

May 26, 2020

Inga Note, P.E.
Senior Traffic Planning Engineer
City of Spokane
808 W. Spokane Falls Boulevard
Spokane, WA 99201
509.625.6331
inote@spokanecity.org

Re: Trip Generation & Distribution Letter for the **Pacific Northwest Technology Park-West Binding Site Plan**
Spokane, Washington

Dear Inga,

DCI Engineers understands that the City of Spokane is requesting a trip generation and distribution letter as part of the SEPA process to understand the possible traffic impacts for the proposed Pacific Northwest Technology Park to be constructed in Spokane. A vicinity map of the site location is included in Appendix I.

Project Description

The proposed project includes the completion of a binding site plan which would subdivide 3 existing lots into 19 new lots and multiple associated ROW dedications for new public roads. The total project area is approximately 88.3 acres in total. The existing land is undeveloped. There are 2 specific projects included in this trip letter which are the McKinstry Warehouse and Puget Sound Pipe and Supply Warehouse. The developments will occur on Lot 3 and Lot 2 of Block 1 of the Preliminary BSP. There are no other specific projects included in this letter. The 2 specific projects' site plans will be used as approximate representations of future development for the purposes of estimating . This will allow us to approximate the total building square footages for the remainder of the project. See Appendix II for the proposed binding site plan. It is estimated that the entire proposed project will generate approximately 226 entering trips and 55 exiting trips during the AM peak hour and 61 entering trips and 222 exiting trips during the PM peak hour.

The BSP will be completed in 3 proposed Phases. The first phase will include Blocks 1 and 2 of the BSP. These blocks include a total of 9 lots accounting for a total of 33.664 acres. This phase includes the two known projects (McKinstry Warehouse and Puget Sound Pipe and supply) along with 23.987 additional acres of light industrial land use. See Appendix V for a proposed phasing plan for the BSP.

Trip Generation Summary:

The number of trips generated by this project was estimated using information found in the 10th Edition of ITE's *Trip Generation Manual*. The *Trip Generation Manual* was used to calculate the estimated total number of proposed trips entering and exiting the site during the AM and PM peak hours based on prior and proposed land uses. Two of the 19 parcels have known land uses of Warehousing and, thus, Land use 150 – Warehousing will be used for those two parcels. The



remainder of the parcels will use Land Use 130 – Industrial Park which should be a good representation of the remaining parcels. The two parcels with proposed site plans completed have building coverages of 30% (67,500 square foot building on a 222,548 square foot parcel) and 9.8% (19,500 square foot building on a 198,982 square foot parcel). Averaging these two numbers, we will assume a typical building coverage of 20% throughout the park. Excluding the ROW areas, there is a total of approximately 79.9 acres in total. Also excluding the two planned sites, the total remaining land to be developed is 70.2 acres (3,057,702 square feet). Using an assumed building coverage of 20% results and an estimated total building area of 611,540 square feet. The methodology described in the *Trip Generation Handbook* was used to determine whether to use the fitted curve or the average rate for each scenario. Pass-by trips and internal capture were not considered for this project as they were determined to be negligible. The corresponding charts from the ITE Manual and the trip calculations are included in Appendix III. The following is a summary of the anticipated trip generation for the proposed project.

Land Use 150 – Warehousing (for the Proposed McKinstry and Puget Sound Pipe & Supply Developments)

- Weekday
 - Average vehicle trip ends vs. 1000 sf of gross floor area (87)
 - Approximately 183 trips are generated (Fitted Curve)
 - 50% IN, 91 trips
 - 50% OUT, 92 trips
- Weekday, Peak Hour of Adjacent Street Traffic, One hour between 7-9 AM
 - Average vehicle trip ends vs. 1000 sf of gross floor area (87)
 - Approximately 36 trips are generated (Fitted Curve)
 - 77% IN, 28 trips
 - 23% OUT, 8 trips
- Weekday, Peak Hour of Adjacent Street Traffic, One hour between 4-6 PM
 - Average vehicle trip ends vs. 1000 sf of gross floor area (87)
 - Approximately 38 trips are generated (Fitted Curve)
 - 27% IN, 10 trips
 - 73% OUT, 28 trips

Land Use 130 – Industrial Park (for the remaining 17 Lots in the BSP)

- Weekday
 - Average vehicle trip ends vs. 1000 sf of gross floor area (612)
 - Approximately 2,408 trips are generated (Fitted Curve)
 - 50% IN, 1,204 trips
 - 50% OUT, 1,204 trips
- Weekday, Peak Hour of Adjacent Street Traffic, One hour between 7-9 AM
 - Average vehicle trip ends vs. 1000 sf of gross floor area (612)
 - Approximately 245 trips are generated (Average Rate)
 - 81% IN, 198 trips
 - 19% OUT, 47 trips

- Weekday, Peak Hour of Adjacent Street Traffic, One hour between 4-6 PM
 - Average vehicle trip ends vs. 1000 sf of gross floor area (612)
 - Approximately 245 trips are generated (Average Rate)
 - 21% IN, 51 trips
 - 79% OUT, 194 trips

Summary

Based on the results provided above, accounting for existing trips along with infill trips, the estimated net total trips generated by the proposed site are as follows:

<u>Estimated Trips</u>		
Weekday Trips:	2,591	Trips
<i>Entering:</i>	1,295	Trips
<i>Exiting:</i>	1,296	Trips
AM Trips:	281	Trips
<i>Entering:</i>	226	Trips
<i>Exiting:</i>	55	Trips
PM Trips:	283	Trips
<i>Entering:</i>	61	Trips
<i>Exiting:</i>	222	Trips

<u>PHASE 1 ONLY Estimated Trips</u>		
Weekday Trips:	1,560	Trips
<i>Entering:</i>	779	Trips
<i>Exiting:</i>	781	Trips
AM Trips:	120	Trips
<i>Entering:</i>	96	Trips
<i>Exiting:</i>	24	Trips
PM Trips:	122	Trips
<i>Entering:</i>	28	Trips
<i>Exiting:</i>	94	Trips

These trip calculations along with the appropriate pages from the ITE Manual can be found in Appendix III.

Trip Distribution and Assignment:

Trips for this project site will enter and exit the site via 21st Avenue, Deer Heights Road, and Lucas Road. These roads will be used to access Hazelwood Road, Flint Road, and US Highway 2.

The table below describes the movements at the boundary of the analysis extents, the potential destinations/originations associated with that movement, and the anticipated percentage of trips that



would be associated with that movement. It is assumed that these percentages will be consistent across both the AM and PM peak hours.

Roadway (Direction)	Origination/Destination	Anticipated Percentage
US Highway 2 (East)	Spokane, I-90 East	45%
US Highway 2 (West)	Airway Heights, Fairchild AFB	10%
Flint Road (South)	Spokane International Airport	5%
Hayford Road (South)	I-90 West	25%
Misc. Other Roads	Airway Heights Residential/Rural	15%

Exhibits showing the anticipated distribution of trips created by the proposed project have been included in Appendix III. Included exhibits show the proposed AM and PM peak hour trips.

If you have any questions, please don't hesitate to contact me.

Sincerely,
DCI Engineers Inc.

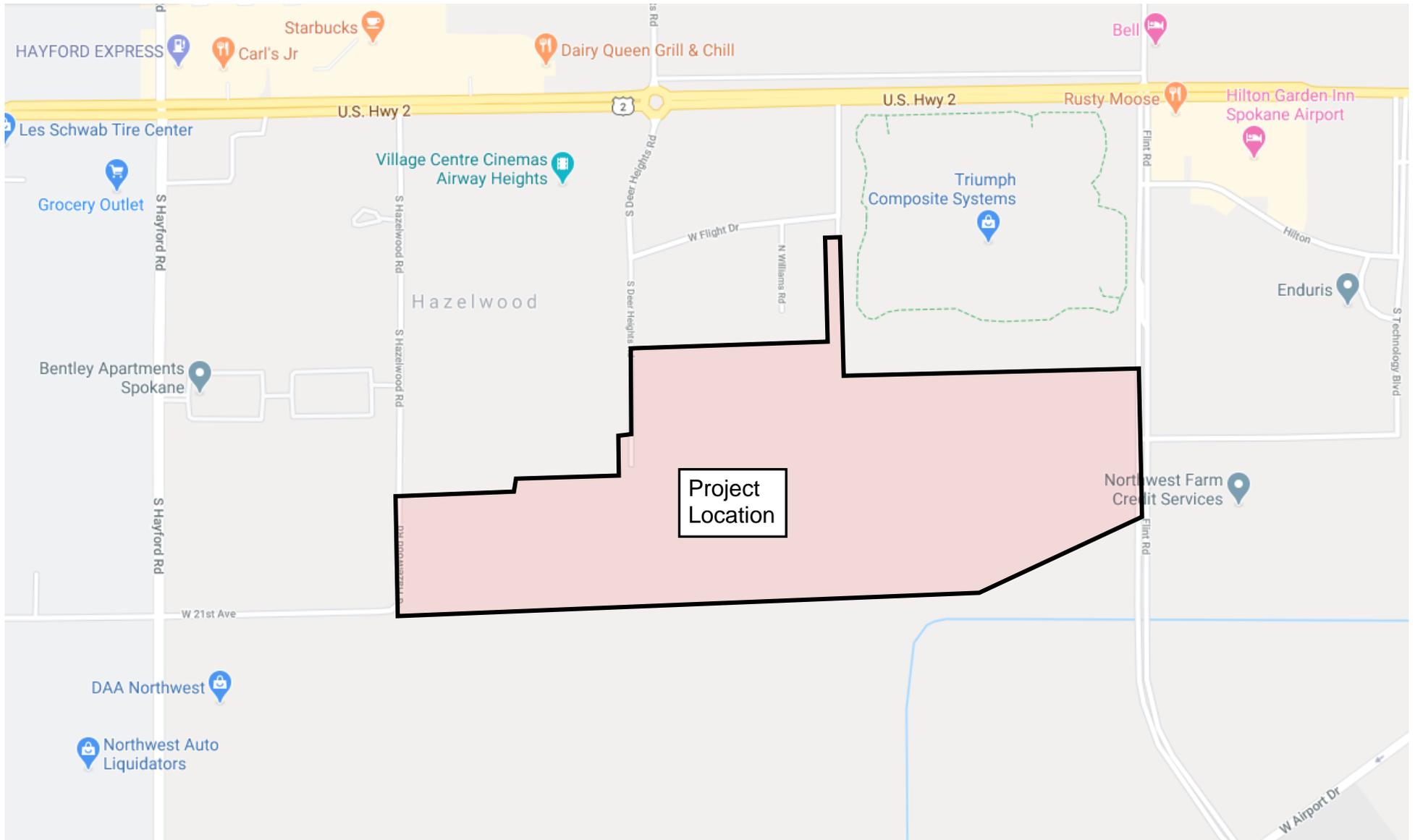
Wade Gelhausen, P.E.
Associate Principal

Sam Shastany, E.I.T.
Project Engineer

- Appendix I: Vicinity Map
- Appendix II: Preliminary Binding Site Plan
- Appendix III: Calculations/ITE Manual (AM & PM Peak Hour)
- Appendix IV: Trip Distribution
- Appendix V: BSP Phasing Plan

Appendix I

VICINITY MAP



Appendix II

PRELIMINARY BINDING SITE PLAN PACIFIC NORTHWEST TECH PARK - WEST TAX PARCEL NOS. 25301.0303, 25305.9035, & 25305.9043 IN THE N 1/2 SECTION 30, T. 25 N., R. 42 E. W.M. SPOKANE, WASHINGTON

LEGAL DESCRIPTIONS:

25301.0303: AIRPORT VILLAGE LT 3 BLK 2

OWNER: WEST PLAINS INVESTMENTS, LLC

25305.9035: 30-25-42 PTN OF THE N1/2 OF SEC DAF; BEG AT THE NE COR OF SEC 30; TH S ALG E LN OF SD SEC 52.51' TO S LN OF P S H # 2; TH W ALG SD S LN TO THE NE CORNER OF AIRPORT VILLAGE SUBDIVISION; TH S ALG E LN OF SD SUBDIVISION 698.70' TO THE TRUE POB; TH W ALG THE S LN OF LUCAS DRIVE 80' TO THE E LN OF LT 1 BLK 2 SD SUBDIVISION; TH S 535.37' TO SE COR OF SD LT 1; TH W 511.65' TO SW COR OF LT 1 AND NE COR OF LT 3 BLK 2; TH S 445' TO SE COR OF SD LOT 3; TH W 513.85' TO THE SW COR OF SD LT 3 TH CONT W ALG SD LN 70' TO THE E LN OF LT 7 SD SUBDIVISION; TH S 203' TO THE SE COR OF SD LT 7; TH W 535.60' TO THE SW COR OF LT 7 AND THE E LN OF TR 22 HAZELWOOD IRR FARMS # 2; TH S ALG THE E LN LT 7 65' ML TO THE SE COR OF TR 22 AND TH NW COR OF TR 28; TH E ALG THE N LN OF TR 28 659.35' TO N-S CENTERLINE OF SEC; TH E 1053.96' TO THE E LN OF LUCAS DR EXTENDED S; TH N ALG SD EXTENDED E LN TO THE POB; EXC DEER HEIGHTS RD

OWNER: WEST PLAINS INVESTMENTS, LLC

25305.9043: 30-25-42 PARCEL B OF RECORDED SURVEY AUDITORS #4147356 BK 78 PGS 52 & 53; EXC E 39FT

OWNER: GRANITE INVESTMENTS, LLC

PROJECT DATUM:



ASSUMED BASIS OF ELEVATIONS:

THE CONTOURS SHOWN ARE FROM THE CITY OF SPOKANE'S GIS REFERENCE DATA. THEY ARE 2' ELEVATION CONTOURS AND MEET ASPRS CLASS 1 ACCURACY STANDARDS. THEY ARE DEVELOPED FROM 2007 LIDAR AND ORTHOPHOTOGRAPHY. ASSUMED TO BE NAVD88.

ASSUMED BASIS OF ELEVATIONS:

N86°35'57"E ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SECTION 30, T25N, R42E, W.M. AS PER RECORD OF SURVEY FILED IN BOOK 43 OF SURVEYS, PAGE 63, SPOKANE COUNTY RECORDS.

PROJECT STATEMENT:

THIS PROPOSED BINDING SITE PLAN WOULD SUBDIVIDE 3 EXISTING LOTS INTO 19 NEW LOTS FOR LIGHT INDUSTRIAL ZONE APPROVED USES. THE DEVELOPMENT BE SERVED BY CITY OF SPOKANE WATER AND SEWER SYSTEMS.

THE ENTIRE SUBJECT PROPERTY WITHIN THIS PROPOSAL LIES WITHIN THE SPOKANE INTERNATIONAL AIRPORT COMPATIBILITY ZONE 5 (ACZ-5) AND A PORTION OF THE EAST SIDE OF THE SUBJECT PROPERTY LIES WITHIN ACZ-3. IN ADDITION, THE SUBJECT PROPERTY LIES WITHIN FAIRCHILD AIR FORCE BASE MILITARY OVERLAY ZONE 3/4. THESE OVERLAY ZONES COULD HAVE IMPACTS ON THE ALLOWED USES AND MAXIMUM BUILDING HEIGHTS WITHIN THE PROPOSED LOTS.

PROJECT TEAM:

OWNER #1:

GRANITE INVESTMENTS, LLC
12906 N. ADDISON STREET
SPOKANE, WASHINGTON 99218
MANAGING MEMBER: RICHARD VANDERVERT
PHONE: (509) 465-3340

OWNER #2:

WEST PLAINS INVESTMENTS, LLC
12906 N. ADDISON STREET
SPOKANE, WASHINGTON 99218
MANAGING MEMBER: RICHARD VANDERVERT
PHONE: (509) 465-3340

CIVIL ENGINEER:

DCI ENGINEERS
707 W. 2ND AVENUE
SPOKANE, WASHINGTON 99201
CONTACT: WADE GELHAUSEN, P.E.
PHONE: (509) 455-4448

UTILITY PURVEYORS:

WATER:

CITY OF SPOKANE
WATER DEPARTMENT
914 E. NORTH FOOTHILLS DR.
SPOKANE, WA 99207
PHONE: (509) 625-7800

SEWER:

CITY OF SPOKANE
WASTEWATER DEPARTMENT
909 E. SPRAGUE AVENUE
SPOKANE, WA 99202
PHONE: (509) 625-7900

NATURAL GAS:

AVISTA UTILITIES
1411 E. MISSION AVENUE
SPOKANE, WA 99202
PHONE: (800) 936-6629

FIRE DEPARTMENT:

CITY OF SPOKANE FIRE DEPARTMENT
44 W. RIVERSIDE AVENUE
SPOKANE, WA 99201
PHONE: (509) 625-7000

POWER:

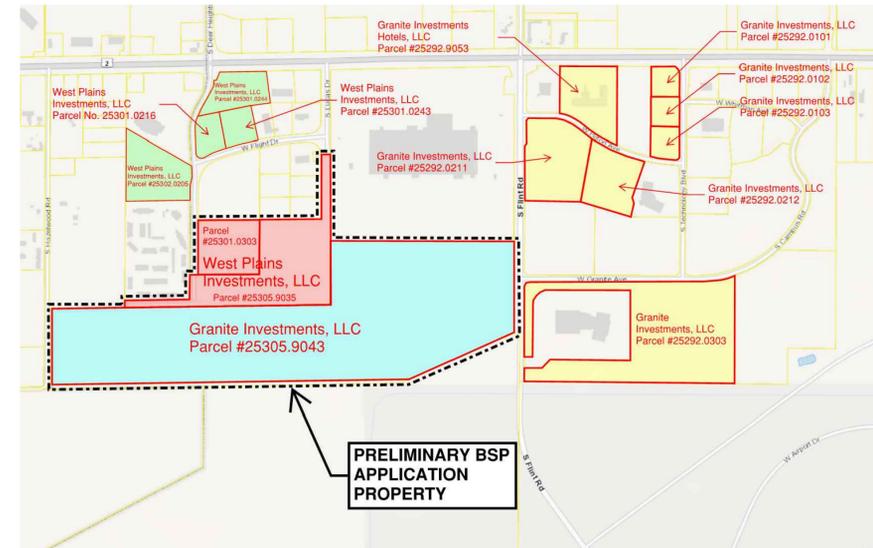
AVISTA UTILITIES
1411 E. MISSION AVENUE
SPOKANE, WA 99202
PHONE: (800) 936-6629

TELEPHONE:

CENTURYLINK
924 N. COLUMBUS STREET
SPOKANE, WA 99202
PHONE: (509) 340-2636

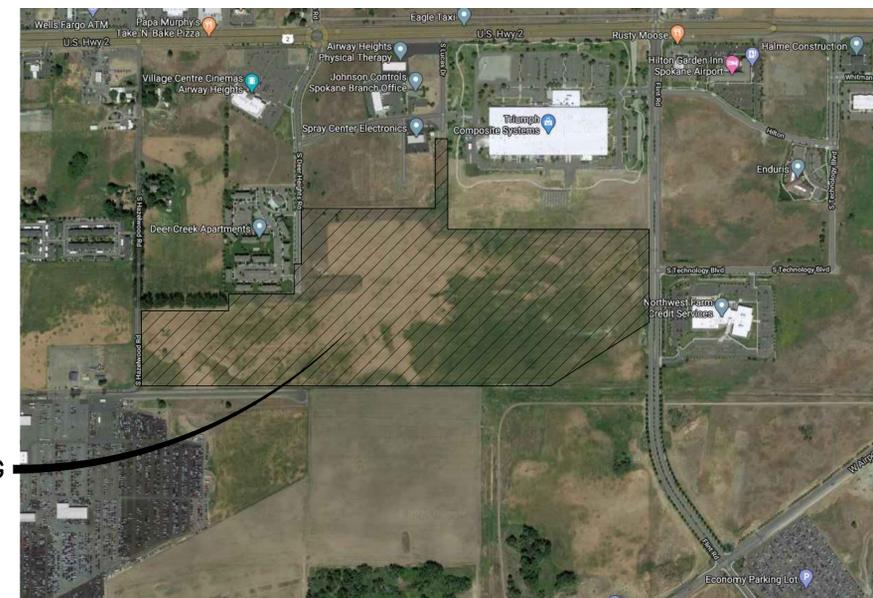
CABLE:

COMCAST
1717 E. BUCKEYE AVENUE
SPOKANE, WA 99207
CONTACT: BRIAN RICHARDSON
PHONE: (509) 755-4717



VICINITY MAP

NOT TO SCALE



AREA MAP

NOT TO SCALE



LOT STANDARDS FOR LIGHT INDUSTRIAL ZONE

	LIGHT INDUSTRIAL
MINIMUM FRONTAGE	NONE
MAXIMUM BUILDING COVERAGE	NO LIMIT (1)
MAXIMUM BUILDING HEIGHT	150 FEET (2)(3)
MINIMUM BUILDING SETBACK STREET LOT LINE	0 FEET (4)
STREET FRONTAGE LANDSCAPING REQUIRED	6 FEET L2 SEE THRU (5)

(1) THE FLOOR AREA RATIOS (FAR) FOR USES THAT ARE NOT CLASSIFIED AS INDUSTRIAL USES WITHIN THE INDUSTRIAL CATEGORIES OF SMC TABLE 17C.130-1 ARE THE SAME AS THE GC COMMERCIAL ZONE. SEE CHAPTER 17C.120 SMC FOR GC ZONE STANDARDS.

(2) BUILDINGS AND STRUCTURES FOR USES THAT ARE NOT CLASSIFIED AS INDUSTRIAL USES WITHIN THE INDUSTRIAL CATEGORIES OF SMC TABLE 17C.130-1 AND THAT ARE OVER FIFTY FEET IN HEIGHT MUST FOLLOW THE DESIGN, SETBACK AND DIMENSIONAL STANDARDS FOUND IN CHAPTER 17C.250 SMC, TALL BUILDING STANDARDS.

(3) A PORTION OF THE EASTERN PROPERTY WITHIN THIS PROPOSAL (LOCATED IN BLOCKS 1 AND 2) LIES WITHIN THE AIRPORT COMPATIBILITY ZONE ACZ-3 AND IS SUBJECT TO GRADUATING BUILDING HEIGHT LIMITATIONS (BUT NOT LESS THAN 70 FEET).

(4) STRUCTURES SHALL BE NO CLOSER THAN TWELVE FEET FROM THE BACK OF THE CURB.

(5) ALONG ALL LIGHT INDUSTRIAL ZONED PROPERTIES EXCEPT WHERE BUILDINGS ARE BUILT WITH NO SETBACK FROM THE PROPERTY LINE, A SIX-FOOT WIDE PLANTING AREA OF L2 SEE-THROUGH BUFFER IS REQUIRED, INCLUDING STREET TREES AS PRESCRIBED IN SMC 17C.200.050. IN INDUSTRIAL ZONES, ALL USES IN THE COMMERCIAL CATEGORIES (SEE CHAPTER 17C.190 SMC, USE CATEGORY DESCRIPTIONS, ARTICLE III, COMMERCIAL CATEGORIES) ARE SUBJECT TO THE STANDARDS FOR USES IN THE GENERAL COMMERCIAL (GC) ZONE.

PROPOSED LOT INFORMATION

LOT #	STREET FRONTAGE (FT)	AREA (ACRES)	ZONE	OWNER
BLOCK 1				
1	569.5	1.940	LI	GRANITE INVESTMENTS, LLC.
2	556.1	4.568	LI	GRANITE INVESTMENTS, LLC.
3	406.3	5.109	LI	GRANITE INVESTMENTS, LLC.
4	656.9	5.094	LI	GRANITE INVESTMENTS, LLC.
5	478.1	1.200	LI	GRANITE INVESTMENTS, LLC.
BLOCK 2				
1	439.3	3.472	LI	GRANITE INVESTMENTS, LLC.
2	448.5	4.925	LI	GRANITE INVESTMENTS, LLC.
3	462.7	4.540	LI	GRANITE INVESTMENTS, LLC.
4	723.05	2.816	LI	GRANITE INVESTMENTS, LLC.
BLOCK 3				
1	356.4	4.188	LI	WEST PLAINS INVESTMENTS, LLC.
2	356.4	4.194	LI	WEST PLAINS INVESTMENTS, LLC.
3	1,043.3	6.548	LI	GRANITE INVESTMENTS, LLC.
4	1,078.2	6.794	LI	GRANITE INVESTMENTS, LLC.
5	356.5	4.208	LI	WEST PLAINS INVESTMENTS, LLC.
6	356.5	4.190	LI	WEST PLAINS INVESTMENTS, LLC.
BLOCK 4				
1	65.0	0.799	LI	WEST PLAINS INVESTMENTS, LLC.
2	945.7	5.056	LI	GRANITE INVESTMENTS, LLC.
3	385.1	5.068	LI	GRANITE INVESTMENTS, LLC.
4	385.1	5.069	LI	GRANITE INVESTMENTS, LLC.

PRELIMINARY BINDING
SITE PLAN SUBJECT
PROPERTY

CONTRACTOR NOTE

ALL EXISTING UTILITIES SHOWN ON PLANS ARE TO BE VERIFIED HORIZONTALLY AND VERTICALLY PRIOR TO ANY CONSTRUCTION. ALL EXISTING FEATURES INCLUDING BURIED UTILITIES ARE SHOWN AS INDICATED ON RECORD MAPS AND SURVEYS FURNISHED BY OTHERS. WE ASSUME NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS AND SURVEYS. CONTACT THE UTILITY OWNER/AGENCY FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO CONSTRUCTION.

**UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER**

811

CALL TWO BUSINESS DAYS
BEFORE YOU DIG

PREPARED BY:

DCI ENGINEERS
707 W. 2ND AVENUE
SPOKANE, WASHINGTON 99201
PHONE: (509) 455-4448 • FAX: (509) 455-7492
WEBSITE: www.dci-engineers.com
CIVIL STRUCTURAL
© 2020 DCI ENGINEERS, LLC
The information on this plan was prepared by DCI ENGINEERS, LLC. It is the property of DCI ENGINEERS, LLC. It is not to be used, copied, or reproduced in any form without the written permission of DCI ENGINEERS, LLC.

SIGNATURE:

REVISIONS:

NO.	DATE	DESCRIPTION

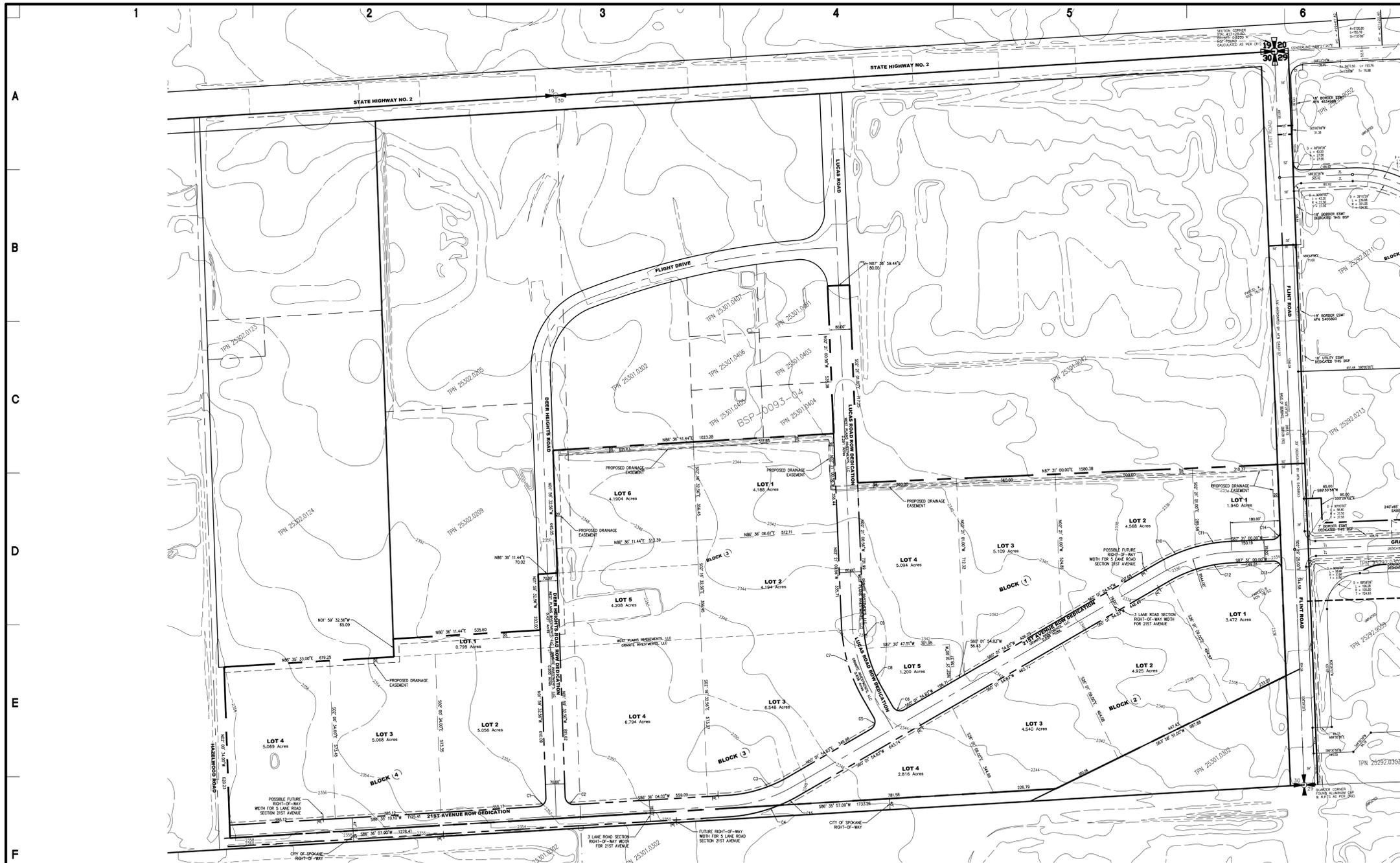
APPROVALS:

Job No.:	19-42-0100
Proj. Manager:	WMC
Drawn:	JFS
Reviewed:	WMC
Dwg. Chk.:	JFS
Date:	5-1-2020
Scale:	N/A

PROJECT TITLE:
**PRELIMINARY BINDING SITE PLAN
PACIFIC NORTHWEST TECH PARK - WEST
TAX PARCEL NOS. 25301.0303, 25305.9035, & 25305.9043
IN THE N 1/2 SECTION 30, T. 25 N., R. 42 E. W.M.
SPOKANE, WASHINGTON**

SHEET TITLE:
GENERAL CIVIL INFORMATION

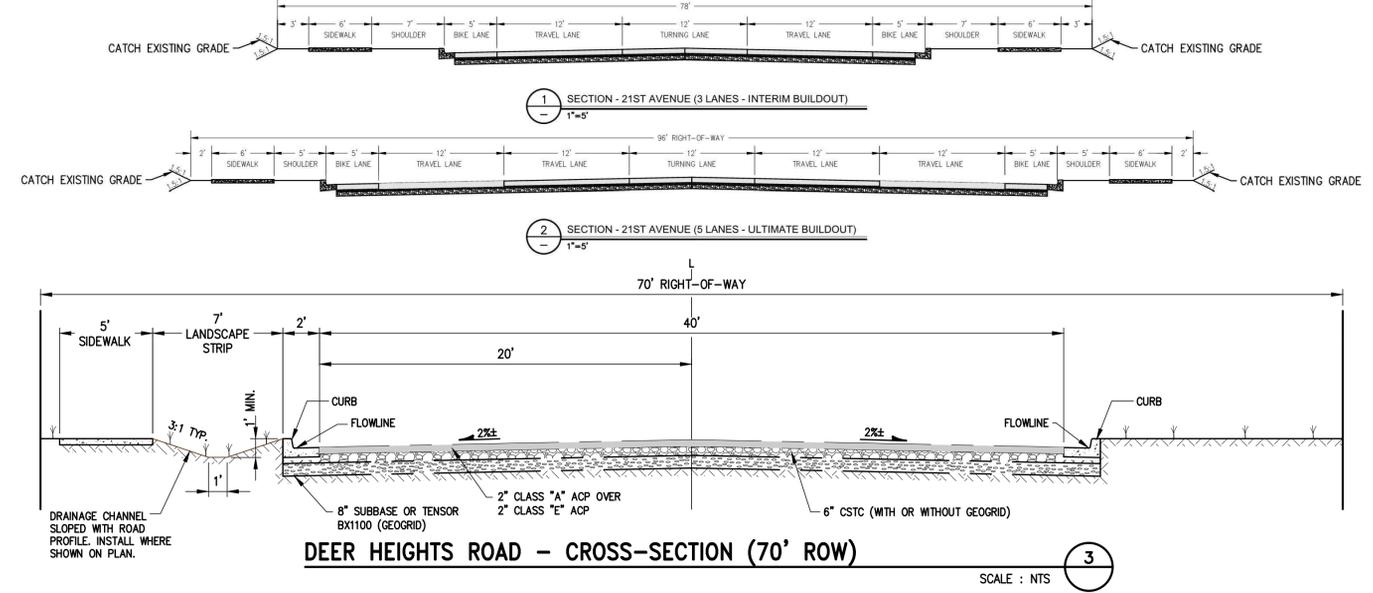
SHEET NO.
C0.00



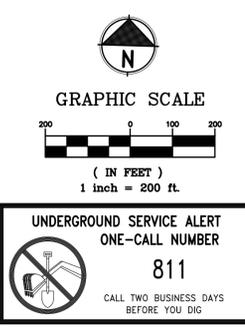
PROJECT DATUM:
ASSUMED BASIS OF ELEVATIONS:
 THE CONTOURS SHOWN ARE FROM THE CITY OF SPOKANE'S GIS REFERENCE DATA. THEY ARE A 2' ELEVATION CONTOURS AND MEET ASPRS CLASS 1 ACCURACY STANDARDS. THEY ARE DEVELOPED FROM 2007 LIDAR AND ORTHOPHOTOGRAPHY. ASSUMED TO BE NAVD88.
ASSUMED BASIS OF ELEVATIONS:
 N86°35'57"E ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SECTION 30, T25N, R42E, W.M. AS PER RECORD OF SURVEY FILED IN BOOK 43 OF SURVEYS, PAGE 63, SPOKANE COUNTY RECORDS.

PROJECT STATEMENT:
 THIS PROPOSED BINDING SITE PLAN WOULD SUBDIVIDE 3 EXISTING LOTS INTO 19 NEW LOTS FOR LIGHT INDUSTRIAL ZONE APPROVED USES. THE DEVELOPMENT BE SERVED BY CITY OF SPOKANE WATER AND SEWER SYSTEMS.
 THE ENTIRE SUBJECT PROPERTY WITHIN THIS PROPOSAL LIES WITHIN THE SPOKANE INTERNATIONAL AIRPORT COMPATIBILITY ZONE 5 (ACZ-5) AND A PORTION OF THE EAST SIDE OF THE SUBJECT PROPERTY LIES WITHIN ACZ-3). IN ADDITION, THE SUBJECT PROPERTY LIES WITHIN FAIRCHILD AIR FORCE BASE MILITARY OVERLAY ZONE 3/4. THESE OVERLAY ZONES COULD HAVE IMPACTS ON THE ALLOWED USES AND MAXIMUM BUILDING HEIGHTS WITHIN THE PROPOSED LOTS.

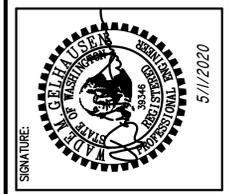
Curve #	Length	Radius	Delta
C1	46.387	30.000	088.5935
C2	47.860	30.000	091.4065
C3	234.179	505.000	026.5692
C4	191.035	583.000	018.7744
C5	47.124	30.000	090.0000
C6	47.125	30.000	090.0023
C7	282.308	584.084	027.6931
C8	152.739	504.000	017.3637
C9	90.201	504.000	010.2543
C10	148.383	583.000	014.5827
C11	131.282	583.000	012.9020
C12	242.248	505.000	027.4848
C13	47.208	30.000	090.1597
C14	47.404	30.000	089.8403
C15	79.314	583.000	007.7948



CONTRACTOR NOTE
 ALL EXISTING UTILITIES SHOWN ON PLANS ARE TO BE VERIFIED HORIZONTALLY AND VERTICALLY PRIOR TO ANY CONSTRUCTION. ALL EXISTING FEATURES INCLUDING BURIED UTILITIES ARE SHOWN AS INDICATED ON RECORD MAPS AND SURVEYS FURNISHED BY OTHERS. WE ASSUME NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS AND SURVEYS. CONTACT THE UTILITY OWNER/AGENCY FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO CONSTRUCTION.



PREPARED BY:
EDC ENGINEERS
 707 W. 2ND AVENUE
 SPOKANE, WASHINGTON 99201
 PHONE: (509) 455-4448 • FAX: (509) 455-7492
 WEBSITE: www.edcengineers.com
 CIVIL STRUCTURAL
 © EDC ENGINEERS, INC. 2020
 The information on this plan was prepared by EDC ENGINEERS, INC. and is the property of EDC ENGINEERS, INC. It is to be used only for the project and site identified on this plan. No part of this plan may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of EDC ENGINEERS, INC.



REVISIONS:

APPROVALS:
 Job No.: 19-42-0100
 Proj. Manager: WMC
 Drawn: JFS
 Reviewed: WMC
 Dwg. Chk.: JFS
 Date: 5-1-2020
 Scale: 1" = 200'

PROJECT TITLE:
PRELIMINARY BINDING SITE PLAN
PACIFIC NORTHWEST TECH PARK - WEST
 TAX PARCEL NOS. 25301.0303, 25305.9035, & 25305.9043
 IN THE N 1/2 SECTION 30, T. 25 N., R. 42 E. W.M.
 SPOKANE, WASHINGTON

SHEET TITLE:
 PRELIMINARY BINDING SITE PLAN
 SHEET NO.
CI.00

UNDERGROUND SERVICE ALERT
 ONE-CALL NUMBER
 811
 CALL TWO BUSINESS DAYS BEFORE YOU DIG

Appendix III

Land Use: 150

Warehousing

Description

A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas. High-cube transload and short-term storage warehouse (Land Use 154), high-cube fulfillment center warehouse (Land Use 155), high-cube parcel hub warehouse (Land Use 156), and high-cube cold storage warehouse (Land Use 157) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 13 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:30 a.m. and 12:30 p.m. and 3:00 and 4:00 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Minnesota, New Jersey, New York, Ohio, Oregon, Pennsylvania, and Texas.

Source Numbers

184, 331, 406, 411, 443, 579, 583, 596, 598, 611, 619, 642, 752, 869, 875, 876, 914, 940

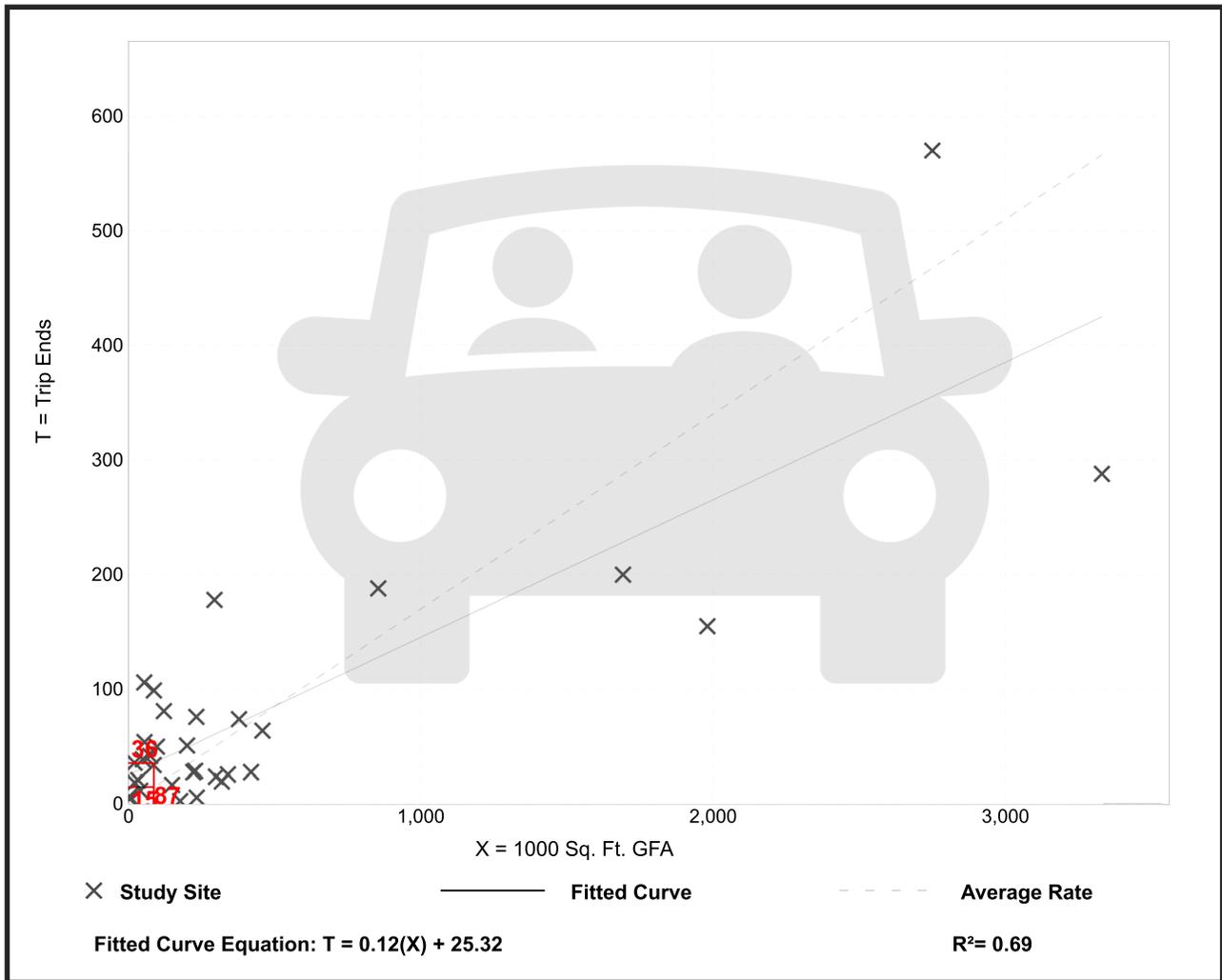
Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 34
 Avg. 1000 Sq. Ft. GFA: 451
 Directional Distribution: 77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.02 - 1.93	0.20

Data Plot and Equation



Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

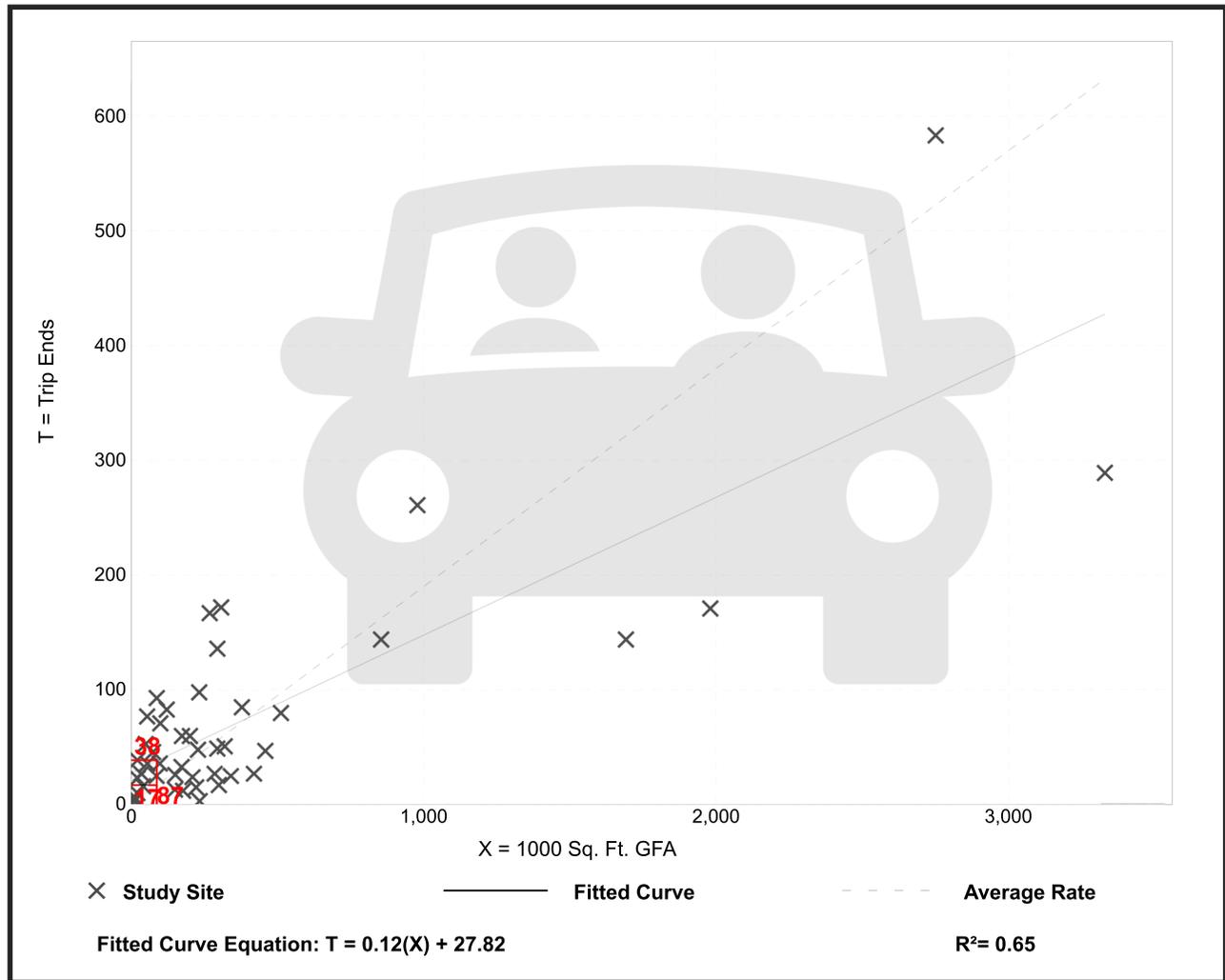
Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 47
 Avg. 1000 Sq. Ft. GFA: 400
 Directional Distribution: 27% entering, 73% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.19	0.01 - 1.80	0.18

Data Plot and Equation



Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

Warehousing (150)

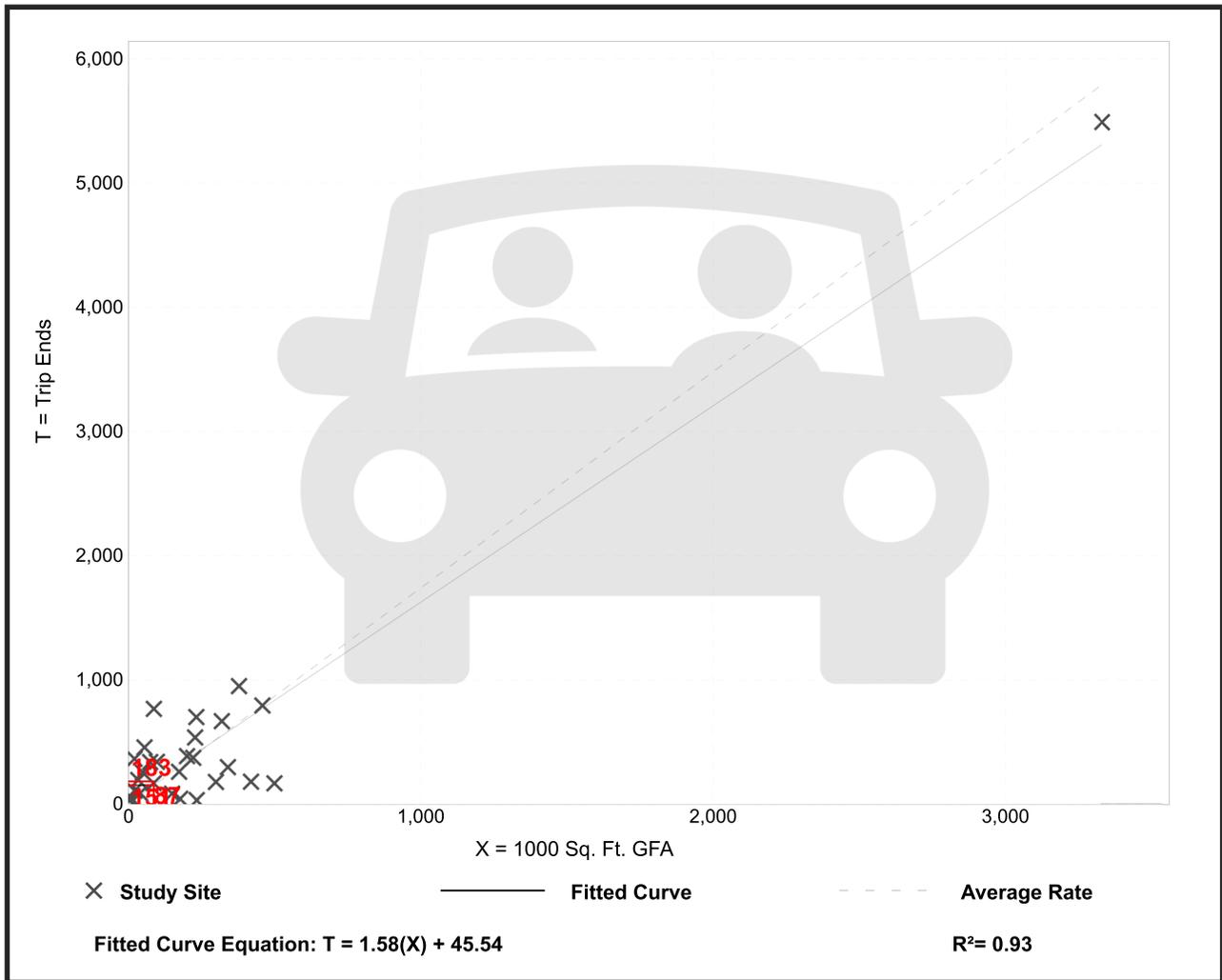
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 29
Avg. 1000 Sq. Ft. GFA: 285
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.74	0.15 - 16.93	1.55

Data Plot and Equation



Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

Land Use: 130

Industrial Park

Description

An industrial park contains a number of industrial or related facilities. It is characterized by a mix of manufacturing, service, and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities—some with a large number of small businesses and others with one or two dominant industries. General light industrial (Land Use 110) and manufacturing (Land Use 140) are related uses.

Additional Data

The sites were surveyed in the 1980s, the 2000s, and the 2010s in California, Georgia, New Jersey, New York, Ontario (CAN), and Pennsylvania.

Source Numbers

106, 162, 184, 251, 277, 422, 706, 747, 753, 937

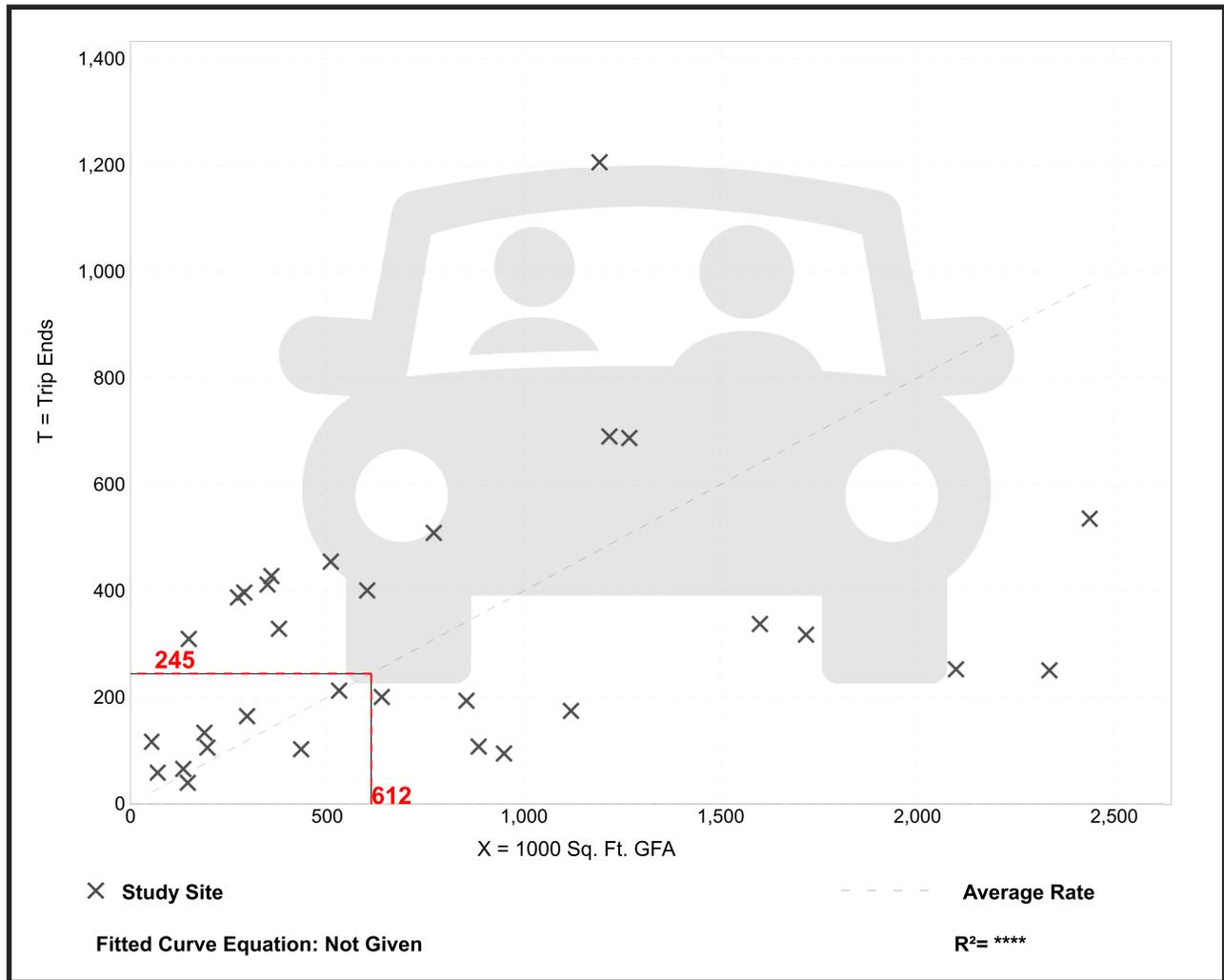
Industrial Park (130)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 31
 Avg. 1000 Sq. Ft. GFA: 776
 Directional Distribution: 81% entering, 19% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.40	0.10 - 2.13	0.37

Data Plot and Equation



Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

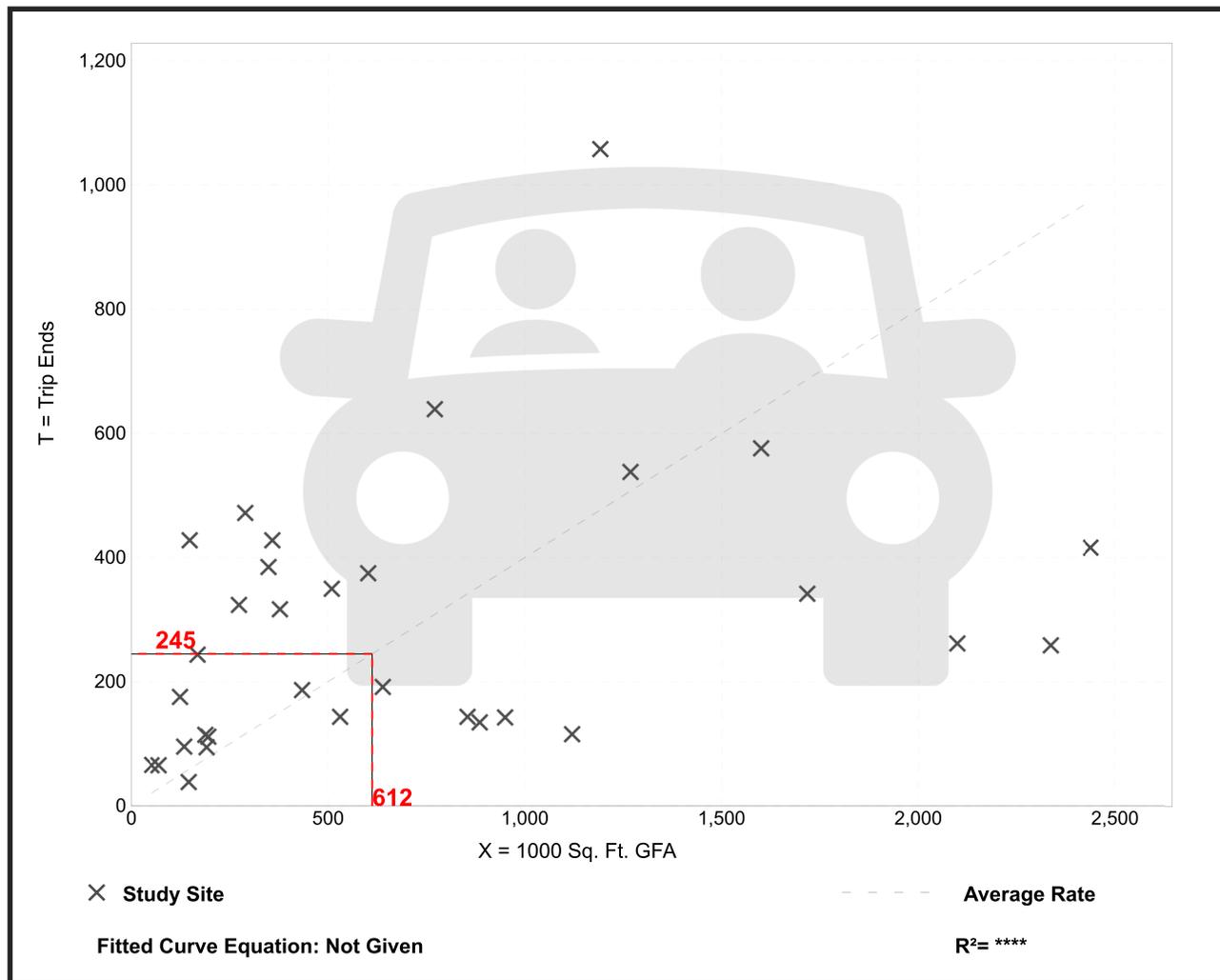
Industrial Park (130)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 32
 Avg. 1000 Sq. Ft. GFA: 720
 Directional Distribution: 21% entering, 79% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.40	0.10 - 2.85	0.41

Data Plot and Equation



Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

Industrial Park (130)

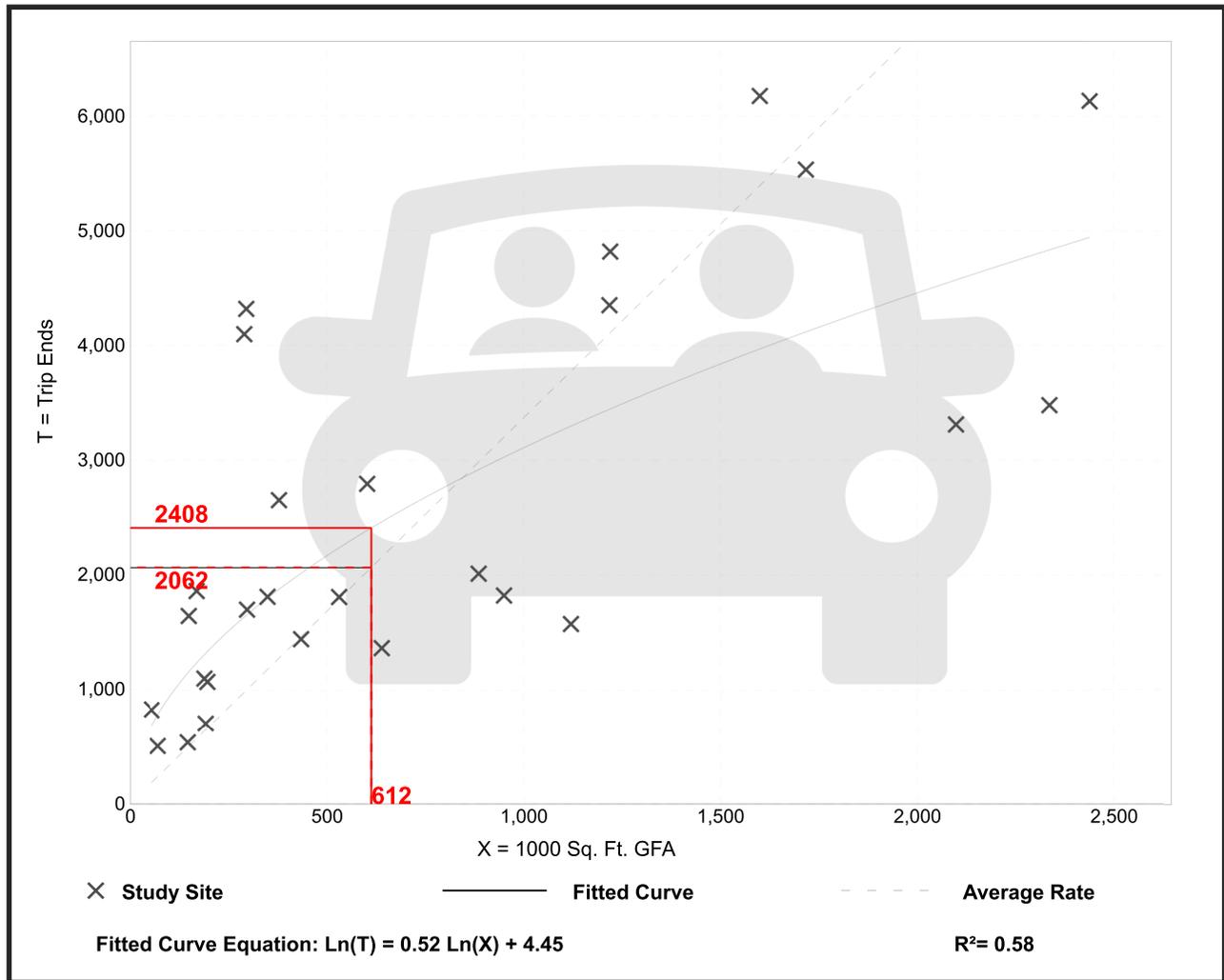
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 27
Avg. 1000 Sq. Ft. GFA: 762
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.37	1.41 - 14.98	2.60

Data Plot and Equation



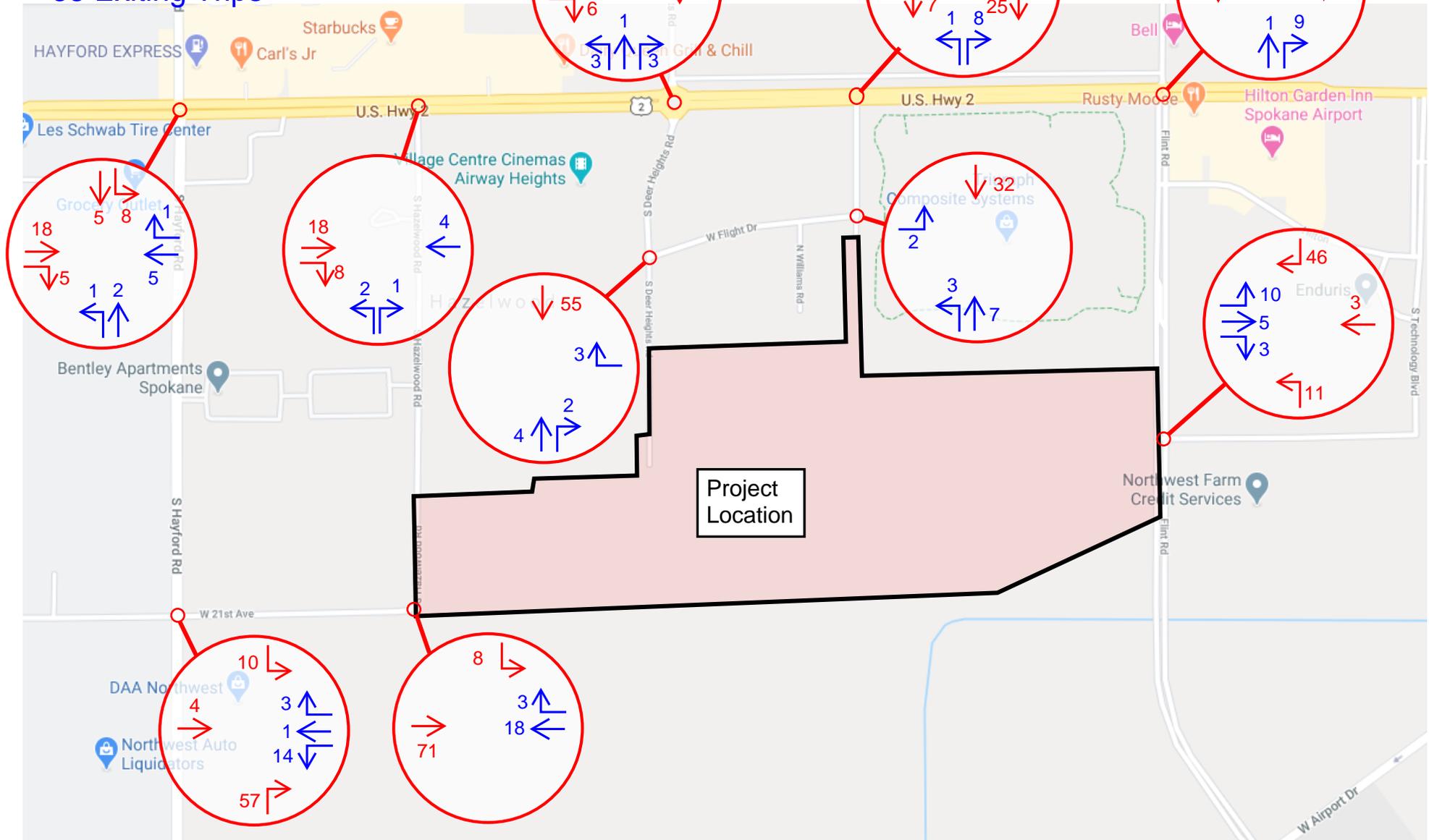
Trip Gen Manual, 10th Edition • Institute of Transportation Engineers

Appendix IV

AM Peak Hour

- 226 Entering Trips

- 55 Exiting Trips



Appendix V

