



Planning and Zoning

47 S. Main Street • Room 208 • Tooele, UT 84074

Phone: (435) 843-3160 • Fax: (435) 843-3252

<https://tooeleco.org>

REZ 2024-109

Rezone Summary and Recommendation

Public Body: Tooele County Planning Commission

Meeting Date: September 4, 2024

Parcel ID: 06-018-0-0016

Property Address: Not yet given.

Unincorporated: Tooele

Request: Rezone parcels from MU-40 (Mixed use, 40-acre min.) to RR-1 (Rural Residential 1-acre min.).

Planner: Trish DuClos

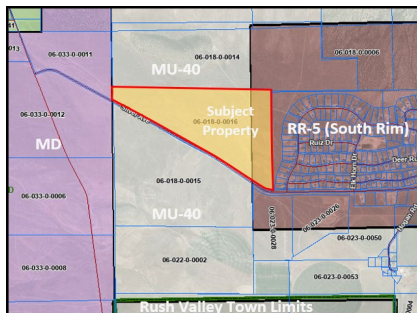
Planning Commission Recommendation: Not Yet Received.

Applicant Name: Doug and Matt Hogan

PROJECT DESCRIPTION

Doug and Matt Hogan are requesting a rezone of the parcel 06-018-0-0016 from MU-40 (Mixed use, 40-acre min.) and RR-5 (Rural Residential, 5-acre min.) to RR-1 (Rural Residential, 1-acre min.). The applicant would like to create a subdivision of at least 1-acre lots in the future.

SITE & VICINITY DESCRIPTION (see attached map)



The subject property is located North of Silver Avenue, just West of South Rim subdivisions. The property is 307.66 acres in size.

ZONE CONSIDERATIONS

Requirement	Existing Zone (MU-40)	Existing Zone (RR-5)	Proposed Zone (RR-1)
Height	35 Feet	35 Feet	35 Feet
Front Yard Setback	30 Feet	30 Feet	30 Feet
Side Yard Setback	30 Feet (both Main and Accessory Buildings. *Accessory building is allowed 10-foot setback if located 10 feet behind main)	20 Feet (both Main and Accessory Buildings. *Accessory building is allowed 10-foot setback if located 10 feet behind main)	15 Feet (both Main and Accessory Buildings. *Accessory building is allowed 10-foot setback if located 10 feet behind main)
Rear Yard Setback	Main Building: 60 Feet Accessory Buildings: *10 Feet	Main Building: 50 Feet Accessory Buildings: *10 Feet	Main Building: 30 Feet Accessory Buildings: 10 Feet
Lot Width	660 Feet	220 Feet	125 Feet

Lot Area	40 Acre Minimum	5 Acre Minimum	1 Acre Minimum
Maximum Building Coverage	5%	10%	20%
Required Improvements	Street grading; street base; on-site surface drainage facilities; culinary water facilities; wastewater disposal; and street monuments.	Street grading; street base; on-site surface drainage facilities; culinary water facilities; wastewater disposal; and street monuments.	Street Grading, Street Base, On-Site Surface Drainage Facilities, Culinary Water Facilities, Wastewater Disposal and Street Monuments
Compatibility with existing buildings/lots in terms of size, scale and height.			Yes

GENERAL PLAN CONSIDERATIONS

According to the future land use map of the Tooele County General Plan Update 2022, the subject property is located entirely in a residential geographical area. The planning commission & County Council should determine whether or not the requested rezone fits the general area and General Plan.

ISSUES OF CONCERN/PROPOSED MITIGATION

The applicant does not currently have water rights to the property. They have submitted the state's information on open appropriation in the area. If required, the applicant has sufficient water rights in the same subbasin area that could be transferred to this area.

NEIGHBORHOOD RESPONSE

Not yet received. Any comments that are received from the surrounding neighbors or affected entities will be addressed at the planning commission meeting.

PLANNING COMMISSION RESPONSE

Not yet received.

PLANNING STAFF ANALYSIS

Planning staff found the proposed rezone aligns with the Tooele County General Plan update 2022. The concept plan allows for trails and open space. The applicant provided a will serve letter that L&B Development Company will provide culinary water service the area. The applicant will provide proof of water at subdivision phase.

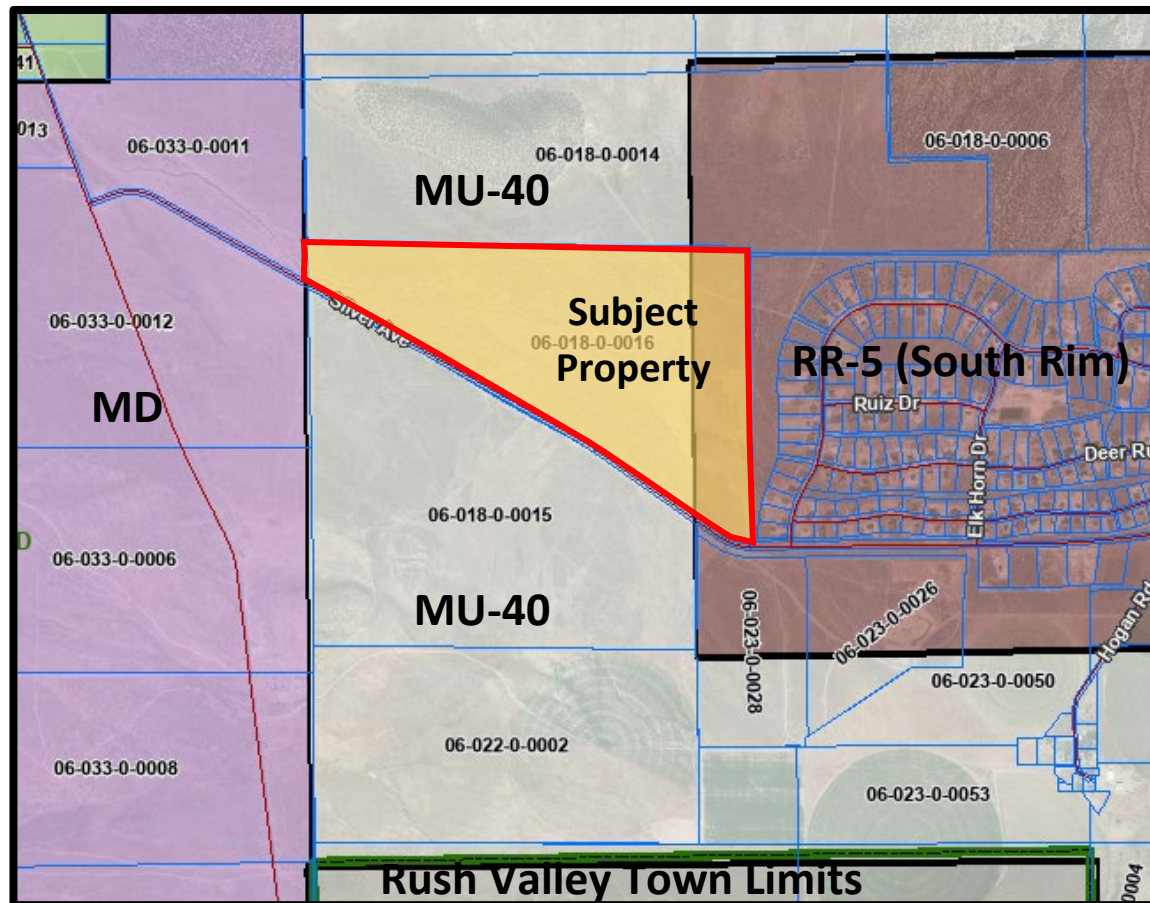
The Traffic Impact Study suggests Stockton City change the Silver Ave/Connor Ave/Grant Ave intersection by 2029. Mostly because of the skewed additional access point Grant Ave provides, among the already existing moderate level of service traffic has during PM peak hours. This intersection would approach close to the worst level of service by 2029, during PM peak travel.

PLANNING STAFF RECOMMENDATION

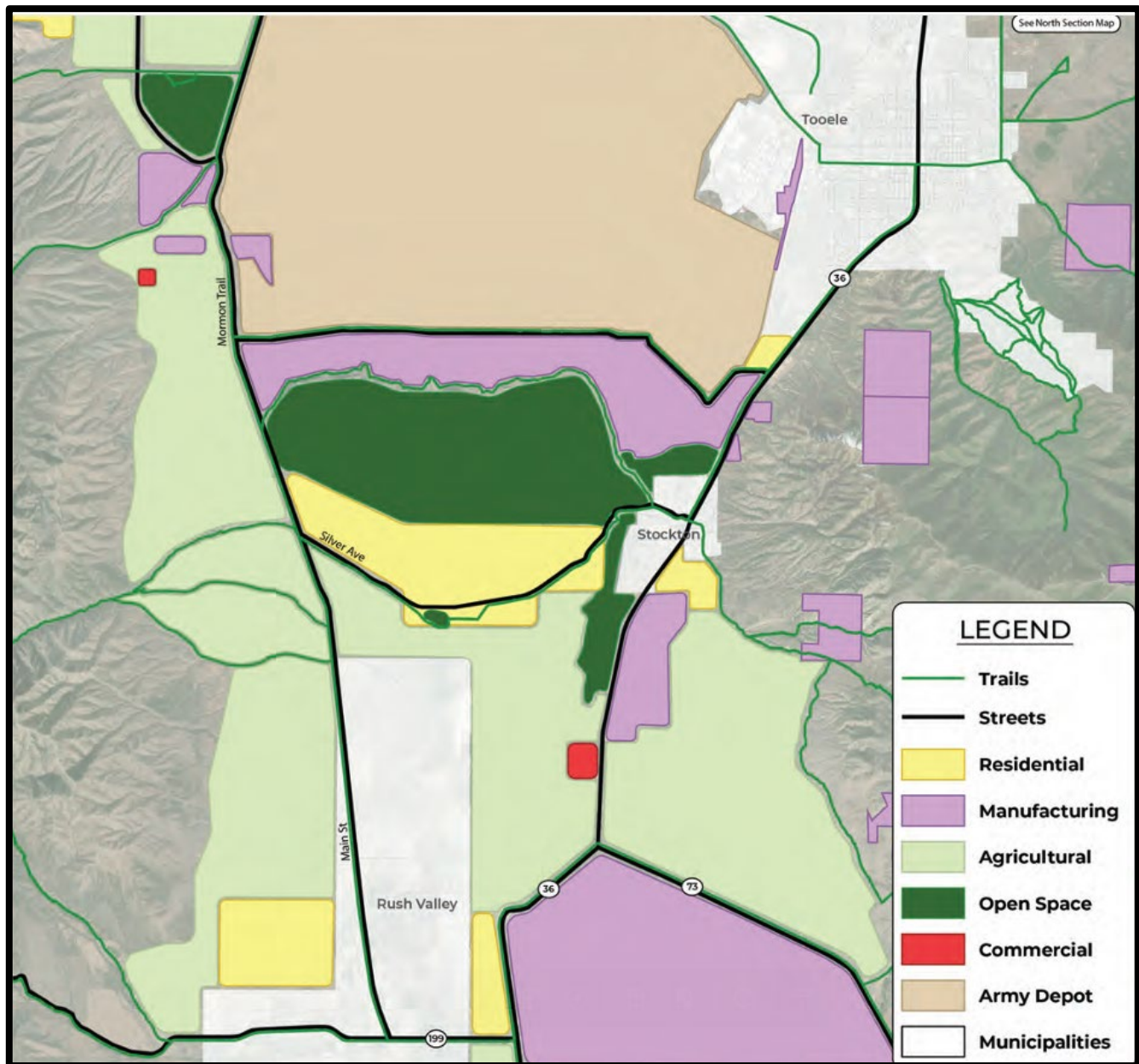
Planning Staff recommends that the Tooele County Planning Commission analyzes the information provided in this Staff Report to ensure that the proposed rezone request would be compatible with existing residential uses and infrastructure in the surrounding area prior to making a recommendation to the Tooele County Council.

REZ 2024-109: Rezone from MU-40 (Multiple Use, 40-Acre Min.) to RR-1 (Rural Residential, 1-Acre Min.).

West of South Rim (Parcel ID: 06-018-0-0016)



General Plan Land Use Map – South Section 2022



Rezone Application

Parcel # 6-18-16

Subdivision Name: West South Rim Subdivision

Rezone Application Checklist

- a) Parcel #6-18-16 is the parcel directly west of The Benches at South Rim Subdivision. The parcel is currently zoned MU-40. Applicants are requesting the parcel be rezoned to RR1 to allow for the development of the West South Rim Subdivision. The West South Rim Subdivision is a rural residential subdivision similar to The Benches at South Rim. The 307.66 acre parcel is owned by South Rim LC and has historically been used for grazing cattle. The surface of the ground is covered by a mixture of grasses and sage brush. Attached are pictures showing what the parcel looks like right now.



This photo is taken from Silver Avenue looking north where this parcel (eastern edge) abuts the Benches at South Rim Subdivision (west edge).



This photo is taken from Silver Avenue looking North across the center of the parcel.



This photo is taken from Silver Avenue looking North across the West Edge of the parcel.



This photo is taken from Silver Avenue at the Western edge of the parcel looking back in a North Easterly direction.

The parcel is mostly flat with good topsoil. The Hickman Canyon drainage runs across the parcel and has been accounted for in this proposal.

- b) The legal description has been submitted as a separate attachment to this application.

- c) The current zoning of the parcel is MU-40. Tooele County Land Use Ordinance 15-1-2 provides the following restrictions for MU-40:

15-1-2. MU-40 development restrictions.

The development restrictions in MU-40 zoning districts are as follows:

- (1) Minimum lot size is 40 acres (1,742,400 sq. ft.). A six (6) percent reduction in minimum lot size shall be allowed for dedication of public rights-of-way providing access to and past the affected lot or parcel.
- (2) Minimum width – 660 feet.
- (3) Minimum frontage on a public street or an approved private street – 60 feet.
- (4) Minimum yard setback requirements:
 - (a) front yard – 30 feet,
 - (b) rear yard:
 - (i) main building – 60 feet, and
 - (ii) accessory buildings – 10 feet
 - (c) side yard:
 - (i) main building – 30 feet; and
 - (ii) accessory buildings:
 1. from the front setback to distance ten feet behind the main dwelling – 30 feet.
 2. from a distance ten feet behind the dwelling to the rear of the lot – 10 feet.
- (5) On corner lots, two front yards and two side yards are required.
- (6) Maximum building height – 35 feet
- (7) Maximum building coverage: 5%
- (8) Required improvements:
 - (a) street grading;
 - (b) street base;
 - (c) on-site surface drainage facilities;
 - (d) culinary water facilities;
 - (e) wastewater disposal; and
 - (f) street monuments. (Ord. 2005-30, 11/22/05)

The proposed zoning is RR-1. Tooele County Land Use Ordinance 15-3-2 provides the following restrictions for RR-1:

15-3-2. RR-1 development restrictions.

The development restrictions in RR-1 zoning districts are as follows:

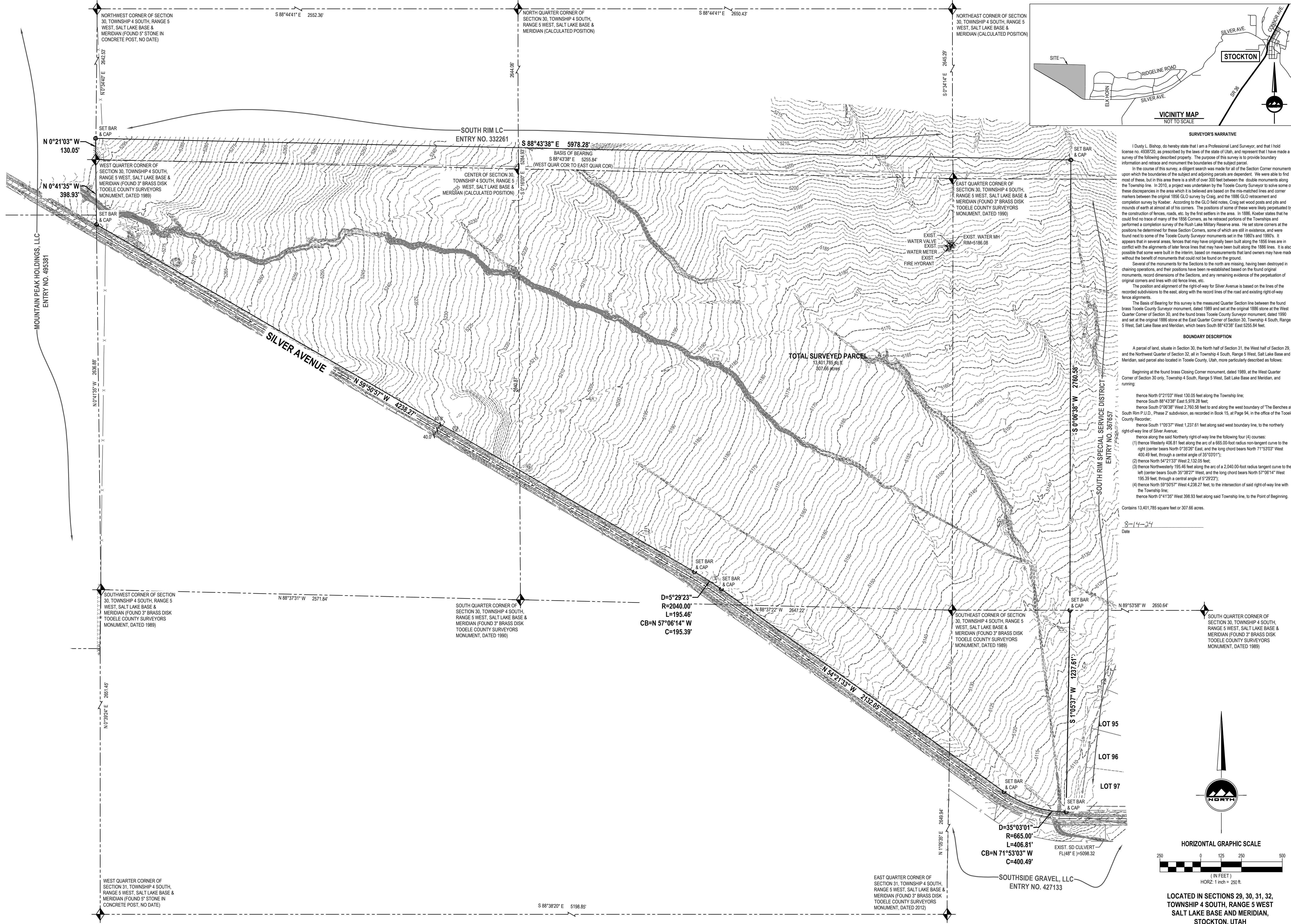
- (1) Minimum lot size is one (1) acre (43,560 sq. ft.). An up to six percent (6%) reduction in minimum lot size shall be allowed for the dedication of collector class type roads with a cross-section width 80 feet or larger or a portion thereof providing residential access to the proposed development. The collector class type road must be in an appropriate location which the County has determined is useful, and the road shall be finished within 15 years from the approval date of the reduction in lot size. The cumulative square footage reduction in minimum lot size within the subdivision development shall be equal to the square footage of the dedicated portion of the collector class type road, up to a maximum of a six percent (6%) reduction in minimum lot sizes for the development. Residential dwellings are not allowed to front onto collector class roads.
- (2) Minimum width – 125 feet.
- (3) Minimum frontage on a public street or an approved private street – 25 feet.
- (4) Minimum yard setback requirements:
 - (a) front yard – 30 feet,
 - (b) rear yard:

- (i) main building – 30 feet, and
 - (ii) accessory buildings – 10 feet
- (c) side yard:
 - (i) main building – 15 feet; and
 - (ii) accessory buildings:
 - 1. from the front setback to distance ten feet behind the main dwelling – 15 feet.
 - 2. from a distance ten feet behind the dwelling to the rear of the lot – 10 feet.
- (5) On corner lots, two front yards and two side yards are required.
- (6) Maximum building height – 35 feet
- (7) Maximum building coverage: 20%
- (8) Required improvements:
 - (a) street grading;
 - (b) street base;
 - (c) on-site surface drainage facilities;
 - (d) culinary water facilities;
 - (e) wastewater disposal; and
 - (f) street monuments. (Ord. 2019-08, 5/7/19; Ord. 2005-30,11/22/05)

- d) The Traffic Impact Study was performed by Hales Engineering and has been submitted as a separate attachment to this application.
- e) The proposed Plat Map was prepared by Ensign Engineering and has been submitted as a separate attachment to this application.
- f) The parcel would be accessed from Silver Avenue which is the main road running East/West between Stockton and Mormon Trail Road. All other roads within the project would be built and constructed consistent with the Plat Map submitted herewith. Culinary water service will be provided by L&B Development Company. A copy of the “Will Serve” letter from L&B Development Company is being submitted as a separate attachment to this application. The construction of additional infrastructure (storage tank and transmission lines) as well as the transfer of water rights are conditions of receiving culinary water service from L&B Development. These conditions are outlined in the Will Serve letter from L&B Development. Electricity will be provided by Rocky Mountain Power.
- g) The requested zone change is consistent with the Tooele County General Plan in that the proposed rezone is directly west of The Benches at South Rim, property that has been successfully developed as Rural Residential subdivision. This proposal is a logical and natural extension of The Benches at South Rim. Because the subject property abuts the western edge of The Benches at South Rim, there is an opportunity for efficient and economical use of existing infrastructure that can be expanded, specifically the roads, trails and water system. Connecting to or expanding existing infrastructure, particularly a culinary water system, is superior to pioneering new infrastructure and is consistent with the Tooele County General Plan. (See Tooele County Land Use Ordinance 3-1 (1), (2) and (3).) Developing adjacent to the existing subdivision is also consistent with the Tooele County General plan as it will prevent the “excessive scattering” of population. (See Tooele County Land Use Ordinance 3-1 (2)(b).)

- h) The area map and property owner's list were hand delivered from the Recorder's Office to County Planning Office on 7/31/2024.
- i) The location, description and acreage of land uses is included on the plat map submitted as a separate attachment to this application.
- j) There are 225 lots depicted on the plat map. The plat map includes all of the details associated with the lots including location, number, square footage, density and height. The plat map was submitted as a separate attachment to this application.
- k) There are zero non-residential buildings with respect to this application.
- l) The specific details relating to open space are included on the plat map submitted as a separate attachment to this application.
- m) The Hickman Canyon drainage, often referred to as the Hickman Wash is a significant feature of the property that has been accounted for in the engineering and design of the proposed development. See Plat Map, Traffic Impact Study, and Geotechnical Reports attached hereto.
- n) The subject parcel lies within an "open basin" meaning that water rights can be applied for through the State of Utah (State Engineer's Office). Application for ___ acre feet of water is being made with the State Engineer's Office; the water rights approved by the State Engineer would then be transferred to L&B Development who has agreed to provide culinary water service to this project consistent with the Will Serve Letter attached to this application.

Tooele County is currently constructing a fire station to better provide fire protection services to the north end of Rush Valley and will be in an ideal location to provide service to this property. The Tooele County School District provides bus service to the Benches at South Rim and this property is adjacent to said subdivision and would receive the same service.
- o) Storm water detention and retention details are included on the plat map submitted as a separate attachment to this application.
- p) This will be finalized at a later date.
- q) This will be determined and finalized at a later date.
- r) A detailed Traffic Impact Study completed by Hales Engineering was submitted as a separate attachment to this application.
- s) This is not a PUD.
- t) Applicants would be happy to address any other questions or concerns presented by the Planning Department or Planning Commission.





THE STANDARD IN ENGINEERING

TOOELE
169 N. Main St, Unit 1
Tooele, UT 84074
Phone: 435.843.3590

SANDY
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

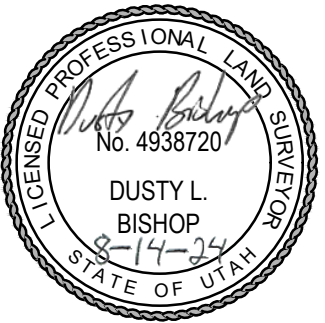
WWW.ENSIGNENG.COM

FOR:
ROBERT DREW SULLIVAN
43513 RIDGE PARK DRIVE
TEMECULA, CA 92590

CONTACT:
ROBERT DREW SULLIVAN
PHONE: 951-746-5896

WEST SOUTH RIM BOUNDARY SURVEY

2799 WEST SILVER AVENUE
STOCKTON, UTAH 84071



DUSTY L. BISHOP
No. 4358720
STATE OF UTAH

BOUNDARY SURVEY

PROJECT NUMBER: T1951N
PRINT DATE: 8/14/2024
PROJECT MANAGER: D. KINSMAN
DESIGNED BY: T. HUSSEY

1 OF 1

egal A PARCEL OF LAND, SITUATE IN SECTION 30, THE NORTH HALF OF SECTION 31, THE WEST HALF OF SECTION 29, AND THE NORTHWEST QUARTER OF SECTION 32, ALL IN TOWNSHIP 4 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN, SAID PARCEL ALSO LOCATED IN TOOELE COUNTY, UTAH, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE FOUND CLOSING CORNER MONUMENT REPRESENTING THE WEST QUARTER CORNER OF SECTION 30 ONLY, TOWNSHIP 4 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN, AND RUNNING; THENCE NORTH 0°21'03" WEST 130.05 FEET ALONG THE WESTERLY TOWNSHIP LINE;

THENCE SOUTH 88°43'38" EAST 5,978.28 FEET;

THENCE SOUTH 0°06'38" WEST 2,760.58 FEET TO AND ALONG THE WEST SUBDIVISION LINE OF THE BENCHES AT SOUTH RIM P.U.D., PHASE 2, WHICH IS RECORDED UNDER BOOK 15, PAGE 94 IN THE OFFICE OF THE TOOELE COUNTY RECORDER

THENCE SOUTH 1°05'37" WEST 1,237.61 FEET ALONG SAID WEST SUBDIVISION LINE TO THE NORTHERLY RIGHT-OF-WAY LINE OF SILVER AVENUE;

THENCE ALONG THE SAID NORTHERLY RIGHT-OF-WAY LINE THE FOLLOWING FOUR (4) COURSES;

(1) THENCE WESTERLY 406.81 FEET ALONG THE ARC OF A 665.00 FEET RADIUS NON-TANGENT CURVE TO THE RIGHT (CENTER BEARS NORTH 0°35'26" EAST AND THE LONG CHORD BEARS NORTH 71°53'03" WEST 400.49 FEET THROUGH A CENTRAL ANGLE OF 35°03'01");

(2) THENCE NORTH 54°21'33" WEST 2,132.05 FEET;

(3) THENCE NORTHWESTERLY 195.46 FEET ALONG THE ARC OF A 2,040.00 FEET RADIUS TANGENT CURVE TO THE LEFT (CENTER BEARS SOUTH 35°38'27" WEST AND THE LONG CHORD BEARS NORTH 57°06'14" WEST 195.39 FEET THROUGH A CENTRAL ANGLE OF 5°29'23");

(4) THENCE ALONG A LINE NON-TANGENT TO SAID CURVE, NORTH 59°50'57" WEST, A DISTANCE OF 4,238.27 FEET TO A POINT ON THE SAID WESTERLY TOWNSHIP LINE;

THENCE NORTH 0°41'35" WEST 398.93 FEET ALONG SAID TOWNSHIP LINE, TO THE POINT OF BEGINNING. CONTAINS 13,401,785 SQUARE FEET OR 307.66 ACRES. OUT OF 6-18-13, 6-22-5 AND 6-18-10 FOR 2025 YEAR. 307.66 AC

06-018-0016

West South Rim

Traffic Impact Study



Tooele County, Utah

April 26, 2024

UT24-2740



EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed West South Rim development located in Tooele County, Utah. The development is located on the north side of Silver Avenue, between Mormon Trail Road and Ridgeline Road.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2024) and future (2029) conditions with and without the proposed project and to recommend mitigation measures as needed. The morning and evening peak hour level of service (LOS) results are shown in Table ES-1. An exhibit of the proposed mitigated roadway network is shown in Figure ES-1. A site plan of the project is provided in Appendix A.

Table ES-1: Peak Hour Level of Service Results

Intersection		Level of Service									
		Existing (2024)				Future (2029)					
		BG		+P		BG		+P		+P MIT	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Silver Avenue / Mormon Trail Road	a	a	a	a	a	a	a	a	a	a
2	Ridgeline Road / Silver Avenue	a	a	a	a	a	a	a	a	a	a
3	Grant Avenue / Silver Avenue / S.R. 36	a	c	a	c	a	c	b	e	a	c
4	Access 1 / Silver Avenue	-	-	a	a	-	-	a	a	a	a
5	Access 2 / Silver Avenue	-	-	a	a	-	-	a	a	a	a
6	Access 3 / Silver Avenue	-	-	a	a	-	-	a	a	a	a
7	Access 4 / Silver Avenue	-	-	a	a	-	-	a	a	a	a
1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter) 2. BG = Background (without project traffic), +P = Plus Project (with project traffic), MIT = Mitigated Scenario Source: Hales Engineering, April 2024											

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

Project Conditions

- The development will consist of 225 residential detached single-family units
- The project is anticipated to generate approximately 2,128 weekday daily trips, including 156 trips in the morning peak hour, and 214 trips in the evening peak hour
- Based on the anticipated traffic volumes, no auxiliary lanes are recommended

2024	Background	Plus Project
Findings	• Acceptable LOS	• Acceptable LOS
Mitigations	• Stockton City could consider restricting access to / from the north leg of Grant Avenue due to safety concerns with the existing skew.	• None
2029	Background	Plus Project
Assumptions	• 3% annual growth rate applied	• None
Findings	• Acceptable LOS	• Grant Ave / Silver Ave / S.R. 36: Poor LOS
Mitigations	• None	• Grant Ave / Silver Ave / S.R. 36: Install an emergency gate at the north leg of Grant Ave. Vehicles can reroute to Silver Ave or Honerine Ave to the south.



TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
SUMMARY OF KEY FINDINGS & RECOMMENDATIONS	ii
TABLE OF CONTENTS	iv
LIST OF TABLES	v
LIST OF FIGURES	v
I. INTRODUCTION	1
A. Purpose	1
B. Scope	2
C. Analysis Methodology	2
D. Level of Service Standards	2
II. EXISTING (2024) BACKGROUND CONDITIONS.....	4
A. Purpose	4
B. Roadway System	4
C. Traffic Volumes	4
D. Level of Service Analysis	4
E. Queuing Analysis	11
F. Mitigation Measures	11
III. PROJECT CONDITIONS	12
A. Purpose	12
B. Project Description	12
C. Trip Generation	12
D. Trip Distribution and Assignment	13
E. Access	13
F. Auxiliary Lanes	13
IV. EXISTING (2024) PLUS PROJECT CONDITIONS	22
A. Purpose	22
B. Traffic Volumes	22
C. Level of Service Analysis	22
V. FUTURE (2029) BACKGROUND CONDITIONS.....	31
A. Purpose	31
B. Roadway Network	31
C. Traffic Volumes	31
D. Level of Service Analysis	31
E. Queuing Analysis	38
F. Mitigation Measures	38
VI. FUTURE (2029) PLUS PROJECT CONDITIONS.....	39
A. Purpose	39
B. Traffic Volumes	39
C. Level of Service Analysis	39
D. Queuing Analysis	Error! Bookmark not defined.
E. Mitigation Measures	Error! Bookmark not defined.
F. Mitigated Scenario	Error! Bookmark not defined.

Appendix A: Project Site Plan
Appendix B: Turning Movement Counts
Appendix C: LOS Results
Appendix D: Queuing Results

LIST OF TABLES

Table 1: Level of Service Description	3
Table 2: Existing (2024) Background Peak Hour LOS	11
Table 3: Trip Generation	12
Table 4: Trip Distribution	13
Table 5: Existing (2024) Background Peak Hour LOS	22
Table 6: Existing (2024) Background Peak Hour LOS	31
Table 7: Future (2029) Plus Project Peak Hour LOS	39
Table 8: Future (2029) Mitigated Plus Project Peak Hour LOS	Error! Bookmark not defined.

LIST OF FIGURES

Figure 1: Vicinity map showing the project location in Tooele County, Utah	1
Figure 2: Existing (2024) background peak hour traffic volumes	5
Figure 3: Trip assignment for the peak hours	14
Figure 4: Existing (2024) plus project peak hour traffic volumes	23
Figure 5: Future (2029) background peak hour traffic volumes	32
Figure 6: Future (2029) plus project peak hour traffic volumes	40

I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed West South Rim development located in Tooele County, Utah. The proposed project is located on the north side of Silver Avenue, between Mormon Trail Road and Ridgeline Road. Figure 1 shows a vicinity map of the proposed development.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2024) and future (2029) conditions with and without the proposed project and to recommend mitigation measures as needed.

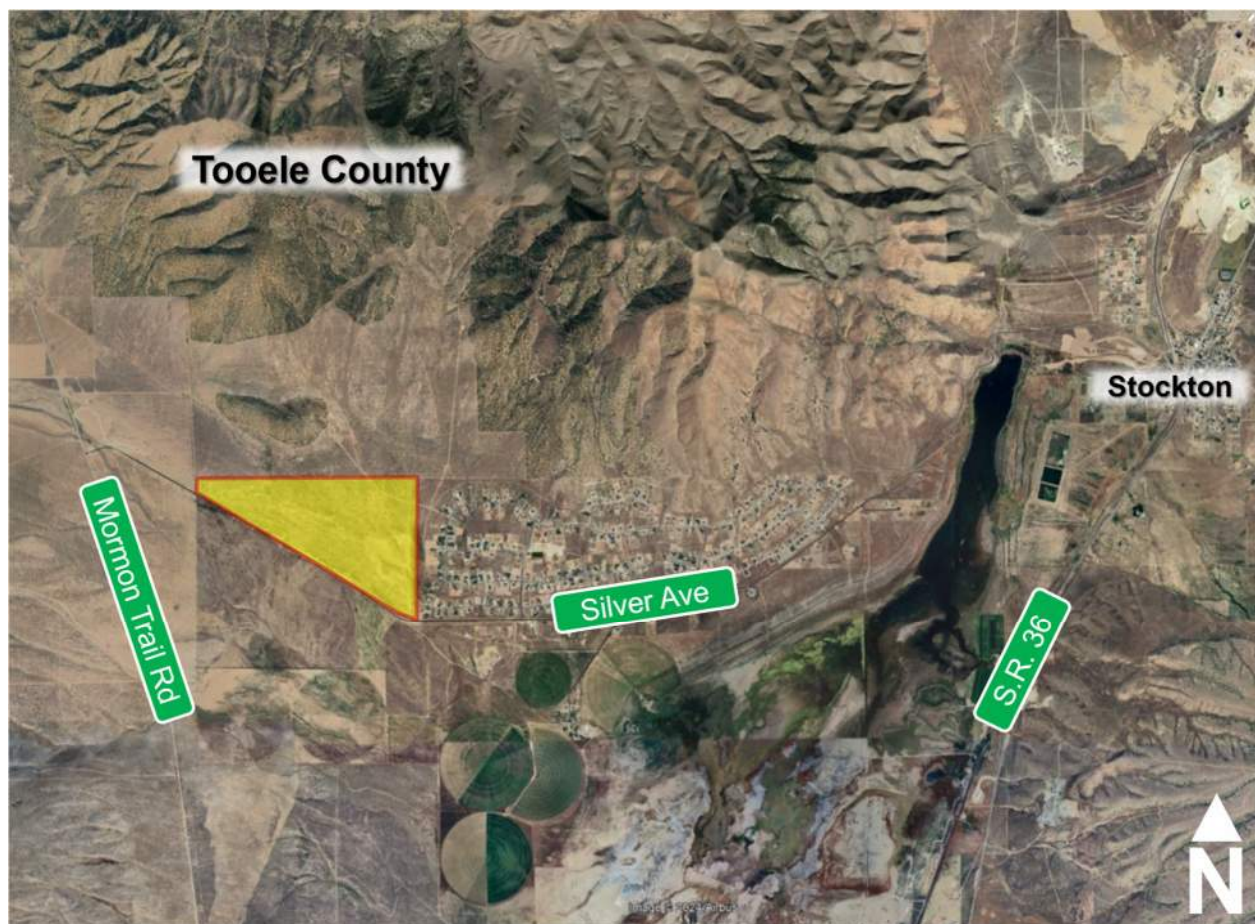


Figure 1: Vicinity map showing the project location in Tooele County, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersections:

- Silver Avenue / Mormon Trail Road
- Ridgeline Road / Silver Avenue
- Silver Avenue / S.R. 36
- Project Accesses (4) / Silver Avenue

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM), 7th Edition, 2022 methodology was used in this study to remain consistent with “state-of-the-practice” professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Synchro/SimTraffic software, which follow the HCM methodology, the peak hour LOS was computed for each study intersection. Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. The detailed LOS reports are provided in Appendix C. Hales Engineering also calculated the 95th percentile queue lengths for the study intersections using SimTraffic. The detailed queue length reports are provided in Appendix D.

Many of the figures in this report are printouts of the Synchro model. These figures are not meant to be a design exhibit for exact lane striping and design, due to the limitations of the Synchro software. Instead, the purpose of these figures is to show assumed peak hour turning movement volumes and the conceptual travel lane configuration of the study roadway network.

D. Level of Service Standards

For the purposes of this study, a minimum acceptable intersection performance for each of the study intersections was set at LOS D. If levels of service E or F conditions exist, an explanation and/or mitigation measures will be presented. A LOS D threshold is consistent with “state-of-the-practice” traffic engineering principles for urbanized areas.

Table 1: Level of Service Description

LOS		Description of Traffic Conditions	Average Delay (seconds/vehicle)	
			Signalized Intersections	Unsignalized Intersections
A		Free Flow / Insignificant Delay	≤ 10	≤ 10
B		Stable Operations / Minimum Delays	> 10 to 20	> 10 to 15
C		Stable Operations / Acceptable Delays	> 20 to 35	> 15 to 25
D		Approaching Unstable Flows / Tolerable Delays	> 35 to 55	> 25 to 35
E		Unstable Operations / Significant Delays	> 55 to 80	> 35 to 50
F		Forced Flows / Unpredictable Flows / Excessive Delays	> 80	> 50

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 7th Edition, 2022 Methodology (Transportation Research Board)

II. EXISTING (2024) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified, and potential mitigation measures recommended. This analysis provides a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site are described below:

Silver Avenue – is a county-maintained roadway. The roadway has one travel lane in each direction. The posted speed limit is 45 mph along the project boundary.

C. Traffic Volumes

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period traffic counts were performed at the following intersections:

- Silver Avenue / Mormon Trail Road
- Ridgeline Road / Silver Avenue
- Silver Avenue / S.R. 36

The counts were performed on Thursday, April 11, and Tuesday, April 16, 2024. The morning peak hour was determined to be between 7:15 and 8:15 a.m., and the evening peak hour was determined to be between 4:45 and 5:45 p.m. The evening peak hour volumes were approximately 56% higher than the morning peak hour volumes. Both the morning and evening peak hour volumes were used in the analysis. Detailed count data are included in Appendix B.

Figure 2 shows the existing morning and evening peak hour volumes as well as intersection geometry at the study intersections.

D. Level of Service Analysis

Hales Engineering determined that all study intersections are currently operating at acceptable levels of service during the morning and evening peak hours, as shown in Table 2. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2024) conditions.













Table 2: Existing (2024) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
Silver Avenue / Mormon Tral Road	WB Stop	a (2.8) / WBL	a (2.8) / WBL
Ridgeline Road / Silver Avenue	SB Stop	a (4.1) / SBL	a (3.8) / SBL
Grant Avenue / Silver Avenue / S.R. 36	EB/WB/NWB Stop	a (8.9) / WBT	c (16.4) / WBT

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.

2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, April 2024

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing was observed during the morning and evening peak hours.

F. Mitigation Measures

Because of safety concerns with the skewed angle of Grant Avenue at the Grant Avenue / Silver Avenue / S.R. 36 intersection, Stockton City could consider restricting turns into and out of the north end of Grant Avenue via an emergency gate. Users of this leg could reroute to the east leg of the intersection. The skew on Grant Avenue means that northbound vehicles need to look behind them to be able to pass through the intersection.

III. PROJECT CONDITIONS

A. Purpose

The project conditions discussion explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in Chapter I.

B. Project Description

The proposed West South Rim development is located on the north side of Silver Avenue, between Mormon Trail Road and Ridgeline Road. The development will consist of 225 residential detached single-family units. A concept plan for the proposed development is provided in Appendix A.

C. Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 11th Edition, 2021. Trip generation for the proposed project is included in Table 3.

The total trip generation for the development is as follows:

- Daily Trips: 2,128
- Morning Peak Hour Trips: 156
- Evening Peak Hour Trips: 214

Table 3: Trip Generation

Trip Generation Tooele County - West South Rim TIS								
Land Use ¹	# of Units	Unit Type	Trip Generation			New Trips		
			Total	% In	% Out	In	Out	Total
Weekday Daily								
Single-Family Detached Housing (210)	225	DU	2,128	50%	50%	1,064	1,064	2,128
AM Peak Hour								
Single-Family Detached Housing (210)	225	DU	156	26%	74%	41	115	156
PM Peak Hour								
Single-Family Detached Housing (210)	225	DU	214	63%	37%	135	79	214
1. Land Use Code from the Institute of Transportation Engineers (ITE) <i>Trip Generation</i> ,11th Edition,2021.								
SOURCE: Hales Engineering, April 2024								

D. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially near the site. According to online maps, the quickest route to/from Salt Lake Valley is via Mormon Trail Road. The resulting distribution of project generated trips during the morning and evening peak hour is shown in Table 4.

Table 4: Trip Distribution

Direction	% To/From Project
North (via S.R. 36)	60%
North (via Mormon Trail Road)	25%
South (via S.R. 36)	10%
South (via Mormon Trail Road)	5%

These trip distribution assumptions were used to assign the morning and evening peak hour trip generation at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.

E. Access

The proposed access for the site will be gained at the following locations:

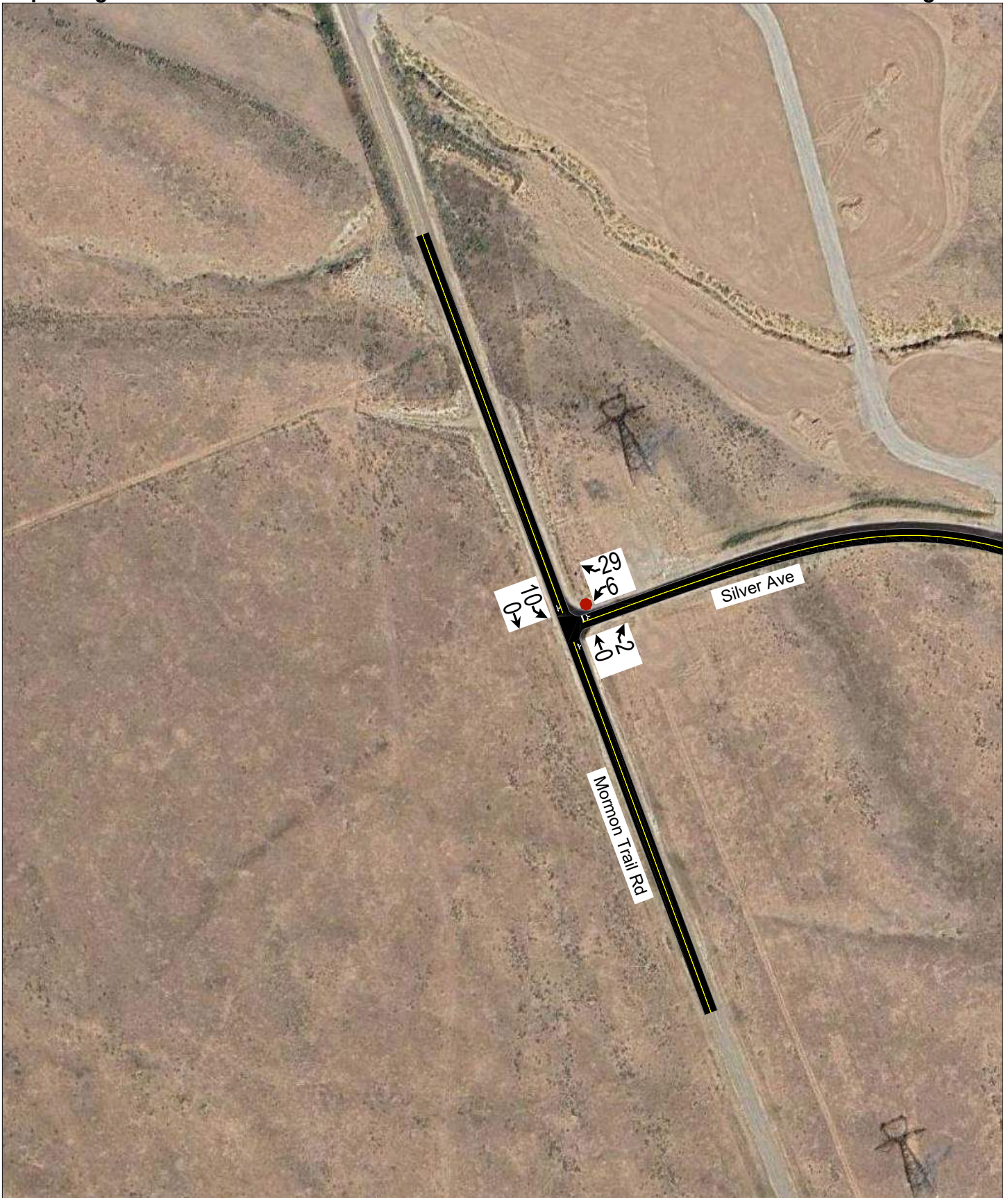
Silver Avenue:

- Access 1,2,3, and 4 will all be located approximately 550, 3,000, 5,500, and 5,800 feet northwest of the Silver Avenue / Ridgeline Road intersection, respectively. They will access the project on the north side of Silver Avenue. It is anticipated that the accesses will be stop-controlled.

F. Auxiliary Lanes

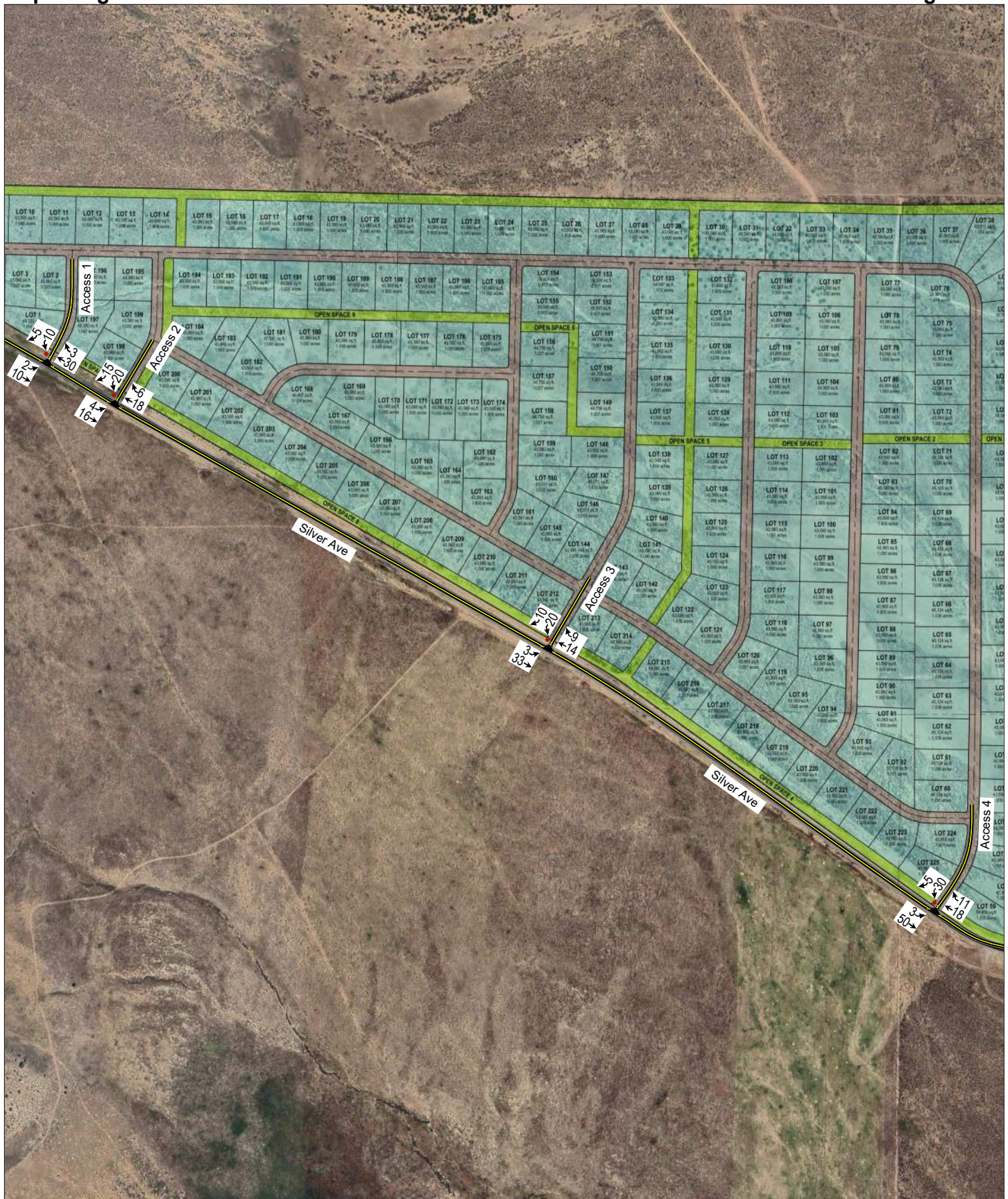
Auxiliary lanes are deceleration (ingress) or acceleration (egress) turn lanes that provide for safe turning movements that have less impact on through traffic. These lanes are sometimes needed at accesses or roadway intersections if right- or left-turn volumes are high enough.

Deceleration (ingress) lanes are generally needed when there are at least 50 right-turn vehicles or 25 left-turn vehicles in an hour. These guidelines were used for the County roadways in the study area. Based on these guidelines and the anticipated project traffic, no auxiliary lanes are recommended



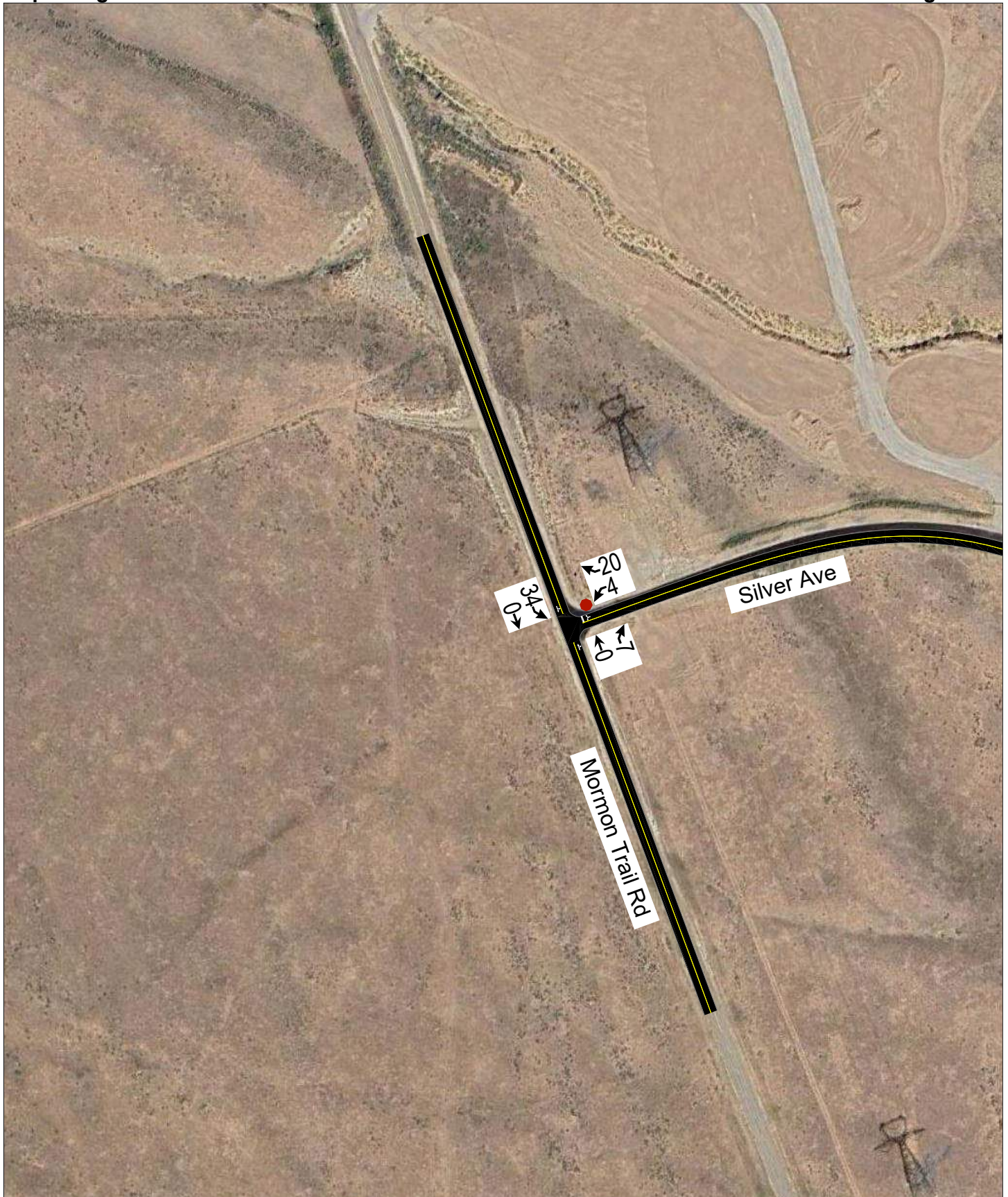
Tooele County - West South Rim TIS
Trip Assignment

Morning Peak Hour
Figure 3B



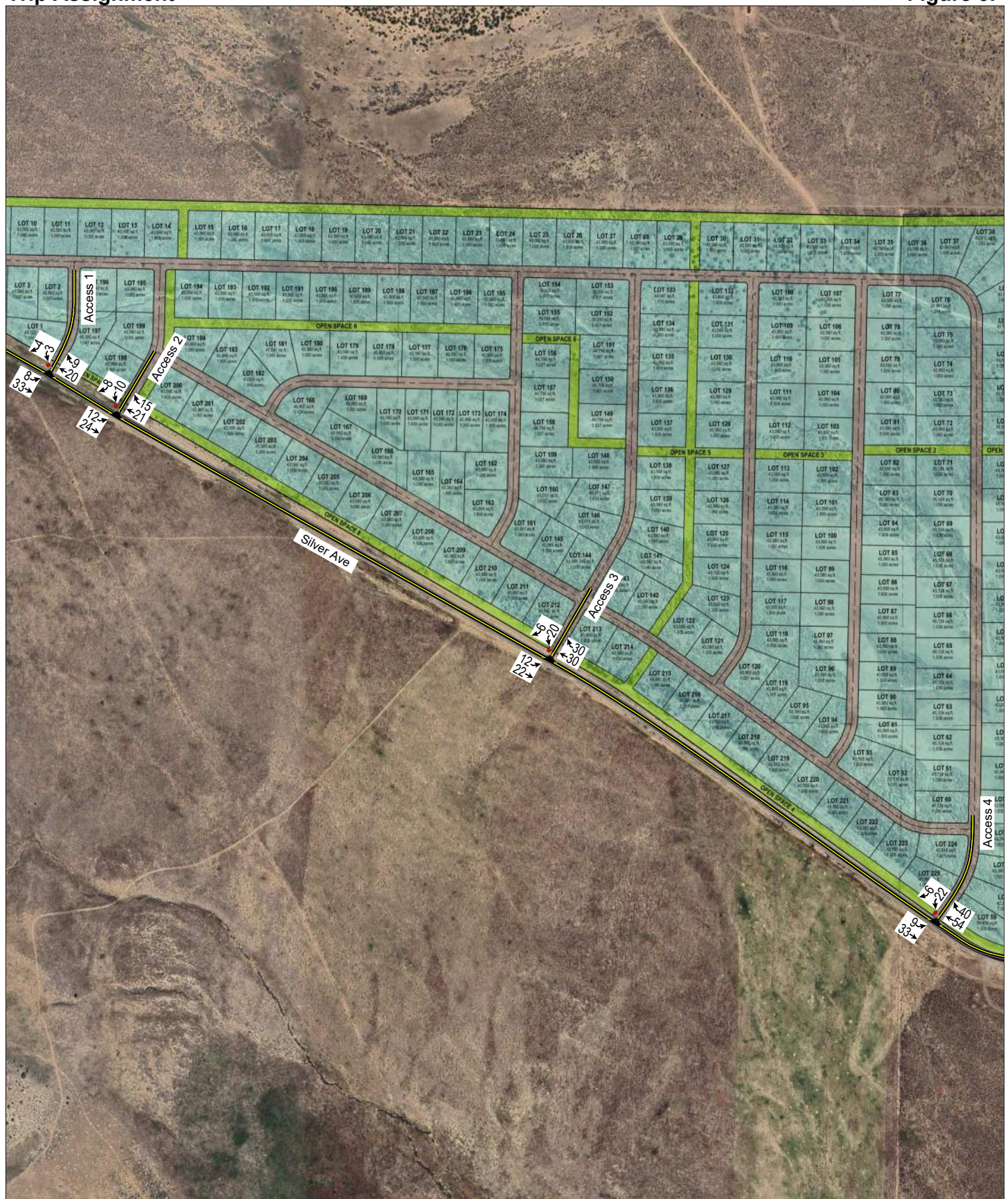






Tooele County - West South Rim TIS
Trip Assignment

Evening Peak Hour
Figure 3F







IV. EXISTING (2024) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the existing (2024) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for existing background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the existing (2024) background traffic volumes to predict turning movement volumes for existing (2024) plus project conditions. Existing (2024) plus project morning and evening peak hour turning movement volumes are shown in Figure 4.

C. Level of Service Analysis

Hales Engineering determined that all intersections are anticipated to operate at acceptable levels of service during the morning and evening peak hours with project traffic added, as shown in Table 5.

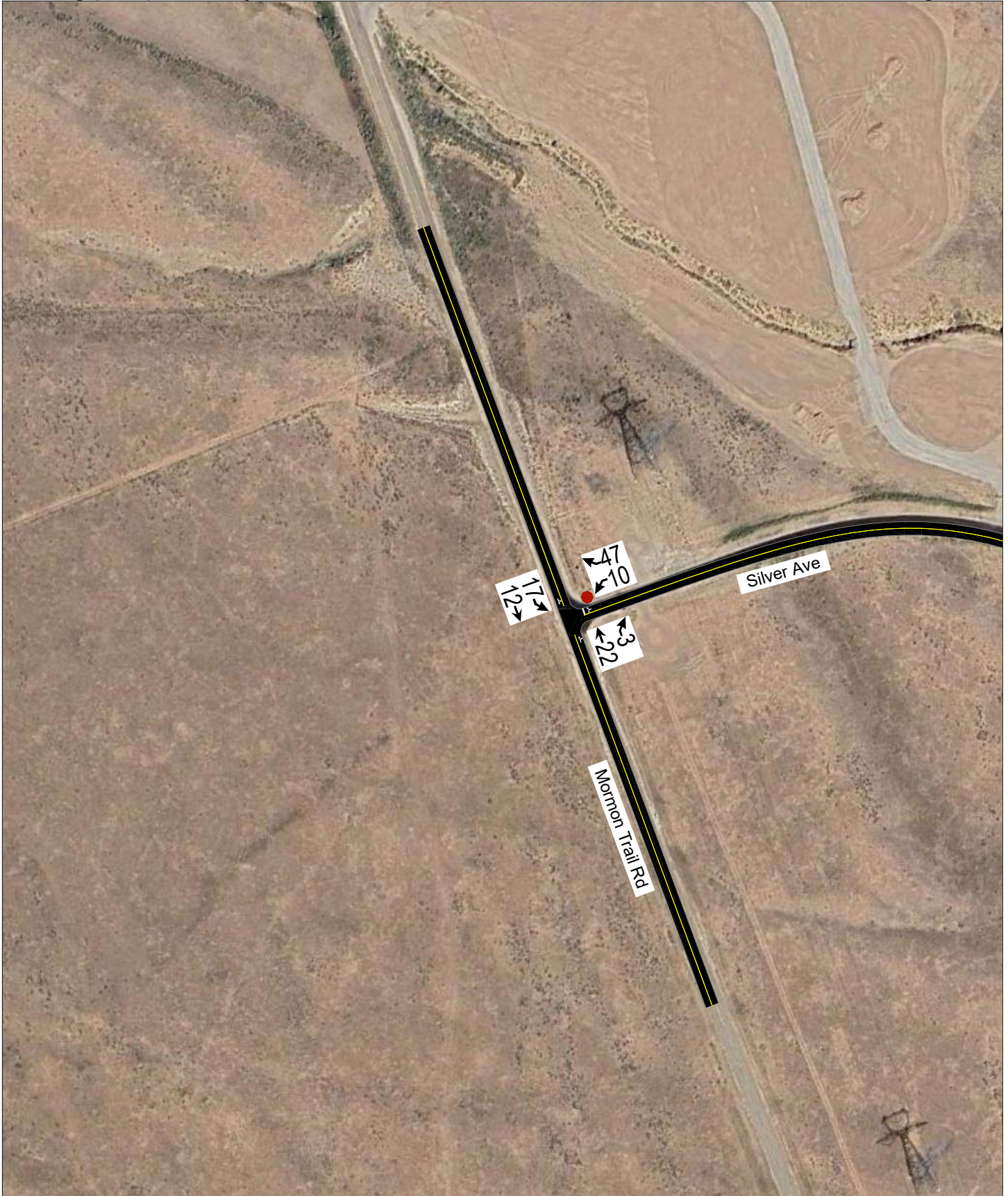
Table 5: Existing (2024) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
Silver Avenue / Mormon Tral Road	WB Stop	a (3.5) / WBL	a (3.2) / WBL
Ridgeline Road / Silver Avenue	SB Stop	a (4.3) / SBL	a (4.5) / SBL
Grant Avenue / Silver Avenue / S.R. 36	EB/WB/NWB Stop	a (8.6) / EBT	c (19.5) / WBT
Access 1 / Silver Avenue	SB Stop	a (4.1) / SBL	a (5.0) / SBL
Access 2 / Silver Avenue	SB Stop	a (4.1) / SBL	a (4.2) / SBL
Access 3 / Silver Avenue	SB Stop	a (4.1) / SBL	a (4.4) / SBL
Access 4 / Silver Avenue	SWB Stop	a (4.1) / SWL	a (4.8) / SWL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.

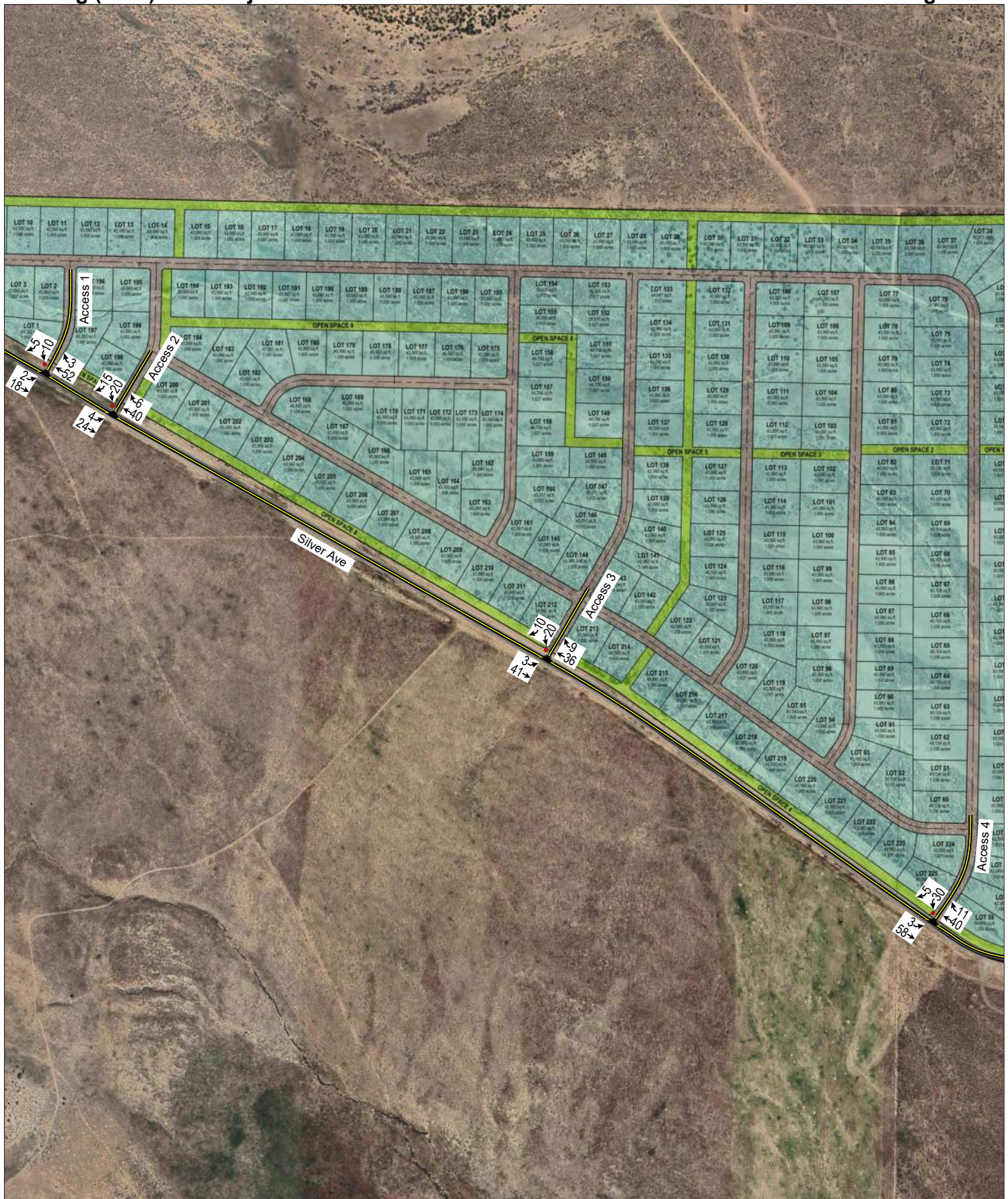
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, April 2024



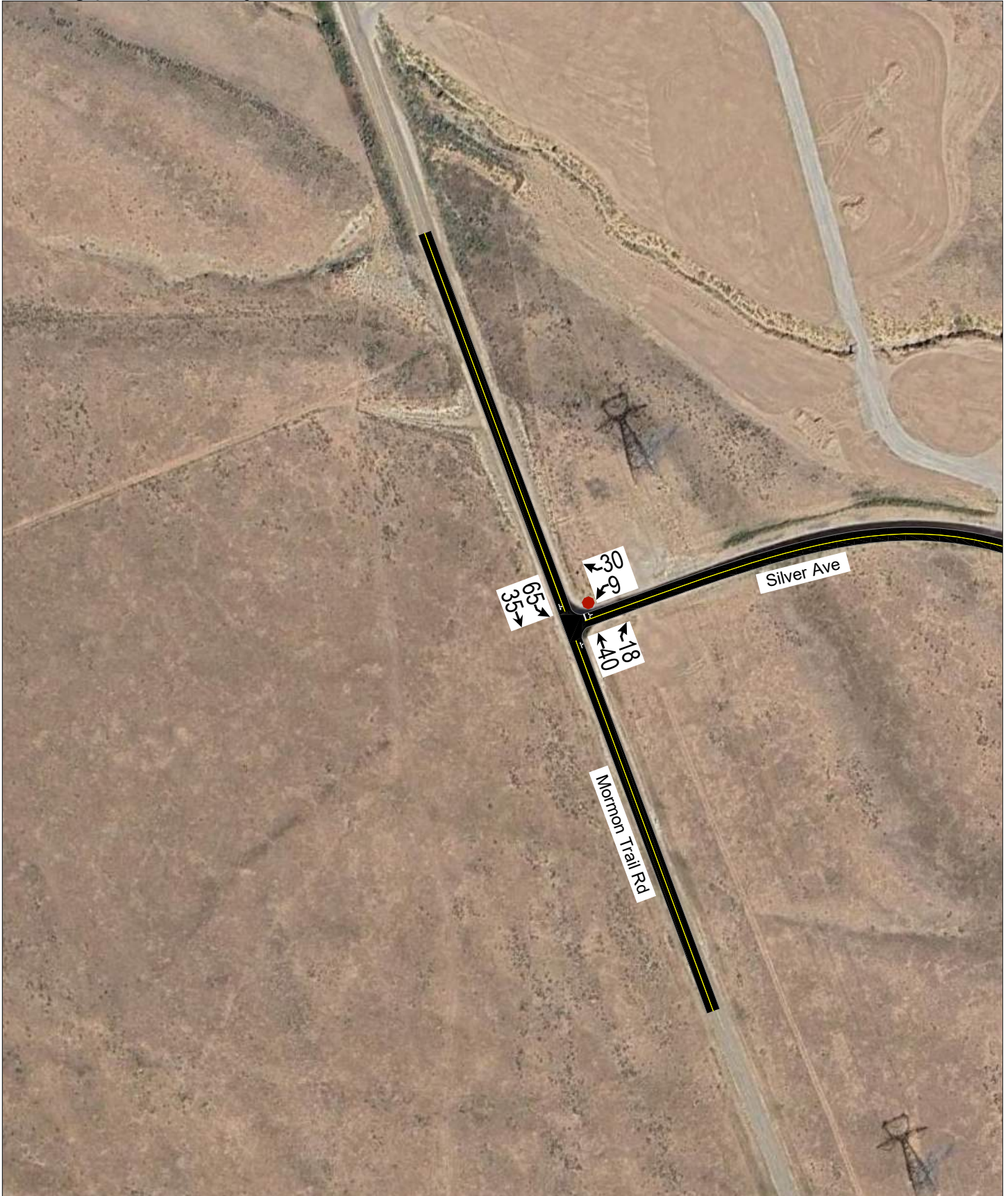
Tooele County - West South Rim TIS
Existing (2024) Plus Project

Morning Peak Hour
Figure 4B



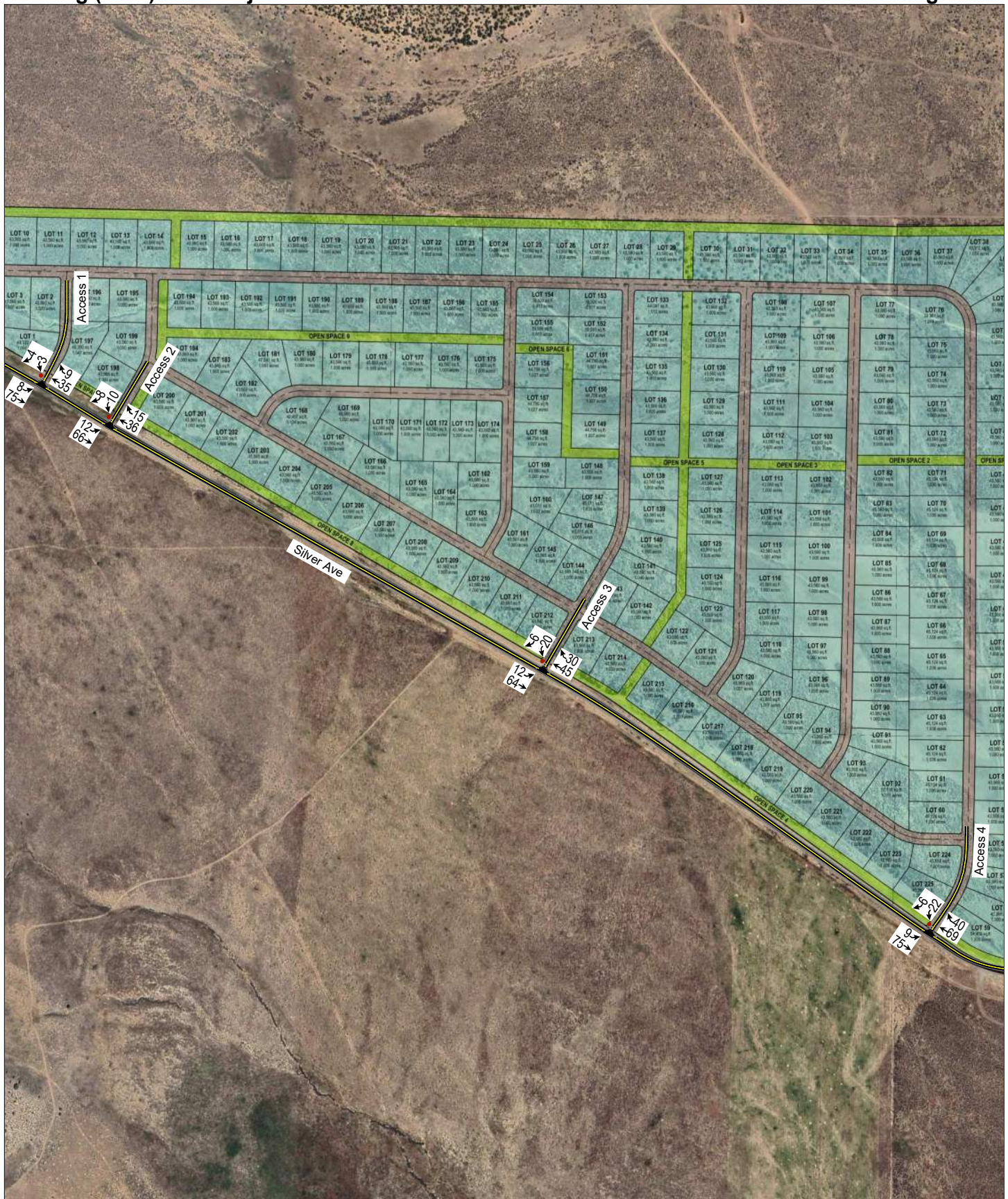






Tooele County - West South Rim TIS
Existing (2024) Plus Project

Evening Peak Hour
Figure 4F







V. FUTURE (2029) BACKGROUND CONDITIONS

A. Purpose

The purpose of the future (2029) background analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified, and potential mitigation measures recommended.

B. Roadway Network

According to the UDOT project Map, there are no projects planned before 2029 in the study area. Therefore, no changes were made to the roadway network for the future (2029) analysis.

C. Traffic Volumes

Hales Engineering obtained future (2029) forecasted volumes using a calculated historic growth rate of 3%. The growth rate was determined using historic AADT data collected by UDOT on S.R. 36. Future (2029) morning and evening peak hour turning movement volumes are shown in Figure 5.

D. Level of Service Analysis

Hales Engineering determined that all study intersections are anticipated to operate at acceptable levels of service during the morning and evening peak hours in future (2029) background conditions, as shown in Table 6. These results serve as a baseline condition for the impact analysis of the proposed development for future (2029) conditions.

Table 6: Existing (2024) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
Silver Avenue / Mormon Tral Road	WB Stop	a (2.6) / WBL	a (3.0) / WBL
Ridgeline Road / Silver Avenue	SB Stop	a (4.0) / SBL	a (4.2) / SBL
Grant Avenue / Silver Avenue / S.R. 36	EB/WB/NWB Stop	a (8.0) / EBL	c (23.9) / EBR

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.

2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, April 2024













E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing is anticipated during the morning and evening peak hours.

F. Mitigation Measures

No mitigation measures are recommended.

VI. FUTURE (2029) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the future (2029) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on future background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the future (2029) background traffic volumes to predict turning movement volumes for future (2029) plus project conditions. Future (2029) plus project morning and evening peak hour turning movement volumes are shown in Figure 6.

C. Level of Service Analysis

Hales Engineering determined that the Grant Avenue / Silver Avenue / S.R. 36 intersection is anticipated to operate at a poor level of service during the evening peak hour in future (2029) plus project conditions, as shown in Table 7.

Table 7: Future (2029) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
Silver Avenue / Mormon Tral Road	WB Stop	a (3.4) / WBL	a (3.7) / WBL
Ridgeline Road / Silver Avenue	SB Stop	a (4.6) / SBL	a (4.7) / SBL
Grant Avenue / Silver Avenue / S.R. 36	EB/WB/NWB Stop	b (11.5) / EBT	e (35.4) / EBR
Access 1 / Silver Avenue	SB Stop	a (4.3) / SBL	a (5.5) / SBL
Access 2 / Silver Avenue	SB Stop	a (4.1) / SBL	a (4.3) / SBL
Access 3 / Silver Avenue	SB Stop	a (4.2) / SBL	a (4.6) / SBL
Access 4 / Silver Avenue	SWB Stop	a (4.2) / SWL	a (4.5) / SWL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.

2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

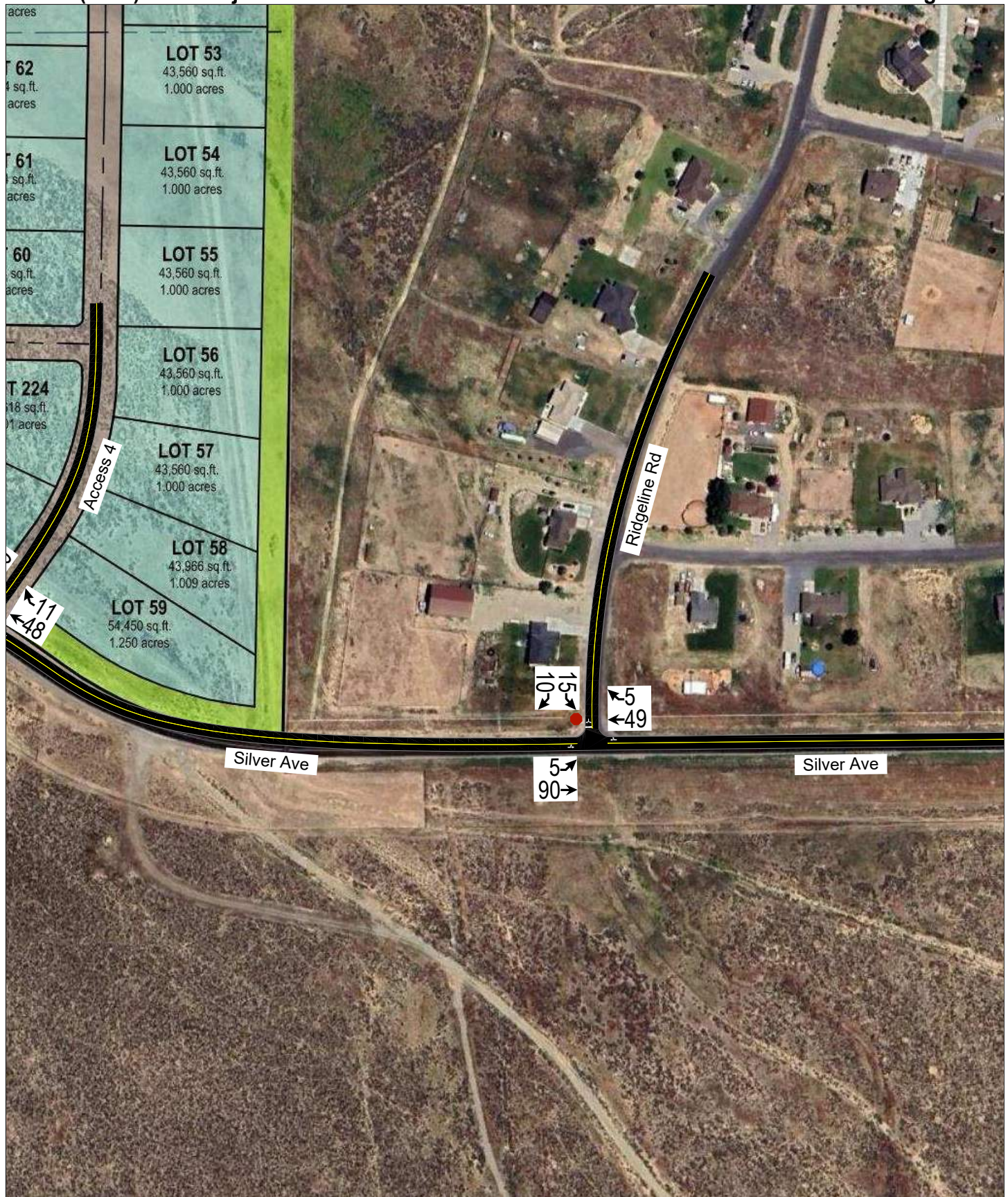
Source: Hales Engineering, April 2024



Tooele County - West South Rim TIS Future (2029) Plus Project

Morning Peak Hour Figure 6B



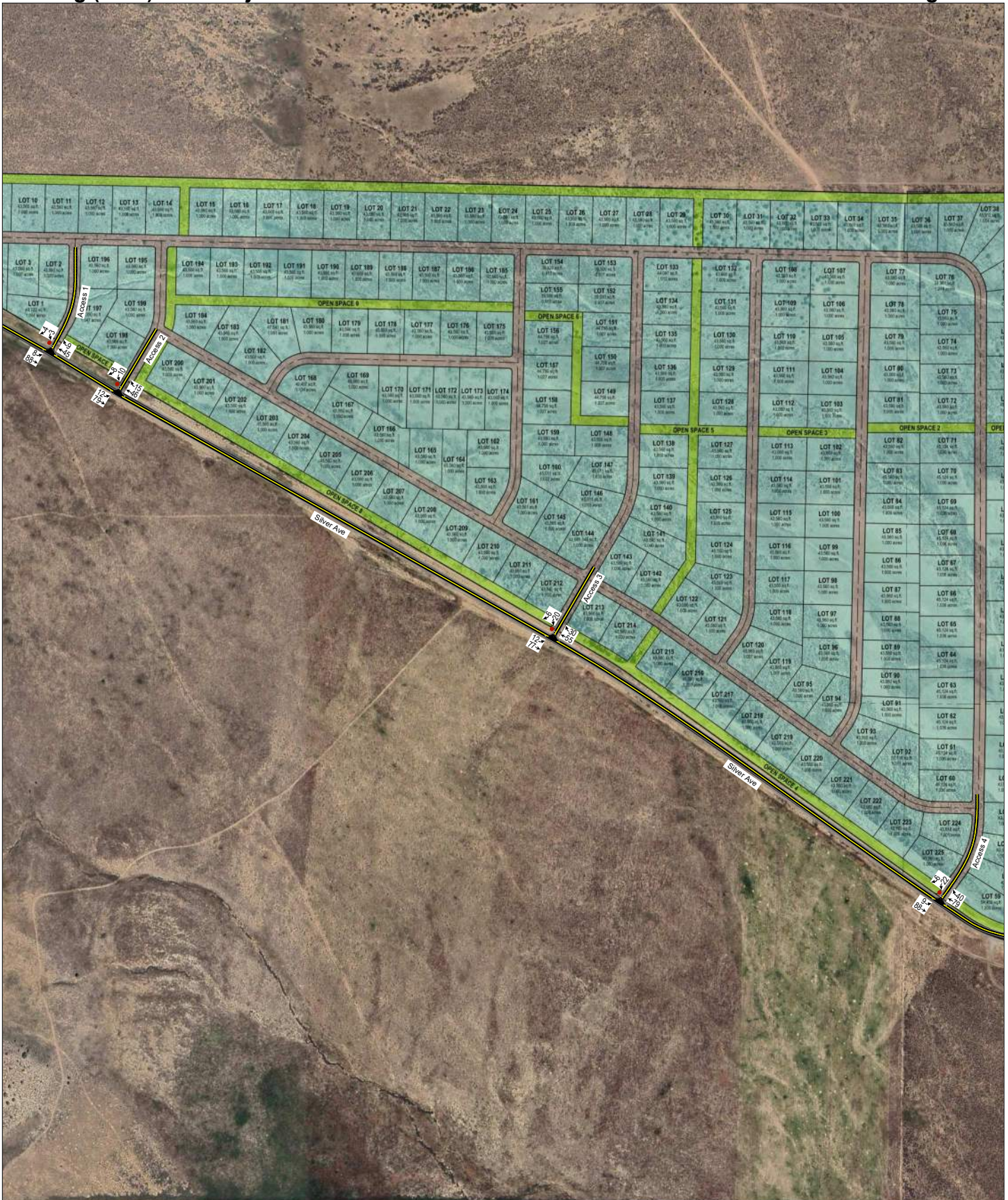


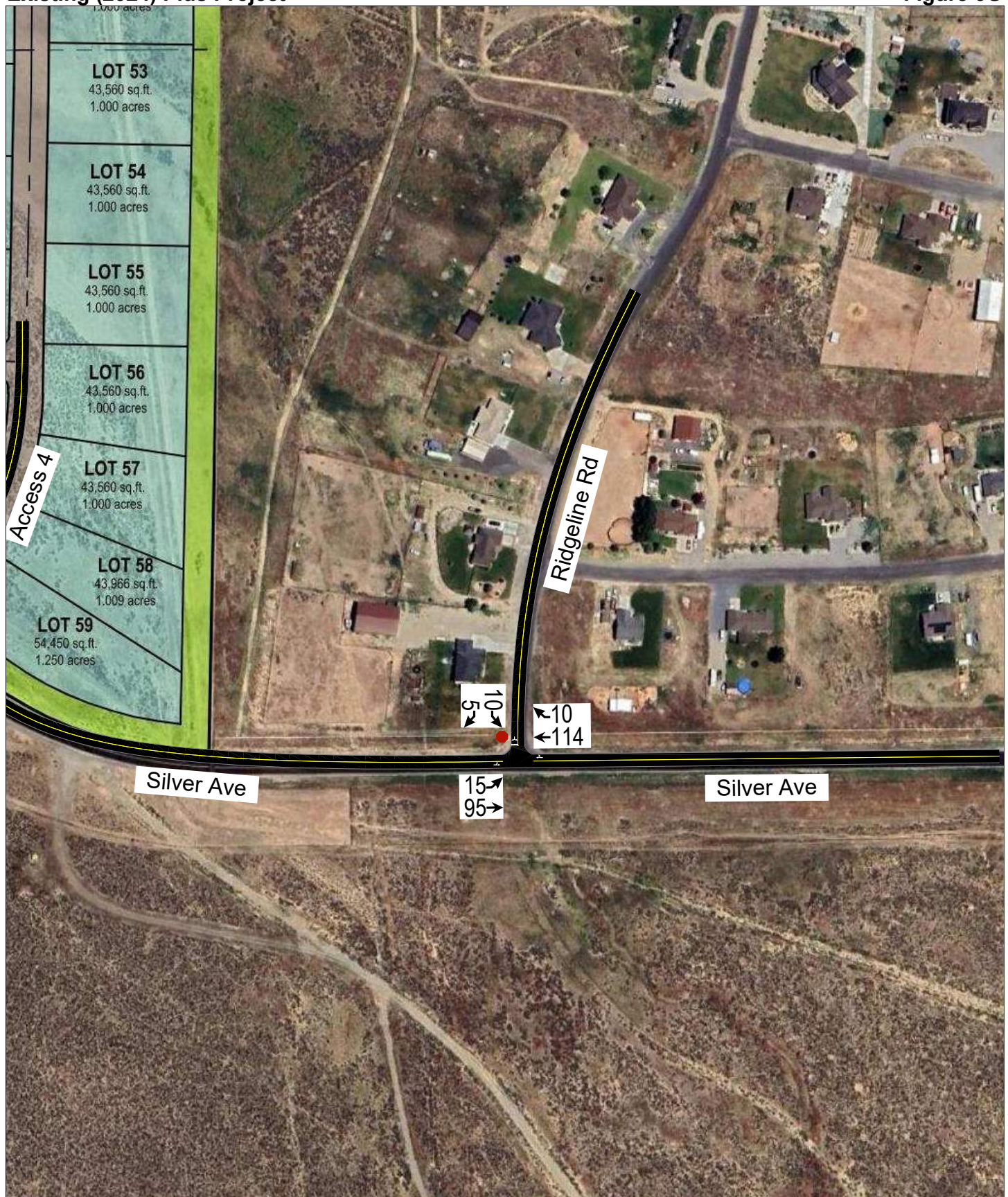




Tooele County - West South Rim TIS
Existing (2024) Plus Project

Evening Peak Hour
Figure 6F







D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing is anticipated during the morning and evening peak hours.

E. Mitigation Measures

As traffic volumes increase on Silver Avenue and S.R. 36, the previously mentioned safety concerns with the skewed angle of Grant Avenue at the Grant Avenue / Silver Avenue / S.R. 36 intersection also increase. The skewed leg will also contribute to increased delays at this intersection, resulting in a poor LOS. Therefore, it is recommended that access at Grant Avenue be restricted from S.R. 36.

Closing the north end of Grant Avenue would create a cul-de-sac that is approximately 1,000 feet long. Stockton city code states that the maximum length of cul-de-sacs shall be 400 feet. Therefore, the recommended mitigation measure is to install a gate on the north end which would only service emergency vehicles.

F. Mitigated Scenario

Hales Engineering ran a mitigated scenario assuming that the north end of Grant Avenue was gated as recommended. Volumes on the Grant Avenue leg were rerouted to and from the east leg of Silver Avenue. As a result, it is anticipated that all study intersections will operate at an acceptable level of service as shown in Table 8.

Table 8: Future (2029) Mitigated Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
Silver Avenue / Mormon Tral Road	WB Stop	a (3.5) / WBL	a (3.8) / WBL
Ridgeline Road / Silver Avenue	SB Stop	a (4.3) / SBL	a (5.1) / SBL
Grant Avenue / Silver Avenue / S.R. 36	EB/WB/NWB Stop	a (8.6) / EBT	c (15.7) / WBT
Access 1 / Silver Avenue	SB Stop	a (4.2) / SBL	a (5.4) / SBL
Access 2 / Silver Avenue	SB Stop	a (4.0) / SBL	a (4.7) / SBL
Access 3 / Silver Avenue	SB Stop	a (3.9) / SBL	a (4.6) / SBL
Access 4 / Silver Avenue	SWB Stop	a (4.4) / SWL	a (4.7) / SWL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.

2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, April 2024

APPENDIX A

Site Plan

TOOELE
169 N. Main St, Unit 1
Tooele, UT 84074
Phone: 435.843.3590

SANDY
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:

CONTACT:

PHONE:

WEST SOUTH RIM SUBDIVISION - CONCEPT

SILVER AVENUE
STOCKTON, UT

CONCEPTUAL

CONCEPT

PROJECT NUMBER
T1951M

PROJECT MANAGER
J. CLEGG

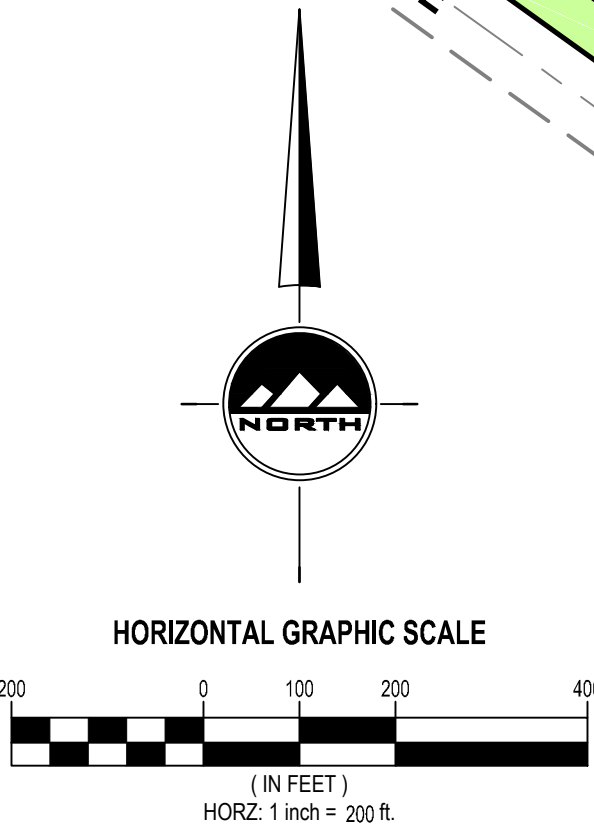
PRINT DATE
2024-01-31

DESIGNED BY
R. FISH



PARCEL TABLE		
PARCEL #	DESCRIPTION	AREA
1001	OPEN SPACE 1	550,117 sq. ft. 12.629 acres
1002	OPEN SPACE 2	27,807 sq. ft. 0.638 acres
1003	OPEN SPACE 3	25,109 sq. ft. 0.578 acres
1004	OPEN SPACE 4	130,154 sq. ft. 2.988 acres
1005	OPEN SPACE 5	119,846 sq. ft. 2.751 acres
1006	OPEN SPACE 6	54,354 sq. ft. 1.248 acres
1007	OPEN SPACE 7	18,073 sq. ft. 0.415 acres
1008	OPEN SPACE 8	136,973 sq. ft. 3.144 acres
1009	OPEN SPACE 9	108,753 sq. ft. 2.497 acres

AREA CALCULATIONS TABLE			
DESCRIPTION	AREA PROPOSED (sq. ft.)	AREA PROPOSED (acres)	PERCENTAGE PROPOSED
(225) 1 ACRE SINGLE FAMILY LOTS	9,888,517 sq. ft.	227.009 acres	78.98%
OPEN SPACE	1,171,276 sq. ft.	26.889 acres	9.35%
ARTERIAL ROADS	1,460,542 sq. ft.	33.529 acres	11.67%
TOTAL SITE	12,520,338 sq. ft.	287.427 acres	100.00%



APPENDIX B

Turning Movement Counts



Intersection Turning Movement Summary

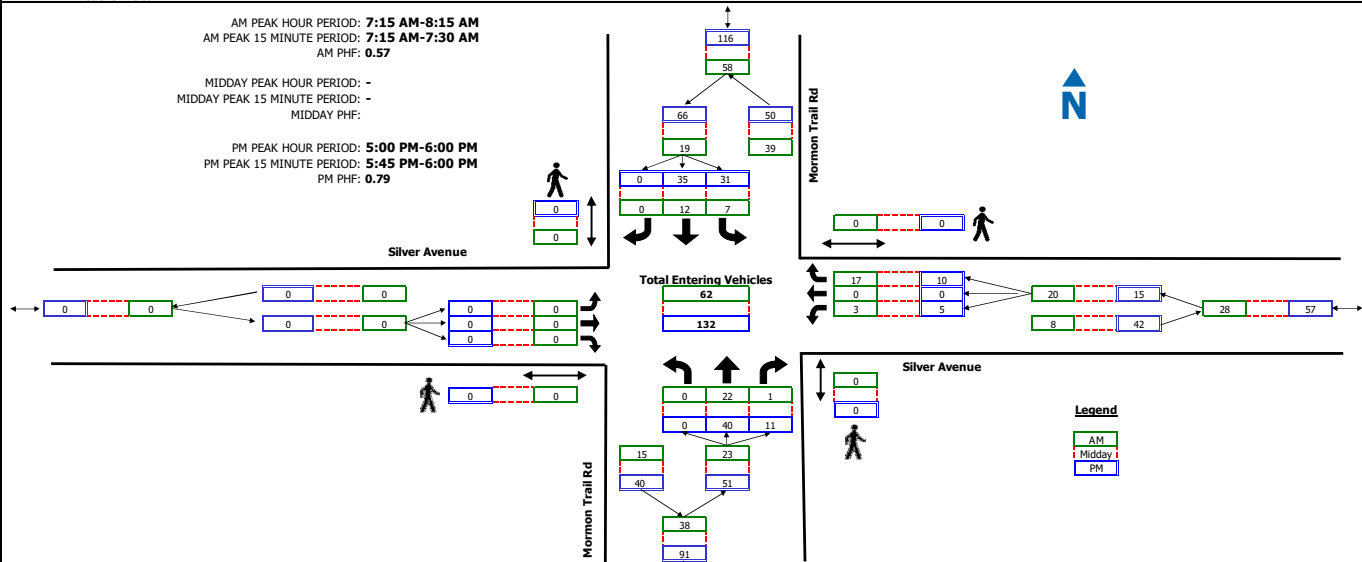
Intersection: Mormon Trail Rd / Silver Avenue
North/South Road: Mormon Trail Rd
East/West Road: Silver Avenue
Jurisdiction: Tooele County
Project Title: West South Rim TIS
Project No: UT24-2740
Weather: Clear

Date: 4-11-24, Thu
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%

AM PEAK HOUR PERIOD: 7:15 AM-8:15 AM
AM PEAK 15 MINUTE PERIOD: 7:15 AM-7:30 AM
AM PHF: 0.57

MIDDAY PEAK HOUR PERIOD: -
MIDDAY PEAK 15 MINUTE PERIOD: -
MIDDAY PHF: -

PM PEAK HOUR PERIOD: 5:00 PM-6:00 PM
PM PEAK 15 MINUTE PERIOD: 5:45 PM-6:00 PM
PM PHF: 0.79



COUNT SUMMARY	Mormon Trail Rd Northbound				Mormon Trail Rd Southbound				Silver Avenue Eastbound				Silver Avenue Westbound				TOTAL	
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
AM PERIOD COUNTS																		
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL	
7:00 - 7:15	0	9	0	0	0	2	0	0	0	0	0	0	0	2	0	2	0	13
7:15 - 7:30	0	13	1	0	1	3	0	0	0	0	0	0	1	0	8	0	27	
7:30 - 7:45	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3	0	7	
7:45 - 8:00	0	0	0	0	4	4	0	0	0	0	0	0	0	0	4	0	12	
8:00 - 8:15	0	7	0	0	1	4	0	0	0	0	0	0	2	0	2	0	16	
8:15 - 8:30	0	3	1	0	0	5	0	0	0	0	0	0	1	0	1	0	11	
8:30 - 8:45	0	5	1	0	0	3	0	0	0	0	0	0	1	0	2	0	12	
8:45 - 9:00	0	2	1	0	2	8	0	0	0	0	0	0	3	0	3	0	19	
MIDDAY PERIOD COUNTS																		
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL	
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM PERIOD COUNTS																		
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL	
16:00 - 16:15	0	5	1	0	4	13	0	0	0	0	0	0	0	0	4	0	27	
16:15 - 16:30	0	10	1	0	2	8	0	0	0	0	0	0	0	0	1	0	22	
16:30 - 16:45	0	7	0	0	2	14	0	0	0	0	0	0	0	0	3	0	26	
16:45 - 17:00	0	10	0	0	10	11	0	0	0	0	0	0	2	0	3	0	36	
17:00 - 17:15	0	10	1	0	3	8	0	0	0	0	0	0	0	0	2	0	24	
17:15 - 17:30	0	8	2	0	10	8	0	0	0	0	0	0	2	0	2	0	32	
17:30 - 17:45	0	7	5	0	9	11	0	0	0	0	0	0	0	0	2	0	34	
17:45 - 18:00	0	15	3	0	9	8	0	0	0	0	0	0	3	0	4	0	42	



Intersection Turning Movement Summary

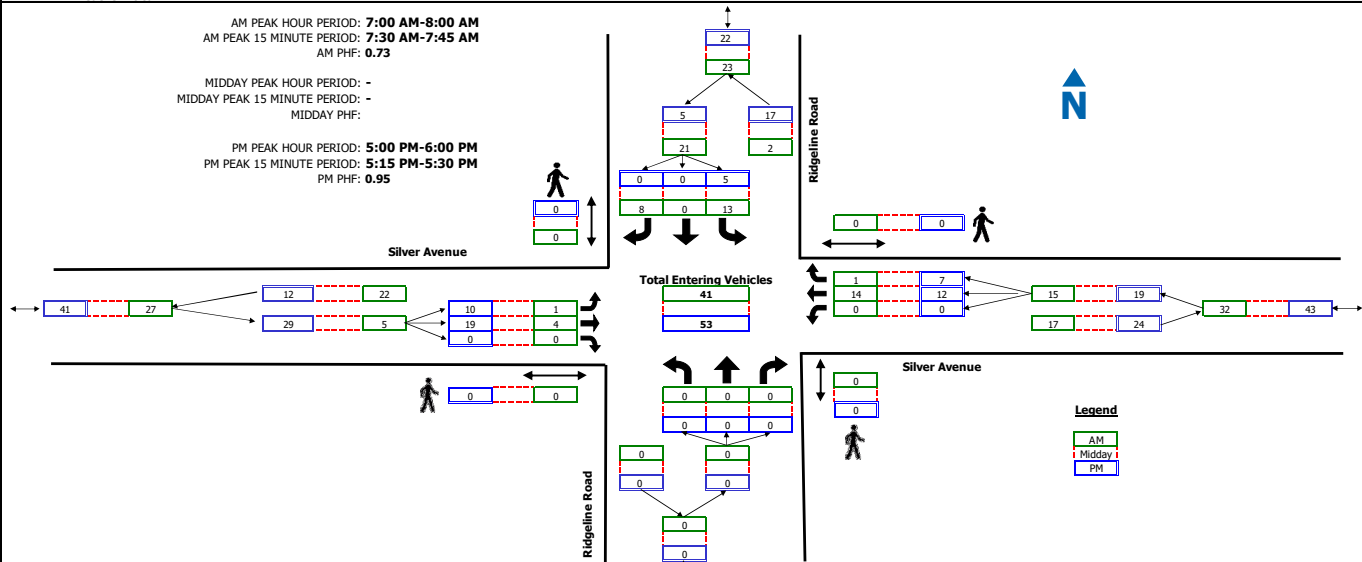
Intersection: Ridgeline Road / Silver Avenue
North/South Road: Ridgeline Road
East/West Road: Silver Avenue
Jurisdiction: Tooele County
Project Title: West South Rim TIS
Project No: UT24-2740
Weather: Clear

Date: 4-16-24, Tue
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%

AM PEAK HOUR PERIOD: 7:00 AM-8:00 AM
AM PEAK 15 MINUTE PERIOD: 7:30 AM-7:45 AM
AM PHF: 0.73

MIDDAY PEAK HOUR PERIOD: -
MIDDAY PEAK 15 MINUTE PERIOD: -
MIDDAY PHF: -

PM PEAK HOUR PERIOD: 5:00 PM-6:00 PM
PM PEAK 15 MINUTE PERIOD: 5:15 PM-5:30 PM
PM PHF: 0.95



COUNT SUMMARY	Ridgeline Road Northbound				Ridgeline Road Southbound				Silver Avenue Eastbound				Silver Avenue Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00 - 7:15	0	0	0	0	2	2	0	0	0	1	1	0	0	4	0	0	8
7:15 - 7:30	0	0	0	0	2	0	5	0	0	1	0	0	0	4	0	0	12
7:30 - 7:45	0	0	0	0	5	0	1	0	1	1	0	0	0	5	1	0	14
7:45 - 8:00	0	0	0	0	4	0	1	0	0	1	0	0	0	1	0	0	7
8:00 - 8:15	0	0	0	0	0	0	1	0	1	2	0	0	0	2	0	0	6
8:15 - 8:30	0	0	0	0	0	0	1	0	0	0	0	0	0	2	2	0	5
8:30 - 8:45	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
8:45 - 9:00	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	8
MIDDAY PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00 - 16:15	0	0	0	0	1	1	0	0	1	6	0	0	0	2	2	0	12
16:15 - 16:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	4
16:30 - 16:45	0	0	0	0	0	0	1	0	3	3	0	0	0	6	0	0	13
16:45 - 17:00	0	0	0	0	0	0	2	0	2	2	0	0	0	5	1	0	12
17:00 - 17:15	0	0	0	0	0	0	0	0	2	5	0	0	0	4	1	0	12
17:15 - 17:30	0	0	0	0	0	0	0	0	2	7	0	0	0	3	2	0	14
17:30 - 17:45	0	0	0	0	2	0	0	0	3	3	0	0	0	2	3	0	13
17:45 - 18:00	0	0	0	0	3	0	0	0	3	4	0	0	0	3	1	0	14



Intersection Turning Movement Summary

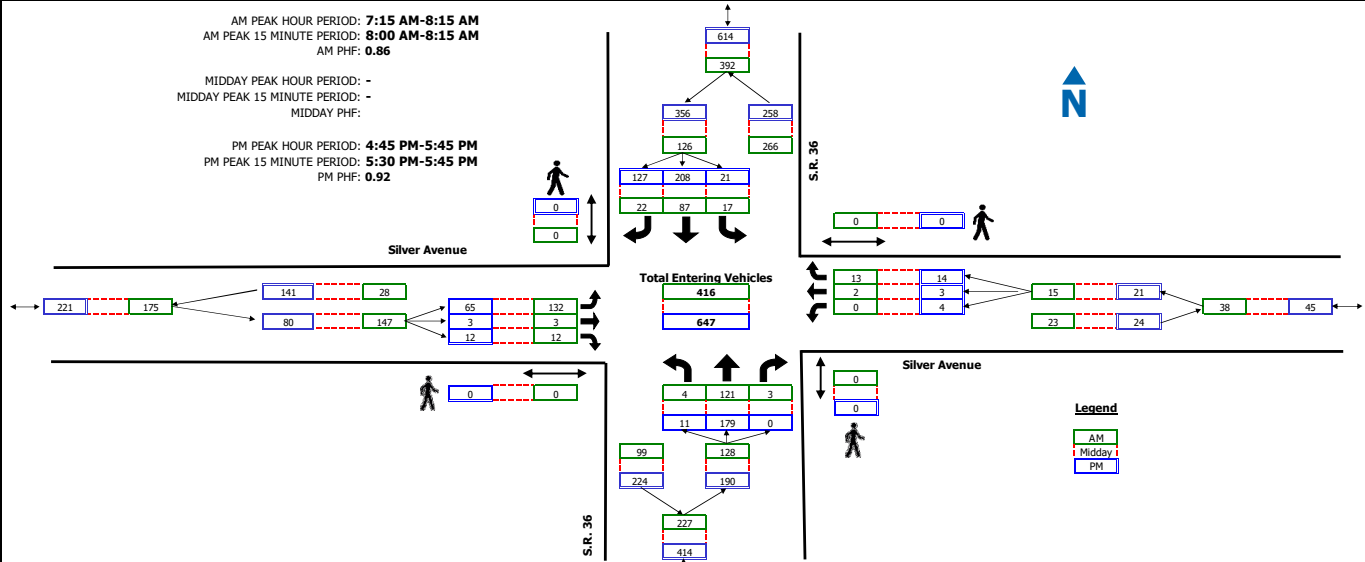
Intersection: S.R. 36 / Silver Avenue
North/South Road: S.R. 36
East/West Road: Silver Avenue
Jurisdiction: Tooele County
Project Title: West South Rim TIS
Project No: UT24-2740
Weather: Clear

Date: 4-11-24, Thu
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%

AM PEAK HOUR PERIOD: 7:15 AM-8:15 AM
AM PEAK 15 MINUTE PERIOD: 8:00 AM-8:15 AM
AM PHF: 0.86

MIDDAY PEAK HOUR PERIOD: -
MIDDAY PEAK 15 MINUTE PERIOD: -
MIDDAY PHF: -

PM PEAK HOUR PERIOD: 4:45 PM-5:45 PM
PM PEAK 15 MINUTE PERIOD: 5:30 PM-5:45 PM
PM PHF: 0.92



COUNT SUMMARY	S.R. 36 Northbound				S.R. 36 Southbound				Silver Avenue Eastbound				Silver Avenue Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00 - 7:15	4	22	1	0	2	32	4	0	19	1	3	0	0	0	4	0	92
7:15 - 7:30	2	33	1	0	3	28	8	0	34	1	2	0	0	0	4	0	116
7:30 - 7:45	1	34	1	0	3	16	2	0	41	1	0	0	0	0	2	0	101
7:45 - 8:00	1	31	1	0	3	18	5	0	14	0	1	0	0	0	4	0	78
8:00 - 8:15	0	23	0	0	8	25	7	0	43	1	9	0	0	2	3	0	121
8:15 - 8:30	0	22	1	0	1	19	14	0	28	2	2	0	0	0	8	0	97
8:30 - 8:45	1	22	0	0	2	22	9	0	23	1	1	0	0	0	4	0	85
8:45 - 9:00	2	28	1	0	2	18	19	0	12	1	3	0	1	1	6	0	94
MIDDAY PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00 - 16:15	1	43	0	0	10	37	36	0	6	3	9	0	2	3	4	0	154
16:15 - 16:30	2	53	1	0	3	47	24	0	18	4	1	0	0	2	2	0	157
16:30 - 16:45	4	39	4	0	4	53	25	0	13	1	1	0	1	2	5	0	152
16:45 - 17:00	3	40	0	0	2	68	29	0	16	1	4	0	1	1	4	0	169
17:00 - 17:15	4	42	0	0	4	50	29	0	16	0	4	0	0	1	4	0	154
17:15 - 17:30	3	40	0	0	8	41	37	0	10	2	2	0	3	1	1	0	148
17:30 - 17:45	1	57	0	0	7	49	32	0	23	0	2	0	0	0	5	0	176
17:45 - 18:00	2	42	1	0	3	31	25	0	22	2	1	0	0	1	4	0	134

APPENDIX C

LOS Results

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
 Analysis Period: Existing (2024) Background
 Time Period: Morning Peak Hour
 Project #: UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	22	22	99	0.4	A
	R	1	1	100	0.0	A
	Subtotal	23	23	100	0.4	A
SB	L	7	8	110	0.3	A
	T	12	12	102	0.3	A
	Subtotal	19	20	105	0.3	A
WB	L	4	4	94	2.8	A
	R	18	18	100	1.4	A
	Subtotal	22	22	100	1.7	A
Total		64	65	101	0.8	A

Intersection: Silver Ave & Ridgeline Rd
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	13	11	86	4.1	A
	R	8	9	109	2.6	A
	Subtotal	21	20	95	3.4	A
EB	L	1	1	100	0.4	A
	T	7	8	110	0.0	A
	Subtotal	8	9	113	0.0	A
WB	T	14	12	87	0.1	A
	R	1	2	200	0.0	A
	Subtotal	15	14	93	0.1	A
Total		44	43	98	1.6	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Background
Time Period: Morning Peak Hour

Project #: UT24-2740

Intersection: S.R. 36 & Grant Ave & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	R	3	4	133	2.4	A
	Subtotal	3	4	133	2.4	A
EB	L	132	130	98	7.0	A
	T	3	4	133	7.5	A
	R2	12	14	119	3.6	A
	Subtotal	147	148	101	6.7	A
WB	T	2	1	50	8.9	A
	R	10	10	103	4.2	A
	Subtotal	12	11	92	4.6	A
NE	L	4	3	71	1.2	A
	T	121	122	101	0.4	A
	R	3	3	100	0.0	A
	Subtotal	128	128	100	0.4	A
SW	L2	14	11	80	1.6	A
	L	3	3	100	3.2	A
	T	87	86	99	0.4	A
	R	22	25	112	0.0	A
	Subtotal	126	125	99	0.4	A
Total		415	416	100	2.9	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Background
Time Period: Evening Peak Hour
Project #: UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	40	40	100	0.5	A
	R	11	13	116	0.0	A
	Subtotal	51	53	104	0.4	A
SB	L	31	30	97	0.5	A
	T	35	33	94	0.8	A
	Subtotal	66	63	95	0.7	A
WB	L	5	5	100	2.8	A
	R	10	9	88	1.3	A
	Subtotal	15	14	93	1.8	A
Total		132	130	98	0.7	A

Intersection: Silver Ave & Ridgeline Rd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	5	5	100	3.8	A
	Subtotal	5	5	100	3.8	A
EB	L	10	12	117	0.9	A
	T	32	31	97	0.1	A
	Subtotal	42	43	102	0.3	A
WB	T	15	14	92	0.3	A
	R	7	7	97	0.0	A
	Subtotal	22	21	95	0.2	A
Total		70	69	99	0.5	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
 Analysis Period: Existing (2024) Background
 Time Period: Evening Peak Hour Project #: UT24-2740

Intersection: S.R. 36 & Grant Ave & Silver Ave
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L2	1	1	100	5.4	A
	L	1	1	100	13.3	B
	R	3	4	133	3.3	A
	Subtotal	5	6	120	5.3	A
EB	L	65	65	100	9.8	A
	T	3	3	100	11.6	B
	R	1	0	0		
	R2	12	13	106	4.0	A
WB	L	3	3	100	11.9	B
	T	2	2	100	16.4	C
	R	11	13	116	4.7	A
	Subtotal	16	18	113	7.2	A
NE	L	11	11	98	4.3	A
	T	179	174	97	0.5	A
	Subtotal	190	185	97	0.7	A
SW	L2	18	18	101	2.2	A
	L	3	3	100	2.0	A
	T	208	205	99	2.3	A
	R	127	137	108	0.8	A
	Subtotal	356	363	102	1.7	A
Total		648	653	101	2.6	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Plus Project
Time Period: Morning Peak Hour **Project #:** UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	22	24	108	0.5	A
	R	3	4	133	0.0	A
	Subtotal	25	28	112	0.4	A
SB	L	17	17	100	0.3	A
	T	12	13	111	0.5	A
	Subtotal	29	30	103	0.4	A
WB	L	10	9	92	3.5	A
	R	47	51	109	1.9	A
	Subtotal	57	60	105	2.1	A
Total		110	118	107	1.3	A

Intersection: Silver Ave & Ridgeline Rd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	13	13	102	4.3	A
	R	8	9	109	3.0	A
	Subtotal	21	22	105	3.8	A
EB	L	1	0	0		
	T	87	87	100	0.5	A
	Subtotal	88	87	99	0.5	A
WB	T	43	44	102	0.1	A
	R	1	2	200	0.0	A
	Subtotal	44	46	105	0.1	A
Total		153	155	101	0.8	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Plus Project
Time Period: Morning Peak Hour
Project #: UT24-2740

Intersection: S.R. 36 & Grant Ave & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	R	3	4	133	3.2	A
	Subtotal	3	4	133	3.2	A
EB	L	200	198	99	8.5	A
	T	3	3	100	8.6	A
	R2	24	26	107	4.3	A
	Subtotal	227	227	100	8.0	A
WB	T	2	1	50	5.9	A
	R	10	10	103	4.6	A
	Subtotal	12	11	92	4.7	A
NE	L	8	9	109	1.3	A
	T	121	120	99	0.6	A
	R	3	3	100	0.1	A
	Subtotal	132	132	100	0.6	A
SW	L2	14	12	87	1.5	A
	L	3	3	100	1.3	A
	T	87	88	101	1.0	A
	R	47	48	103	0.3	A
	Subtotal	151	151	100	0.8	A
Total		524	525	100	4.0	A

Intersection: Silver Ave & Access 1
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	10	7	72	4.1	A
	R	5	6	114	2.8	A
	Subtotal	15	13	87	3.5	A
EB	L	2	2	100	0.8	A
	T	18	17	94	0.0	A
	Subtotal	20	19	95	0.1	A
WB	T	53	51	97	0.2	A
	R	3	4	133	0.2	A
	Subtotal	56	55	98	0.2	A
Total		91	87	96	0.7	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Plus Project
Time Period: Morning Peak Hour
Project #: UT24-2740

Intersection: Silver Ave & Access 2
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	20	100	4.1	A
	R	15	14	95	2.8	A
	Subtotal	35	34	97	3.6	A
EB	L	4	3	71	1.1	A
	T	24	22	90	0.3	A
	Subtotal	28	25	89	0.4	A
WB	T	40	40	99	0.5	A
	R	6	6	96	0.5	A
	Subtotal	46	46	100	0.5	A
Total		110	105	95	1.5	A

Intersection: Silver Ave & Access 3
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	18	90	4.1	A
	R	10	10	103	2.9	A
	Subtotal	30	28	93	3.7	A
EB	L	3	2	67	1.1	A
	T	41	40	97	0.5	A
	Subtotal	44	42	95	0.5	A
WB	T	36	36	99	0.4	A
	R	9	9	97	0.4	A
	Subtotal	45	45	100	0.4	A
Total		120	115	96	1.3	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Plus Project
Time Period: Morning Peak Hour **Project #:** UT24-2740

Intersection: Silver Ave & Access 4
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
EB	L	3	2	67	1.3	A
	T	58	56	96	0.6	A
	Subtotal	61	58	95	0.6	A
WB	T	42	42	101	0.3	A
	R	11	12	112	0.1	A
	Subtotal	53	54	102	0.3	A
SW	L	30	32	108	4.1	A
	R	5	5	95	2.7	A
	Subtotal	35	37	106	3.9	A
Total		149	149	100	1.3	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Plus Project
Time Period: Evening Peak Hour **Project #:** UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	40	38	94	0.8	A
	R	18	18	100	0.0	A
	Subtotal	58	56	97	0.5	A
SB	L	65	64	99	0.9	A
	T	35	38	109	1.5	A
	Subtotal	100	102	102	1.1	A
WB	L	9	10	108	3.2	A
	R	30	33	111	1.7	A
	Subtotal	39	43	110	2.0	A
Total		197	201	102	1.1	A

Intersection: Silver Ave & Ridgeline Rd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	5	5	95	4.5	A
	Subtotal	5	5	100	4.5	A
EB	L	10	10	103	1.6	A
	T	88	94	107	0.7	A
	Subtotal	98	104	106	0.8	A
WB	T	109	113	104	0.2	A
	R	7	8	110	0.1	A
	Subtotal	116	121	104	0.2	A
Total		219	230	105	0.6	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Plus Project
Time Period: Evening Peak Hour
Project #: UT24-2740

Intersection: S.R. 36 & Grant Ave & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L2	1	1	100	8.8	A
	L	1	1	100	6.0	A
	R	3	2	67	5.8	A
	Subtotal	5	4	80	6.6	A
EB	L	112	107	96	15.8	C
	T	3	3	100	13.1	B
	R	1	1	100	13.5	B
	R2	20	19	95	4.9	A
WB	L	3	2	67	17.7	C
	T	2	2	100	19.5	C
	R	11	10	93	5.8	A
	Subtotal	16	14	88	9.5	A
NE	L	25	24	95	5.9	A
	T	179	184	103	1.3	A
	Subtotal	204	208	102	1.8	A
SW	L2	18	18	100	3.0	A
	L	3	3	100	3.6	A
	T	208	199	96	3.4	A
	R	207	208	100	1.4	A
	Subtotal	436	428	98	2.4	A
Total		797	784	98	4.3	A

Intersection: Silver Ave & Access 1
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	3	3	100	5.0	A
	R	4	4	94	2.9	A
	Subtotal	7	7	100	3.8	A
EB	L	8	7	85	1.1	A
	T	75	79	105	0.2	A
	Subtotal	83	86	104	0.3	A
WB	T	35	32	91	0.4	A
	R	9	10	108	0.2	A
	Subtotal	44	42	95	0.4	A
Total		135	135	100	0.5	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Plus Project
Time Period: Evening Peak Hour **Project #:** UT24-2740

Intersection: Silver Ave & Access 2
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	10	8	82	4.2	A
	R	8	8	97	2.7	A
	Subtotal	18	16	89	3.5	A
EB	L	12	10	85	1.0	A
	T	66	72	108	0.2	A
	Subtotal	78	82	105	0.3	A
WB	T	38	36	96	0.9	A
	R	15	16	108	0.5	A
	Subtotal	53	52	98	0.8	A
Total		148	150	101	0.8	A

Intersection: Silver Ave & Access 3
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	22	110	4.4	A
	R	6	6	96	3.1	A
	Subtotal	26	28	108	4.1	A
EB	L	12	11	94	1.2	A
	T	64	69	107	0.8	A
	Subtotal	76	80	105	0.9	A
WB	T	46	45	99	1.1	A
	R	30	33	111	0.7	A
	Subtotal	76	78	103	0.9	A
Total		178	186	105	1.4	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Existing (2024) Plus Project
Time Period: Evening Peak Hour **Project #:** UT24-2740

Intersection: Silver Ave & Access 4
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
EB	L	9	10	108	1.6	A
	T	75	80	107	1.1	A
	Subtotal	84	90	107	1.2	A
WB	T	69	72	105	0.7	A
	R	40	42	104	0.2	A
	Subtotal	109	114	105	0.5	A
SW	L	22	23	103	4.8	A
	R	6	6	96	3.0	A
	Subtotal	28	29	104	4.4	A
Total		222	233	105	1.2	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Background
Time Period: Morning Peak Hour
Project #: UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	30	31	104	0.5	A
	R	5	5	95	0.0	A
	Subtotal	35	36	103	0.4	A
SB	L	10	9	92	0.3	A
	T	15	14	95	0.4	A
	Subtotal	25	23	92	0.4	A
WB	L	5	5	95	2.6	A
	R	25	28	111	1.7	A
	Subtotal	30	33	110	1.8	A
Total		90	92	102	0.9	A

Intersection: Silver Ave & Ridgeline Rd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	15	13	88	4.0	A
	R	10	10	103	2.9	A
	Subtotal	25	23	92	3.5	A
EB	L	5	4	76	0.8	A
	T	10	10	103	0.1	A
	Subtotal	15	14	93	0.3	A
WB	T	20	20	100	0.2	A
	R	5	6	114	0.1	A
	Subtotal	25	26	104	0.2	A
Total		65	63	97	1.4	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Background
Time Period: Morning Peak Hour
Project #: UT24-2740

Intersection: S.R. 36 & Grant Ave & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	R	5	6	114	4.2	A
	Subtotal	5	6	120	4.2	A
EB	L	155	151	97	8.0	A
	T	5	4	76	7.0	A
	R2	15	17	115	3.9	A
	Subtotal	175	172	98	7.6	A
WB	T	5	4	76	6.2	A
	R	15	16	108	4.5	A
	Subtotal	20	20	100	4.8	A
NE	L	4	3	71	1.9	A
	T	145	137	94	0.5	A
	R	5	6	114	0.1	A
	Subtotal	154	146	95	0.5	A
SW	L2	20	19	95	1.8	A
	L	5	6	114	2.4	A
	T	105	103	98	0.6	A
	R	30	30	101	0.2	A
	Subtotal	140	139	99	0.6	A
Total		515	502	98	3.2	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
 Analysis Period: Future (2029) Background
 Time Period: Evening Peak Hour
 Project #: UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	50	47	94	0.7	A
	R	15	17	111	0.1	A
	Subtotal	65	64	98	0.5	A
SB	L	40	38	95	0.6	A
	T	45	44	97	1.0	A
	Subtotal	85	82	96	0.8	A
WB	L	10	8	78	3.0	A
	R	15	14	92	1.6	A
	Subtotal	25	22	88	2.1	A
Total		176	168	95	0.9	A

Intersection: Silver Ave & Ridgeline Rd
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	10	12	117	4.2	A
	R	5	6	120	2.6	A
	Subtotal	15	18	120	3.7	A
EB	L	15	16	105	0.9	A
	T	40	40	100	0.2	A
	Subtotal	55	56	102	0.4	A
WB	T	20	19	96	0.3	A
	R	10	9	88	0.1	A
	Subtotal	30	28	93	0.2	A
Total		100	102	101	0.9	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Background
Time Period: Evening Peak Hour

Project #: UT24-2740

Intersection: S.R. 36 & Grant Ave & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L2	5	5	100	11.2	B
	L	5	5	100	23.5	C
	R	5	6	120	5.5	A
	Subtotal	15	16	107	12.9	B
EB	L	80	79	98	16.2	C
	T	5	5	100	15.7	C
	R	5	6	120	23.9	C
	R2	15	17	111	5.3	A
WB	L	5	5	100	12.7	B
	T	5	5	100	12.9	B
	R	15	16	105	5.8	A
	Subtotal	25	26	104	8.5	A
NE	L	15	15	98	6.0	A
	T	210	209	100	0.8	A
	Subtotal	225	224	100	1.1	A
SW	L2	25	21	85	2.6	A
	L	5	5	100	3.7	A
	T	245	246	100	2.8	A
	R	150	154	102	1.2	A
	Subtotal	425	426	100	0.6	A
Total		796	799	100	4.0	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Plus Project
Time Period: Morning Peak Hour
Project #: UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	30	29	97	0.7	A
	R	7	9	124	0.0	A
	Subtotal	37	38	103	0.5	A
SB	L	20	18	90	0.4	A
	T	15	16	108	0.6	A
	Subtotal	35	34	97	0.5	A
WB	L	11	9	84	3.4	A
	R	54	54	100	2.1	A
	Subtotal	65	63	97	2.3	A
Total		136	135	99	1.3	A

Intersection: Silver Ave & Ridgeline Rd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	15	14	95	4.6	A
	R	10	11	113	3.1	A
	Subtotal	25	25	100	3.9	A
EB	L	5	6	114	1.2	A
	T	90	90	100	0.5	A
	Subtotal	95	96	101	0.5	A
WB	T	49	46	94	0.2	A
	R	5	6	114	0.1	A
	Subtotal	54	52	96	0.2	A
Total		174	173	99	0.9	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Plus Project
Time Period: Morning Peak Hour
Project #: UT24-2740

Intersection: S.R. 36 & Grant Ave & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	R	5	4	76	3.9	A
	Subtotal	5	4	80	3.9	A
EB	L	223	227	102	10.6	B
	T	5	4	76	11.5	B
	R2	27	30	110	4.6	A
	Subtotal	255	261	102	9.9	A
WB	T	5	4	76	8.7	A
	R	15	14	95	5.0	A
	Subtotal	20	18	90	5.8	A
NE	L	8	7	85	2.2	A
	T	145	139	96	0.7	A
	R	5	6	114	0.1	A
	Subtotal	158	152	96	0.7	A
SW	L2	20	19	95	1.8	A
	L	5	5	95	1.7	A
	T	105	111	106	1.2	A
	R		61	111	0.3	A
	Subtotal	130	196	151	0.9	A
Total		624	631	101	4.8	A

Intersection: Silver Ave & Access 1
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	10	8	82	4.3	A
	R	5	6	114	3.0	A
	Subtotal	15	14	93	3.7	A
EB	L	2	1	50	0.8	A
	T	25	25	99	0.0	A
	Subtotal	27	26	96	0.0	A
WB	T	60	60	100	0.3	A
	R	3	3	100	0.2	A
	Subtotal	63	63	100	0.3	A
Total		106	103	98	0.7	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Plus Project
Time Period: Morning Peak Hour
Project #: UT24-2740

Intersection: Silver Ave & Access 2
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	18	90	4.1	A
	R	15	18	122	2.9	A
	Subtotal	35	36	103	3.5	A
EB	L	4	2	47	1.5	A
	T	31	31	101	0.2	A
	Subtotal	35	33	94	0.3	A
WB	T	48	45	94	0.7	A
	R	6	8	128	0.3	A
	Subtotal	54	53	98	0.6	A
Total		124	122	98	1.4	A

Intersection: Silver Ave & Access 3
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	20	100	4.2	A
	R	10	12	123	3.0	A
	Subtotal	30	32	107	3.8	A
EB	L	3	2	67	1.5	A
	T	48	47	98	0.4	A
	Subtotal	51	49	96	0.4	A
WB	T	45	42	94	0.4	A
	R	9	9	97	0.1	A
	Subtotal	54	51	94	0.3	A
Total		134	132	98	1.2	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Plus Project
Time Period: Morning Peak Hour **Project #:** UT24-2740

Intersection: Silver Ave & Access 4
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
EB	L	3	2	67	1.4	A
	T	65	64	99	0.6	A
	Subtotal	68	66	97	0.6	A
WB	T	49	47	96	0.2	A
	R	11	11	102	0.3	A
	Subtotal	60	58	97	0.2	A
SW	L	30	29	97	4.2	A
	R	5	5	95	3.4	A
	Subtotal	35	34	97	4.1	A
Total		162	158	97	1.2	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Plus Project
Time Period: Evening Peak Hour
Project #: UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	50	48	96	0.9	A
	R	22	24	108	0.1	A
	Subtotal	72	72	100	0.6	A
SB	L	74	73	99	1.0	A
	T	45	48	106	1.4	A
	Subtotal	119	121	102	1.2	A
WB	L	14	13	95	3.7	A
	R	35	35	100	1.9	A
	Subtotal	49	48	98	2.4	A
Total		240	241	100	1.3	A

Intersection: Silver Ave & Ridgeline Rd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	10	9	92	4.7	A
	R	5	6	114	3.0	A
	Subtotal	15	15	100	4.0	A
EB	L	15	15	102	1.6	A
	T	95	96	101	0.8	A
	Subtotal	110	111	101	0.9	A
WB	T	114	115	101	0.3	A
	R	10	9	92	0.1	A
	Subtotal	124	124	100	0.3	A
Total		249	250	100	0.8	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Plus Project
Time Period: Evening Peak Hour
Project #: UT24-2740

Intersection: S.R. 36 & Grant Ave & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L2	5	5	95	17.7	C
	L	5	6	114	30.7	D
	R	5	5	95	6.3	A
	Subtotal	15	16	107	19.0	C
EB	L	127	129	102	28.5	D
	T	5	6	114	23.0	C
	R	5	5	95	35.4	E
	R2	23	25	108	8.2	A
WB	L	5	4	76	15.3	C
	T	5	6	114	14.4	B
	R	15	16	108	7.3	A
	Subtotal	25	26	104	10.2	B
NE	L	29	27	94	10.0	A
	T	210	210	100	2.6	A
	Subtotal	239	237	99	3.4	A
SW	L2	25	27	107	3.5	A
	L	5	5	95	3.6	A
	T	245	243	99	3.9	A
	R		225	98	1.7	A
	Subtotal	250	473	189	2.9	A
Total		947	944	100	7.4	A

Intersection: Silver Ave & Access 1
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	3	2	67	5.5	A
	R	4	4	94	2.8	A
	Subtotal	7	6	86	3.7	A
EB	L	8	9	109	1.1	A
	T	88	91	104	0.2	A
	Subtotal	96	100	104	0.3	A
WB	T	46	47	103	0.4	A
	R	9	10	108	0.1	A
	Subtotal	55	57	104	0.3	A
Total		158	163	103	0.4	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Plus Project
Time Period: Evening Peak Hour
Project #: UT24-2740

Intersection: Silver Ave & Access 2
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	10	9	92	4.3	A
	R	8	10	121	2.6	A
	Subtotal	18	19	106	3.4	A
EB	L	12	11	94	1.2	A
	T	80	84	105	0.2	A
	Subtotal	92	95	103	0.3	A
WB	T	47	48	103	0.8	A
	R	15	16	108	0.6	A
	Subtotal	62	64	103	0.8	A
Total		171	178	104	0.8	A

Intersection: Silver Ave & Access 3
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	19	95	4.6	A
	R	6	7	112	2.8	A
	Subtotal	26	26	100	4.1	A
EB	L	12	12	102	1.8	A
	T	78	81	104	0.7	A
	Subtotal	90	93	103	0.8	A
WB	T	56	58	104	0.9	A
	R	30	31	104	0.6	A
	Subtotal	86	89	103	0.8	A
Total		202	208	103	1.2	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Plus Project
Time Period: Evening Peak Hour **Project #:** UT24-2740

Intersection: Silver Ave & Access 4
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
EB	L	9	8	86	1.7	A
	T	89	91	103	1.1	A
	Subtotal	98	99	101	1.1	A
WB	T	80	84	105	0.6	A
	R	40	38	94	0.3	A
	Subtotal	120	122	102	0.5	A
SW	L	22	22	99	4.5	A
	R	6	7	112	2.8	A
	Subtotal	28	29	104	4.1	A
Total		247	250	101	1.2	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
 Analysis Period: Future (2029) Mitigated Plus Project
 Time Period: Morning Peak Hour
 Project #: UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	30	32	108	0.6	A
	R	7	7	97	0.0	A
	Subtotal	37	39	105	0.5	A
SB	L	20	19	95	0.4	A
	T	15	17	115	0.5	A
	Subtotal	35	36	103	0.4	A
WB	L	11	10	93	3.5	A
	R	54	53	98	2.1	A
	Subtotal	65	63	97	2.3	A
Total		136	138	101	1.3	A

Intersection: Silver Ave & Ridgeline Rd
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	15	13	88	4.3	A
	R	10	9	92	2.9	A
	Subtotal	25	22	88	3.7	A
EB	L	5	4	76	0.9	A
	T	90	91	101	0.6	A
	Subtotal	95	95	100	0.6	A
WB	T	49	48	98	0.1	A
	R	5	6	114	0.1	A
	Subtotal	54	54	100	0.1	A
Total		174	171	98	0.9	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Mitigated Plus Project
Time Period: Morning Peak Hour

Project #: UT24-2740

Intersection: S.R. 36 & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	8	8	97	1.5	A
	T	145	143	99	0.9	A
	R	5	6	114	0.1	A
	Subtotal	158	157	99	0.9	A
SB	L	25	22	87	1.9	A
	T	105	103	98	1.2	A
	R	55	54	98	0.4	A
	Subtotal	185	179	97	1.0	A
EB	L	223	219	98	7.8	A
	T	5	4	76	8.6	A
	R	27	30	110	3.8	A
	Subtotal	255	253	99	7.3	A
WB	T	5	4	76	7.0	A
	R	20	21	105	4.1	A
	Subtotal	25	25	100	4.6	A
Total		624	614	98	3.8	A

Intersection: Silver Ave & Access 1
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	10	8	82	4.2	A
	R	5	6	114	2.9	A
	Subtotal	15	14	93	3.6	A
EB	L	2	2	100	0.8	A
	T	25	27	107	0.1	A
	Subtotal	27	29	107	0.1	A
WB	T	60	59	98	0.2	A
	R	3	3	100	0.1	A
	Subtotal	63	62	98	0.2	A
Total		106	105	100	0.6	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Mitigated Plus Project
Time Period: Morning Peak Hour Project #: UT24-2740

Intersection: Silver Ave & Access 2
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	20	100	4.0	A
	R	15	15	102	3.0	A
	Subtotal	35	35	100	3.6	A
EB	L	4	3	71	1.1	A
	T	31	32	104	0.3	A
	Subtotal	35	35	100	0.4	A
WB	T	48	46	96	0.6	A
	R	6	6	96	0.3	A
	Subtotal	54	52	96	0.6	A
Total		124	122	98	1.4	A

Intersection: Silver Ave & Access 3
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	17	85	3.9	A
	R	10	9	92	2.8	A
	Subtotal	30	26	87	3.5	A
EB	L	3	2	67	0.9	A
	T	48	50	105	0.6	A
	Subtotal	51	52	102	0.6	A
WB	T	45	43	96	0.4	A
	R	9	10	108	0.2	A
	Subtotal	54	53	98	0.4	A
Total		134	131	97	1.1	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Mitigated Plus Project
Time Period: Morning Peak Hour **Project #:** UT24-2740

Intersection: Silver Ave & Access 4
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
EB	L	3	3	100	1.6	A
	T	65	64	99	0.8	A
	Subtotal	68	67	99	0.8	A
WB	T	49	46	94	0.3	A
	R	11	11	102	0.1	A
	Subtotal	60	57	95	0.3	A
SW	L	30	30	101	4.4	A
	R	5	6	114	3.0	A
	Subtotal	35	36	103	4.2	A
Total		162	160	99	1.3	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
 Analysis Period: Future (2029) Mitigated Plus Project
 Time Period: Evening Peak Hour Project #: UT24-2740

Intersection: Mormon Trail Rd & Silver Ave
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	50	51	103	0.9	A
	R	22	25	112	0.1	A
	Subtotal	72	76	106	0.6	A
SB	L	74	77	104	1.0	A
	T	45	44	97	1.2	A
	Subtotal	119	121	102	1.1	A
WB	L	14	12	87	3.8	A
	R	35	37	106	1.9	A
	Subtotal	49	49	100	2.4	A
Total		240	246	102	1.2	A

Intersection: Silver Ave & Ridgeline Rd
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	10	9	92	5.1	A
	R	5	6	114	2.9	A
	Subtotal	15	15	100	4.2	A
EB	L	15	14	95	1.7	A
	T	95	97	102	0.8	A
	Subtotal	110	111	101	0.9	A
WB	T	114	116	102	0.3	A
	R	10	10	103	0.1	A
	Subtotal	124	126	102	0.3	A
Total		249	252	101	0.8	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Mitigated Plus Project
Time Period: Evening Peak Hour

Project #: UT24-2740

Intersection: S.R. 36 & Silver Ave
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	29	29	101	4.5	A
	T	210	210	100	1.4	A
	R	5	6	114	1.8	A
	Subtotal	244	245	100	1.8	A
SB	L	25	26	103	3.9	A
	T	245	243	99	4.0	A
	R	230	227	99	1.8	A
	Subtotal	500	496	99	3.0	A
EB	L	127	128	101	14.2	B
	T	10	11	113	11.8	B
	R	23	21	90	4.7	A
	Subtotal	160	160	100	12.8	B
WB	L	10	10	103	8.8	A
	T	10	9	92	15.7	C
	R	20	19	95	5.6	A
	Subtotal	40	38	95	8.8	A
Total		944	939	99	4.6	A

Intersection: Silver Ave & Access 1
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	3	2	67	5.4	A
	R	4	5	118	2.7	A
	Subtotal	7	7	100	3.5	A
EB	L	8	8	97	1.1	A
	T	88	90	103	0.2	A
	Subtotal	96	98	102	0.3	A
WB	T	46	47	103	0.4	A
	R	9	13	141	0.1	A
	Subtotal	55	60	109	0.3	A
Total		158	165	104	0.4	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
 Analysis Period: Future (2029) Mitigated Plus Project
 Time Period: Evening Peak Hour
 Project #: UT24-2740

Intersection: Silver Ave & Access 2
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	10	9	92	4.7	A
	R	8	10	121	2.7	A
	Subtotal	18	19	106	3.6	A
EB	L	12	12	102	1.2	A
	T	80	81	101	0.2	A
	Subtotal	92	93	101	0.3	A
WB	T	47	50	107	0.8	A
	R	15	13	88	0.6	A
	Subtotal	62	63	102	0.8	A
Total		171	175	102	0.9	A

Intersection: Silver Ave & Access 3
 Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	20	19	95	4.6	A
	R	6	6	96	3.1	A
	Subtotal	26	25	96	4.2	A
EB	L	12	10	85	1.6	A
	T	78	80	103	0.7	A
	Subtotal	90	90	100	0.8	A
WB	T	56	57	102	1.0	A
	R	30	29	97	0.6	A
	Subtotal	86	86	100	0.9	A
Total		202	201	100	1.2	A

SimTraffic LOS Report

Project: Tooele County - West South Rim TIS
Analysis Period: Future (2029) Mitigated Plus Project
Time Period: Evening Peak Hour Project #: UT24-2740

Intersection: Silver Ave & Access 4
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
EB	L	9	8	86	1.7	A
	T	89	92	104	1.0	A
	Subtotal	98	100	102	1.1	A
WB	T	80	81	101	0.7	A
	R	40	42	104	0.2	A
	Subtotal	120	123	103	0.5	A
SW	L	22	21	94	4.7	A
	R	6	7	112	3.0	A
	Subtotal	28	28	100	4.3	A
Total		247	251	102	1.2	A

APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report

Project: Tooele County - West South Rim TIS

Analysis: Existing (2024) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft



HALES ENGINEERING

innovative transportation solutions

Project #: UT24-2740

Intersection	NE	SB		SW	EB		WB	
	LTR	LR	LT	<L	>	LT	LR	LTR
01: Mormon Trail Rd & Silver Ave							50	
02: Silver Ave & Ridgeline Rd		50						
03: S.R. 36 & Grant Ave & Silver Ave					50	100	50	

SimTraffic Queueing Report

Project: Tooele County - West South Rim TIS

Analysis: Exisiting (2024) Background

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft



Project #: UT24-2740

Intersection	NE		SB		SW		EB		WB	
	LTR	LR	LT	<L	TR	>	LT	LTR	LR	LTR
01: Mormon Trail Rd & Silver Ave									50	
02: Silver Ave & Ridgeline Rd										
03: S.R. 36 & Grant Ave & Silver Ave						50		75		50

SimTraffic Queueing Report

Project: Tooele County - West South Rim TIS

Analysis: Existing (2024) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES  **ENGINEERING**
innovative transportation solutions

Project #: UT24-2740

Intersection	NE	SB		SW			EB		WB	
	LTR	LR	LT	<L	LR	TR	>	LT	LR	LTR
01: Mormon Trail Rd & Silver Ave									50	
02: Silver Ave & Ridgeline Rd		50								
03: S.R. 36 & Grant Ave & Silver Ave							75	125		50
04: Silver Ave & Access 1		50								
05: Silver Ave & Access 2		50								
06: Silver Ave & Access 3		50								
07: Silver Ave & Access 4					50					

SimTraffic Queueing Report
Project: Tooele County - West South Rim TIS
Analysis: Existing (2024) Plus Project



Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

Project #: UT24-2740

Intersection	NE	SB		SW			EB			WB	
	LTR	LR	LT	<L	LR	TR	>	LT	LTR	LR	LTR
01: Mormon Trail Rd & Silver Ave										50	
02: Silver Ave & Ridgeline Rd											
03: S.R. 36 & Grant Ave & Silver Ave	50						75		125		50
04: Silver Ave & Access 1		50									
05: Silver Ave & Access 2		50									
06: Silver Ave & Access 3		50									
07: Silver Ave & Access 4					50						

SimTraffic Queueing Report

Project: Tooele County - West South Rim TIS

Analysis: Future (2029) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES  **ENGINEERING**
innovative transportation solutions

Project #: UT24-2740

Intersection	NE	SB		SW		EB		WB	
	LTR	LR	LT	<L	TR	>	LT	LR	LTR
01: Mormon Trail Rd & Silver Ave								50	
02: Silver Ave & Ridgeline Rd		50							
03: S.R. 36 & Grant Ave & Silver Ave						50	100		50

SimTraffic Queueing Report

Project: Tooele County - West South Rim TIS

Analysis: Future (2029) Background

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft



Project #: UT24-2740

Intersection	NB	NE	SB		SW		EB			WB	
	<LR	LTR	LR	LT	<L	TR	>	LT	LTR	LR	LTR
01: Mormon Trail Rd & Silver Ave										50	
02: Silver Ave & Ridgeline Rd			50								
03: S.R. 36 & Grant Ave & Silver Ave		50					50	100		50	

SimTraffic Queueing Report
Project: Tooele County - West South Rim TIS



Analysis: Future (2029) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

Project #: UT24-2740

Intersection	NB	NE	SB		SW			EB		WB	
	<LR	LTR	LR	LT	<L	LR	TR	>	LT	LR	LTR
01: Mormon Trail Rd & Silver Ave											50
02: Silver Ave & Ridgeline Rd			50								
03: S.R. 36 & Grant Ave & Silver Ave								75	125		50
04: Silver Ave & Access 1			50								
05: Silver Ave & Access 2			75								
06: Silver Ave & Access 3			75								
07: Silver Ave & Access 4					50						

SimTraffic Queueing Report

Project: Tooele County - West South Rim TIS

Analysis: Future (2029) Plus Project

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES  **ENGINEERING**
innovative transportation solutions

Project #: UT24-2740

Intersection	NB	NE	SB		SW			EB			WB	
	<LR	LTR	LR	LT	<L	LR	TR	>	LT	LTR	LR	LTR
01: Mormon Trail Rd & Silver Ave												50
02: Silver Ave & Ridgeline Rd			50									
03: S.R. 36 & Grant Ave & Silver Ave		100						75		175		50
04: Silver Ave & Access 1			50									
05: Silver Ave & Access 2			50									
06: Silver Ave & Access 3			50									
07: Silver Ave & Access 4					50							

SimTraffic Queueing Report
Project: Tooele County - West South Rim TIS
Analysis: Future (2029) Mitigated Plus Project
Time Period: Morning Peak Hour
 95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft



Project #: UT24-2740

Intersection	NB	SB			SW	EB			WB
	LTR	LR	LT	LTR	LR	LT	R	LR	LTR
01: Mormon Trail Rd & Silver Ave								50	
02: Silver Ave & Ridgeline Rd		50							
03: S.R. 36 & Silver Ave						125	50		50
04: Silver Ave & Access 1		50							
05: Silver Ave & Access 2		50							
06: Silver Ave & Access 3		50							
07: Silver Ave & Access 4					50				

SimTraffic Queueing Report
Project: Tooele County - West South Rim TIS
Analysis: Future (2029) Mitigated Plus Project

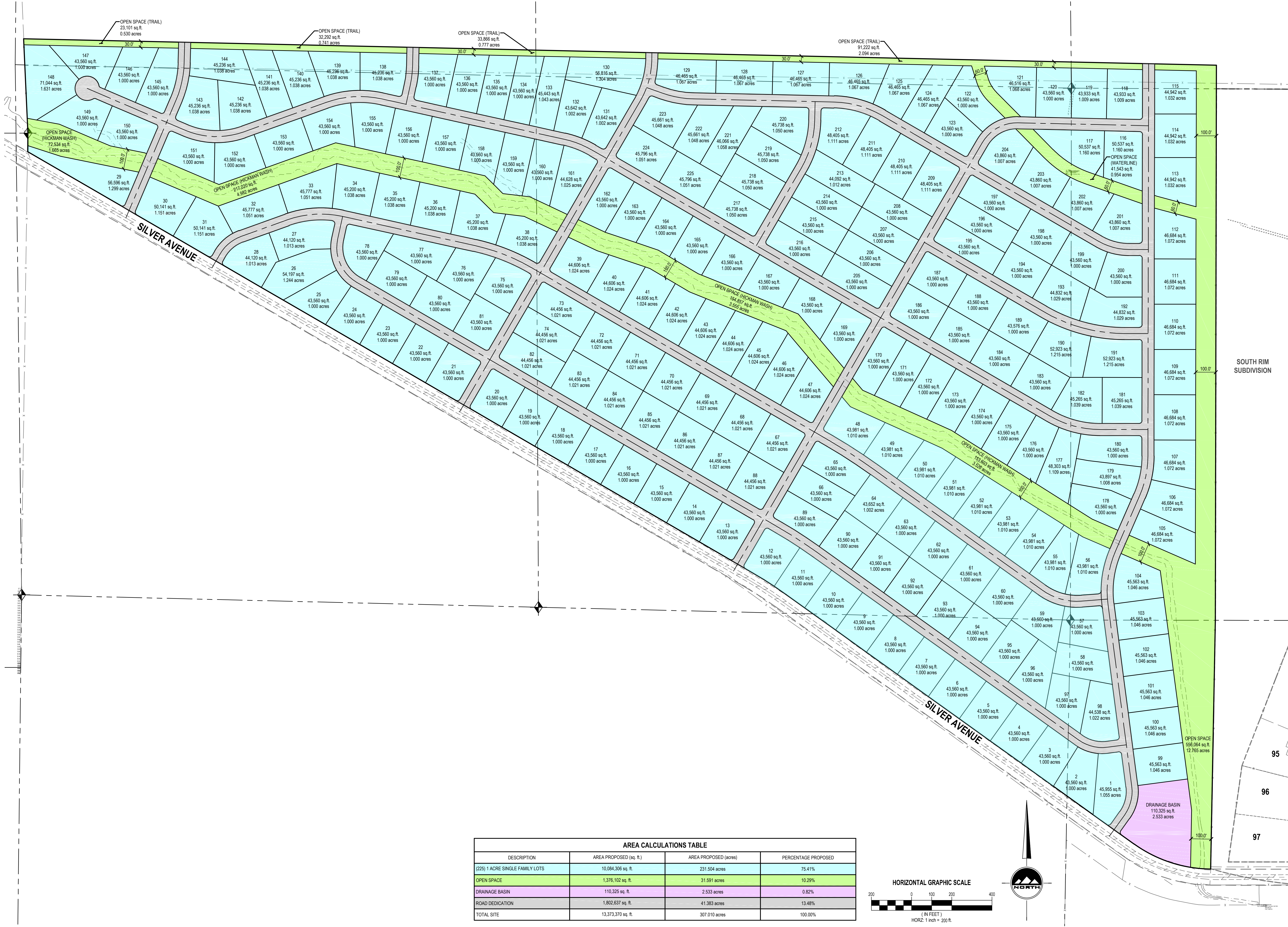


Time Period: Evening Peak Hour

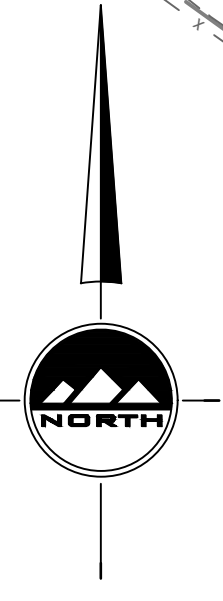
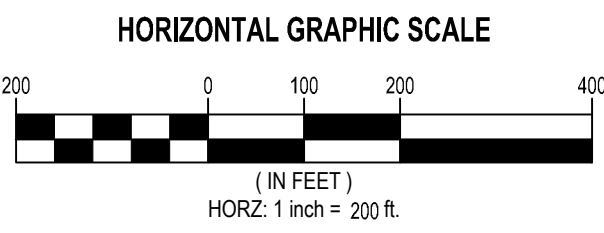
95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

Project #: UT24-2740

Intersection	NB	SB			SW	EB			WB		
	LTR	LR	LT	LTR	LR	LT	R		LR	LTR	TR
01: Mormon Trail Rd & Silver Ave		50							50		
02: Silver Ave & Ridgeline Rd											
03: S.R. 36 & Silver Ave	50			50		125	75			75	
04: Silver Ave & Access 1		50									
05: Silver Ave & Access 2		50									
06: Silver Ave & Access 3		50									
07: Silver Ave & Access 4					50						



AREA CALCULATIONS TABLE			
DESCRIPTION	AREA PROPOSED (sq. ft.)	AREA PROPOSED (acres)	PERCENTAGE PROPOSED
(225) 1 ACRE SINGLE FAMILY LOTS	10,084,306 sq. ft.	231.504 acres	75.41%
OPEN SPACE	1,376,102 sq. ft.	31.591 acres	10.29%
DRAINAGE BASIN	110,325 sq. ft.	2.533 acres	0.82%
ROAD DEDICATION	1,802,637 sq. ft.	41.383 acres	13.48%
TOTAL SITE	13,373,370 sq. ft.	307.010 acres	100.00%



TOOELE
169 N. Main St, Unit 1
Tooele, UT 84074
Phone: 435.843.3590

SANDY
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR: _____

CONTACT: _____

PHONE: _____

WEST SOUTH RIM SUBDIVISION - CONCEPT

SILVER AVENUE
STOCKTON, UT

CONCEPTUAL

CONCEPT

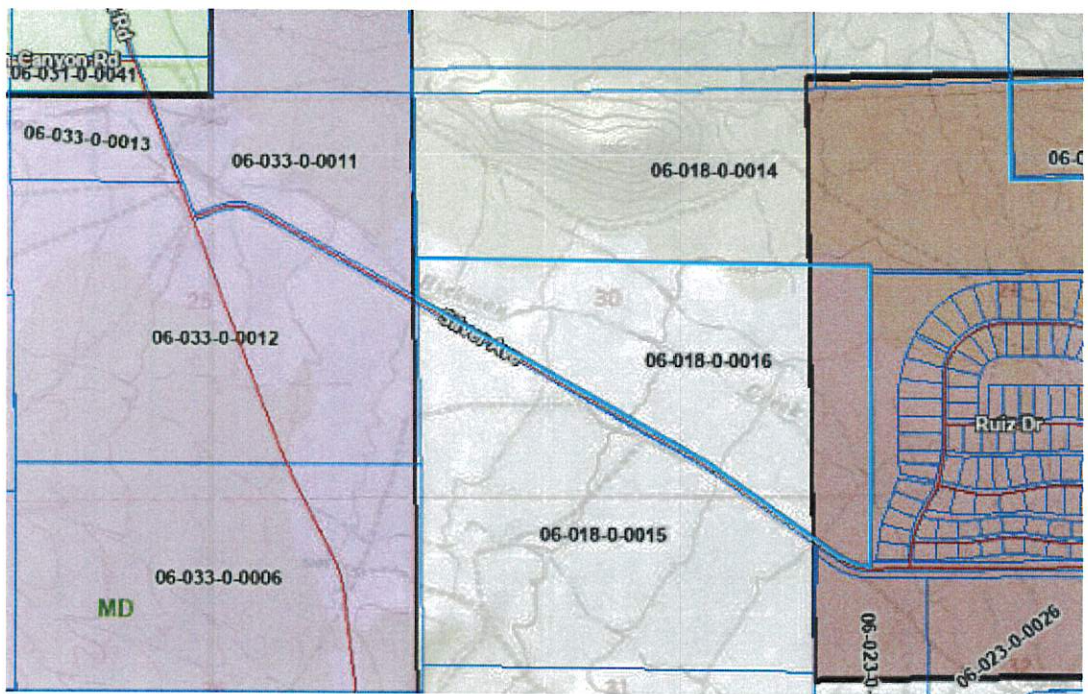
PROJECT NUMBER
T1951M

PROJECT MANAGER
J. CLEGG

PRINT DATE
2024-05-01

DESIGNED BY
R. FISH

1 OF 1



2024-109



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

BRIAN C. STEED
Executive Director

Division of Water Rights

KENT L. JONES
State Engineer/Division Director

July 25, 2019

Dear Water User,

RE: Interim Rush Valley Policy for Applications to Appropriate and Change Applications

This letter serves as notice of a change in the State Engineer's policy for applications to appropriate and change applications in Rush Valley. The State Engineer's intention to modify water right policy was discussed in a November 8, 2018 public meeting. The public meeting was held to discuss the results of a groundwater study (SIR 2011-5068, hereafter referred to as the "study") conducted by the US Geological Survey (USGS). From this study, the following findings are pertinent to the policy proposed herein:

- The study found that Rush Valley is hydrologically separated into three subbasins, known as the Northern, Vernon and Southeastern areas.
- The study presented subbasin water budgets. These budgets suggest that there may be unappropriated water in the Northern area and, to a lesser extent, in the Vernon area. The study indicates that the Southeastern area is over-appropriated although actual uses do not currently exceed safe yield.
- The State Engineer's review of the study has identified discrepancies in the data used to prepare these budgets, in particular the estimated well withdrawal. However, the budgets and study illustrate water use trends and science that should be reflected in the State Engineer's water right policy for the valley.
- Additional data, particularly relating to estimated well withdrawal, will be needed to further refine water right policy, particularly in the Northern area.

The State Engineer believes these findings warrant a policy change in how applications to appropriate and change applications are processed. The following policy changes are hereby adopted by the State Engineer for use in the administration of water right applications in Rush Valley:

- Northern Rush Valley will remain limited to applications to appropriate of up to 4.73 acre-feet.
- The Vernon Area and Southeastern Rush Valley will be limited to applications to appropriate of 1.73 acre-feet for small domestic



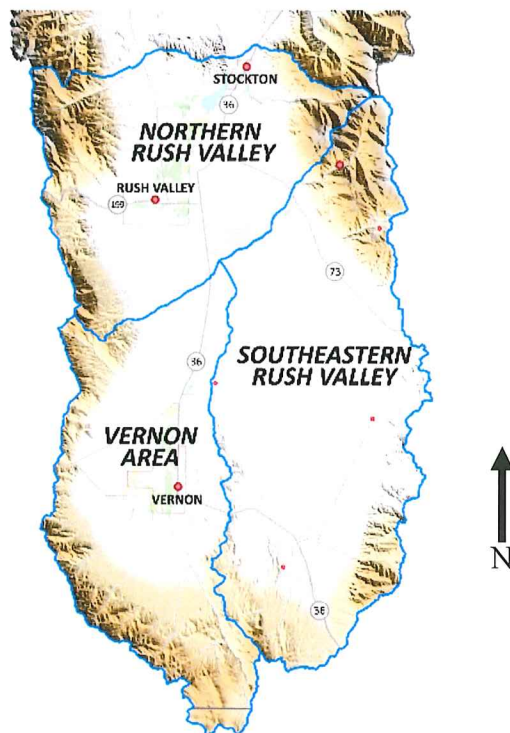
July 25, 2019

Subject: Interim Rush Valley Policy for Applications to Appropriate and Change Applications

applications (i.e. 0.25 acres of irrigation, 10 equivalent livestock units and one equivalent domestic unit) or an equivalent amount of water for small commercial or institutional use.

- Whereas the valley has been found to be three hydrologically distinct subbasins, applications seeking to move a point of diversion from one subbasin to another will no longer be approved. The policy page for the area on the Division of Water Rights website has been updated to show the boundary of the subbasins that will be used in the State Engineer's decisions.
- Change applications within a subbasin will be considered favorably by the State Engineer where there is a demonstrable hydrologic connection between heretofore and hereafter points of diversion.

This policy is effective immediately. The State Engineer's office will continue to gather information with the objective of determining a more appropriate policy for applications to appropriate in Northern Rush Valley. The figure illustrates the policy boundary and subbasin delineation:



Approved,


Kent Jones, P.E., State Engineer

7-25-2019
Date



GEOTECHNICAL INVESTIGATION
PROPOSED WATER TANK
APPROXIMATELY 400 SOUTH AND 3000 WEST
SOUTH RIM, UTAH

PREPARED FOR:

DREW SULLIVAN
C/O ENSIGN ENGINEERING
45 WEST 10000 SOUTH, SUITE 500
SANDY, UTAH 84070

ATTENTION: DREW SULLIVAN

PROJECT NO. 1240148B

MAY 17, 2024

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	Page 1
SCOPE.	Page 2
SITE CONDITIONS.	Page 2
FIELD STUDY.....	Page 3
SUBSURFACE CONDITIONS.....	Page 3
SUBSURFACE WATER.	Page 4
PROPOSED CONSTRUCTION.	Page 4
RECOMMENDATIONS.....	Page 4
A. Site Grading.....	Page 4
B. Foundations.....	Page 7
C. Concrete Slab-on-Grade.....	Page 8
D. Subgrade Walls.....	Page 9
E. Subsurface Drains.....	Page 9
F. Pipe Support.....	Page 10
G. Thrust Blocks.....	Page 10
H. Seismicity, Liquefaction and Faulting.....	Page 11
I. Water Soluble Sulfates.....	Page 12
J. Preconstruction Meeting.....	Page 12
LIMITATIONS.....	Page 13
REFERENCES.....	Page 14

FIGURES

EXPLORATORY BORING LOCATIONS	FIGURE 1
EXPLORATORY BORING LOGS	FIGURE 2
EXPLORATORY BORING LEGEND AND NOTES	FIGURE 3
CONSOLIDATION TEST RESULTS	FIGURE 4
SUMMARY OF LABORATORY TEST RESULTS	TABLE I

EXECUTIVE SUMMARY

1. Subsurface soils encountered in the borings consist of approximately $\frac{1}{2}$ foot of topsoil overlying lean clay that extends the full depth investigated, approximately $40\frac{1}{2}$ feet. Sandy silt was encountered in Boring B-1 between depths of approximately 20 to 24 feet.
2. No subsurface water was encountered in the borings at the time of drilling.
3. The proposed water tank may be supported on spread footings bearing on the undisturbed natural soil or on compacted structural fill extending down to the undisturbed natural soil and may be designed for a net allowable bearing pressure of 2,500 pounds per square foot. Footings bearing on at least 2 feet of structural fill may be designed for a net allowable bearing pressure of 3,500 pounds per square foot.
4. The onsite soil, exclusive of topsoil, organics, oversized particles and other deleterious material, may be considered for use as backfill for the walls of the reservoir.
5. Temporary unretained excavation slopes may be constructed at 1 horizontal to 1 vertical or flatter. Permanent unretained cut and fill slopes may be constructed at 2 horizontal to 1 vertical or flatter.
6. Geotechnical information related to foundations, subgrade preparation and materials is included in the report.

SCOPE

This report presents the results of a geotechnical investigation for the proposed water tank to be located at approximately 400 South and 3000 West in South Rim, Utah. The approximate latitude and longitude of the site are 40.4498° N, 112.4358° W. The report presents the subsurface conditions encountered, laboratory test results and recommendations for foundations. The study was conducted in general accordance with our proposal dated March 7, 2024.

Field exploration was conducted to obtain information on the subsurface conditions and to obtain samples for laboratory testing. Information obtained from the field and laboratory was used to define the conditions at the site for our engineering analysis. Results of the field exploration and laboratory tests were analyzed to develop recommendations for the proposed foundations.

This report has been prepared to summarize the data obtained during the study and to present our conclusions and recommendations based on the proposed construction and the subsurface conditions encountered. Design parameters and a discussion of geotechnical engineering considerations related to construction are included in the report.

SITE CONDITIONS

The site consists of undeveloped land.

The site slopes gently down to the southwest.

Vegetation consists of grass and brush.

The surrounding area is similar undeveloped land. There is a dirt road west of the site that extends in a general north-south direction.

FIELD STUDY

Two borings were drilled on April 30, 2024 at the approximate locations indicated on Figure 1. The borings were drilled using 8-inch-diameter hollow-stem auger powered by a truck-mounted drill rig. The borings were logged and soil samples obtained by a geologist from AGECE. Logs of the subsurface conditions encountered in the borings are presented on Figure 2 with legend and notes on Figure 3.

SUBSURFACE CONDITIONS

Subsurface soils encountered in the borings consist of approximately ½ foot of topsoil overlying lean clay that extends the full depth investigated, approximately 40½ feet. Sandy silt was encountered in Boring B-1 between depths of approximately 20 to 24 feet.

A description of the soils encountered in the borings follows:

Topsoil - The topsoil consists of lean clay with sand. It is moist to very moist, dark brown and contains organics.

Lean Clay - The clay contains small to large amounts of sand and occasional gravels. It is medium stiff to hard, slightly to very moist and brown.

Laboratory tests conducted on samples of the clay indicate it has natural moisture contents of 11 to 21 percent and natural dry densities of 84 to 102 pounds per cubic foot (pcf).

Consolidation tests conducted on the clay indicate it will compress a small to moderate amount with the addition of light to moderate loads. Results of the consolidation tests are presented on Figure 4.

Silt with Sand - The silt is very stiff, slightly moist and brown.

Results of the laboratory tests are summarized on Table I and are included on logs of the borings.

SUBSURFACE WATER

No subsurface water was encountered in the borings.

PROPOSED CONSTRUCTION

We understand that the proposed water tank will consist of a reinforced- concrete structure. We understand that the tank will extend to depths on the order of 9 to 15 feet below the existing ground surface. The structural engineer indicates maximum column loads are 120 kips and maximum wall loads are 8 kips per foot.

If the proposed construction or loads are significantly different from those described above, we should be notified so that we can reevaluate the recommendations given.

RECOMMENDATIONS

Based on the subsurface conditions encountered, laboratory test results and the proposed construction, the following recommendations are given:

A. Site Grading

We understand that excavation for the proposed tank will extend to depths on the order of 9 to 15 feet below the existing ground surface.

1. Excavation

We anticipate that excavation for the structure can be accomplished with typical excavation equipment.

Temporary unretained excavation slopes may be constructed at 1 horizontal to 1 vertical or flatter.

2. Cut and Fill Slopes

Permanent unretained cut and fill slopes may be constructed at 2 horizontal to 1 vertical or flatter. Surface runoff should be directed away from the cut and fill slope faces. Cut and fill slopes should be protected from erosion by revegetation or other methods.

3. Subgrade Preparation

The topsoil, organics, unsuitable fill and other deleterious materials should be removed from below the proposed water tank area.

4. Compaction

Compaction of fill placed at the site should equal or exceed the minimum densities as indicated below when compared to the maximum dry density as determined by ASTM D 1557.

Fill To Support	Compaction
Foundations and Floor Slab	≥ 95%
Exterior Concrete Flatwork	≥ 90%
Pavement	
Base Course	≥ 95%
Fill Placed Below Base Course	≥ 90%
Landscaping	≥ 85%
Retaining Wall Backfill	85 - 90%

The fill should be compacted at a moisture content within 2 percent of the optimum moisture content to facilitate the compaction process.

Fill placed for the project should be frequently tested for compaction.

5. Materials

Materials placed as structural fill to support the water tank should consist of granular soil with less than 35 percent passing the No. 200 sieve and a maximum particle size of 4 inches. The clay is not recommended for use as structural fill, but may be used as site grading fill outside the proposed tank area and as backfill adjacent the tank if the topsoil, organics, debris and other deleterious materials are removed.

The following recommendations are given for imported structural fill:

Fill to Support	Recommendations
Footings and Slabs	Non-expansive granular soil Passing No. 200 Sieve < 35% Liquid Limit < 30% Maximum size 4 inches
Floor Slab (Upper 4 inches)	Sand and/or Gravel Passing No. 200 Sieve < 5% Maximum size 2 inches

The moisture of the soil should be adjusted to within 2 percent of optimum to facilitate compaction. This may require wetting or drying of the soil depending of the soil moisture at the time of construction. Drying of the soil may not be practical during cold or wet times of the year.

6. Drainage

The ground surface surrounding the proposed water tank should be planned to direct the surface run off away from the structure.

B. Foundations**1. Bearing Material**

With the proposed construction and the subsurface conditions encountered, the proposed water tank may be supported on spread footings bearing on the undisturbed natural soil or on compacted structural fill extending down to the undisturbed natural soil. Structural fill should extend out away from the footings at least a distance equal to the depth of structural fill below the footings.

Topsoil, unsuitable fill and other deleterious materials should be removed from below proposed footing areas.

2. Bearing Pressure

Spread footings bearing on the undisturbed natural soil or on compacted structural fill may be designed for an allowable net bearing pressure of 2,500 pounds per square foot. Footings bearing on at least 2 feet of structural fill may be designed for a net allowable bearing pressure of 3,500 pounds per square foot. Footings should have a minimum width of 2 feet and a minimum depth of embedment of 1 foot.

3. Temporary Loading Conditions

The allowable bearing pressure may be increased by one-half for temporary loading conditions such as wind and seismic loads.

4. Settlement

We estimate that total and differential settlement will be less than 1 and ½ inch, respectively.

5. Lateral Resistance

Lateral resistance for spread footings placed on the natural soil or on structural fill is controlled by sliding resistance between the footing and the foundation soils. A friction value of 0.35 may be used in design for ultimate lateral resistance. The passive resistance of the soil adjacent footings may be included in determining the lateral resistance.

6. Frost Depth

Footings below unheated areas should extend at least 30 inches below grade for frost protection

7. Foundation Base

The base of foundation excavations should be cleared of loose or deleterious material or the loose material should be compacted.

8. Construction Observation

A representative of the geotechnical engineer should observe footing excavations prior to structural fill and concrete placement.

C. Concrete Slab-on-Grade

1. Slab Support

Floor slabs may be supported on the natural undisturbed soil, or on compacted structural fill extending down to the natural undisturbed soil.

2. Underslab Sand and/or Gravel

A minimum thickness of 4 inches of free draining sand and/or gravel should be placed beneath floor slabs. If columns are supported by thickened and reinforced sections of the floor slab, the sand and/or gravel need not be placed below the thickened portion of the slab.

D. Subgrade Walls

For the at-rest condition, where no lateral movement of the wall is permitted, the lateral load from the backfill may be calculated using an equivalent fluid weight of 55 pcf or 65 pcf for backfill consisting of the natural gravel or clay, respectively. These values assume a horizontal ground surface above the wall. An equivalent fluid weight for passive pressure of 300 pcf or 250 pcf may be used for gravel or clay backfill, respectively, assuming a horizontal ground surface on the passive side of the wall.

Under seismic conditions the equivalent fluid weight should be increased by 7 pcf for the at-rest condition and decreased by 22 pcf for the passive condition. This assumes a peak horizontal ground acceleration of 0.37g for a 2 percent probability of exceedance in a 50-year period.

The values given do not include hydrostatic pressure. Proper drainage should be provided around the tank walls.

E. Subsurface Drains

Consideration may be given to providing a means to collect and remove water that may accumulate around the walls of the water tank. This drain would consist of a perforated pipe installed in the gravel filled trench around the perimeter of the subgrade floor of the tank and should connect to the underslab gravel.

F. Pipe Support

The soils encountered are suitable for support of piping at the reservoir site.

1. Settlement

The soils at the pipe bearing elevation will experience little, if any, increase in stress due to the proposed construction. Thus, settlement of the proposed pipeline will be a function of disturbance of the soil beneath the pipe. Disturbance may result from excavation or construction activities. Care should be taken to minimize disturbance of the soils below the pipeline so that settlement can be maintained within tolerable limits.

2. Pipe Bedding

Pipe bedding requirements will depend on the type of pipe selected and design criteria based on the manufacturer's recommendations. Pipe bedding material should be placed on undisturbed natural soil. If bearing soils are disturbed, they should be removed and replaced with compacted bedding material. Pipe bedding should meet the criteria given by the pipe manufacturer.

G. Thrust Blocks

Thrust block resistance may be calculated using the passive earth pressure condition with an equivalent fluid weight of 250 pcf. This assumes a ratio of horizontal displacement to height of thrust block of 0.01. A lower equivalent fluid weight should be used if less displacement is needed. An equivalent fluid weight of 150 pcf may be used if negligible horizontal displacement is desired. Thrust blocks should bear on the undisturbed natural soil or on compacted granular fill. A friction coefficient of 0.35 may be used between the concrete and soil. The values given above are ultimate values and a suitable factor of safety should be applied.

H. Seismicity, Liquefaction and Faulting

1. Seismicity

Listed below is a summary of the site parameters for the 2021 International Building Code.

Description	Value ¹
Site Class	D ²
S _s - MCE _R ground motion (period = 0.2s)	0.65g
S ₁ - MCE _R ground motion (period = 1.0s)	0.23g
F _a - Site amplification factor at 0.2s	1.28
F _v - Site amplification factor at 1.0s	2.07
PGA - MCE _G peak ground acceleration	0.28g
PGA _M - Site modified peak ground acceleration	0.37g

¹Values obtained from information provided by the Applied Technology Council at <https://hazards.atcouncil.org>.

²Site Class D is selected based on the subsurface conditions encountered and our understanding of the geology of the area.

2. Liquefaction

Based on the subsurface conditions encountered in the borings and our understanding of the geologic conditions of the area, liquefaction is not considered to be a hazard at the site.

3. Faulting

No active fault traces are mapped to extend through the water tank site. The closest surface trace of a potentially active fault to the site is the North Oquirrh Mountain Fault, located approximately 6.8 miles east of the site (Utah Geological Survey, 2024).

I. Water Soluble Sulfates

One sample of the natural soil was tested in the laboratory for water soluble sulfate content. The sample tested was found to have less than 0.1 percent water soluble sulfates. Based on the results of the test and our experience in the area, the natural soils do not contain significant water soluble sulfates. No special cement type is needed for concrete placed in contact with the natural soil.

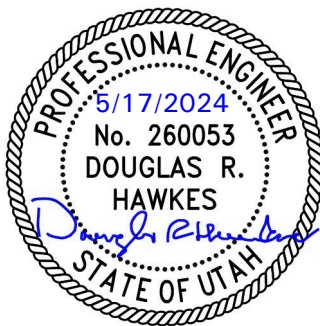
J. Preconstruction Meeting

A preconstruction meeting should be held with representatives of the owner, civil engineer, geotechnical engineer, general contractor, earthwork contractor and other members of the design team to review construction plans, specifications, methods and schedule.

LIMITATIONS

This report has been prepared in accordance with generally accepted soil and foundation engineering practices in the area for the use of the client for design purposes. The conclusions and recommendations included within the report are based on the information obtained from the borings drilled at the approximate locations indicated on Figure 1 and data obtained from laboratory testing. Variations in the subsurface conditions may not become evident until additional exploration or excavation is conducted. If the subsurface soil or groundwater conditions are found to be different from those described in this report, we should be notified to reevaluate the recommendations.

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.



Douglas R. Hawkes, P.E., P.G.

A blue ink signature of Jay R. McQuivey.

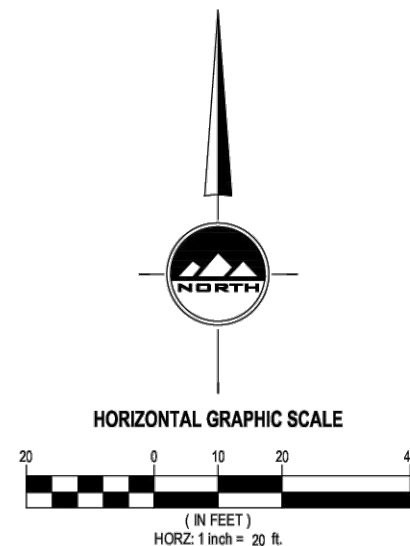
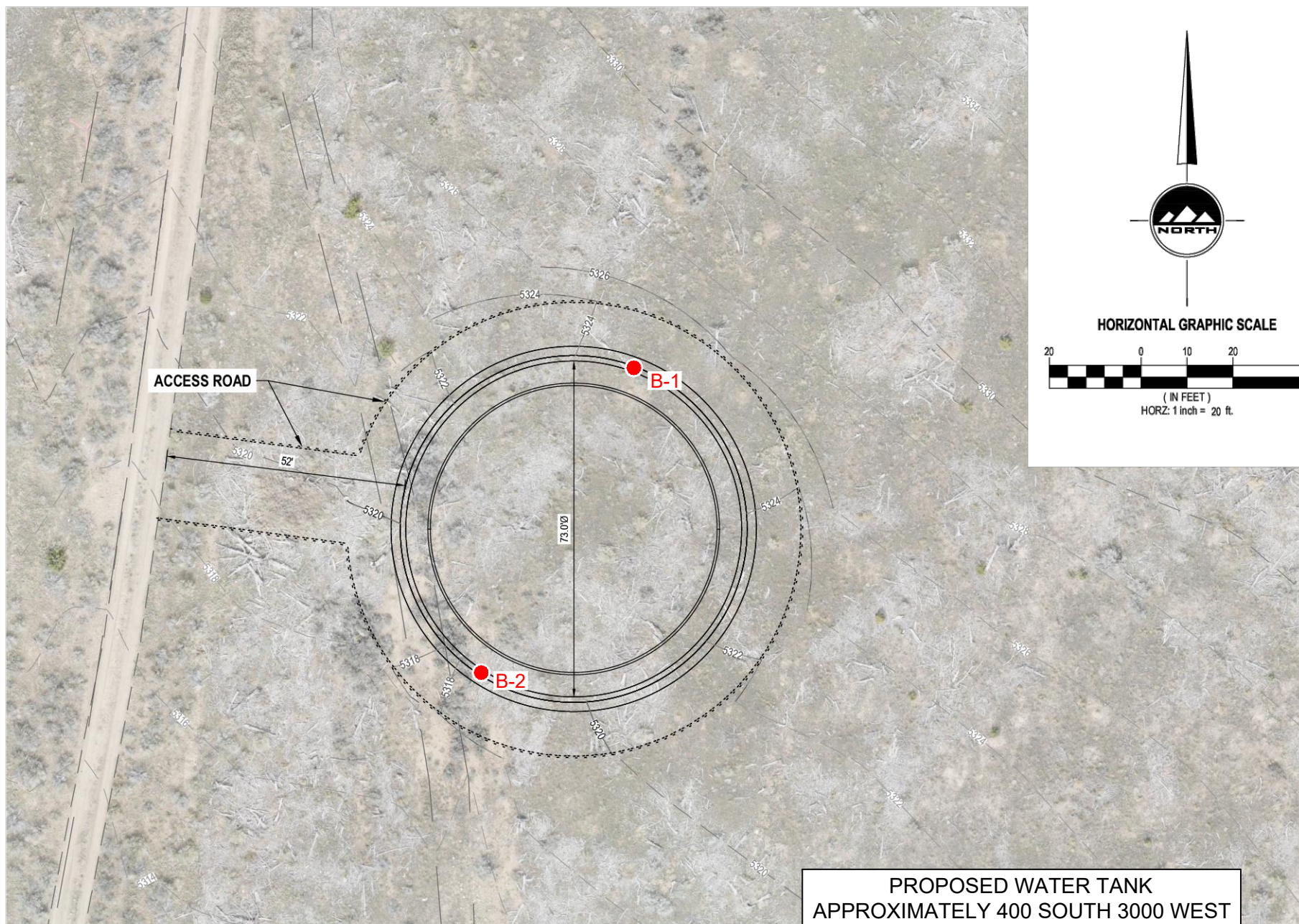
Reviewed by Jay R. McQuivey, P.E.

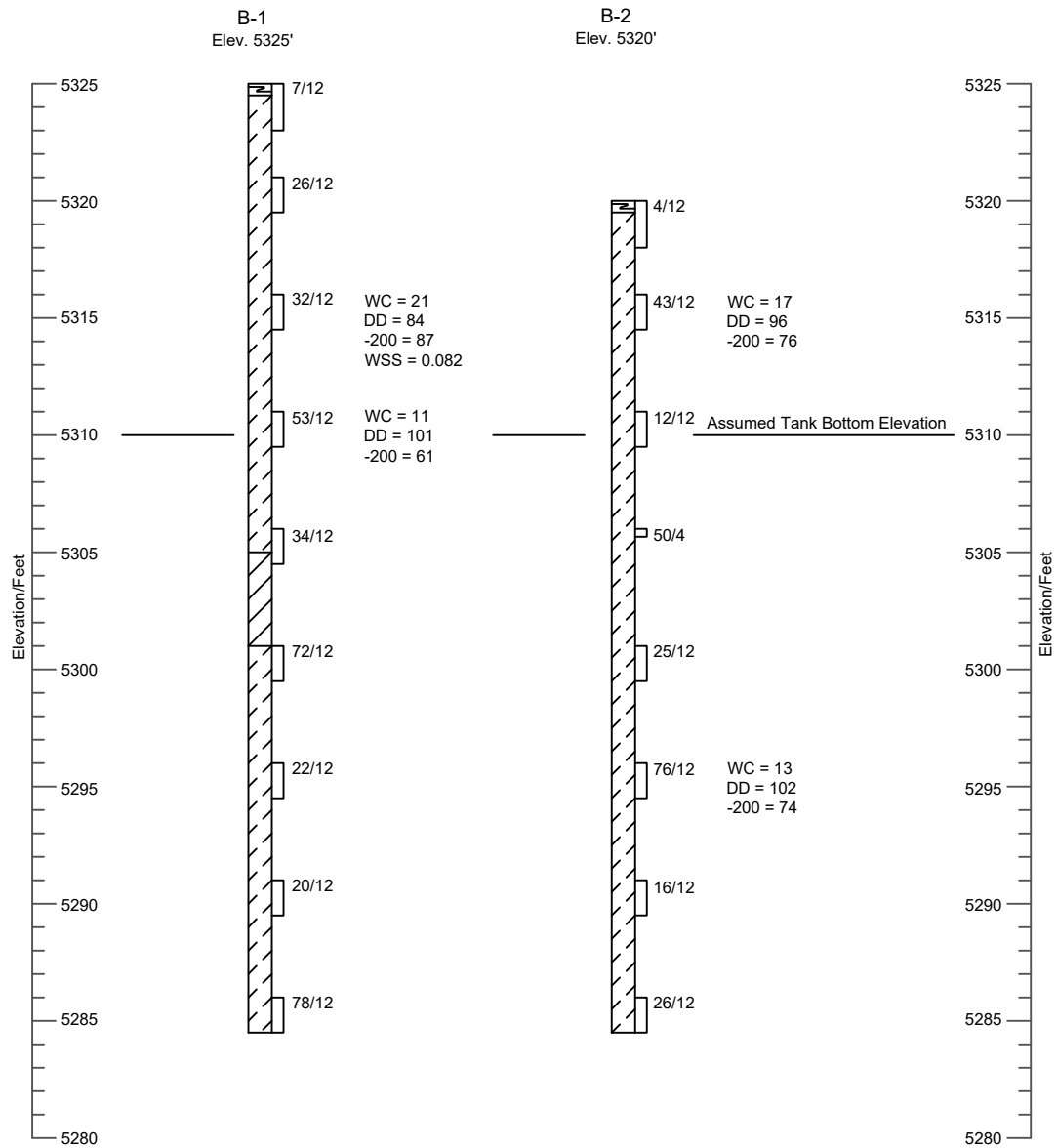
DRH/rs

REFERENCES

International Code Council, 2020; 2021 International Building Code, Falls Church, Virginia.

Utah Geological Survey, 2024; Utah Geologic Hazard Portal accessed April 23, 2024 at <https://hazards.geology.utah.gov/>.





Approximate Vertical Scale 1" = 8'

See Figure 3 for Legend and Notes

LEGEND:



Topsoil; lean clay with sand, moist to very moist, dark brown, organics.



Lean Clay (CL); small to large amount of sand, occasional gravels, medium stiff to hard, slightly to very moist, brown.



Silt with Sand (ML); very stiff, slightly moist, brown.



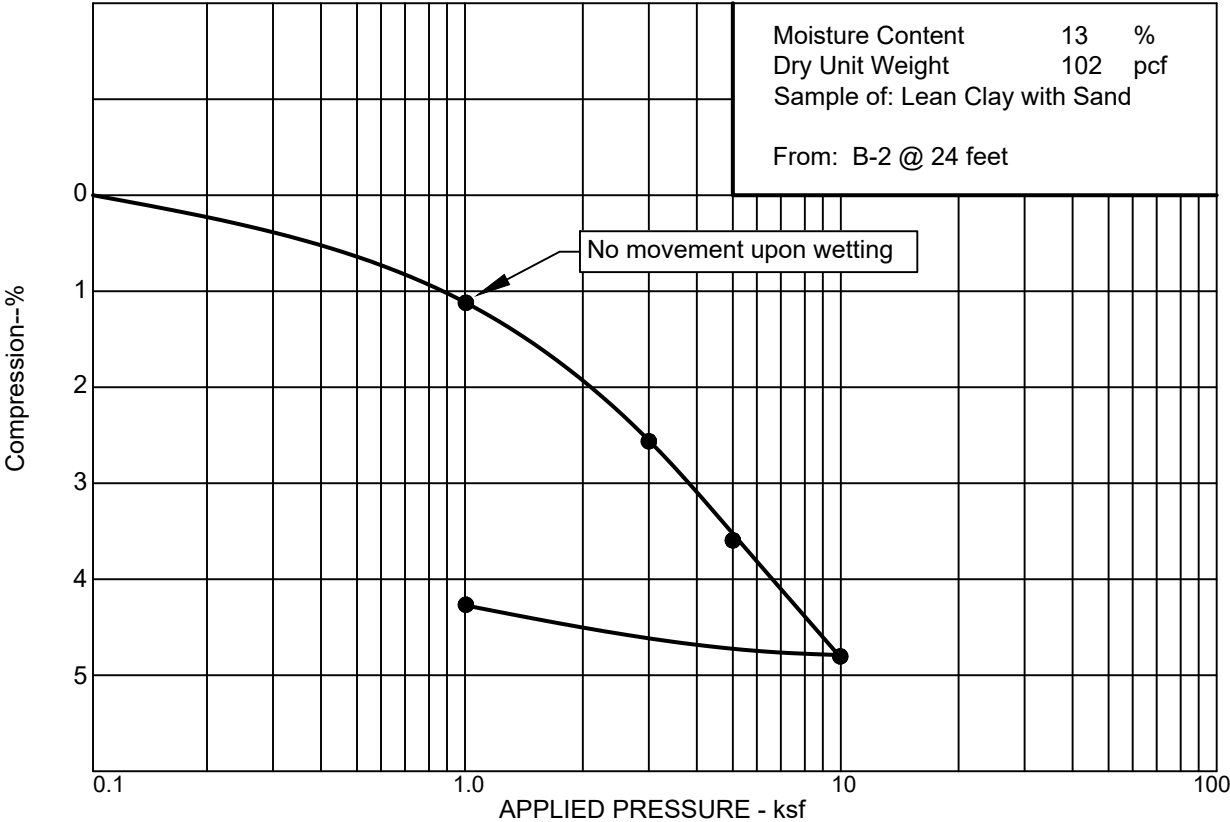
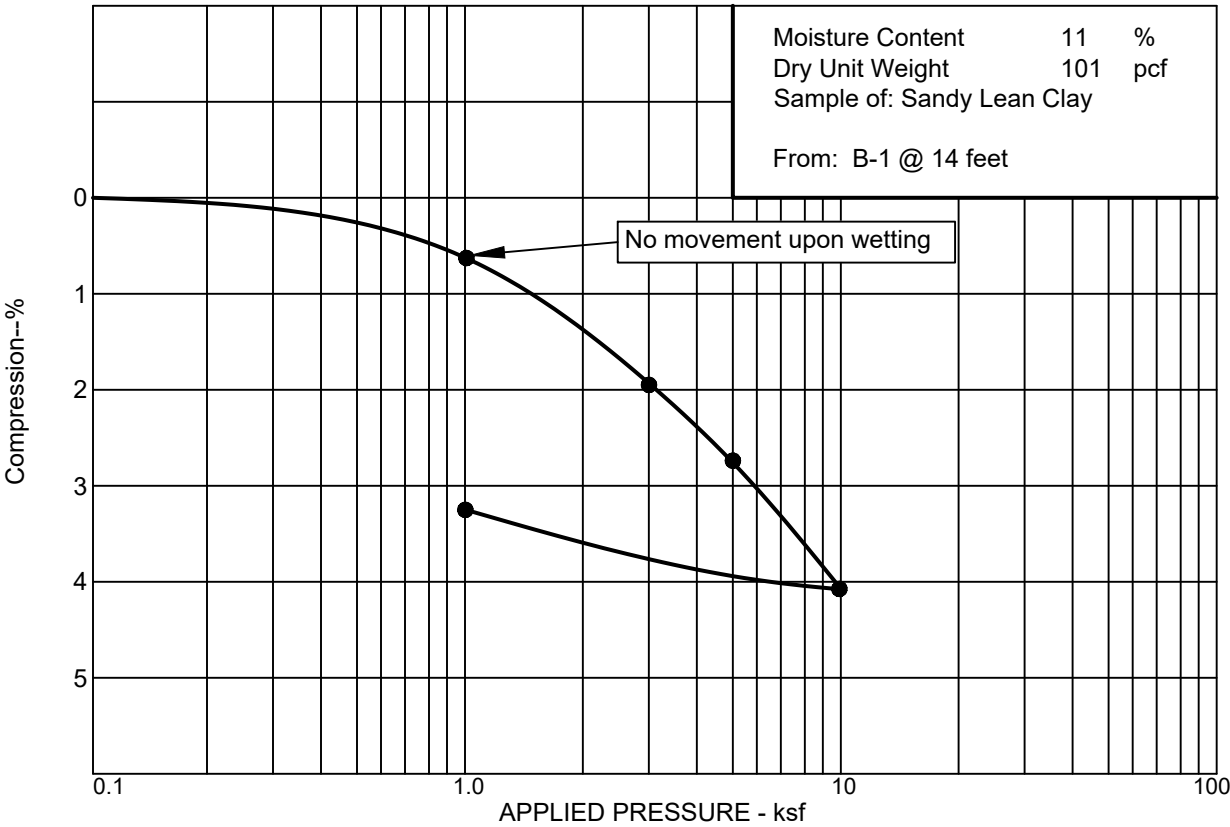
10/12

California Drive sample taken. The symbol 10/12 indicates that 10 blows from a 140-pound automatic hammer falling 30 inches were required to drive the sampler 12 inches.

NOTES:

1. The borings were drilled on April 30, 2024 with 8-inch-diameter hollow-stem auger.
2. Locations of the borings were measured approximately by pacing from features shown on the site plan provided.
3. Elevations of the borings were determined by interpolating between contours shown on the site plan provided.
4. The boring locations and elevations should be considered accurate only to the degree implied by the method used.
5. The lines between materials shown on the boring logs represent the approximate boundaries between material types and the transitions may be gradual.
6. No free water was encountered in the borings at the time of drilling.
7. WC = Water Content (%);
DD = Dry Density (pcf);
-200 = Percent Passing the No. 200 Sieve;
WSS = Water Soluble Sulfates (%).

Applied Geotechnical Engineering Consultants, Inc.



APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

TABLE I
SUMMARY OF LABORATORY TEST RESULTS

PROJECT NUMBER: 1240148B

[illegible]

***L&B DEVELOPMENT COMPANY
P.O. BOX 244
SOUTH RIM, UTAH 84071***

July 31, 2024

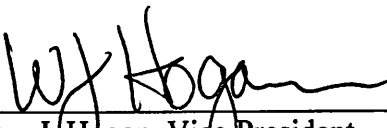
DSHCO LLC
Attn: Tyler Dohrman
43513 Ridge Park Dr.
Temecula, CA 92590

RE: WILL SERVE LETTER: West South Rim Subdivision

This letter serves as official notice that L&B Development Company will provide culinary water service to the West South Rim Subdivision upon satisfaction of the following conditions: (1) transfer to L&B Development Company of all water rights issued by the State of Utah for the West South Rim Subdivision, the amount of water rights transferred must be of sufficient quantity, per Lot, to satisfy the requirements of the State of Utah and (2) design, construction and installation of a water tank, controls/telemetry and all transmission lines (collectively called “water conveyance infrastructure”) necessary to provide culinary water service to the West South Rim Subdivision; (3) all water conveyance infrastructure must be compatible with and fully integrate with L&B Development Company’s existing infrastructure and must meet all standards established by the State of Utah; (4) after the installation and successful inspection of the water conveyance infrastructure, the ownership of the water conveyance infrastructure will be transferred to L&B Development Company.

Additionally, when the owner of the West South Rim Subdivision sells a Lot within the Project, at each individual Lot closing, seller will collect from buyer a water hook up fee of \$3000 (per Lot) payable to L&B Development Company. Upon L&B Development Company’s receipt of the water hook up fee, L&B Development Company will hook up (connect) said Lot to the water system, including the installation of a water meter, and will begin billing the buyer (now owner) of said Lot for monthly water service.

L&B Development Company understands that the owner of the West South Rim Subdivision is relying on this “will serve” letter and that third parties may also rely on this letter as evidence of L&B Development Company’s obligation to provide culinary water service to the West South Rim Subdivision consistent with the conditions outlined in this letter.



William J. Hogan, Vice President
L&B Development Company