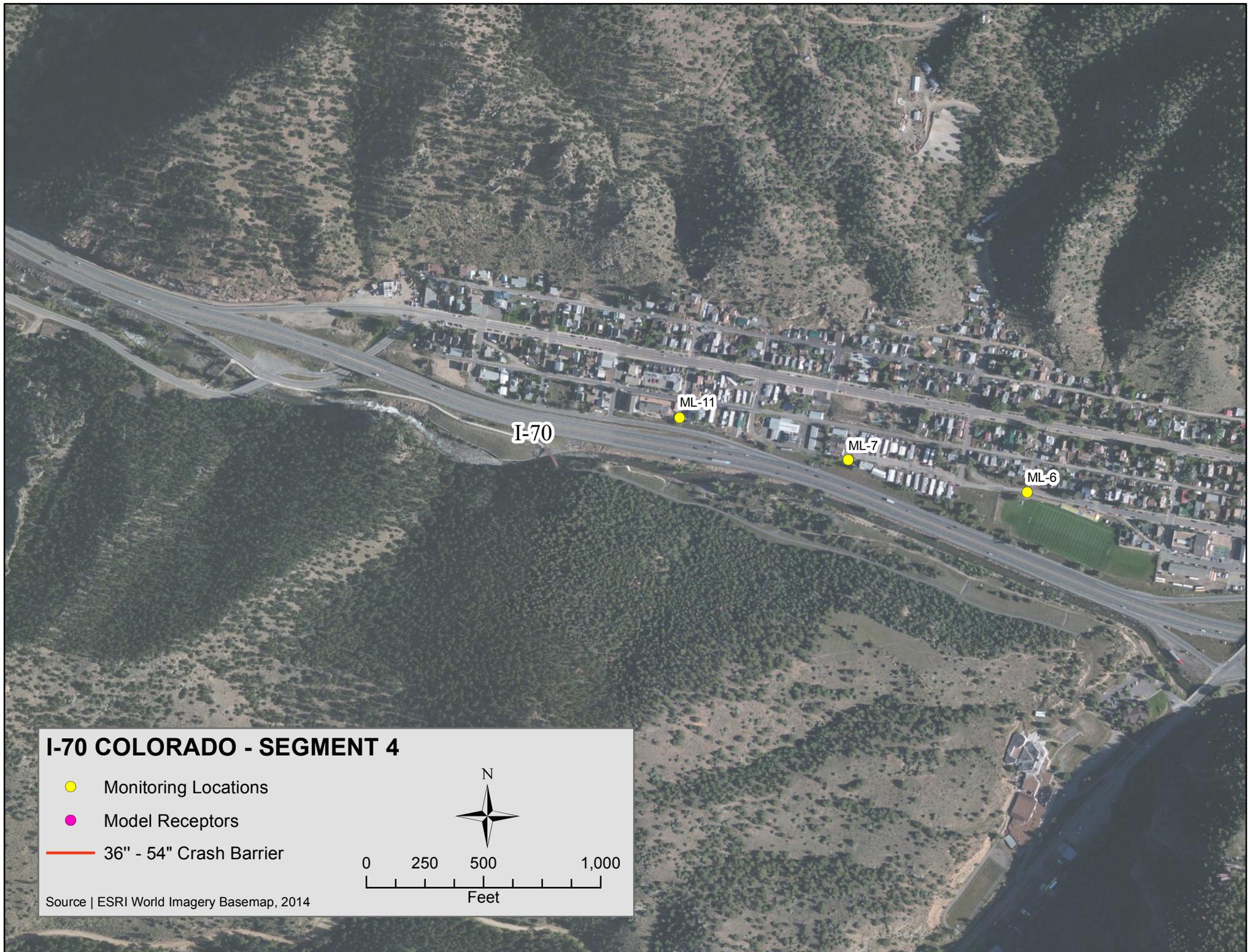


I-70 COLORADO - SEGMENT 3

- Monitoring Locations
- Model Receptors
- 36" - 54" Crash Barrier

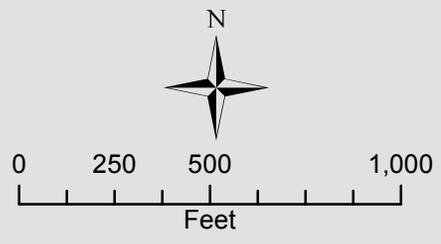


Source | ESRI World Imagery Basemap, 2014



I-70 COLORADO - SEGMENT 4

- Monitoring Locations
- Model Receptors
- 36" - 54" Crash Barrier



Source | ESRI World Imagery Basemap, 2014

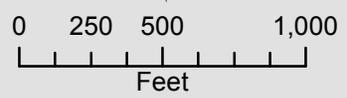


I-70 COLORADO - SEGMENT 5

● Monitoring Locations

● Model Receptors

— 36" - 54" Crash Barrier



Source | ESRI World Imagery Basemap, 2014



**Appendix B.
Field Sheets for Measured Noise Levels in the I-70 PPSL Corridor Area**

DATE: 8/12/13 Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 9:48 AM PM STOP TIME: 9:58 AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: 65 MPH. ACTUAL TRAVEL SPEED: _____ MPH.

# OF CARS:	# OF MT:	# OF HT:
EB: 217	EB: 15	EB: 5
WB: 265	WB: 15	WB: 26

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
66.5	60.9	69.9	84.5	68.6	67.3	66.1	63.2

TRAFFMON. FRM L(5)-69.1 L(67)-65.1

ML-1
Lawson
(White-water
Park)

DATE: _____ Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ AM PM STOP TIME: _____ AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

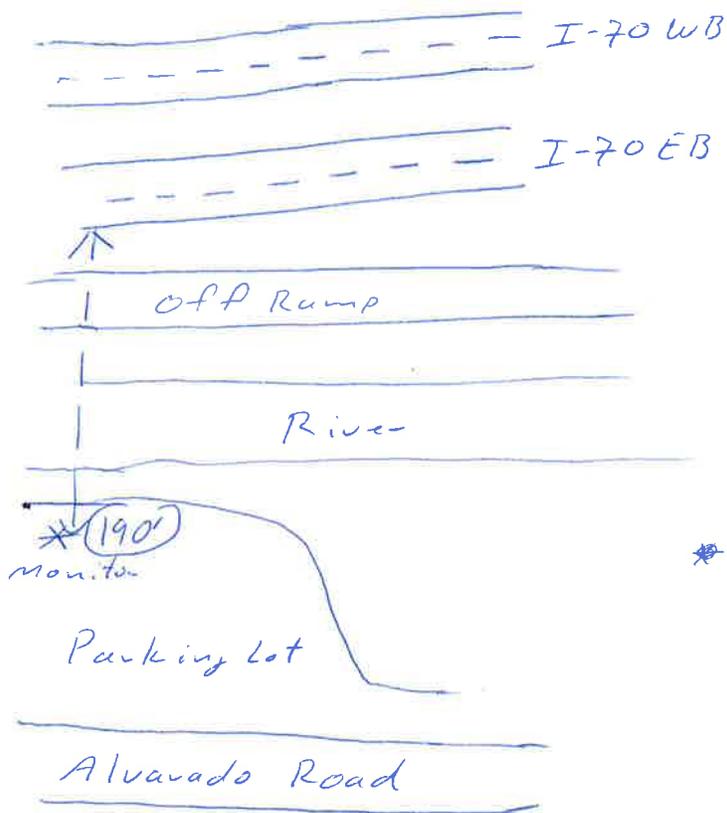
POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

# OF CARS:	# OF MT:	# OF HT:

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

ML-1; Lawson Whitewater Park (8/12/13)



Easting: 445401.7

Northing: 4401644.2

Z: 8109

DATE: 8/12/13

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 10:25 : AM PM STOP TIME: 10:35 : AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____

OF MT: _____

OF HT: _____

WB: 246

WB: 10

WB: 12

EB: 252

EB: 6

EB: 9

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
67.1	59.4	78.3	92.4	69.9	67.0	65.7	62.5

TRAFFMON. FRM

L(5)-71.2

L(67)-64.5

ML-2
Lawson
Mobile
Home
Park

DATE: _____

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ : AM PM STOP TIME: _____ : AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____

OF MT: _____

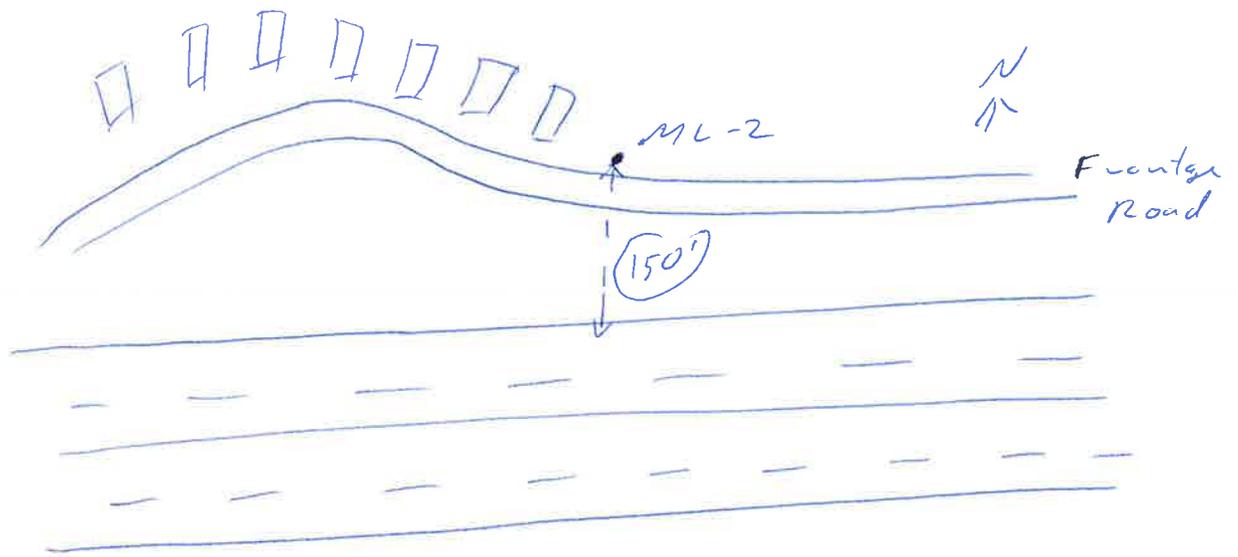
OF HT: _____

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

ML-2 Lawson Mobile Home Park

8/12/17



ML-2
Easting: 445265.8
Northing: 4401727.1
Z: 8120

DATE: 8/13/12 Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 12:10 AM PM STOP TIME: 12:20 AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

# OF CARS:	# OF MT:	# OF HT:
EB: 202	EB: 13	EB: 17
WB: 128	WB: 13	WB: 11

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
71.0	60.7	79.7	92.3	74.1	71.2	69.9	64.7

TRAFFMON. FRM _____ L(5)-75.4 L(67)-68.6

ML-3
Downieville

DATE: _____ Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ STOP TIME: _____ DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

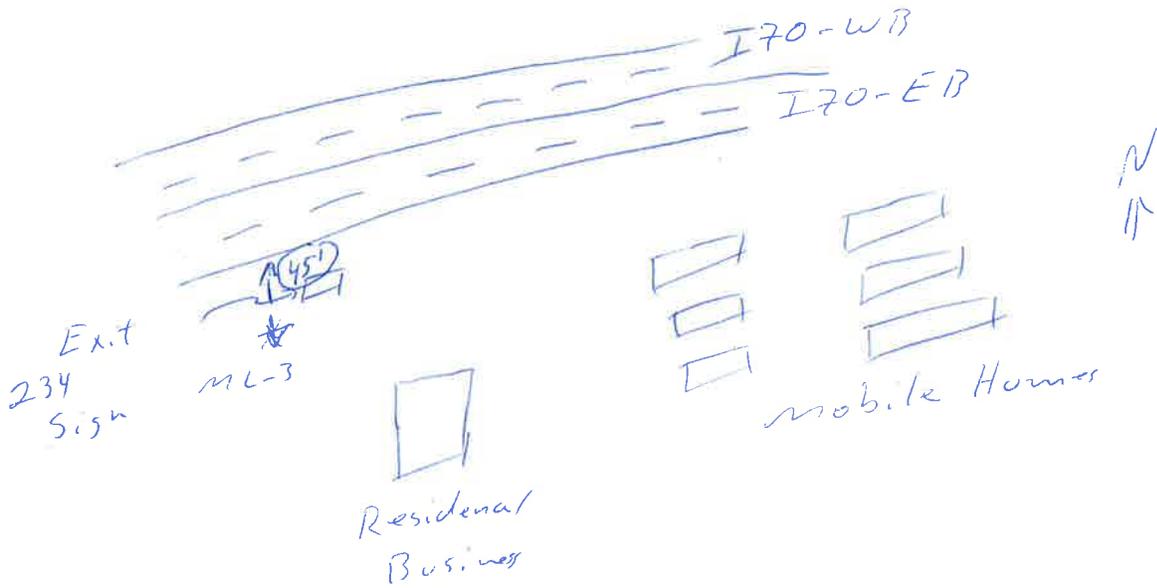
POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

# OF CARS:	# OF MT:	# OF HT:

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM _____

ML-3 Downieville (8/13/12)



ML-3

Easting: 445828.1

Northing: 4401800.3

Z: 8101

Top of beam looking
down on I-70

DATE: 8/12/13 Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 12:00 : AM PM STOP TIME: 12:10 : AM PM DURATION: _____ WEATHER CONDITIONS: _____ COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.
OF CARS: _____ # OF MT: _____ # OF HT: _____

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
<u>72.6</u>	<u>61.3</u>	<u>98.9</u>	<u>130.7</u>	<u>70.6</u>	<u>68.4</u>	<u>67.4</u>	<u>63.5</u>

TRAFFMON. FRM L(5)-71.6 L(67)-66.3

*ML-4
Silver
Lake
Drive
Dirt Road
next to
River*

DATE: _____ Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ : AM _____ PM STOP TIME: _____ : AM _____ PM DURATION: _____ WEATHER CONDITIONS: _____ COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

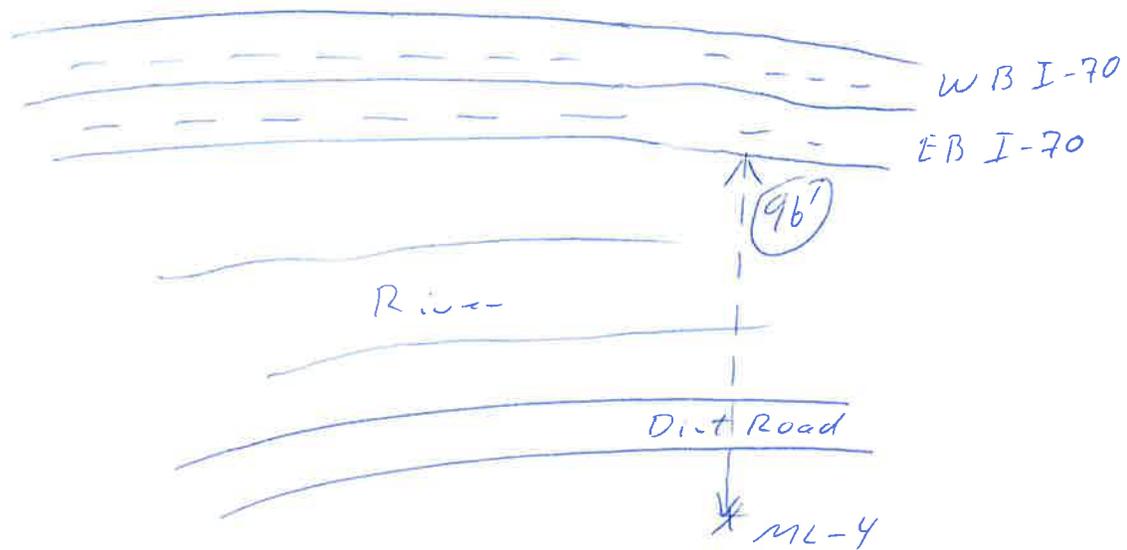
NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.
OF CARS: _____ # OF MT: _____ # OF HT: _____

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

ML-4 - Silver Lake Drive (Dirt Road)



ML-4
Easting: 446903.6
Northing: 4401972.5
Z: 7994



Scattered
homes



DATE: 8/13/13 Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 8:45 AM PM STOP TIME: 8:55 AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____ # OF MT: _____ # OF HT: _____

WB: 147 WB: 11 WB: 14
 EB: 140 EB: 8 EB: 14
 Motorcycles: 2

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
71.7	60.0	78.1	91.8	74.6	72.2	70.9	65.2

TRAFFMON. FRM L(5)-72.5 L(67)-69.5

ML-5
 15th Ave.
 Parking
 Lot
 Compression
 Brakes

DATE: _____ Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ AM PM STOP TIME: _____ AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

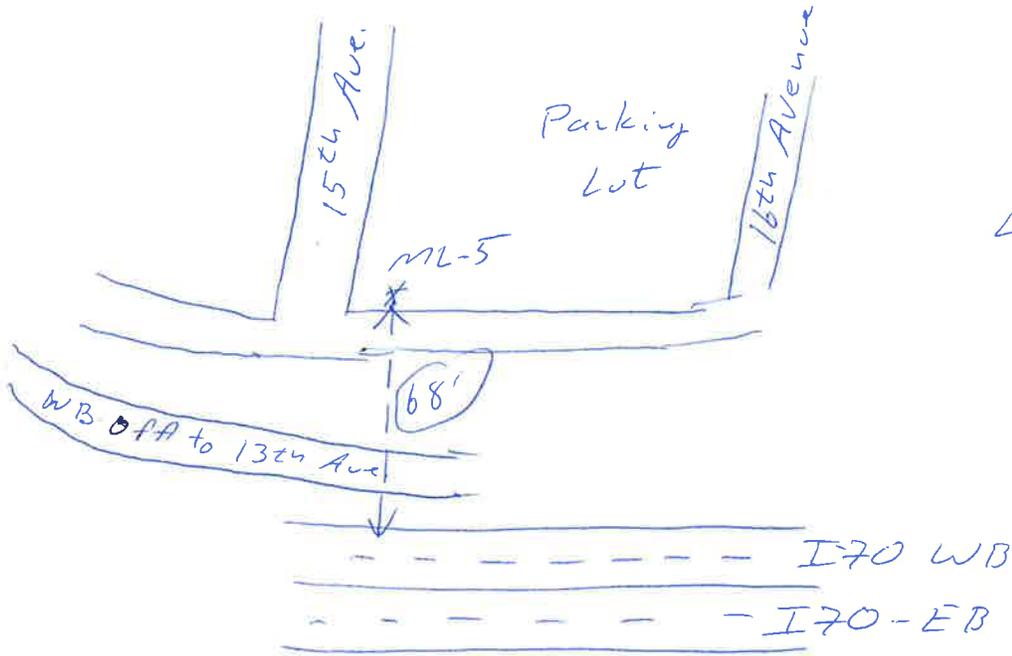
POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____ # OF MT: _____ # OF HT: _____

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

ML-5 15th Avenue Parking Lot (8/13/13)



Lots of
compression-
baking

ML-5:

Easting: 455713.4

Northing: 4399153.8

Z: 7498'

DATE: 8/13/13 Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 9:30 AM PM STOP TIME: 9:40 AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

# OF CARS:	# OF MT:	# OF HT:
WB: 217	WB: 8	WB: 23
EB: 151	EB: 6	EB: 13

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
67.3	34.6	88.4	114.2	69	64.0	35.9	35.7

TRAFFMON. FRM

L(5)-70.2 L(67)-35.7

ML-6
NW corner
of foot
ball
field

DATE: _____ Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ AM PM STOP TIME: _____ AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

# OF CARS:	# OF MT:	# OF HT:

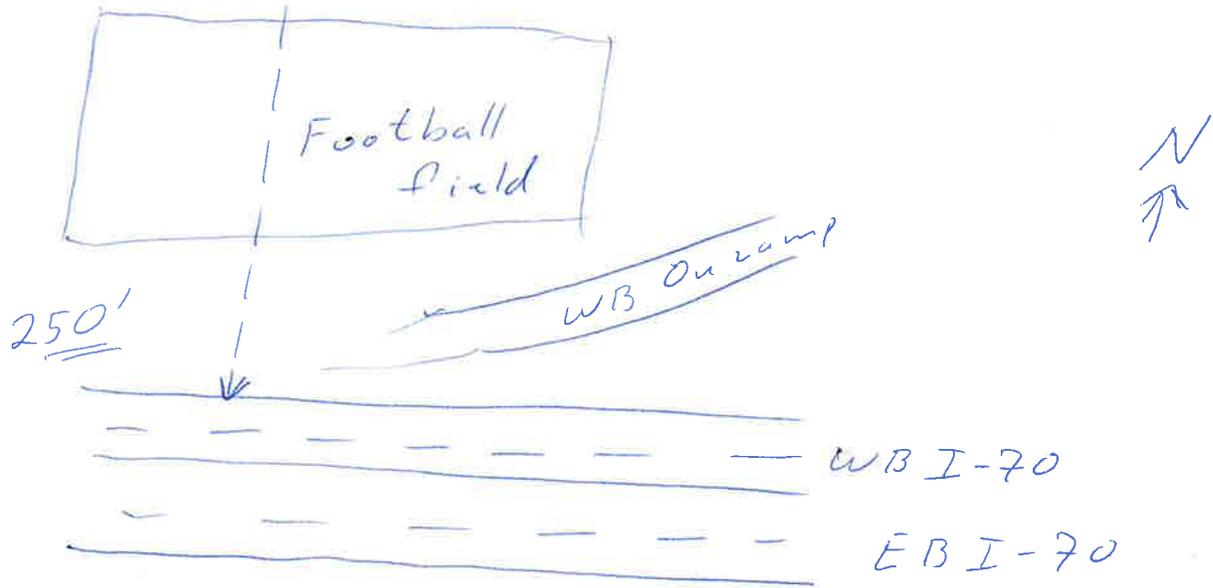
Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

ML-6 NW corner of football field (8/13/13)



Looking down
on football field
& I-70



ML-6

Easting: 455600.6

Northing: 4399196.4

Z: 7510

DATE: 8/13/13 Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 10:05 : AM PM STOP TIME: 10:15 : AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

# OF CARS:	# OF MT:	# OF HT:
WB: 175	WB: 14 10	WB: 16
EB: 142	EB: 5	EB: 18

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
70.4	—	—	—	73.2	70.6	69.2	65.5

TRAFFMON. FRM

1

ML-7
Mobile
Home
Park
(brief
rain
shown)

DATE: _____ Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ : _____ AM PM STOP TIME: _____ : _____ AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

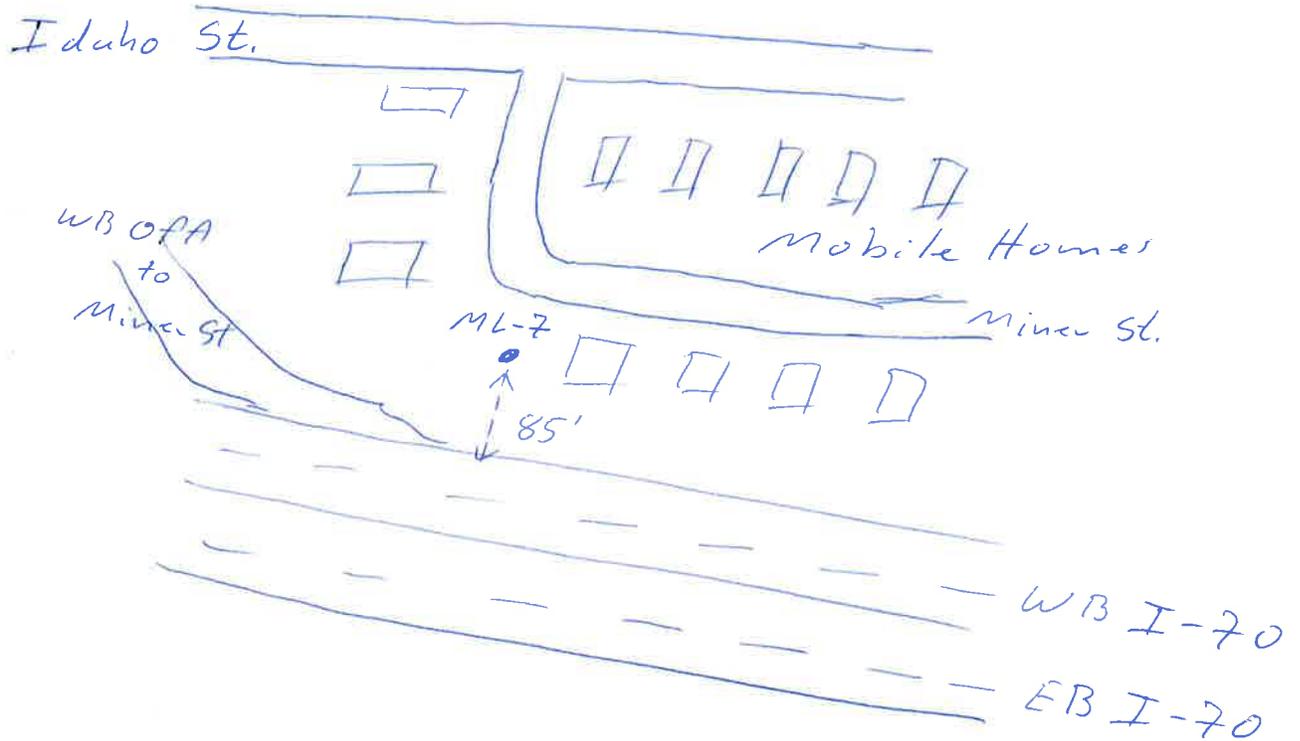
# OF CARS:	# OF MT:	# OF HT:

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

1

ML-7 (Mobile Home Park) 8/13/13



DATE: 8/13/13

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ STOP TIME: _____ DURATION: _____ WEATHER CONDITIONS: _____

: 10:55 AM PM : 11:05 AM PM COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____ # OF MT: _____ # OF HT: _____

WB: 216
EB: 203

WB: 12
EB: 11

WB: 15
EB: 17

ML-8
Dumont

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
69.0	55.1	79.8	93.7	71.9	68.9	67.5	62.9

TRAFFMON. FRM

L(5)-
73.4

L(67)-
66.2

DATE: _____

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ STOP TIME: _____ DURATION: _____ WEATHER CONDITIONS: _____

: _____ AM PM : _____ AM PM COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

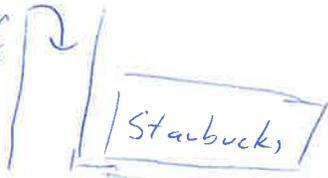
OF CARS: _____ # OF MT: _____ # OF HT: _____

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

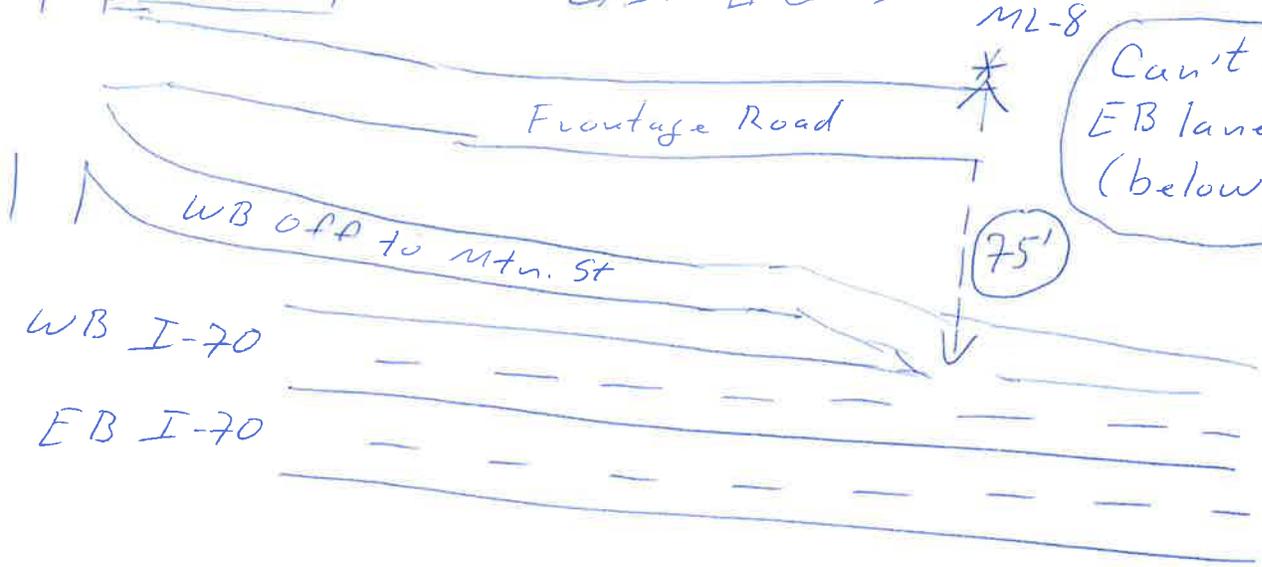
TRAFFMON. FRM

ML-8 Dumont

Mountain Street



7
Homes/
Mobile Homes



ML-8
*
Can't see
EB lanes
(below grade)

Easting: 448950.9

Northing: 4401785.7

Z: 7882

DATE: 8/13/13

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 11:35 AM (PM) STOP TIME: 11:45 AM (PM) DURATION: _____ WEATHER CONDITIONS: _____ COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____

OF MT: _____

OF HT: _____

EB: 240

EB: 5

EB: 17

WB: 182

WB: 7

WB: 17

ML-9
Willow
Drive/
Silver
Lake
Drive

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
66.2	58.1	73.7	87.6	69.0	66.5	65.1	61.6

TRAFFMON. FRM

L(67)-69.9

L(67)-

63.7

DATE: _____

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ STOP TIME: _____ DURATION: _____ WEATHER CONDITIONS: _____ COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____

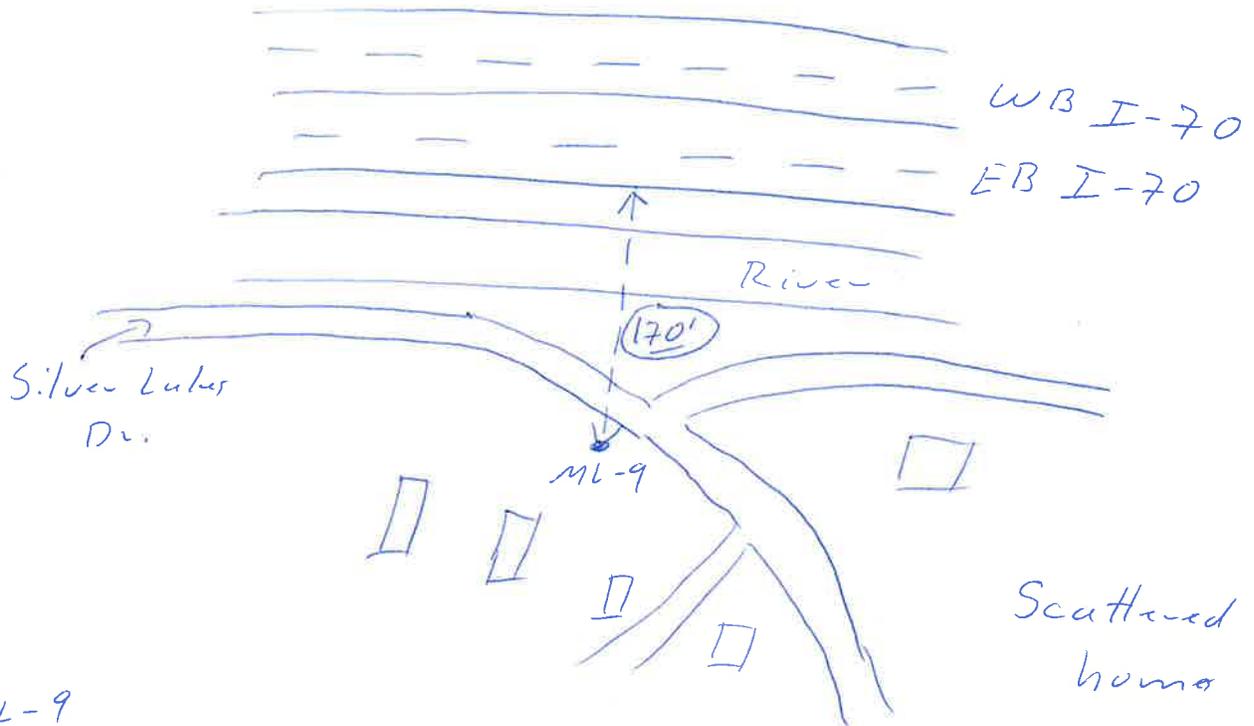
OF MT: _____

OF HT: _____

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

ML-9 Willow Drive/Silver Lakes Dr. (8/13/13)



ML-9

Easting: 446 777.8

Northing: 4401961.1

Z: 8014

DATE: 8/14/13 Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 9:10 AM PM STOP TIME: 9:20 AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____ # OF MT: _____ # OF HT: _____

WB: 164 EB: 6 WB: 11 EB: 6 WB: 13 EB: 12

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
68.6	55.7	75.8	89.3	71.7	69.1	67.1	62.9

TRAFFMON. FRM

1

ML-10
Mobile
Home
Park
(Idaho
Springs,
East)

DATE: _____ Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ AM PM STOP TIME: _____ AM PM DURATION: _____ WEATHER CONDITIONS: _____

COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

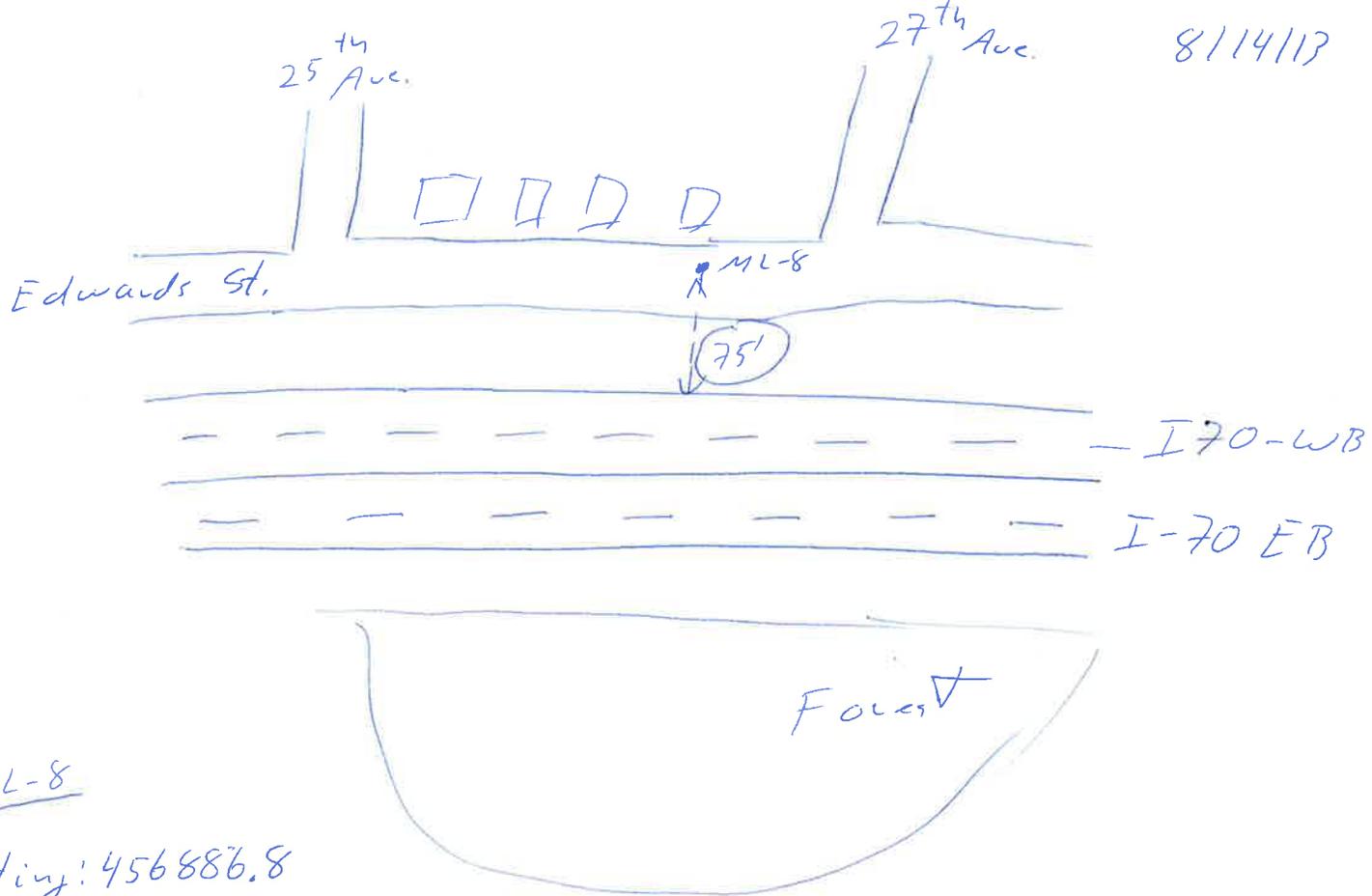
OF CARS: _____ # OF MT: _____ # OF HT: _____

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

1

ML-10 (Mobile Home Park - Idaho Springs, East)



8114113

ML-8

Easting: 456886.8

Northing: 4399087.4

Z: 7489

DATE: 8/14/13 Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 10:53 AM PM STOP TIME: 11:03 AM PM DURATION: _____ WEATHER CONDITIONS: _____ COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.
OF CARS: _____ # OF MT: _____ # OF HT: _____

WB: 242
EB: 135

WB: 13
EB: 7

WB: 16
EB: 10

ML-11
Idaho
Springs
(Mobile
Home
Park-
north)
next to
Olson Leath
Apts

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
67.0	57.9	82.1	97.9	69.4	67.1	65.8	60.7

TRAFFMON. FRM
L(5)- 70.2
L(67)- 64.0

DATE: _____ Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ AM PM STOP TIME: _____ AM PM DURATION: _____ WEATHER CONDITIONS: _____ COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

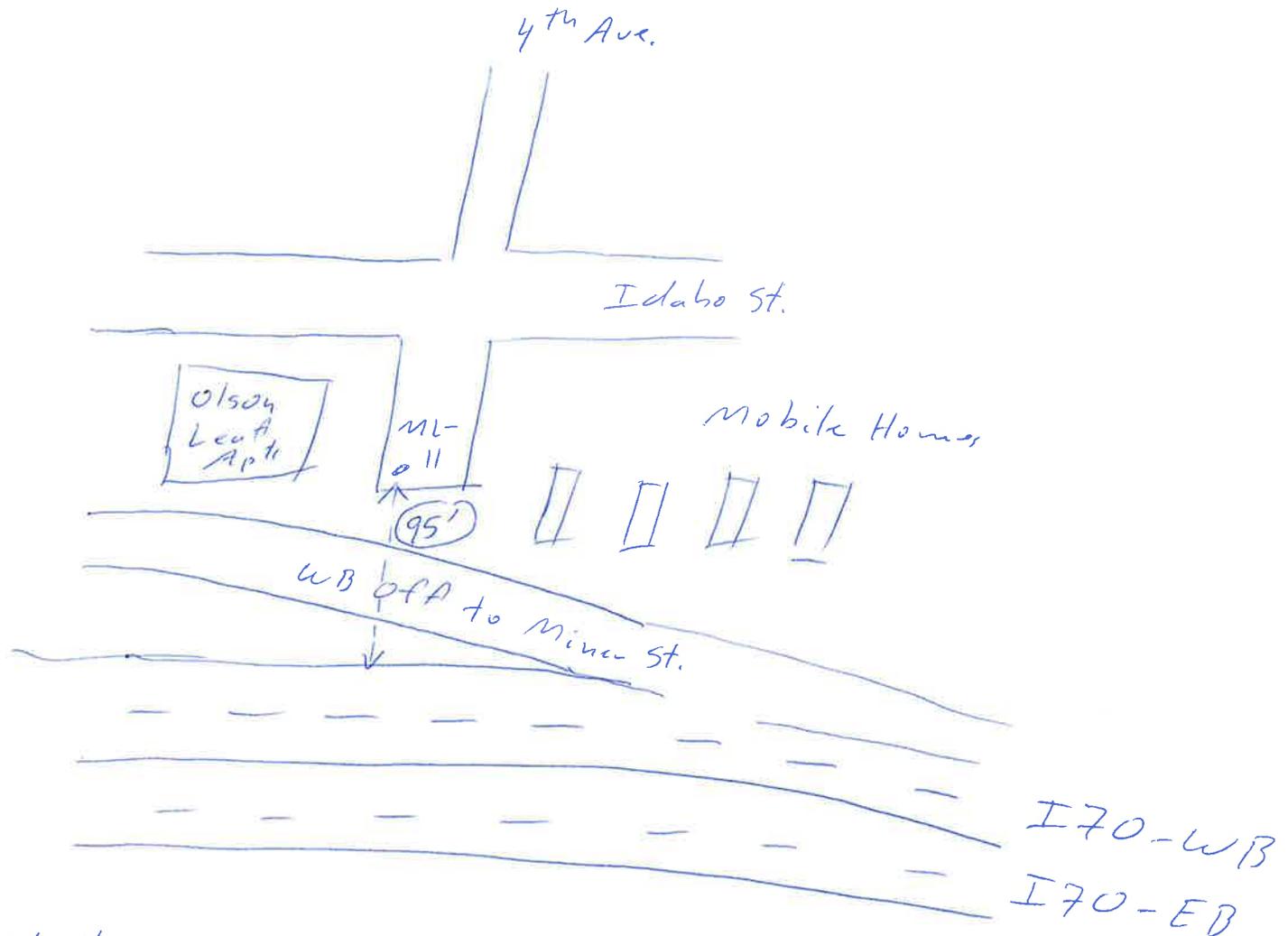
NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.
OF CARS: _____ # OF MT: _____ # OF HT: _____

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

ML-11 (Idaho Springs - Mobile Home Park,
next to Olson Leaf apts.) 8114113



ML-11

Easting: 454681.4

Northing: 4399413.5

Z: 7557

DATE: 8/14/13

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME | STOP TIME | DURATION | WEATHER CONDITIONS:

: AM PM | : AM PM | COMMENT:

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____ # OF MT: _____ # OF HT: _____

EB: 152

EB: 5

EB: 14

WB: 194

WB: 8

WB: 15

ML-12

Dumont

Mobile

Home

Park

Side of I-70

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
70.6	57.5	77.4	91.9	73.7	71.0	69.6	64.5

TRAFFMON. FRM

L(5)-
74.9

L(67)-
68.0

1

DATE: _____

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME | STOP TIME | DURATION | WEATHER CONDITIONS:

: AM PM | : AM PM | COMMENT:

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____ # OF MT: _____ # OF HT: _____

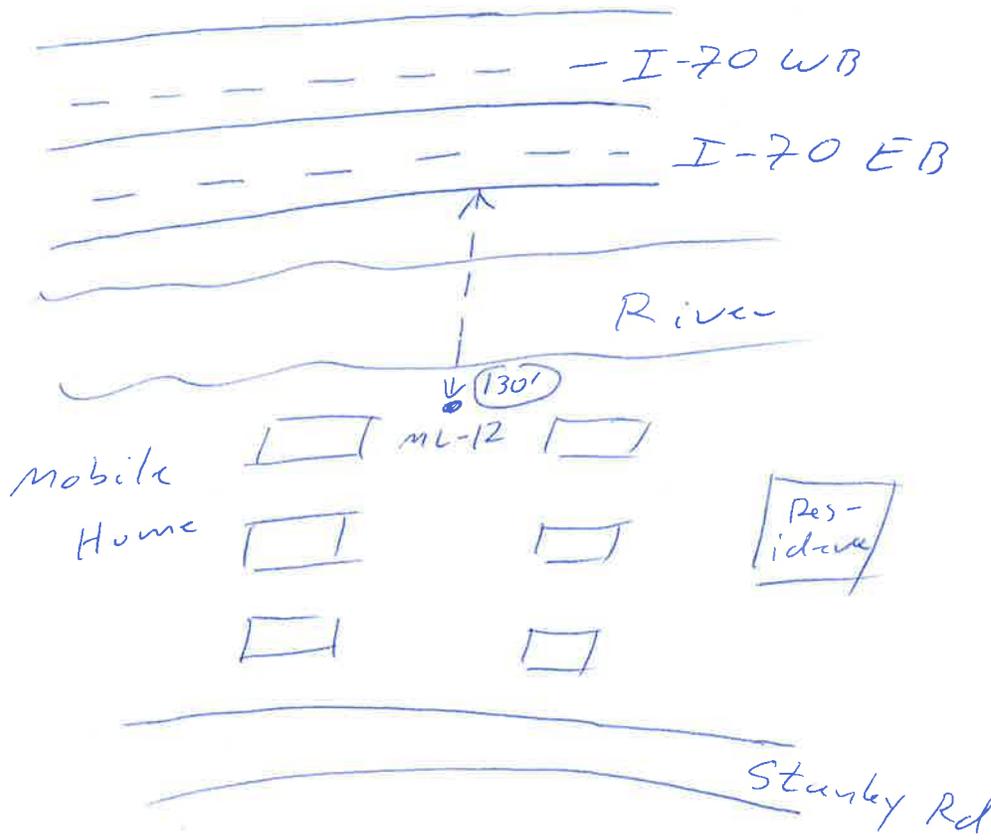
Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

1

ML-12 (Dumont-Mobile Home Park, (S) Side of A
I-70)

8/14/13



N
↑

Looking down
on I-70 from
here

ML-12
Easting: 448981.9
Northing: 4401699.6
Z: 7868

DATE: 8/14/13

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: 11:30 STOP TIME: 11:40 DURATION: _____ WEATHER CONDITIONS: _____

: AM PM : AM PM COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

OF CARS: _____ # OF MT: _____ # OF HT: _____

*ML-13
Dumont
Mobile
Home
Park*

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90
<u>67.3</u>	<u>52.4</u>	<u>75.7</u>	<u>99.6</u>	<u>71.1</u>	<u>67.5</u>	<u>64.9</u>	<u>60.0</u>

TRAFFMON. FRM

*L(15)-
72.0*

*L(67)-
63.0*

1

DATE: _____

Site ID: _____

STREET NAME: _____ BETWEEN _____ AND: _____

START TIME: _____ STOP TIME: _____ DURATION: _____ WEATHER CONDITIONS: _____

: AM PM : AM PM COMMENT: _____

DISTANCE FROM METER TO ROADWAY CENTERLINE: _____ FEET.

NUMBER OF LANES: _____ CENTER TURN LANE: YES _____ NO _____

POSTED SPEED LIMIT: _____ MPH. ACTUAL TRAVEL SPEED: _____ MPH.

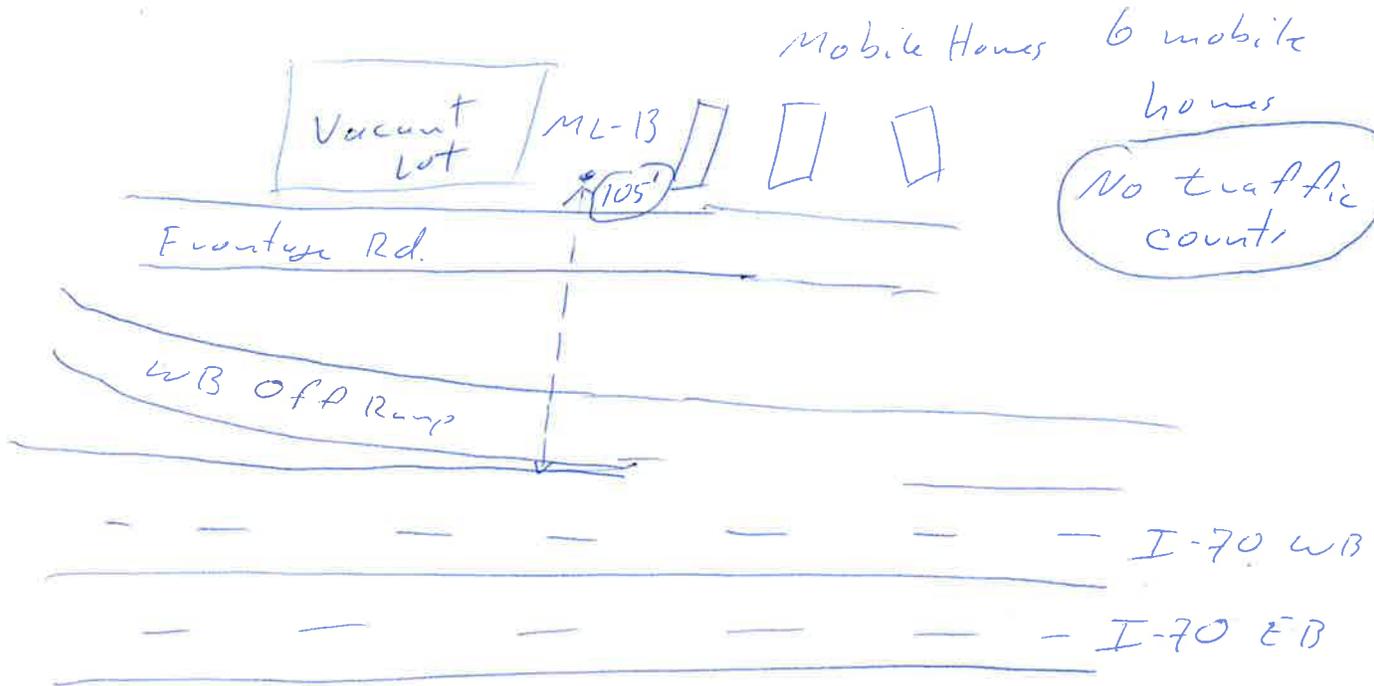
OF CARS: _____ # OF MT: _____ # OF HT: _____

Leq	Lmin	Lmax	Lpeak	L10	L33	L50	L90

TRAFFMON. FRM

1

ML-13 (Mobile Home Park, Dumont, (2))
Side of I-70



ML-13

Easting: 447685.1

Northing: 4401928.0

Z: 7951