

January 29, 2025

Bonner County
Road & Bridge Department
1500 Highway 2, Suite 101
Sandpoint, ID 83864

Attn: Matt Mulder, P.E.

RE: Deerfield
Trip Generation and Distribution Letter

Dear Matt,

The purpose of this document is to provide a Trip Generation and Distribution (TG&D) Letter for the proposed Deerfield Drive, associated with Deerfield in Bonner County, Idaho. A preliminary plat is shown in Appendix A. This letter follows the standards for Trip Generation and Distribution as required by Bonner County Road Standards Manual (March 2019) and the Institute of Transportation Engineers (ITE).

Project Location:

RP57N02W164952A, SECTION 1, TOWNSHIP 57 N, RANGE 2W, BOISE MERIDIAN, BONNER COUNTY, IDAHO



Project Action:

The subject property is currently a vacant partially-wooded 32.82 acre parcel with a Suburban (S) zoning classification. Deerfield is anticipated to include 24 single-family parcels. The proposed development will be served via a new publically owned, privately maintained road name Deerfield Drive, intersecting Baldy Mountain Road. Roadway and utility construction is anticipated to be completed in a single phase during the 2025 construction season.

Trip Generation:

The ITE Generation Manual, 11th Edition was used to estimate trips based on Single-Family Detached Housing (Land Use Code 210) for weekday, weekday AM peak hour, and weekday PM peak hour, respectively.

ITE Trip Generation 11th Edition

Vehicle Trip Ends Vs Dwelling Units			
Single-Family Detached Housing (210)		X* =	T* =
Weekday	$\text{Ln}(T) = 0.92 \text{Ln}(X) + 2.68$	24	271
Weekday AM Peak Hour	$T = 0.71 (X) + 7.23$	24	24
Weekday PM Peak Hour	$\text{Ln}(T) = 0.93 \text{Ln}(X) + 0.36$	24	28

*X is the number of dwelling units.

*T is the number of trips.

Trips are distributed into and out of Deerfield based on the directional distribution rates given on the trip generation table for Single Family Detached Housing (Land Use Code 210).

Rates for Land Use

	ITE Code	Land Use	Quantity	Units	Trips	% Entering	% Exiting	Trips Entering	Trips Exiting
Weekday	210	Residential	24	Dwelling Units	271	50%	50%	136	135
AM Peak Hour	210	Residential	24	Dwelling Units	24	26%	74%	6	18
PM Peak Hour	210	Residential	24	Dwelling Units	28	64%	36%	18	10

Trip Distribution and Assignment:

The proposed development will see an average of 271 trips per weekday with the highest peak hour being the PM peak of 28 trips. Vehicle trips will enter and exit Deerfield via a new roadway intersecting Baldy Mountain Road. Given the project location, with Sandpoint to the east and rural residential land to

the west, it is estimated that 95% of the total trips are anticipated to travel to/from the City of Sandpoint. The remaining 5% of the total trips are anticipated to travel to/from the west. The intersection of Baldy Mountain Road and Great Northern to the east of the project is projected to support more than 24 peak hour trips. It is estimated that 90% of the trips are anticipated to travel east/west along Baldy Mountain Road and 10% are estimated to travel north/south along Great Northern Road.

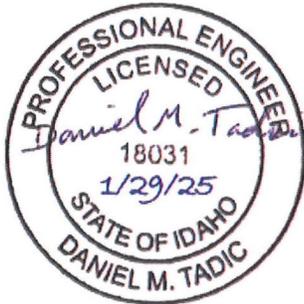
Stopping Sight Distance Evaluation:

A stopping sight distance evaluation was completed for the proposed intersection with Baldy Mountain Road. Per Table 1, Section 3.3 of the Bonner County Road Standards Manual, the minimum stopping sight distance for new approaches entering arterial, collector or local access roads at 6% downgrade on asphalt roads with 35 mph posted speed limit is 271 feet. Actual distance measured from the crest of the hill to the middle of the proposed intersection with Baldy Mountain Road is 470 feet with downgrade measured at 4.58%.

Please feel free to contact Dan Tadic, PE at (208) 635-5825 or dtadic@hmh-llc.com if you need any additional information or clarifications.

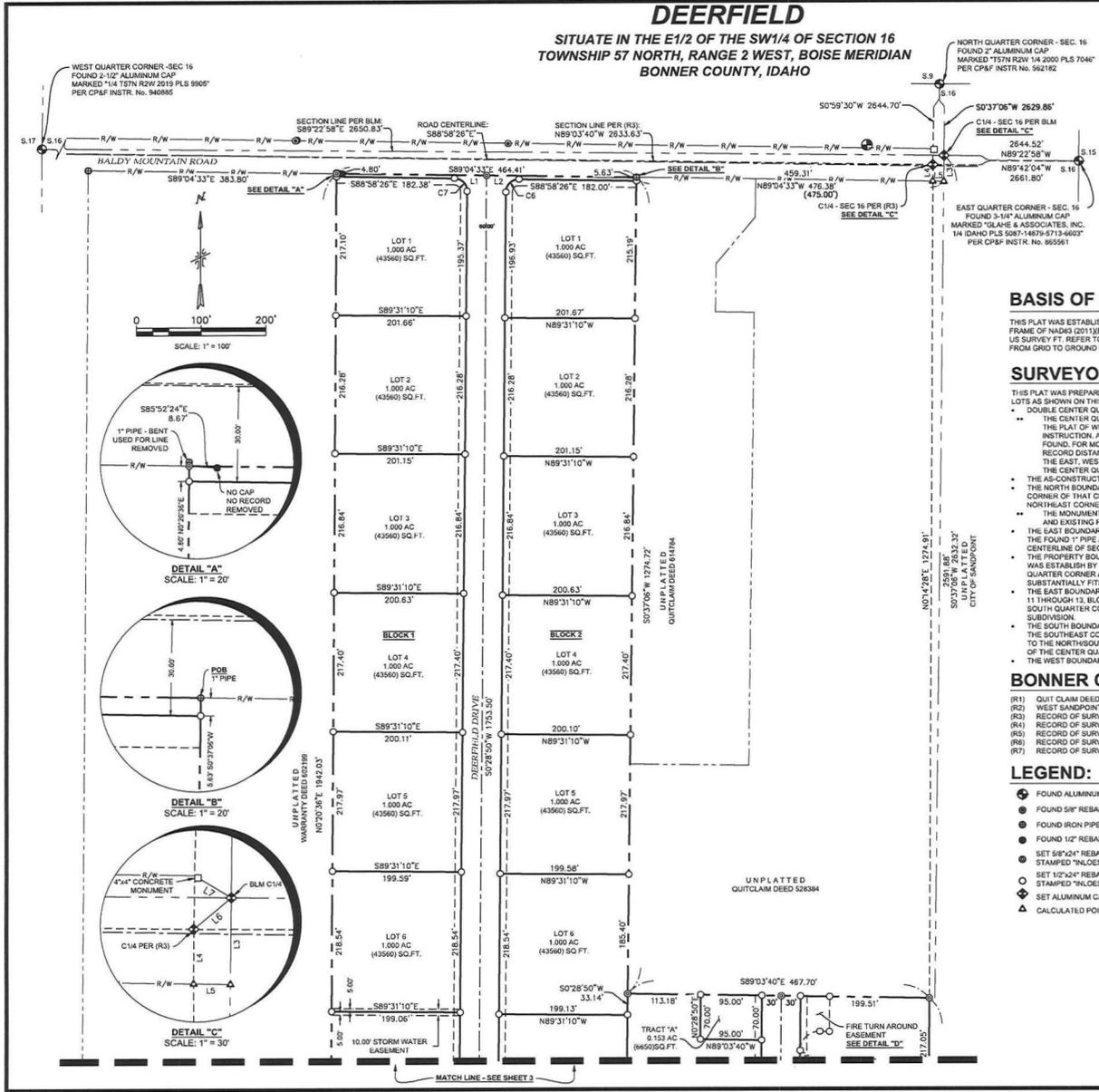
Prepared By:

Dan Tadic, P.E., & Brandt Souvenir, E.I.
HMH Engineering



Appendix A
Preliminary Plat

DEERFIELD
 SITUATE IN THE E1/2 OF THE SW1/4 OF SECTION 16
 TOWNSHIP 57 NORTH, RANGE 2 WEST, BOISE MERIDIAN
 BONNER COUNTY, IDAHO



- NOTES:**
- SEE SHEET 3 FOR LINE AND CURVE TABLE.
 - THE LOTS WITHIN THIS PLAT MAY NOT BE FURTHER SUBDIVIDED WITHOUT WRITTEN APPROVAL OF THE BONNER COUNTY PLANNING DEPARTMENT & BONNER COUNTY COMMISSIONERS.
 - THE NUMBER AND TYPE OF DWELLINGS PERMITTED WITHIN THIS PLAT SHALL BE IN ACCORDANCE WITH IDAHO STATE CODE AND BONNER COUNTY PLANNING CODE.
 - STORM WATER TRACT IS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
 - WATER STORAGE TRACT IS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
 - ALL LOT LINES COMMON TO PUBLIC RIGHTS-OF-WAY HAVE A 10' UTILITY EASEMENT ADJACENT TO SAID RIGHT-OF-WAY WITH SAID LOTS.
 - THE SUBJECT PROPERTY IS LOCATED WITHIN FEMA FLOOD ZONE 'X', AREA OF MINIMAL FLOOD HAZARD, AND FLOOD ZONE 'A' PER FIRM PANEL 1507C0715E WITH AN EFFECTIVE DATE OF 11/11/2009.
 - ALL ROADS WITHIN THIS PLAT ARE HEREBY DEDICATED TO THE PUBLIC AS PRIVATELY MAINTAINED PUBLIC ROADS AND WILL BE CONSTRUCTED TO THE PRIVATELY MAINTAINED PUBLIC ROADS COUNTY STANDARDS. THEY HAVE NOT BEEN CONSTRUCTED TO COUNTY STANDARDS FOR COUNTY MAINTENANCE. THESE ROADS SHALL BE MAINTAINED AT THE SOLE EXPENSE OF THE PROPERTY OWNERS.
 - PURSUANT TO IDAHO CODE 50-1304(2)(3), PER PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATIONS NATIONAL PIPELINE MAPPING SYSTEM, A GAS TRANSMISSION NORTHWEST LLC NATURAL GAS PIPELINE EXIST ROUGHLY 1000' WEST OF THE NORTHWEST CORNER OF THIS PLAT.
 - THIS PLAT IS SUBJECT TO THE TERMS, CONDITIONS AND PROVISIONS AS OUTLINES IN THE COVENANTS, CONDITIONS AND RESTRICTIONS (CCRS) RECORDED AS INSTRUMENT NO.

BASIS OF BEARING:

THIS PLAT WAS ESTABLISHED BY GPS CONTROL. COORDINATES DERIVED FROM NGS OPUS SOLUTIONS USING A REFERENCE FRAME OF NAD83 (2011 EPOCH) 2010.00 ALL BEARINGS REFER TO THE IDAHO COORDINATE SYSTEM OF 1983, WEST ZONE, (1103). U.S. SURVEY FT. REFER TO THE DRAWING FOR SPECIFIC LINE AND MONUMENTS USED. DISTANCES SHOWN HAVE BEEN CONVERTED FROM GRID TO GROUND USING A COMBINED ADJUSTMENT FACTOR (CAF) OF 1.0001188201.

SURVEYOR'S NARRATIVE:

THIS PLAT WAS PREPARED AT THE REQUEST OF DEERFIELD LLC TO ESTABLISH THE BOUNDARY DESCRIBED IN (R1) AND ESTABLISH LOTS AS SHOWN ON THIS PLAT.

- DOUBLE CENTER QUARTER
 - THE CENTER QUARTER CORNER OF SECTION 16 HAS BEEN ESTABLISHED IN TWO LOCATIONS. ONE LOCATION IS BASED ON THE PLAT OF WEST SANDPOINT SUBDIVISION (R2) AND ONE BASED ON BUREAU OF LAND MANAGEMENT MANUAL OF INSTRUCTION. AN EXTENSIVE ATTEMPT WAS MADE TO LOCATE THESE TWO MONUMENTS, NEITHER OF WHICH WERE FOUND. FOR MORE INFORMATION REGARDING WHICH SURVEY AND MONUMENTS USED EACH CENTER QUARTER, SEE (R3). RECORD DISTANCES PER (R2) WERE USED TO ESTABLISH THE CALCULATED POSITION OF THE CENTER QUARTER, PER (R3). THE EAST, WEST, NORTH AND SOUTH QUARTER CORNERS WERE LOCATED TO ESTABLISH THE CALCULATED POSITION OF THE CENTER QUARTER PER BLM MANUAL OF INSTRUCTION.
- THE AS-CONSTRUCTED CENTERLINE OF BALDY MOUNTAIN ROAD WAS LOCATED TO ESTABLISH A 30.00' RIGHT OF WAY.
- THE NORTH BOUNDARY OF THE SUBJECT PROPERTY WAS ESTABLISHED FROM FOUND MONUMENTS AT THE NORTHWEST CORNER OF THAT CERTAIN PARCEL DESCRIBED IN WARRANTY DEED 602199 AND THE FOUND 1" PIPE MONUMENT TO THE NORTHEAST CORNER OF THE SUBJECT PROPERTY.
- THE MONUMENT AT THE NORTHEAST CORNER OF THE SUBJECT PROPERTY SUBSTANTIALLY FITS LINES OF OCCUPATION AND EXISTING FENCE LINES.
- THE EAST BOUNDARY OF THE SUBJECT PROPERTY ADJACENT TO LOTS 1 THROUGH 6, BLOCK 3 WAS ESTABLISHED BY HOLDING THE FOUND 1" PIPE AT THE NORTHEAST CORNER OF THE SUBJECT PROPERTY HOLDING THE BEARING OF THE NORTHSOUTH CENTERLINE OF SECTION 16, PER THE BLM SOLUTION.
- THE PROPERTY BOUNDARY ADJACENT TO THE NORTH BOUNDARY OF LOT 11 AND TRACT 'A', BLOCK 2 AND LOT 14, BLOCK 1, WAS ESTABLISHED BY DETERMINING THE EASTWEST CENTER OF SECTION 16 BASED ON WEST SANDPOINT PLAT AND THE WEST QUARTER CORNER AND OFFSETTING THAT ALIGNMENT A RECORD DISTANCE OF 1000.38 FEET TO THE SOUTH. THIS SUBSTANTIALLY FITS EXISTING FENCE LINES AND LINES OF OCCUPATION.
- THE EAST BOUNDARY OF THE SUBJECT PARCEL ADJACENT TO THE EAST BOUNDARY OF THE STORM WATER TRACT AND LOTS 11 THROUGH 13, BLOCK 1, WAS ESTABLISHED BY HOLDING THE NORTHSOUTH CENTERLINE OF SECTION 16 BASED ON THE SOUTH QUARTER CORNER AND THE CALCULATED POSITION OF THE CENTER QUARTER BASED ON WEST SANDPOINT SUBDIVISION.
- THE SOUTH BOUNDARY OF THE SUBJECT PARCEL WAS ESTABLISHED BY HOLDING FOUND MONUMENTS THE FOUND 1" PIPE AT THE SOUTHWEST CORNER OF THE SUBJECT PARCEL WAS USED FOR LINE ONLY. THE SOUTH BOUNDARY LINE WAS EXTENDED TO THE NORTHSOUTH CENTERLINE OF SECTION 16, BASED ON THE SOUTH QUARTER CORNER AND THE CALCULATED POSITION OF THE CENTER QUARTER BASED ON WEST SANDPOINT SUBDIVISION.
- THE WEST BOUNDARY OF THE SUBJECT PARCEL WAS ESTABLISHED BY HOLDING FOUND MONUMENTS.

- BONNER COUNTY REFERENCES:**
- (R1) QUIT CLAIM DEED INSTRUMENT NO. 976337 RECORDED 2/12/2021
 - (R2) WEST SANDPOINT SUBDIVISION, RECORDED DEC. 4, 1910 UNDER INSTRUMENT NO. 32090 IN BOOK 1 OF PLATS AT PAGE 152.
 - (R3) RECORD OF SURVEY INSTRUMENT NO. 842527 RECORDED BY MARK DUFFNER, PLS 2965, 2019.
 - (R4) RECORD OF SURVEY INSTRUMENT NO. 562766 RECORDED BY GEORGE MARSHALL, PLS 7048, 2000.
 - (R5) RECORD OF SURVEY INSTRUMENT NO. 562969 RECORDED BY GEORGE MARSHALL, PLS 7046, 2000.
 - (R6) RECORD OF SURVEY INSTRUMENT NO. 365249 RECORDED BY DAVID EVANS, PLS 5087, 1989.
 - (R7) RECORD OF SURVEY INSTRUMENT NO. 347149 RECORDED BY ROBERT BRISTOL, PLS 882, 1986.

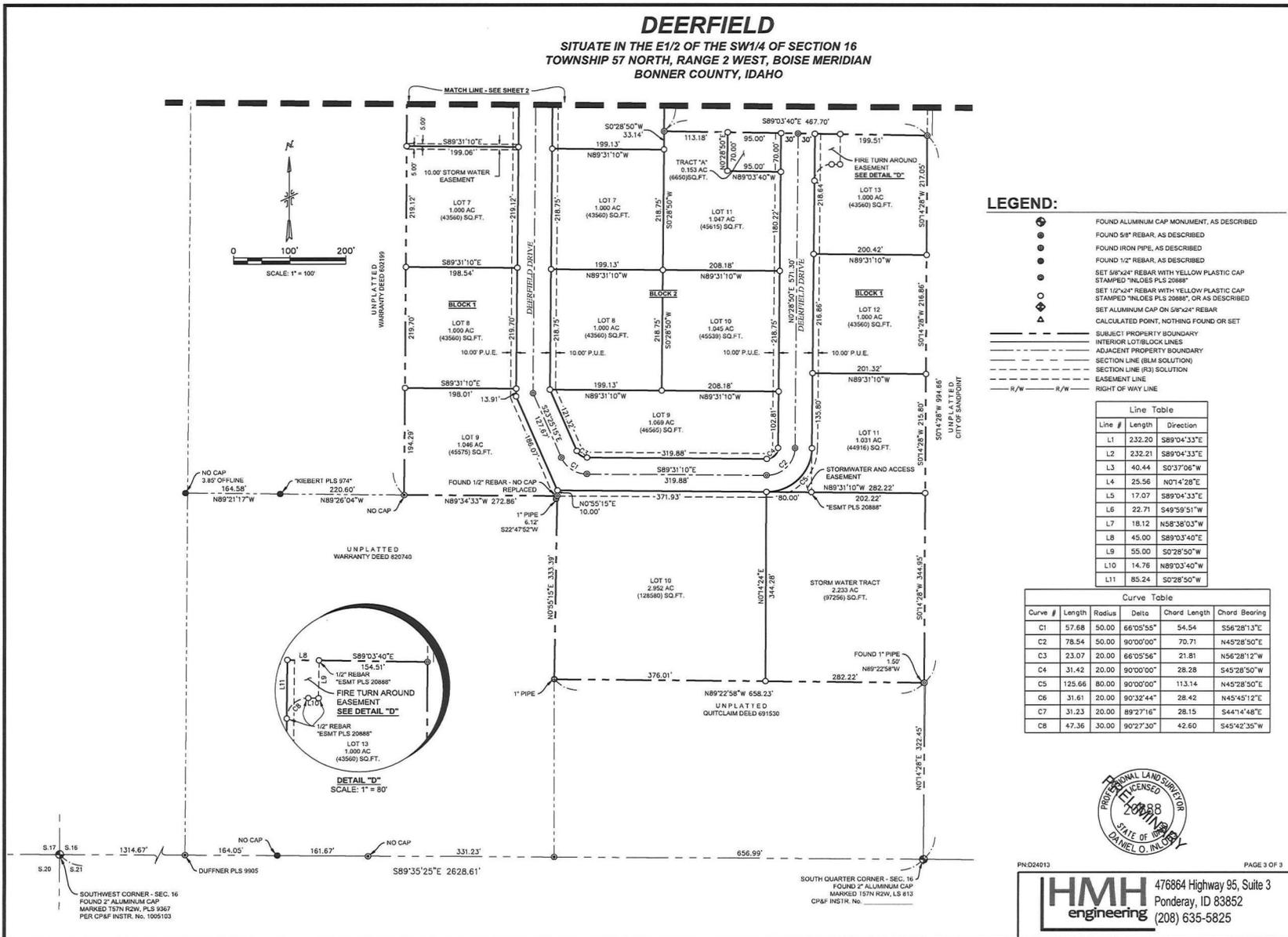
- LEGEND:**
- FOUND ALUMINUM CAP MONUMENT, AS DESCRIBED
 - FOUND 5/8" REBAR, "BRISTOL, PLS 882" OR AS DESCRIBED
 - FOUND IRON PIPE, AS DESCRIBED
 - FOUND 1/2" REBAR, AS DESCRIBED
 - SET 5/8"x24" REBAR WITH YELLOW PLASTIC CAP STAMPED "NLOCS PLS 2088"
 - SET 1/2"x24" REBAR WITH YELLOW PLASTIC CAP STAMPED "NLOCS PLS 2088" OR AS DESCRIBED
 - SET ALUMINUM CAP ON 5/8"x24" REBAR
 - CALCULATED POINT, NOTHING FOUND OR SET
 - SUBJECT PROPERTY BOUNDARY
 - INTERIOR LOT/BLOCK LINES
 - ADJACENT PROPERTY BOUNDARY
 - SECTION LINE (BLM SOLUTION)
 - SECTION LINE (R3) SOLUTION
 - EASEMENT LINE
 - RIGHT OF WAY LINE

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478664 Highway 95, Suite 3
 Ponderay, ID 83852
 (208) 635-5825

DEERFIELD

SITUATE IN THE E1/2 OF THE SW1/4 OF SECTION 16
TOWNSHIP 57 NORTH, RANGE 2 WEST, BOISE MERIDIAN
BONNER COUNTY, IDAHO



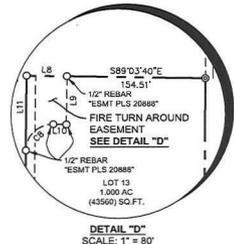
- LEGEND:**
- FOUND ALUMINUM CAP MONUMENT, AS DESCRIBED
 - FOUND 5/8" REBAR, AS DESCRIBED
 - FOUND IRON PIPE, AS DESCRIBED
 - FOUND 1/2" REBAR, AS DESCRIBED
 - SET 5/8"x24" REBAR WITH YELLOW PLASTIC CAP STAMPED "INLOS PLS 20888"
 - SET 1/2"x24" REBAR WITH YELLOW PLASTIC CAP STAMPED "INLOS PLS 20888", OR AS DESCRIBED
 - SET ALUMINUM CAP ON 5/8"x24" REBAR CALCULATED POINT, NOTHING FOUND OR SET
 - SUBJECT PROPERTY BOUNDARY
 - INTERIOR LOT/BLOCK LINES
 - ADJACENT PROPERTY BOUNDARY
 - SECTION LINE (BLM SOLUTION)
 - SECTION LINE (RS) SOLUTION
 - EASEMENT LINE
 - R/W
 - R/W
 - RIGHT OF WAY LINE

Line Table

Line #	Length	Direction
L1	232.20	S89°04'33"E
L2	232.21	S89°04'33"E
L3	40.44	S0°37'06"W
L4	25.56	N07°4'28"E
L5	17.07	S89°04'33"E
L6	22.71	S49°59'51"W
L7	18.12	N58°38'03"W
L8	45.00	S0°28'50"W
L9	55.00	S0°28'50"W
L10	14.76	N89°03'40"W
L11	85.24	S0°28'50"W

Curve Table

Curve #	Length	Radius	Delta	Chord Length	Chord Bearing
C1	57.68	50.00	66°05'55"	54.54	S56°28'13"E
C2	78.54	50.00	90°00'00"	70.71	N45°28'50"E
C3	23.07	20.00	66°05'56"	21.81	N56°28'12"W
C4	31.42	20.00	90°00'00"	28.28	S45°28'50"W
C5	125.66	80.00	90°00'00"	113.14	N45°28'50"E
C6	31.61	20.00	90°32'44"	28.42	N45°45'12"E
C7	31.23	20.00	89°27'16"	28.15	S44°14'48"E
C8	47.36	30.00	90°27'30"	42.60	S45°42'35"W



HMH 476864 Highway 95, Suite 3
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Appendix B
ITE Reference Material

Single-Family Detached Housing (210)

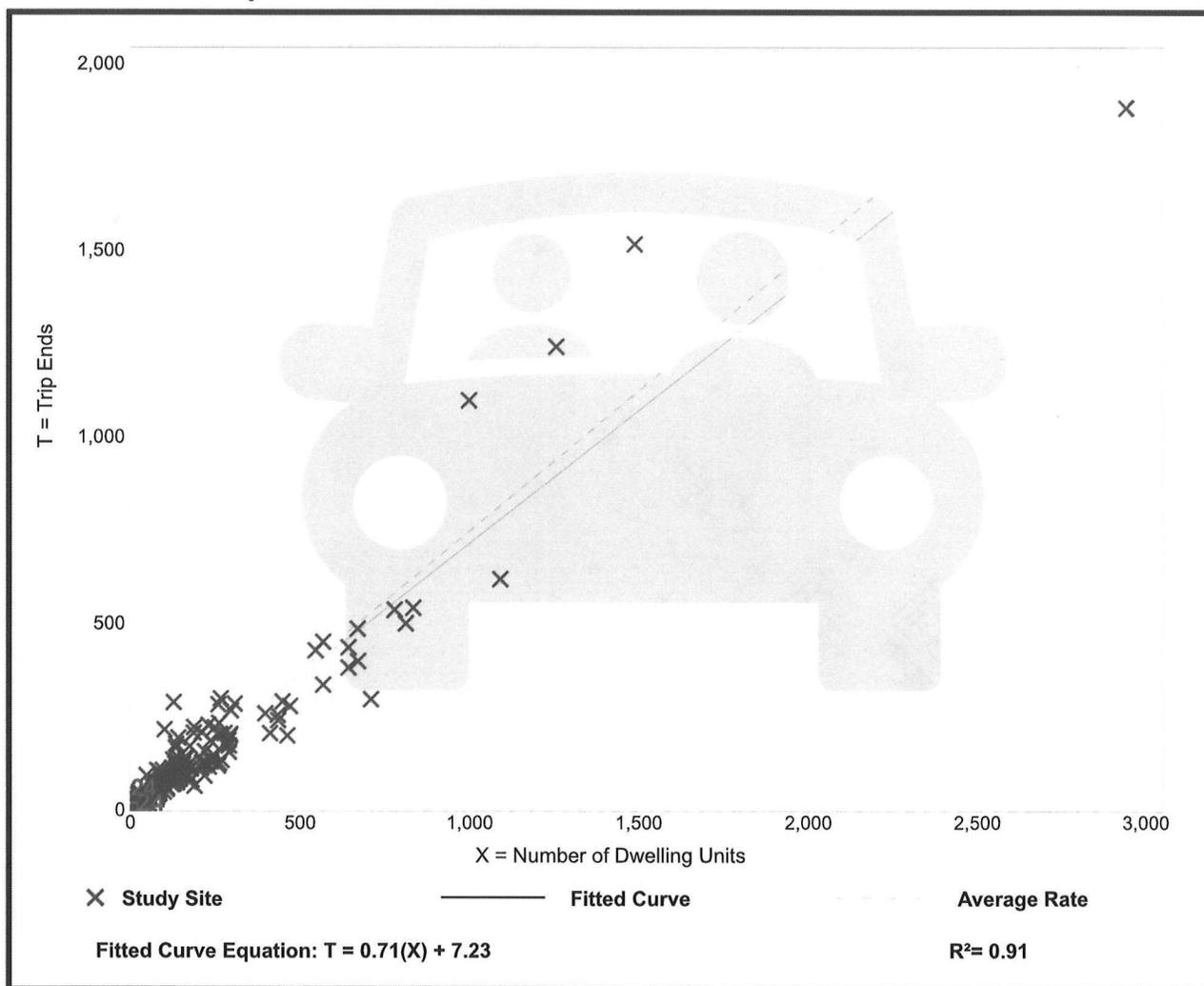
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
 Number of Studies: 169
 Avg. Num. of Dwelling Units: 217
 Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.75	0.34 - 2.27	0.25

Data Plot and Equation



Single-Family Detached Housing (210)

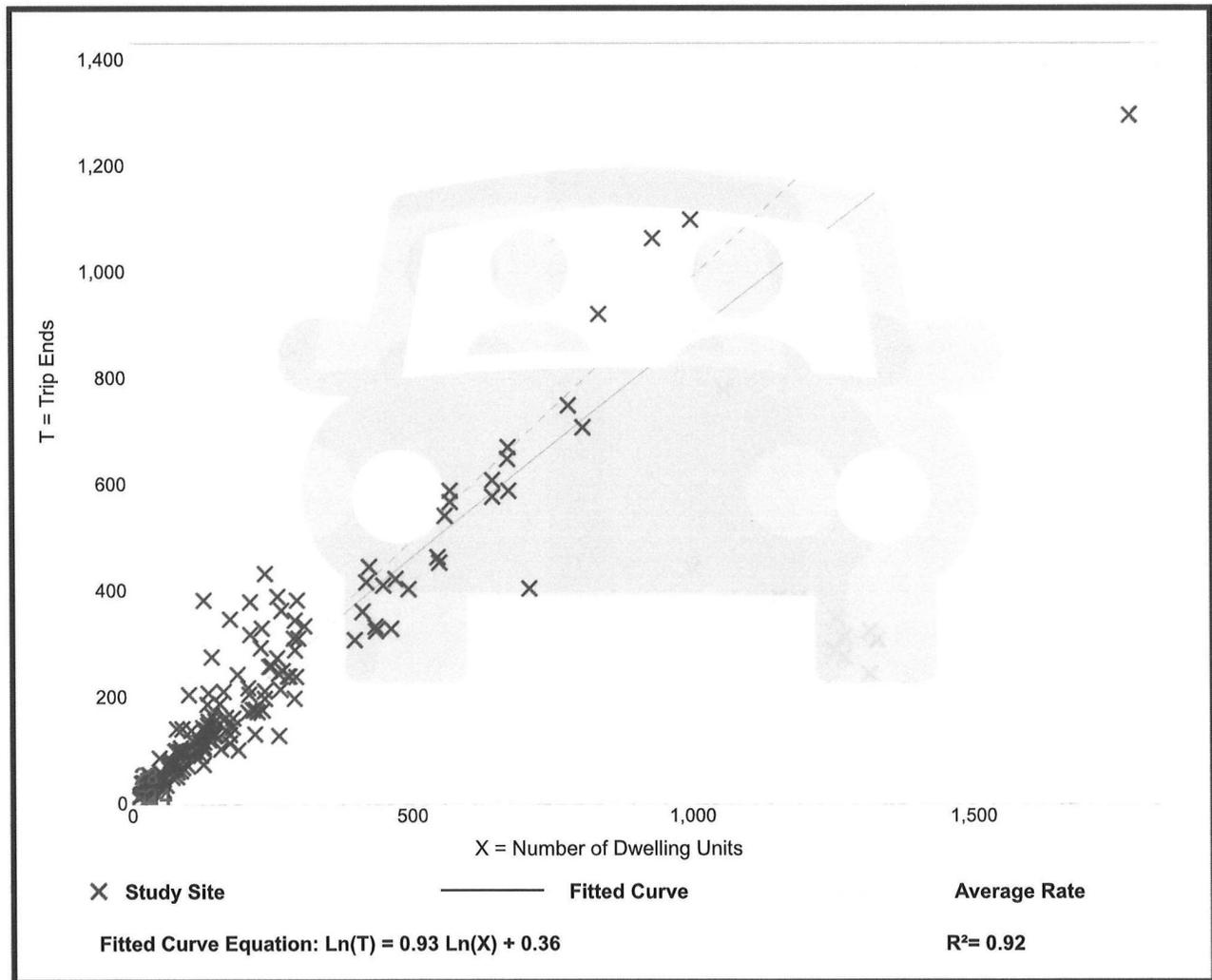
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
 Number of Studies: 178
 Avg. Num. of Dwelling Units: 203
 Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.49 - 2.98	0.28

Data Plot and Equation



Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation

