

Community Services Department

Planning and Building

SPECIAL USE PERMIT

(see page 5)

SPECIAL USE PERMIT FOR GRADING

(see page 11)

SPECIAL USE PERMIT FOR STABLES

(see page 16)

APPLICATION



Community Services Department
Planning and Building
1001 E. Ninth St., Bldg. A
Reno, NV 89520

Telephone: 775.328.6100

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

Project Information		Staff Assigned Case No.: _____	
Project Name: U- Haul of Spanish Springs			
Project Description: Three story interior access climate controlled self- storage building, parking canopies and mini- storage units exterior access buildings storage facility.			
Project Address: NWC Sha Neva Road & Pyramid Way, Sparks, NV			
Project Area (acres or square feet): +/-20,000 SF			
Project Location (with point of reference to major cross streets AND area locator): NWC Sha Neva Road & Pyramid Way			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
530-491-02	5.0	530-491-04	10.0
530-491-03	5.0		
Section(s)/Township/Range:			
Indicate any previous Washoe County approvals associated with this application: Case No.(s).			
Applicant Information (attach additional sheets if necessary)			
Property Owner: The Roger B Primm Family Trust		Professional Consultant:	
Name: Roger B Primm		Name: Nathan Robison PE,WRS	
Address: 5100 Franktown Rd. Washoe County, NV 89074		Address: 846 Victorian Avenue, Suite 20	
Washoe Valley, NV Zip: 89074		Sparks, NV Zip: 89431	
Phone: Fax:		Phone: 775-852-2251 Fax: 852-9736	
Email: rarmstrong@mcdonaldcarano.com		Email: nathan@robisoneng.com	
Cell: 775-326-4357 Other:		Cell: 775-240-7652 Other:	
Contact Person: Robert Armstrong		Contact Person: Nathan Robison	
Applicant/Developer:		Other Persons to be Contacted:	
Name: Lora Lakov- Planner /AMERCO Real Estate Co		Name:	
Address: 2727 N Central Ave. Ste. 500		Address:	
Phoenix, AZ Zip: 85004		Zip:	
Phone: 602- 263-6502 Fax: 277-5824		Phone: Fax:	
Email: lora_lakov@uhaul.com		Email:	
Cell: Other:		Cell: Other:	
Contact Person: Lora Lakov		Contact Person:	
For Office Use Only			
Date Received: Initial:		Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Property Owner Affidavit

Applicant Name: AMERCO Real Estate Company

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, Roger B. Primm
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true, and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Building.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 530-491-02, 530-491-03, 530-491-04

X Printed Name Roger B. Primm

X Signed [Signature]

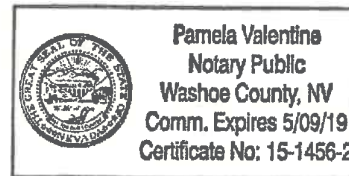
Address 5100 Franktown Rd. Washoe County, NV 88074

Subscribed and sworn to before me this 8th day of February, 2018.

[Signature]
Notary Public in and for said county and state

My commission expires: _____

(Notary Stamp)



*Owner refers to the following: (Please mark appropriate box.)

- Owner
- Corporate Officer/Partner (Provide copy of record document indicating authority to sign.)
- Power of Attorney (Provide copy of Power of Attorney.)
- Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- Property Agent (Provide copy of record document indicating authority to sign.)
- Letter from Government Agency with Stewardship

Special Use Permit Application Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to special use permits may be found in Article 810, Special Use Permits.

1. What is the type of project being requested?

AMERCO Real Estate Company / U-Haul International is proposing to build a state of the art Commercial / Retail Moving and Self-Storage Center that will require a Special Use Permit for our equipment rental use. All other planned uses are permitted by right. The proposed facility shall be developed into (2) phases. Phase I includes the disturbance of 15 acres land and construction of the following: Building A is a 3 story structure with a 32,648SF footprint and a total of 85,224 SF gross building area. This building combines our retail spaces, interior access climate controlled self-storage and the storage / warehouse area for our U-Boxes (portable storage container). Each of our U-Boxes are 5'x8'x8 in size and are not used as cargo containers for vehicles. Building(s) B through O are (232) mini-storage units with exterior drive-up access. Structures P through U are the vehicle and boat storage / parking canopies which are within an access controlled secured fenced area.

The main vehicular proposed access is from Digital Court. Upon entering the site there are a series of directional signs that communicate to our customers where to park, where to return rental equipment, etc. The parking lanes note "Equipment Staging" is where our equipment rental vehicles and trailers are located. All other parking spaces are for customers, display and employees.

U-Haul offers a series moving services that include supplies, packing and loading and many sizes and types of vehicle and trailer rental moving equipment. The inventory for each center will always be different and changing based upon customer demand. Currently, the area for rental equipment can stage a maximum of 60 vehicles that can include pickups, vans and box trucks and 40 trailers that can include open and box types.

Phase II land area shall be used to expand the self-storage and vehicle parking uses. There is no plan to expand the equipment rental use that requires a SUP. This shall remain "as-is" until expansion is warranted.

2. What currently developed portions of the property or existing structures are going to be used with this permit?

N/A

3. What improvements (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.) will have to be constructed or installed and what is the projected time frame for the completion of each?

Entry drive, extension of water, sewer and electric and of outside stormwater system.
Completions will be February 2019.

4. What is the intended phasing schedule for the construction and completion of the project?

The proposed development is part of Phase I of the site development.
Phase II development plan to be determined, by December 2018.

5. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

The site plan has slight sloped topography. We do not anticipate enormous seismic movements in the area.

6. What are the anticipated beneficial aspects or effects your project will have on adjacent properties and the community?

The proposed development is located in proximity to intersection of Hwy 445 (Pyramid Lake Rd) in the Spanish Springs area in Sparks, NV. The immediately surrounding properties consist of the following uses. The east side the property abuts Hwy 445. North of the property is vacant land. South of the property is Leviton Manufacturing Co. East of the property there is vacant land and residential use.

The request will allow for the development of a quality, indoor storage and moving facility, and will provide for the moving needs of the surrounding community. The proposed development will encourage new development in the area along Hwy 445. It will provide for storage and moving services that will be consistent with the needs of the surrounding neighborhood. By nature, self-storage is a low traffic generating use. The site design will provide a quality redevelopment with attractive landscaping. In addition, AMERCO/U-Haul financial model will improve the City's economic development goals by offering a valuable service to the community, creating jobs, and increasing tax revenues.

7. What will you do to minimize the anticipated negative impacts or effect your project will have on adjacent properties?

The proposal shall not cause a material reduction in the value of existing abutting properties or approved developments.

Safety is of the utmost importance to AMERCO/U-Haul and the proposed project will not be detrimental to or endanger the public health or general welfare of the community. AMERCO/U-Haul achieves safety by providing customers a swipe identification card which must be used to gain access into each facility and storage unit. Other security measures include individually alarmed storage rooms with customer lock and electronically controlled access areas provided for after hour business. Strategically installed video surveillance cameras and DVR equipment are also provided for twenty-four-hour site and building monitoring.

Our proposed development shall not have hours of operation, lighting, odor, noise levels or site activity that would significantly diminish the enjoyment of, safety or quality of life in existing neighborhoods. The Goal is to protect the public health and welfare and enhance the quality of life by reducing noise and by preventing new land use/noise conflicts.

8. Please describe operational parameters and/or voluntary conditions of approval to be imposed on the project special use permit to address community impacts:

No exterior loud speaker for the purpose of paging.
Lighting will be shielded.
Landscape will be mechanically irrigated and maintained.

9. How many improved parking spaces, both on-site and off-site, are available or will be provided? (Please indicate on site plan.)

The parking design is per off- street parking requirements Article 410 of the Development Code. The proposed parking is 12 parking spaces , including two (2) ADA parking spaces. In addition on the north side of the property we are proposing nineteen (19) display parking spaces, for our truck and trailer rental vehicles. A separate shunting area is provided for temporary staging of rental equipment.

10. What types of landscaping (e.g. shrubs, trees, fencing, painting scheme, etc.) are proposed? (Please indicate location on site plan.)

The landscape design is per landscape requirements Article 412 of the Development Code. Buffering, screens and setbacks are per Appendix B- Business Park Design Standards for Spanish Springs Area Plan.
Refer to site plan for location of shrubs and trees.

11. What type of signs and lighting will be provided? On a separate sheet, show a depiction (height, width, construction materials, colors, illumination methods, lighting intensity, base landscaping, etc.) of each sign and the typical lighting standards. (Please indicate location of signs and lights on site plan.)

Sign submittal will be a differed submittal.
Lighting design is per Appendix B- Business Park Design Standards for Spanish Springs Area Plan.
See attached photometric plan and site plan for location of lighting.

12. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that apply to the area subject to the special use permit request? (If so, please attach a copy.)

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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13. Utilities:

a. Sewer Service	Washoe County Community Services
b. Electrical Service	Nevada Energy
c. Telephone Service	ATT
d. LPG or Natural Gas Service	
e. Solid Waste Disposal Service	Sparks Sanitation
f. Cable Television Service	TBD
g. Water Service	Truckee Meadows Water Authority

For most uses, the Washoe County Code, Chapter 110, Article 422, Water and Sewer Resource Requirements, requires the dedication of water rights to Washoe County. Please indicate the type and quantity of water rights you have available should dedication be required:

h. Permit #		acre-feet per year	
i. Certificate #		acre-feet per year	
j. Surface Claim #		acre-feet per year	
k. Other #		acre-feet per year	

l. Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources):

14. Community Services (provided and nearest facility):

a. Fire Station	
b. Health Care Facility	
c. Elementary School	
d. Middle School	
e. High School	
f. Parks	
g. Library	
h. Citifare Bus Stop	

Special Use Permit Application for Grading Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to special use permits may be found in Article 810, Special Use Permits. Article 438, Grading, and Article 418, Significant Hydrologic Resources, are the ordinances specifically involved in this request.

1. What is the purpose of the grading?

The site shall be graded to accommodate for the proposed U-Haul development and provide adequate drainage away from the proposed infrastructure.

2. How many cubic yards of material are you proposing to excavate on site?

A total of 13,000 CY of material shall be excavated onsite for development, including excavation for buildings and pavement

3. How many square feet of surface of the property are you disturbing?

689,110 SF total disturbed area: 509,910sf shall be pavement and buildings (refer to C1 for earthwork calculations)

4. How many cubic yards of material are you exporting or importing? If none, how are you managing to balance the work on-site?

300 CY of material will be exported. Refer to C1 for earthwork calculations

5. Is it possible to develop your property without surpassing the grading thresholds requiring a Special Use Permit? (Explain fully your answer.)

The grading plan has been designed to minimize the limits of disturbance. As stated in #2, 13,000CY total of material will be excavated onsite. Approximately 16 acres will be disturbed during construction. At project completion, approximately 13.15 acres will consist of buildings, pavement, required landscaped perimeter, and a landscaped berm. Approximately 2.85acres/4,452 CY will consist of pervious, re-vegetated land and a retention pond. Refer to C1 for earthwork calculations.

6. Has any portion of the grading shown on the plan been done previously? (If yes, explain the circumstances, the year the work was done, and who completed the work.)

No

7. Have you shown all areas on your site plan that are proposed to be disturbed by grading? (If no, explain fully your answer.)

Yes

8. Can the disturbed area be seen from off-site? If yes, from which directions, and which properties or roadways?

Yes, the disturbed area is visible from Sha Neva Road located southwest of the site, from the adjacent properties north and northwest of the site as well as from Pyramid Lake Road east of the site. At completion of the project, a landscaped perimeter will be provided to mitigate visual impact.

9. Could neighboring properties also be served by the proposed access/grading requested (i.e. if you are creating a driveway, would it be used for access to additional neighboring properties)?

The development is located at the end of Digital Court and is served by an existing cul-de-sac. The neighboring properties are also served by the existing cul-de-sac and will not benefit from the grading for the development.

10. What is the slope (Horizontal/Vertical) of the cut and fill areas proposed to be? What methods will be used to prevent erosion until the revegetation is established?

3:1 maximum slopes are proposed throughout the site. Best Management Practices (BMP's) in accordance with the Truckee Meadows Handbook and the Washoe County Stormwater Protection Ordinances and Standards shall be implemented throughout the site. BMP's will include but are not limited to silt fence, fiber rolls, inlet protection, rip-rap and re-vegetation.

11. Are you planning any berms?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes, how tall is the berm at its highest? 3'
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12. If your property slopes and you are leveling a pad for a building, are retaining walls going to be required? If so, how high will the walls be and what is their construction (i.e. rockery, concrete, timber, manufactured block)?

A concrete retaining wall is required the for proposed truckwell attached to the building; however, no other retaining walls are necessary to create a level pad area. The truck-well wall will be designed as part of the structural building plans.

13. What are you proposing for visual mitigation of the work?

A landscaped perimeter is proposed for visual mitigation. Along Pyramid Lake Road, a 3' tall landscaped berm is proposed.

14. Will the grading proposed require removal of any trees? If so, what species, how many and of what size?

No trees are required to be removed as part of the proposed development.

15. What type of revegetation seed mix are you planning to use and how many pounds per acre do you intend to broadcast? Will you use mulch and, if so, what type?

Botanical Name	Common Name	PLS (lbs/acre)
Firesafe Seeds:		
Agropyron Sibericum	Siberian Wheatgrass "P-27"	4.00
Elymus Elymoides	Squirrel Tail	4.00
Elymus lanceolatus	Streambank Wheatgrass "Sodar"	4.00
Kochia Prostrata	Prostrate Summer Cypress	0.25
Leymus Cinereus	Great Basin Wildrye	2.50
Penstemon Palmeri	Palmer Penstemon	1.00
	Annual Ryegrass	6.25
		Total: 22.25

16. How are you providing temporary irrigation to the disturbed area?

Watering trucks will be used for temporary irrigation during construction.

17. Have you reviewed the revegetation plan with the Washoe Storey Conservation District? If yes, have you incorporated their suggestions?

The revegetation plan has not been reviewed with Washoe Storey Conservation District. The proposed plan of development consists primarily of installing asphalt as a permanent erosion control measure.

18. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that may prohibit the requested grading?

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, please attach a copy.
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Washoe County Treasurer
Tammi Davis

Washoe County Treasurer
P.O. Box 30039, Reno, NV 89520-3039
ph (775) 328-2510 fax: (775) 328-2500
Email tax@washoecounty.us

Bill Detail

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Washoe County Parcel Information

Parcel ID	Status	Last Update
53049102	Active	2/6/2018 2:06:50 AM
Current Owner: PRIMM FAMILY TRUST, ROGER B 5100 FRANKTOWN RD WASHOE VALLEY, NV 89704		SITUS: 0 DIGITAL CT WCTY NV
Taxing District		Geo CD:
Legal Description		
Lot 3 SubdivisionName _UNSPECIFIED Township 21 Range 20		

Installments

Period	Due Date	Tax Year	Tax	Penalty/Fee	Interest	Total Due
INST 1	8/21/2017	2017	\$0.00	\$0.00	\$0.00	\$0.00
INST 2	10/2/2017	2017	\$0.00	\$0.00	\$0.00	\$0.00
INST 3	1/1/2018	2017	\$0.00	\$0.00	\$0.00	\$0.00
INST 4	3/5/2018	2017	\$0.00	\$0.00	\$0.00	\$0.00
Total Due:			\$0.00	\$0.00	\$0.00	\$0.00

Tax Detail

	Gross Tax	Credit	Net Tax
State of Nevada	\$181.76	\$0.00	\$181.76
Truckee Meadows Fire Dist	\$577.35	\$0.00	\$577.35
Washoe County	\$1,487.95	\$0.00	\$1,487.95
Washoe County Sc	\$1,217.24	\$0.00	\$1,217.24
SPANISH SPRINGS WATER BASIN	\$0.30	\$0.00	\$0.30
Total Tax	\$3,464.60	\$0.00	\$3,464.60

Payment History

Tax Year	Bill Number	Receipt Number	Amount Paid	Last Paid
2017	2017131114	B17.188028	\$866.07	12/29/2017
2017	2017131114	B17.188067	\$866.07	12/29/2017
2017	2017131114	B17.43159	\$866.38	8/11/2017
2017	2017131114	B17.95583	\$866.08	9/20/2017

Pay By Check

Please make checks payable to:
WASHOE COUNTY TREASURER

Mailing Address:
P.O. Box 30039
Reno, NV 89520-3039

Overnight Address:
1001 E. Ninth St., Ste D140
Reno, NV 89512-2845

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Treasurer
P O Box 30039
Reno, NV 89520-3039

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Tammi Davis

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53049103	Active	2/6/2018 2:06:50 AM
Current Owner: PRIMM FAMILY TRUST, ROGER B 5100 FRANKTOWN RD WASHOE VALLEY, NV 89704		SITUS: 0 DIGITAL CT WCTY NV
Taxing District	Geo CD:	
Legal Description		
SubdivisionName _UNSPECIFIED Lot 2 Township 21 Range 20		

Installments

Period	Due Date	Tax Year	Tax	Penalty/Fee	Interest	Total Due
INST 1	8/21/2017	2017	\$0.00	\$0.00	\$0.00	\$0.00
INST 2	10/2/2017	2017	\$0.00	\$0.00	\$0.00	\$0.00
INST 3	1/1/2018	2017	\$0.00	\$0.00	\$0.00	\$0.00
INST 4	3/5/2018	2017	\$0.00	\$0.00	\$0.00	\$0.00
Total Due:			\$0.00	\$0.00	\$0.00	\$0.00

Tax Detail

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State of Nevada	\$181.76	\$0.00	\$181.76
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Washoe County	\$1,487.95	\$0.00	\$1,487.95
Washoe County Sc	\$1,217.24	\$0.00	\$1,217.24
SPANISH SPRINGS WATER BASIN	\$0.30	\$0.00	\$0.30
Total Tax	\$3,464.60	\$0.00	\$3,464.60

Payment History

Tax Year	Bill Number	Receipt Number	Amount Paid	Last Paid
2017	2017131372	B17.188030	\$866.07	12/29/2017
2017	2017131372	B17.188063	\$866.07	12/29/2017
2017	2017131372	B17.43156	\$866.38	8/11/2017
2017	2017131372	B17.95586	\$866.08	9/20/2017

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Taxing District		Geo CD:
Legal Description		
SubdivisionName _UNSPECIFIED Lot 1 Township 21 Range 20		

Installments

Period	Due Date	Tax Year	Tax	Penalty/Fee	Interest	Total Due
INST 1	8/21/2017	2017	\$0.00	\$0.00	\$0.00	\$0.00
INST 2	10/2/2017	2017	\$0.00	\$0.00	\$0.00	\$0.00
INST 3	1/1/2018	2017	\$0.00	\$0.00	\$0.00	\$0.00
INST 4	3/5/2018	2017	\$0.00	\$0.00	\$0.00	\$0.00
Total Due:			\$0.00	\$0.00	\$0.00	\$0.00

Tax Detail

	Gross Tax	Credit	Net Tax
State of Nevada	\$337.27	\$0.00	\$337.27
Truckee Meadows Fire Dist	\$1,071.32	\$0.00	\$1,071.32
Washoe County	\$2,761.04	\$0.00	\$2,761.04
Washoe County Sc	\$2,258.69	\$0.00	\$2,258.69
SPANISH SPRINGS WATER BASIN	\$0.30	\$0.00	\$0.30
Total Tax	\$6,428.62	\$0.00	\$6,428.62

Payment History

Tax Year	Bill Number	Receipt Number	Amount Paid	Last Paid
2017	2017131293	B17.188026	\$1,607.08	12/29/2017
2017	2017131293	B17.188064	\$1,607.08	12/29/2017
2017	2017131293	B17.43157	\$1,607.38	8/11/2017
2017	2017131293	B17.95580	\$1,607.08	9/20/2017

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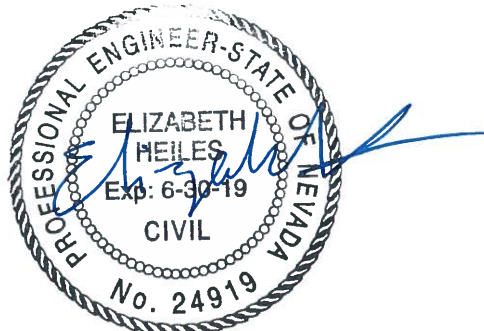
This site is best viewed using Google Chrome, Internet Explorer 11, Mozilla Firefox or Safari.

U-HAUL OF SPANISH SPRINGS DRAINAGE REPORT

February 2018

Prepared for:

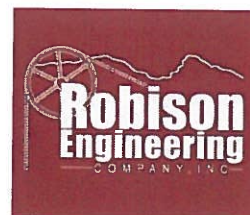
AMERCO Real Estate Co.
2727 N Central Ave.
Suite #500
Phoenix, AZ 85004



2018-02-14

Prepared by:

Robison Engineering Company, Inc
846 Victorian Avenue, Suite 20
Sparks, NV US



Robison Engineering Company, Inc
846 Victorian Avenue, Suite 20
Sparks, NV US

www.robisoneng.com



PROJECT DESCRIPTION

This report addresses the existing and proposed drainage conditions for the proposed U-Haul development located at the intersection of Sha Neva Road and Pyramid Way, Sparks, NV. The development consists of grading, building placement, utility installation, paving, and landscaping. The project site is identified as Assessor's Parcel Numbers 530-491-02, 03, 04.

Per the FEMA Flood Insurance Rate Map panel 32031C2865G, the site is not in a designated flood area and is labeled as Unshaded Zone X. The definition of this zone is stated in the FEMA flood map as "areas determined to be outside the 0.2% annual chance floodplain." Based on this information, it can be determined that the site has a very low risk of flooding.

The site is located in the Western Mountains and High Plains region whose rainfall averages 10 inches per year. The rainfall intensity is determined by National Oceanic and Atmospheric Administration (NOAA).

EXISTING CONDITIONS

The site is currently vacant and undeveloped. The property, is well vegetated and consists of native soils and plants. The site is relatively flat and naturally sheet flows to the northwest. The total area of the property is 20 acres.

FUTURE CONDITIONS

The newly developed site will maintain the existing drainage pattern to the northwest. The development will consist of a three-story interior access climate controlled self-storage building, parking canopies, mini-storage units exterior, paving, grading and utility installation.

The site will drain via sheet flow to proposed storm drains and a newly constructed infiltration/detention basin located at the northwest corner of the property. The proposed pond was designed to detain the 5-year 24hour storm event as well as the 100-year 24-hour storm event in accordance with the Washoe County Development Standards. TR-55 methodology was used to analyze the existing and proposed conditions.

CONCLUSION

The development of the proposed site will not negatively impact the surrounding areas or existing drainage facilities. The development conforms to all engineering practices to protect any existing and future facilities.

Robison Engineering Company, Inc
846 Victorian Avenue, Suite 20
Sparks, NV US

www.robisoneng.com



Appendix A

- FEMA Flood Insurance Rate Map
- NOAA Precipitation Data
- USDA Soil Survey Data
- Existing Conditions Plan
- Proposed Conditions Plan
- Hydrology Calculations

NOTES TO USERS

is for use in administering the National Flood Insurance Program. It is necessary to identify all areas subject to flooding, particularly from local sources of small size. The community map repository should be updated for possible updated or additional flood hazard information.

In more detailed information in areas where **Base Flood Elevations** and/or **Foodways** have been determined, users are encouraged to consult the Profiles and Foodway Data and/or Summary of Stillwater Elevations obtained within the Flood Insurance Study (FIS) report that accompanies this map. Users should be aware that BFEs shown on the FIRM represent whole-foot elevations. These BFEs are intended for flood insurance purposes only and should not be used as the sole source of flood information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of flood and/or floodplain management.

Base Flood Elevations shown on this map apply only landward of the American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Elevations tables in the Flood Insurance Study report for this jurisdiction, shown in the Summary of Stillwater Elevations tables should be used for flood and/or floodplain management purposes when they are higher than elevations shown on this FIRM.

Foodways were computed at cross sections and interpolated across sections. The foodways were based on hydraulic considerations related to requirements of the National Flood Insurance Program. Floodway and other pertinent foodway data are provided in the Flood Insurance Study report for this jurisdiction.

Areas not in Special Flood Hazard Areas may be protected by flood structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The information used in the preparation of this map was State Plane Nevada West Zone 12, NAD 83. The horizontal datum used is NAD 83. Differences in datum, projection or State Plane zones used in the production of FIRM maps from other jurisdictions may result in slight positional differences in map features and boundary lines. These differences do not affect the accuracy of this map.

Elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding differences between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the address below.

Information Services
 NG512
 Geodetic Survey
 #9202
 1617 West Highway
 Fort Belknap, Maryland 20910-3282
 301-3242

For current elevation, description, and/or location information for a **benchmark** shown on this map, please contact the Information Services Branch at the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Map road centerline information shown on this FIRM was provided by the County GIS Program. This data, dated 2005 or later, was provided in map scale of 1:1,200 in urban areas and 1:2,400 in rural areas.

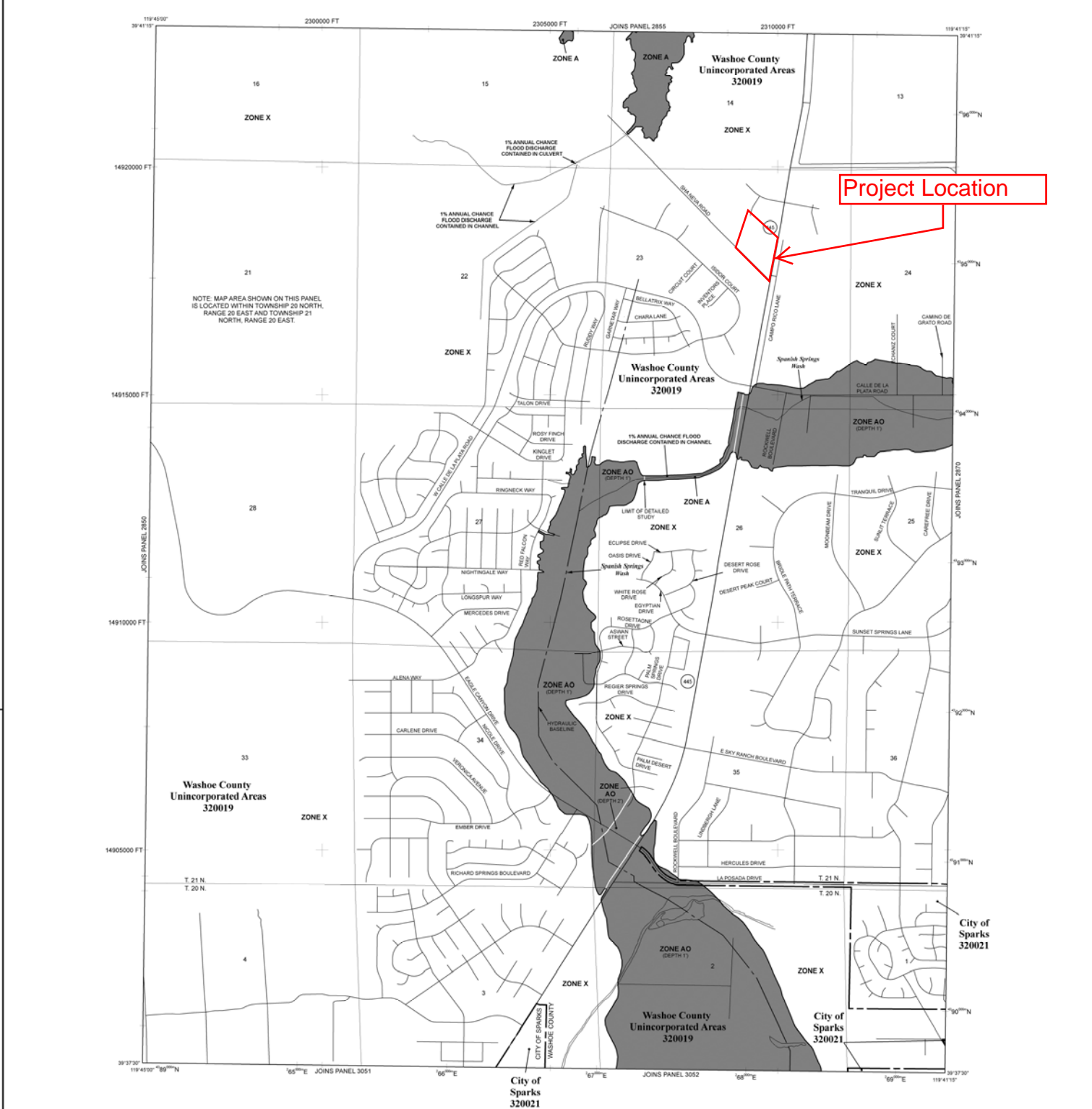
This map reflects more detailed and up-to-date stream channel configurations shown on the previous FIRM for this jurisdiction. The floodplains and areas that were transferred from the previous FIRM may have been adjusted to these new stream channel configurations. As a result, the Flood and Foodway Data tables in the Flood Insurance Study Report (which contain authoritative hydraulic data) may reflect stream channel distances that are different from those shown on this map.

The **limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may occur after this map was published, map users should contact appropriate officials to verify current corporate limit locations.

Refer to the separately printed **Map Index** for an overview map of the entire county showing the layout of map panels, community map repository addresses, and listing of Communities table containing National Flood Insurance Program information for each community as well as a listing of the panels on which each community is located.

For the **FEMA Map Service Center** at 1-800-358-9616 for information on products associated with this FIRM. Available products may include printed Letters of Map Change, a Flood Insurance Study report, and/or other products of this map. The FEMA Map Service Center may also be reached at 1-800-358-9620 and its website at <http://msc.fema.gov>.

For questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2527) or FEMA website at <http://www.fema.gov>.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Areas subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard Zones A, AE, AO, AH, AV, V, and VE. The Base Flood Elevation is the water elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); depths determined. For areas of shallow fan flooding, velocities determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual flood by a flood control system that was subsequently abandoned. Indicates that the former flood control system is being restored to protect from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal protection system under construction; no Base Flood determined.

ZONE V Coastal Flood zone with velocity hazard (wave action); no Base Flood determined.

ZONE VE Coastal Flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be included to ensure that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

BOUNDARIES

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area zone
- Boundary dividing Special Flood Hazard Areas of different Flood Elevations, flood depths or flood velocities.

BASE FLOOD ELEVATION LINE AND VALUE; ELEVATION IN FEET

Base Flood Elevation value where uniform within zone, or in feet

513 (E1 987)

Reference to the North American Vertical Datum of 1988

Cross section line

Transect line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

1000-meter Transverse Mercator grid values, in feet

11

600000 FT

West zone (FIPSZONE 2703), Transverse Mercator projection

DK5510 x

M1.5

MAP REPOSITORY

Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

September 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

March 18, 2009 - To update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previous Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the County Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6625.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

300 0 300 600 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 2865G

FIRM

FLOOD INSURANCE RATE

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 2865 OF 3475
 (SEE MAP INDEX FOR FIRM PANEL LISTING)

CONTAINS

COMMUNITY	NUMBER	PANEL
SPARKS, CITY OF	320021	2865
WASHOE COUNTY	320019	2865

Notice to User: The Map Number shown above should be used when placing map orders. The Community Number shown above should be used on insurance applications and other documents.

MAP NUMBER
 32031C

MAP REVISION
 MARCH 18, 2009

Federal Emergency Management Agency



NOAA Atlas 14, Volume 1, Version 5
Location name: Sparks, Nevada, USA*
Latitude: 39.6743°, Longitude: -119.7027°
Elevation: 4542.61 ft**



* source: ESRI Maps
 ** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

PF tabular

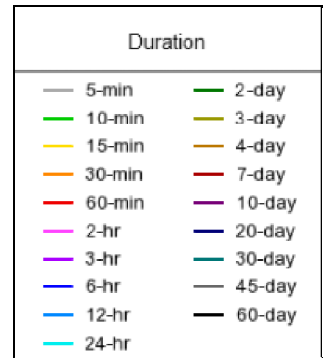
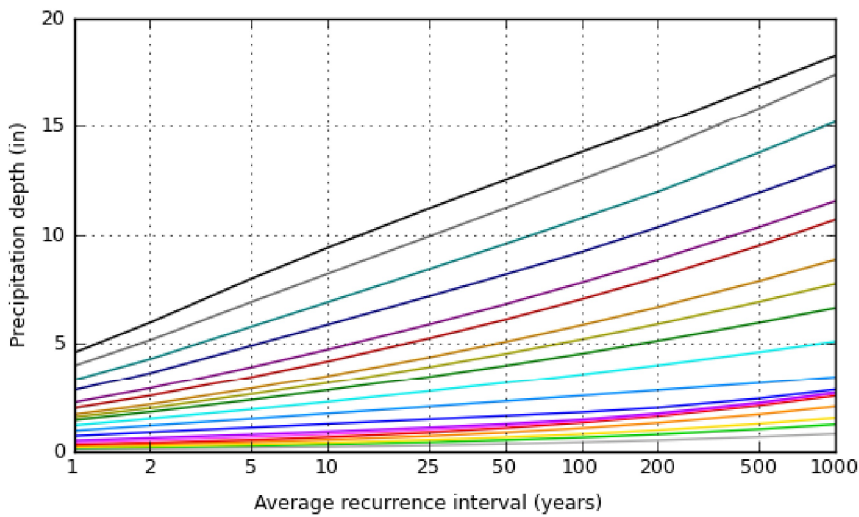
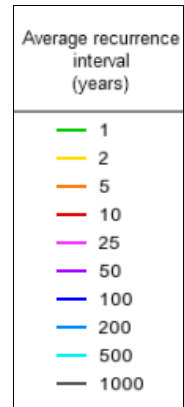
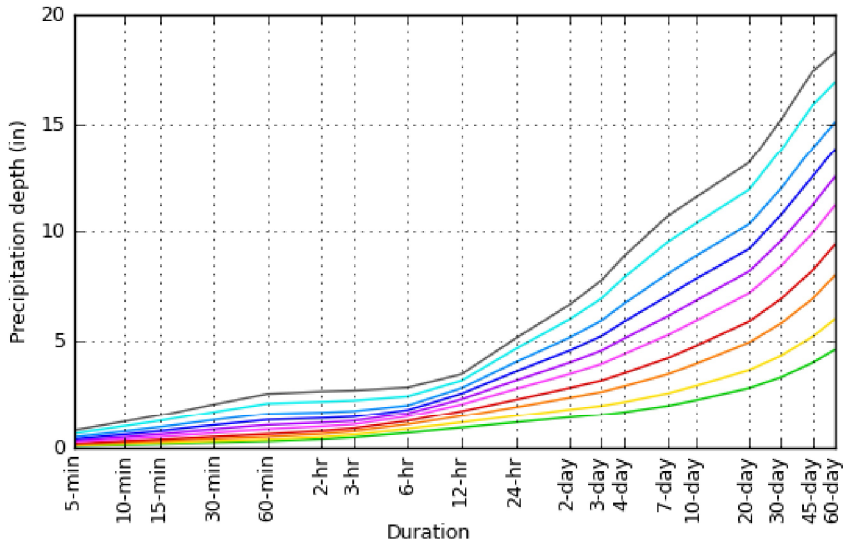
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.100 (0.084-0.115)	0.125 (0.104-0.146)	0.167 (0.141-0.197)	0.208 (0.175-0.248)	0.277 (0.227-0.334)	0.341 (0.273-0.418)	0.419 (0.325-0.521)	0.514 (0.384-0.654)	0.670 (0.473-0.882)	0.814 (0.551-1.10)
10-min	0.152 (0.127-0.175)	0.190 (0.158-0.222)	0.254 (0.214-0.300)	0.316 (0.266-0.376)	0.421 (0.346-0.509)	0.519 (0.415-0.636)	0.638 (0.495-0.794)	0.782 (0.584-0.996)	1.02 (0.720-1.34)	1.24 (0.838-1.67)
15-min	0.189 (0.158-0.218)	0.235 (0.196-0.274)	0.315 (0.265-0.372)	0.392 (0.330-0.467)	0.522 (0.429-0.631)	0.644 (0.515-0.789)	0.790 (0.614-0.984)	0.970 (0.724-1.24)	1.26 (0.893-1.67)	1.54 (1.04-2.07)
30-min	0.254 (0.213-0.293)	0.317 (0.264-0.369)	0.424 (0.357-0.502)	0.528 (0.444-0.628)	0.703 (0.578-0.849)	0.867 (0.693-1.06)	1.06 (0.826-1.33)	1.31 (0.975-1.66)	1.70 (1.20-2.24)	2.07 (1.40-2.79)
60-min	0.315 (0.263-0.362)	0.392 (0.327-0.457)	0.525 (0.442-0.621)	0.654 (0.550-0.778)	0.870 (0.715-1.05)	1.07 (0.858-1.32)	1.32 (1.02-1.64)	1.62 (1.21-2.06)	2.11 (1.49-2.78)	2.56 (1.73-3.46)
2-hr	0.414 (0.364-0.480)	0.515 (0.454-0.598)	0.663 (0.579-0.772)	0.795 (0.684-0.922)	0.997 (0.836-1.17)	1.18 (0.967-1.39)	1.40 (1.12-1.67)	1.68 (1.30-2.08)	2.19 (1.62-2.80)	2.67 (1.91-3.49)
3-hr	0.499 (0.443-0.569)	0.620 (0.556-0.711)	0.779 (0.692-0.891)	0.910 (0.801-1.04)	1.10 (0.950-1.26)	1.26 (1.07-1.47)	1.46 (1.22-1.72)	1.75 (1.43-2.09)	2.24 (1.78-2.83)	2.71 (2.09-3.53)
6-hr	0.708 (0.633-0.801)	0.885 (0.790-1.00)	1.10 (0.974-1.25)	1.26 (1.11-1.43)	1.48 (1.29-1.69)	1.64 (1.41-1.88)	1.80 (1.53-2.10)	2.02 (1.69-2.37)	2.43 (2.00-2.91)	2.85 (2.30-3.56)
12-hr	0.946 (0.844-1.06)	1.19 (1.06-1.34)	1.50 (1.33-1.69)	1.74 (1.54-1.97)	2.07 (1.81-2.35)	2.31 (2.00-2.65)	2.57 (2.19-2.97)	2.82 (2.37-3.31)	3.16 (2.59-3.78)	3.47 (2.78-4.20)
24-hr	1.19 (1.06-1.34)	1.50 (1.35-1.69)	1.93 (1.72-2.17)	2.28 (2.03-2.57)	2.77 (2.44-3.13)	3.17 (2.76-3.59)	3.58 (3.09-4.09)	4.01 (3.42-4.61)	4.62 (3.86-5.36)	5.10 (4.19-5.99)
2-day	1.43 (1.27-1.63)	1.82 (1.61-2.07)	2.38 (2.09-2.70)	2.82 (2.48-3.22)	3.47 (3.01-3.97)	3.99 (3.43-4.59)	4.55 (3.86-5.27)	5.14 (4.30-6.01)	5.97 (4.89-7.09)	6.65 (5.34-8.01)
3-day	1.56 (1.38-1.78)	1.99 (1.76-2.27)	2.64 (2.32-3.01)	3.16 (2.77-3.61)	3.92 (3.39-4.50)	4.54 (3.88-5.23)	5.20 (4.39-6.05)	5.91 (4.92-6.93)	6.93 (5.62-8.25)	7.76 (6.18-9.36)
4-day	1.70 (1.50-1.93)	2.17 (1.92-2.48)	2.90 (2.55-3.31)	3.50 (3.06-4.01)	4.37 (3.78-5.02)	5.08 (4.34-5.87)	5.86 (4.93-6.82)	6.69 (5.53-7.85)	7.88 (6.36-9.40)	8.86 (7.02-10.7)
7-day	2.00 (1.75-2.31)	2.57 (2.24-2.96)	3.46 (3.00-3.99)	4.19 (3.62-4.85)	5.25 (4.48-6.10)	6.11 (5.15-7.15)	7.05 (5.86-8.32)	8.05 (6.60-9.60)	9.50 (7.60-11.5)	10.7 (8.40-13.1)
10-day	2.26 (1.97-2.60)	2.91 (2.54-3.36)	3.92 (3.41-4.53)	4.74 (4.10-5.48)	5.89 (5.03-6.85)	6.82 (5.77-7.98)	7.81 (6.52-9.21)	8.86 (7.29-10.6)	10.3 (8.33-12.5)	11.5 (9.15-14.1)
20-day	2.82 (2.47-3.25)	3.65 (3.19-4.20)	4.91 (4.28-5.66)	5.88 (5.11-6.77)	7.18 (6.19-8.28)	8.18 (7.00-9.48)	9.21 (7.79-10.8)	10.3 (8.64-12.2)	11.9 (9.76-14.3)	13.2 (10.6-16.0)
30-day	3.32 (2.90-3.84)	4.30 (3.76-4.97)	5.79 (5.04-6.68)	6.91 (6.00-7.97)	8.42 (7.25-9.72)	9.57 (8.19-11.1)	10.8 (9.12-12.6)	12.0 (10.0-14.1)	13.8 (11.4-16.4)	15.2 (12.4-18.3)
45-day	3.99 (3.48-4.54)	5.17 (4.51-5.88)	6.92 (6.02-7.86)	8.22 (7.13-9.34)	9.92 (8.56-11.3)	11.2 (9.62-12.8)	12.5 (10.6-14.4)	13.9 (11.7-16.1)	15.8 (13.1-18.6)	17.4 (14.2-20.6)
60-day	4.59 (3.99-5.23)	5.98 (5.21-6.81)	7.99 (6.95-9.09)	9.41 (8.16-10.7)	11.2 (9.68-12.8)	12.5 (10.7-14.3)	13.8 (11.8-15.9)	15.1 (12.7-17.5)	16.9 (14.1-19.8)	18.3 (15.1-21.6)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 39.6743°, Longitude: -119.7027°

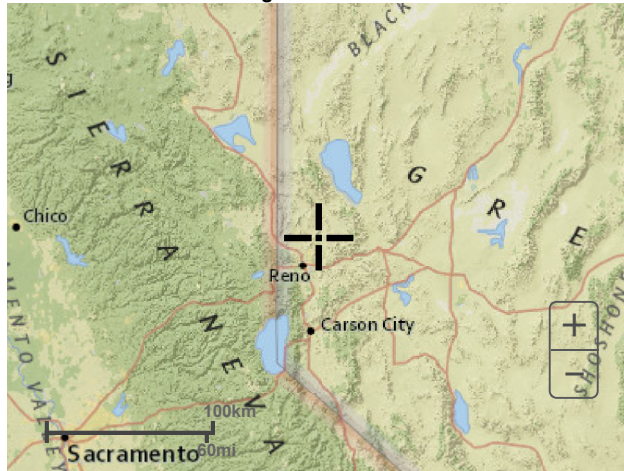


Maps & aerals

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



[Back to Top](#)

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[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

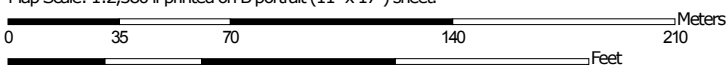
[Disclaimer](#)

Soil Map—Washoe County, Nevada, South Part



Soil Map may not be valid at this scale.


Map Scale: 1:2,380 if printed on B portrait (11" x 17") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Washoe County, Nevada, South Part

Survey Area Data: Version 13, Oct 12, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 4, 2014—Nov 17, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
140	Haybourne loamy sand, 2 to 4 percent slopes	3.7	10.9%
971	Aladshi sandy loam, 2 to 4 percent slopes	30.3	89.1%
Totals for Area of Interest		34.0	100.0%

Washoe County, Nevada, South Part

971—Aladshi sandy loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: hxnX
Elevation: 4,400 to 5,200 feet
Mean annual precipitation: 7 to 9 inches
Mean annual air temperature: 47 to 51 degrees F
Frost-free period: 100 to 110 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Aladshi and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aladshi

Setting

Landform: Alluvial fans
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 7 inches: sandy loam
H2 - 7 to 34 inches: sandy clay loam
H3 - 34 to 60 inches: stratified extremely gravelly loamy sand to very gravelly loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6c
Hydrologic Soil Group: C
Ecological site: DROUGHTY LOAM 8-10 P.Z. (R026XY024NV)

Hydric soil rating: No

Minor Components

Kayo

Percent of map unit: 6 percent

Landform: Alluvial fans

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: DROUGHTY LOAM 8-10 P.Z. (R026XY024NV)

Hydric soil rating: No

Indian creek

Percent of map unit: 4 percent

Landform: Fan remnants

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: CLAYPAN 8-10 P.Z. (R026XY025NV)

Hydric soil rating: No

Turria

Percent of map unit: 3 percent

Landform: Fan remnants

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: LOAMY 8-10 P.Z. (R026XY016NV)

Hydric soil rating: No

Holbrook

Percent of map unit: 2 percent

Landform: Alluvial fans

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: LOAMY 8-10 P.Z. (R026XY016NV)

Hydric soil rating: No

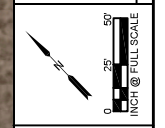
Data Source Information

Soil Survey Area: Washoe County, Nevada, South Part

Survey Area Data: Version 13, Oct 12, 2017



SPECIAL USE PERMIT
PYRAMID WAY & SHA NEVA



PREPARED FOR:
AMERCO REAL ESTATE
 2727 N CENTRAL AVE
 STE. 100
 PHOENIX, AZ
 (602) 265-6502



PRELIMINARY
NOT FOR
CONSTRUCTION

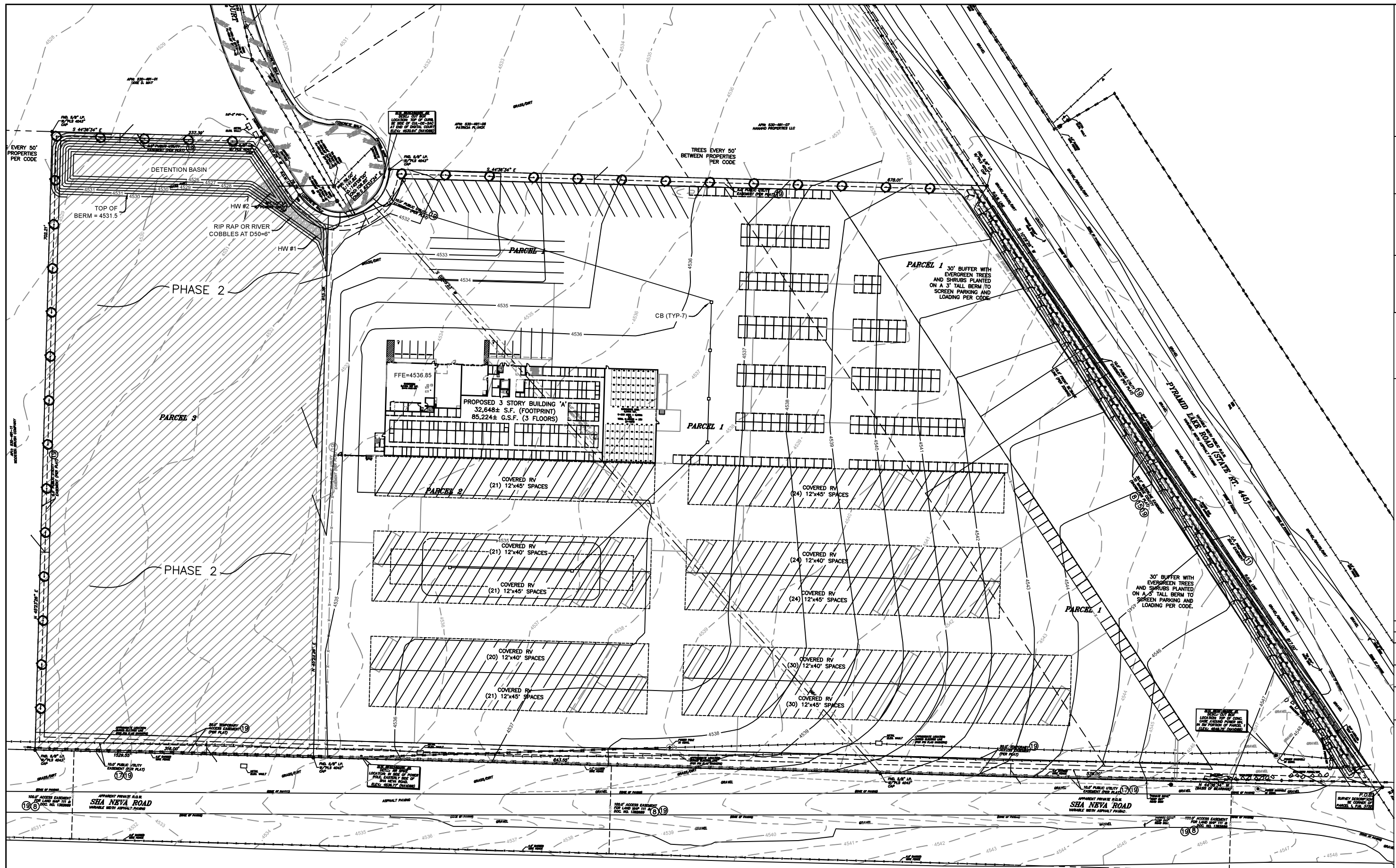
NO.	DATE	BY	CHK'D	DESCRIPTION
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2				
3				
4				
5				
6				

NO.	DATE	BY	CHK'D	DESCRIPTION
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2				
3				
4				
5				
6				

REVISIONS
 SHEET
C0



NEVADA
 WASHOE COUNTY
 PROJECT NO. 1-1822-01-022



SHEET C1
 SPECIAL USE PERMIT
 PYRAMID WAY & SHEA NEVA
 PREPARED FOR: AMERCO REAL ESTATE
 2727 N CENTRAL AVE
 PHOENIX, AZ
 (602) 265-6502
 PROJECT NO. 14-02-00-022
 DATE: PENDING

PRELIMINARY
NOT FOR
CONSTRUCTION

NO.	DATE	BY	CHK'D	DESCRIPTION
1	2018-02-14	ESH	NER	FOR CLIENT REVIEW

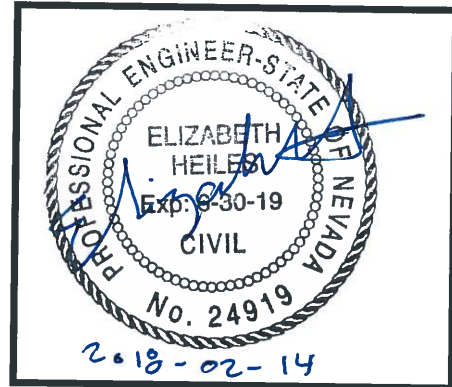
REVISIONS
 SHEET
C1



Client: AMERCO Real Estate Co.

Project No. 1-866-02.001
 U-Haul of Spanish Springs
 Sha Neva Rd. and Pyramid Way
Hydrology Evaluation

Jurisdiction: Washoe County, NV
 Parcel: 530-491-02, 03, 04
 County: Washoe County, NV



This evaluation is prepared in accordance with general accepted engineering standards, intended to meet or exceed the requirements of the reviewing or permitting jurisdiction. Codes and requirements vary significantly, therefore if a discrepancy is identified it shall be brought to the attention of the engineer prior to proceeding with the work. See project plans and specifications for other conditions and duties of the project.

Hydrologic Evaluation Summary Table

Basin Identification	Units	Pre - 5 yr	Pre - 100 yr	Post - 5 yr	Post - 100 yr
		A	A	A	A
Total Area	acres	20	20	20	20
Storm Type	-	II	II	II	II
Storm Duration	hours	24	24	24	24
Storm Recurrence	years	5	100	5	100
Storm Depth/Intensity at Duration	inches	1.93	3.58	1.93	3.58
Rational Method C factor	-	n/a	n/a	n/a	n/a
TR-55 Factors					
Soil Type	-	C	C	C	C
Soil Curve Number	-	63	63	80	80
Average Slope	%	1.26	1.26	2	2
Total Time of Concentration	minutes	58.4	58.4	10	10
Runoff, Q	inches				
Total Runoff volume, V	cubic feet	1,742	20,038	21,344	77,101
Peak Discharge, qp	cfs	0.43	6.378	11.33	42.502

Basin Descriptions:

- Pre** Sage with grass understory in fair condition
Post 4.4 acres open space in fair condition (undisturbed), 4 acres sage/grass in good condition, 11.6 acres pavement and buildings

Notes:

- Soil data source: NRCS Web Soil Survey <https://websoilsurvey.sc.egov.usda.us>
- Rainfall data: NOAA National Weather Service https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=nv
- Time of Concentration by SCS Method

ROBISON ENGINEERING COMPANY
CALCULATIONS: Detention

By: Elizabeth Heiles, PE
 Date: 14-Feb-18

Client: AMERCO Real Estate Co.
 Project No. 1-866-02.001

Detention Basin Stage/Capacity

Basin Volume Required (TR-55 Method)

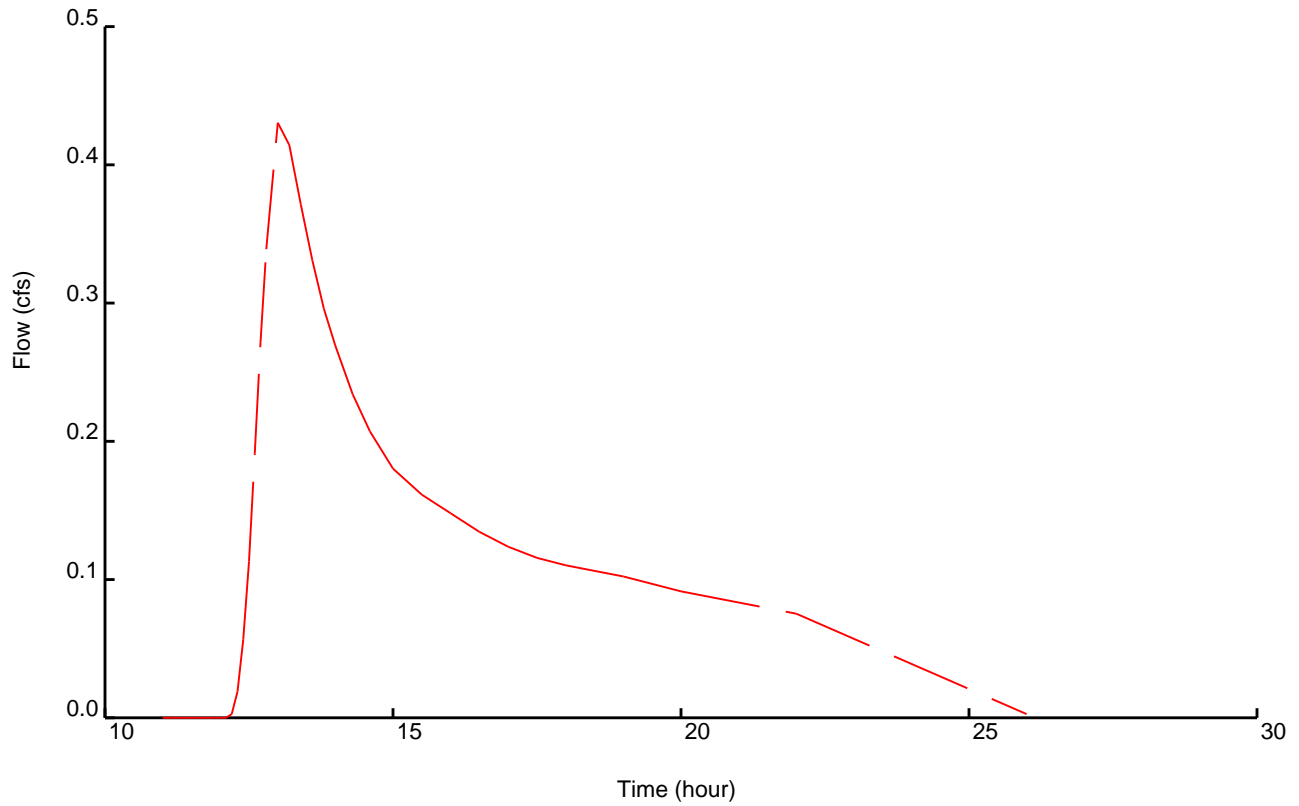
	cfs	
Peak Runoff (undeveloped)	6.4	
Peak Runoff (developed)	42.5	
Ratio:	0.15	
Storm type	II	
Required Storage v. Runoff	0.55	Vs / Vr
Design storm runoff	77,101	CF
Required Detention:	42,406	CF

Basin #1		
Elevation	Area (sf)	Cumulative Volume (cf)
		-
		-
	-	-
4,525.5		-
4,525.5		-
4,526.0	5,347	1,337
4,527.0	6,957	7,489
4,528.0	8,935	15,435
4,529.0	10,883	25,344
4,530.0	13,058	37,314
Overflow: 4,530.5	14,000	44,079
Total: 4,531.0	15,358	51,418

Runoff Hydrograph

Storm Type	Type II	Rainfall Distribution Type	TR-55 Tabular Method
Rainfall Depth:	1.93 in	Peak Discharge (Qp)	0.4304 cfs
Base Flow:	0.0000 cfs	Time to Peak:	13.00 hrs
Ia/P Interpolation:	Off	Runoff Volume:	0.04 acre-ft

Subarea Name	Downstream Subareas	Area (acre)	CN	Tc (min)	Tt (min)
Basin A		20.000	63	58.4	0.0



Runoff Hydrograph - TR-55 Tabular Method

Hydrograph Table

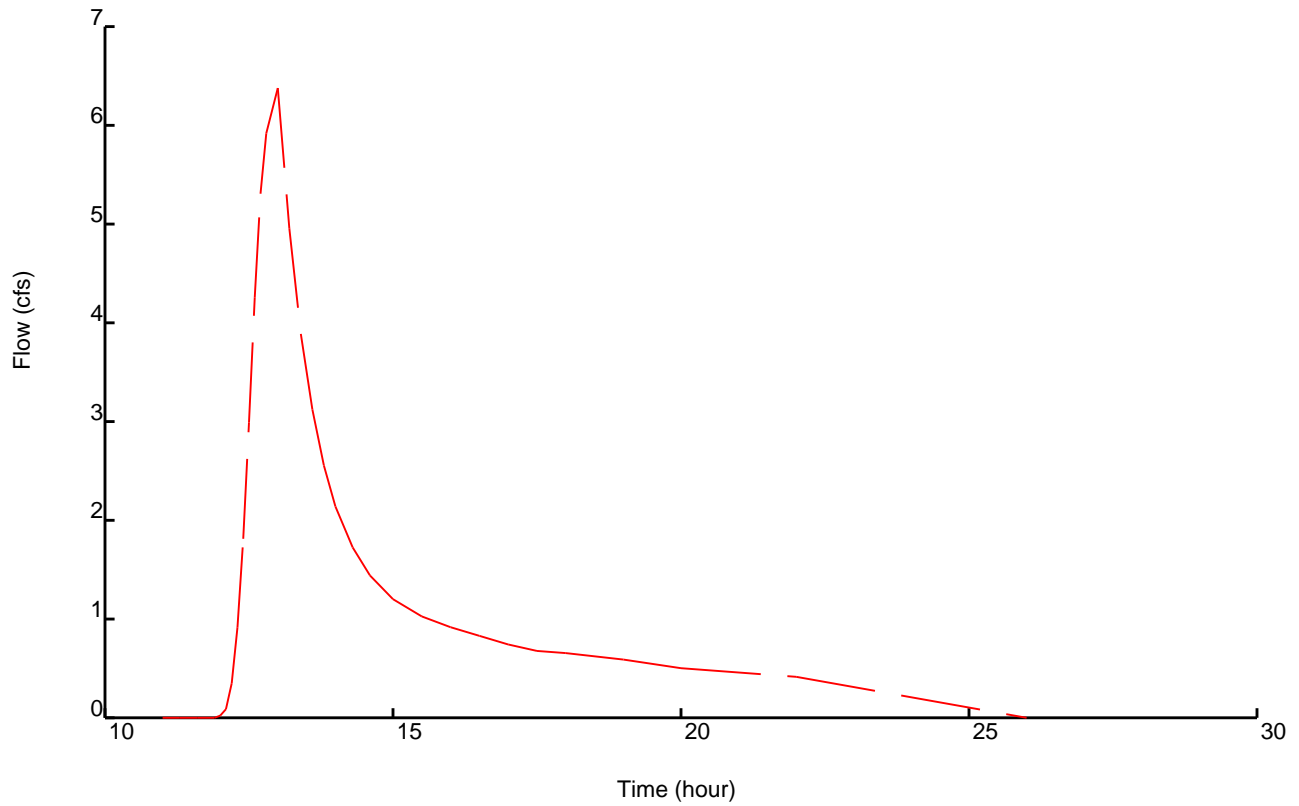
Time (hr)	Flow (cfs)
11.00	0.000
11.30	0.000
11.60	0.000
11.90	0.000
12.00	0.000
12.10	0.000

12.20	0.003
12.30	0.019
12.40	0.056
12.50	0.113
12.60	0.191
12.70	0.272
12.80	0.339
13.00	0.430
13.20	0.414
13.40	0.371
13.60	0.331
13.80	0.296
14.00	0.269
14.30	0.234
14.60	0.207
15.00	0.180
15.50	0.161
16.00	0.148
16.50	0.135
17.00	0.124
17.50	0.116
18.00	0.110
19.00	0.102
20.00	0.091
22.00	0.075
26.00	0.003

Runoff Hydrograph

Storm Type	Type II	Rainfall Distribution Type	TR-55 Tabular Method
Rainfall Depth:	3.58 in	Peak Discharge (Qp)	6.3776 cfs
Base Flow:	0.0000 cfs	Time to Peak:	13.00 hrs
Ia/P Interpolation:	Off	Runoff Volume:	0.46 acre-ft

Subarea Name	Downstream Subareas	Area (acre)	CN	Tc (min)	Tt (min)
Basin A - 100 pre		20.000	63	58.4	0.0



Runoff Hydrograph - TR-55 Tabular Method

Hydrograph Table

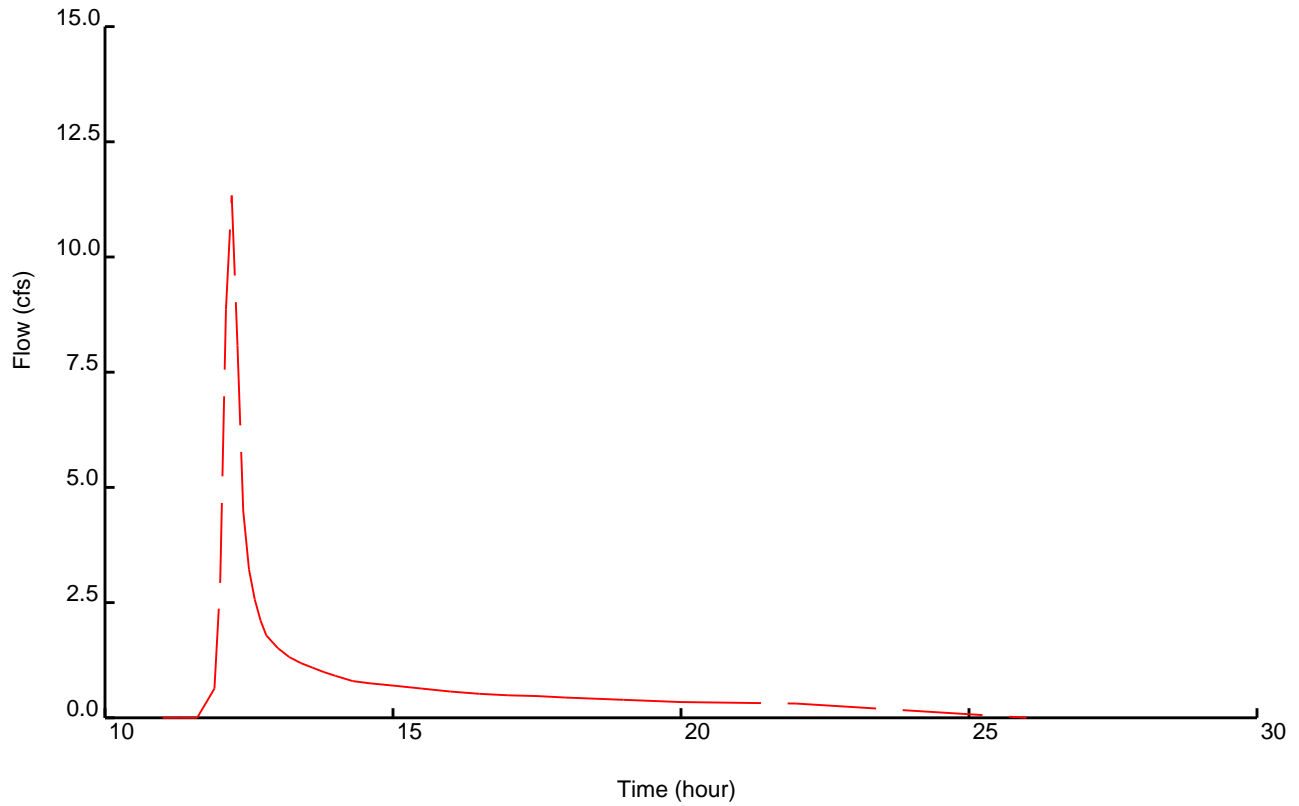
Time (hr)	Flow (cfs)
11.00	0.000
11.30	0.000
11.60	0.000
11.90	0.000
12.00	0.022
12.10	0.087

12.20	0.349
12.30	0.917
12.40	1.813
12.50	2.992
12.60	4.259
12.70	5.307
12.80	5.919
13.00	6.378
13.20	4.958
13.40	3.888
13.60	3.123
13.80	2.555
14.00	2.140
14.30	1.725
14.60	1.442
15.00	1.201
15.50	1.027
16.00	0.917
16.50	0.830
17.00	0.743
17.50	0.677
18.00	0.655
19.00	0.590
20.00	0.502
22.00	0.415
26.00	0.000

Runoff Hydrograph

Storm Type	Type II	Rainfall Distribution Type	TR-55 Tabular Method
Rainfall Depth:	1.93 in	Peak Discharge (Qp)	11.3335 cfs
Base Flow:	0.0000 cfs	Time to Peak:	12.20 hrs
Ia/P Interpolation:	Off	Runoff Volume:	0.49 acre-ft

Subarea Name	Downstream Subareas	Area (acre)	CN	Tc (min)	Tt (min)
Basin A - 5 yr post		20.000	80	10.0	0.0



Runoff Hydrograph - TR-55 Tabular Method

Hydrograph Table

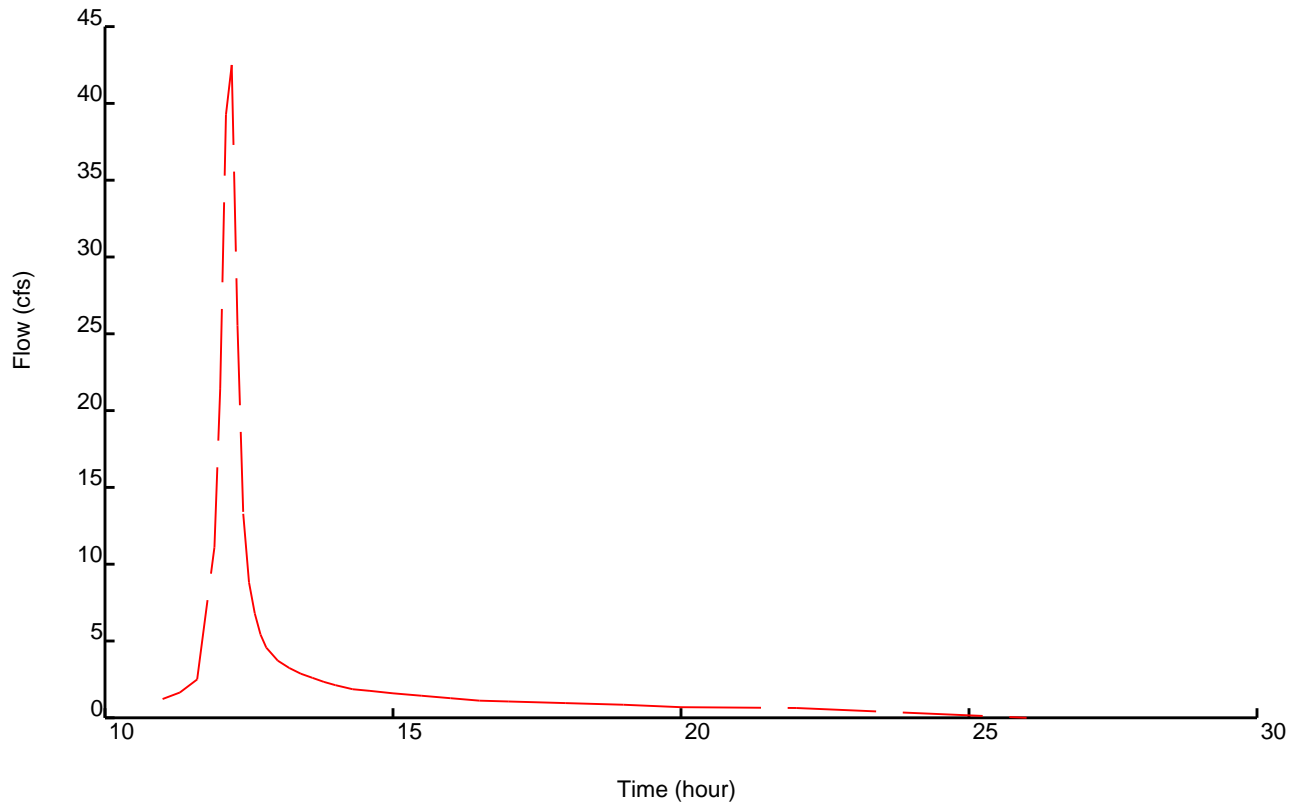
Time (hr)	Flow (cfs)
11.00	0.000
11.30	0.000
11.60	0.000
11.90	0.634
12.00	2.927
12.10	8.862

12.20	11.333
12.30	8.081
12.40	4.488
12.50	3.220
12.60	2.569
12.70	2.114
12.80	1.789
13.00	1.512
13.20	1.317
13.40	1.187
13.60	1.089
13.80	0.992
14.00	0.911
14.30	0.797
14.60	0.748
15.00	0.699
15.50	0.634
16.00	0.569
16.50	0.520
17.00	0.488
17.50	0.472
18.00	0.439
19.00	0.390
20.00	0.341
22.00	0.309
26.00	0.000

Runoff Hydrograph

Storm Type	Type II	Rainfall Distribution Type	TR-55 Tabular Method
Rainfall Depth:	3.58 in	Peak Discharge (Qp)	42.5018 cfs
Base Flow:	0.0000 cfs	Time to Peak:	12.20 hrs
Ia/P Interpolation:	Off	Runoff Volume:	1.77 acre-ft

Subarea Name	Downstream Subareas	Area (acre)	CN	Tc (min)	Tt (min)
Basin A - 100yr post		20.000	80	10.0	0.0



Runoff Hydrograph - TR-55 Tabular Method

Hydrograph Table

Time (hr)	Flow (cfs)
11.00	1.222
11.30	1.647
11.60	2.497
11.90	11.104
12.00	21.410
12.10	39.261

12.20	42.502
12.30	25.554
12.40	13.282
12.50	8.819
12.60	6.800
12.70	5.419
12.80	4.569
13.00	3.719
13.20	3.241
13.40	2.869
13.60	2.603
13.80	2.338
14.00	2.125
14.30	1.859
14.60	1.753
15.00	1.594
15.50	1.434
16.00	1.275
16.50	1.116
17.00	1.063
17.50	1.009
18.00	0.956
19.00	0.850
20.00	0.691
22.00	0.638
26.00	0.000

February 14, 2018

To: Washoe County
1001 E. Ninth St., Bldg. A
Reno, NV 89520

Subject: Trip Generation for U-Haul of Spanish Springs
NWC Sha Neva & Pyramid Lake Rd.

Please find attached the accompanying excerpts from the ITE Trip Generation, 10th Edition.

Mini-Warehouse Trips

The Mini-Warehouse trip generation using Land Use Classification ITE 151 is as follows and assumes the 110,924 square feet associated with the proposed building:

AM Trip Rate = 0.10 trips per 1,000 Sq. Ft. GFA	AM trips = 110.9 x 0.10 = 11 trips
PM Trip Rate = 0.17 trips per 1,000 Sq. Ft. GFA	PM trips = 110.9 x 0.17 = 19 trips
Daily Trip Rate = 1.51 trips per 1,000 Sq. Ft. GFA	Daily trips = 110.9 x 1.51 = 167 trips

Retail Trips

If the retail space is not considered ancillary and needs to be standalone in the trip generation the best proposed use from ITE is Land Use Code 812 Building Materials and Lumber Store as it is a retail base with a do it yourself type clientele looking for specialty items. The square footage allocated to the retail is 3,000 square feet.

AM Trip Rate = 1.57 trips per 1,000 Sq. Ft. GFA	AM trips = 3 x 1.57 = 5 trips
PM Trip Rate = 2.06 trips per 1,000 Sq. Ft. GFA	PM trips = 3 x 2.06 = 6 trips
Daily Trip Rate = 18.05 trips per 1,000 Sq. Ft. GFA	Daily trips = 3 x 18.05 = 54 trips

Hopefully the above information and the attached excerpts will show the County how nominal the traffic is for this site.

Sincerely,

David Pollock

Mini-Warehouse (151)

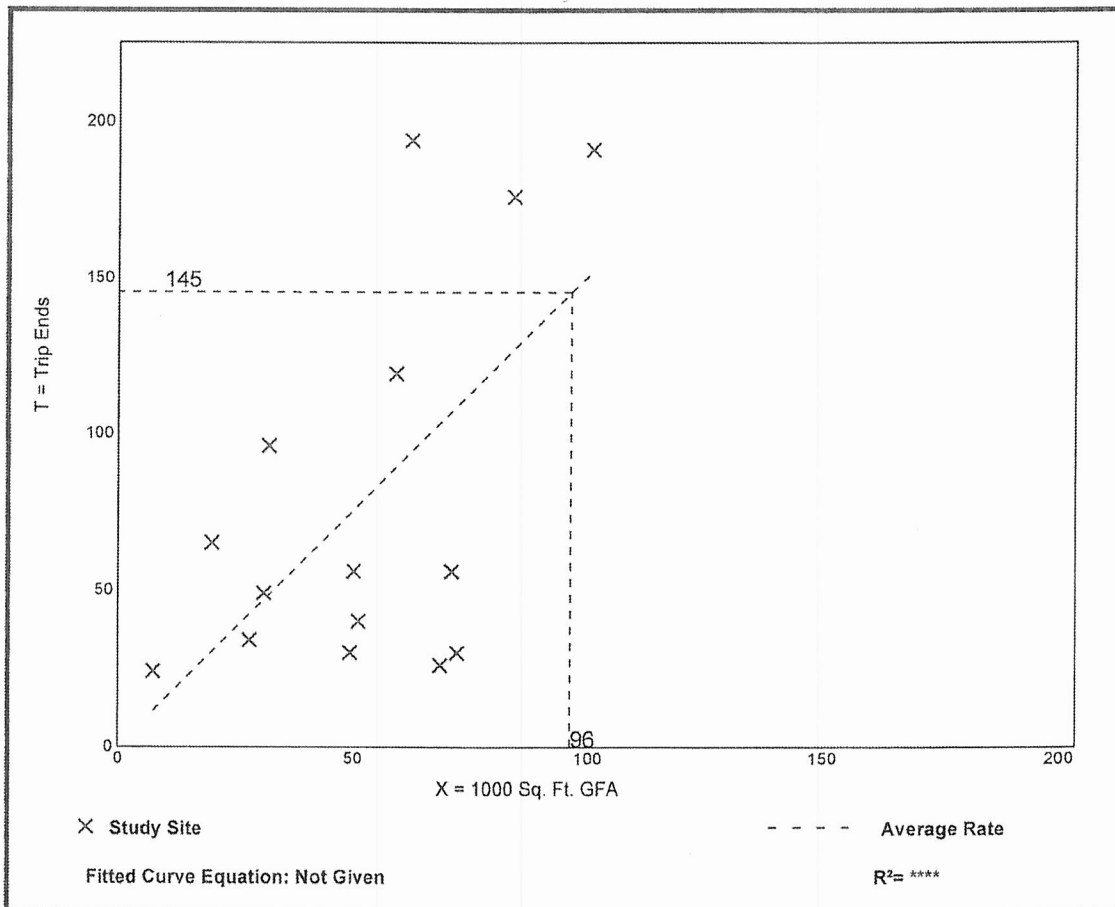
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 15
Avg. 1000 Sq. Ft. GFA: 52
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.51	0.38 - 3.25	0.95

Data Plot and Equation



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

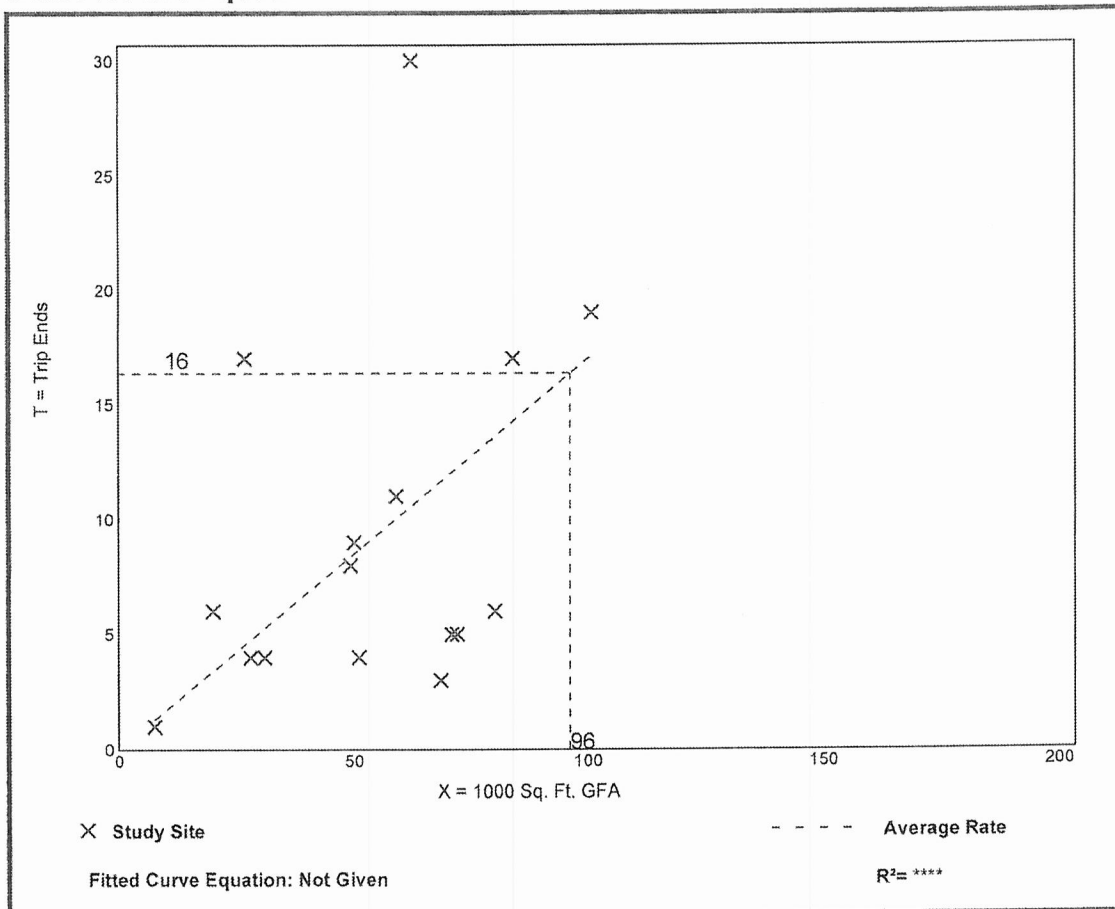
Mini-Warehouse (151)

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: 16
 Avg. 1000 Sq. Ft. GFA: 54
 Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.04 - 0.64	0.14

Data Plot and Equation



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

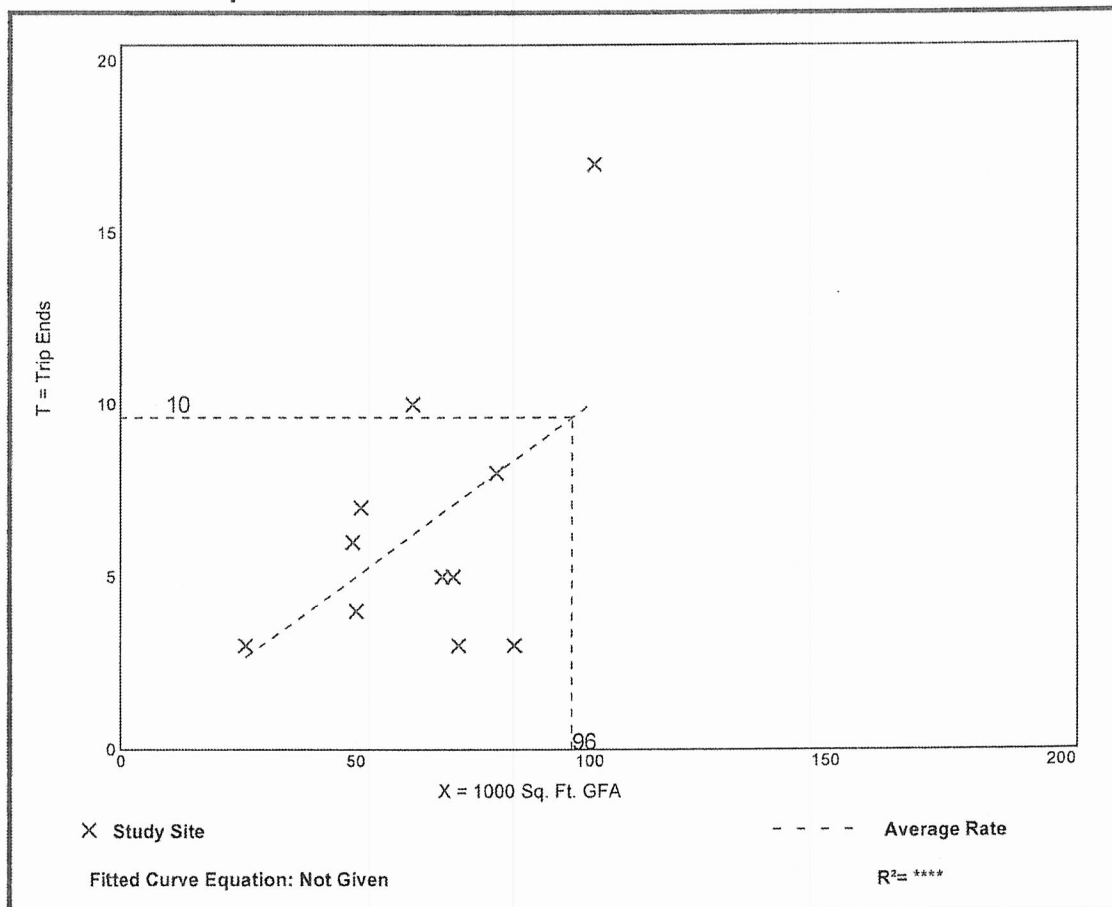
Mini-Warehouse (151)

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: 11
 Avg. 1000 Sq. Ft. GFA: 65
 Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.10	0.04 - 0.17	0.05

Data Plot and Equation



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

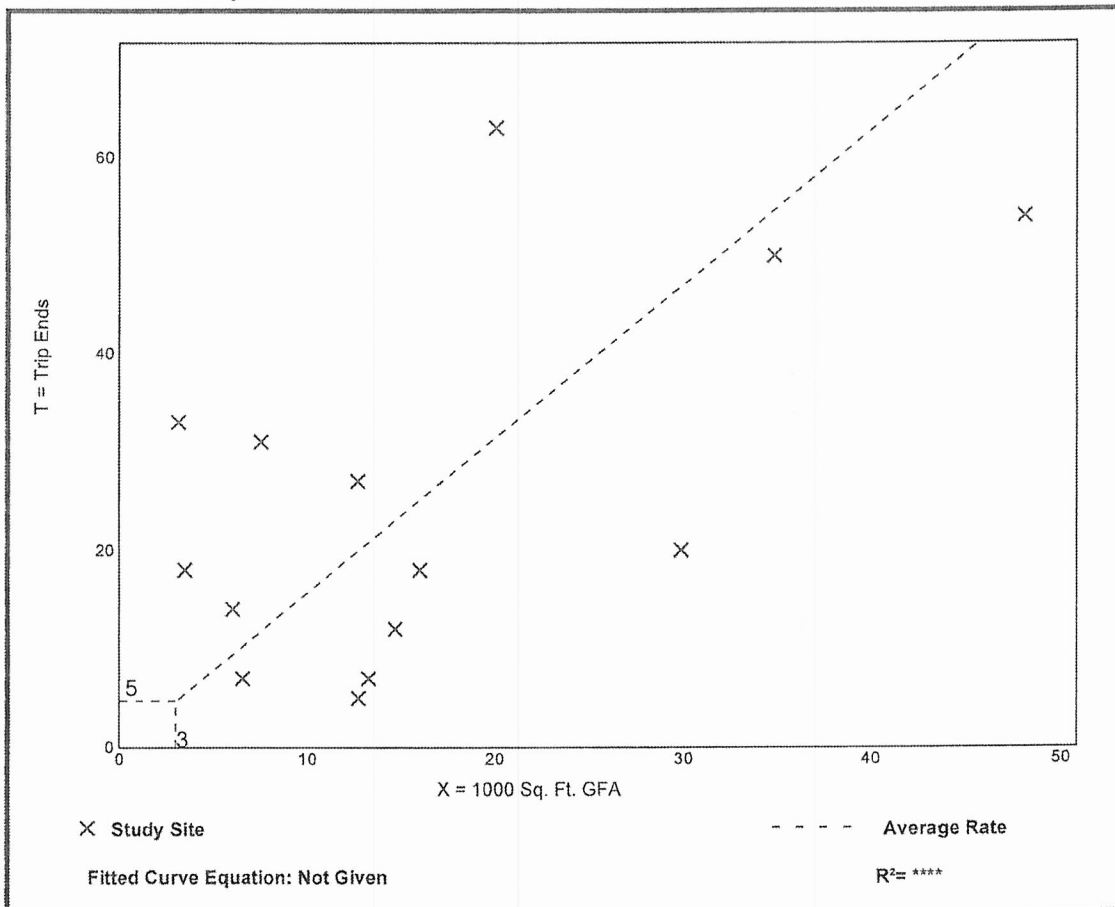
Building Materials and Lumber Store (812)

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: 14
 Avg. 1000 Sq. Ft. GFA: 16
 Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.57	0.39 - 10.58	1.51

Data Plot and Equation



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

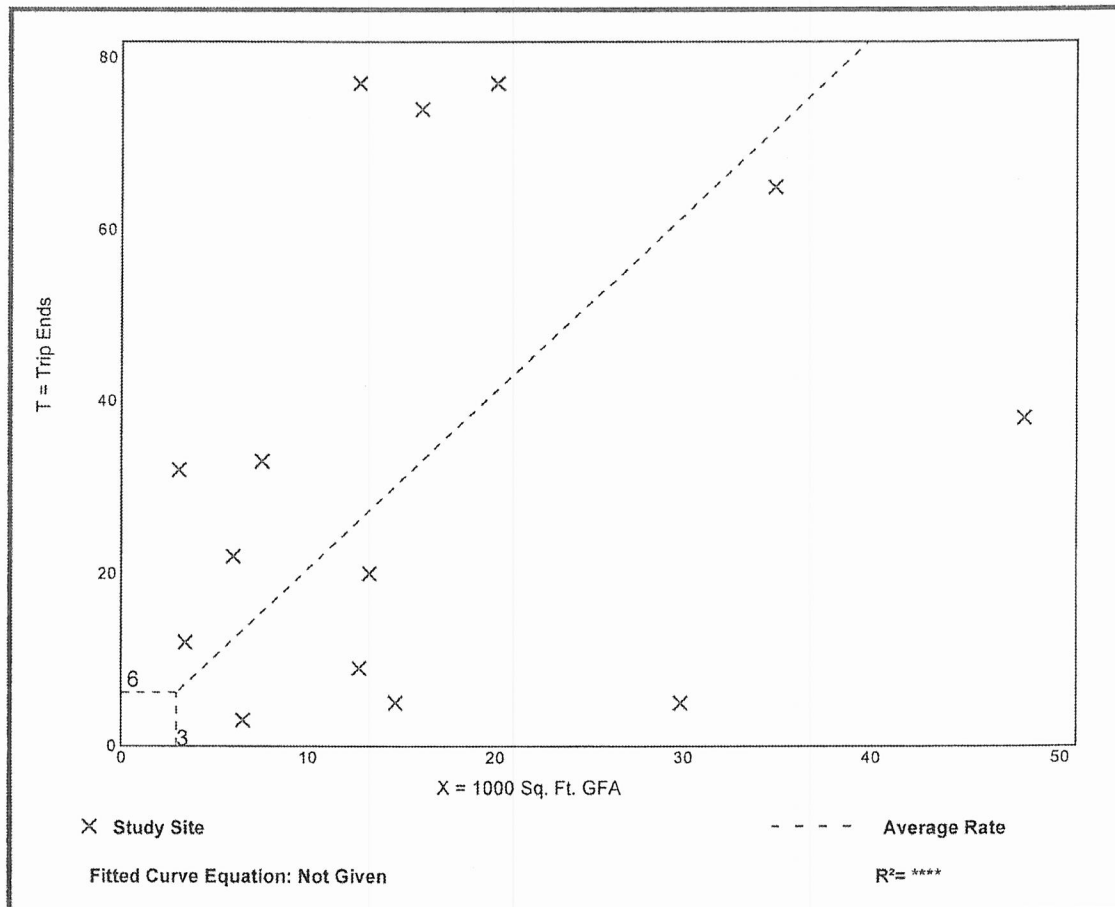
Building Materials and Lumber Store (812)

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: 14
 Avg. 1000 Sq. Ft. GFA: 16
 Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.06	0.17 - 10.26	2.08

Data Plot and Equation



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

Building Materials and Lumber Store (812)

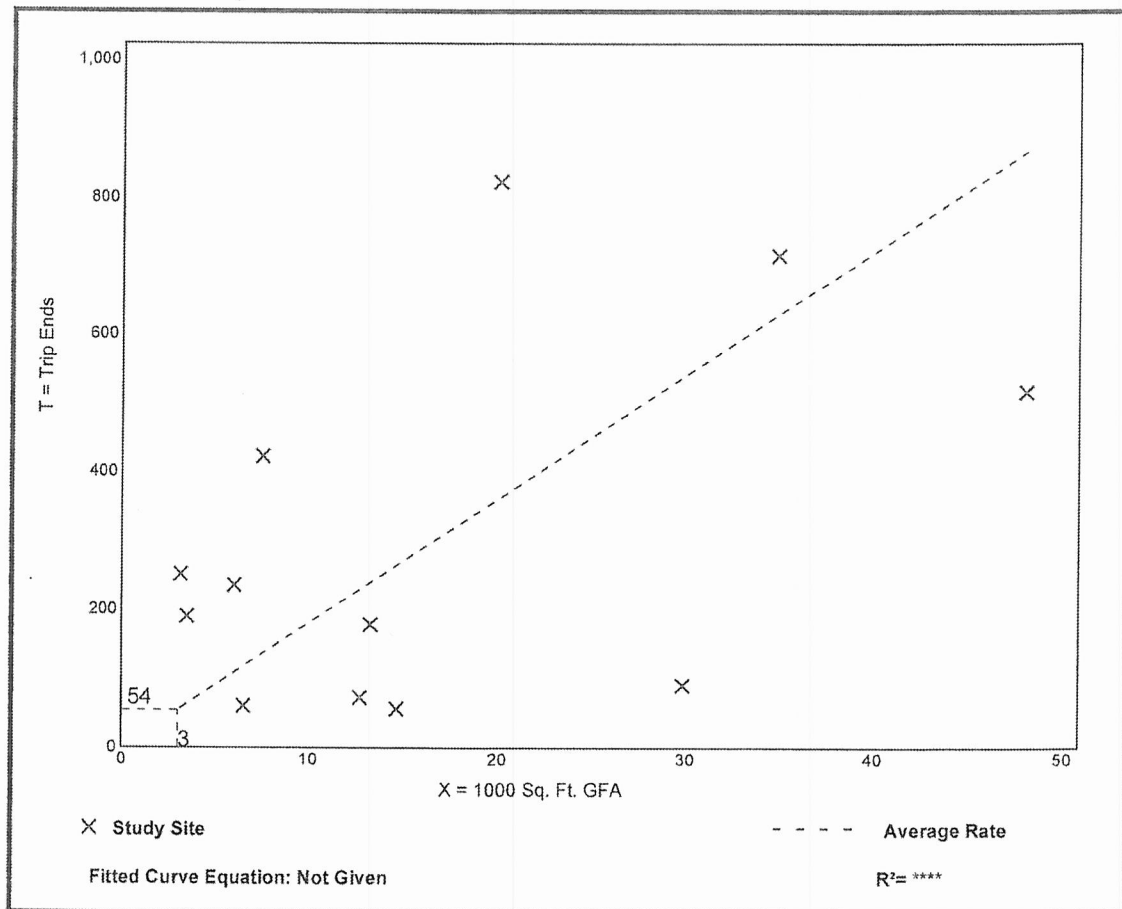
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 12
Avg. 1000 Sq. Ft. GFA: 17
Directional Distribution: 50% entering, 50% exiting

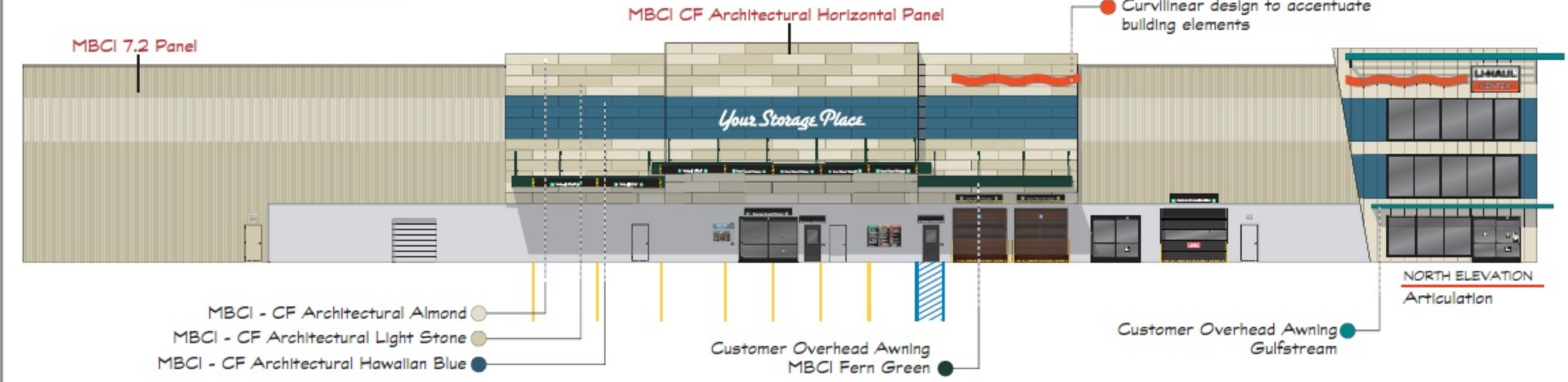
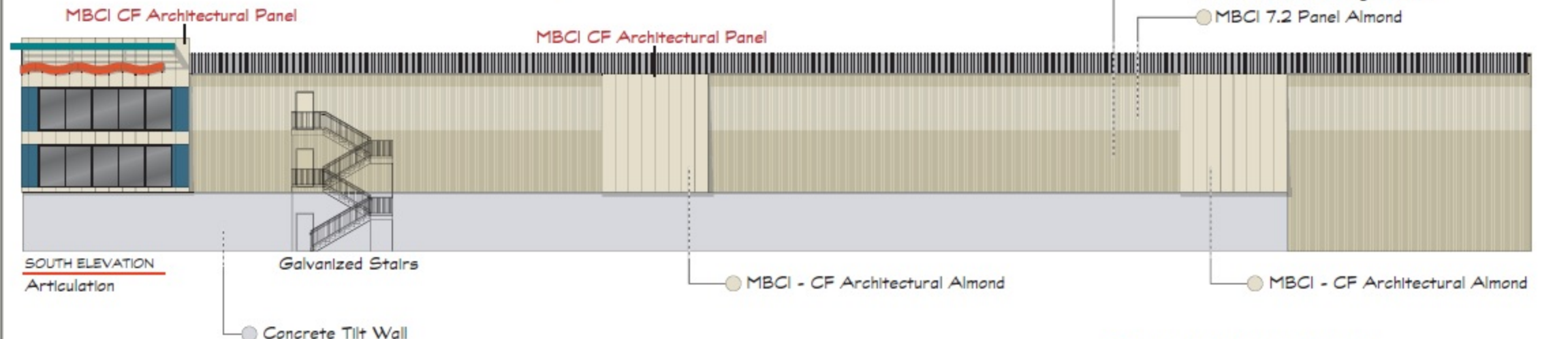
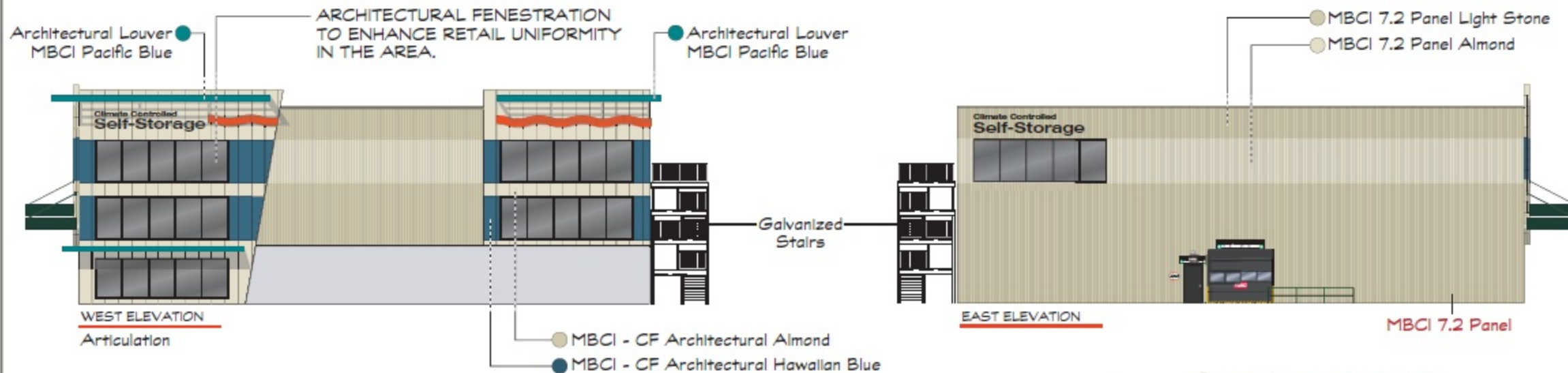
Vehicle Trip Generation per 1000 Sq. Ft. GFA


Average Rate	Range of Rates	Standard Deviation
18.05	3.02 - 80.45	17.54

Data Plot and Equation



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



-  MBCI Fern Green
-  Gulfstream
-  CF MBCI Pacific Blue
-  CF MBCI Light Stone
-  CF MBCI Almond
-  7.2 MBCI Almond
-  7.2 MBCI Light Stone
-  Sierra Sunset

FINAL APPROVED IMAGING

ANY CHANGES REQUIRE REBID OF PROJECT



PROJECT NAME: 864072 / U-HAUL, MOVING & STORAGE OF SPANISH SPRINGS
 MUNICIPALITY: WASHOE COUNTY, NV
 PROJECT ADDRESS: NWC SHA NEVA RD AND PYRAMID WAY, SPANISH NV 89441-402, 350-491-02, 350-491-03, 350-491-04
 DESCRIPTION OF REQUEST: REQUESTING SUP FOR VEHICLE, TRUCK AND TRAILER RENTAL
 HISTORY: VACANT LOTS
 ZONE: I (INDUSTRIAL)
 OVERLAY: SPANISH SPRINGS AREA PLAN (APPENDIX B - BUSINESS DESIGN GUIDELINES)
 LOT SIZE: +/- 20 AC OR 871,200 SF

BUILDING STRUCTURES:	FOOTPRINT	GROSS SF
BUILDING A:	32,648 SF	82,224 GSF
BUILDING B:	1,600 SF	
BUILDING C:	2,500 SF	
BUILDING D:	2,000 SF	
BUILDING E:	600 SF	
BUILDING F:	2,900 SF	
BUILDING G:	1,500 SF	
BUILDING H:	2,500 SF	
BUILDING I:	2,500 SF	
BUILDING J:	2,000 SF	
BUILDING K:	2,600 SF	
BUILDING L:	1,800 SF	
BUILDING M:	1,800 SF	
BUILDING N:	2,400 SF	
BUILDING O:	2,400 SF	
TOTAL BUILDINGS:	61,948 SF	113,924 GSF

VEHICLE COVERED PARKING:	FOOTPRINT	GROSS SF
CANOPY P:	14,254 SF	
CANOPY O:	16,123 SF	
CANOPY R:	25,096 SF	
CANOPY T:	28,408 SF	
CANOPY S:	25,096 SF	
CANOPY U:	35,025 SF	
TOTAL CANOPES:	144,000 SF	
TOTAL GROSS SF BUILDINGS AND CANOPES:	257,924 GSF	
TOTAL LOT COVERAGE:	205,348 SF OR 24 %	



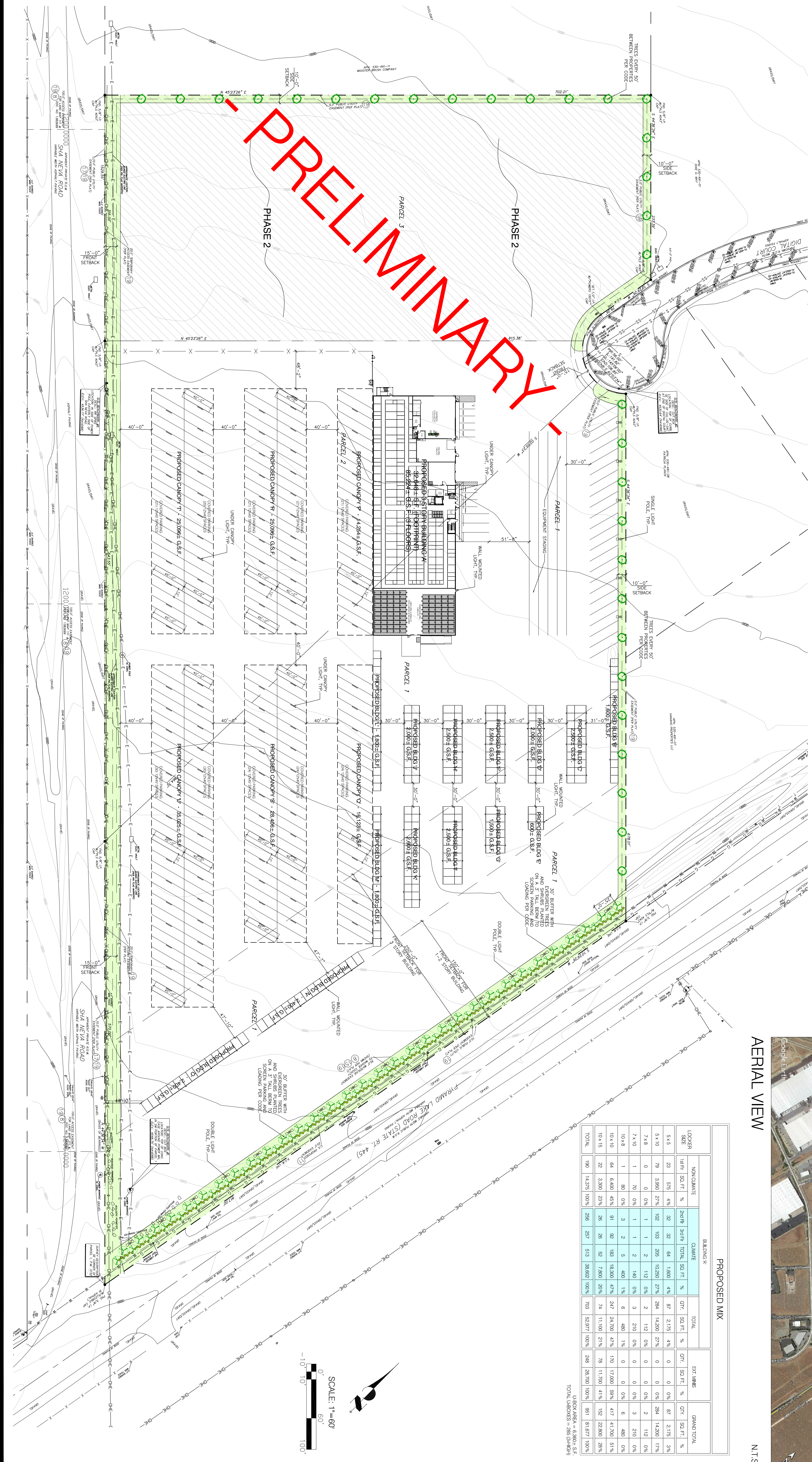
AERIAL VIEW

N.T.S.

LOGGER SIZE	NON-CLIMATE			CLIMATE			TOTAL			EXT LANS			GRAND TOTAL			
	U/FI	SO. FT.	%	30'FH	30'FH	TOTAL	SO. FT.	%	DRY.	SO. FT.	%	DRY.	SO. FT.	%		
5 x 5	23	575	4.1%	32	64	1,000	4.1%	67	2,175	4.1%	0	0%	284	14,200	17%	
5 x 10	79	3,960	27%	102	103	10,200	27%	284	14,200	27%	0	0%	284	14,200	17%	
7 x 8	0	0	0%	1	1	112	0%	2	112	0%	0	0%	2	112	0%	
7 x 10	1	20	0%	1	2	140	0%	3	210	0%	0	0%	3	210	0%	
10 x 8	1	80	0%	3	2	400	1%	6	480	1%	0	0%	6	480	0%	
10 x 10	64	6,400	45%	91	92	18,300	47%	247	24,700	47%	170	17,000	99%	417	41,700	51%
10 x 15	22	3,300	23%	28	28	7,800	20%	74	11,100	21%	79	11,700	41%	152	22,800	28%
TOTAL	190	14,378	100%	256	257	913	38.62%	704	52,977	100%	248	28,700	100%	951	81,677	100%

USDA PERCENTAGE = 63.83%
 TOTAL SQUARES = 589 (141,181)

PROPOSED MIX



AMERCO REAL ESTATE COMPANY
 CONSTRUCTION DEPARTMENT
 2727 NORTH CENTRAL AVENUE
 PHOENIX, ARIZONA 85004
 P: (602) 263-6502

SITE ADDRESS:
 U-Haul of Spanish Springs
 NWC Sha Neva & Pyramid
 Sparks, NV 89441

SHEET CONTENTS:
 Proposed Site Plan

864072

DRAWN: BLC
 CHECKED: NH
 DATE: 12/21/17
 864072A1B

REVISIONS:

NO.	DATE	INITIALS	NOTES
1	02/07/18	BLC	SITE LIGHTING ADDED
2	02/21/18	BLC	PROJECT DATA
3			
4			
5			
6			
7			

PROFESSIONAL SEAL:
 PRELIMINARY DOCUMENTS, NOT FOR CONSTRUCTION, FOR INFORMATION ONLY.

ARCHITECT: 10003



SPECIAL USE PERMIT
PYRAMID WAY & SHA NEVA

SHEET CO
EXISTING CONDITIONS
WASHOE COUNTY
NEVADA
PROJECT NO. 1902-01.002

INCHES TO FEET SCALE
0 25 50

PREPARED FOR:
AMERCO REAL ESTATE
2727 N CENTRAL AVE.
RTE 500
PHO: 702.253.4602
(R) 702.253.4602

Robinson Engineering
401 VICTORIAN AVENUE
SUITE 100
RENO, NV 89501
PHO: 775.784.1111
FAX: 775.784.1112
DRAWN: ESH
DATE: PENDING

PRELIMINARY
NOT FOR
CONSTRUCTION

NO.	DATE	BY	CHKD	DESCRIPTION
1				
2				
3				
4				
5				
6				

FOR CLIENT REVIEW

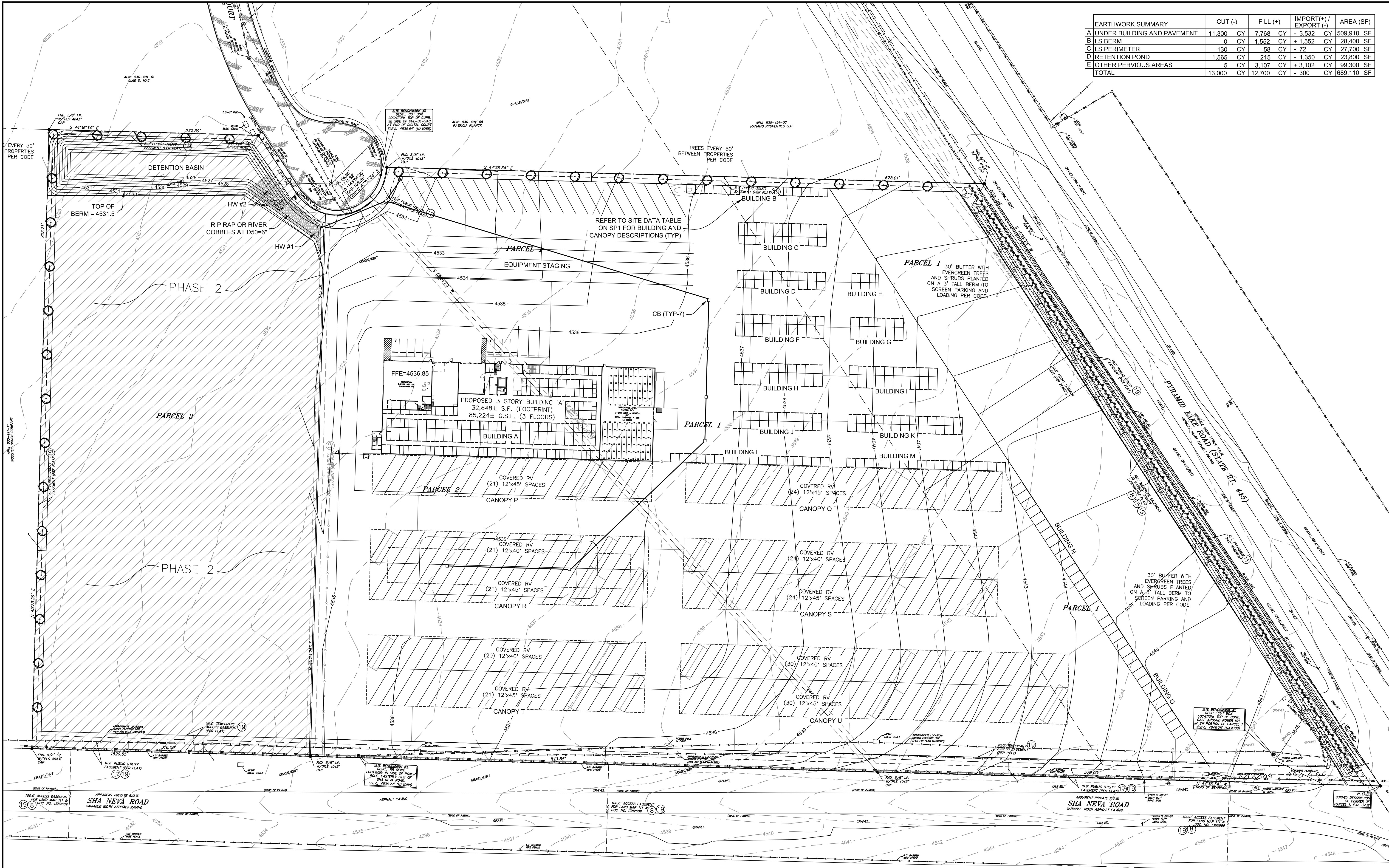
PO

REVISIONS

SHEET
CO



EARTHWORK SUMMARY	CUT (-)	FILL (+)	IMPORT(+)/EXPORT (-)	AREA (SF)
A UNDER BUILDING AND PAVEMENT	11,300 CY	7,768 CY	- 3,532 CY	509,910 SF
B LS BERM	0 CY	1,552 CY	+ 1,552 CY	28,400 SF
C LS PERIMETER	130 CY	58 CY	- 72 CY	27,700 SF
D RETENTION POND	1,565 CY	215 CY	- 1,350 CY	23,800 SF
E OTHER PVIOUS AREAS	5 CY	3,107 CY	+ 3,102 CY	99,300 SF
TOTAL	13,000 CY	12,700 CY	- 300 CY	689,110 SF



SPECIAL USE PERMIT
PYRAMID WAY & SHA NEVA

PREPARED FOR:
AMERCO REAL ESTATE
 2727 N CENTRAL AVE.
 SUITE 500
 RENO, NV 89502
 (775) 784-6602

Robinson Engineering
 1000 W. WASHINGTON AVENUE
 SUITE 100
 RENO, NV 89502
 DRAWN: ESH
 DATE: PENDING

PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	BY	CHKD	DESCRIPTION
1				REFERENCES
2				
3				
4				
5				
6				

DATE: 2018-02-14
 DATE: 2018-02-21

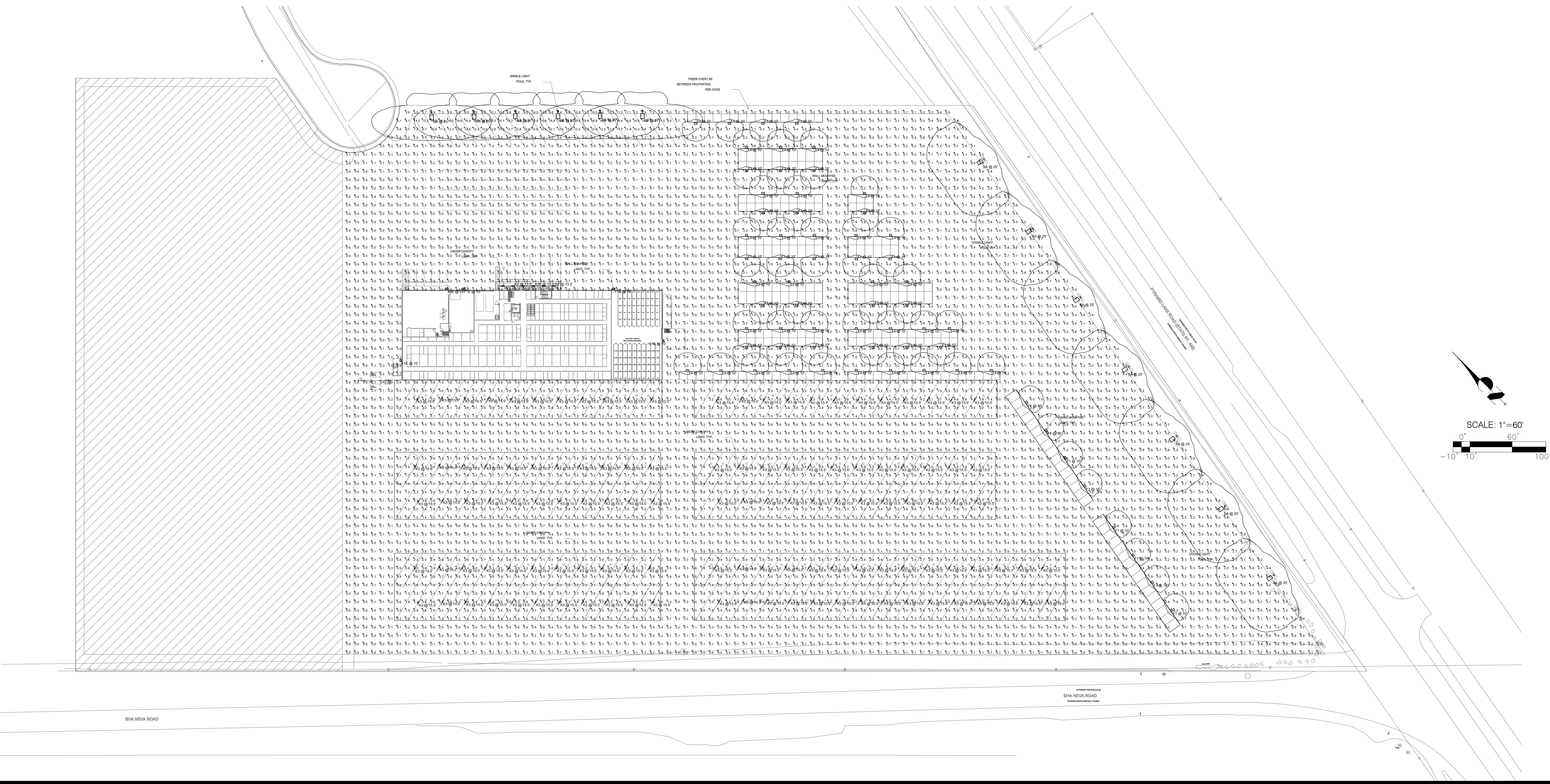
FOR CLIENT REVIEW
 FOR CLIENT REVIEW

PO: P1
 SHEET: C1



Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	F1	65	Lithonia Lighting	WST LED P1 40K VF MVOLT DDBXD	WST LED, Performance package 1, 4000 K, visual comfort forward throw, MVOLT	LED - 4000K COLOR TEMP	WST_LED_P1_40K_VF_MVOLT.ies	1639	0.95	12
	F1E	5	Lithonia Lighting	WST LED P1 40K VF MVOLT DDBXD EL	WST LED, Performance package 1, 4000 K, visual comfort forward throw, MVOLT	LED - 4000K COLOR TEMP	WST_LED_P1_40K_VF_MVOLT.ies	1639	0.95	12
	K2	3	Lithonia Lighting	WRT 2 32 A12125 MVOLT GEB10IS	WET LOCATION TROFFER 1' X 4'	TWO 32-WATT T8 LINEAR FLUORESCENTS.	WRT_2_32_A19_TUBI.ies	2850	0.75	59
	K2E	3	Lithonia Lighting	WRT 2 32 A12125 MVOLT GEB10IS EL14	WET LOCATION TROFFER 1' X 4'	TWO 32-WATT T8 LINEAR FLUORESCENT.	WRT_2_32_A19_TUBI.ies	2850	0.75	59
	K3	121	Lithonia Lighting	DMW2 4000LM WD AFL MVOLT GZ1 40K 80CRI	DMW2 L24 4000LM WD AFL MVOLT GZ1 40K 80CRI (GLEDS)	LED - 4000K COLOR TEMP	DMW2_4000LM_WD_AFL_MVOLT_40K_80CRI.ies	4215	0.95	39.9
	SA	7	Lithonia Lighting	DSX2 LED P4 40K T4M MVOLT HS DDBXD / SSS 22' POLE WITH 3' BASE	DSX2 LED P4 40K T4M MVOLT with houseside shield	LED - 4000K COLOR TEMP	DSX2_LED_P4_40K_T4M_MVOLT_HS.ies	25364	0.95	270
	SB	6	Lithonia Lighting	DSX2 LED P4 40K T1S MVOLT HS DDBXD / SSS 22' POLE WITH 3' BASE	DSX2 LED P4 40K T1S MVOLT with houseside shield	LED - 4000K COLOR TEMP	DSX2_LED_P4_40K_T1S_MVOLT_HS.ies	28762	0.95	270

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
FC @ GRADE	+	1.6 fc	20.1 fc	0.0 fc	N/A	N/A



REVISIONS:

NO.	DATE	INITIALS	NOTES
1			
2			
3			
4			
5			
6			

PROFESSIONAL SEAL:

PRELIMINARY DOCUMENTS;
NOT FOR CONSTRUCTION;
FOR INFORMATION ONLY

ARCHITECT LOGO:

AMERCO
REAL ESTATE COMPANY

CONSTRUCTION DEPARTMENT
2727 NORTH CENTRAL AVENUE
PHOENIX, ARIZONA 85004
P: (602) 263-6502

SITE ADDRESS:
U-Haul of Spanish Springs
NWC Sha Neva & Pyramid
Sparks, NV 89441

SHEET CONTENTS:
Proposed
Photometric

864072

DRAWN:	BLC	PH1
CHECKED:	NH	
DATE:	02/14/18	

864072A1B

March 12, 2018

To: Washoe County
1001 E. Ninth St., Bldg. A
Reno, NV 89520

Subject: Trip Generation for U-Haul of Spanish Springs **(REVISED)**
NWC Sha Neva & Pyramid Lake Rd.

Below and attached is the Trip Generation analysis gathered from ITE Trip Generation, 10th Edition and our proposed Site Development plan for the following uses (Self-Storage, Retail and Equipment Rental). It should be noted that hours of operation are Monday through Thursday 7am to 7pm, Friday 7am to 8pm, Saturday 7am to 7pm and Sunday 9am to 5pm.

Mini-Warehouse Trips

The Mini-Warehouse trip generation using Land Use Classification ITE 151 is as follows and assumes the 111,924 square feet associated with the proposed 15 building(s):

AM Trip Rate = 0.10 trips per 1,000 Sq. Ft. GFA AM trips = 111.9 x 0.10 = 11.2 trips
PM Trip Rate = 0.17 trips per 1,000 Sq. Ft. GFA PM trips = 111.9 x 0.17 = 19 trips
Daily Trip Rate = 1.51 trips per 1,000 Sq. Ft. GFA Daily trips = 111.9 x 1.51 = 169 trips

Retail Trips

U-Haul Retail space is considered a shared use for (Self-Storage, Equipment Rental and General Sales of Moving Supplies) and provides support to the primary operations (Self-Storage). It should not be considered standalone in the trip generation analysis. The overall area combines the 3,000sf of internal building spaces that is subdivided into 3 Land Use Categories.

The most appropriate land use category within the 10th Edition of ITE is Land Use Code 812 Building Materials & Lumber Store for Retail and Code 840 Auto Sales New for Equipment Rental. The square footage allocated to the Retail is 1,000sf. The square footage allocated for Equipment Rental is 1,000sf

812 Materials & Lumber (Retail)

AM Trip Rate = 1.57 trips per 1,000 Sq. Ft. GFA AM trips = 1 x 1.57 = 2 trips
PM Trip Rate = 2.06 trips per 1,000 Sq. Ft. GFA PM trips = 1 x 2.06 = 2 trips
Daily Trip Rate = 18.05 trips per 1,000 Sq. Ft. GFA Daily trips = 1 x 18.05 = 18 trips

Auto Sales New (Equipment Rental)

AM Trip Rate = 1.87 trips per 1,000 Sq. Ft. GFA AM trips = 1 x 1.87 = 2 trips
PM Trip Rate = 2.71 trips per 1,000 Sq. Ft. GFA PM trips = 1x 2.71= 3 trips
Daily Trip Rate = 44.32 trips per 1,000 Sq. Ft. GFA Daily trips = 1 x 44.32 = 44 trips

Above information with attached excerpts will show the County how nominal the traffic is for this site.

Sincerely,

David Pollock, Traffic Engineering
AMERCO Real Estate / U-Haul International

Mini-Warehouse (151)

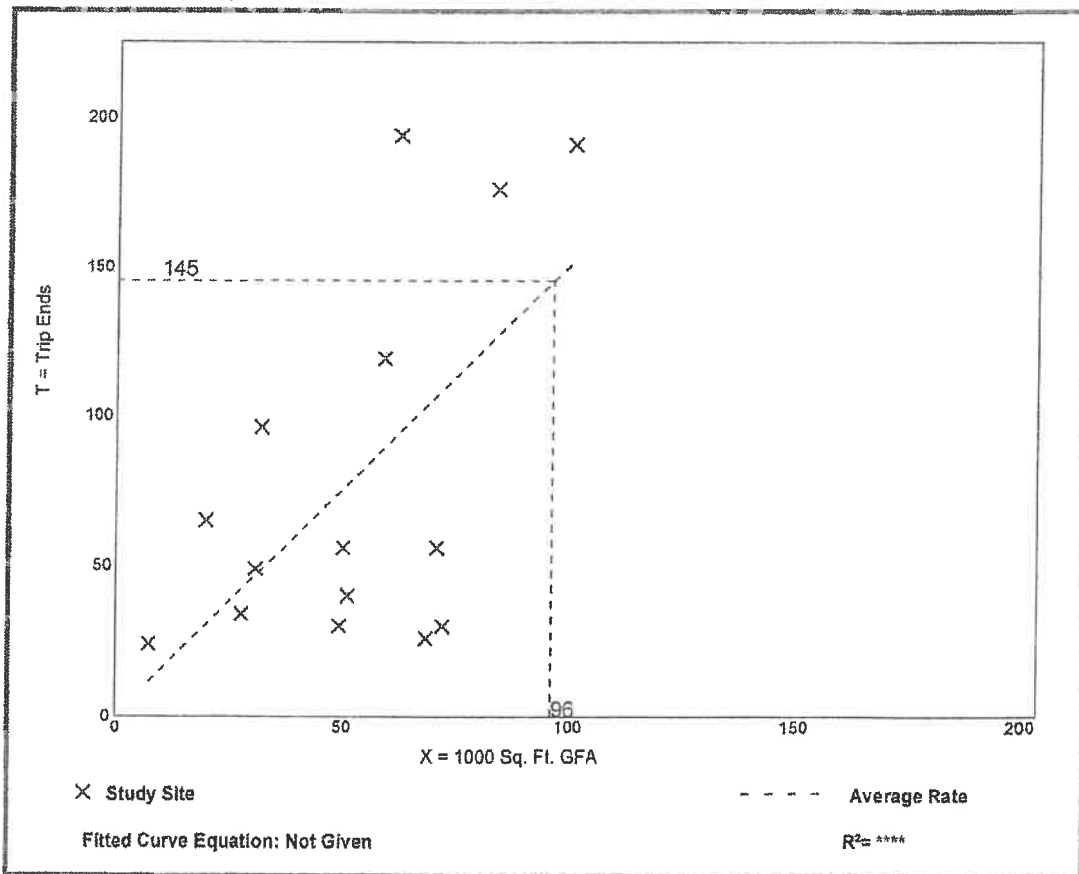
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 15
Avg. 1000 Sq. Ft. GFA: 52
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.51	0.38 - 3.25	0.95

Data Plot and Equation



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

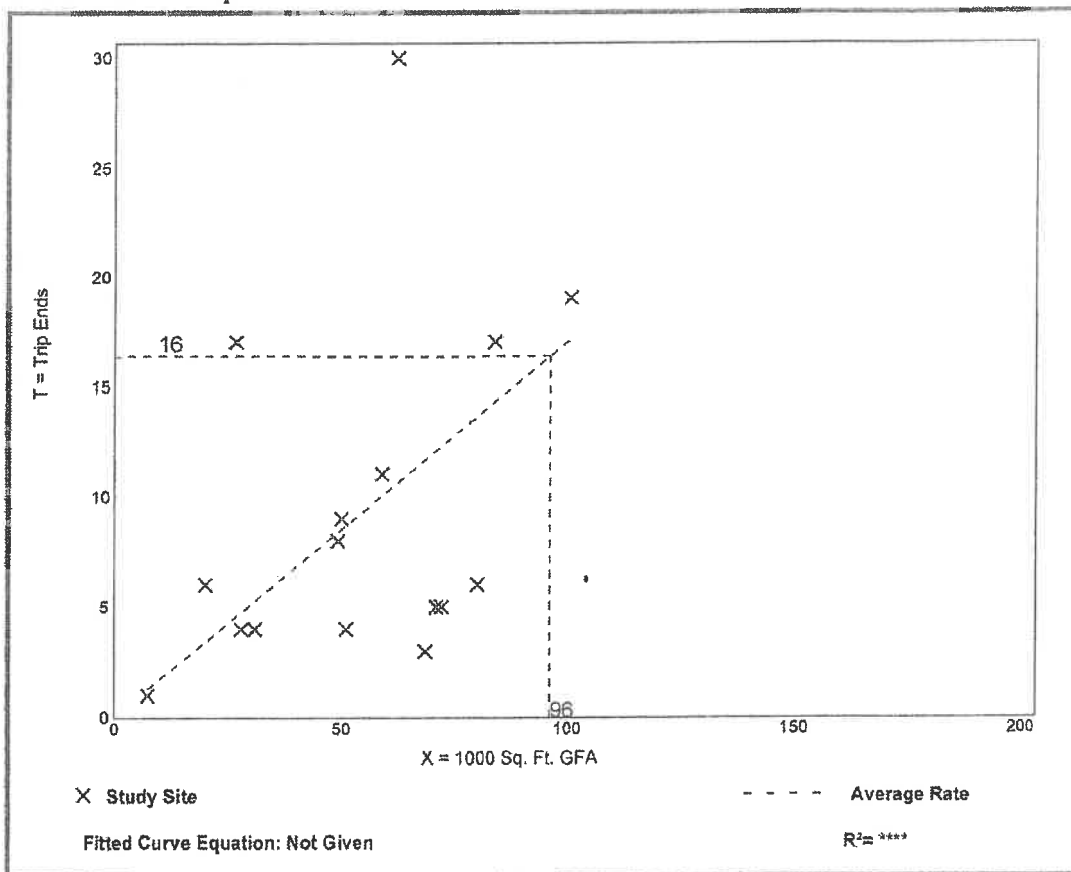
Mini-Warehouse (151)

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: 16
 Avg. 1000 Sq. Ft. GFA: 54
 Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.04 - 0.64	0.14

Data Plot and Equation



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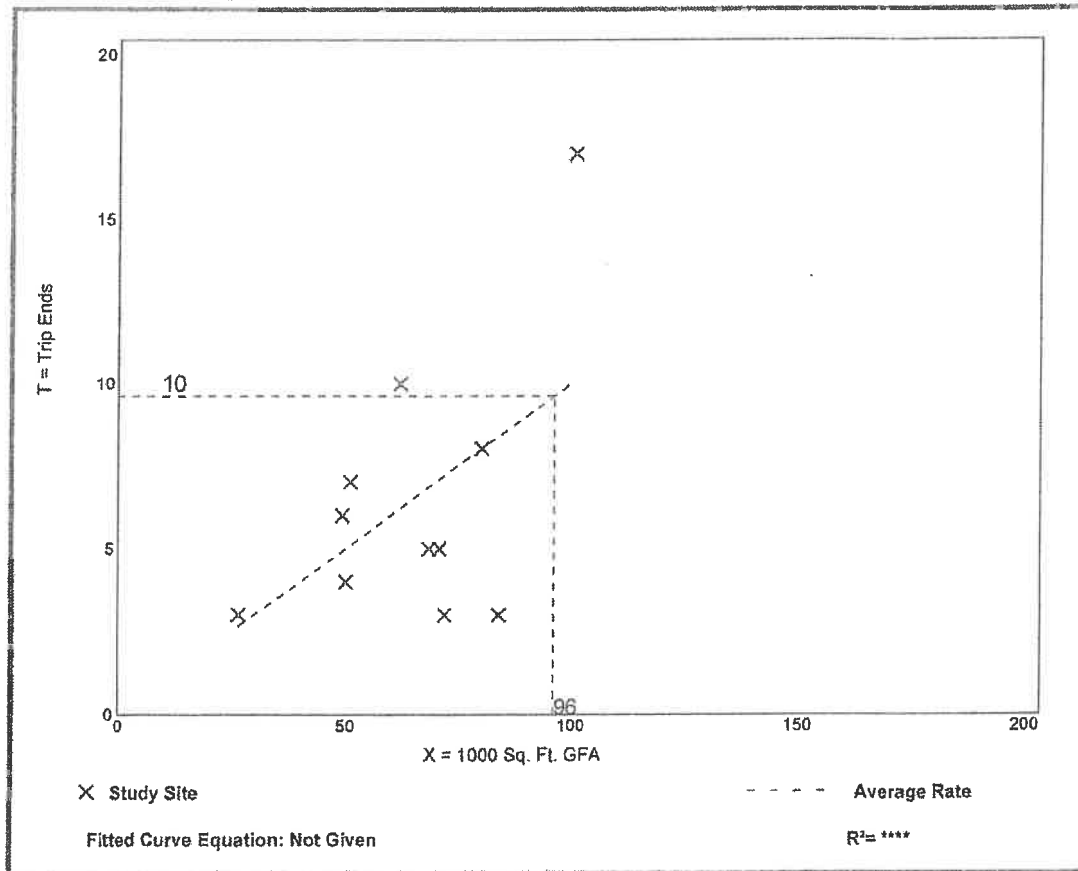
Mini-Warehouse (151)

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: 11
 Avg. 1000 Sq. Ft. GFA: 65
 Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.10	0.04 - 0.17	0.05

Data Plot and Equation



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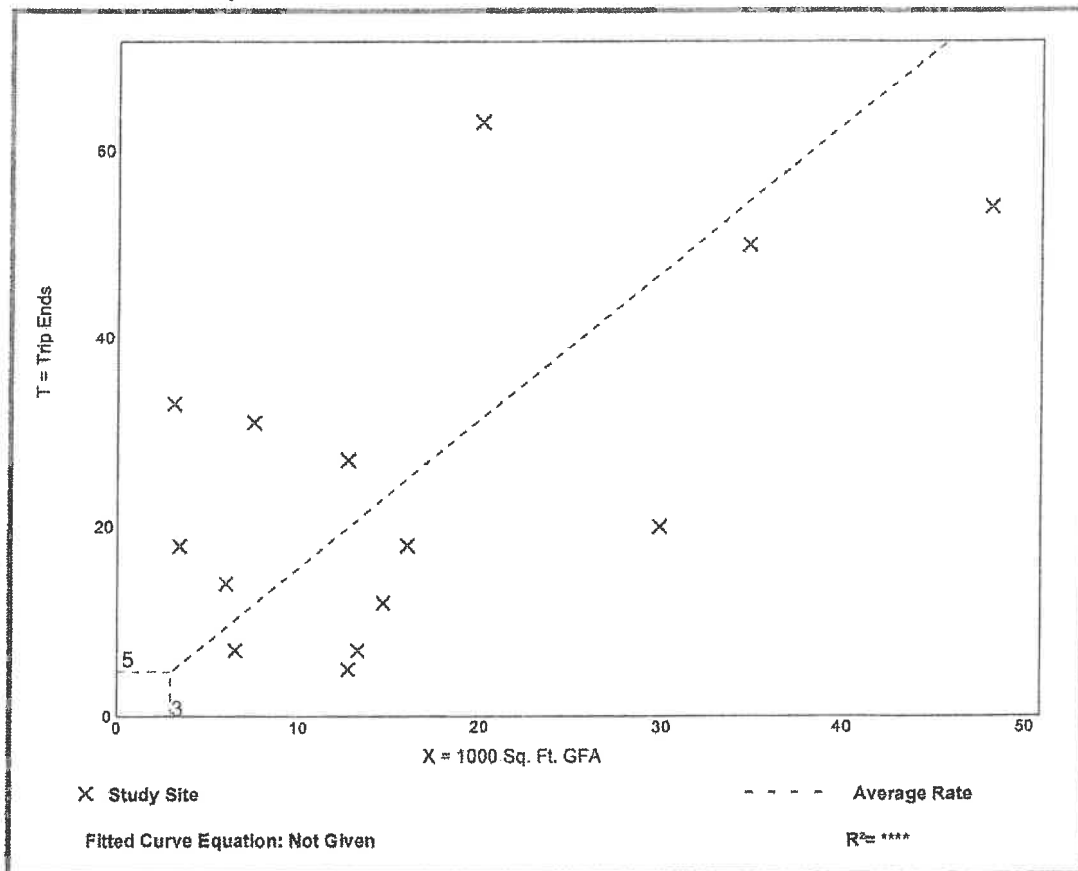
Building Materials and Lumber Store (812)

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: 14
Avg. 1000 Sq. Ft. GFA: 16
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.57	0.39 - 10.58	1.51

Data Plot and Equation



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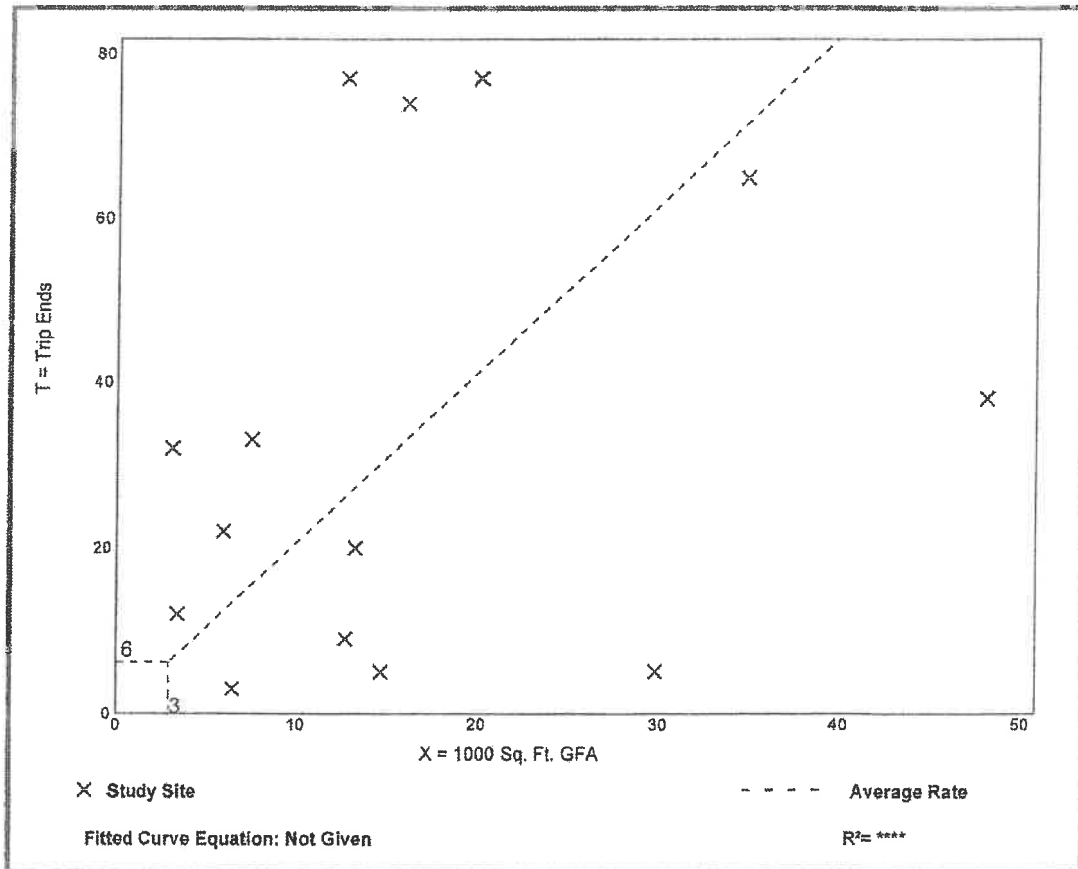
Building Materials and Lumber Store (812)

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: 14
 Avg. 1000 Sq. Ft. GFA: 16
 Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.06	0.17 - 10.26	2.08

Data Plot and Equation



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Building Materials and Lumber Store (812)

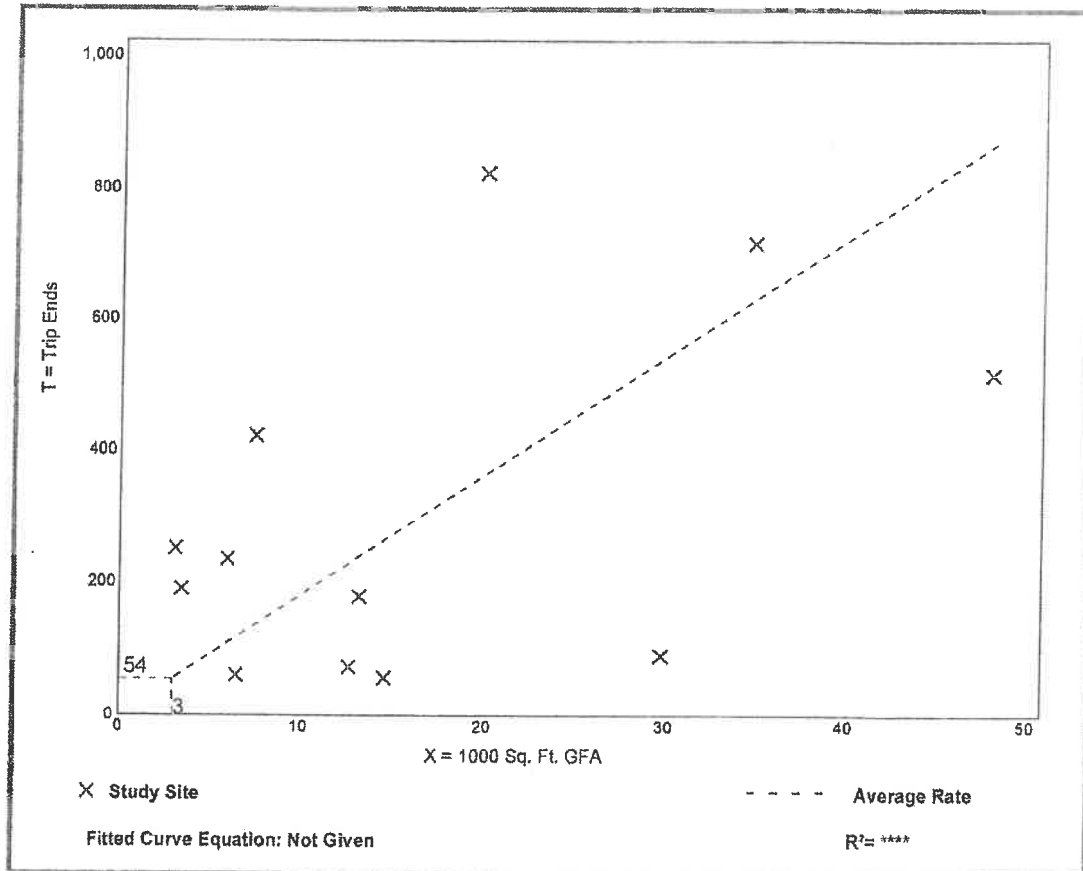
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 12
Avg. 1000 Sq. Ft. GFA: 17
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
18.05	3.02 - 80.45	17.54

Data Plot and Equation



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

Land Use: 812

Building Materials and Lumber Store

Description

A building materials and lumber store is a free-standing building that sells hardware, building materials, and lumber. The lumber may be stored in the main building, yard, or storage shed. Hardware/paint store (Land Use 816) and home improvement superstore (Land Use 862) are related uses.

Additional Data

Outside storage areas are not included in the overall gross floor area measurements. However, if storage areas are located within the principal outside faces of the exterior walls, they are included in the overall gross floor area of the building.

Time-of-day distribution data for this land use are presented in Appendix A. For the nine general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:30 and 10:30 a.m. and 12:30 and 1:30 p.m., respectively.

The sites were surveyed in the 1980s and the 2010s in California, New York, and Texas.

Source Numbers

126, 280, 879

Building Materials and Lumber Store (812)

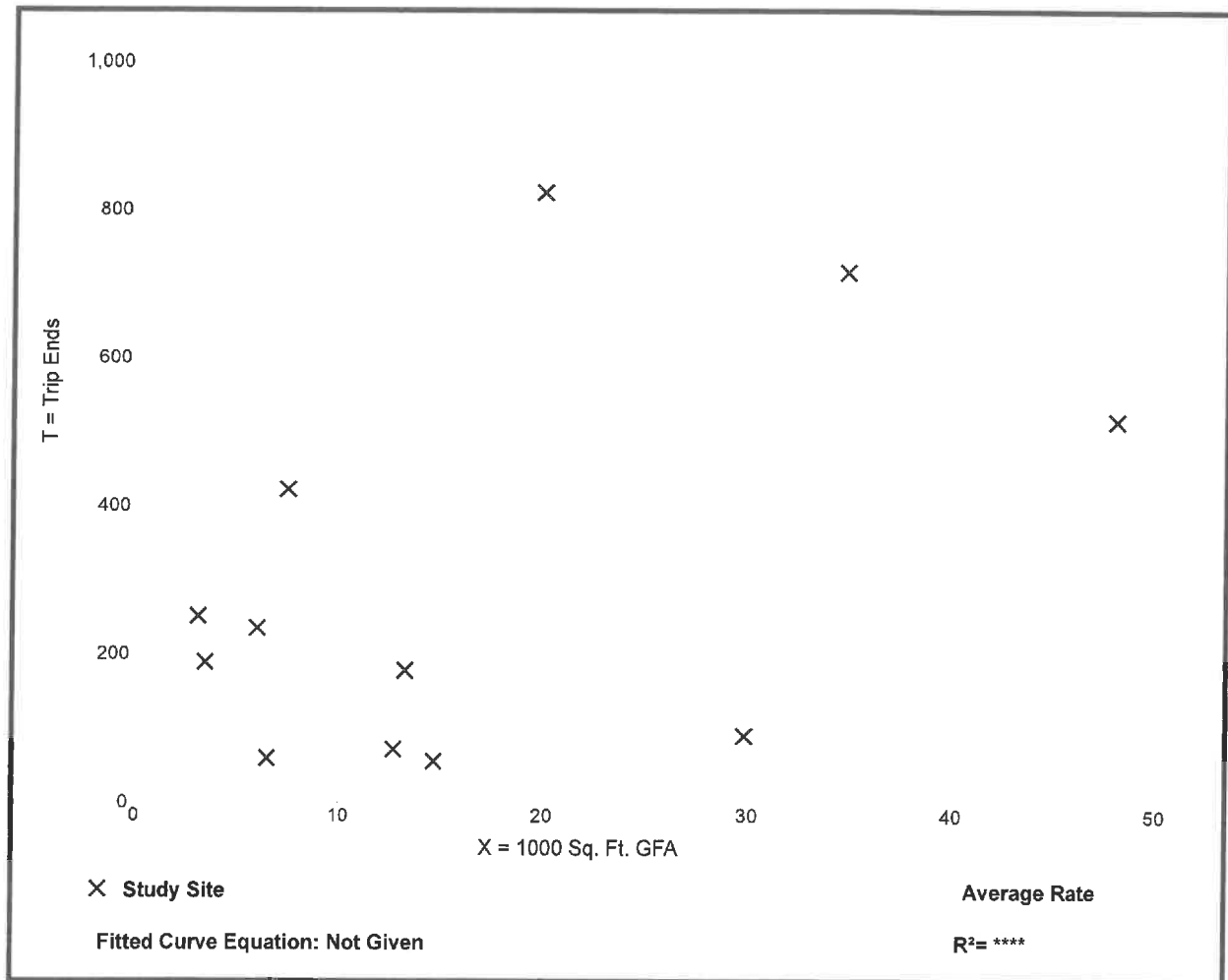
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 12
Avg. 1000 Sq. Ft. GFA: 17
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
18.05	3.02 - 80.45	17.54

Data Plot and Equation



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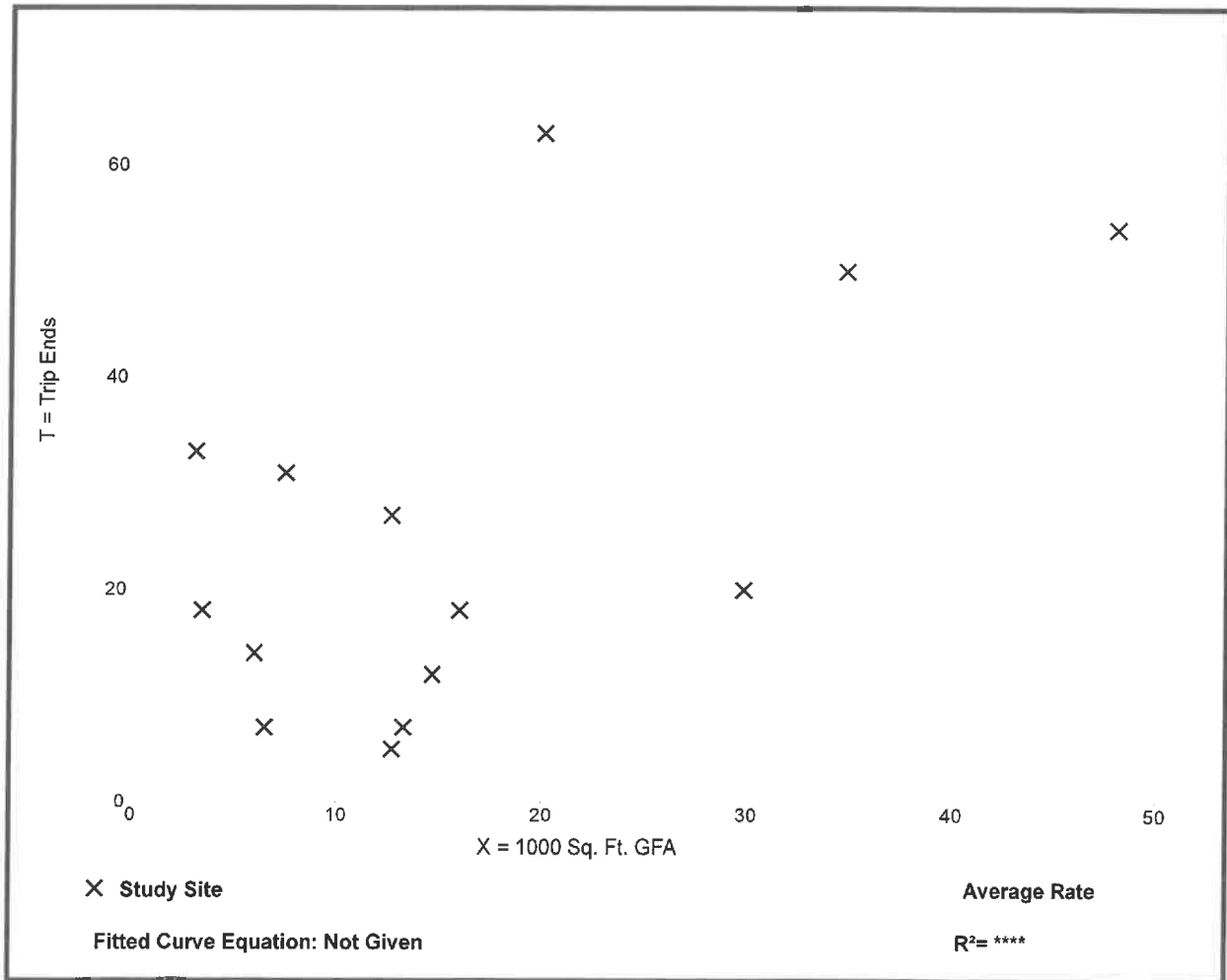
Building Materials and Lumber Store (812)

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: 14
 Avg. 1000 Sq. Ft. GFA: 16
 Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.57	0.39 - 10.58	1.51

Data Plot and Equation



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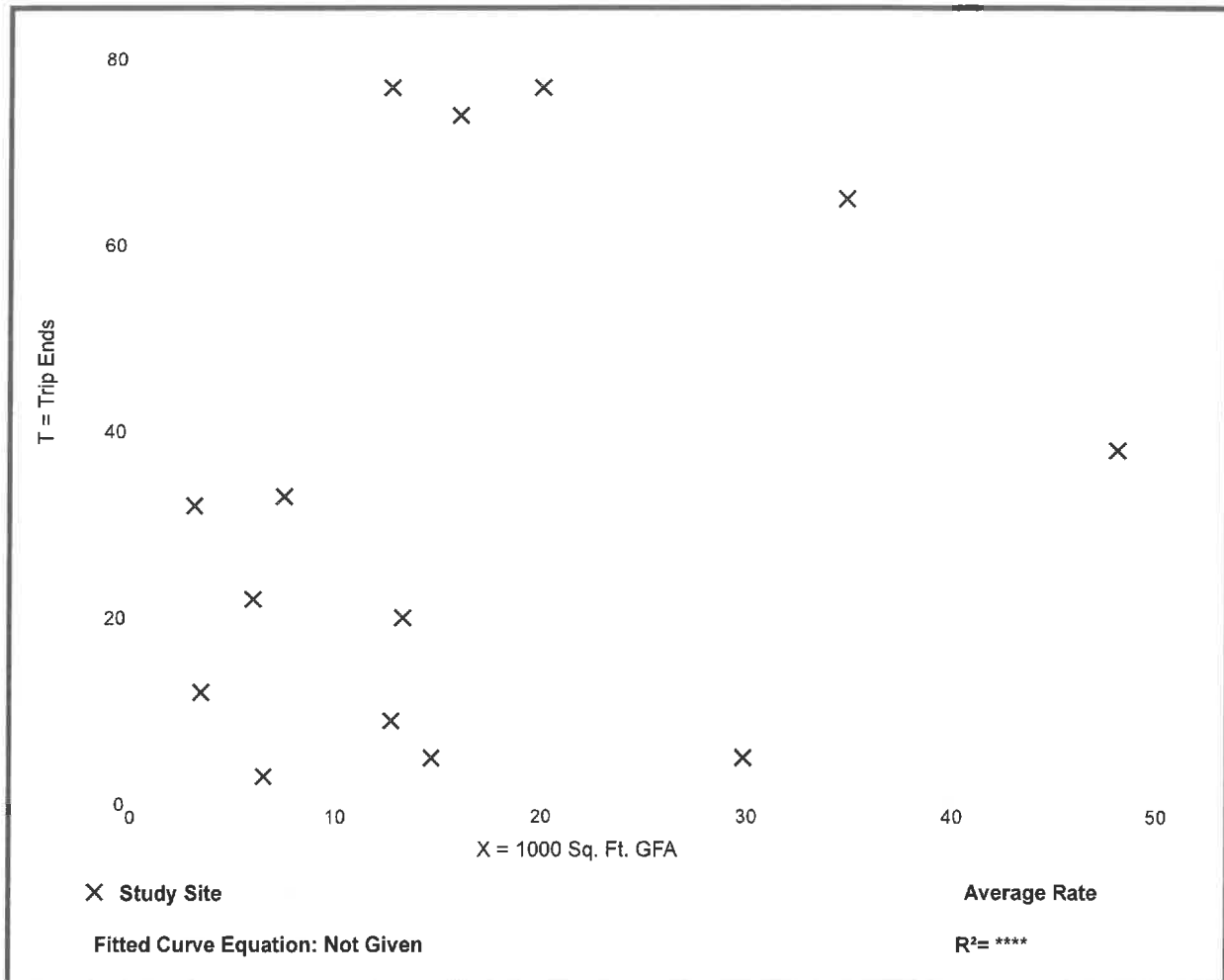
Building Materials and Lumber Store (812)

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: 14
 Avg. 1000 Sq. Ft. GFA: 16
 Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.06	0.17 - 10.26	2.08

Data Plot and Equation



Land Use: 840

Automobile Sales (New)

Description

A new automobile sales dealership is typically located along a major arterial street characterized by abundant commercial development. The sale or leasing of new cars is the primary business at these facilities; however, automobile services, parts sales, and used car sales may also be available. Some dealerships also include leasing options, truck sales, and servicing. Automobile sales (used) (Land Use 841) and recreational vehicle sales (Land Use 842) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:15 a.m. and 12:15 p.m. and 1:45 and 2:45 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, Georgia, Indiana, New York, North Carolina, Oregon, Texas, Vermont, and Virginia.

Source Numbers

260, 271, 280, 328, 414, 424, 427, 438, 440, 507, 571, 583, 612, 715, 728, 880, 881, 936, 974, 975

Automobile Sales (New) (840)

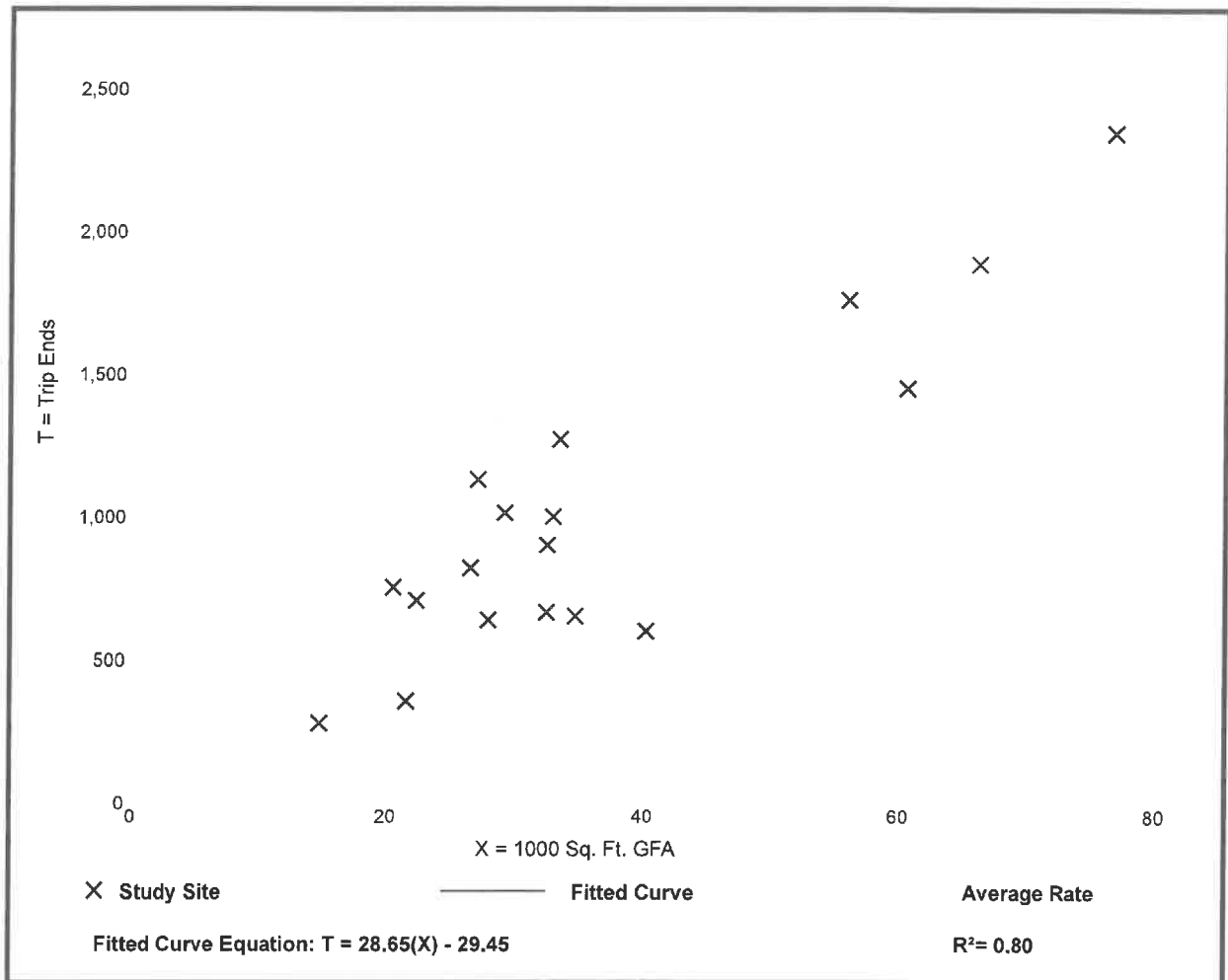
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 36
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
27.84	14.98 - 41.78	7.01

Data Plot and Equation



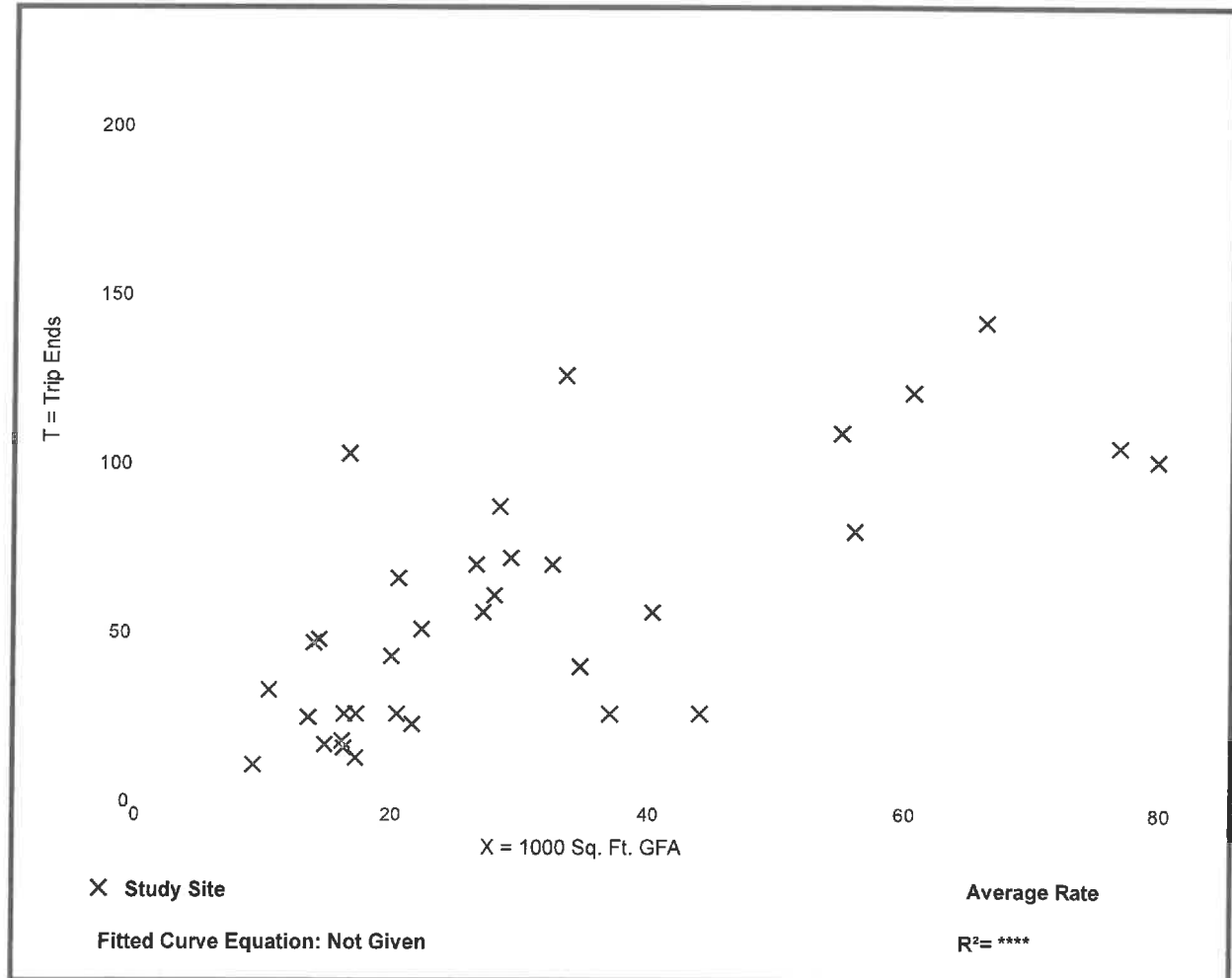
Automobile Sales (New) (840)

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: 31
 Directional Distribution: 73% entering, 27% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.87	0.59 - 6.17	0.95

Data Plot and Equation



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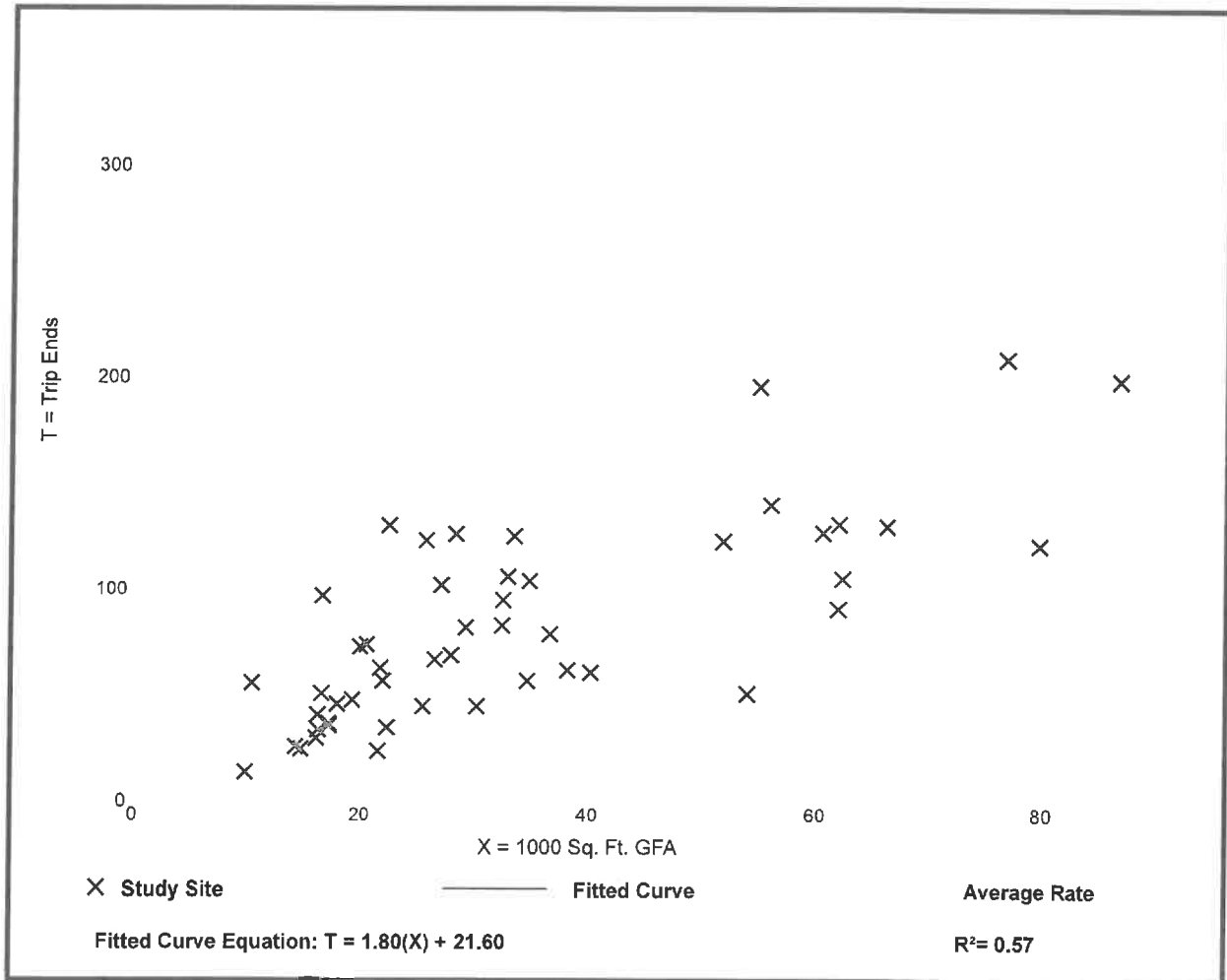
Automobile Sales (New) (840)

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: 49
 Avg. 1000 Sq. Ft. GFA: 34
 Directional Distribution: 40% entering, 60% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.43	0.94 - 5.81	0.99

Data Plot and Equation



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