# Lehi City Council Meeting
# Agenda
# June 9, 2020

**5:30 PM -** This will be a virtual online meeting and can be viewed at www.lehi-ut.gov. To submit comments go to www.lehi-ut.gov/government/public-meetings.

Pre-Council, 5:30 p.m.

1. Welcome and Prayer

2. Presentations and Reports

   2.1. Update on Willow Park- Mayor Johnson and Steve Marchbanks, Parks Manager

   2.2. Update on the PEC Contract for Parks Design- Mayor Johnson and Steve Marchbanks

   2.3. Discussion of the Baum Advertising Contract- Mayor Johnson

3. Agenda Questions
   *The Mayor and City Council discuss and ask questions on items on the Regular Session agenda.*

4. Administrative Report

5. Mayor and Council Reports
   *Calendar items and outside Committee reports*

Regular Session, 7:00 p.m.

1. Welcome, Roll Call, Pledge of Allegiance

2. Consent Agenda

2.1. Approve Minutes from the May 12, 2020 City Council Meeting.
051220 CC.pdf

2.2. Approve Purchase Orders
PO Index.pdf
Codale.pdf
Stevens Sales.pdf
Mountain States.pdf
RB&G.pdf

2.3. Re-approve Ordinance #19-2020, the Jacketta M. Clark Annexation
Ord 19-2020.docx

Regular Agenda

3. Consideration of Final subdivision approval for Staten Farms Plat B, a 9-lot subdivision located at 1340 North 2020 West.

Petitioner: Fred Clark

CC Staff Report Staten Farms Plat B Final Subdivision 06.09.20.docx
Staten Farms Plat B Final Subdivision DRC 5.27.2020.docx
Staten Farms Final Subdivision 05.27.20 Plans.pdf
Aerial map.pdf
General Plan map.pdf
Zoning Map.pdf

4. Consideration of Final subdivision approval for the Innovation Pointe Phase 2, a 3-lot commercial subdivision located at 1441 W Innovation Way.

Petitioner: Innovation Pointe

CC Staff Report Innovation Pointe 2 Final Subdivision.docx
Innovation Pointe Phase 2 Final Subdivision DRC 5.20.2020.docx
iPointe - Subdivision Plat (Redline) 5.12.2020.pdf
iPointe Narrative.pdf
20200521 Lehi - Innovation Pointe Office Buildings TIS Signed.pdf
Innovation Pointe Aerial Map.pdf
Innovation Pointe General Plan Map.pdf
Innovation Pointe Zoning Map.pdf

5. Consideration of Ordinance #31-2020, approval of the Ellsworth Zone Change from TH-5 to RA-1 on 0.34 acres located at 1015 East 1840 North.

Petitioner: Richard Ellsworth

CC Staff Report Ellsworth Zone Change 06.09.2020.docx
Ellsworth Zone Change DRC 4.29.2020.docx
Ord 31-2020.docx
Zone Change Narrative.pdf
Ellsworth Zone Change Map.pdf
Ellsworth- Aerial Map.pdf
Ellsworth-General Plan Map.pdf
Ellsworth-Zoning Map.pdf

6. Consideration of Resolution #2020-40, approval of a street name change for the southern portion of Holbrook Way to Miller Campus Drive.

Petitioner: Intermountain Healthcare

CC Staff Report Primary Children's Hospital Road Name Change 06.09.20.docx
Primary Children's Hospital Road Name Change DRC 5.27.2020.docx
Res 2020-40.doc
Primary Children's Hospital Road Name Change - narrative.pdf
Primary Children's Hospital Road Name Change - Map.pdf

7. Consideration of Ordinance #32-2020, a Development Code Amendment to Table 37.070 adding a parking requirement for Short Term Rentals.

Petitioner: Lehi City

CC Staff Report Table 37.070.B Development Code Amendment 06.09.2020.docx
Ord 32-2020.docx
Table 37.070 STR Parking DRC 05.06.2020.docx
TBL37.070 Parking- Short Term Rentals.pdf

8. Consideration of Ordinance #33-2020, a Development Code Amendment to Chapter 20, adding a home office with mobile services as an allowed use.

Petitioner: Lehi City

CC Staff Report Ch 20 Development Code Amendment 06.09.2020.docx
Ord 33-2020.docx
Ch 20 Home Occupation Development Code Amendment DRC 3.11.2020.docx
Ch20HomeOccupations - mobile businesses - text.pdf

9. Consideration of Ordinance #34-2020, a Development Code Amendment to Chapters 12 and 26, adding requirements for storage containers on residential property.

Petitioner: Lehi City

CC Staff Report Chapter 12 and 26 Development Code Amendment 06.09.20.docx
Ord 34-2020.docx
Chapter 12 and 26 Development Code Amendments DRC 04.29.2020.docx
Ch 12 and 26 Development Code Amendment - portable storage container sheds.pdf

10. FY 2020 Budget Amendment

a. Public Hearing

b. Consideration of Resolution #2020-41, approving an amendment to the current Lehi City FY2020 Budget.

Petitioner: Lehi City

Res 2020-41.docx
Budget Adjustment #3.pdf

11. FY2021 Consolidated Fee Schedule Amendment

a. Public Hearing

b. Consideration of Resolution #2020-42, approving an amendment to the Lehi City Consolidated Fee Schedule for FY2021 to include fees for Willow Park.

Petitioner: Lehi City

Res 2020-42.docx

willow park fees.docx

12. Consideration of Resolution #2020-43, adopting the Municipal Wastewater Planning Program (MWPP) Annual Report for the year 2019.

Petitioner: Lehi City

Res 2020-43.docx

2019 MWPP ResponseSummary.pdf

13. Public Safety and Firefighter Tier II Contributory Retirement System. (Tabled from the May 26, 2020 meeting.)

a. Un-table Resolution #2020-31

b. Consideration of Resolution #2020-31, taking formal action to pick up required employee contributions in the new Public Safety and Firefighter Tier II Contributory Retirement System.

Petitioner: Lehi City

Res 2020-31.docx

14. Consideration of Resolution #2020-44, taking formal action to pick up required employee contributions in the new Public Safety and Firefighter Tier I Contributory Retirement System.

Petitioner: Lehi City

Res 2020-44.docx

15. Consideration of Ordinance #35-2020, repealing and reenacting Lehi City Code Chapter 10-7, Flood Damage Prevention.

Petitioner: Lehi City

Ord 35-2020.docx

16. Consideration of Resolution #2020-45, approval of an agreement for professional services with RB&G Engineering, Inc.

Petitioner: Lehi City

Res 2020-45.docx

RBG-Lehi SS CEM Agreement.pdf

17. Adjournment

- Public is invited to attend all City Council Meetings
- In compliance with the Americans with Disabilities Act, persons in need of special accommodations should contact the City Recorder at 768-7100 ext. 2254.
- This agenda has been properly posted and a copy provided to the local news media.

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Discussion
Agenda Section:

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**Subject:**
Update on Willow Park- Mayor Johnson and Steve Marchbanks, Parks Manager

**Suggested Action:**

**Attachments**:

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Discussion
Agenda Section:

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**Subject:**
Update on the PEC Contract for Parks Design- Mayor Johnson and Steve Marchbanks

**Suggested Action:**

**Attachments**:

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Discussion
Agenda Section:

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**Subject:**
Discussion of the Baum Advertising Contract- Mayor Johnson

**Suggested Action:**

**Attachments**:

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Action Item
Agenda Section:

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**Subject:**
Approve Minutes from the May 12, 2020 City Council Meeting.

**Suggested Action:**

**Attachments**:
051220 CC.pdf

LEHI CITY

153 North 100 East
Lehi, UT 84043
(801) 768-7100

Minutes of the **Pre Council and Regular Session** of the **Lehi City Council** held Tuesday, **May 12, 2020,** online at www.lehi-ut.gov.

**Members Present**: Mark Johnson, Mayor
Paige Albrecht, Council Member
Chris Condie, Council Member
Paul Hancock, Council Member
Katie Koivisto, Council Member
Mike Southwick, Council Member

**Others Present**: Jason Walker, City Administrator; Cameron Boyle, Assistant City Administrator; Beau Thomas, Assistant to the City Administrator; Ryan Wood, City Attorney; Kim Struthers, Community Development Director; Lorin Powell, City Engineer; Dean Lundell, Finance Director; Shaye Ruitenbeek, Management Analyst; Melanie Hansen, Events Coordinator; and Teisha Wilson, City Recorder.

**Pre-Council, 5:30 p.m.**

**1. Welcome and Prayer**

Mayor Johnson welcomed everyone and noted that all Councilmembers were present except for Councilor Condie, who will join the meeting at 7:00 p.m. Councilor Southwick offered the prayer.

**2. Presentations and Reports**

2.1 Fraud Risk Assessment Recommendations-

Dean Lundell, Finance Director, gave on update on the Fraud Risk Assessment. He stated that there are three things they would like to implement by the end of the year. One of those is an audit committee that would be made up of 5 individuals which would include two Councilmembers, two staff members and an outside representative. They also need employees to annually sign the code of ethics document that's part of the employee policy manual. He said the last one is for the elected officials to do an online training. They are still looking at getting a fraud hotline established for employee and the public to contact to report concerns.

2.2 COVID-19 Update and Discussion

Jason Walker, City Administrator, gave an update on the current pandemic. He stated that the Utah County Commission and Health Department will make recommendations to the State regarding which phase Utah County should be in. He said that if they decide to transition to yellow, then the City would need about 2 weeks to have everything in place to be able to operate safety in the yellow phase.

**3. Agenda Questions**

Mayor Johnson reported that items 10 and 11 were withdrawn by the applicant.

**4. Administrative Report**

DRAFT

Mr. Lundell reported that the sales tax numbers for March were not as bad as expected. He said that the city has a good diversity of revenue sources, but it is a fluid situation, so they aren't sure what to expect for April.

David Kitchen, Human Resources Director stated that they are looking at best practices on what employers can do to protect their employees when they return. We have good leadership and they are taking these precautions seriously.

Mr. Kitchen stated that they had a recent opportunity to enroll in a new healthcare option for employees that would be in addition to the standard insurance offered. The program is called Nice Healthcare. It would allow employees home access to a Physician's Assistant free of cost to the employee with the potential of future premium savings and better renewal rate for the City.

There was discussion about the likeness of employees using the system. This program is new so there isn't a lot of data on utilization. The Council was interested in exploring this option and asked that staff conduct a survey to see what the utilization might be from employees.

**5. Mayor and Council Reports**
None.

The meeting recessed at approximately 6:50 p.m.
The meeting reconvened at approximately 7:00 p.m.

**Regular Session, 7:00 p.m.**

**1. Welcome, Roll Call, Pledge of Allegiance**
Mayor Johnson welcomed everyone and noted that all Councilmembers were present. Mayor Johnson led the Pledge.

**2. Consent Agenda**
2.1. Approve Minutes from the April 28, 2020 Council Meeting.

2.2 Approve Purchase Orders

**Motion:** Councilor Albrecht moved to approve the consent agenda items. Councilor Southwick seconded the motion.

**Roll Call Vote**: Councilor Albrecht, Yes; Councilor Condie, Yes; Councilor Southwick, Yes; Councilor Hancock, Yes; and Councilor Koivisto, Yes. The motion passed unanimously.

**3. Community Development Block Grant (CDBG) Annual Action Plan for FY2020, and Consolidated Plan for 2020-2024**
a. Public Hearing
There were no comments

b. Consideration of approval for the proposed Community Development Block Grant (CDBG) Annual Action Plan for FY2020, and Consolidated Plan for 2020-2024.

DRAFT

Jessica Delora, from Mountainland Association of Governments was representing Lehi City.

**Motion:** Councilor Condie moved to approve the Community Development Block Grant (CDBG) Annual Action Plan for FY2020, and Consolidated Plan for 2020-2024. Councilor Albrecht seconded the motion.

**Roll Call Vote**: Councilor Albrecht, Yes; Councilor Condie, Yes; Councilor Southwick, Yes; Councilor Hancock, Yes; and Councilor Koivisto, Yes. The motion passed unanimously.

4. **Public Hearing for the Lehi City Fiscal Year 2021 Budget and Consolidated Fee Schedule.**
   There were no comments.

5. **Consideration of Ordinance #26-2020, a zone change for Lehi Block, changing the zoning from Industrial to Commercial on 30-acres located at approximately 2303 North 1200 West.**
   Ryan Simmons, with the Boyer Company, was representing the applicant.

   **Motion:** Councilor Southwick moved to approve Ordinance #26-2020, a zone change for Lehi Block, changing the zoning from Industrial to Commercial on 30-acres located at approximately 2303 North 1200 West, and subject to the completion of all Development Review Committee and Planning Commission comments. Councilor Hancock seconded the motion.

   **Roll Call Vote**: Councilor Albrecht, Yes; Councilor Condie, Yes; Councilor Southwick, Yes; Councilor Hancock, Yes; and Councilor Koivisto, Yes. The motion passed unanimously.

6. **Consideration of Ordinance #27-2020, a zone change for the New Star Commercial Development, changing the zoning from C (Commercial) to C-H (Heavy Commercial) on 3-acres of property located at approximately 333 Millpond Drive.**
   Mr. Aki Miyagi was representing the applicant.

   **Motion:** Councilor Southwick moved to approve Ordinance #27-2020, a zone change for the New Star Commercial Development, changing the zoning from C (Commercial) to C-H (Heavy Commercial) on 3-acres of property located at approximately 333 Millpond Drive; subject to the completion of all Development Review Committee and Planning Commission comments. Councilor Koivisto seconded the motion.

   **Roll Call Vote**: Councilor Albrecht, Yes; Councilor Condie, Yes; Councilor Southwick, Yes; Councilor Hancock, Yes; and Councilor Koivisto, Yes. The motion passed unanimously.

7. **Consideration of a Plat Amendment to Quail View, located at 2774 North 900 East, amending lots 4,5 & 6.**
   Jason Yates was representing the applicant. He stated that the plat map should only have lots 5 and 6. Lot 4 is not affected by this.

**Motion:** Councilor Southwick moved to approve Plat Amendment to Quail View, located at 2774 North 900 East, amending lots 5 & 6; and also approving a second PI connection and noting that a new plat needs to reflect that there is a change only to lots 5 and 6; and subject to the completion of all Development Review Committee and Planning Commission comments. Councilor Albrecht seconded the motion.

**Roll Call Vote**: Councilor Albrecht, Yes; Councilor Condie, Yes; Councilor Southwick, Yes; Councilor Hancock, Yes; and Councilor Koivisto, Yes. The motion passed unanimously.

**8. Consideration of revisions to the Cold Spring Ranch HD1 preliminary plat, amending the building sizes, number of units, and walkways.**

Greg Haws was representing the applicant.

**Motion:** Councilor Southwick moved to approve revisions to the Cold Spring Ranch HD1 preliminary plat, amending the building sizes, number of units, and walkways; subject to the completion of all Development Review Committee and Planning Commission comments. Councilor Condie seconded the motion.

**Roll Call Vote**: Councilor Albrecht, Yes; Councilor Condie, Yes; Councilor Southwick, Yes; Councilor Hancock, Yes; and Councilor Koivisto, Yes. The motion passed unanimously.

**9. Consideration of Ordinance #28-2020, a Development Code amendment for Section 06.140, changing the residential building material requirements in Planned Communities.**

**Motion:** Councilor Koivisto moved to approve Ordinance #28-2020, a Development Code amendment for Section 06.140, changing the residential building material requirements in Planned Communities; subject to the completion of all Development Review Committee and Planning Commission comments. Councilor Hancock seconded the motion.

**Roll Call Vote**: Councilor Albrecht, Yes; Councilor Condie, Yes; Councilor Southwick, Yes; Councilor Hancock, Yes; and Councilor Koivisto, Yes. The motion passed unanimously.

**10. Consideration of Concept approval for the Timp Point, a 200-lot residential development located at approximately 2400 West Hardman Way.**

The item was withdrawn by the applicant.

**11. Consideration of Concept approval for the Willow Point, a 420-lot residential development located at approximately 4100 West Hardman Way.**

The item was withdrawn by the applicant.

**12. Consideration of Ordinance #29-2020, a Development Code amendment to the Connectivity Standards in Chapter 37.**

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**Motion:** Councilor Hancock moved to approve Ordinance #29-2020, a Development Code amendment to the Connectivity Standards in Chapter 37; subject to the completion of all Development Review Committee and Planning Commission comments. Councilor Koivisto seconded the motion.

**Roll Call Vote**: Councilor Albrecht, Yes; Councilor Condie, Yes; Councilor Southwick, Yes; Councilor Hancock, Yes; and Councilor Koivisto, Yes. The motion passed unanimously.

**13. Consideration of Ordinance #25-2020, repealing Section 2-1-12 of the Lehi City Municipal Code, requiring a security deposit for utility accounts.**

**Motion:** Councilor Southwick moved to approve Ordinance #25-2020, repealing Section 2-1-12 of the Lehi City Municipal Code, requiring a security deposit for utility accounts. Councilor Hancock seconded the motion.

**Roll Call Vote**: Councilor Albrecht, Yes; Councilor Condie, Yes; Councilor Southwick, Yes; Councilor Hancock, Yes; and Councilor Koivisto, Yes. The motion passed unanimously.

**14. Adjournment**

With no further business to come before the City Council at this time, Councilor Albrecht moved to adjourn the meeting. Councilor Southwick seconded the motion. The motion passed unanimously. The meeting adjourned at approximately 7:45 p.m.

Approved: June 9, 2020 Attest:

_____ _____

Mark Johnson, Mayor Teisha Wilson, City Recorder

DRAFT

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Action Item
Agenda Section:

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**Subject:**
Approve Purchase Orders

**Suggested Action:**

**Attachments**:
PO Index.pdf

Codale.pdf

Stevens Sales.pdf

Mountain States.pdf

RB&G.pdf

LEHI CITY
CITY COUNCIL AGENDA
June 9, 2020

# Consent Agenda: Approval of Purchase Orders

INFORMATION:

| Company | Description | P O Amount | Budget Amt (before PO) |
|---|---|---|---|
| Codale | Transformers Bid | $131,602.00 | Inventory |
| Stevens Sales | Thanksgiving Point Street Lighting | $152,250.00 | $539,730.00 |
| Mountain States | Replacement Truck | $125,244.00 | $1,430,516.92 |
| RB&G Engineering | Construction Engineering Services for the Main Street Widening | $955,000.00 | $1,032,967.17 |

# PURCHASE ORDER

## LEHI CITY CORPORATION

153 NORTH 100 EAST
LEHI UT 84043

THIS ORDER NUMBER MUST APPEAR ON YOUR INVOICE

# 6556

LEHI CITY

6625
ISSUED TO: CODALE ELECTRIC SUPPLY INC.
P.O. BOX 740525

LOS ANGELES CA 90074-0525

SHIP TO: LEHI CITY CORPORATION
153 NORTH 100 EAST
LEHI UT 84043

DEPARTMENT:

PURCHASE ORDER DATE: 04/30/2020

| REQ # | QUANTITY | DESCRIPTION | UNIT PRICE | TOTAL | GL ACCOUNT |
|---|---|---|---|---|---|
| 0 | 1.00 | TRANSFORMERS BID NO 2018-11 AWARDED TO CODALE | 131,602.00 | 131,602.00 | 53-1415 |

TOTAL 131,602.00

Authorized By:

Department Head

City Council Approval Date *

* City Council approval required if greater than $125,000

Mayor or City Administrator

6556

# Lehi City Purchase Requisition Request

| | | | | | |
|---|---|---|---|---|---|
| Supplier | Name | Codale Electric Supply | | Vender # | 6625 |
| | Street | 362 south Commerce Loop | | Date | 4/14/2020 |
| | City | Orem | State | Utah | |
| | Zip | 84058 | Phone | 801-724-3000 | |

Dean Lundell

| POWER | 53-14-15 | |
|---|---|---|
| Requesting Department | Dept. Account No. | Department Head Signature |

| Quanity | Unit | Materials and Description | Price | Total |
|---|---|---|---|---|
| 40 | | HOWARD 25 KVA HI-LIFT HANDLE 12470GRDY/ | $1,298.00 | $51,920.00 |
| | | 7200 HV TO 240/120 LV SINGLE PHASE PAD | | |
| | | MOUNT TRANSFORMER DEAD FRONT LOOP FEED | | |
| | | WELL AND INSERTS WITH 5/8 IN SECONDARY | | |
| | | STUD BAYONET FUSING NO TAPS TANK:MILD | | |
| | | STEEL 6225-424376-201 | | |
| 30 | | HOWARD 37.5 KVA HI-LIFT HANDLE 12470GRDY/ | $1,460.00 | $43,800.00 |
| | | 7200 HV TO 240/120 LV SINGLE PHASE PAD | | |
| | | MOUNT TRANSFORMER DEAD FRONT LOOP FEED | | |
| | | WELL AND INSERTS WITH 5/8 IN SECONDARY | | |
| | | STUD BAYONET FUSING NO TAPS TANK:MILD | | |
| | | STEEL 6225-424376-201 | | |
| 20 | | HOWARD 50 KVA HI-LIFT HANDLE 12470GRDY/ | $1,642.00 | $32,840.00 |
| | | 7200 HV TO 240/120 LV SINGLE PHASE PAD | | |
| | | MOUNT TRANSFORMER DEAD FRONT LOOP FEED | | |
| | | WELL AND INSERTS WITH 5/8 IN SECONDARY | | |
| | | STUD BAYONET FUSING NO TAPS TANK:MILD | | |
| | | STEEL 6250-424376-201 | | |
| 2 | | HOWARD 25 KVA HI-LIFT HANDLE 12470GRDY/ | $1,521.00 | $3,042.00 |
| | | 7200 HV TO 480/240 LV SINGLE PHASE PAD | | |
| | | MOUNT TRANSFORMER DEAD FRONT LOOP FEED | | |
| | | WELL AND INSERTS WITH 5/8 IN SECONDARY | | |
| | | STUD BAYONET FUSING NO TAPS TANK:MILD | | |
| | | STEEL | | |
| | | | | $131,602.00 |

| Justification: | Price Determination | |
|---|---|---|
| AS PER LEHI CITY DISTRIBUTION | Verbal Quote | |
| TRANSFORMERS BID NO.2018-11 | Informal Bid | |
| AWARDED TO CODALE | Written Bid | * |
| | State Bid | |
| | Other | |



Inventory on Hand

CODALE
A Sonepar Company

** Quotation **

Send P/C To:
Codale Electric Supply, Inc.
5225 WEST 2400 SOUTH
SALT LAKE CITY, UT 84120-1264
Phone # : 801-975-7300

Bid #: S7042860
Page #: 1

Bid To:
LEHI CITY POWER
153 NORTH 100 EAST
ATTN:PENNY JENSEN
LEHI, UT 84043
Phone # : 801-768-7100

Ship To:
LEHI CITY POWER/ SHOPS
560 WEST GLENN CARTER DRIVE
LEHI, UT 84043

JOB: HOWARD 1PH XFRMRS

| Bid-Date | Expr-Date | Writer | Salesman | Ship Via |
|---|---|---|---|---|
| 04/15/20 | 05/15/20 | John Grace | Greg McPhie | 203AM PROVO NOR |

| Qty | Description | Net Prc | Ext Prc |
|---|---|---|---|
| 40 | HOWARD 25KVA HI-LIFT HANDLE<br>12470GRDY/7200 HV TO 240/120 LV<br>SINGLE PHASE PAD MOUNT TRANSFORMER<br>DEAD FRONT LOOP FEED WELL AND<br>INSERTS WITH 5/8-IN SECONDARY STUD<br>BAYONET FUSING NO TAPS TANK:MILD<br>STEEL 6225-424376-201<br>Pn: 3518719 | 1298.000ea | 51920.00 |
| 30 | HOWARD 37.5KVA HI-LIFT HANDLE<br>12470GRDY/7200 HV TO 240/120 LV<br>SINGLE PHASE PAD MOUNT TRANSFORMER<br>DEAD FRONT LOOP FEED WELL AND<br>INSERTS SECONDARY STUD BAYONET<br>FUSING NO TAPS TANK:MILD STEEL<br>6237-424376-201<br>Pn: 3514785 | 1460.000ea | 43800.00 |
| 20 | HOWARD 50KVA HI-LIFT HANDLE<br>12470GRDY/7200 HV TO 240/120 LV<br>SINGLE PHASE PAD MOUNT TRANSFORMER<br>DEAD FRONT LOOP FEED BUSHING WELL &<br>INSERTS WITH 5/8-IN SECONDARY STUD<br>BAYONET FUSING NO TAPS TANK:MILD<br>STEEL 6250-424376-201<br>Pn: 3514857 | 1642.000ea | 32840.00 |
| | Bid Total | | 128560.00 |

*** Continued on Next Page ***
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All Sales subject to Codale's Terms and Conditions (T&C's) available at www.codale.com/terms. Price listed on this quotation are subject to change without notice beyond expiration date. Sales Tax is not included in any Bid. Payment terms are subject to approved credit. Prices are exclusive of applicable taxes unless noted.

CODALE
A Sonepar Company

** Quotation **

Send Rmt. To:
Codale Electric Supply, Inc.
5225 WEST 2400 SOUTH
SALT LAKE CITY, UT 84120-1264
Phone # : 801-975-7300

Bid #: S7042860
Page #: 2

Bid To:
LEHI CITY POWER
153 NORTH 100 EAST
ATTN:PENNY JENSEN
LEHI, UT 84043
Phone # : 801-768-7100

Ship To:
LEHI CITY POWER/ SHOPS
560 WEST GLENN CARTER DRIVE
LEHI, UT 84043

JOB: HOWARD 1PH XFRMRS

| Bid-Date | Expr-Date | Writer | Salesman | Ship Via |
|---|---|---|---|---|
| 04/15/20 | 05/15/20 | John Grace | Greg McPhie | 203AM PROVO NOR |

| Qty | Description | Net Prc | Ext Prc |
|---|---|---|---|
| | Bid Amount | | 128560.00 |

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CODALE
A Sonepar Company

** Quotation **

Send P... To:
CODALE ELECTRIC SUP OREM BRANCH
362 South Commerce Loop
OREM, UT 84058-5157
Phone # : 801-724-3000

Bid #: S7049075
Page #: 1

Bid To:
LEHI CITY POWER
153 NORTH 100 EAST
ATTN:PENNY JENSEN
LEHI, UT 84043
Phone # : 801-768-7100

Ship To:
LEHI CITY POWER/ SHOPS
560 WEST GLENN CARTER DRIVE
LEHI, UT 84043

JOB: HOW 25KVA 480/240

| Bid-Date | Expr-Date | Writer | Salesman | Ship Via |
|---|---|---|---|---|
| 04/22/20 | 05/22/20 | John Grace | Greg McPhie | 203AM PROVO NOR |

| Qty | Description | Net Prc | Ext Prc |
|---|---|---|---|
| 1 | HOWARD 25KVA HI-LIFT HANDLE<br>12470GRDY/7200 HV TO 480/240 LV<br>SINGLE PHASE PAD MOUNT TRANSFORMER<br>NO TAPS, DEAD FRONT, LOOP FEED<br>TYPEII, WELLS/INSERTS, BAYONET FUSE<br>N/S Item: Mfg Return Policy Applies<br>*** 8-10 WK LT ARO **<br>Pn: 4313953 | 1521.000ea | 1521.00 |
| | Bid Total | | 1521.00 |
| | Bid Amount | | 1521.00 |

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# PURCHASE ORDER

**LEHI CITY CORPORATION**
153 NORTH 100 EAST
LEHI UT 84043

THIS ORDER NUMBER MUST APPEAR ON YOUR INVOICE

# 6577

LEHI CITY

48784
ISSUED TO: STEVENS SALES, INC.
268 WEST 1530 SOUTH

SALT LAKE CITY UT 84165

SHIP TO: LEHI CITY CORPORATION
153 NORTH 100 EAST
LEHI UT 84043

DEPARTMENT:

PURCHASE ORDER DATE: 06/02/2020

| REQ # | QUANTITY | DESCRIPTION | UNIT PRICE | TOTAL | GL ACCOUNT |
|---|---|---|---|---|---|
| 0 | 1.00 | THANKSGIVING POINT STREET LIGHTING | 152,250.00 | 152,250.00 | 73-50-19-003 |

TOTAL 152,250.00

Authorized By:

Department Head

City Council Approval Date *

* City Council approval required if greater than $125,000

Mayor or City Administrator

6577

# Lehi City Purchase Requisition Request

| | | | | |
|---|---|---|---|---|
| **Supplier** | **Name** | Stevens Sales Company | **Vender #** | |
| | **Street** | 2010 S. Milestone Dr. Suite A | **Date** | **5/9/2019** |
| | **City** | SLC | **State** | Utah |
| | **Zip** | 84165 | **Phone** | 801-487-8971 X327 |

| Power | 73-50-19-003 | |
|---|---|---|
| **Requesting Department** | **Dept. Account No.** | **Department Head Signature** |

| Quantity | Unit | Materials and Description | Price | Total |
|---|---|---|---|---|
| 50 | | Thanksgiving point street lighting | $3,045.00 | $152,250.00 |
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| | | **Total** | | $152,250.00 |

| | | |
|---|---|---|
| Justification: | Price Determination | |
| *See justification memo* | Verbal Quote | |
| | Informal Bid | |
| | Written Bid | X |
| | State Bid | |
| | Other | |

Notes:



539,730.00

Date: Apr 25, 2019

Quote: SSCO19-3069-1

# Quote



SSCO EST. 1914
Stevens Sales Company

Stevens Sales Company
2010 S. Milestone Dr. Suite A
Slc UT 84165
Phone: (801) 487-8971
Fax:
**From: Dana Zamora**
**Quoter Ph: (801) 487-8971x327**
**Email: dana@ssco.net**

**Project** Thanksgiving Point - Roadway - Lehi
City Power - Thanksgiving Point
**Location** Lehi UT
**Quote**

**To:** Judd Green
Anixter Inc. - Power Solutions
PO Box 4959
Orlando FL 32802
Phone: (801) 290-1121
EMail: judd.green@anixter.com

**For**
**Bid Date** Apr 25, 2019
**Expires** May 25, 2019

| QTY | Type | MFG | Part | |
|---|---|---|---|---|
| Note | | | *PENDANT - OPTION 1 (WITH OR W/O LOGO)* | |
| 1 | PENDANT | LMCR | MSR-C-140L2100WW-G1-3-UNV-DMG-SMB-DH-RCD7-BKTX<br>pendant luminaire | |
| 1 | ARM | LMCR | CRH-1A<br>decorative arm, black | |
| 1 | POLE/BASE | LMCR | RTA127B-20-3/4X27-12 1/2-DEC-BK<br>20' round tapered aluminum pole with base, black | |
| **SUBTOTAL** | | | | **$3,805.00** |
| Note | | | *PENDANT - OPTION 2 (WITH OR W/O LOGO)* | |
| 1 | PENDANT | LMCR | MSR-C-140L2100WW-G1-3-UNV-DMG-SMB-DH-RCD7-BKTX<br>pendant luminaire | |
| 1 | ARM | LMCR | OM-1A-BKTX<br>decorative arm, black | |
| 1 | POLE/BASE | LMCR | RTA127B-20-3/4X27-12 1/2-DEC-BK<br>20' round tapered aluminum pole with base, black | |
| **SUBTOTAL** | | | | **$3,650.00** |
| Note | | | *POST TOP - OPTION 1 (WITHOUT LOGO)* | |
| 1 | POST TOP | LMCR | MPTR-C-140L2100WW-G1-3-UNV-DMG-FN10-FAWS-RCD7-BK<br>post top luminaire | |
| 1 | POLE/BASE | LMCR | RTA127B-18-3/4X27-12 1/2-DEC-BK<br>18' round tapered aluminum pole with base, black | |
| **SUBTOTAL** | | | | **$2,895.00** |

SSCO EST. 1914
Stevens Sales Company

Stevens Sales Company
2010 S. Milestone Dr. Suite A
Slc UT 84165
Phone: (801) 487-8971
Fax:
**From: Dana Zamora**
**Quoter Ph: (801) 487-8971x327**
**Email: dana@ssco.net**

**Project** Thanksgiving Point - Roadway - Lehi City Power - Thanksgiving Point
**Location** Lehi UT
**Quote**

| QTY | Type | MFG | Part | |
|---|---|---|---|---|
| Note | | | *POST TOP - OPTION 2 (WITH LOGO)* | |
| 1 | POST TOP | LMCR | MPTR-C-140L2100WW-G1-3-UNV-DMG-FN10-FAWS-RCD7-BK<br>post top luminaire | |
| 1 | POLE | VALMR | R-170830504T4-P4-DBL<br>18' round tapered aluminum pole, black | |
| 1 | BASE | SOUTHR | BCHUN1827-LOGO<br>Huntington style base with logo, black | |
| **SUBTOTAL** | | | | **$3,045.00** |

## Notes:
LEAD TIMES:
Lumec: 8-10 weeks from release of order
Valmont: 10-12 weeks from release of order
South Coast: 8-10 weeks from release of order

FREIGHT TERMS:
Lumec: freight allowed @ $1000
Valmont: freight allowed @ $1500
South Coast: freight allowed @ $5000

## Terms and conditions of sale:
*Quote is only valid for 30 days after the listed bid date
*Quantities shown on this quote are not to be used as as a guarentee of fixture counts. It is the distributors responsibility to confirm counts with their contractor.
*Subject to manufacturer's published terms and conditions of sale.
*All quoted lead times are subject to change according to market conditions and will need to be updated at time of order entry and/or release. Please communicate this to your customers and make them aware that industry component shortages, labor issues and transportation weather conditions can and do occur.
*Quotation is void if changed.
*Complete quote must be used, no partials.
*Stems, pendants, hangers, down light mounting bars, canopies or lamps are NOT included unless noted in body of quote.
*Emergency drivers are contractor installed, unless otherwise noted.
*Freight charges may not be included unless items meet factory standard terms and conditions.
*Anchor-bolts are shipped with poles, additional charges will apply if shipped separately.
*Spare lenses, lamps, and ballasts are NOT included unless otherwise noted.
*Aircraft Cable/Pendant lenghts are standard per manufacturer, longer lengths will be a cost adder.
*This quotation is based on information provided by you, the customer. Any additional or missing information could void this quotation.

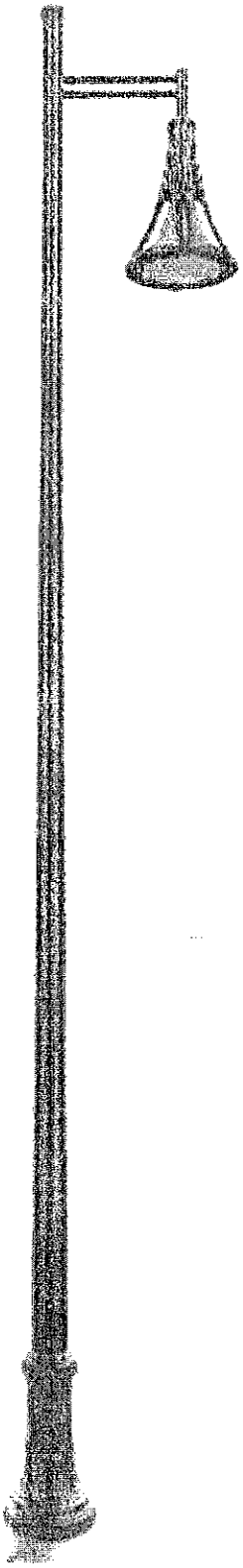
SSCO EST. 1914
Stevens Sales Company

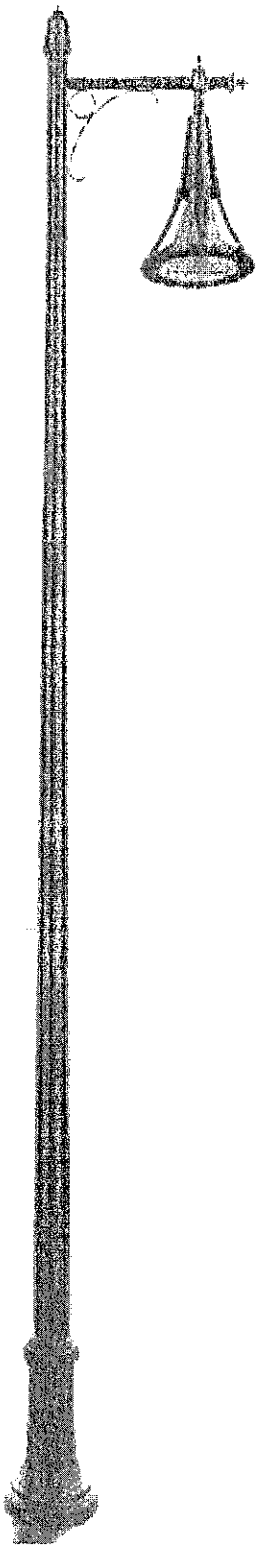
Stevens Sales Company
2010 S. Milestone Dr. Suite A
Slc UT 84165
Phone: (801) 487-8971
Fax:
**From: Dana Zamora**
**Quoter Ph: (801) 487-8971x327**
**Email: dana@ssco.net**

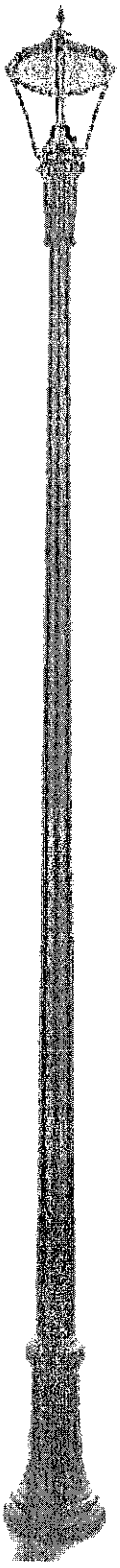
**Project** Thanksgiving Point - Roadway - Lehi City Power - Thanksgiving Point
**Location** Lehi UT
**Quote**

*Unless noted in body, no addendums have been received.
*If factory layouts are required for linear lighting systems, occupancy sensors, etc., it is the contractors responsibility to provide electronic CAD drawings.
*SSCO services are non-refunable after submittals have been produced or PO's have been recieved
*SCBA is to be defined as "Standard color by Architect" Custom colors will be an added cost
*Steel and Aluminum pole pricing will be subject to price increases in coming months due to tariffs

| **Mfg Terms:** | | Freight Allowance | Minimum Order |
|---|---|---|---|
| SOUTH | South Coast Lighting & Des | Plus Freight | |
| LMCR | Lumec Roadway | Freight Allowed | |
| VALMR | Valmont Roadway | Plus Freight | |







LEHI CITY
POWER DEPARTMENT

5/28/2020

**To:** Jason Walker
**From:** Joel Eves
**Subject:** Thanksgiving point street lighting justification

The power department is planning the upgrade of the street lighting in the Thanksgiving point area to improve lighting and reduce maintenance and energy costs. The power department has reviewed the pricing and ascetics of several streetlight vendors and would recommend selecting Steven sales Company (SSCO) for the lighting in Thanksgiving point. We feel that these lights will be a great complement to the area for the best value as well reduce the energy costs.

The quote we received from SSCO was $3,045 per light and we recommend purchasing the lights in a phased approach from the street lighting budget 53-50-55 over the next few years starting with 50 lights for the first phase for a purchase order request of $152,250. The street lighting budget has an annual re-occurring balance of $250,000. If you have any questions or need further clarification please let me know. Thanks

Sincerely,

Joel Eves
Lehi City Corporation
Power Department Director

# PURCHASE ORDER

**LEHI CITY CORPORATION**
153 NORTH 100 EAST
LEHI UT 84043

THIS ORDER NUMBER MUST APPEAR ON YOUR INVOICE **# 6580**

LEHI CITY

586641
ISSUED TO: MOUNTAIN STATES INDUSTRIAL
1015 W 1700 S

SLC UT 84104

SHIP TO: LEHI CITY CORPORATION
153 NORTH 100 EAST
LEHI UT 84043

DEPARTMENT:

PURCHASE ORDER DATE: 06/02/2020

| REQ # | QUANTITY | DESCRIPTION | UNIT PRICE | TOTAL | GL ACCOUNT |
|---|---|---|---|---|---|
| 0 | 1.00 | REPLACEMENT TRUCK FOR E-9 NEW TRUCK E-55 | 125,244.00 | 125,244.00 | 64-40-55-000 |

TOTAL 125,244.00

Authorized By:

Jeremy Estes
Department Head

City Council Approval Date *

* City Council approval required if greater than $125,000

Mayor or City Administrator

6580

# Lehi City Purchase Requisition Request

| | | | | | |
|---|---|---|---|---|---|
| **Supplier** | **Name** | Mountain States Industrial Services | | **Vendor#** | |
| | **Street** | 1015 West 1700 South | | **Date** | **6/1/2020** |
| | **City** | Salt Lake City | **State** | UT | |
| | **Zip** | 84104 | **Phone** | 801-972-1166 | |

Dean Lundell

| Fleet | 64-40-55-000 | Jeremy Estes |
|---|---|---|
| **Requesting Department** | **Dept. Account No.** | **Department Head Signature** |

| Quanity | Unit | Materials and Description | Price | Total |
|---|---|---|---|---|
| | | Replacement truck for E-9 | | $125,244.00 |
| | | New Truck E-55 | | |
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| | | **Total** | | $125,244.00 |

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|---|---|---|
| Justification: | Price Determination | |
| State Contract #MA3244 | Verbal Quote | |
| | Informal Bid | |
| | Written Bid | $125,244.00 |
| | State Bid | |
| | Other | |
| | | |



1,430,516.92

MSIS
VERSALIFT
MOUNTAIN STATES INDUSTRIAL SERVICES
1015 West 1700 South • Salt Lake City • Utah • 84104
Phone (801) 972-1166 • Fax (801) 972-6101 • www.msisutah.com

MR. JEREMY ESTES
LEHI CITY CORP. – FLEET MANAGER
385-201-2719 o 385-250-5555 c
jestes@lehi-ut.gov

MAY 4, 2020

RE: MA3244 STATE CONTRACT – VERSALIFT VST-5000-MHI QUOTATION

**We are pleased to quote the VERSALIFT VST-5000-MHI, insulated 50 ft. telescopic articulating aerial platform lift, 55 ft. working height including the following items:**

- Standard platform capacity of 600 lbs. without jib/winch
- Platform capacity with the jib and winch installed is 500 lbs.
- Hydraulic Platform Rotator – 180 degree
- **Platform liner (50 KV) and vinyl cover**
- **TRUGUARD TECHNOLOGY - Platform mounted full pressure UNITROL single-handle insulated control including safety trigger, emergency stop, and platform rotator controls with tilt control for cleanout or rescue. ALL UPPER CONTROLS, DASH, TOOL PORTS, AND ALL CONTROL HANDLES ARE DIELECTRICALLY INSULATED WITH TRUGUARD TECHNOLOGY FOR OPERATOR PROTECTION. UPPER CONTROLS ARE TESTED PER ANSI A92.2 STANDARDS.**
- **Top mounted, removable hydraulic DUAL ARM material handling jib and winch, in lieu of standard manual jib/winch pole. (Jib is adaptive to line lifting attachments)**
- **Jib mounting socket is also used for line-lifting attachments when jib is removed, and levels automatically with boom position**
- Winch capacity up to 1000 lbs (454 kg.)
- Continuous and unrestricted boom rotation
- 7.5 GPM open center hydraulic system with a 2250 psi operating pressure.
- Side mounted telescopic upper boom allows low stowing of platform.
- Fiberglass inner boom provides insulation gap of 48 inches fully retracted meeting ANSI A92.2.
- Chassis insulating system (fiberglass lower boom insert) provides 24 in. insulation gap and includes accommodations to bridge insulation gap for

**Curb Side Compartments**

- 1st vertical: 24" wide with two (2) adjustable shelves and dividers. Outrigger cutout with cover and material hook
- **2nd vertical: 24" wide, optional grip strut access steps to bed area**, with grab handles and cable step, in lieu of standard compartment.
- 3rd vertical: 24" wide with two (2) adjustable shelves with adjustable dividers
- Horizontal: 60" wide with adjustable shelf and dividers
- Rear Vertical: 24" wide with seven (7) locking swivel material hooks 2-3-2
- Wheel chock storage - one (1) each side built into wheel wells.

**Tail Shelf**

- 30" x 94" wide tread plate with 6" structural channel frame
- Perimeter rail ¼" x 3" fixed with wash out drains
- FMVSS-108 9-lamp light bar installed in rear of tail shelf.
- Outrigger control valves, accessory control switches installed below tail shelf
- Heavy Duty towing package with ICC under-ride bumper
- Cable type access step and pool type grab handle

**INSTALLATION**

- Install VERSALIFT VST-5000-MHI, mounting hardware, PTO and pump, hoses and fittings, and non-conductive hydraulic oil
- Install and paint Dakota Bodies line body and accessories.
- Install HD towing package – BP-100-A pintle hitch, chain eyes, and 7 prong trailer socket
- Install mud flaps, slope indicators, access steps and grab handles.
- Install outrigger-boom interlock system
- Furnish rubber wheel chocks (2), fire extinguisher, and 3 piece triangle reflector kit.
- Provide certified scale weight ticket
- ANSI data plate, caution and warning placards
- Test ride completed unit
- Certify per ANSI A92.2-2001.

| | |
|---|---|
| **VERSALIFT, LINE BODY, INSTALLATION** | **$ 104,574.00** |
| **CREDIT MANUAL JIB** | **$ - 4,270.00** |
| **DUAL ARM JIB/WINCH** | **$ + 7,980.00** |
| **ADDITIONAL OPTIONAL EQUIPMENT (SEE LIST)** | **$ +16,960.00** |
| **TOTAL PRICE** | **$ 125,244.00** |

**EXCLUDES ANY APPLICABLE TAXES, LICENSE, FEES**
**FOB – YOUR YARD**

**OPTIONAL EQUIPMENT**

| | |
|---|---|
| HYDRAULIC AUTOMATIC BOOM REST | $ 925.00 |
| 3 POINT GROUNDING SYSTEM, LUG | $ 675.00 |
| ALUMINUM TREAD PLATE ROCK GUARDS | $ 240.00 |
| HOT STICK SHELF | $INCLUDED |
| E-TRACK W/HOOKS INSTALLED ON LOAD WALLS | $ 480.00 |
| COMPARTMENT LIGHTING, LED ROPE TYPE | $ 990.00 |
| DRI-DEK & RUBBER SHELVING LINER | $ 920.00 |
| STREET SIDE TOP BOX | $ 1,560.00 |
| CURB SIDE TOP BOX | $ 1,560.00 |
| START/STOP CONTROL AT TAIL SHELF | $ 225.00 |
| REMOTE THROTTLE CONTROL AT TAIL SHELF | $ 225.00 |
| AMBER LED STROBE LIGHTS (2) POST MOUNT | $ 650.00 |
| AMBER LED STROBE LIGHTS, 2 GRILLE, 2 T.S. | $ 660.00 |
| COMPARTMENT HOOKS – ABOVE O/R COVERS | $INCLUDED |
| MASTER LOCK SYSTEM – GANG LOCKS | $INCLUDED |
| LED DIRECTIONAL ARROW BAR AT TAIL SHELF | $ 960.00 |
| RADIO CONTROL LED GO-LIGHT SPOT LIGHT (2) | $ 1,100.00 |
| INVERTER PACKAGE 3600 WATT | $ 3,140.00 |
| OUTRIGGER PADS & HOLDERS | $ 580.00 |
| REMOTE JIB STOW SOCKET | $ 250.00 |
| CONE HOLDER, BELOW TAIL SHELF | $ 390.00 |
| TRIPLE SPOOL GROUND WIRE CARRIER | $ 280.00 |
| REFLEX URETHANE SPRAYED BED LINER | $ 1,150.00 |
| TAIL SHELF RAIL, FIXED W/DRAINS | $INCLUDED |
| **OPTIONS SUBTOTAL** | **$ 16,960.00** |

**Thank you for the opportunity to quote on your equipment needs. We hope you will find this quotation favorable and that we may be of service to you soon. Please contact us with any questions you may have, or to place your order.**

**Best Regards,**

**Layne Anthony**

# PURCHASE ORDER

**LEHI CITY CORPORATION**
153 NORTH 100 EAST
LEHI UT 84043

THIS ORDER NUMBER MUST APPEAR ON YOUR INVOICE **# 6592**

LEHI CITY

44275
ISSUED TO: RB&G ENGINEERING
1435 W. 820 N.

PROVO UT 84601

SHIP TO: LEHI CITY CORPORATION
153 NORTH 100 EAST
LEHI UT 84043

DEPARTMENT: Engineering

PURCHASE ORDER DATE: 06/04/2020

| REQ # | QUANTITY | DESCRIPTION | UNIT PRICE | TOTAL | GL ACCOUNT |
|---|---|---|---|---|---|
| 0 | 1.00 | CONSTruction engineering services for the main st widening from cro | 955,000.00 | 955,000.00 | 49-70-70-116 |

TOTAL 955,000.00

Authorized By:

Lisa Powell 6/4/20
Department Head

City Council Approval Date *

* City Council approval required if greater than $125,000

Mayor or City Administrator

6592

# Lehi City Purchase Requisition Request

| | | | | | |
|---|---|---|---|---|---|
| Supplier | Name | RB&G Engineering, Inc | | Vender # | |
| | Street | 1435 West 820 North | | Date | 6/3/2020 |
| | City | Provo | State | Ut | |
| | Zip | 84601-1343 | Phone | (801) 374-5771 | |

Dean Lundell

Engineering | 49-70-70-116 | Department Head Signature

Requesting Department | Dept. Account No.

| Quantity | Unit | Materials and Description | Price | Total |
|---|---|---|---|---|
| | | | | |
| 1 | LS | Construction Engineering Services for the Main | $955,000.00 | $955,000.00 |
| | (Contract | Street widening from Crossroads Blvd. in | | |
| | plus | Saratoga Springs to 2300 West in Lehi. | | |
| | contingency) | | | |
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| | | Total | | $955,000.00 |

Justification:

A request for a Statement of Qualifications was submitted to five (5) Engineering Firms. Four (4) of those firms submitted a Statement of Qualifications, from which RB&G was chosen by a selection committee comprised of representatives from Lehi City, Utah County and Saratoga Springs. Based upon this selection, RB&G submitted a cost proposal to perform the work, which after being modified has been accepted by Lehi. This roadway widening complies with the Lehi City Master Transportation Plan, and is funded through the Mountainland Association of Governments (MAG) with Utah County Funds.

| | |
|---|---|
| Price Determination | |
| Verbal Quote | |
| Informal Bid | |
| Written Bid | X |
| State Bid | |
| Other | |



(1032.967.17) Dean Old.

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Ordinance
Agenda Section:

---

**Subject:**
Re-approve Ordinance #19-2020, the Jacketta M. Clark Annexation

**Suggested Action:**

**Attachments**:
Ord 19-2020.docx

**ORDINANCE NO: 19-2020**

## AN ORDINANCE APPROVING THE JACKETTA M. CLARK ANNEXATION

WHEREAS, the Lehi City Council has adopted a resolution of intent to annex real property known as the "Jacketta M. Clark Annexation", located at approximately 1300 South 2000 West further identified by Exhibit "A" pursuant to the provisions of Section 10-2-418 of the Utah Code; and

WHEREAS, the Lehi City Council conducted a public hearing on the 31th day of March 2020, after having published notice as also required by Section 10-2-418 of the Utah Code; and

WHEREAS, the Lehi City Council noted that there were no protests filed to defeat the annexation as required by Section 10-2-418 of the Utah Code.

NOW, THEREFORE, IT IS ORDAINED by the City Council of Lehi City, Utah, as follows:

Section 1. The Lehi City Council finds that the proposed Jacketta M. Clark Annexation as more fully described on the transparent reproducible Annexation Plat and the attached Exhibit "A", in the judgment of Lehi City, meets the standards set forth in Section 10-2-418 of the Utah Code.

Section 2. The area as specifically described in the Annexation Plat is hereby annexed to Lehi City.

Section 3. Pursuant to Utah Code Ann. §10-9-406, the City Council hereby assigns the R-1-22 zoning district designation to the territory depicted on the Annexation Plat which is being annexed to Lehi City by this ordinance, and further directs that the Official Zoning District Map of Lehi City be amended to show the area as part of Lehi City with the new zoning district designation.

Section 4. The Mayor is hereby authorized to sign this ordinance. Once all conditions precedent to the Annexation have been complied with, including the water dedication requirement described in Chapter 27 of the Lehi City Development Code, the City Recorder is directed to file the transparent reproducible Annexation Plat, together with a certified copy of this ordinance in the office of the Utah County Recorder

Section 5. This ordinance shall become effective on the date that it is filed in the office of the Utah County Recorder.

Approved and adopted by the Lehi City Council the 31th day of March 2020; and re-approved on this 6th day of June 2020.

ATTEST

| | |
|---|---|
| _____ | _____ |
| MARK JOHNSON, Mayor | Teisha Wilson, City Recorder |

EXHIBIT “A”

Jacketta M. Clark Annexation Legal Description

# BOUNDARY DESCRIPTION

BEGINNING AT THE NORTHEAST CORNER OF SNOW'S SPRINGS SUBDIVISION, PLAT A (SAID POINT ALSO BEING LOCATED N 00°07'46" W 1015.68 FEET ALONG THE SECTION LINE AND EAST 1622.40 FEET FROM THE WEST QUARTER CORNER OF SECTION 19, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SLB&M); RUNNING THENCE S 00°25'05" W 963.66 FEET ALONG THE EAST BOUNDARY OF SAID SUBDIVISION; THENCE ALONG FENCES THE FOLLOWING COURSES AND DISTANCES: S 87°21'58" E 138.34 FEET, N 35°02'57" E 51.61 FEET, N 55°24'19" E 497.92 FEET, S 88°59'47" E 74.32 FEET TO A REBAR AND CAP MARKED TORGERSEN ENGINEERING AT A FENCE CORNER, N 01°39'47" E 33.34 FEET TO A WOOD POST AT A FENCE CORNER, N 13°46'34" E 41.63 FEET, N 07°28'39" E 20.00 FEET TO A REBAR AND CAP MARKED TORGERSEN ENGINEERING, N 00°01'58" W 549.19 FEET TO A REBAR AND CAP MARKED LS 3269 AT A FENCE CORNER, AND N 89°41'22" W 658.17 FEET TO THE POINT OF BEGINNING. CONTAINING 12.29 ACRES.

BASIS OF BEARINGS IS S 00°25'05" W (913.66 FEET) ALONG SUBDIVISION BOUNDARY FROM THE NORTHEAST CORNER OF LOT 49 TO THE SOUTHEAST CORNER OF LOT 41 OF SNOW'S SPRINGS SUBDIVISION, PLAT A, ACCORDING TO THE OFFICIAL PLAT THEREOF (ENTRY NO. 85523, UTAH COUNTY RECORDER'S OFFICE).

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# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Jacob Curtis
Submitting Department: Planning Division
Item Type: Action Item
Agenda Section:

---

**Subject:**
Consideration of Final subdivision approval for Staten Farms Plat B, a 9-lot subdivision located at 1340 North 2020 West.
Petitioner: Fred Clark

**Suggested Action:**

**Attachments**:
CC Staff Report Staten Farms Plat B Final Subdivision 06.09.20.docx

Staten Farms Plat B Final Subdivision DRC 5.27.2020.docx

Staten Farms Final Subdivision 05.27.20 Plans.pdf

Aerial map.pdf

General Plan map.pdf

Zoning Map.pdf

# STATEN FARMS PLAT B FINAL SUBDIVISION

## CITY COUNCIL REPORT

| | | | |
|---|---|---|---|
| **Applicant** | Chad Staten | | |
| **Meeting Date** | June 9, 2020 | | |
| **Requested Action/Purpose** | Approval of a final subdivision | | |
| **Location** | 1340 North 2020 West | | |
| **Existing Land Use** | Single family residential | | |
| **Existing Zoning** | R-1-22 | | |
| **General Plan Land Use Designation** | VLDRA (Very Low Density Residential Agriculture) | | |
| **Number of Lots/Units** | 9 lots | | |
| **Adjacent Zoning and Land Use** | *North* | RA-1 | Scottfield Acres Subdivision |
| | *South* | RA-1 | Colony Point Plat B Subdivision |
| | *East* | RA-1 | Colony Point Plat B Subdivision |
| | *West* | R-1-22 | Staten Farms Subdivision |
| **Date of DRC Review** | May 27, 2020 | | |
| **Assigned Planner** | Jacob Curtis | | |

## REQUIRED ACTION

| | |
|---|---|
| **City Council** | Final approval |

## APPLICABLE DEVELOPMENT CODE REGULATIONS

**Section 11.180.** Effective Period of Final Subdivision Plat Approval.
The approval of a final subdivision plat shall be effective for a period of two (2) years from the date the final plat is approved and signed by the City Council, at the end of which time such final subdivision plat shall have been recorded in the office of the Utah County Recorder.

**Section 37.030.** Connectivity Standards

A. Residential Connectivity Standards. All new residential subdivisions with ten or more units or more than one acre shall meet the following connectivity index, block length, and cul-de-sac length standards for private and public roads.

1. Required Connectivity Index. The minimum required connectivity index shall be required based on the project density as identified in the following table of minimum connectivity index scores:

| Density | Index Score |
|---|---|
| 0-2.5 DU/AC | 1.5 |
| 2.6-4 DU/AC | 1.6 |
| 4.1+ DU/AC | 1.75 |

a. Reduction in Required Connectivity Index. The required connectivity index may be reduced if the applicant provides clear and convincing evidence that it is impracticable to achieve due to:
   i. road grades that exceed ten percent
   ii. Jordan River;
   iii. Utah Lake;
   iv. delineated wetlands;
   v. other significant natural or historic features;
   vi. existing adjacent development;
   vii. rail corridors; or

viii. limited access roadways.

b. Reductions in the required connectivity index will be reviewed on a case-by-case basis and shall require positive recommendations from the reviewing departments and Planning Commission and approval by the City Council.

c. The total allowed reduction to the required connectivity index shall be based on an analysis of existing conditions that prevent connections. As part of the analysis, City staff shall ensure the internal connectivity of the subdivision meets the required connectivity index and that connectivity is provided to adjacent properties where possible.

## PROPERTY HISTORY

| | |
|---|---|
| **December 11, 1978** | This property was annexed as part of the Lehi Meadows Addition. |
| **June 13, 2017** | The Staten Farms final subdivision was approved by the City Council. |
| **March 12, 2020** | The Staten Farms Plat B preliminary subdivision was approved by the City Council. |

## REPORT ANALYSIS

The applicant requests final subdivision approval of Staten Farms Plat B, a 9-lot residential development located at 1340 North 2020 West in an approved R-1-22 zone. This report will discuss the proposed layout, connectivity standards, and the DRC comments.

**Proposed Layout**

The residential subdivision will consist of nine lots on approximately 5.544 acres. The nine proposed lots range in size from 22,000 to 26,600 square feet which meets the minimum lot size requirement for the R-1-22 zone. The proposed final subdivision shows all lots meeting the street frontage requirement of 100 feet. The residential subdivision will have an overall density of approximately 1.62 units per acre. The proposed density for the project is consistent with the current R-1-22 zone which allows a maximum density of 1.75 units per acre.

**Connectivity Standards**

The proposed project, because it is more than one acre, must meet the minimum connectivity index of 1.5 and maximum cul-de-sac length of 400 feet. However, exceptions are needed to the connectivity index and maximum cul-de-sac length requirements because there are no potential options for road stubs to the north, south, or east due to existing developments. The proposed subdivision connects to the road stub to the west from the Staten Farms subdivision.

**DRC Comments**

The DRC had nine comments on the proposed preliminary subdivision including the following:

1. Add zoning to the plat.
2. Add note to the plat that all floor slabs to be no lower than native grade.
3. Use standard City title block including removing the City Attorney's signature. Keep Planning Commission Chair Signature.

## PLANNING DIVISION RECOMMENDATION

Planning staff recommends **APPROVAL** of the proposed Staten Farms Plat B final subdivision, including the DRC comments from May 27, 2020. This recommendation is based on the following findings:

1. The proposed lot sizes and density are consistent with the R-1-22 zoning.

2. The proposed subdivision conforms to the goals and policies of the General Plan.
3. The proposed subdivision is not detrimental to the public health, safety, and welfare of Lehi City.
4. The proposed subdivision meets the requirements of the Lehi City Development Code regarding subdivision approvals.
5. Other findings based upon information presented at the public meeting.

**Staten Farms Plat B Final Subdivision**
**DRC Redline Comments**

*Fred Clark - requests final subdivision review of Staten Farms Plat B, a 9-lot subdivision located at 1340 North 2020 West.*

DRC Members Present: Glade Kirkham, Kerry Evans, Greg Allred, Kim Struthers, Gary Smith, Joshua Bunnell, Ross Dinsdale, Trent Dyer
Date of Plans Reviewed: 5/13/2020

**DRC REDLINE COMMENTS:**
**Glade – Power:** No comments
**Kerry – Fire:** No comments
**Greg – Water/Sewer:**
1. Construction valves required where connecting to both water mains
2. Irrigation co approval required for all ditch piping/modification
3. Show and label mechanical bends in both water mains.

**Trent – Parks:** No comments
**Gary – Building/Inspections:**
4. Add zoning to the plat.
5. Add note to the plat that all floor slabs to be no lower than native grade.
6. Add native grade elevation to the plat if different, each lot will need its own.

**JD – Streets:**
7. Change our detail to show 6" concrete
8. Our new t-patch standard is 2'

**Ross – Engineering:** No comments
**Kim – Planning:**
9. Use standard City title block including removing the City Attorney's signature. Keep Planning Commission Chair Signature.

**PRIOR TO PRECONSTRUCTION MEETING:**
1. Provide an engineer's cost estimate for the cost of all improvements.
2. 10% Warranty Escrow Bond or Letter of Credit and Public/Private Improvement Agreement for all public and private improvements must be in place (from a financial institution with a branch in Utah).
3. Pay all necessary inspection fees and any up-front supply costs required by the City for power supplies, water system supplies, public signs (stop signs, address signs, etc.) and any other associated costs so that the City can order all necessary supplies for the development.
4. Include surveyor's and engineer's stamps and signatures on the construction drawings.
5. Show lot addresses on the final plat (must coordinate with Planning Division).
6. New property line adjacent to existing roads and any new trails must be staked and reviewed by the City.
7. Submit Storm Water Pollution Prevention Plan (SWPPP) through ComplianceGo.com for review by Lehi Public Works (call Rochelle with Public Works at 385-201-1900 with questions).
8. Schedule a SWPPP inspection through Lehi City Water Dept. (call 385-201-1900). This should be the last item completed prior to scheduling a preconstruction meeting.
9. Address any comments or conditions from City Council approval.
10. Plans need to be signed by Community Development Director and Public Works Director before precon can be scheduled
11. Planner needs to sign off on building plans prior to the precon meeting

**PRIOR TO RECORDING OF PLAT:**
1. Provide a Mylar of the final plat for recording with the owners notarized signature(s).
2. Include surveyor's and engineer's stamps and signatures on the plat.
3. Submit a title report to be reviewed by Lehi City Attorney.
4. Developer shall provide a letter with an exhibit of the property covered from their title company guaranteeing that the property taxes including rollback/greenbelt taxes have been paid of open space or right of way is being dedicated.
5. Provide a signed easement verification sheet (for proposed public utility easements on the plat).

**Note: This list of corrections and deficiencies should not be considered as an all-inclusive or final list. The items listed need to be corrected and resolved and a new set of information submitted for review by the DRC. Further corrections and deficiencies may still be noted as the DRC further reviews the resubmitted information.**

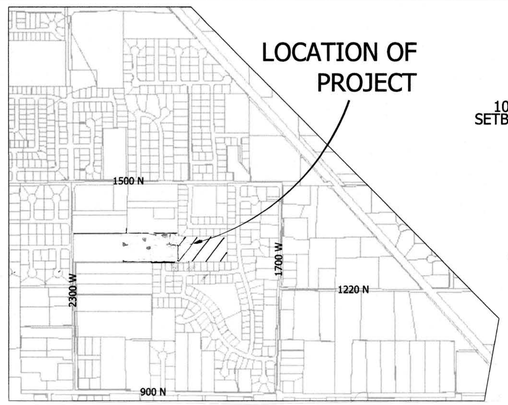
6. Provide a recorded copy of required boundary line agreement(s).
7. Provide a signed original copy of the CC&Rs to record with the plat (to be reviewed by City Attorney).
8. Warranty deed/title insurance (open space, detention, City park property, City trails, some road dedication). Title insurance policies on each to be obtained through Marnae at Vanguard Title 801-610-1670
9. All City utilities/infrastructure has been accepted and signed off by all Lehi City Inspectors.

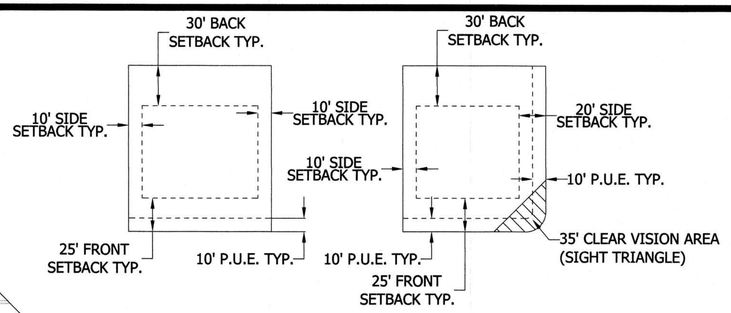
**DRC GENERAL COMMENTS:**

1. Please note that ALL of the DRC Redline and Prior to Recording of Plat comments MUST be completed before a preconstruction meeting can be scheduled.
2. Once approved by the Planning Commission or City Council (whichever is applicable) plans may be submitted for check-off. Check-off plans consist of one set of 24x36-inch plans submitted to the Planning Division office. When changes need to be made to a check set, revise the affected sheets only. Each new submittal will require a revision date on each new sheet. It is the responsibility of the applicant to follow through with completing the check-off items.
3. Prior to the pre-construction meeting, Lehi City Staff will make copies of plans for the meeting from the check-off set and the developer will pay fees for the copies.
4. On the power, developer will install conduit; Lehi City Power will install all other required power infrastructure shown on the plans and charge the developer for the costs. These costs are separate from power impact fees that are paid with the building permit.
5. Developer is responsible to purchase, move or remove any existing Rocky Mountain Power facilities. Additionally, the Developer is responsible for all costs associated for the purchase of RMP equipment by Lehi City Power. These costs are separate from infrastructure, impact fees, and connection fees.
6. Developer is responsible to furnish adequate rights of way or easements for construction of off-site power line extensions.
7. Residential developments shall complete all required private improvements prior to commencing construction on units totaling more than 80% of the allowed units in the development.
8. The approval of a development shall be effective for a period of two (2) years from the date the development is approved by the Planning Commission or City Council, whichever is applicable.
9. Approved vehicle access for firefighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections. Vehicle access shall be provided by either a twenty (20) foot minimum width temporary or permanent road, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be kept clear of all fencing, barricades, dumpsters, vehicles, construction materials and debris and maintained until permanent fire apparatus access roads are available.

THIS ITEM WILL BE SCHEDULED FOR CITY COUNCIL ON JUNE 9TH 2020.

**Note: This list of corrections and deficiencies should not be considered as an all-inclusive or final list. The items listed need to be corrected and resolved and a new set of information submitted for review by the DRC. Further corrections and deficiencies may still be noted as the DRC further reviews the resubmitted information.**




## TYPICAL LOT SETBACKS

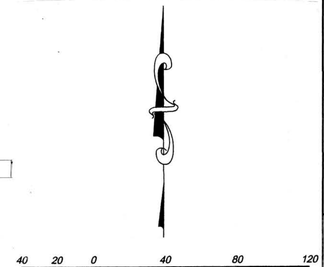
| TABULATIONS | |
|---|---|
| TOTAL ACREAGE | 5.544 AC |
| NUMBER OF LOTS | 9 |
| UNITS PER ACRE | 1.62 |
| ACREAGE IN ROW | 0.886 AC |
| LANE MILES | 0.09 M |

## NOTES:

1. THIS AREA IS SUBJECT TO THE NORMAL EVERYDAY SOUNDS, ODORS, SIGHTS, EQUIPMENT, FACILITES, AND ALL OTHER ASPECTS ASSOCIATED WITH AN AGRICULTURAL LIFESTYLE. FUTURE RESIDENTS SHOULD ALSO RECOGNIZE THE RISKS INHERENT WITH LIVESTOCK.
2. SEE SOILS REPORT FOR FOUNDATION DETAILS.
3. ALL PROPERTY CORNERS TO BE MARKED AND PINS SET IN THE TOP OF CURB

## CURVE DATA

| Curve # | Radius | Delta | Length | Tangent | Chord/Brg |
|---|---|---|---|---|---|
| C3 | 1059.00' | 5°00'24" | 92.54' | 46.30' | 92.51' N82-1 |
| C4 | 1059.00' | 1°35'24" | 29.39' | 14.69' | 29.39' N79-0 |
| C5 | 1059.00' | 6°35'48" | 121.92' | 61.03' | 121.86' N81-3 |
| C6 | 997.00' | 11°30'11" | 200.16' | 100.42' | 199.83' N83-5 |
| C7 | 997.00' | 8°27'57" | 147.31' | 73.79' | 147.18' N82-2 |
| C8 | 997.00' | 3°02'14" | 52.85' | 26.43' | 52.84' S88-1 |
| C9 | 47.00' | 45°21'21" | 37.21' | 19.64' | 36.24' N87-3 |
| C10 | 64.00' | 270°42'41" | 302.39' | 0.00' | 89.95' S00-1 |
| C11 | 64.00' | 89°31'18" | 100.00' | 63.47' | 90.13' S89-3 |
| C12 | 64.00' | 89°31'24" | 100.00' | 63.47' | 90.13' N00-4 |
| C13 | 64.00' | 91°39'59" | 102.39' | 65.89' | 91.82' S89-4 |
| C14 | 47.00' | 45°21'21" | 37.21' | 19.64' | 36.24' S87-0 |
| C15 | 1059.00' | 11°30'10" | 212.61' | 106.66' | 212.25' N83-5 |
| C16 | 1059.00' | 2°41'35" | 41.15' | 20.58' | 41.15' S88-3 |
| C17 | 1059.00' | 8°07'33" | 150.19' | 75.22' | 150.06' N83-2 |
| C18 | 1059.00' | 1°09'02" | 21.27' | 10.63' | 21.27' N78-4 |
| C19 | 997.00' | 6°16'30" | 109.19' | 54.65' | 109.14' N81-2 |




SURVEYOR: AZTEC ENGINEERING INC.
732 N. 780 W.
AMERICAN FORK, UT. 84003
AZTECENGINEERING@GMAIL.COM

CIVIL ENGINEER:
FRED CLARK
9448 N. TIMPANOGOS COVE
CEDAR HILLS, UT

## SURVEYOR'S CERTIFICATE

I, **Aaron D. Thomas**, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. **6418780**. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS, AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRIBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8A-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

SURVEYOR'S SIGNATURE _____ DATE _____

## BOUNDARY DESCRIPTION

**Beginning at a point located North 89°44'31" East along section line 1588.27 feet and South 614.08 feet from the Northwest Corner of Section 7, Township 5 South, Range 1 East, Salt Lake Base and Meridian; thence South 89°45'37" East 63.19 feet; thence North 0.27 feet; thence South 89°45'04" East 65.48 feet; thence along the boundary of Scottfield Acres Plat A the following two courses and distances: 1) South 0°00'57" East 23.98 feet, and 2) South 89°44'21" East 640.09 feet; thence along the boundary of Colony Pointe Plat B the following five courses and distances: 1) South 0°08'17" East 2.94 feet, 2) South 2°59'19" East 13.35 feet, 3) South 0°09'54" East 319.49 feet, 4) North 88°56'00" West 311.00 feet, and 5) South 89°22'00" West 367.21 feet; thence along the boundary of Staten Farms Plat A the following four courses and distances: 1) North 0°00'57" West 239.94 feet, 2) along the arc of a 1056.00 foot radius curve to the left 79.34 feet through a central angle of 4°18'17" (chord bears North 86°58'13" West 79.32 feet), 3) along the arc of a 15.00 foot radius curve to the right 23.59 feet through a central angle of 90°05'27" (chord bears North 44°04'09" West 21.23 feet), and 4) North 0°59'04" East 107.26 feet to the point of beginning.**
**Area = 5.544 Acres**

## OWNER'S DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT WE, ALL OF THE UNDERSIGNED OWNERS OF ALL OF THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC, THE PUBLIC UTILITY EASEMENTS TO ALL UTILITY PROVIDERS, PUBLIC OR PRIVATE, AND THEIR SUCCESSORS AND ASSIGNS IN PERPETUITY. IN WITNESS WHEREOF WE HAVE HEREUNTO SET OUR HANDS

THIS _____ DAY OF _____, 2020

SIGN _____ PRINT _____
SIGN _____ PRINT _____
SIGN _____ PRINT _____
SIGN _____ PRINT _____

## ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.

ON THIS _____ DAY OF _____, A.D. 2020, PERSONALLY APPEARED BEFORE ME THE SIGNERS OF THE FOREGOING OWNERS DEDICATION WHO DULY ACKNOWLEDGED TO ME THAT THEY DID EXECUTE THE SAME.

MY COMMISSION EXPIRES: _____

A NOTARY PUBLIC COMMISSIONED IN UTAH (SEE SEAL BELOW) _____ PRINTED FULL NAME OF NOTARY _____

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF LEHI CITY, COUNTY OF UTAH APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY OF _____, A.D. 2020.

APPROVED:

MAYOR'S SIGNATURE _____ DATE _____
CITY ATTORNEY'S SIGNATURE _____ DATE _____
CITY ENGINEER'S SIGNATURE (SEE SEAL BELOW) _____ DATE _____

ATTEST:

CITY RECORDER'S SIGNATURE (SEE SEAL BELOW) _____ DATE _____

## PLANNING COMMISSION APPROVAL

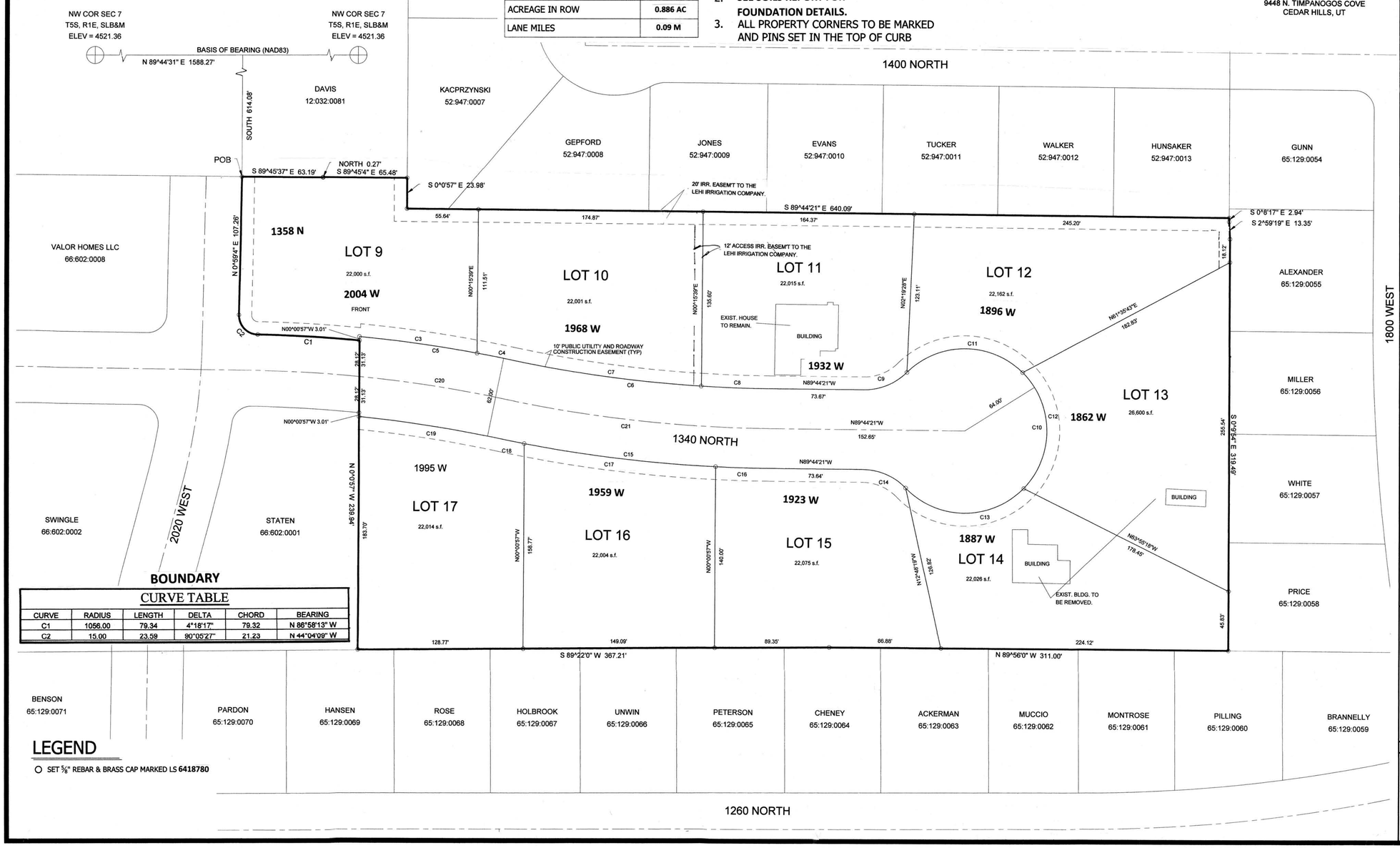
APPROVED THIS _____ DAY OF _____, A.D. 2020 BY THE LEHI CITY PLANNING COMMISSION.

PLANNING COMMISSION CHAIR SIGNATURE _____ DATE _____

# PLAT "B"

# STATEN FARMS
## A RESIDENTIAL SUBDIVISION

| NOTARY PUBLIC SEAL | RECORDER SEAL | ENGINEER SEAL | SURVEYOR SEAL |
|---|---|---|---|
| | | | |




## CURVE TABLE

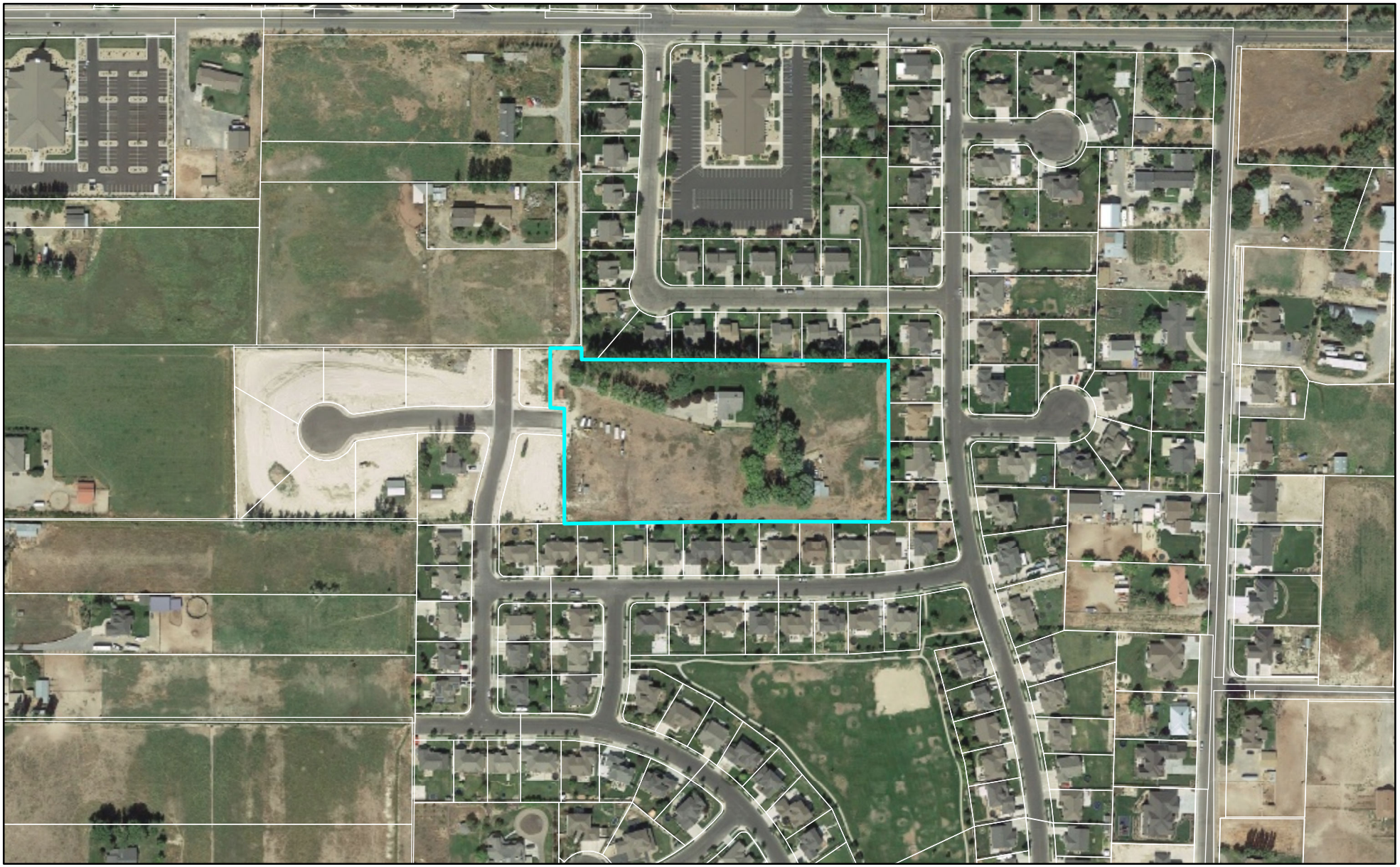
| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 1056.00 | 79.34 | 4°18'17" | 79.32 | N 86°58'13" W |
| C2 | 15.00 | 23.59 | 90°05'27" | 21.23 | N 44°04'09" W |

## LEGEND

○ SET ⅝" REBAR & BRASS CAP MARKED LS **6418780**

# Staten Farms Plat B Final Subdivision

Aerial

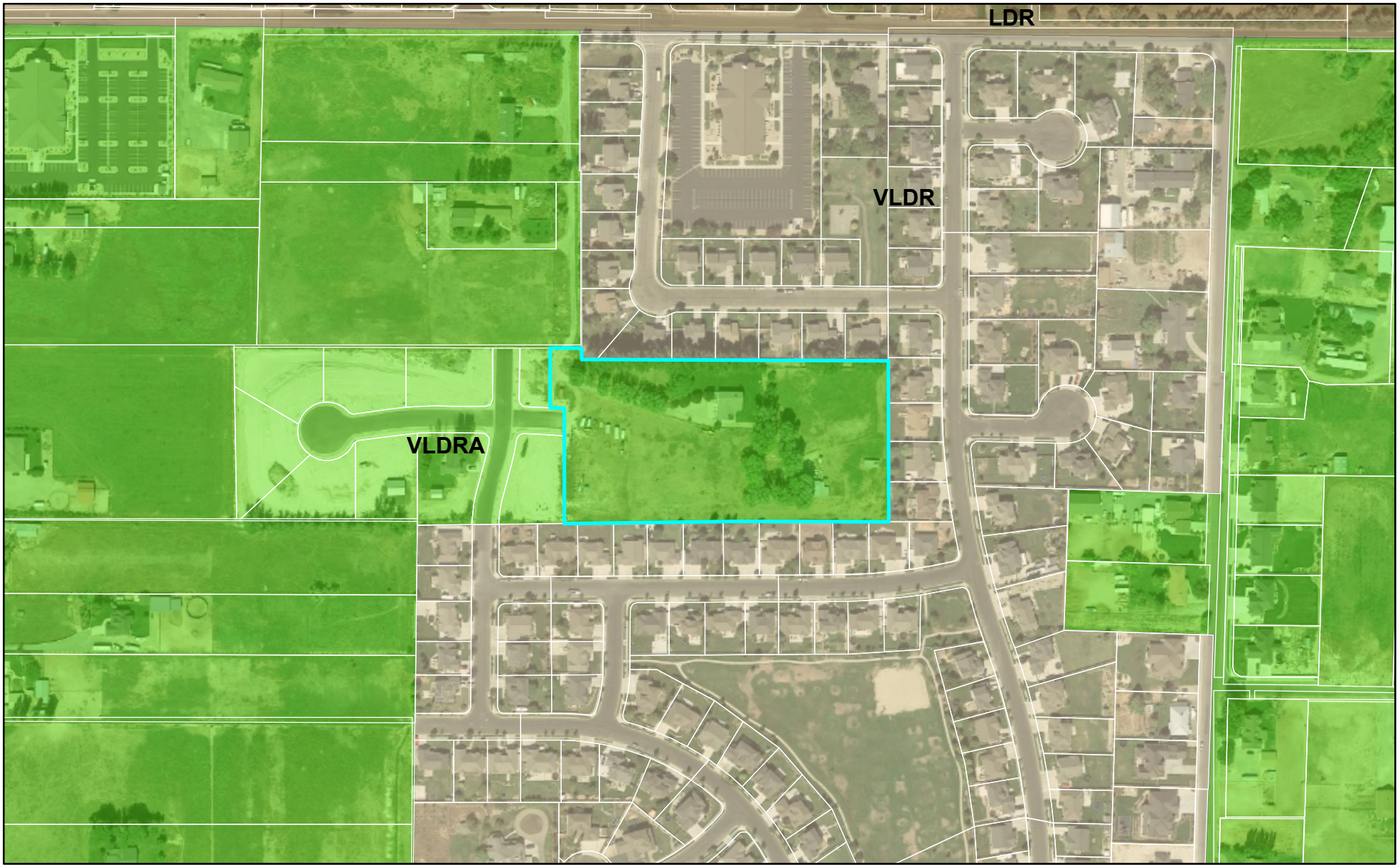


0 340 680 Feet

LEHI CITY

# Staten Farms Plat B Final Subdivision

General Plan

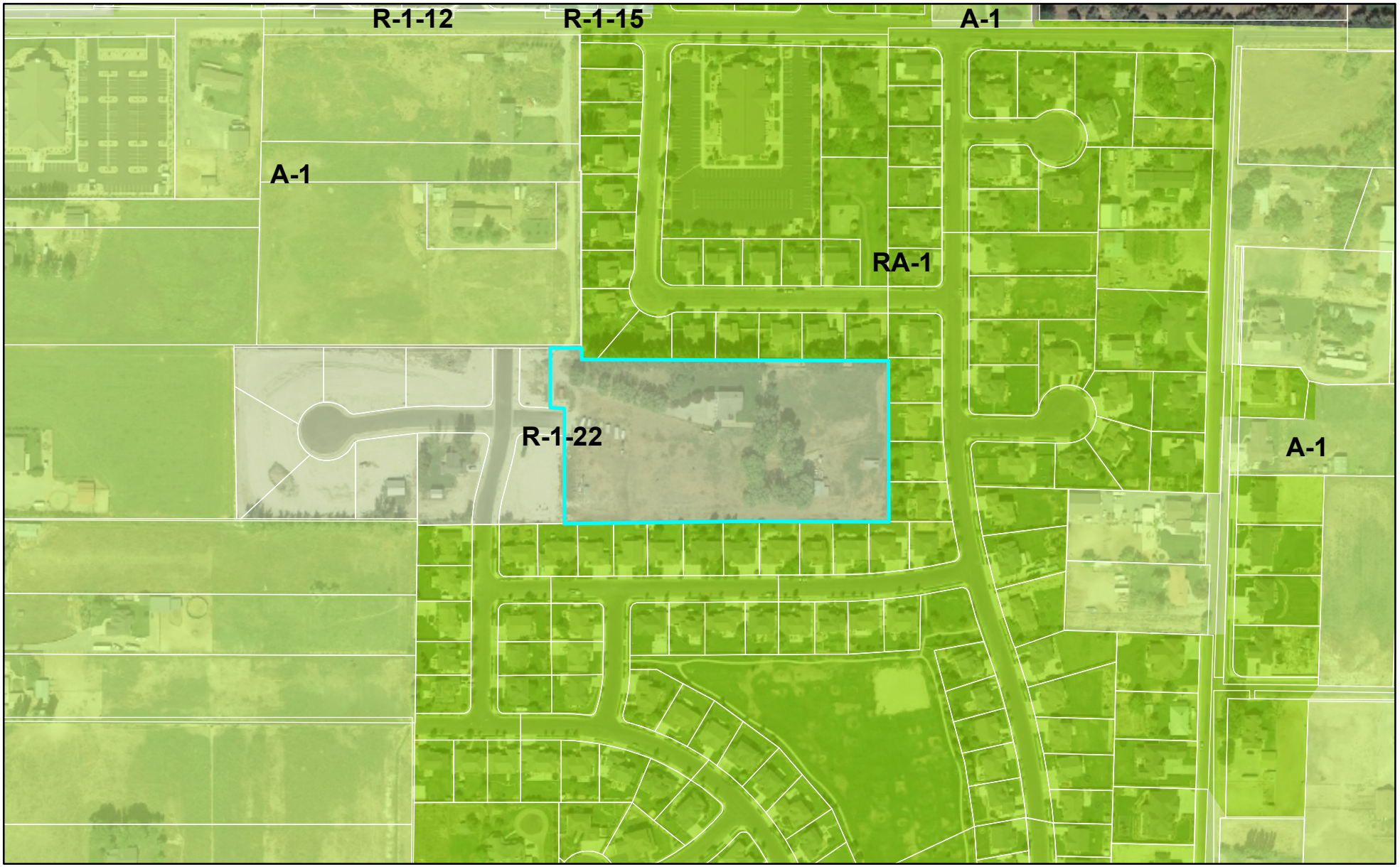



0 340 680 Feet

LEHI CITY

# Staten Farms Plat B Final Subdivision

Zoning



# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Brittney Harris
Submitting Department: Planning Division
Item Type: Action Item
Agenda Section:

---

**Subject:**
Consideration of Final subdivision approval for the Innovation Pointe Phase 2, a 3-lot commercial subdivision located at 1441 W Innovation Way.
Petitioner: Innovation Pointe

**Suggested Action:**

**Attachments**:
CC Staff Report Innovation Pointe 2 Final Subdivision.docx

Innovation Pointe Phase 2 Final Subdivision DRC 5.20.2020.docx

iPointe - Subdivision Plat (Redline) 5.12.2020.pdf

iPointe Narrative.pdf

20200521 Lehi - Innovation Pointe Office Buildings TIS Signed.pdf

Innovation Pointe Aerial Map.pdf

Innovation Pointe General Plan Map.pdf

Innovation Pointe Zoning Map.pdf

# INNOVATION POINTE 2 FINAL SUBDIVISION

## CITY COUNCIL REPORT

| | | | |
|---|---|---|---|
| **Applicant** | Innovation Pointe | | |
| **Meeting Date** | June 9, 2020 | | |
| **Requested Action/Purpose** | Approval of a final subdivision | | |
| **Location** | 1441 W Innovation Way | | |
| **Existing Land Use** | Undeveloped | | |
| **Existing Zoning** | Commercial | | |
| **General Plan Land Use Designation** | Commercial | | |
| **Number of Lots/Units** | 3 | | |
| **Adjacent Zoning and Land Use** | *North* | PC | Murdock Canal Trail and SR-92 |
| | *South* | PF/TH-5 | Elementary School/ Single Family Home |
| | *East* | Commercial | Fluent Building |
| | *West* | Commercial | iPointe buildings 1 and 2 |
| **Date of DRC Review** | May 20, 2020 | | |
| **Assigned Planner** | Brittney Harris | | |

## REQUIRED ACTION

| | |
|---|---|
| **City Council** | Final approval |

## APPLICABLE DEVELOPMENT CODE REGULATIONS

**Section 11.180. Effective Period of Final Subdivision Plat Approval.**
The approval of a final subdivision plat shall be effective for a period of two (2) years from the date the final plat is approved and signed by the City Council, at the end of which time such final subdivision plat shall have been recorded in the office of the Utah County Recorder.

**Section 37.030. Connectivity Standards.**

A. Nonresidential Connectivity Standards. All new nonresidential subdivisions containing the dedication of public roads shall meet the following connectivity index and block length standards. Private roads shall meet the requirements of this section; however, a public road may be required to prevent a private road in a subdivision from stubbing into a future or existing public road.

1. Required Connectivity Index. The minimum required connectivity index score shall be a minimum of 1.5 for nonresidential developments and a minimum of 1.75 for stacked and horizontal mixed use and transit-oriented developments.

a. The required connectivity index may be reduced if the applicant provides clear and convincing evidence that it is impracticable to achieve due to:

i. road grades that exceed ten percent;

ii. Jordan River;

iii. Utah Lake;

iv. delineated wetlands;

v. other significant natural and historic features;

vi. existing adjacent development;

vii. rail corridors; or

viii. limited access roadways.

b. Reductions in the required connectivity index shall be reviewed on a case-by-case basis and shall require positive recommendations from the reviewing departments and Planning Commission and approval by the City Council.

c. The total allowed reduction to the required connectivity index will be based on an analysis of existing conditions that prevent connections. As part of the analysis, City staff will ensure the internal connectivity of the subdivision meets the required connectivity index and that connectivity is provided to adjacent properties where possible.

1. Maximum Block Lengths. Maximum block lengths allowed shall be required based on the project development type as identified on the following table of maximum block lengths:

| Development Type | Block Length |
|---|---|
| Regional Retail, Office/Warehouse, Manufacturing, Technical Manufacturing, and Warehouse Distribution | 1,000 feet |
| All other nonresidential uses | 800 feet |
| Mixed use (stacked and horizontal), Urban Tech Mixed Use District, and transit-oriented developments | 600 feet |

a. Increase in Block Length. The maximum allowed block length may be increased if the applicant provides clear and convincing evidence that it is impracticable to achieve due to:

i. road grades that exceed ten percent;

ii. Jordan River;

iii. Utah Lake;

iv. delineated wetlands;

v. other significant natural and historic features;

vi. existing adjacent development;

vii. rail corridors; or

viii. limited access roadways.

b. Increases in block length will be reviewed on a case-by-case basis and shall require recommendations from the reviewing departments and Planning Commission and approval by the City Council.

2. Cross Access. Nonresidential and multi-family residential site plans shall provide pedestrian and vehicular cross-access to adjacent developments to allow auto and pedestrian trips to occur between developments (see Figure 158).

## PROPERTY HISTORY

| | |
|---|---|
| **May 12, 2005** | Eastern portion of the property annexed into the City as part of the Bull River Business Park annexation |
| **November 28, 2018** | Western portion of the property annexed into the City as part of the Innovation Pointe Addition |
| **January 14, 2020** | City Council approved the Innovation Pointe General Plan Land Use Amendment changing the use from Business Park to Commercial. Included in their motion was the need for a development agreement stating that building 3 will be an office building, this agreement subsequently was recorded. |
| **March 31, 2020** | City Council approved the Innovation Pointe Zone Change from Business Park to Commercial on 35 acres. |

## REPORT ANALYSIS

The applicant requests approval of the Innovation Pointe 2 Final Subdivision, creating 3 commercial lots at 1441 West Innovation Way. The applicant has expressed the intention to develop these lots with office buildings. Though they also indicated a willingness to consider other commercial uses in the future. Along with this application, the applicant has simultaneously submitted an application for site plan approval for an office building on lot 3. All of the site improvements will occur with the site plan; and accordingly, utilities and design standards receive review with the site plan. The primary purpose of this final subdivision is to consolidate and restructure lots, as well as designate and dedicate public road right of way and utility easements. This limited scope and concurrent site plan eliminated the need for the applicant to submit a preliminary subdivision for review.

With the broader scope of the site plan, connectivity standards represent the main consideration for the final subdivision approval. The proposed subdivision shows a new 3350 North road that connects 1450 West to 1200 West. This road connection required extra consideration to ensure that the existing roads could handle the extra traffic from an office use. The applicant worked with Ross Dinsdale, from the engineering department, to get an updated traffic study. The traffic study shows existing issues with the Level of Service on SR-92 and includes recommendations to improve the flow of traffic. These require coordination with UDOT. The study also indicates that the proposed project will not require significant alterations to existing infrastructure in order to accommodate the proposed office use.

The proposed commercial subdivision has a block length of 1,011.5 feet. The maximum allowed block length is 1,000 feet. Though slightly over, this site does have significant slope and is next to two existing roadways and developments. City Council can determine if this justifies a slightly larger block length. And the subdivision does provide cross access between the three proposed lots and connects into the larger road system.

DRC reviewed the proposed subdivision and had 2 redline comments. One about the updated traffic study that has been provided, and the following:

1. Use the City's standard title block format (see example provided) including only 1 signature line for the Mayor in the Legislative Body Acceptance area

Please consider including all DRC comments in your motion.

## PLANNING DIVISION RECOMMENDATION

Planning Staff recommends **APPROVAL** of the proposed Innovation Pointe 2 final subdivision including the DRC comments from May 20, 2020. This recommendation is based on the following findings:

1. The proposed subdivision's impact on traffic can be mitigated against without excessive infrastructure improvements by the City.
2. The proposed subdivision meets the connectivity requirements in the Development Code.
3. The proposed subdivision is not detrimental to the public health, safety, and welfare of Lehi City.
4. The proposed subdivision meets the requirements of the Development Code.
5. Other findings based upon information presented at the public meeting.

**Innovation Pointe Phase 2 Final Subdivision**
**DRC Redline Comments**

*Innovation Pointe- requests final subdivision review of Innovation Pointe Phase 2, a 3-lot commercial subdivision located at 1441 West Innovation Way.*

DRC Members Present: Glade Kirkham, Kerry Evans, Greg Allred, Kim Struthers, Gary Smith, Joshua Bunnell, Ross Dinsdale, Trent Dyer
Representatives of the Applicant Present: None due to Covid-19
Date of Plans Reviewed: 5/12/2020
Time Start: N/A
Time End: N/A

**DRC REDLINE COMMENTS:**
**Glade – Power:**
General Comment: Lot 5 Power service will route in from switch PME-9 at 1200 W. along proposed Lot 4 and proposed road access from 1200 W. This can be constructed with Lot 4 improvements
**Kerry – Fire:** No comments
**Greg – Water/Sewer:** No comments
**Trent – Parks:** No comments
**Gary – Building/Inspections:** No comments
**JD – Streets:** No comments
**Ross – Engineering:**
1. Need to finalize review of traffic study

**Kim – Planning:**
2. Use the City's standard title block format (see example provided) including only 1 signature line for the Mayor in the Legislative Body Acceptance area.

**PRIOR TO RECORDING OF PLAT:**
1. Provide a Mylar of the final plat for recording with the owners notarized signature(s).
2. Include surveyor's and engineer's stamps and signatures on the plat.
3. Provide a signed easement verification sheet (for proposed public utility easements on the plat).

**DRC GENERAL COMMENTS:**
1. Lot 5 Power service will route in from switch PME-9 at 1200 W. along proposed Lot 4 and proposed road access from 1200 W. This can be constructed with Lot 4 improvements
2. Please note that ALL of the DRC Redline and Prior to Recording of Plat comments MUST be completed before a preconstruction meeting can be scheduled.
3. Once approved by the Planning Commission or City Council (whichever is applicable) plans may be submitted for check-off. Check-off plans consist of one set of 24x36-inch plans submitted to the Planning Division office. When changes need to be made to a check set, revise the affected sheets only. Each new submittal will require a revision date on each new sheet. It is the responsibility of the applicant to follow through with completing the check-off items.
4. Prior to the pre-construction meeting, Lehi City Staff will make copies of plans for the meeting from the check-off set and the developer will pay fees for the copies.
5. On the power, developer will install conduit; Lehi City Power will install all other required power infrastructure shown on the plans and charge the developer for the costs. These costs are separate from power impact fees that are paid with the building permit.
6. Developer is responsible to purchase, move or remove any existing Rocky Mountain Power facilities. Additionally, the Developer is responsible for all costs associated for the purchase of RMP equipment by Lehi City Power. These costs are separate from infrastructure, impact fees, and connection fees.
7. Developer is responsible to furnish adequate rights of way or easements for construction of off-site power line extensions.
8. Residential developments shall complete all required private improvements prior to commencing construction on units totaling more than 80% of the allowed units in the development.

**Note: This list of corrections and deficiencies should not be considered as an all-inclusive or final list. The items listed need to be corrected and resolved and a new set of information submitted for review by the DRC. Further corrections and deficiencies may still be noted as the DRC further reviews the resubmitted information.**

9. The approval of a development shall be effective for a period of two (2) years from the date the development is approved by the Planning Commission or City Council, whichever is applicable.
10. Approved vehicle access for firefighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections. Vehicle access shall be provided by either a twenty (20) foot minimum width temporary or permanent road, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be kept clear of all fencing, barricades, dumpsters, vehicles, construction materials and debris and maintained until permanent fire apparatus access roads are available.

THIS ITEM WILL BE SCHEDULED FOR CITY COUNCIL ONCE THE TRAFFIC STUDY HAS BEEN REVIEWED

**Note: This list of corrections and deficiencies should not be considered as an all-inclusive or final list. The items listed need to be corrected and resolved and a new set of information submitted for review by the DRC. Further corrections and deficiencies may still be noted as the DRC further reviews the resubmitted information.**

# Innovation Pointe Subdivision - Phase 2
## A Commercial Subdivision
### A part of the Northeast Quarter of Section 31, Township 4 South, Range 1 East, SLB&M, U.S. Survey
### Lehi City, Utah County, Utah
### May 2020

## NARRATIVE

This Subdivision Plat was requested by Mr. Steve Layton of DLM Development for the purpose of subdividing the site into Lots and Streets.

Brass Cap Monuments were found at the West Quarter Corner and the East Quarter Corner of Section 31, T4S, R1E, SLB&M.

Right of Way Monuments Stamped R.O.W. 139 were found as depicted on this drawing and relate closely with the deeded right of way line of Timpanogos Highway.

A line bearing South 89°57'55" East between monuments found at the West Quarter Corner and the East Quarter Corner of said Section 31, was used as the Basis of Bearings for this Survey and subdivision plat.

Property Corners were set as depicted on this survey.

## DESCRIPTION

A part of the Northeast Quarter of Section 31, Township 4 South, Range 1 East, Salt Lake Base and Meridian, U.S. Survey, Lehi City, Utah County, Utah:

Beginning at a point on the Westerly Right-of-Way Line of 1200 West Street, said point being 849.81 feet North 0°09'13" East and 58.85 feet North 89°54'00" West from the East Quarter Corner of said Section 31; and running thence North 89°54'00" West 441.14 feet; thence South 0°09'30" West 321.24 feet; thence West 277.40 feet; thence North 0°09'30" East 174.93 feet; thence South 89°59'43" West 362.88 feet to the Easterly Right-of-Way Line of 1450 West Street; thence along said Easterly and Southerly Lines the following five (5) courses: (1) North 02°02'39" East 534.44 feet to a point of curvature; (2) Northeasterly along the arc of a 34.00 foot Radius curve to the right a distance of 54.41 feet (Central Angle equals 91°41'20" and Long Chord bears North 45°53'18" East 48.79 feet) to a point of non-tangency; (3) North 2°10'09" East 7.98 feet; (4) North 87°49'51" West 223.12 feet; and (5) North 0°10'55" East 29.93 feet; thence South 89°58'22" East 1269.71 feet; thence South 72°25'55" West 65.11 feet; thence South 1°42'09" West 7.21 feet; thence South 88°17'51" East 12.63 feet; thence South 88°41'12" East 13.99 feet; thence South 0°06'00" West 30.80 feet to the Westerly Right-of-Way Line of 1200 West Street; thence along said Westerly Right-of-Way Line the following two (2) courses: (1) Southeasterly along the arc of a 36.00 foot Radius curve to the right a distance of 56.65 feet (Central Angle equals 90°09'30" and Long Chord bears South 44°55'15" East 50.98 feet) to a point of tangency; and (2) South 0°09'30" West 374.11 feet to the point of beginning.

Contains 14.971 Acres, More or Less

| LINE DATA | | |
|---|---|---|
| Line | Bearing | Length |
| L1 | N 2°10'09" E | 7.98 |
| L2 | N 0°10'55" E | 29.93 |
| L3 | S 72°25'55" W | 65.11 |
| L4 | S 1°42'09" W | 7.21 |
| L5 | S 88°17'51" E | 12.63 |
| L6 | S 88°41'12" E | 13.99 |
| L7 | S 0°06'00" W | 30.80 |
| L100 | N 89°54'00" W | 5.40 |
| L101 | S 0°02'39" W | 12.84 |
| L200 | N 0°02'39" E | 54.42 |
| L201 | N 89°57'21" W | 86.50 |
| L202 | S 0°02'39" W | 86.50 |

| PROPERTY LINE CURVE DATA | | | | | |
|---|---|---|---|---|---|
| Curve | Delta | Radius | Length | Chord | Chord Bearing |
| C1 | 91°41'20" | 34.00' | 54.41' | 48.79' | N 45°53'18" E |
| C2 | 90°09'30" | 36.00' | 56.65' | 50.98' | S 44°55'15" E |
| C100 | 43°29'16" | 16.00' | 12.14' | 11.85' | S 21°47'16" W |
| C101 | 90°00'00" | 112.00' | 175.93' | 158.39' | S 45°02'39" W |
| C102 | 92°10'55" | 25.03' | 40.27' | 36.07' | S 46°04'48" E |
| C103 | 90°00'00" | 61.00' | 95.82' | 86.27' | N 45°02'39" E |
| C104 | 89°56'29" | 26.00' | 40.81' | 36.75' | N 45°07'45" E |
| C105 | 90°09'30" | 36.00' | 56.65' | 50.98' | S 44°55'15" E |
| C106 | 91°41'20" | 34.00' | 54.41' | 48.79' | N 45°53'18" E |

| CENTERLINE CURVE DATA | | | | | |
|---|---|---|---|---|---|
| Curve | Delta | Radius | Length | Chord | Chord Bearing |
| C200 | 90°00'00" | 86.50' | 135.87' | 122.33' | N 45°02'39" E |
| C201 | 14°03'43" | 271.78' | 66.70' | 66.54' | S 85°04'32" W |




VICINITY MAP
Not to Scale

GREAT BASIN ENGINEERING
5746 South 1475 East Ogden, Utah 84403
Main (801)394-4515 S.L.C (801)521-0222 Fax (801)392-7544
www.greatbasinengineering.com

## NOTES:

1. Property is Zoned BP for Business Park use.
2. This area is subject to the normal everyday sounds, odors, sights, equipment, facilities and all other aspects associated with an agricultural lifestyle. Further residents should also recognize the risks inherent with livestock.
3. Permanent detention/retention facility to be owned and maintained by the owners of this property not to be altered without approval of Lehi City Council and City Engineer.
4. Subdivision is 2 Lots (15.118 Acres), 2 Parcels (1.807 Acres) and Roadways (3.089 Acres) totaling 20.013 Acres.
5. There are no Limited Access Restrictions within this Subdivision.
6. Full Roadway Improvements for 1450 West Street will be constructed at the time of the Lot 2 Site Plan.
7. Parcels A and B to be owned and maintained by the owners of Lot 1.

## SURVEYOR'S CERTIFICATE

I, Andy Hubbard, do hereby certify that I am a Professional Land Surveyor in the State of Utah, and that I hold Certificate No. 6242920 in accordance with Title 58, Chapter 22, of the Professional Engineers and Land Surveyors Licensing Act. I also certify that I have completed a survey of the property described hereon In accordance with Section 17-23-17 and that I have verified all measurements shown hereon this plat of Innovation Pointe Subdivision - Phase 2 in Lehi City, Utah County, Utah and that it has been correctly drawn to the designated scale and is a true and correct representation of the following description of lands included in said subdivision, based on data compiled from records in the Utah County Recorder's Office. Monuments have been found or placed as represented on this plat.

Signed this_____day of_____, 2020.

PROFESSIONAL LAND SURVEYOR
05/12/2020
No. 6242920
ANDY HUBBARD
STATE OF UTAH

6242920
License No.

Andy Hubbard

## OWNER'S DEDICATION

We, the undersigned owners of the hereon described tract of land, hereby set apart and subdivide the same into lots, parcels and streets as shown on this plat, and name said tract Innovation Pointe Subdivision - Phase 2, and hereby dedicate, grant and convey to Lehi City, Utah County, Utah, all those parts or portions of said tract of land designated as Streets, the same to be used as public thoroughfares forever, and also dedicate to Lehi City those certain strips designated as Pressure Irrigation Easements to be used for the installation, maintenance, and operation of water, sewer, and fire lines as may be authorized by Lehi City, and those certain strips designated as public utility easements for public utility and drainage purposes as shown hereon, the same to be used for the installation, maintenance, and operation of public utility service lines and drainage, as may be authorized by Lehi City.

We also dedicate to Lehi Irrigation Company those certain strips designated as North Bench Irrigation Easements to be used for the installation, maintenance, and operation of Irrigation lines as may be authorized by North Bench Irrigation Company.

We also hereby dedicate, all those parts or portions of said tract of land designated as parcels, the same to be used as landscaping and amenity spaces for the lots within this development, the same to be owned and maintained by the owners of said lots.

Signed this _____ day of _____, 2020.

Innovation Pointe Land, LLC

Jeffrey Flamm - Manager

## ACKNOWLEDGMENT

State of _____
County of _____ } ss

The foregoing instrument was acknowledged before me this_____ day of _____ 2020 by _____.

Residing At:_____

Commission Number:_____

Commission Expires:_____

_____
A Notary Public commissioned in _____

_____
Print Name

## ACCEPTANCE BY LEGISLATIVE BODY

The Mayor of the City of Lehi, County of Utah, approves this subdivision subject to the conditions and restrictions stated hereon, and hereby accepts the dedication of all streets, easements, and other parcels of land intended for public purposes for the perpetual use of the public.

Dated This _____ Day of _____, 2020.

_____ Attest _____
Mayor City Recorder

## LEHI PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____ A.D.. 2020,
BY THE LEHI PLANNING COMMISSION.

_____
CHAIRMAN, PLANNING COMMISSION


# Innovation Pointe Subdivision - Phase 2
## A Commercial Subdivision
### A part of the Northeast Quarter of Section 31, Township 4 South, Range 1 East, SLB&M, U.S. Survey
### Lehi City, Utah County, Utah
### May 2020


Scale: 1" = 60'



| Corporate Seal | Surveyor's Seal | Notary Public Seal | City-County Engineer | Clerk/Recorders Seal |
|---|---|---|---|---|
| | PROFESSIONAL LAND SURVEYOR 05/12/2020 No. 6242920 ANDY HUBBARD STATE OF UTAH | | | |

## UTAH COUNTY RECORDER

ENTRY NO._____FEE PAID _____FILED FOR RECORD AND RECORDED_____AT _____ IN BOOK_____OF OFFICIAL RECORDS, PAGE_____. RECORDED FOR_____

_____
UTAH COUNTY RECORDER

BY:_____
DEPUTY

# Innovation Pointe Subdivision - Phase 2

## A Commercial Subdivision

***A part of the Northeast Quarter of Section 31, Township 4 South, Range 1 East, SLB&M, U.S. Survey***
***Lehi City, Utah County, Utah***
***May 2020***

| LINE DATA | | |
|---|---|---|
| Line | Bearing | Length |
| L1 | N 2°10'09" E | 7.98 |
| L2 | N 0°10'55" E | 29.93 |
| L3 | S 72°25'55" W | 65.11 |
| L4 | S 1°42'09" W | 7.21 |
| L5 | S 88°17'51" E | 12.63 |
| L6 | S 88°41'12" E | 13.99 |
| L7 | S 0°06'00" W | 30.80 |
| L100 | N 89°54'00" W | 5.40 |
| L101 | S 0°02'39" W | 12.84 |
| L200 | N 0°02'39" E | 54.42 |
| L201 | N 89°57'21" W | 86.50 |
| L202 | S 0°02'39" W | 86.50 |

| PROPERTY LINE CURVE DATA | | | | | |
|---|---|---|---|---|---|
| Curve | Delta | Radius | Length | Chord | Chord Bearing |
| C1 | 91°41'20" | 34.00' | 54.41' | 48.79' | N 45°53'18" E |
| C2 | 90°09'30" | 36.00' | 56.65' | 50.98' | S 44°55'15" E |
| C100 | 43°29'16" | 16.00' | 12.14' | 11.85' | S 21°47'16" W |
| C101 | 90°00'00" | 112.00' | 175.93' | 158.39' | S 45°02'39" W |
| C102 | 92°10'55" | 25.03' | 40.27' | 36.07' | S 46°04'48" E |
| C103 | 90°00'00" | 61.00' | 95.82' | 86.27' | N 45°02'39" E |
| C104 | 89°56'29" | 26.00' | 40.81' | 36.75' | N 45°07'45" E |
| C105 | 90°09'30" | 36.00' | 56.65' | 50.98' | S 44°55'15" E |
| C106 | 91°41'20" | 34.00' | 54.41' | 48.79' | N 45°53'18" E |

| CENTERLINE CURVE DATA | | | | | |
|---|---|---|---|---|---|
| Curve | Delta | Radius | Length | Chord | Chord Bearing |
| C200 | 90°00'00" | 86.50' | 135.87' | 122.33' | N 45°02'39" E |
| C201 | 14°03'43" | 271.78' | 66.70' | 66.54' | S 85°04'32" W |

Scale: 1" = 60'

60 0 30 60 80 100 120

Graphic Scale

North Corner of of Section 31, T4S, R1E, SLB&M, U.S. Survey (Not Found Positioned from Record information)

2645.35' Calc'd
1327.24'

S 89°58'22" E Calc'd

S 89°58'22" E

Northeast Corner of of Section 31, T4S, R1E, SLB&M, U.S. Survey (Not Found Positioned from Record information)

1318.46'
2636.92' Calc'd.

Utah Department of Transportation

Found Rebar & "REDCON" Cap

North Line of the Southwest Quarter of the Northeast Quarter (40 Acre Line)

1269.71'
2657.69' Calc'd

Innovation Way
Bull River Road
(Public Street)
Lehi City

N 87°49'51" W
223.12'

N 89°14'15" W 1071.51'
N 89°17'07" W 20.00'
S 89°17'07" E
531.52'
479.98'
1011.50'
13.1'
6.9'
26.2'
29.3'
18.31'
96.40'
N 88°16'02" W
11.62'
C201
19.8'
N 0°02'39" E 20.57'
100.0'
18.19'
C100
25.0' 25.0'
50.0'
S 45°02'39" W 37.28'
N 45°02'39" E 9.73'
N 89°57'21" W 481.53'
S 89°57'21" E 293.19'
S 0°02'39" W 40.24'
N 0°02'39" E 60.01'
S 89°57'21" E 163.06'
N 89°57'21" W 5.74'
N 0°02'39" E 20.00'
S 89°57'21" E 13.50'
S 0°02'39" W 20.88'
S 89°57'21" E 17.00'
10.0' Public Utility and Roadway Construction Easement
5.0' Telephone Easement Entry No. 123244
20.0' Pressure Irrigation Easement
534.44'
142.31'
N 0°02'39" E
S 0°02'39" W 117.62'
N 0°02'39" E 158.50'
N 89°57'31" W 17.06'
S 0°02'29" W 20.00'
S 89°57'37" E 17.06'
S 89°57'21" E 20.00'
N 0°07'58" E 559.84'
559.30'
Lot 3
285,395 sq.ft.
Lot 4
182,517 sq.ft.
374.11'
Lehi City 1200 West Street
(Public Street)
284.74'
10.0' Public Utility and Roadway Construction Easement
L3 1.62'
L4
L5
L6
L7
29.19'
C2
C105
58.9'
Lot 2
Innovation Pointe Subdivision - Phase 1
1318.29' Calc'd
N 0°11'09" E (Calc'd)
1450 West Street
(Public Street)
447.45'
S 0°02'39" W 388.21'
N 0°02'39" E 175.26'
10.0' Public Utility and Roadway Construction Easement
N 89°57'21" W 13.50'
N 0°02'39" E 20.00'
S 89°57'21" E 13.50'
20.0' Pressure Irrigation Easement
S 0°02'39" W 11.00'
N 89°57'21" W 32.51'
S 0°02'39" W 20.00'
N 89°54'54" W
S 89°54'00" E 54.99'
10.0' P.U.E.
75.00'
N 0°02'38" E 20.00'
40.04'
384.24'
N 75°06'00" E 30.91'
S 89°54'00" E 75.28'
C104
3350 North Street
(Public Street)
S 89°54'00" E 478.32'
N 89°54'00" W 441.14'
Point of Beginning
58.85'
N 89°54'00" W
29.00'
29.92'
37.00'
75.21'
25.94'
34.3'
24.6'
27.00'
N 89°57'21" W 17.68'
N 0°02'39" E 20.00'
S 89°57'21" E 17.68'
N 48°14'10" W 22.28'
N 0°02'39" E 1.16'
S 48°14'10" E 38.86'
N 89°57'21" W 374.24'
S 89°57'21" E 390.14'
10.0' Public Utility and Roadway Construction Easement
S 89°57'22" E 32.51'
S 0°02'39" W 16.09'
S 45°02'39" W 49.70'
S 0°03'22" E 35.37'
N 0°02'39" E 59.87'
N 45°02'39" E 66.27'
15.80'
N 89°57'22" W
23.66'
C100
L100
L101
L200
C103
C106
492.78'
N 0°02'39" E
3350 North Street
(Public Street)
S 89°57'21" E 516.94'
54.04'
29.04'
32.85'
32.65'
22.00'
21.96'
C200
L201
L202
321.24'
Found Rebar & "147089" Cap
Joyce Ann Jones (ETAL)
S 89°59'43" W 362.88'
Found Rebar & "GBE" Cap
Set Rebar & Cap
N 89°58'14" W 155.88'
N 0°09'30" E 10.64'
Sixteenth Quarter Section Line
Alpine School District
174.93'
N 0°09'30" E
185.37'
Lot 5
55,443 sq.ft.
S 0°09'30" W
321.24'
849.81'
South Line of the North Half of the Southwest Quarter of the Northeast Quarter
Set Rebar & Cap
277.40'
West
277.40'
N 0°12'07" E Calc'd
661.23'
Center of of Section 31, T4S, R1E, SLB&M, U.S. Survey (Not Found)
2670.43'
S 89°57'55" E
S 89°57'55" E (Basis of Bearings)
664.67'
West Quarter Corner of of Section 31, T4S, R1E, SLB&M, U.S. Survey (Found Brass Cap Monument)
1994.02'
N 0°09'15" E Calc'd
East Quarter Corner of Section 31, T4S, R1E, SLB&M, U.S. Survey (Found Brass Cap Monument)
2658.69'
5329.12' Meas. (5327.60 Rec.)

Legend
- Set Nail & Washer
- Set Rebar & Cap
- Set Hub & Tack
- Monument to be set
- (Rad.) Radial Line
- (N/R) Non-Radial Line
- (PUE) Public Utility Easement
- Existing Easement Line
- Proposed Easement Line


GREAT BASIN ENGINEERING INC
5746 South 1475 East Ogden, Utah 84403
Main (801)394-4515 S.L.C (801)521-0222 Fax (801)392-7544
www.greatbasinengineering.com


PROFESSIONAL LAND SURVEYOR
05/12/2020
No. 6242920
ANDY HUBBARD
STATE OF UTAH



UTAH COUNTY RECORDER

ENTRY NO._____FEE PAID _____FILED FOR RECORD AND RECORDED_____AT _____IN BOOK_____OF OFFICIAL RECORDS, PAGE_____. RECORDED FOR _____

UTAH COUNTY RECORDER

BY:_____
DEPUTY

13N905 - BP - Update

# Innovation Pointe – Phase 2 Subdivision Plat

Innovation Pointe is proposing a new subdivision plat in order to continue with the second phase of the project. The new plat will dissolve and recreate parcels to better suit the future use of the land. Innovation Pointe Subdivision – Phase 2 is located at approximately 1441 W Innovation Way, near SR-92 and 1200 West. The subdivision contains roughly 15 acres of land.

There are no CC&R's associated with the development or subdivision.

Lot 3 is intended for the future Innovation Pointe 3 office building, which conforms to the formal development agreement that was recently executed with Lehi City. The office building is currently in design.

Lot 4 and Lot 5 will be developed in the future.

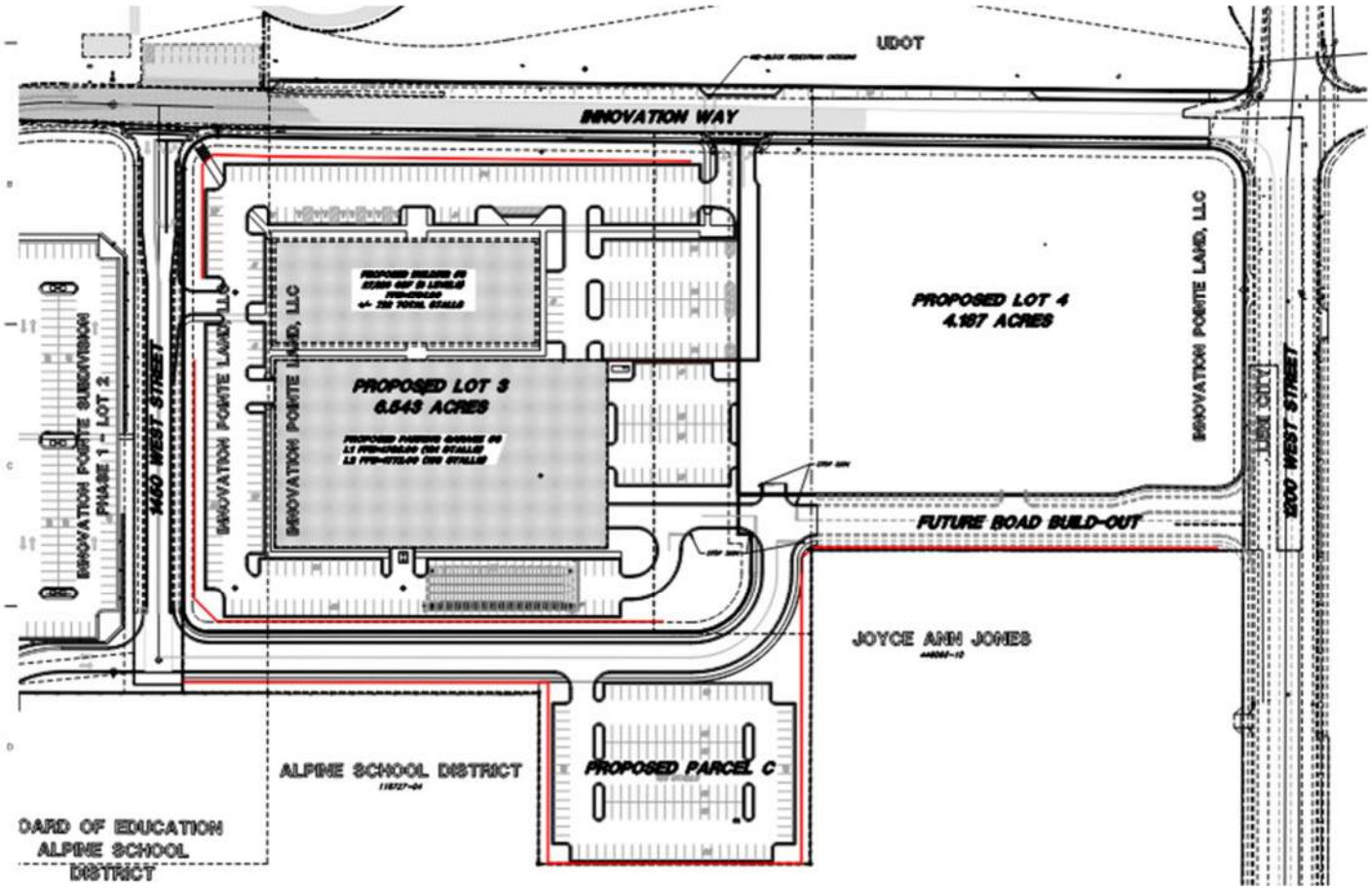
Design details such as a drainage study, geotechnical reports, road profiles, grading, utility design, SWPPP, landscape design, etc. are being developed as part of a separate site plan improvement package. Innovation Pointe understands this separate site package must be reviewed and approved by Lehi City prior to any construction taking place on the new parcels.

We appreciate your time and your consideration of this application, and we look forward to our continued relationship with Lehi City.

HALES ENGINEERING
innovative transportation solutions

# Innovation Pointe

## Traffic Impact Study




## Lehi, Utah

**May 28, 2020**

**UT16-902**

LICENSED PROFESSIONAL ENGINEER
NO. 295699
RYAN R.
HALES
05/28/2020
STATE OF UTAH



1220 North 500 West, Ste. 202 Lehi, UT 84043 p 801.766.4343
www.halesengineering.com

# EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Innovation Pointe development located in Lehi, Utah. The proposed project is located south of Timpanogos Highway (SR-92), between 1200 West and Triumph Boulevard.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways near the site. Future 2025 and 2040 conditions were also analyzed.

The evening peak hour level of service (LOS) was computed for each study intersection. The results of this analysis are shown in Table ES-1. Recommended storage lengths are shown in Table ES-2.

**TABLE ES-1**
**LOS Analysis - Evening Peak Hour**
**Lehi - Innovation Pointe TIS**

| Intersection | Level of Service (Sec/Veh)[1] | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Existing (2020) | | | Future (2025) | | | | Future (2040) | | | |
| | Background | Mitigated Background | Plus Project | Background | Mitigated Background | Plus Project | Mitigated Plus Project | Background | Mitigated Background | Plus Project | Mitigated Plus Project |
| Triumph Boulevard / Timpanogos Highway (SR-92) | E (67.9) | D (52.3) | D (54.7) | E (62.8) | D (53.4) | E (59.3) | D (54.4) | E (62.5) | D (50.7) | D (53.5) | D (53.1) |
| 1200 West / Timpanogos Highway (SR-92) | C (33.5) | C (34) | C (34.2) | C (32.2) | C (33.1) | C (33.2) | C (33.9) | D (35.6) | D (37.5) | D (37.5) | D (36.9) |
| 3400 North / Triumph Boulevard | f (>50) / WBT | B (18.6) | C (27.6) | D (50) | B (19.1) | C (32.9) | C (32.3) | D (38.4) | C (29.3) | E (56.8) | D (53.1) |
| Innovation Way / 1200 West | c (21) / WBT | c (21.3) / EBL | d (25.2) / EBL | c (20.9) / EBL | c (24.6) / EBL | d (26.4) / EBL | d (29.6) / EBL | e (39.2) / EBL | d (32.7) / EBL | f (>50) / EBL | a (6.3) / WBR |
| Aces Athletics North Access / 1200 West | b (11.4) / WBL | a (5.7) / WBL | a (8.3) / WBL | a (9.4) / WBL | b (10.6) / WBL | a (10) / WBL | a (8.5) / WBL | b (10.3) / WBL | b (11.9) / WBL | b (10.8) / WBL | b (13.3) / WBL |
| Aces Athletics South Access / 1200 West | a (6.6) / WBL | a (9.1) / WBL | a (9.7) / WBL | a (10) / WBL | a (8.7) / WBL | a (8.2) / WBL | a (8.9) / WBL | b (10.4) / WBL | b (11.8) / WBL | b (12.7) / WBL | b (11.4) / WBL |
| 3200 North / 1200 West | A (5.3) | A (5.3) | A (5.5) | A (6.3) | A (6.2) | A (6.3) | A (6.2) | A (7.4) | A (7.1) | A (7.4) | A (7.9) |
| East Access / 1200 West[2] | - | - | - | - | - | - | - | - | - | - | e (38.9) / EBL |
| 3400 North / Innovation Way[2] | - | - | a (4) / SBR | - | - | a (6.6) / SBR | a (6) / SBR | - | - | a (9.3) / SBR | a (8.5) / SBR |

1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average for roundabout, signalized, all-way stop-controlled intersections and the worst approach for all other unsignalized intersections. Uppercase LOS used for signalized, roundabout, and all-way stop-controlled intersections. Lowercase LOS used for one-way & two-way stop-controlled intersections.
2. This intersection is project-related and was only analyzed in "plus project" scenarios.

Source: Hales Engineering, May 2020

| TABLE ES-2<br>Recommended Storage Lengths<br>Lehi - Innovation Pointe TIS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Intersection | Storage Length (feet) | | | | | | | |
| | Northbound | | Southbound | | Eastbound | | Westbound | |
| | LT | RT | LT | RT | LT | RT | LT | RT |
| 3400 North / Triumph Boulevard | - | - | - | - | - | - | - | 100 |
| Triumph Boulevard / Timpanogos Highway (SR-92) | 100 | 150 | - | - | - | - | - | - |
| Source: Hales Engineering, May 2020 | | | | | | | | |

## SUMMARY OF KEY FINDINGS/RECOMMENDATIONS

The following is a summary of key findings and recommendations:

**Existing 2020 Background Conditions**

- The Triumph Boulevard / Timpanogos Highway (SR-92) and 3400 North / Triumph Boulevard intersections are currently operating at an unacceptable LOS during the evening peak hour:
  - ***Recommendation:*** **Per UDOT's I-15 corridor plan, construct an additional through lane on the eastbound and westbound approaches of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection, and construct dual left-turn lanes on the westbound approach to mirror the eastbound approach.**
  - ***Recommendation:*** **Add a separate right-turn pocket to the northbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection.**
  - ***Recommendation:*** **Convert the left through lane on the northbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection to a second left-turn lane.**
  - ***Recommendation:*** **Restripe the southbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection to ensure that the right lane flows into one of the two right-turn lanes. Add a sign that says, "Right lane must turn right." It is currently ambiguous whether drivers should enter the thru lane from the right lane or the left lane.**
  - ***Recommendation:*** **Widen Triumph Boulevard to five lanes through the study area and to the south.**
  - ***Recommendation:*** **Restripe the westbound approach of the 3400 North / Triumph Boulevard intersection to create a dedicated right-turn pocket.**

- ***Recommendation:*** **Signalize the 3400 North / Triumph Boulevard intersection. While it is located close to an adjacent signalized intersection and not typically recommended, the morning peak hour volumes and projected future growth in the area necessitate it.**

**Existing 2020 Plus Project Conditions**

- All study intersections are anticipated to operate at an acceptable LOS during the evening peak hour in existing (2020) plus project conditions.
  - The development will consist of a single office building.

**Future 2025 Background Conditions**

- The Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to operate at an unacceptable LOS during the evening peak hour:
  - ***Recommendation:*** **Widen the structure to accommodate dual left-turn lanes, two through lanes, and a right-turn pocket on the northbound approach.**

**Future 2025 Plus Project Conditions**

- The Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to operate at an unacceptable LOS during the evening peak hour:
  - ***Recommendation:*** **Install permissive-protected left-turn phasing to the southbound approach of the 3400 North / Triumph Boulevard intersection.**
  - ***Recommendation:*** **Change the southbound approach lane configuration. Convert the inner right-turn lane into an exclusive through lane.**

**Future 2040 Background Conditions**

- The Triumph Boulevard / Timpanogos Highway (SR-92) and Innovation Way / 1200 West intersections are anticipated to operate at an unacceptable LOS during the evening peak hour:
  - ***Recommendation:*** **Change the southbound approach lane configuration. Convert the inner right-turn lane into an exclusive through lane.**
  - ***Recommendation:*** **Install permissive / protected left-turn phasing on the southbound approach of the 3400 North / Triumph Boulevard intersection.**

**Future 2040 Plus Project Conditions**

- The 3400 North / Triumph Boulevard and Innovation Way / 3400 North intersections are anticipated to operate at an unacceptable LOS during the evening peak hour conditions:
  - ***Recommendation:*** **Construct the East Access on 1200 West as proposed and restrict the movements on Innovation Way to right-in/right-out only.**

- ***Recommendation:*** **Add a right-turn overlap phase to the eastbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection.**

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# I. INTRODUCTION

## A. Purpose

This study addresses the traffic impacts associated with the Innovation Pointe development located in Lehi, Utah. The proposed project is located south of Timpanogos Highway (SR-92), between 1200 West and Triumph Boulevard. Figure 1 shows a vicinity map of the proposed development.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways near the site. Future 2025 and 2040 conditions were also analyzed.




**Figure 1: Vicinity map showing the project location in Lehi, 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:

- Triumph Boulevard / Timpanogos Highway (SR-92)
- 1200 West / Timpanogos Highway (SR-92)
- 3400 North / Triumph Boulevard
- Innovation Way / 1200 West
- Aces Athletics North Access / 1200 West
- Aces Athletics South Access / 1200 West
- 3200 North / 1200 West

## 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. Figure 2 provides a visual representation of each LOS letter designation.

The *Highway Capacity Manual* (HCM), 6$^{th}$ Edition, 2016 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 and all-way stop 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 approach.

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 B. Hales Engineering also calculated the 95$^{th}$ percentile queue lengths for the study intersections using SimTraffic. The detailed queue length reports are provided in Appendix D.

## 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**

| Level of Service | Description of Traffic Conditions | Average Delay (seconds/vehicle) |
|---|---|---|
| | **Signalized Intersections** | **Overall Intersection** |
| A | Extremely favorable progression and an extremely low level of control delay. Individual users are virtually unaffected by others in the traffic stream. | 0 ≤ 10.0 |
| B | Good progression and a low level of control delay. The presence of other users in the traffic stream becomes noticeable. | > 10.0 and ≤ 20.0 |
| C | Fair progression and a moderate level of control delay. The operation of individual users becomes somewhat affected by interactions with others in the traffic stream. | >20.0 and ≤ 35.0 |
| D | Marginal progression with relatively elevated levels of control delay. Operating conditions are noticeably more constrained. | > 35.0 and ≤ 55.0 |
| E | Poor progression with unacceptably elevated levels of control delay. Operating conditions are at or near capacity. | > 55.0 and ≤ 80.0 |
| F | Unacceptable progression with forced or breakdown operating conditions. | > 80.0 |
| | **Unsignalized Intersections** | **Worst Approach** |
| A | Free Flow / Insignificant Delay | 0 ≤ 10.0 |
| B | Stable Operations / Minimum Delays | >10.0 and ≤ 15.0 |
| C | Stable Operations / Acceptable Delays | >15.0 and ≤ 25.0 |
| D | Approaching Unstable Flows / Tolerable Delays | >25.0 and ≤ 35.0 |
| E | Unstable Operations / Significant Delays Can Occur | >35.0 and ≤ 50.0 |
| F | Forced Flows / Unpredictable Flows / Excessive Delays Occur | > 50.0 |

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 6th Edition, 2016 Methodology (Transportation Research Board)

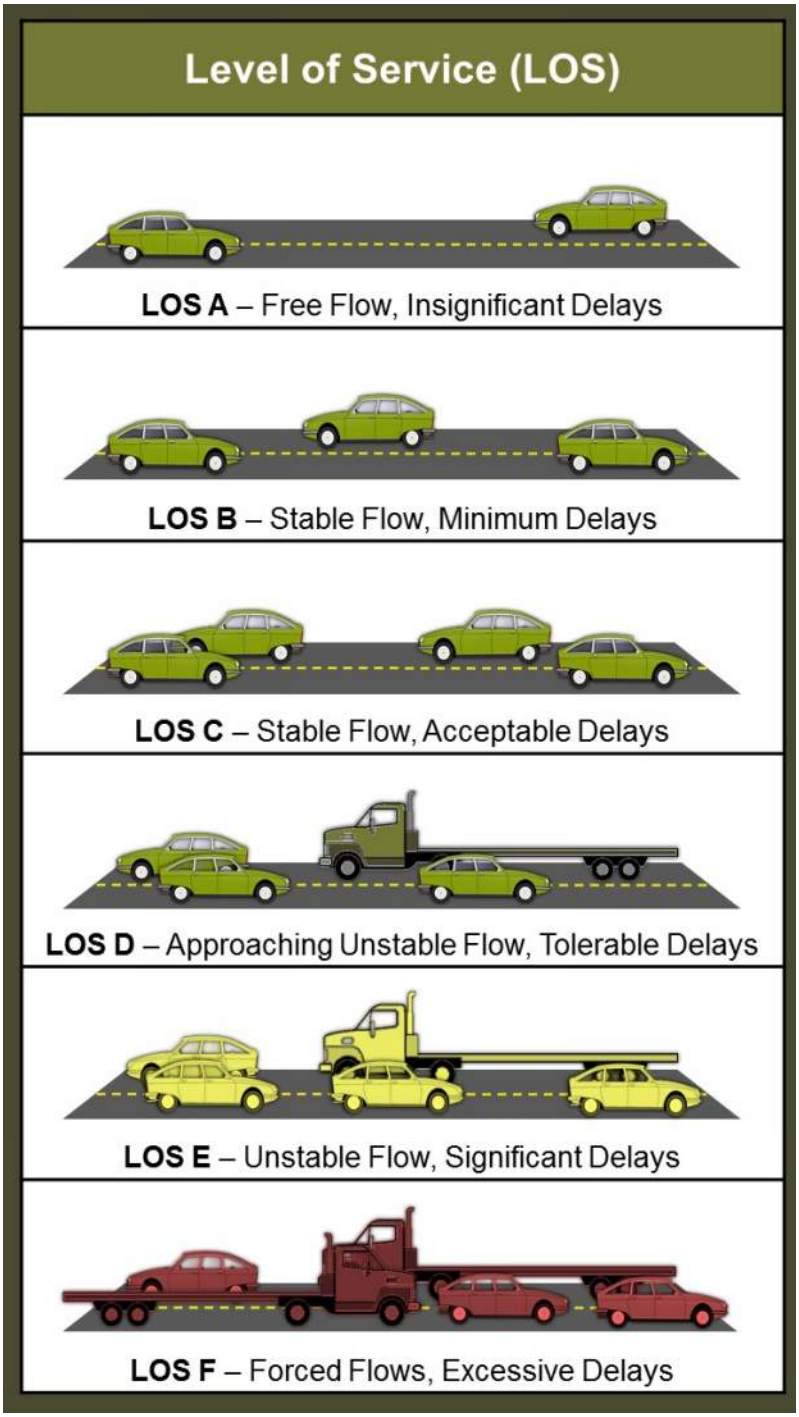



**Figure 2: Visual representation of the LOS letter designations**

# II. EXISTING (2020) 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:

Timpanogos Highway (SR-92) – is a state-maintained roadway (classified by UDOT access management standards as a "System Priority-Urban Importance" facility, or access category 3 roadway) that serves as an east/west connection from I-15 to several communities in northern Utah County, as well as to American Fork Canyon. As an access category 3 roadway, the minimum signal spacing is one-half mile, and no unsignalized access is permitted. Timpanogos Highway (SR-92) has two travel lanes in each direction separated by a wide center median, with separate right- and left-turn lanes at signalized intersection. A separate commuter lane also exists on this corridor but was excluded from these analyses as it is grade-separated from all study intersections. The posted speed limit in the vicinity of the project site is 55 mph.

Triumph Boulevard – is a city-maintained roadway that currently connects Traverse Mountain and the new Mountain Point Medical Center to Timpanogos Highway (SR-92). According to the Lehi City Transportation Master Plan, Triumph Boulevard is classified as an "arterial" roadway, that will eventually cross I-15, connecting the 2300 West. The posted speed limit on Triumph Boulevard is 30 mph.

1200 West – is a city-maintained roadway that runs north/south connecting to Timpanogos Highway (SR-92) and the I-15 / 2100 North (SR-85) interchange. 1200 West is classified by the Lehi City Transportation Master Plan as an "arterial." 1200 West currently has one travel lane in each direction, and the posted speed limit is 25 mph.

Innovation Way – is a city-maintained roadway that runs parallel to Timpanogos Highway (SR-92) between 3400 North and 1200 West. The posted speed limit on Innovation Way is 25 mph.

## 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:

- Triumph Boulevard / Timpanogos Highway (SR-92)

- 1200 West / Timpanogos Highway (SR-92)
- 3400 North / Triumph Boulevard
- Innovation Way / 1200 West
- Aces Athletics North Access / 1200 West
- Aces Athletics South Access / 1200 West
- 3200 North / 1200 West

The Triumph Boulevard counts were performed on Tuesday, July 9, 2019 and all other counts were performed on Wednesday, June 29, 2016 (with the exception of the 3200 North / 1200 West intersection which was counted on May 11, 2016). All counts were grown to 2020 with an assumed 3% growth rate. The morning peak hour was determined to be between 8:00 and 9:00 a.m., and the evening peak hour was determined to be between 5:00 and 6:00 p.m. The evening peak hour volumes were approximately 24% higher than the morning peak hour volumes. Therefore, the evening peak hour volumes were used in the analysis to represent the worst-case conditions. Detailed count data are included in Appendix A.

Building #2 in the Innovation Pointe commercial development was under construction at the time counts were taken on Triumph Boulevard. It is presumed that it is now complete. Trips were added to existing (2020) background conditions to reflect the added traffic from this office building. Building #1 was partially occupied at the time the counts were completed and the full number of trips generated by the building were added to the road network as a conservative measure.

Figure 3 shows the existing evening peak hour volumes as well as intersection geometry at the study intersections.

## D. Level of Service Analysis

Hales Engineering determined that the Triumph Boulevard / Timpanogos Highway (SR-92) and 3400 North / Triumph Boulevard intersections are currently operating at unacceptable levels of service during the evening peak hour, as shown in Table 2. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2020) conditions.

## E. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queueing was observed during the evening peak hour at the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (600 feet, westbound approach and 1,400 feet, northbound approach) and the 3400 North / Triumph Boulevard intersection (900 feet, westbound approach).

## F. Mitigation Measures

According to the Mountainland Association of Governments (MAG) Regional Transportation Plan, Triumph Boulevard is planned to be widened to five lanes. Additionally, Timpanogos Highway

(SR-92) is planned to be widened with an additional through lane in both directions as part of UDOT's I-15 Technology Corridor project. As a part of this project, dual left-turn lanes are anticipated to be added to the westbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection.

In addition to the SR-92 widening, it is recommended that dual left turn lanes be installed on the northbound approach, converting the existing leftmost through lane into a left-turn trap. A separate right-turn pocket should also be added. The existing pavement is wide enough to accommodate the installation if all lanes on the northbound approach are reduced to approximately 11.5 feet wide.

It is also recommended that the westbound approach of the 3400 North / Triumph Boulevard intersection be restriped to accommodate a shared thru/left-turn lane and a separate right-turn lane. 3400 North is wide enough to accomplish this without constructing additional pavement.

In conjunction with the right-turn pocket, the 3400 North / Triumph Boulevard intersection warrants a traffic signal, based on high anticipated southbound left-turn movements during the morning peak hour. While it would be spaced very closely to the adjacent traffic signal to the north, the future growth anticipated in the area necessitates it. For this reason, it is recommended that a traffic signal be installed at this location.

In performing the analysis, a safety concern was identified. On the southbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection, two travel lanes split into two left-turn lanes, a thru lane, and two right-turn lanes. The dashed striping ends 150 feet from the start of the turn lanes, and it is very ambiguous as to whether the right lane or the left lane should utilize the single thru lane at the intersection. The dashed line follows a pavement joint, which proceeds to follow down the middle of the thru lane. It is recommended that this portion of Triumph Boulevard be restriped such that the right lane may only use the right-turn lanes, supplemented with a sign that warns drivers that the right lane must turn right.

## G. Mitigated Scenario

With the proposed improvements, all study intersections are anticipated to operate at an acceptable LOS, as shown in Table 3.

**Lehi Innovation Pointe TIS**
**Existing (2020) Background**

**Evening Peak Hour**
**Figure 3**




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**05/27/2020**

**Table 2: Existing (2020) Background Evening Peak Hour LOS**

| Intersection | | | Level of Service | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 67.9 | E |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 33.5 | C |
| 3400 North / Triumph Boulevard | EB/WB Stop | WBT | >50 | f |
| Innovation Way / 1200 West | EB/WB Stop | WBT | 21.0 | c |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 11.4 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 6.6 | a |
| 3200 North / 1200 West | Signal | - | 5.3 | A |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 3: Mitigated Existing (2020) Background Evening Peak Hour LOS**

| Intersection | | | Level of Service | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 52.3 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 34.0 | C |
| 3400 North / Triumph Boulevard | Signal | - | 18.6 | B |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 21.3 | c |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 5.7 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 9.1 | a |
| 3200 North / 1200 West | Signal | - | 5.3 | A |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

# 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 Innovation Pointe development is located south of Timpanogos Highway (SR-92), between Triumph Boulevard and 1200 West. The new portion of the development will consist of a single office building. A concept plan for the proposed development is provided in Appendix C.

The proposed land use for the development has been identified as follows:

- General Office Building 137,000 sq. ft.

## C. Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 10th Edition, 2017. Trip generation for the proposed project is included in Table 4.

The total trip generation for the development is as follows:

- Daily Trips: 1,354
- Morning Peak Hour Trips: 147
- Evening Peak Hour Trips: 145

## Table 4: Trip Generation

**Table 4**
**Lehi - Innovation Pointe**
**Trip Generation**

| **Weekday Daily** Land Use[1] | # of Units | Unit Type | Trip Generation | % Entering | % Exiting | Trips Entering | Trips Exiting | Transit Reduction | Net Trips Entering | Net Trips Exiting | **Total Daily Trips** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building (710) | 137 | 1,000 Sq. Ft. GFA | 1,440 | 50% | 50% | 720 | 720 | 6% | 677 | 677 | **1,354** |
| Project Total Daily Trips | | | | | | **720** | **720** | | **677** | **677** | **1,354** |
| **Morning Peak Hour** Land Use[1] | # of Units | Unit Type | Trip Generation | % Entering | % Exiting | Trips Entering | Trips Exiting | Transit Reduction | Net Trips Entering | Net Trips Exiting | **Total a.m. Trips** |
| General Office Building (710) | 137 | 1,000 Sq. Ft. GFA | 156 | 86% | 14% | 134 | 22 | 6% | 126 | 21 | **147** |
| Project Total a.m. Peak Hour Trips | | | | | | **134** | **22** | | **126** | **21** | **147** |
| **Evening Peak Hour** Land Use[1] | # of Units | Unit Type | Trip Generation | % Entering | % Exiting | Trips Entering | Trips Exiting | Transit Reduction | Net Trips Entering | Net Trips Exiting | **Total p.m. Trips** |
| General Office Building (710) | 137 | 1,000 Sq. Ft. GFA | 154 | 16% | 84% | 25 | 129 | 6% | 24 | 121 | **145** |
| Project Total p.m. Peak Hour Trips | | | | | | **25** | **129** | | **24** | **121** | **145** |

1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 10th Edition, 2017.

SOURCE: Hales Engineering, May 2020

## 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. The resulting distribution of project generated trips during the evening peak hour is as follows:

To/From Project:

- 65% West
- 5% North
- 5% South
- 25% East

These trip distribution assumptions were used to assign the evening peak hour generated traffic at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 4.

**Lehi Innovation Pointe TIS**
**Trip Assignment**

**Evening Peak Hour**
**Figure 4**



## E. Access

The proposed access for the site will be gained at the following locations (see also concept plan in Appendix C):

3400 North:

- 3400 North is currently accessed via the existing Innovation Way intersection.

1200 West:

- 1200 West is also currently accessed via Innovation Way.
- A future East Access is planned approximately 350 feet south of the Innovation Way / 1200 West intersection. It will not be included in the analysis until the Innovation Way / 1200 West intersection performs at an unacceptable LOS, at which point it will be needed. It is anticipated that the access will be stop-controlled.

# IV. EXISTING (2020) PLUS PROJECT CONDITIONS

## A. Purpose

The purpose of the existing (2020) 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 (2020) background traffic volumes to predict turning movement volumes for existing (2020) plus project conditions. Existing (2020) plus project evening peak hour turning movement volumes are shown in Figure 5.

## C. Level of Service Analysis

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

## D. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour at the 3400 North / Triumph Boulevard intersection (500 feet, northbound) and the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (470 feet, northbound and westbound).

## E. Mitigation Measures

No mitigation measures are recommended.

**Lehi Innovation Pointe TIS**
**Existing (2020) Plus Project**

**Evening Peak Hour**
**Figure 5**




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**05/27/2020**

**Table 5: Existing (2020) Plus Project Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 54.7 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 34.2 | C |
| 3400 North / Triumph Boulevard | Signal | - | 27.6 | C |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 25.2 | d |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 8.3 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 9.7 | a |
| 3200 North / 1200 West | Signal | - | 5.5 | A |
| Innovation Way / 3400 North | SB Stop | SBR | 4.0 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

# V. FUTURE (2025) BACKGROUND CONDITIONS

## A. Purpose

The purpose of the future (2025) 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 MAG Regional Transportation Plan, there are no projects planned in the study area before 2025. Therefore, no changes were made.

## C. Traffic Volumes

Hales Engineering obtained future (2025) forecasted volumes from the Wasatch Front Regional Council (WFRC) / Mountainland Association of Governments (MAG) travel demand model. Peak period turning movement counts were estimated using National Cooperative Highway Research Program (NCHRP) 255 methodologies which utilize existing peak period turn volumes and future average weekday daily traffic (AWDT) volumes to project the future turn volumes at the major intersections. Future (2025) evening peak hour turning movement volumes are shown in Figure 6.

## D. Level of Service Analysis

Hales Engineering determined that the Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to operate at an unacceptable LOS during the evening peak hour in future (2025) background conditions, as shown in Table 6. These results serve as a baseline condition for the impact analysis of the proposed development for future (2025) conditions.

## E. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour at the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (450 feet, east- and westbound approaches, 950 feet, southbound approach, and 1,300 feet, northbound approach) and at the 3400 North / Triumph Boulevard intersection (750 feet, westbound approach).

## F. Mitigation Measures

Some improvements will need to be made to the northbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection to operate at an acceptable LOS. It is recommended

that two through lanes be constructed on the northbound approach in addition to the dual left-turn lanes recommended earlier. The inherent difficulty with this recommendation; however, is that the northbound approach is located on a bridge over a commuter lane. According to the MAG Regional Transportation Plan, the commuter lanes along Timpanogos Highway (SR-92) are planned to be widened, so perhaps replacing the bridge with a wider one could be done in conjunction with this project.

It is also recommended that a right-turn overlap phase be added to the northbound approach.

## G. Mitigated Scenario

With the proposed improvements, it is anticipated that the Triumph Boulevard / Timpanogos Highway (SR-92) intersection will operate at an acceptable LOS D, as shown in Table 7.

**Lehi Innovation Pointe TIS**
**Future (2025) Background**

**Evening Peak Hour**
**Figure 6**




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**Table 6: Future (2025) Background Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 62.8 | E |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 32.2 | C |
| 3400 North / Triumph Boulevard | Signal | - | 50.0 | D |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 20.9 | c |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 9.4 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 10.0 | a |
| 3200 North / 1200 West | Signal | - | 6.3 | A |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 7: Mitigated Future (2025) Background Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Approach[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 53.4 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 33.1 | C |
| 3400 North / Triumph Boulevard | Signal | - | 19.1 | B |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 24.6 | c |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 10.6 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 8.7 | a |
| 3200 North / 1200 West | Signal | - | 6.2 | A |

1. Approach indicated for non-all-way stop-controlled intersections where delay and LOS represents worst approach. SB = Southbound approach, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for non-AWSC intersections.

Source: Hales Engineering, April 2020

# VI. FUTURE (2025) PLUS PROJECT CONDITIONS

## A. Purpose

The purpose of the future (2025) 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 (2025) background traffic volumes to predict turning movement volumes for future (2025) plus project conditions. Future (2025) plus project evening peak hour turning movement volumes are shown in Figure 7.

## C. Level of Service Analysis

Hales Engineering determined that the Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to operate at an unacceptable LOS E during the evening peak hour in future (2025) plus project conditions, as shown in Table 8.

## D. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour at the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (800 feet, southbound approach and 500 feet, northbound approach) and at the 3400 North / Triumph Boulevard intersection (650 feet, westbound approach).

## E. Mitigation Measures

While the 3400 North / Triumph Boulevard intersection is operating at an acceptable LOS, it creates a queueing problem for the Triumph Boulevard / Timpanogos Highway (SR-92) intersection. The southbound queue extends into the intersection and hinders the operation. Permissive / Protected left-turn phasing is warranted on the southbound approach of the 3400 North / Triumph Boulevard intersection, according to UDOT left-turn guidelines. For this reason, it is recommended that permissive / protected phasing be installed on the southbound approach only.

Currently, the lane configuration of the southbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection is two left-turn lanes, a single thru lane, and two right-turn lanes. Due to the change in future volumes, a better option may be to change the

configuration to two left-turn lanes, two thru lanes, and a single right-turn lane. This would only require restriping without any additional improvements.

## F. Mitigated Scenario

With the proposed improvements, it is anticipated that the Triumph Boulevard / Timpanogos Highway (SR-92) intersection will operate at an acceptable LOS D, as shown in Table 9.

**Lehi Innovation Pointe TIS**
**Future (2025) Plus Project**

**Evening Peak Hour**
**Figure 7**




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**05/27/2020**

**Table 8: Future (2025) Plus Project Evening Peak Hour LOS**

| Intersection | | | Level of Service | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 59.3 | E |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 33.2 | C |
| 3400 North / Triumph Boulevard | Signal | - | 32.9 | C |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 26.4 | d |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 10.0 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 8.2 | a |
| 3200 North / 1200 West | Signal | - | 6.3 | A |
| Innovation Way / 3400 North | SB Stop | SBR | 6.6 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 9: Mitigated Future (2025) Plus Project Evening Peak Hour LOS**

| Intersection | | | Level of Service | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 54.4 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 33.9 | C |
| 3400 North / Triumph Boulevard | Signal | - | 32.3 | C |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 29.6 | d |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 8.5 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 8.9 | a |
| 3200 North / 1200 West | Signal | - | 6.2 | A |
| Innovation Way / 3400 North | SB Stop | SBR | 6.0 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

# VII. FUTURE (2040) BACKGROUND CONDITIONS

## A. Purpose

The purpose of the future (2040) 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 MAG Regional Transportation Plan, the commuter lanes along Timpanogos Highway (SR-92) are planned to be widened. However, because they are not part of the study intersections, no changes were made to the roadway network for the future (2040) analysis.

## C. Traffic Volumes

Hales Engineering obtained future (2040) forecasted volumes from the WFRC / MAG travel demand model. Peak period turning movement counts were estimated using National Cooperative Highway Research Program (NCHRP) 255 methodologies which utilize existing peak period turn volumes and future average weekday daily traffic (AWDT) volumes to project the future turn volumes at the major intersections. The widening of the commuter lanes is anticipated to lower volumes on Timpanogos Highway (SR-92). Future (2040) background evening peak hour turning movement volumes are shown in Figure 8.

## D. Level of Service Analysis

Hales Engineering determined that the Triumph Boulevard / Timpanogos Highway (SR-92) and Innovation Way / 1200 West intersections are anticipated to operate at unacceptable levels of service during the evening peak hour in future (2040) background conditions, as shown in Table 10. These results serve as a baseline condition for the impact analysis of the proposed development for future (2040) conditions.

## E. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour on all approaches of the Triumph Boulevard / Timpanogos Highway intersection with the highest being 950 feet on the southbound approach. Significant queueing is also anticipated on the westbound approach of the 3400 North / Triumph Boulevard intersection with a queue of 800 feet.

## F. Mitigation Measures

While the 3400 North / Triumph Boulevard intersection is operating at an acceptable LOS, it creates a queueing problem for the Triumph Boulevard / Timpanogos Highway (SR-92) intersection. The southbound queue extends into the intersection and hinders the operation. Permissive / Protected left-turn phasing is recommended on the southbound approach of the 3400 North / Triumph Boulevard intersection.

It is also recommended that the lane configuration of the southbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection be changed to dual left-turn lanes, two through lanes, and a single right-turn lane. This should only require restriping.

## G. Mitigated Scenario

With these improvements, nearly all study intersections are anticipated to operate at an acceptable LOS in future (2020) background conditions, as shown in Table 11. Because of the location of the Innovation Way / 1200 West intersection, both in its terms of proximity to Timpanogos Highway (SR-92) and its position on a grade, it cannot be mitigated. Drivers will learn to adapt and reroute.

**Lehi Innovation Pointe TIS**
**Future (2040) Background**

**Evening Peak Hour**
**Figure 8**




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**05/27/2020**

**Table 10: Future (2040) Background Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Approach[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 62.5 | E |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 35.6 | D |
| 3400 North / Triumph Boulevard | Signal | - | 38.4 | D |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 39.2 | e |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 10.3 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 10.4 | b |
| 3200 North / 1200 West | Signal | - | 7.4 | A |

1. Approach indicated for non-all-way stop-controlled intersections where delay and LOS represents worst approach. SB = Southbound approach, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for non-AWSC intersections.

Source: Hales Engineering, April 2020

**Table 11: Mitigated Future (2040) Background Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Approach[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 50.7 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 37.5 | D |
| 3400 North / Triumph Boulevard | Signal | - | 29.3 | C |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 32.7 | d |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 11.9 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 11.8 | b |
| 3200 North / 1200 West | Signal | - | 7.1 | A |

1. Approach indicated for non-all-way stop-controlled intersections where delay and LOS represents worst approach. SB = Southbound approach, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for non-AWSC intersections.

Source: Hales Engineering, April 2020

# VIII. FUTURE (2040) PLUS PROJECT CONDITIONS

## A. Purpose

The purpose of the future (2040) 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 (2040) background traffic volumes to predict turning movement volumes for future (2040) plus project conditions. Future (2040) plus project evening peak hour turning movement volumes are shown in Figure 9.

## C. Level of Service Analysis

Hales Engineering determined that the 3400 North / Triumph Boulevard and Innovation Way / 1200 West intersections are anticipated to operate at an unacceptable LOS during the evening peak hour in future (2040) plus project conditions, as shown in Table 12.

## D. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour at the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (eastbound, 390 feet and northbound, 480 feet) and at the 3400 North / Triumph Boulevard intersection (800 feet, westbound approach and 900 feet, northbound approach).

## E. Mitigation Measures

Because the unique location of the Innovation Way / 1200 West intersection on a grade, the intersection itself cannot be mitigated. For this reason, it is recommended that the proposed East Access be constructed before 2040 and that the Innovation Way / 1200 West intersection be restricted to right-in/right-out movements only.

While the Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to perform at an acceptable LOS in the future (2040) plus project scenario, its proximity to the 3400 North / Triumph Boulevard intersection creates some operational problems. For this reason, it is recommended that a right-turn overlap phase be added to the eastbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection.

## F. Mitigated Scenario

With the proposed improvements, it is anticipated that the 3400 North / Triumph Boulevard and Innovation Way / 1200 West intersections will perform at an acceptable LOS, as shown in Table 13. The East Access / 1200 West intersection is anticipated to perform at LOS E. However, little can be done to mitigate this intersection as the volumes do not warrant a signal. Drivers will learn to adapt and reroute.

Left-turn movements and some right-turn movements were rerouted from Innovation Way to the East Access.

## G. Recommended Storage Lengths

Hales Engineering determined recommended storage lengths based on the 95$^{th}$ percentile queue lengths given in the future (2040) plus project scenario. These storage lengths do not include the taper length. Recommended storage lengths for the study intersections are shown in Table 14. Intersections shown in Table 14 include new intersections and existing intersections that have recommended storage length changes.

**Lehi Innovation Pointe TIS**
**Future (2040) Plus Project**

**Evening Peak Hour**
**Figure 9**




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**05/27/2020**

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**Table 12: Future (2040) Plus Project Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 53.5 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 37.5 | D |
| 3400 North / Triumph Boulevard | Signal | - | 56.8 | E |
| Innovation Way / 1200 West | EB/WB Stop | EBL | >50 | f |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 10.8 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 12.7 | b |
| 3200 North / 1200 West | Signal | - | 7.4 | A |
| Innovation Way / 3400 North | SB Stop | SBR | 9.3 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 13: Mitigated Future (2040) Plus Project Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 53.1 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 36.9 | D |
| 3400 North / Triumph Boulevard | Signal | - | 53.1 | D |
| Innovation Way / 1200 West | EB/WB Stop | WBR | 6.3 | a |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 13.3 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 11.4 | b |
| 3200 North / 1200 West | Signal | - | 7.9 | A |
| East Access / 1200 West | EB Stop | EBL | 38.9 | e |
| Innovation Way / 3400 North | SB Stop | SBR | 8.5 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 14: Recommended Storage Lengths**

| Recommended Storage Lengths<br>Lehi - Innovation Pointe TIS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Intersection | Storage Length (feet) | | | | | | | |
| | Northbound | | Southbound | | Eastbound | | Westbound | |
| | LT | RT | LT | RT | LT | RT | LT | RT |
| 3400 North / Triumph Boulevard | - | - | - | - | - | - | - | 100 |
| Triumph Boulevard / Timpanogos Highway (SR-92) | 100 | 150 | - | - | - | - | - | - |

Source: Hales Engineering, May 2020

# APPENDIX A

## Turning Movement Counts

# TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

## Intersection Turning Movement Summary

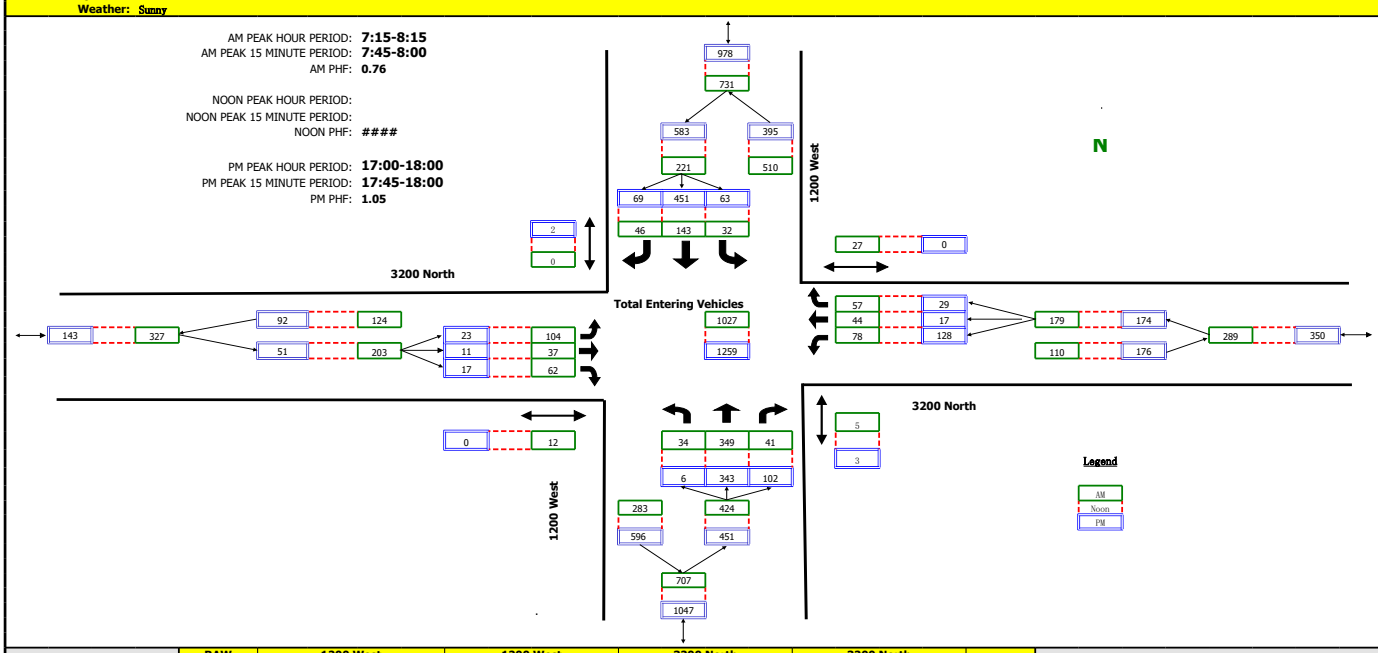
**Intersection:** 1200 West / 3200 North
**North/South:** 1200 West
**East/West:** 3200 North
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:** Sunny

**Date:** 5-11-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **7:15-8:15**
AM PEAK 15 MINUTE PERIOD: **7:45-8:00**
AM PHF: **0.76**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: **####**

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:45-18:00**
PM PHF: **1.05**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | 3200 North Eastbound | | | | 3200 North Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 3 | 56 | 15 | 0 | 6 | 25 | 1 | 0 | 12 | 2 | 1 | 0 | 25 | 1 | 12 | 0 | 159 |
| 7:15-7:30 | 15 | 67 | 9 | 0 | 8 | 31 | 4 | 0 | 13 | 4 | 1 | 0 | 17 | 4 | 8 | 1 | 181 |
| 7:30-7:45 | 9 | 76 | 6 | 3 | 6 | 30 | 13 | 0 | 16 | 6 | 14 | 8 | 22 | 9 | 10 | 14 | 217 |
| 7:45-8:00 | 2 | 97 | 9 | 1 | 6 | 40 | 21 | 0 | 46 | 21 | 31 | 3 | 22 | 24 | 18 | 9 | 337 |
| 8:00-8:15 | 4 | 70 | 12 | 0 | 8 | 26 | 3 | 0 | 17 | 2 | 9 | 0 | 8 | 2 | 15 | 0 | 176 |
| 8:15-8:30 | 1 | 82 | 10 | 0 | 3 | 35 | 4 | 0 | 7 | 3 | 2 | 3 | 20 | 5 | 5 | 2 | 177 |
| 8:30-8:45 | 4 | 59 | 14 | 0 | 5 | 33 | 2 | 2 | 9 | 1 | 1 | 0 | 18 | 4 | 7 | 5 | 157 |
| 8:45-9:00 | 4 | 73 | 10 | 0 | 3 | 36 | 11 | 0 | 16 | 3 | 9 | 1 | 17 | 13 | 9 | 12 | 204 |

**NOON PERIOD COUNTS**

| Period | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

**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 | 64 | 32 | 0 | 9 | 79 | 9 | 0 | 9 | 4 | 8 | 0 | 19 | 2 | 10 | 0 | 246 |
| 16:15-16:30 | 1 | 70 | 24 | 1 | 8 | 80 | 5 | 0 | 9 | 0 | 2 | 1 | 24 | 2 | 11 | 1 | 236 |
| 16:30-16:45 | 1 | 63 | 20 | 0 | 15 | 94 | 12 | 0 | 4 | 4 | 2 | 1 | 36 | 1 | 7 | 0 | 259 |
| 16:45-17:00 | 2 | 65 | 23 | 0 | 11 | 86 | 10 | 0 | 8 | 1 | 3 | 0 | 23 | 0 | 12 | 0 | 244 |
| 17:00-17:15 | 1 | 66 | 23 | 2 | 16 | 112 | 19 | 0 | 9 | 4 | 4 | 0 | 22 | 5 | 7 | 0 | 288 |
| 17:15-17:30 | 0 | 77 | 18 | 1 | 14 | 109 | 15 | 0 | 4 | 0 | 1 | 0 | 39 | 1 | 6 | 0 | 284 |
| 17:30-17:45 | 2 | 73 | 23 | 0 | 14 | 81 | 14 | 1 | 2 | 3 | 4 | 0 | 18 | 5 | 7 | 0 | 246 |
| 17:45-18:00 | 2 | 89 | 27 | 0 | 12 | 99 | 13 | 1 | 5 | 3 | 6 | 0 | 35 | 4 | 6 | 0 | 301 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

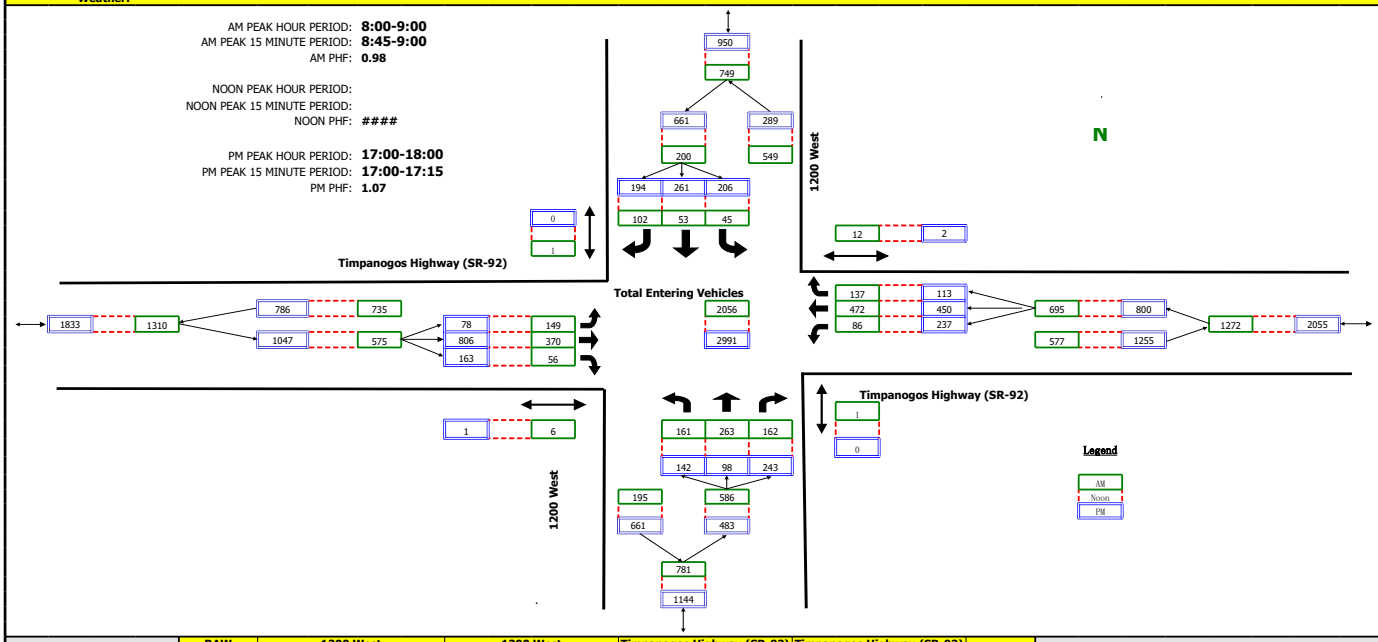
**Intersection:** 1200 West / Timpanogos Highway (SR-92)
**North/South:** 1200 West
**East/West:** Timpanogos Highway (SR-92)
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:**

**Date:** 6-29-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **8:00-9:00**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.98**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: ####

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:00-17:15**
PM PHF: **1.07**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | Timpanogos Highway (SR-92) Eastbound | | | | Timpanogos Highway (SR-92) Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 20 | 30 | 35 | 0 | 6 | 6 | 17 | 0 | 14 | 60 | 5 | 0 | 13 | 74 | 12 | 1 | 292 |
| 7:15-7:30 | 24 | 23 | 28 | 0 | 11 | 10 | 19 | 0 | 12 | 61 | 13 | 0 | 11 | 91 | 12 | 0 | 315 |
| 7:30-7:45 | 32 | 51 | 36 | 0 | 20 | 14 | 14 | 0 | 28 | 83 | 10 | 0 | 11 | 92 | 13 | 2 | 404 |
| 7:45-8:00 | 47 | 57 | 61 | 0 | 13 | 12 | 14 | 0 | 28 | 102 | 12 | 0 | 13 | 103 | 30 | 1 | 492 |
| 8:00-8:15 | 39 | 60 | 41 | 0 | 18 | 17 | 26 | 1 | 30 | 74 | 12 | 0 | 22 | 100 | 41 | 1 | 480 |
| 8:15-8:30 | 33 | 45 | 25 | 0 | 8 | 11 | 19 | 0 | 24 | 74 | 11 | 1 | 14 | 107 | 23 | 2 | 394 |
| 8:30-8:45 | 34 | 46 | 36 | 1 | 8 | 11 | 16 | 0 | 32 | 79 | 14 | 1 | 12 | 116 | 24 | 7 | 428 |
| 8:45-9:00 | 37 | 83 | 42 | 0 | 6 | 8 | 30 | 0 | 46 | 102 | 13 | 3 | 28 | 96 | 34 | 1 | 525 |
| **NOON PERIOD COUNTS** | | | | | | | | | | | | | | | | | |
| **Period** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** | **M** | **N** | **O** | **P** | **TOTAL** |
| 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 |
| **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 | 31 | 11 | 40 | 0 | 15 | 48 | 32 | 0 | 19 | 122 | 22 | 0 | 20 | 90 | 8 | 1 | 458 |
| 16:15-16:30 | 22 | 16 | 20 | 0 | 37 | 31 | 32 | 0 | 16 | 148 | 35 | 2 | 38 | 118 | 8 | 0 | 521 |
| 16:30-16:45 | 25 | 17 | 36 | 0 | 22 | 58 | 37 | 1 | 6 | 118 | 34 | 1 | 65 | 155 | 19 | 2 | 592 |
| 16:45-17:00 | 28 | 12 | 42 | 0 | 30 | 77 | 40 | 0 | 16 | 150 | 37 | 0 | 40 | 90 | 8 | 0 | 570 |
| 17:00-17:15 | 28 | 20 | 55 | 0 | 57 | 84 | 48 | 0 | 21 | 179 | 48 | 0 | 53 | 87 | 21 | 0 | 701 |
| 17:15-17:30 | 36 | 20 | 49 | 0 | 46 | 56 | 52 | 0 | 18 | 184 | 21 | 0 | 62 | 98 | 28 | 0 | 670 |
| 17:30-17:45 | 32 | 28 | 52 | 0 | 47 | 50 | 36 | 0 | 14 | 184 | 23 | 1 | 49 | 108 | 33 | 2 | 656 |
| 17:45-18:00 | 30 | 19 | 60 | 0 | 33 | 42 | 36 | 0 | 16 | 169 | 53 | 0 | 47 | 107 | 18 | 0 | 630 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

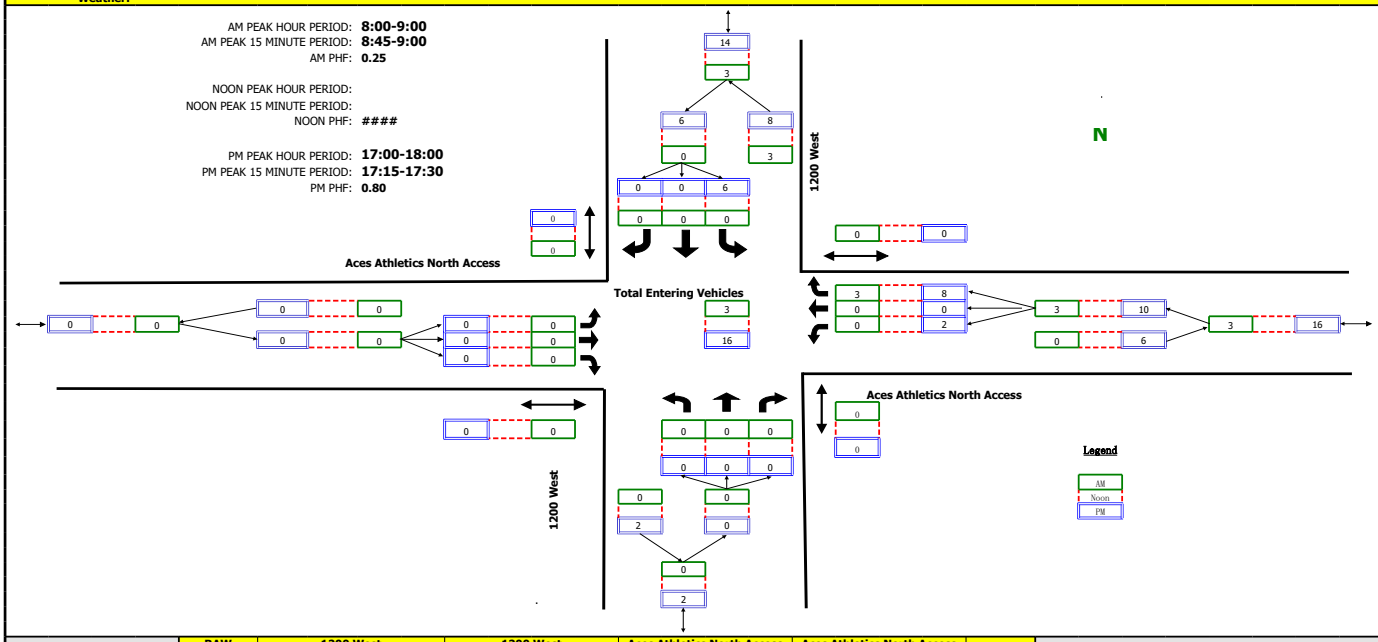
**Intersection:** 1200 West / Aces Athletics North Access
**North/South:** 1200 West
**East/West:** Aces Athletics North Access
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:**

**Date:** 6-29-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **8:00-9:00**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.25**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: **####**

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:15-17:30**
PM PHF: **0.80**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | Aces Athletics North Access Eastbound | | | | Aces Athletics North Access Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15-7:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30-7:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45-8:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00-8:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15-8:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30-8:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45-9:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |

**NOON PERIOD COUNTS**

| Period | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

**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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00-17:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| 17:15-17:30 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 5 |
| 17:30-17:45 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 5 |
| 17:45-18:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

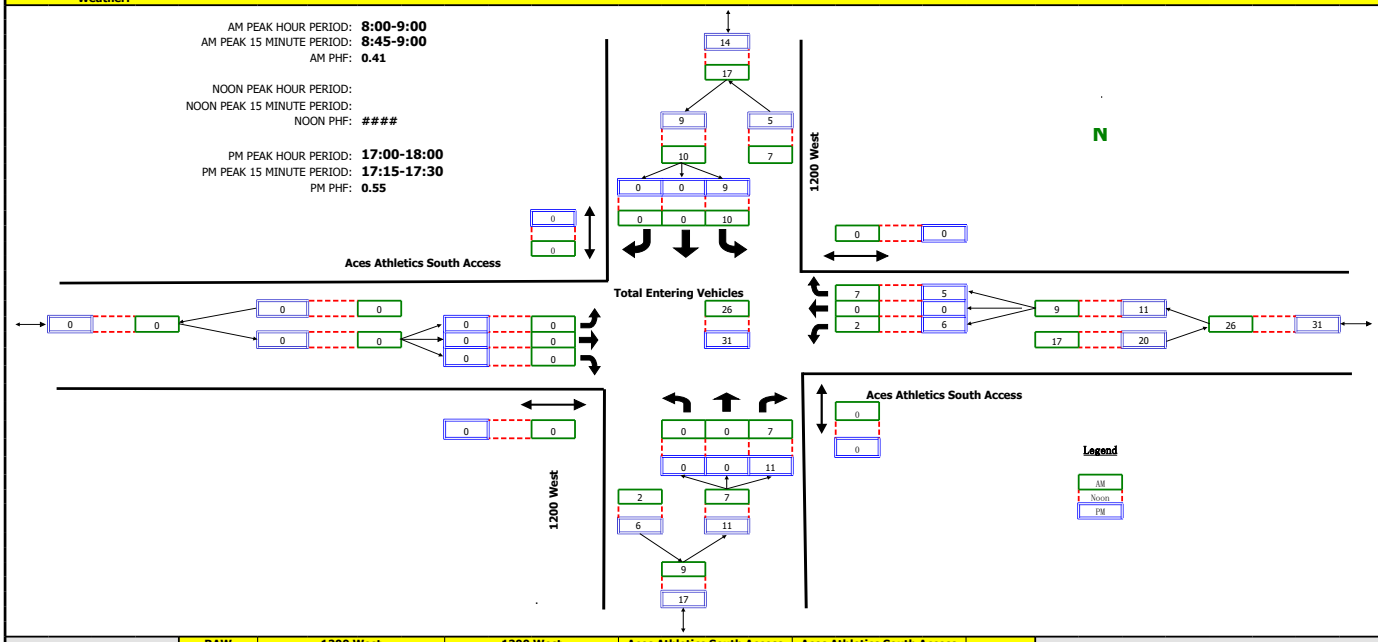
**Intersection:** 1200 West / Aces Athletics South Access
**North/South:** 1200 West
**East/West:** Aces Athletics South Access
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:**

**Date:** 6-29-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **8:00-9:00**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.41**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: **####**

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:15-17:30**
PM PHF: **0.55**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | Aces Athletics South Access Eastbound | | | | Aces Athletics South Access Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 7:15-7:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 7:30-7:45 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| 7:45-8:00 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| 8:00-8:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 8:15-8:30 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 |
| 8:30-8:45 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:45-9:00 | 0 | 0 | 4 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 16 |

**NOON PERIOD COUNTS**

| Period | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

**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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| 17:00-17:15 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| 17:15-17:30 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 14 |
| 17:30-17:45 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 |
| 17:45-18:00 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 6 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

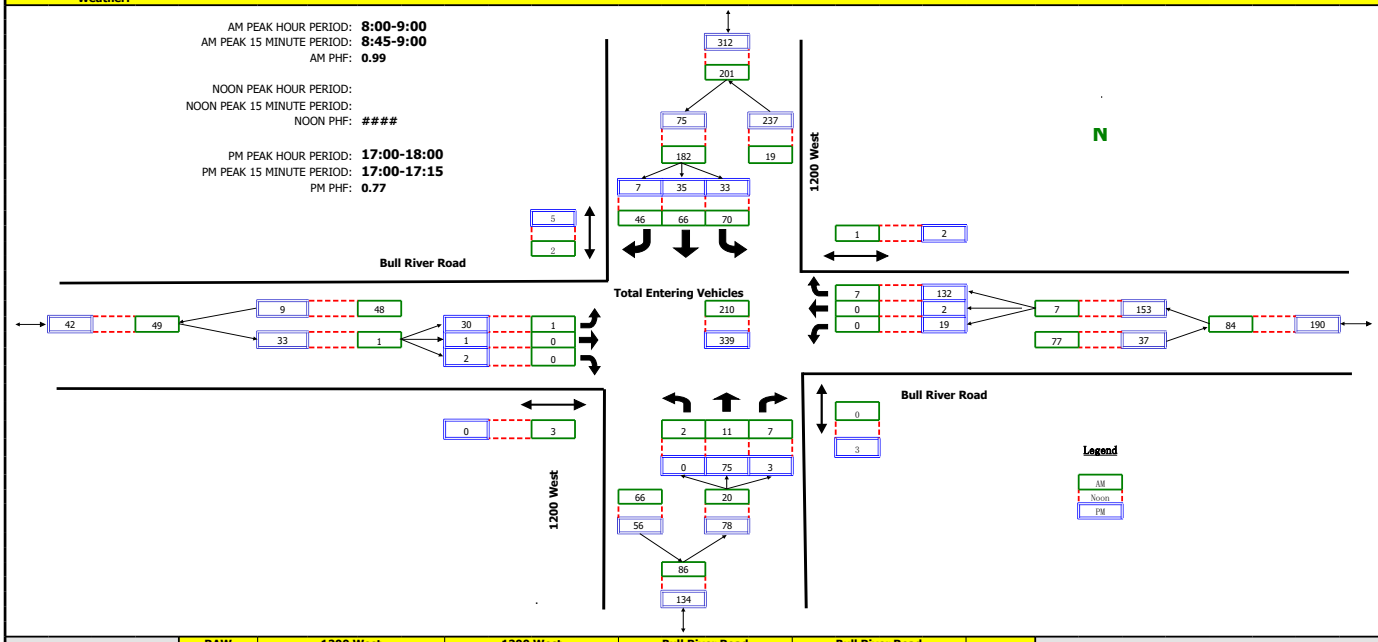
**Intersection:** 1200 West / Bull River Road
**North/South:** 1200 West
**East/West:** Bull River Road
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:**

**Date:** 6-29-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **8:00-9:00**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.99**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: **####**

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:00-17:15**
PM PHF: **0.77**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | Bull River Road Eastbound | | | | Bull River Road Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 2 | 0 | 0 | 6 | 11 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 23 |
| 7:15-7:30 | 1 | 2 | 2 | 0 | 17 | 5 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 33 |
| 7:30-7:45 | 0 | 1 | 1 | 0 | 20 | 15 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 40 |
| 7:45-8:00 | 0 | 2 | 2 | 0 | 14 | 16 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 46 |
| 8:00-8:15 | 0 | 0 | 3 | 0 | 14 | 17 | 10 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 45 |
| 8:15-8:30 | 0 | 1 | 1 | 0 | 13 | 11 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 37 |
| 8:30-8:45 | 2 | 3 | 0 | 0 | 15 | 21 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 52 |
| 8:45-9:00 | 0 | 6 | 2 | 0 | 20 | 10 | 13 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 53 |
| **NOON PERIOD COUNTS** | | | | | | | | | | | | | | | | | |
| **Period** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** | **M** | **N** | **O** | **P** | **TOTAL** |
| 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 |
| **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 | 12 | 0 | 2 | 6 | 8 | 2 | 0 | 6 | 0 | 1 | 0 | 1 | 0 | 19 | 0 | 56 |
| 16:15-16:30 | 0 | 8 | 0 | 2 | 9 | 11 | 1 | 0 | 6 | 0 | 1 | 0 | 2 | 0 | 13 | 0 | 51 |
| 16:30-16:45 | 0 | 13 | 0 | 1 | 6 | 7 | 2 | 1 | 4 | 0 | 4 | 0 | 4 | 0 | 23 | 0 | 63 |
| 16:45-17:00 | 0 | 15 | 1 | 5 | 7 | 5 | 1 | 1 | 8 | 0 | 0 | 0 | 1 | 0 | 13 | 1 | 51 |
| 17:00-17:15 | 0 | 17 | 1 | 0 | 13 | 6 | 2 | 0 | 6 | 0 | 1 | 0 | 5 | 1 | 58 | 2 | 110 |
| 17:15-17:30 | 0 | 25 | 0 | 0 | 2 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 1 | 0 | 16 | 0 | 56 |
| 17:30-17:45 | 0 | 15 | 0 | 3 | 9 | 6 | 2 | 0 | 8 | 0 | 0 | 0 | 5 | 0 | 16 | 0 | 61 |
| 17:45-18:00 | 0 | 10 | 2 | 0 | 5 | 13 | 2 | 4 | 7 | 1 | 1 | 0 | 6 | 1 | 27 | 0 | 75 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

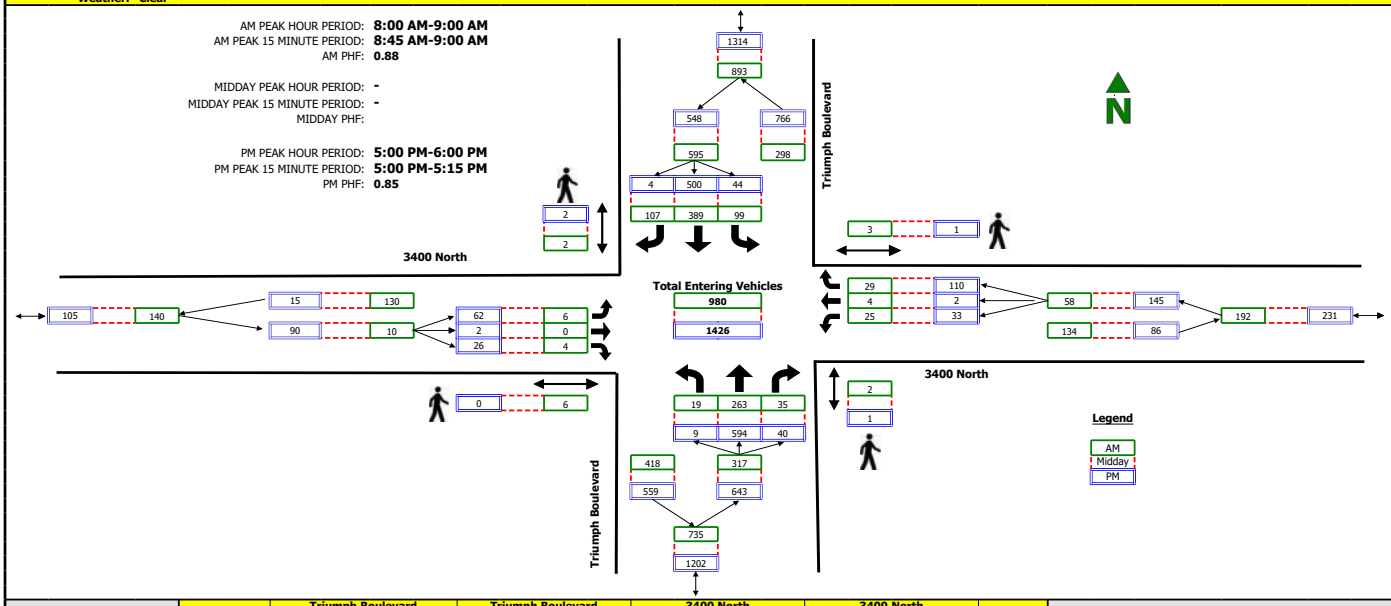
# Intersection Turning Movement Summary

| | | | |
|---|---|---|---|
| **Intersection:** | **Triumph Boulevard / 3400 North** | **Date:** | **7-9-19, Tue** |
| **North/South:** | **Triumph Boulevard** | **Day of Week Adjustment:** | **100.0%** |
| **East/West:** | **3400 North** | **Month of Year Adjustment:** | **100.0%** |
| **Jurisdiction:** | **Lehi** | **Adjustment Station #:** | **0** |
| **Project Title:** | **3400 North Triumph Boulevard TS** | **Growth Rate:** | **3.0%** |
| **Project No:** | **UT19-1507** | **Number of Years:** | **1** |
| **Weather:** | **Clear** | | |

AM PEAK HOUR PERIOD: **8:00 AM-9:00 AM**
AM PEAK 15 MINUTE PERIOD: **8:45 AM-9:00 AM**
AM PHF: **0.88**

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: **5:00 PM-5:15 PM**
PM PHF: **0.85**




| RAW COUNT SUMMARIES | Triumph Boulevard Northbound | | | | Triumph Boulevard Southbound | | | | 3400 North Eastbound | | | | 3400 North 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 | 1 | 34 | 5 | 0 | 17 | 33 | 6 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 0 | 102 |
| 7:15 - 7:30 | 1 | 65 | 7 | 0 | 11 | 57 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 6 | 0 | 152 |
| 7:30 - 7:45 | 0 | 47 | 2 | 0 | 16 | 70 | 6 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 6 | 0 | 151 |
| 7:45 - 8:00 | 6 | 63 | 8 | 0 | 23 | 100 | 15 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 5 | 1 | 225 |
| 8:00 - 8:15 | 5 | 39 | 15 | 2 | 27 | 88 | 26 | 1 | 5 | 0 | 0 | 2 | 14 | 1 | 5 | 1 | 225 |
| 8:15 - 8:30 | 2 | 64 | 6 | 0 | 22 | 93 | 18 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 8 | 0 | 217 |
| 8:30 - 8:45 | 4 | 66 | 2 | 0 | 28 | 92 | 26 | 0 | 1 | 0 | 2 | 1 | 2 | 0 | 6 | 0 | 229 |
| 8:45 - 9:00 | 7 | 86 | 11 | 0 | 19 | 105 | 34 | 1 | 0 | 0 | 1 | 1 | 5 | 3 | 9 | 2 | 280 |

**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 | 68 | 3 | 0 | 6 | 93 | 1 | 0 | 19 | 0 | 3 | 1 | 9 | 0 | 31 | 0 | 233 |
| 16:15 - 16:30 | 1 | 85 | 1 | 0 | 12 | 88 | 3 | 1 | 15 | 1 | 8 | 0 | 9 | 0 | 35 | 3 | 258 |
| 16:30 - 16:45 | 0 | 107 | 4 | 0 | 9 | 93 | 4 | 2 | 15 | 2 | 7 | 0 | 12 | 0 | 39 | 0 | 292 |
| 16:45 - 17:00 | 1 | 80 | 4 | 0 | 10 | 85 | 1 | 7 | 13 | 2 | 3 | 0 | 8 | 0 | 22 | 7 | 229 |
| 17:00 - 17:15 | 2 | 168 | 17 | 0 | 17 | 123 | 2 | 0 | 18 | 1 | 15 | 0 | 12 | 1 | 41 | 0 | 417 |
| 17:15 - 17:30 | 2 | 155 | 11 | 1 | 8 | 132 | 0 | 1 | 17 | 0 | 4 | 0 | 11 | 0 | 25 | 0 | 365 |
| 17:30 - 17:45 | 1 | 155 | 6 | 0 | 8 | 124 | 1 | 0 | 13 | 1 | 5 | 0 | 6 | 1 | 22 | 0 | 343 |
| 17:45 - 18:00 | 4 | 99 | 5 | 0 | 10 | 106 | 1 | 1 | 12 | 0 | 1 | 0 | 3 | 0 | 19 | 1 | 260 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

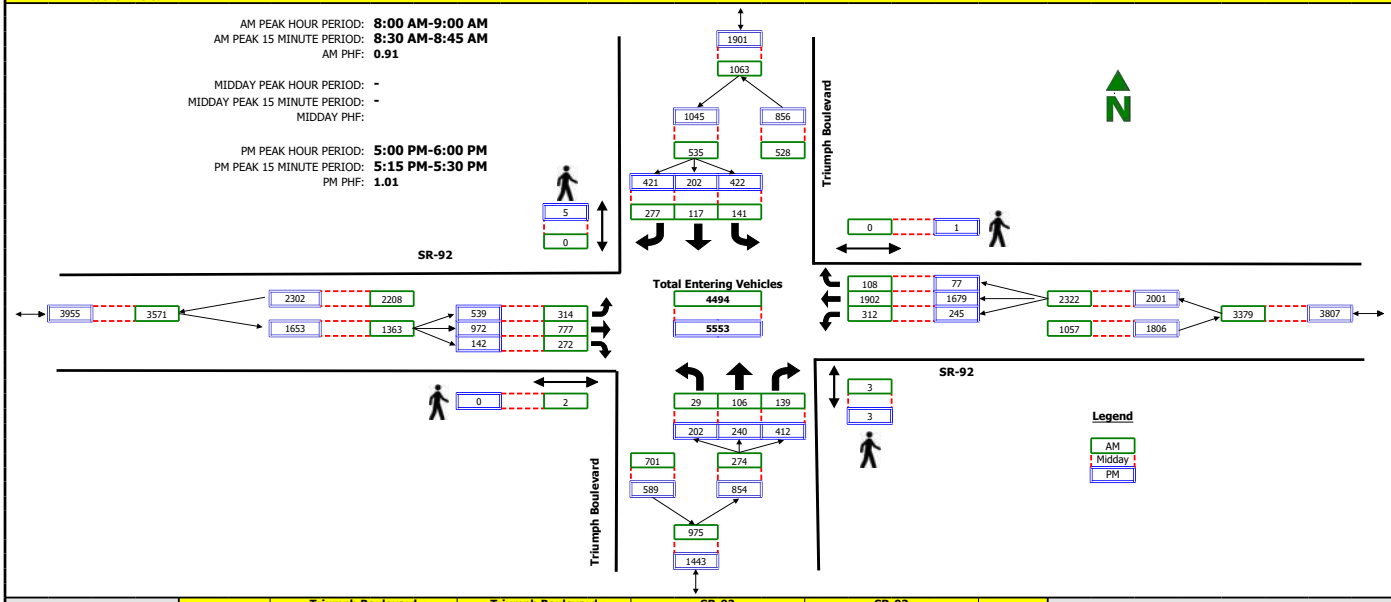
**Intersection:** Triumph Boulevard / SR-92
**North/South:** Triumph Boulevard
**East/West:** SR-92
**Jurisdiction:** Lehi
**Project Title:** 3400 North Triumph Boulevard TS
**Project No:** UT19-1507
**Weather:** Clear

**Date:** 7-9-19, Tue
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 1

AM PEAK HOUR PERIOD: **8:00 AM-9:00 AM**
AM PEAK 15 MINUTE PERIOD: **8:30 AM-8:45 AM**
AM PHF: **0.91**

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: **1.01**




| RAW COUNT SUMMARIES | Triumph Boulevard Northbound | | | | Triumph Boulevard Southbound | | | | SR-92 Eastbound | | | | SR-92 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 | 15 | 10 | 20 | 0 | 21 | 6 | 58 | 0 | 23 | 109 | 36 | 0 | 30 | 456 | 13 | 0 | 797 |
| 7:15 - 7:30 | 14 | 10 | 41 | 0 | 16 | 11 | 44 | 0 | 28 | 126 | 17 | 0 | 57 | 504 | 11 | 0 | 879 |
| 7:30 - 7:45 | 14 | 11 | 36 | 0 | 27 | 13 | 77 | 0 | 35 | 147 | 30 | 0 | 52 | 456 | 19 | 0 | 917 |
| 7:45 - 8:00 | 7 | 20 | 39 | 0 | 49 | 28 | 49 | 0 | 69 | 162 | 69 | 0 | 80 | 432 | 36 | 0 | 1040 |
| 8:00 - 8:15 | 4 | 13 | 37 | 1 | 25 | 31 | 46 | 0 | 60 | 161 | 77 | 1 | 70 | 437 | 22 | 0 | 983 |
| 8:15 - 8:30 | 11 | 33 | 22 | 1 | 29 | 34 | 58 | 0 | 80 | 189 | 62 | 1 | 66 | 458 | 31 | 0 | 1073 |
| 8:30 - 8:45 | 9 | 19 | 37 | 1 | 37 | 30 | 105 | 0 | 61 | 201 | 66 | 0 | 73 | 559 | 33 | 0 | 1230 |
| 8:45 - 9:00 | 4 | 38 | 39 | 0 | 46 | 19 | 60 | 0 | 104 | 203 | 59 | 0 | 94 | 393 | 19 | 0 | 1078 |

**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 | 46 | 31 | 47 | 0 | 50 | 28 | 114 | 0 | 135 | 151 | 21 | 0 | 61 | 339 | 36 | 2 | 1059 |
| 16:15 - 16:30 | 59 | 38 | 45 | 0 | 87 | 26 | 104 | 0 | 114 | 223 | 32 | 0 | 34 | 335 | 37 | 1 | 1134 |
| 16:30 - 16:45 | 58 | 37 | 82 | 0 | 75 | 46 | 74 | 0 | 179 | 189 | 27 | 0 | 46 | 374 | 38 | 1 | 1225 |
| 16:45 - 17:00 | 61 | 40 | 61 | 0 | 85 | 38 | 74 | 0 | 166 | 269 | 40 | 0 | 60 | 312 | 25 | 0 | 1231 |
| 17:00 - 17:15 | 68 | 60 | 91 | 0 | 123 | 58 | 112 | 1 | 167 | 213 | 32 | 0 | 49 | 379 | 11 | 0 | 1363 |
| 17:15 - 17:30 | 57 | 52 | 118 | 0 | 72 | 49 | 108 | 4 | 121 | 247 | 29 | 0 | 59 | 445 | 17 | 1 | 1374 |
| 17:30 - 17:45 | 40 | 66 | 111 | 0 | 102 | 52 | 93 | 0 | 114 | 225 | 45 | 0 | 62 | 393 | 17 | 0 | 1320 |
| 17:45 - 18:00 | 31 | 55 | 80 | 3 | 113 | 37 | 96 | 0 | 121 | 259 | 32 | 0 | 68 | 413 | 30 | 0 | 1335 |

# APPENDIX B

## LOS Results

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 358 | 255 | 71 | 194.7 | *F* |
| | T | 362 | 255 | 71 | 95.6 | *F* |
| | R | 412 | 304 | 74 | 113.1 | *F* |
| | Subtotal | 1,132 | 814 | 72 | 133.2 | *F* |
| SB | L | 422 | 432 | 102 | 72.7 | *E* |
| | T | 205 | 198 | 97 | 61.4 | *E* |
| | R | 421 | 424 | 101 | 19.1 | *B* |
| | Subtotal | 1,048 | 1,054 | 101 | 49.0 | *D* |
| EB | L | 539 | 537 | 100 | 76.0 | *E* |
| | T | 972 | 968 | 100 | 35.9 | *D* |
| | R | 173 | 177 | 102 | 5.8 | *A* |
| | Subtotal | 1,684 | 1,682 | 100 | 45.5 | *D* |
| WB | L | 245 | 250 | 102 | 75.2 | *E* |
| | T | 1,679 | 1,687 | 100 | 70.0 | *E* |
| | R | 77 | 78 | 101 | 30.5 | *C* |
| | Subtotal | 2,001 | 2,015 | 101 | 69.1 | *E* |
| **Total** | | 5,866 | 5,565 | 95 | 67.9 | *E* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 142 | 141 | 99 | 72.0 | *E* |
| | T | 105 | 106 | 101 | 48.7 | *D* |
| | R | 322 | 320 | 99 | 15.6 | *B* |
| | Subtotal | 569 | 567 | 100 | 35.8 | *D* |
| SB | L | 206 | 207 | 101 | 68.9 | *E* |
| | T | 264 | 266 | 101 | 53.4 | *D* |
| | R | 194 | 201 | 103 | 7.0 | *A* |
| | Subtotal | 664 | 674 | 102 | 44.3 | *D* |
| EB | L | 78 | 72 | 92 | 76.4 | *E* |
| | T | 1,565 | 1,479 | 94 | 27.7 | *C* |
| | R | 163 | 158 | 97 | 14.3 | *B* |
| | Subtotal | 1,806 | 1,709 | 95 | 28.5 | *C* |
| WB | L | 253 | 247 | 98 | 62.7 | *E* |
| | T | 450 | 459 | 102 | 24.7 | *C* |
| | R | 113 | 114 | 101 | 3.9 | *A* |
| | Subtotal | 816 | 820 | 100 | 33.3 | *C* |
| **Total** | | 3,856 | 3,770 | 98 | 33.5 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 9 | 8 | 86 | 136.3 | *F* |
| | T | 682 | 538 | 79 | 133.1 | *F* |
| | R | 49 | 38 | 77 | 136.2 | *F* |
| | Subtotal | 740 | 584 | 79 | 133.3 | *F* |
| SB | L | 78 | 74 | 95 | 23.6 | *C* |
| | T | 603 | 610 | 101 | 2.6 | *A* |
| | R | 4 | 3 | 80 | 1.1 | *A* |
| | Subtotal | 685 | 687 | 100 | 4.9 | *A* |
| EB | L | 62 | 32 | 51 | 355.4 | *F* |
| | T | 2 | 1 | 44 | 195.3 | *F* |
| | R | 26 | 14 | 54 | 273.2 | *F* |
| | Subtotal | 90 | 47 | 52 | 327.5 | *F* |
| ***WB*** | ***L*** | ***77*** | ***38*** | ***50*** | ***475.6*** | ***F*** |
| | T | 2 | 1 | 44 | 520.6 | *F* |
| | R | 286 | 142 | 50 | 454.1 | *F* |
| | Subtotal | 365 | 181 | 50 | 459.0 | *F* |
| **Total** | | 1,880 | 1,499 | 80 | 127.5 | *F* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 4 | 4 | 100 | 3.6 | *A* |
| | T | 321 | 321 | 100 | 0.3 | *A* |
| | R | 3 | 3 | 100 | 0.1 | *A* |
| | Subtotal | 328 | 328 | 100 | 0.3 | *A* |
| SB | L | 33 | 31 | 95 | 3.5 | *A* |
| | T | 622 | 613 | 99 | 1.1 | *A* |
| | R | 26 | 28 | 107 | 1.0 | *A* |
| | Subtotal | 681 | 672 | 99 | 1.2 | *A* |
| EB | L | 116 | 116 | 100 | 19.8 | *C* |
| | R | 12 | 14 | 114 | 13.3 | *B* |
| | Subtotal | 128 | 130 | 102 | 19.1 | *C* |
| ***WB*** | ***L*** | ***19*** | ***17*** | ***88*** | ***12.7*** | ***B*** |
| | T | 2 | 2 | 100 | 21.0 | *C* |
| | R | 132 | 132 | 100 | 7.3 | *A* |
| | Subtotal | 153 | 151 | 99 | 8.1 | *A* |
| **Total** | | 1,290 | 1,281 | 99 | 3.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 320 | 318 | 99 | 0.2 | *A* |
| | R | 2 | 4 | 200 | 0.2 | *A* |
| | Subtotal | 322 | 322 | 100 | 0.2 | *A* |
| SB | L | 6 | 5 | 83 | 3.0 | *A* |
| | T | 648 | 640 | 99 | 0.2 | *A* |
| | Subtotal | 654 | 645 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***2*** | ***1*** | ***50*** | ***11.4*** | ***B*** |
| | R | 8 | 10 | 125 | 3.2 | *A* |
| | Subtotal | 10 | 11 | 110 | 3.9 | *A* |
| **Total** | | 985 | 978 | 99 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 386 | 387 | 100 | 1.0 | *A* |
| | R | 11 | 10 | 89 | 1.1 | *A* |
| | Subtotal | 397 | 397 | 100 | 1.0 | *A* |
| SB | L | 9 | 8 | 89 | 2.8 | *A* |
| | T | 640 | 633 | 99 | 0.4 | *A* |
| | Subtotal | 649 | 641 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***6*** | ***5*** | ***83*** | ***6.6*** | ***A*** |
| | R | 5 | 5 | 100 | 3.2 | *A* |
| | Subtotal | 11 | 10 | 91 | 4.9 | *A* |
| **Total** | | 1,056 | 1,048 | 99 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 9.3 | *A* |
| | T | 345 | 347 | 101 | 4.5 | *A* |
| | R | 102 | 104 | 102 | 3.0 | *A* |
| | Subtotal | 453 | 457 | 101 | 4.2 | *A* |
| SB | L | 63 | 60 | 95 | 9.5 | *A* |
| | T | 513 | 506 | 99 | 4.4 | *A* |
| | R | 69 | 69 | 100 | 3.7 | *A* |
| | Subtotal | 645 | 635 | 98 | 4.8 | *A* |
| EB | L | 23 | 22 | 95 | 8.9 | *A* |
| | T | 11 | 13 | 116 | 8.3 | *A* |
| | R | 17 | 19 | 110 | 4.3 | *A* |
| | Subtotal | 51 | 54 | 106 | 7.1 | *A* |
| WB | L | 128 | 128 | 100 | 10.1 | *B* |
| | T | 17 | 19 | 110 | 10.0 | *A* |
| | R | 29 | 29 | 101 | 5.5 | *A* |
| | Subtotal | 174 | 176 | 101 | 9.3 | *A* |
| **Total** | | 1,324 | 1,322 | 100 | 5.3 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.1 | 0.1 | 0.2 | 0.0 | 3.7 | 2.4 | 4.5 | 0.3 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 2.5 | 0.8 | 2.3 | 1.7 | 0.4 | 1.8 | 50.8 | 34.2 | 52.5 | 2.8 | 0.9 | 0.5 |
| Total Delay (hr) | 11.6 | 9.8 | 0.3 | 5.4 | 33.8 | 0.7 | 14.6 | 7.0 | 9.9 | 8.8 | 3.5 | 2.3 |
| Total Del/Veh (s) | 76.0 | 35.9 | 5.8 | 75.2 | 70.0 | 30.5 | 194.7 | 95.6 | 113.1 | 72.7 | 61.4 | 19.1 |
| Vehicles Entered | 540 | 968 | 178 | 251 | 1688 | 79 | 257 | 252 | 303 | 432 | 198 | 422 |
| Vehicles Exited | 537 | 968 | 177 | 250 | 1687 | 78 | 255 | 255 | 304 | 432 | 198 | 424 |
| Hourly Exit Rate | 537 | 968 | 177 | 250 | 1687 | 78 | 255 | 255 | 304 | 432 | 198 | 424 |
| Input Volume | 539 | 972 | 173 | 245 | 1679 | 77 | 358 | 362 | 412 | 422 | 205 | 421 |
| % of Volume | 100 | 100 | 102 | 102 | 100 | 101 | 71 | 71 | 74 | 102 | 97 | 101 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 12.0 |
| Denied Del/Veh (s) | 7.8 |
| Total Delay (hr) | 107.5 |
| Total Del/Veh (s) | 67.9 |
| Vehicles Entered | 5568 |
| Vehicles Exited | 5565 |
| Hourly Exit Rate | 5565 |
| Input Volume | 5866 |
| % of Volume | 95 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.3 | 2.9 | 0.0 | 0.0 | 0.0 | 3.1 | 0.6 | 0.3 |
| Total Delay (hr) | 1.5 | 11.6 | 0.6 | 4.4 | 3.2 | 0.1 | 2.9 | 1.4 | 1.4 | 4.1 | 4.0 | 0.4 |
| Total Del/Veh (s) | 76.4 | 27.7 | 14.3 | 62.7 | 24.7 | 3.9 | 72.0 | 48.7 | 15.6 | 68.9 | 53.4 | 7.0 |
| Vehicles Entered | 72 | 1476 | 157 | 247 | 460 | 114 | 142 | 107 | 320 | 209 | 267 | 201 |
| Vehicles Exited | 72 | 1479 | 158 | 247 | 459 | 114 | 141 | 106 | 320 | 207 | 266 | 201 |
| Hourly Exit Rate | 72 | 1479 | 158 | 247 | 459 | 114 | 141 | 106 | 320 | 207 | 266 | 201 |
| Input Volume | 78 | 1565 | 163 | 253 | 450 | 113 | 142 | 105 | 322 | 206 | 264 | 194 |
| % of Volume | 92 | 94 | 97 | 98 | 102 | 101 | 99 | 101 | 99 | 101 | 101 | 103 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.6 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 35.7 |
| Total Del/Veh (s) | 33.5 |
| Vehicles Entered | 3772 |
| Vehicles Exited | 3770 |
| Hourly Exit Rate | 3770 |
| Input Volume | 3856 |
| % of Volume | 98 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 15.5 | 0.5 | 6.9 | 11.5 | 0.3 | 46.7 | 0.7 | 59.5 | 4.3 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 845.4 | 929.3 | 859.8 | 559.2 | 548.5 | 585.8 | 281.7 | 321.6 | 316.8 | 0.3 | 0.0 | 0.0 |
| Total Delay (hr) | 3.6 | 0.1 | 1.1 | 5.8 | 0.1 | 21.2 | 0.3 | 20.9 | 1.6 | 0.5 | 0.4 | 0.0 |
| Total Del/Veh (s) | 355.4 | 195.3 | 273.2 | 475.6 | 520.6 | 454.1 | 136.3 | 133.1 | 136.2 | 23.6 | 2.6 | 1.1 |
| Vehicles Entered | 34 | 1 | 15 | 42 | 1 | 160 | 8 | 551 | 40 | 74 | 610 | 3 |
| Vehicles Exited | 32 | 1 | 14 | 38 | 1 | 142 | 8 | 538 | 38 | 74 | 610 | 3 |
| Hourly Exit Rate | 32 | 1 | 14 | 38 | 1 | 142 | 8 | 538 | 38 | 74 | 610 | 3 |
| Input Volume | 62 | 2 | 26 | 77 | 2 | 286 | 9 | 682 | 49 | 78 | 603 | 4 |
| % of Volume | 51 | 44 | 54 | 50 | 44 | 50 | 86 | 79 | 77 | 95 | 101 | 80 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 146.0 |
| Denied Del/Veh (s) | 280.8 |
| Total Delay (hr) | 55.5 |
| Total Del/Veh (s) | 127.5 |
| Vehicles Entered | 1539 |
| Vehicles Exited | 1499 |
| Hourly Exit Rate | 1499 |
| Input Volume | 1880 |
| % of Volume | 80 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.6 | 0.1 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.3 |
| Total Del/Veh (s) | 19.8 | 13.3 | 12.7 | 21.0 | 7.3 | 3.6 | 0.3 | 0.1 | 3.5 | 1.1 | 1.0 | 3.7 |
| Vehicles Entered | 116 | 14 | 17 | 2 | 132 | 4 | 320 | 3 | 31 | 613 | 28 | 1280 |
| Vehicles Exited | 116 | 14 | 17 | 2 | 132 | 4 | 321 | 3 | 31 | 613 | 28 | 1281 |
| Hourly Exit Rate | 116 | 14 | 17 | 2 | 132 | 4 | 321 | 3 | 31 | 613 | 28 | 1281 |
| Input Volume | 116 | 12 | 19 | 2 | 132 | 4 | 321 | 3 | 33 | 622 | 26 | 1290 |
| % of Volume | 100 | 114 | 88 | 100 | 100 | 100 | 100 | 100 | 95 | 99 | 107 | 99 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 11.4 | 3.2 | 0.2 | 0.2 | 3.0 | 0.2 | 0.3 |
| Vehicles Entered | 1 | 10 | 318 | 4 | 5 | 640 | 978 |
| Vehicles Exited | 1 | 10 | 318 | 4 | 5 | 640 | 978 |
| Hourly Exit Rate | 1 | 10 | 318 | 4 | 5 | 640 | 978 |
| Input Volume | 2 | 8 | 320 | 2 | 6 | 648 | 985 |
| % of Volume | 50 | 125 | 99 | 200 | 83 | 99 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 6.6 | 3.2 | 1.0 | 1.1 | 2.8 | 0.4 | 0.7 |
| Vehicles Entered | 5 | 5 | 387 | 10 | 8 | 631 | 1046 |
| Vehicles Exited | 5 | 5 | 387 | 10 | 8 | 633 | 1048 |
| Hourly Exit Rate | 5 | 5 | 387 | 10 | 8 | 633 | 1048 |
| Input Volume | 6 | 5 | 386 | 11 | 9 | 640 | 1056 |
| % of Volume | 83 | 100 | 100 | 89 | 89 | 99 | 99 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.5 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.4 | 0.1 | 0.0 | 0.0 | 0.4 | 0.1 | 0.2 | 0.6 | 0.1 |
| Total Del/Veh (s) | 8.9 | 8.3 | 4.3 | 10.1 | 10.0 | 5.5 | 9.3 | 4.5 | 3.0 | 9.5 | 4.4 | 3.7 |
| Vehicles Entered | 22 | 13 | 18 | 128 | 19 | 28 | 6 | 348 | 103 | 60 | 508 | 69 |
| Vehicles Exited | 22 | 13 | 19 | 128 | 19 | 29 | 6 | 347 | 104 | 60 | 506 | 69 |
| Hourly Exit Rate | 22 | 13 | 19 | 128 | 19 | 29 | 6 | 347 | 104 | 60 | 506 | 69 |
| Input Volume | 23 | 11 | 17 | 128 | 17 | 29 | 6 | 345 | 102 | 63 | 513 | 69 |
| % of Volume | 95 | 116 | 110 | 100 | 110 | 101 | 100 | 101 | 102 | 95 | 99 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.0 |
| Total Del/Veh (s) | 5.3 |
| Vehicles Entered | 1322 |
| Vehicles Exited | 1322 |
| Hourly Exit Rate | 1322 |
| Input Volume | 1324 |
| % of Volume | 100 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 158.6 |
| Denied Del/Veh (s) | 73.3 |
| Total Delay (hr) | 209.1 |
| Total Del/Veh (s) | 97.2 |
| Vehicles Entered | 7454 |
| Vehicles Exited | 7410 |
| Hourly Exit Rate | 7410 |
| Input Volume | 22982 |
| % of Volume | 32 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | L | T | T | T | R | L | T |
| Maximum Queue (ft) | 370 | 441 | 472 | 446 | 174 | 586 | 828 | 805 | 440 | 345 | 250 | 438 |
| Average Queue (ft) | 242 | 287 | 270 | 260 | 26 | 275 | 527 | 506 | 383 | 88 | 248 | 416 |
| 95th Queue (ft) | 346 | 403 | 405 | 387 | 100 | 564 | 801 | 779 | 501 | 287 | 263 | 456 |
| Link Distance (ft) | | | 810 | 810 | | | 3361 | 3361 | | | | 394 |
| Upstream Blk Time (%) | | | 0 | | | | | | | | | 56 |
| Queuing Penalty (veh) | | | 0 | | | | | | | | | 291 |
| Storage Bay Dist (ft) | 230 | 230 | | | 230 | 400 | | | 250 | 250 | 100 | |
| Storage Blk Time (%) | 6 | 25 | 13 | 11 | | 0 | 21 | 38 | 30 | | 88 | 40 |
| Queuing Penalty (veh) | 29 | 122 | 72 | 19 | | 2 | 53 | 243 | 169 | | 114 | 145 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | NB | SB | SB | SB | SB | SB |
|---|---|---|---|---|---|---|
| Directions Served | TR | L | L | T | R | R |
| Maximum Queue (ft) | 448 | 310 | 338 | 313 | 210 | 184 |
| Average Queue (ft) | 367 | 195 | 230 | 171 | 130 | 82 |
| 95th Queue (ft) | 498 | 277 | 317 | 286 | 202 | 175 |
| Link Distance (ft) | 394 | | | 1012 | 1012 | |
| Upstream Blk Time (%) | 19 | | | | | |
| Queuing Penalty (veh) | 96 | | | | | |
| Storage Bay Dist (ft) | | 320 | 320 | | | 200 |
| Storage Blk Time (%) | | 0 | 1 | 0 | 0 | 0 |
| Queuing Penalty (veh) | | 0 | 2 | 2 | 1 | 0 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | L | T | T | R | L | T | R |
| Maximum Queue (ft) | 113 | 129 | 380 | 377 | 96 | 358 | 309 | 208 | 58 | 233 | 205 | 226 |
| Average Queue (ft) | 23 | 45 | 226 | 241 | 41 | 193 | 147 | 99 | 26 | 127 | 78 | 94 |
| 95th Queue (ft) | 59 | 85 | 333 | 346 | 75 | 315 | 254 | 181 | 51 | 220 | 163 | 180 |
| Link Distance (ft) | | | 3361 | 3361 | | | 1013 | 1013 | | | 371 | 371 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | 260 | | | 140 | 210 | | |
| Storage Blk Time (%) | | | 1 | 2 | | 5 | 0 | 3 | | 3 | 0 | |
| Queuing Penalty (veh) | | | 1 | 3 | | 11 | 0 | 3 | | 3 | 0 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | SB | SB | SB |
|---|---|---|---|
| Directions Served | L | T | R |
| Maximum Queue (ft) | 329 | 414 | 116 |
| Average Queue (ft) | 181 | 209 | 52 |
| 95th Queue (ft) | 302 | 354 | 94 |
| Link Distance (ft) | | 931 | 931 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 240 | | |
| Storage Blk Time (%) | 5 | 7 | |
| Queuing Penalty (veh) | 14 | 14 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | TR | L | T | TR |
| Maximum Queue (ft) | 143 | 773 | 75 | 735 | 116 | 104 | 117 |
| Average Queue (ft) | 113 | 666 | 7 | 671 | 38 | 12 | 16 |
| 95th Queue (ft) | 154 | 930 | 44 | 865 | 87 | 59 | 73 |
| Link Distance (ft) | 112 | 720 | | 692 | | 394 | 394 |
| Upstream Blk Time (%) | 85 | 75 | | 62 | | | |
| Queuing Penalty (veh) | 0 | 0 | | 0 | | | |
| Storage Bay Dist (ft) | | | 50 | | 50 | | |
| Storage Blk Time (%) | | | 0 | 66 | 11 | 2 | |
| Queuing Penalty (veh) | | | 0 | 6 | 36 | 2 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 152 | 116 | 26 | 12 | 20 | 41 | 16 | 16 |
| Average Queue (ft) | 60 | 49 | 1 | 1 | 1 | 8 | 1 | 1 |
| 95th Queue (ft) | 115 | 83 | 12 | 7 | 12 | 30 | 10 | 11 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 371 | 371 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | | | 0 | 0 | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 33 | 24 |
| Average Queue (ft) | 9 | 2 |
| 95th Queue (ft) | 32 | 15 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 34 | 2 | 28 |
| Average Queue (ft) | 8 | 0 | 3 |
| 95th Queue (ft) | 31 | 2 | 17 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 64 | 116 | 31 | 93 | 115 | 79 | 113 | 127 |
| Average Queue (ft) | 27 | 56 | 4 | 44 | 43 | 25 | 41 | 61 |
| 95th Queue (ft) | 56 | 97 | 21 | 80 | 86 | 60 | 90 | 108 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Network Summary

Network wide Queuing Penalty: 1452

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 358 | 367 | 102 | 73.9 | *E* |
| | T | 362 | 362 | 100 | 56.1 | *E* |
| | R | 412 | 420 | 102 | 20.4 | *C* |
| | Subtotal | 1,132 | 1,149 | 102 | 48.7 | *D* |
| SB | L | 422 | 414 | 98 | 108.1 | *F* |
| | T | 205 | 206 | 101 | 57.7 | *E* |
| | R | 421 | 429 | 102 | 15.0 | *B* |
| | Subtotal | 1,048 | 1,049 | 100 | 60.1 | *E* |
| EB | L | 539 | 538 | 100 | 96.2 | *F* |
| | T | 972 | 980 | 101 | 37.6 | *D* |
| | R | 173 | 176 | 102 | 6.2 | *A* |
| | Subtotal | 1,684 | 1,694 | 101 | 52.9 | *D* |
| WB | L | 245 | 244 | 99 | 76.3 | *E* |
| | T | 1,679 | 1,700 | 101 | 47.4 | *D* |
| | R | 77 | 77 | 100 | 10.6 | *B* |
| | Subtotal | 2,001 | 2,021 | 101 | 49.5 | *D* |
| **Total** | | 5,866 | 5,913 | 101 | 52.3 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 142 | 141 | 99 | 69.8 | *E* |
| | T | 105 | 102 | 97 | 49.4 | *D* |
| | R | 322 | 318 | 99 | 17.6 | *B* |
| | Subtotal | 569 | 561 | 99 | 36.5 | *D* |
| SB | L | 206 | 203 | 99 | 64.6 | *E* |
| | T | 264 | 268 | 102 | 54.2 | *D* |
| | R | 194 | 200 | 103 | 6.9 | *A* |
| | Subtotal | 664 | 671 | 101 | 43.2 | *D* |
| EB | L | 78 | 75 | 96 | 73.7 | *E* |
| | T | 1,565 | 1,576 | 101 | 30.2 | *C* |
| | R | 163 | 164 | 101 | 11.6 | *B* |
| | Subtotal | 1,806 | 1,815 | 100 | 30.3 | *C* |
| WB | L | 253 | 252 | 100 | 59.2 | *E* |
| | T | 450 | 458 | 102 | 24.6 | *C* |
| | R | 113 | 113 | 100 | 3.9 | *A* |
| | Subtotal | 816 | 823 | 101 | 32.4 | *C* |
| **Total** | | 3,856 | 3,870 | 100 | 34.0 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 9 | 8 | 86 | 11.9 | *B* |
| | T | 682 | 690 | 101 | 14.6 | *B* |
| | R | 49 | 51 | 104 | 16.1 | *B* |
| | Subtotal | 740 | 749 | 101 | 14.7 | *B* |
| SB | L | 78 | 74 | 95 | 43.9 | *D* |
| | T | 603 | 610 | 101 | 5.4 | *A* |
| | R | 4 | 4 | 107 | 4.9 | *A* |
| | Subtotal | 685 | 688 | 100 | 9.5 | *A* |
| EB | L | 62 | 60 | 96 | 78.6 | *E* |
| | T | 2 | 2 | 89 | 63.3 | *E* |
| | R | 26 | 24 | 92 | 42.3 | *D* |
| | Subtotal | 90 | 86 | 96 | 68.1 | *E* |
| WB | L | 77 | 80 | 104 | 51.7 | *D* |
| | T | 2 | 3 | 133 | 44.0 | *D* |
| | R | 286 | 291 | 102 | 25.9 | *C* |
| | Subtotal | 365 | 374 | 102 | 31.6 | *C* |
| **Total** | | 1,880 | 1,897 | 101 | 18.6 | *B* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 4 | 4 | 100 | 6.2 | *A* |
| | T | 321 | 311 | 97 | 0.3 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 328 | 319 | 97 | 0.4 | *A* |
| SB | L | 33 | 31 | 95 | 3.3 | *A* |
| | T | 622 | 625 | 100 | 1.2 | *A* |
| | R | 26 | 28 | 107 | 1.1 | *A* |
| | Subtotal | 681 | 684 | 100 | 1.3 | *A* |
| ***EB*** | ***L*** | ***116*** | ***119*** | ***103*** | ***21.3*** | ***C*** |
| | R | 12 | 12 | 98 | 15.2 | *C* |
| | Subtotal | 128 | 131 | 102 | 20.7 | *C* |
| WB | L | 19 | 18 | 94 | 13.0 | *B* |
| | T | 2 | 3 | 150 | 19.5 | *C* |
| | R | 132 | 132 | 100 | 7.7 | *A* |
| | Subtotal | 153 | 153 | 100 | 8.6 | *A* |
| **Total** | | 1,290 | 1,287 | 100 | 3.9 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 320 | 311 | 97 | 0.2 | *A* |
| | R | 2 | 3 | 150 | 0.1 | *A* |
| | Subtotal | 322 | 314 | 98 | 0.2 | *A* |
| SB | L | 6 | 6 | 100 | 2.5 | *A* |
| | T | 648 | 649 | 100 | 0.2 | *A* |
| | Subtotal | 654 | 655 | 100 | 0.2 | *A* |
| ***WB*** | ***L*** | ***2*** | ***2*** | ***100*** | ***5.7*** | ***A*** |
| | R | 8 | 9 | 112 | 2.8 | *A* |
| | Subtotal | 10 | 11 | 110 | 3.3 | *A* |
| **Total** | | 985 | 980 | 99 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 386 | 377 | 98 | 1.0 | *A* |
| | R | 11 | 11 | 98 | 0.9 | *A* |
| | Subtotal | 397 | 388 | 98 | 1.0 | *A* |
| SB | L | 9 | 9 | 100 | 2.5 | *A* |
| | T | 640 | 641 | 100 | 0.4 | *A* |
| | Subtotal | 649 | 650 | 100 | 0.4 | *A* |
| ***WB*** | ***L*** | ***6*** | ***5*** | ***83*** | ***9.1*** | ***A*** |
| | R | 5 | 5 | 100 | 2.9 | *A* |
| | Subtotal | 11 | 10 | 91 | 6.0 | *A* |
| **Total** | | 1,056 | 1,048 | 99 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 7.8 | *A* |
| | T | 345 | 338 | 98 | 4.3 | *A* |
| | R | 102 | 102 | 100 | 3.0 | *A* |
| | Subtotal | 453 | 446 | 98 | 4.0 | *A* |
| SB | L | 63 | 65 | 103 | 9.4 | *A* |
| | T | 513 | 507 | 99 | 4.7 | *A* |
| | R | 69 | 74 | 107 | 3.9 | *A* |
| | Subtotal | 645 | 646 | 100 | 5.1 | *A* |
| EB | L | 23 | 20 | 86 | 9.4 | *A* |
| | T | 11 | 9 | 80 | 9.3 | *A* |
| | R | 17 | 17 | 99 | 3.7 | *A* |
| | Subtotal | 51 | 46 | 90 | 7.3 | *A* |
| WB | L | 128 | 123 | 96 | 9.3 | *A* |
| | T | 17 | 17 | 99 | 10.0 | *A* |
| | R | 29 | 29 | 101 | 4.9 | *A* |
| | Subtotal | 174 | 169 | 97 | 8.6 | *A* |
| **Total** | | 1,324 | 1,307 | 99 | 5.3 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 2.4 | 0.5 | 2.1 | 1.6 | 0.2 | 1.7 | 0.9 | 1.0 | 1.8 | 2.8 | 0.9 | 0.5 |
| Total Delay (hr) | 14.7 | 10.4 | 0.3 | 5.3 | 22.9 | 0.2 | 7.6 | 5.8 | 2.4 | 12.8 | 3.4 | 1.8 |
| Total Del/Veh (s) | 96.2 | 37.6 | 6.2 | 76.3 | 47.4 | 10.6 | 73.9 | 56.1 | 20.4 | 108.1 | 57.7 | 15.0 |
| Vehicles Entered | 540 | 981 | 176 | 242 | 1703 | 76 | 367 | 364 | 420 | 419 | 206 | 428 |
| Vehicles Exited | 538 | 980 | 176 | 244 | 1700 | 77 | 367 | 362 | 420 | 414 | 206 | 429 |
| Hourly Exit Rate | 538 | 980 | 176 | 244 | 1700 | 77 | 367 | 362 | 420 | 414 | 206 | 429 |
| Input Volume | 539 | 972 | 173 | 245 | 1679 | 77 | 358 | 362 | 412 | 422 | 205 | 421 |
| % of Volume | 100 | 101 | 102 | 99 | 101 | 100 | 102 | 100 | 102 | 98 | 101 | 102 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 1.7 |
| Denied Del/Veh (s) | 1.0 |
| Total Delay (hr) | 87.5 |
| Total Del/Veh (s) | 52.3 |
| Vehicles Entered | 5922 |
| Vehicles Exited | 5913 |
| Hourly Exit Rate | 5913 |
| Input Volume | 5866 |
| % of Volume | 101 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.3 | 2.9 | 0.0 | 0.0 | 0.0 | 3.1 | 0.6 | 0.3 |
| Total Delay (hr) | 1.6 | 13.4 | 0.5 | 4.2 | 3.2 | 0.1 | 2.8 | 1.5 | 1.6 | 3.8 | 4.1 | 0.4 |
| Total Del/Veh (s) | 73.7 | 30.2 | 11.6 | 59.2 | 24.6 | 3.9 | 69.8 | 49.4 | 17.6 | 64.6 | 54.2 | 6.9 |
| Vehicles Entered | 74 | 1576 | 164 | 252 | 459 | 113 | 141 | 103 | 319 | 204 | 267 | 200 |
| Vehicles Exited | 75 | 1576 | 164 | 252 | 458 | 113 | 141 | 102 | 318 | 203 | 268 | 200 |
| Hourly Exit Rate | 75 | 1576 | 164 | 252 | 458 | 113 | 141 | 102 | 318 | 203 | 268 | 200 |
| Input Volume | 78 | 1565 | 163 | 253 | 450 | 113 | 142 | 105 | 322 | 206 | 264 | 194 |
| % of Volume | 96 | 101 | 101 | 100 | 102 | 100 | 99 | 97 | 99 | 99 | 102 | 103 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.6 |
| Denied Del/Veh (s) | 0.5 |
| Total Delay (hr) | 37.1 |
| Total Del/Veh (s) | 34.0 |
| Vehicles Entered | 3872 |
| Vehicles Exited | 3870 |
| Hourly Exit Rate | 3870 |
| Input Volume | 3856 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.6 | 0.0 | 0.2 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 37.4 | 29.5 | 24.6 | 1.0 | 0.6 | 3.6 | 3.2 | 0.8 | 0.7 | 1.7 | 0.4 | 0.1 |
| Total Delay (hr) | 1.3 | 0.0 | 0.3 | 1.2 | 0.0 | 2.1 | 0.0 | 2.8 | 0.2 | 0.9 | 0.9 | 0.0 |
| Total Del/Veh (s) | 78.6 | 63.3 | 42.3 | 51.7 | 44.0 | 25.9 | 11.9 | 14.6 | 16.1 | 43.9 | 5.4 | 4.9 |
| Vehicles Entered | 61 | 2 | 25 | 80 | 3 | 292 | 8 | 692 | 51 | 74 | 610 | 4 |
| Vehicles Exited | 60 | 2 | 24 | 80 | 3 | 291 | 8 | 690 | 51 | 74 | 610 | 4 |
| Hourly Exit Rate | 60 | 2 | 24 | 80 | 3 | 291 | 8 | 690 | 51 | 74 | 610 | 4 |
| Input Volume | 62 | 2 | 26 | 77 | 2 | 286 | 9 | 682 | 49 | 78 | 603 | 4 |
| % of Volume | 96 | 89 | 92 | 104 | 133 | 102 | 86 | 101 | 104 | 95 | 101 | 107 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 1.4 |
| Denied Del/Veh (s) | 2.7 |
| Total Delay (hr) | 9.9 |
| Total Del/Veh (s) | 18.6 |
| Vehicles Entered | 1902 |
| Vehicles Exited | 1897 |
| Hourly Exit Rate | 1897 |
| Input Volume | 1880 |
| % of Volume | 101 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.7 | 0.1 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.4 |
| Total Del/Veh (s) | 21.3 | 15.2 | 13.0 | 19.5 | 7.7 | 6.2 | 0.3 | 0.1 | 3.3 | 1.2 | 1.1 | 3.9 |
| Vehicles Entered | 119 | 12 | 18 | 3 | 133 | 5 | 311 | 4 | 31 | 625 | 28 | 1289 |
| Vehicles Exited | 119 | 12 | 18 | 3 | 132 | 4 | 311 | 4 | 31 | 625 | 28 | 1287 |
| Hourly Exit Rate | 119 | 12 | 18 | 3 | 132 | 4 | 311 | 4 | 31 | 625 | 28 | 1287 |
| Input Volume | 116 | 12 | 19 | 2 | 132 | 4 | 321 | 3 | 33 | 622 | 26 | 1290 |
| % of Volume | 103 | 98 | 94 | 150 | 100 | 100 | 97 | 133 | 95 | 100 | 107 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 5.7 | 2.8 | 0.2 | 0.1 | 2.5 | 0.2 | 0.3 |
| Vehicles Entered | 2 | 9 | 310 | 3 | 6 | 649 | 979 |
| Vehicles Exited | 2 | 9 | 311 | 3 | 6 | 649 | 980 |
| Hourly Exit Rate | 2 | 9 | 311 | 3 | 6 | 649 | 980 |
| Input Volume | 2 | 8 | 320 | 2 | 6 | 648 | 985 |
| % of Volume | 100 | 112 | 97 | 150 | 100 | 100 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 9.1 | 2.9 | 1.0 | 0.9 | 2.5 | 0.4 | 0.7 |
| Vehicles Entered | 5 | 4 | 376 | 11 | 9 | 641 | 1046 |
| Vehicles Exited | 5 | 5 | 377 | 11 | 9 | 641 | 1048 |
| Hourly Exit Rate | 5 | 5 | 377 | 11 | 9 | 641 | 1048 |
| Input Volume | 6 | 5 | 386 | 11 | 9 | 640 | 1056 |
| % of Volume | 83 | 100 | 98 | 98 | 100 | 100 | 99 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.3 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.4 | 0.1 | 0.2 | 0.7 | 0.1 |
| Total Del/Veh (s) | 9.4 | 9.3 | 3.7 | 9.3 | 10.0 | 4.9 | 7.8 | 4.3 | 3.0 | 9.4 | 4.7 | 3.9 |
| Vehicles Entered | 20 | 9 | 17 | 124 | 17 | 29 | 6 | 337 | 101 | 65 | 507 | 73 |
| Vehicles Exited | 20 | 9 | 17 | 123 | 17 | 29 | 6 | 338 | 102 | 65 | 507 | 74 |
| Hourly Exit Rate | 20 | 9 | 17 | 123 | 17 | 29 | 6 | 338 | 102 | 65 | 507 | 74 |
| Input Volume | 23 | 11 | 17 | 128 | 17 | 29 | 6 | 345 | 102 | 63 | 513 | 69 |
| % of Volume | 86 | 80 | 99 | 96 | 99 | 101 | 100 | 98 | 100 | 103 | 99 | 107 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 1.9 |
| Total Del/Veh (s) | 5.3 |
| Vehicles Entered | 1305 |
| Vehicles Exited | 1307 |
| Hourly Exit Rate | 1307 |
| Input Volume | 1324 |
| % of Volume | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 3.7 |
| Denied Del/Veh (s) | 1.7 |
| Total Delay (hr) | 150.7 |
| Total Del/Veh (s) | 67.3 |
| Vehicles Entered | 7821 |
| Vehicles Exited | 7807 |
| Hourly Exit Rate | 7807 |
| Input Volume | 25574 |
| % of Volume | 31 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 373 | 477 | 495 | 443 | 307 | 96 | 255 | 544 | 557 | 546 | 478 | 388 |
| Average Queue (ft) | 281 | 335 | 266 | 240 | 173 | 32 | 112 | 209 | 430 | 403 | 331 | 215 |
| 95th Queue (ft) | 394 | 471 | 440 | 362 | 283 | 70 | 199 | 449 | 565 | 524 | 456 | 334 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1045 | 1045 | 1045 | |
| Upstream Blk Time (%) | | | 0 | | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 14 | 39 | 11 | | 1 | | | 0 | 11 | | 9 | 1 |
| Queuing Penalty (veh) | 47 | 126 | 57 | | 1 | | | 0 | 28 | | 44 | 4 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | SB | SB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | R | L | L | T | R | R |
| Maximum Queue (ft) | 86 | 245 | 381 | 412 | 250 | 349 | 385 | 490 | 216 | 191 |
| Average Queue (ft) | 25 | 159 | 218 | 265 | 172 | 239 | 272 | 200 | 117 | 64 |
| 95th Queue (ft) | 65 | 243 | 359 | 440 | 308 | 366 | 400 | 413 | 195 | 160 |
| Link Distance (ft) | | | 373 | 373 | | | | 1001 | 1001 | |
| Upstream Blk Time (%) | | | 1 | 8 | | | | | | |
| Queuing Penalty (veh) | | | 3 | 47 | | | | | | |
| Storage Bay Dist (ft) | 250 | 150 | | | 150 | 320 | 320 | | | 200 |
| Storage Blk Time (%) | | 12 | 27 | 38 | 8 | 2 | 9 | 0 | 0 | 0 |
| Queuing Penalty (veh) | | 21 | 48 | 155 | 21 | 4 | 18 | 0 | 1 | 0 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 84 | 98 | 432 | 445 | 105 | 311 | 641 | 359 | 305 | 201 | 57 | 228 |
| Average Queue (ft) | 26 | 49 | 286 | 295 | 49 | 11 | 19 | 187 | 137 | 100 | 26 | 123 |
| 95th Queue (ft) | 65 | 87 | 403 | 409 | 85 | 187 | 252 | 301 | 235 | 177 | 52 | 202 |
| Link Distance (ft) | | | 2242 | 2242 | | 1045 | 1045 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 9 | 11 | | | | 4 | 0 | 2 | | 1 |
| Queuing Penalty (veh) | | | 7 | 18 | | | | 9 | 0 | 2 | | 1 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 166 | 227 | 325 | 382 | 110 |
| Average Queue (ft) | 67 | 103 | 179 | 208 | 49 |
| 95th Queue (ft) | 133 | 188 | 293 | 335 | 88 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 4 | 7 | |
| Queuing Penalty (veh) | 0 | | 10 | 14 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 127 | 435 | 200 | 32 | 352 | 436 | 114 | 175 | 174 |
| Average Queue (ft) | 73 | 103 | 94 | 2 | 78 | 143 | 43 | 37 | 47 |
| 95th Queue (ft) | 134 | 295 | 199 | 15 | 271 | 364 | 98 | 137 | 136 |
| Link Distance (ft) | 112 | 703 | | | 688 | 688 | | 373 | 373 |
| Upstream Blk Time (%) | 14 | 0 | | | 0 | 1 | | | |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | | |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 4 | 17 | 0 | 8 | | 16 | 6 | |
| Queuing Penalty (veh) | | 12 | 16 | 0 | 1 | | 53 | 6 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 140 | 98 | 21 | 12 | 18 | 39 | 14 | 20 |
| Average Queue (ft) | 62 | 50 | 2 | 0 | 1 | 7 | 0 | 1 |
| 95th Queue (ft) | 115 | 84 | 14 | 6 | 9 | 29 | 8 | 11 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | | | 0 | 0 | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 33 | 24 |
| Average Queue (ft) | 9 | 2 |
| 95th Queue (ft) | 31 | 13 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 31 | 27 |
| Average Queue (ft) | 8 | 2 |
| 95th Queue (ft) | 30 | 16 |
| Link Distance (ft) | 245 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 58 | 126 | 31 | 89 | 97 | 77 | 114 | 130 |
| Average Queue (ft) | 23 | 56 | 4 | 42 | 43 | 30 | 45 | 63 |
| 95th Queue (ft) | 53 | 99 | 21 | 77 | 80 | 64 | 94 | 111 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Network Summary

Network wide Queuing Penalty: 776

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 407 | 406 | 100 | 70.4 | *E* |
| | T | 373 | 380 | 102 | 61.7 | *E* |
| | R | 412 | 407 | 99 | 23.2 | *C* |
| | Subtotal | 1,192 | 1,193 | 100 | 51.5 | *D* |
| SB | L | 422 | 415 | 98 | 112.7 | *F* |
| | T | 206 | 202 | 98 | 64.9 | *E* |
| | R | 421 | 419 | 99 | 15.8 | *B* |
| | Subtotal | 1,049 | 1,036 | 99 | 64.2 | *E* |
| EB | L | 539 | 543 | 101 | 104.1 | *F* |
| | T | 972 | 971 | 100 | 38.6 | *D* |
| | R | 183 | 184 | 100 | 6.1 | *A* |
| | Subtotal | 1,694 | 1,698 | 100 | 56.0 | *E* |
| WB | L | 246 | 244 | 99 | 74.2 | *E* |
| | T | 1,689 | 1,689 | 100 | 47.6 | *D* |
| | R | 77 | 76 | 98 | 11.0 | *B* |
| | Subtotal | 2,012 | 2,009 | 100 | 49.4 | *D* |
| **Total** | | 5,948 | 5,936 | 100 | 54.7 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 152 | 151 | 100 | 68.0 | *E* |
| | T | 108 | 109 | 101 | 51.0 | *D* |
| | R | 349 | 360 | 103 | 18.7 | *B* |
| | Subtotal | 609 | 620 | 102 | 36.4 | *D* |
| SB | L | 206 | 208 | 101 | 68.9 | *E* |
| | T | 264 | 263 | 100 | 54.0 | *D* |
| | R | 194 | 192 | 99 | 6.7 | *A* |
| | Subtotal | 664 | 663 | 100 | 45.0 | *D* |
| EB | L | 78 | 75 | 96 | 76.0 | *E* |
| | T | 1,565 | 1,554 | 99 | 29.4 | *C* |
| | R | 163 | 165 | 101 | 11.3 | *B* |
| | Subtotal | 1,806 | 1,794 | 99 | 29.7 | *C* |
| WB | L | 258 | 253 | 98 | 61.0 | *E* |
| | T | 451 | 456 | 101 | 24.5 | *C* |
| | R | 113 | 115 | 102 | 4.1 | *A* |
| | Subtotal | 822 | 824 | 100 | 32.9 | *C* |
| **Total** | | 3,901 | 3,901 | 100 | 34.2 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 9 | 9 | 97 | 21.3 | *C* |
| | T | 682 | 698 | 102 | 25.7 | *C* |
| | R | 55 | 52 | 94 | 26.4 | *C* |
| | Subtotal | 746 | 759 | 102 | 25.7 | *C* |
| SB | L | 90 | 86 | 95 | 65.8 | *E* |
| | T | 604 | 597 | 99 | 8.0 | *A* |
| | R | 4 | 4 | 107 | 10.1 | *B* |
| | Subtotal | 698 | 687 | 98 | 15.2 | *B* |
| EB | L | 62 | 52 | 84 | 103.5 | *F* |
| | T | 2 | 2 | 89 | 92.1 | *F* |
| | R | 26 | 24 | 92 | 58.4 | *E* |
| | Subtotal | 90 | 78 | 87 | 89.3 | *F* |
| WB | L | 90 | 85 | 94 | 48.9 | *D* |
| | T | 2 | 3 | 133 | 42.2 | *D* |
| | R | 341 | 334 | 98 | 36.7 | *D* |
| | Subtotal | 433 | 422 | 97 | 39.2 | *D* |
| **Total** | | 1,968 | 1,946 | 99 | 27.6 | *C* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 5 | 4 | 80 | 6.8 | *A* |
| | T | 321 | 326 | 102 | 0.3 | *A* |
| | R | 3 | 3 | 100 | 0.1 | *A* |
| | Subtotal | 329 | 333 | 101 | 0.4 | *A* |
| SB | L | 33 | 32 | 98 | 3.5 | *A* |
| | T | 622 | 617 | 99 | 1.2 | *A* |
| | R | 31 | 34 | 111 | 1.1 | *A* |
| | Subtotal | 686 | 683 | 100 | 1.3 | *A* |
| ***EB*** | ***L*** | ***156*** | ***158*** | ***101*** | ***25.2*** | ***D*** |
| | R | 25 | 28 | 111 | 17.9 | *C* |
| | Subtotal | 181 | 186 | 103 | 24.1 | *C* |
| WB | L | 19 | 20 | 104 | 12.4 | *B* |
| | T | 2 | 2 | 100 | 16.9 | *C* |
| | R | 132 | 135 | 102 | 8.0 | *A* |
| | Subtotal | 153 | 157 | 103 | 8.7 | *A* |
| **Total** | | 1,349 | 1,359 | 101 | 5.1 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 321 | 323 | 101 | 0.2 | *A* |
| | R | 2 | 2 | 100 | 0.1 | *A* |
| | Subtotal | 323 | 325 | 101 | 0.2 | *A* |
| SB | L | 6 | 5 | 83 | 2.3 | *A* |
| | T | 660 | 659 | 100 | 0.2 | *A* |
| | Subtotal | 666 | 664 | 100 | 0.2 | *A* |
| ***WB*** | ***L*** | ***2*** | ***2*** | ***100*** | ***8.3*** | ***A*** |
| | R | 8 | 10 | 125 | 3.6 | *A* |
| | Subtotal | 10 | 12 | 120 | 4.4 | *A* |
| | | | | | | |
| **Total** | | 998 | 1,001 | 100 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 387 | 392 | 101 | 1.0 | *A* |
| | R | 11 | 12 | 107 | 1.0 | *A* |
| | Subtotal | 398 | 404 | 102 | 1.0 | *A* |
| SB | L | 9 | 7 | 78 | 2.3 | *A* |
| | T | 652 | 654 | 100 | 0.4 | *A* |
| | Subtotal | 661 | 661 | 100 | 0.4 | *A* |
| ***WB*** | ***L*** | ***6*** | ***5*** | ***83*** | ***9.7*** | ***A*** |
| | R | 5 | 5 | 100 | 3.7 | *A* |
| | Subtotal | 11 | 10 | 91 | 6.7 | *A* |
| | | | | | | |
| **Total** | | 1,070 | 1,075 | 100 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 12.1 | *B* |
| | T | 346 | 351 | 101 | 4.6 | *A* |
| | R | 102 | 104 | 102 | 2.9 | *A* |
| | Subtotal | 454 | 461 | 102 | 4.3 | *A* |
| SB | L | 63 | 61 | 97 | 9.5 | *A* |
| | T | 526 | 522 | 99 | 4.7 | *A* |
| | R | 69 | 76 | 110 | 4.0 | *A* |
| | Subtotal | 658 | 659 | 100 | 5.1 | *A* |
| EB | L | 23 | 24 | 103 | 8.9 | *A* |
| | T | 11 | 14 | 124 | 9.3 | *A* |
| | R | 17 | 18 | 104 | 4.0 | *A* |
| | Subtotal | 51 | 56 | 110 | 7.4 | *A* |
| WB | L | 128 | 129 | 101 | 10.1 | *B* |
| | T | 17 | 18 | 104 | 11.2 | *B* |
| | R | 29 | 28 | 97 | 5.9 | *A* |
| | Subtotal | 174 | 175 | 101 | 9.5 | *A* |
| **Total** | | 1,338 | 1,351 | 101 | 5.5 | *A* |

**Intersection:** 3400 North & Innovation Way
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***279*** | ***97*** | ***4.0*** | ***A*** |
| | Subtotal | 288 | 279 | 97 | 4.0 | *A* |
| EB | L | 61 | 56 | 92 | 2.5 | *A* |
| | T | 87 | 84 | 97 | 0.7 | *A* |
| | Subtotal | 148 | 140 | 95 | 1.4 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 436 | 419 | 96 | 3.2 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.3 | 0.4 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 2.6 | 0.8 | 2.3 | 1.6 | 0.2 | 1.7 | 1.8 | 1.7 | 2.3 | 3.3 | 1.7 | 1.2 |
| Total Delay (hr) | 16.0 | 10.5 | 0.3 | 5.2 | 22.6 | 0.2 | 8.2 | 6.7 | 2.7 | 13.8 | 3.8 | 1.9 |
| Total Del/Veh (s) | 104.1 | 38.6 | 6.1 | 74.2 | 47.6 | 11.0 | 70.4 | 61.7 | 23.2 | 112.7 | 64.9 | 15.8 |
| Vehicles Entered | 547 | 973 | 184 | 244 | 1688 | 76 | 406 | 380 | 407 | 420 | 205 | 420 |
| Vehicles Exited | 543 | 971 | 184 | 244 | 1689 | 76 | 406 | 380 | 407 | 415 | 202 | 419 |
| Hourly Exit Rate | 543 | 971 | 184 | 244 | 1689 | 76 | 406 | 380 | 407 | 415 | 202 | 419 |
| Input Volume | 539 | 972 | 183 | 246 | 1689 | 77 | 407 | 373 | 412 | 422 | 206 | 421 |
| % of Volume | 101 | 100 | 100 | 99 | 100 | 98 | 100 | 102 | 99 | 98 | 98 | 99 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.2 |
| Denied Del/Veh (s) | 1.3 |
| Total Delay (hr) | 91.7 |
| Total Del/Veh (s) | 54.7 |
| Vehicles Entered | 5950 |
| Vehicles Exited | 5936 |
| Hourly Exit Rate | 5936 |
| Input Volume | 5948 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.8 | 0.0 | 0.0 | 0.0 | 3.1 | 0.7 | 0.3 |
| Total Delay (hr) | 1.6 | 12.8 | 0.5 | 4.5 | 3.1 | 0.1 | 2.9 | 1.6 | 1.9 | 4.1 | 4.0 | 0.4 |
| Total Del/Veh (s) | 76.0 | 29.4 | 11.3 | 61.0 | 24.5 | 4.1 | 68.0 | 51.0 | 18.7 | 68.9 | 54.0 | 6.7 |
| Vehicles Entered | 75 | 1554 | 165 | 255 | 457 | 115 | 150 | 109 | 361 | 208 | 262 | 193 |
| Vehicles Exited | 75 | 1554 | 165 | 253 | 456 | 115 | 151 | 109 | 360 | 208 | 263 | 192 |
| Hourly Exit Rate | 75 | 1554 | 165 | 253 | 456 | 115 | 151 | 109 | 360 | 208 | 263 | 192 |
| Input Volume | 78 | 1565 | 163 | 258 | 451 | 113 | 152 | 108 | 349 | 206 | 264 | 194 |
| % of Volume | 96 | 99 | 101 | 98 | 101 | 102 | 100 | 101 | 103 | 101 | 100 | 99 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.6 |
| Denied Del/Veh (s) | 0.5 |
| Total Delay (hr) | 37.6 |
| Total Del/Veh (s) | 34.2 |
| Vehicles Entered | 3904 |
| Vehicles Exited | 3901 |
| Hourly Exit Rate | 3901 |
| Input Volume | 3901 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 2.1 | 0.1 | 1.1 | 0.1 | 0.0 | 0.4 | 0.0 | 0.3 | 0.0 | 0.2 | 1.5 | 0.0 |
| Denied Del/Veh (s) | 127.3 | 164.2 | 152.0 | 2.8 | 7.6 | 4.8 | 2.7 | 1.8 | 1.6 | 10.3 | 8.8 | 5.1 |
| Total Delay (hr) | 1.6 | 0.1 | 0.4 | 1.2 | 0.0 | 3.4 | 0.1 | 5.0 | 0.4 | 1.6 | 1.3 | 0.0 |
| Total Del/Veh (s) | 103.5 | 92.1 | 58.4 | 48.9 | 42.2 | 36.7 | 21.3 | 25.7 | 26.4 | 65.8 | 8.0 | 10.1 |
| Vehicles Entered | 53 | 2 | 24 | 85 | 3 | 335 | 9 | 699 | 53 | 86 | 599 | 4 |
| Vehicles Exited | 52 | 2 | 24 | 85 | 3 | 334 | 9 | 698 | 52 | 86 | 597 | 4 |
| Hourly Exit Rate | 52 | 2 | 24 | 85 | 3 | 334 | 9 | 698 | 52 | 86 | 597 | 4 |
| Input Volume | 62 | 2 | 26 | 90 | 2 | 341 | 9 | 682 | 55 | 90 | 604 | 4 |
| % of Volume | 84 | 89 | 92 | 94 | 133 | 98 | 97 | 102 | 94 | 95 | 99 | 107 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 5.9 |
| Denied Del/Veh (s) | 10.7 |
| Total Delay (hr) | 15.0 |
| Total Del/Veh (s) | 27.6 |
| Vehicles Entered | 1952 |
| Vehicles Exited | 1946 |
| Hourly Exit Rate | 1946 |
| Input Volume | 1968 |
| % of Volume | 99 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Delay (hr) | 1.1 | 0.1 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.9 |
| Total Del/Veh (s) | 25.2 | 17.9 | 12.4 | 16.9 | 8.0 | 6.8 | 0.3 | 0.1 | 3.5 | 1.2 | 1.1 | 5.1 |
| Vehicles Entered | 158 | 28 | 20 | 2 | 136 | 4 | 326 | 3 | 32 | 617 | 34 | 1360 |
| Vehicles Exited | 158 | 28 | 20 | 2 | 135 | 4 | 326 | 3 | 32 | 617 | 34 | 1359 |
| Hourly Exit Rate | 158 | 28 | 20 | 2 | 135 | 4 | 326 | 3 | 32 | 617 | 34 | 1359 |
| Input Volume | 156 | 25 | 19 | 2 | 132 | 5 | 321 | 3 | 33 | 622 | 31 | 1349 |
| % of Volume | 101 | 111 | 104 | 100 | 102 | 80 | 102 | 100 | 98 | 99 | 111 | 101 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 8.3 | 3.6 | 0.2 | 0.1 | 2.3 | 0.2 | 0.3 |
| Vehicles Entered | 2 | 10 | 323 | 2 | 5 | 659 | 1001 |
| Vehicles Exited | 2 | 10 | 323 | 2 | 5 | 659 | 1001 |
| Hourly Exit Rate | 2 | 10 | 323 | 2 | 5 | 659 | 1001 |
| Input Volume | 2 | 8 | 321 | 2 | 6 | 660 | 998 |
| % of Volume | 100 | 125 | 101 | 100 | 83 | 100 | 100 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 9.7 | 3.7 | 1.0 | 1.0 | 2.3 | 0.4 | 0.7 |
| Vehicles Entered | 5 | 5 | 391 | 12 | 7 | 654 | 1074 |
| Vehicles Exited | 5 | 5 | 392 | 12 | 7 | 654 | 1075 |
| Hourly Exit Rate | 5 | 5 | 392 | 12 | 7 | 654 | 1075 |
| Input Volume | 6 | 5 | 387 | 11 | 9 | 652 | 1070 |
| % of Volume | 83 | 100 | 101 | 107 | 78 | 100 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.8 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.4 | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.2 | 0.7 | 0.1 |
| Total Del/Veh (s) | 8.9 | 9.3 | 4.0 | 10.1 | 11.2 | 5.9 | 12.1 | 4.6 | 2.9 | 9.5 | 4.7 | 4.0 |
| Vehicles Entered | 24 | 14 | 18 | 128 | 18 | 28 | 6 | 350 | 104 | 61 | 522 | 76 |
| Vehicles Exited | 24 | 14 | 18 | 129 | 18 | 28 | 6 | 351 | 104 | 61 | 522 | 76 |
| Hourly Exit Rate | 24 | 14 | 18 | 129 | 18 | 28 | 6 | 351 | 104 | 61 | 522 | 76 |
| Input Volume | 23 | 11 | 17 | 128 | 17 | 29 | 6 | 346 | 102 | 63 | 526 | 69 |
| % of Volume | 103 | 124 | 104 | 101 | 104 | 97 | 100 | 101 | 102 | 97 | 99 | 110 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.1 |
| Total Del/Veh (s) | 5.5 |
| Vehicles Entered | 1349 |
| Vehicles Exited | 1351 |
| Hourly Exit Rate | 1351 |
| Input Volume | 1338 |
| % of Volume | 101 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.3 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.3 | 0.4 |
| Total Del/Veh (s) | 2.5 | 0.7 | 4.0 | 3.2 |
| Vehicles Entered | 56 | 84 | 280 | 420 |
| Vehicles Exited | 56 | 84 | 279 | 419 |
| Hourly Exit Rate | 56 | 84 | 279 | 419 |
| Input Volume | 61 | 87 | 288 | 436 |
| % of Volume | 92 | 97 | 97 | 96 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 8.7 |
| Denied Del/Veh (s) | 4.0 |
| Total Delay (hr) | 161.4 |
| Total Del/Veh (s) | 71.0 |
| Vehicles Entered | 7936 |
| Vehicles Exited | 7913 |
| Hourly Exit Rate | 7913 |
| Input Volume | 26394 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 374 | 475 | 529 | 509 | 343 | 89 | 259 | 520 | 551 | 537 | 501 | 388 |
| Average Queue (ft) | 283 | 345 | 299 | 268 | 167 | 33 | 117 | 197 | 428 | 395 | 329 | 219 |
| 95th Queue (ft) | 397 | 500 | 580 | 477 | 293 | 70 | 209 | 424 | 550 | 515 | 445 | 330 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1026 | 1026 | 1026 | |
| Upstream Blk Time (%) | | | 1 | 0 | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 19 | 40 | 10 | | 1 | | 0 | 0 | 11 | | 9 | 1 |
| Queuing Penalty (veh) | 61 | 131 | 56 | | 1 | | 0 | 0 | 27 | | 45 | 3 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | SB | SB | SB | SB | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | R | L | L | T | R | R | | |
| Maximum Queue (ft) | 129 | 249 | 381 | 421 | 250 | 341 | 386 | 541 | 375 | 178 | | |
| Average Queue (ft) | 29 | 173 | 243 | 298 | 193 | 240 | 275 | 245 | 140 | 58 | | |
| 95th Queue (ft) | 84 | 255 | 388 | 472 | 323 | 370 | 406 | 591 | 384 | 143 | | |
| Link Distance (ft) | | | 373 | 373 | | | | 999 | 999 | | | |
| Upstream Blk Time (%) | | | 1 | 13 | | | | 1 | 1 | | | |
| Queuing Penalty (veh) | | | 4 | 70 | | | | 0 | 0 | | | |
| Storage Bay Dist (ft) | 250 | 100 | | | 150 | 320 | 320 | | | 200 | | |
| Storage Blk Time (%) | | 34 | 53 | 45 | 9 | 5 | 12 | 0 | 0 | 0 | | |
| Queuing Penalty (veh) | | 69 | 109 | 186 | 25 | 10 | 25 | 2 | 1 | 0 | | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 74 | 144 | 410 | 414 | 102 | 69 | 384 | 386 | 296 | 210 | 61 | 229 |
| Average Queue (ft) | 24 | 49 | 276 | 287 | 49 | 2 | 14 | 204 | 141 | 99 | 28 | 127 |
| 95th Queue (ft) | 59 | 101 | 383 | 390 | 85 | 71 | 204 | 332 | 245 | 177 | 55 | 213 |
| Link Distance (ft) | | | 2261 | 2261 | | 1026 | 1026 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 6 | 8 | | | | 6 | 0 | 2 | | 2 |
| Queuing Penalty (veh) | | | 5 | 13 | | | | 14 | 0 | 2 | | 2 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 178 | 235 | 324 | 357 | 110 |
| Average Queue (ft) | 74 | 119 | 184 | 207 | 48 |
| 95th Queue (ft) | 142 | 213 | 292 | 327 | 86 |
| Link Distance (ft) | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | | | 5 | 7 | |
| Queuing Penalty (veh) | | | 14 | 14 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 127 | 462 | 200 | 20 | 423 | 513 | 142 | 234 | 222 |
| Average Queue (ft) | 78 | 146 | 113 | 2 | 122 | 192 | 56 | 59 | 68 |
| 95th Queue (ft) | 135 | 397 | 223 | 14 | 400 | 501 | 124 | 197 | 185 |
| Link Distance (ft) | 112 | 693 | | | 686 | 686 | | 373 | 373 |
| Upstream Blk Time (%) | 21 | 0 | | | 1 | 2 | | 0 | 0 |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | 0 | 0 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 3 | 25 | | 11 | | 26 | 9 | |
| Queuing Penalty (veh) | | 13 | 26 | | 1 | | 82 | 10 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 192 | 109 | 31 | 6 | 5 | 35 | 30 | 30 |
| Average Queue (ft) | 85 | 52 | 3 | 0 | 0 | 9 | 1 | 1 |
| 95th Queue (ft) | 160 | 86 | 16 | 5 | 5 | 32 | 13 | 13 |
| Link Distance (ft) | 535 | 986 | | 157 | 157 | | 368 | 368 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | 0 | | | 0 | 0 | |
| Queuing Penalty (veh) | | | 0 | | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 35 | 28 |
| Average Queue (ft) | 10 | 2 |
| 95th Queue (ft) | 34 | 13 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 37 | 4 | 19 |
| Average Queue (ft) | 9 | 0 | 1 |
| 95th Queue (ft) | 32 | 4 | 12 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 63 | 122 | 33 | 103 | 113 | 85 | 120 | 120 |
| Average Queue (ft) | 24 | 56 | 5 | 45 | 48 | 29 | 42 | 61 |
| 95th Queue (ft) | 54 | 97 | 23 | 85 | 87 | 67 | 90 | 104 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 31: 3400 North & Innovation Way

| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 79 |
| Average Queue (ft) | 43 |
| 95th Queue (ft) | 67 |
| Link Distance (ft) | 525 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 1023

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 451 | 425 | 94 | 71.7 | *E* |
| | T | 466 | 449 | 96 | 60.3 | *E* |
| | R | 540 | 505 | 93 | 35.5 | *D* |
| | Subtotal | 1,457 | 1,379 | 95 | 54.7 | *D* |
| SB | L | 390 | 369 | 95 | 182.1 | *F* |
| | T | 263 | 259 | 99 | 100.7 | *F* |
| | R | 425 | 429 | 101 | 17.9 | *B* |
| | Subtotal | 1,078 | 1,057 | 98 | 95.5 | *F* |
| EB | L | 540 | 528 | 98 | 102.7 | *F* |
| | T | 990 | 1,010 | 102 | 45.9 | *D* |
| | R | 246 | 242 | 98 | 9.3 | *A* |
| | Subtotal | 1,776 | 1,780 | 100 | 57.8 | *E* |
| WB | L | 339 | 336 | 99 | 89.5 | *F* |
| | T | 1,715 | 1,720 | 100 | 49.6 | *D* |
| | R | 80 | 73 | 91 | 10.6 | *B* |
| | Subtotal | 2,134 | 2,129 | 100 | 54.6 | *D* |
| **Total** | | 6,447 | 6,345 | 98 | 62.8 | *E* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 150 | 152 | 102 | 80.7 | *F* |
| | T | 117 | 117 | 100 | 50.5 | *D* |
| | R | 324 | 326 | 101 | 18.5 | *B* |
| | Subtotal | 591 | 595 | 101 | 40.7 | *D* |
| SB | L | 270 | 266 | 99 | 68.8 | *E* |
| | T | 273 | 264 | 97 | 47.2 | *D* |
| | R | 225 | 227 | 101 | 7.8 | *A* |
| | Subtotal | 768 | 757 | 99 | 43.0 | *D* |
| EB | L | 90 | 86 | 96 | 82.2 | *F* |
| | T | 1,661 | 1,626 | 98 | 21.6 | *C* |
| | R | 170 | 170 | 100 | 9.9 | *A* |
| | Subtotal | 1,921 | 1,882 | 98 | 23.3 | *C* |
| WB | L | 256 | 255 | 100 | 66.6 | *E* |
| | T | 450 | 456 | 101 | 27.8 | *C* |
| | R | 145 | 143 | 99 | 4.6 | *A* |
| | Subtotal | 851 | 854 | 100 | 35.5 | *D* |
| **Total** | | 4,129 | 4,088 | 99 | 32.2 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 13 | 85 | 29.8 | *C* |
| | T | 965 | 931 | 97 | 49.8 | *D* |
| | R | 49 | 45 | 91 | 65.0 | *E* |
| | Subtotal | 1,029 | 989 | 96 | 50.2 | *D* |
| SB | L | 78 | 76 | 98 | 125.5 | *F* |
| | T | 850 | 843 | 99 | 9.0 | *A* |
| | R | 5 | 5 | 105 | 9.0 | *A* |
| | Subtotal | 933 | 924 | 99 | 18.6 | *B* |
| EB | L | 75 | 46 | 61 | 184.0 | *F* |
| | T | 5 | 3 | 63 | 125.8 | *F* |
| | R | 30 | 19 | 63 | 162.9 | *F* |
| | Subtotal | 110 | 68 | 62 | 175.5 | *F* |
| WB | L | 77 | 77 | 100 | 88.3 | *F* |
| | T | 2 | 3 | 133 | 87.2 | *F* |
| | R | 286 | 270 | 94 | 109.4 | *F* |
| | Subtotal | 365 | 350 | 96 | 104.6 | *F* |
| **Total** | | 2,436 | 2,331 | 96 | 50.0 | *D* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 4 | 67 | 5.2 | *A* |
| | T | 339 | 345 | 102 | 0.3 | *A* |
| | R | 3 | 2 | 67 | 0.1 | *A* |
| | Subtotal | 348 | 351 | 101 | 0.4 | *A* |
| SB | L | 33 | 30 | 92 | 3.4 | *A* |
| | T | 642 | 633 | 99 | 1.1 | *A* |
| | R | 26 | 28 | 107 | 0.9 | *A* |
| | Subtotal | 701 | 691 | 99 | 1.2 | *A* |
| ***EB*** | ***L*** | ***116*** | ***110*** | ***95*** | ***20.9*** | ***C*** |
| | R | 12 | 14 | 114 | 11.5 | *B* |
| | Subtotal | 128 | 124 | 97 | 19.8 | *C* |
| WB | L | 20 | 21 | 104 | 12.9 | *B* |
| | T | 5 | 5 | 100 | 20.0 | *C* |
| | R | 135 | 138 | 102 | 8.3 | *A* |
| | Subtotal | 160 | 164 | 103 | 9.2 | *A* |
| **Total** | | 1,338 | 1,330 | 99 | 3.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 339 | 343 | 101 | 0.2 | *A* |
| | R | 2 | 2 | 100 | 0.3 | *A* |
| | Subtotal | 341 | 345 | 101 | 0.2 | *A* |
| SB | L | 6 | 6 | 100 | 2.9 | *A* |
| | T | 667 | 660 | 99 | 0.2 | *A* |
| | Subtotal | 673 | 666 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***9.4*** | ***A*** |
| | R | 10 | 10 | 98 | 3.1 | *A* |
| | Subtotal | 15 | 15 | 100 | 5.2 | *A* |
| **Total** | | 1,029 | 1,026 | 100 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 387 | 393 | 102 | 1.1 | *A* |
| | R | 11 | 10 | 89 | 1.1 | *A* |
| | Subtotal | 398 | 403 | 101 | 1.1 | *A* |
| SB | L | 9 | 9 | 100 | 2.7 | *A* |
| | T | 662 | 655 | 99 | 0.4 | *A* |
| | Subtotal | 671 | 664 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***10*** | ***98*** | ***10.0*** | ***A*** |
| | R | 10 | 12 | 117 | 4.0 | *A* |
| | Subtotal | 20 | 22 | 110 | 6.7 | *A* |
| **Total** | | 1,089 | 1,089 | 100 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 11.2 | *B* |
| | T | 345 | 352 | 102 | 5.2 | *A* |
| | R | 130 | 125 | 96 | 3.4 | *A* |
| | Subtotal | 481 | 482 | 100 | 4.8 | *A* |
| SB | L | 70 | 70 | 100 | 11.3 | *B* |
| | T | 560 | 553 | 99 | 5.6 | *A* |
| | R | 69 | 71 | 103 | 4.4 | *A* |
| | Subtotal | 699 | 694 | 99 | 6.1 | *A* |
| EB | L | 23 | 22 | 95 | 10.2 | *B* |
| | T | 11 | 13 | 116 | 10.2 | *B* |
| | R | 17 | 19 | 110 | 4.0 | *A* |
| | Subtotal | 51 | 54 | 106 | 8.0 | *A* |
| WB | L | 165 | 164 | 99 | 10.7 | *B* |
| | T | 17 | 17 | 99 | 10.7 | *B* |
| | R | 30 | 30 | 101 | 6.3 | *A* |
| | Subtotal | 212 | 211 | 100 | 10.1 | *A* |
| **Total** | | 1,444 | 1,441 | 100 | 6.3 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.2 | 0.4 | 0.8 | 0.0 | 0.3 | 0.2 | 0.5 | 1.0 | 0.5 | 0.8 |
| Denied Del/Veh (s) | 2.6 | 0.7 | 2.4 | 3.9 | 1.7 | 2.3 | 2.3 | 2.0 | 3.3 | 8.9 | 6.8 | 6.8 |
| Total Delay (hr) | 15.6 | 13.1 | 0.6 | 8.7 | 24.3 | 0.2 | 8.6 | 7.6 | 5.0 | 19.8 | 7.6 | 2.2 |
| Total Del/Veh (s) | 102.7 | 45.9 | 9.3 | 89.5 | 49.6 | 10.6 | 71.7 | 60.3 | 35.5 | 182.1 | 100.7 | 17.9 |
| Vehicles Entered | 534 | 1013 | 243 | 340 | 1726 | 73 | 426 | 449 | 506 | 382 | 263 | 428 |
| Vehicles Exited | 528 | 1010 | 242 | 336 | 1720 | 73 | 425 | 449 | 505 | 369 | 259 | 429 |
| Hourly Exit Rate | 528 | 1010 | 242 | 336 | 1720 | 73 | 425 | 449 | 505 | 369 | 259 | 429 |
| Input Volume | 540 | 990 | 246 | 339 | 1715 | 80 | 451 | 466 | 540 | 390 | 263 | 425 |
| % of Volume | 98 | 102 | 98 | 99 | 100 | 91 | 94 | 96 | 93 | 95 | 99 | 101 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 5.2 |
| Denied Del/Veh (s) | 2.9 |
| Total Delay (hr) | 113.3 |
| Total Del/Veh (s) | 62.8 |
| Vehicles Entered | 6383 |
| Vehicles Exited | 6345 |
| Hourly Exit Rate | 6345 |
| Input Volume | 6447 |
| % of Volume | 98 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.8 | 0.0 | 0.0 | 0.0 | 3.0 | 0.8 | 0.4 |
| Total Delay (hr) | 2.0 | 9.9 | 0.5 | 4.9 | 3.6 | 0.2 | 3.5 | 1.7 | 1.7 | 5.2 | 3.5 | 0.5 |
| Total Del/Veh (s) | 82.2 | 21.6 | 9.9 | 66.6 | 27.8 | 4.6 | 80.7 | 50.5 | 18.5 | 68.8 | 47.2 | 7.8 |
| Vehicles Entered | 87 | 1621 | 171 | 255 | 457 | 143 | 152 | 116 | 325 | 266 | 265 | 227 |
| Vehicles Exited | 86 | 1626 | 170 | 255 | 456 | 143 | 152 | 117 | 326 | 266 | 264 | 227 |
| Hourly Exit Rate | 86 | 1626 | 170 | 255 | 456 | 143 | 152 | 117 | 326 | 266 | 264 | 227 |
| Input Volume | 90 | 1661 | 170 | 256 | 450 | 145 | 150 | 117 | 324 | 270 | 273 | 225 |
| % of Volume | 96 | 98 | 100 | 100 | 101 | 99 | 102 | 100 | 101 | 99 | 97 | 101 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.7 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 37.1 |
| Total Del/Veh (s) | 32.2 |
| Vehicles Entered | 4085 |
| Vehicles Exited | 4088 |
| Hourly Exit Rate | 4088 |
| Input Volume | 4129 |
| % of Volume | 99 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 11.8 | 0.8 | 5.6 | 0.4 | 0.0 | 1.6 | 0.1 | 7.1 | 0.4 | 0.4 | 3.3 | 0.1 |
| Denied Del/Veh (s) | 575.2 | 554.8 | 631.0 | 18.4 | 18.0 | 21.0 | 29.6 | 26.6 | 28.1 | 17.2 | 14.1 | 51.3 |
| Total Delay (hr) | 2.5 | 0.1 | 0.9 | 1.9 | 0.1 | 8.6 | 0.1 | 13.2 | 0.8 | 2.7 | 2.1 | 0.0 |
| Total Del/Veh (s) | 184.0 | 125.8 | 162.9 | 88.3 | 87.2 | 109.4 | 29.8 | 49.8 | 65.0 | 125.5 | 9.0 | 9.0 |
| Vehicles Entered | 47 | 3 | 20 | 78 | 3 | 278 | 12 | 946 | 46 | 77 | 844 | 5 |
| Vehicles Exited | 46 | 3 | 19 | 77 | 3 | 270 | 13 | 931 | 45 | 76 | 843 | 5 |
| Hourly Exit Rate | 46 | 3 | 19 | 77 | 3 | 270 | 13 | 931 | 45 | 76 | 843 | 5 |
| Input Volume | 75 | 5 | 30 | 77 | 2 | 286 | 15 | 965 | 49 | 78 | 850 | 5 |
| % of Volume | 61 | 63 | 63 | 100 | 133 | 94 | 85 | 97 | 91 | 98 | 99 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 31.6 |
| Denied Del/Veh (s) | 47.0 |
| Total Delay (hr) | 33.1 |
| Total Del/Veh (s) | 50.0 |
| Vehicles Entered | 2359 |
| Vehicles Exited | 2331 |
| Hourly Exit Rate | 2331 |
| Input Volume | 2436 |
| % of Volume | 96 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.6 | 0.0 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.4 |
| Total Del/Veh (s) | 20.9 | 11.5 | 12.9 | 20.0 | 8.3 | 5.2 | 0.3 | 0.1 | 3.4 | 1.1 | 0.9 | 3.7 |
| Vehicles Entered | 110 | 14 | 21 | 5 | 138 | 4 | 346 | 2 | 30 | 634 | 28 | 1332 |
| Vehicles Exited | 110 | 14 | 21 | 5 | 138 | 4 | 345 | 2 | 30 | 633 | 28 | 1330 |
| Hourly Exit Rate | 110 | 14 | 21 | 5 | 138 | 4 | 345 | 2 | 30 | 633 | 28 | 1330 |
| Input Volume | 116 | 12 | 20 | 5 | 135 | 6 | 339 | 3 | 33 | 642 | 26 | 1338 |
| % of Volume | 95 | 114 | 104 | 100 | 102 | 67 | 102 | 67 | 92 | 99 | 107 | 99 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 9.4 | 3.1 | 0.2 | 0.3 | 2.9 | 0.2 | 0.3 |
| Vehicles Entered | 5 | 10 | 344 | 2 | 6 | 660 | 1027 |
| Vehicles Exited | 5 | 10 | 343 | 2 | 6 | 660 | 1026 |
| Hourly Exit Rate | 5 | 10 | 343 | 2 | 6 | 660 | 1026 |
| Input Volume | 5 | 10 | 339 | 2 | 6 | 667 | 1029 |
| % of Volume | 100 | 98 | 101 | 100 | 100 | 99 | 100 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 10.0 | 4.0 | 1.1 | 1.1 | 2.7 | 0.4 | 0.8 |
| Vehicles Entered | 10 | 12 | 394 | 10 | 9 | 655 | 1090 |
| Vehicles Exited | 10 | 12 | 393 | 10 | 9 | 655 | 1089 |
| Hourly Exit Rate | 10 | 12 | 393 | 10 | 9 | 655 | 1089 |
| Input Volume | 10 | 10 | 387 | 11 | 9 | 662 | 1089 |
| % of Volume | 98 | 117 | 102 | 89 | 100 | 99 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.4 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.1 | 0.0 | 0.5 | 0.1 | 0.2 | 0.9 | 0.1 |
| Total Del/Veh (s) | 10.2 | 10.2 | 4.0 | 10.7 | 10.7 | 6.3 | 11.2 | 5.2 | 3.4 | 11.3 | 5.6 | 4.4 |
| Vehicles Entered | 22 | 13 | 19 | 165 | 18 | 30 | 5 | 353 | 126 | 71 | 553 | 71 |
| Vehicles Exited | 22 | 13 | 19 | 164 | 17 | 30 | 5 | 352 | 125 | 70 | 553 | 71 |
| Hourly Exit Rate | 22 | 13 | 19 | 164 | 17 | 30 | 5 | 352 | 125 | 70 | 553 | 71 |
| Input Volume | 23 | 11 | 17 | 165 | 17 | 30 | 6 | 345 | 130 | 70 | 560 | 69 |
| % of Volume | 95 | 116 | 110 | 99 | 99 | 101 | 83 | 102 | 96 | 100 | 99 | 103 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.5 |
| Total Del/Veh (s) | 6.3 |
| Vehicles Entered | 1446 |
| Vehicles Exited | 1441 |
| Hourly Exit Rate | 1441 |
| Input Volume | 1444 |
| % of Volume | 100 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 37.6 |
| Denied Del/Veh (s) | 15.7 |
| Total Delay (hr) | 201.6 |
| Total Del/Veh (s) | 82.2 |
| Vehicles Entered | 8546 |
| Vehicles Exited | 8466 |
| Hourly Exit Rate | 8466 |
| Input Volume | 28142 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 377 | 484 | 577 | 503 | 324 | 141 | 288 | 521 | 558 | 520 | 439 | 364 |
| Average Queue (ft) | 278 | 334 | 313 | 288 | 204 | 51 | 157 | 249 | 423 | 373 | 300 | 208 |
| 95th Queue (ft) | 398 | 488 | 542 | 471 | 313 | 106 | 281 | 474 | 560 | 495 | 416 | 323 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1045 | 1045 | 1045 | |
| Upstream Blk Time (%) | | | 1 | 0 | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 17 | 38 | 17 | | 1 | | 2 | 3 | 11 | | 10 | 1 |
| Queuing Penalty (veh) | 56 | 126 | 91 | | 3 | | 9 | 11 | 37 | | 54 | 4 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | SB | SB | SB | SB | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | R | L | L | T | R | R | | |
| Maximum Queue (ft) | 89 | 248 | 393 | 423 | 250 | 348 | 399 | 855 | 571 | 207 | | |
| Average Queue (ft) | 22 | 165 | 274 | 364 | 232 | 270 | 326 | 459 | 216 | 70 | | |
| 95th Queue (ft) | 59 | 258 | 437 | 486 | 306 | 415 | 475 | 955 | 663 | 172 | | |
| Link Distance (ft) | | | 373 | 373 | | | | 1001 | 1001 | | | |
| Upstream Blk Time (%) | | | 1 | 24 | | | | 6 | 1 | | | |
| Queuing Penalty (veh) | | | 10 | 159 | | | | 0 | 0 | | | |
| Storage Bay Dist (ft) | 250 | 150 | | | 150 | 320 | 320 | | | 200 | | |
| Storage Blk Time (%) | | 18 | 32 | 52 | 28 | 13 | 28 | 11 | 1 | 0 | | |
| Queuing Penalty (veh) | | 40 | 72 | 283 | 95 | 35 | 73 | 42 | 2 | 0 | | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 86 | 126 | 352 | 373 | 104 | 491 | 410 | 377 | 341 | 221 | 72 | 256 |
| Average Queue (ft) | 31 | 51 | 210 | 216 | 43 | 14 | 19 | 213 | 148 | 98 | 33 | 142 |
| 95th Queue (ft) | 69 | 99 | 321 | 332 | 82 | 203 | 246 | 349 | 273 | 190 | 59 | 242 |
| Link Distance (ft) | | | 2242 | 2242 | | 1045 | 1045 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 1 | 1 | | | | 8 | 0 | 3 | | 6 |
| Queuing Penalty (veh) | | | 1 | 2 | | | | 17 | 0 | 4 | | 7 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 239 | 257 | 367 | 406 | 138 |
| Average Queue (ft) | 91 | 110 | 231 | 211 | 58 |
| 95th Queue (ft) | 197 | 208 | 354 | 355 | 110 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | 0 | 0 | | | |
| Queuing Penalty (veh) | 1 | 0 | | | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 13 | 5 | |
| Queuing Penalty (veh) | 0 | | 35 | 13 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 147 | 673 | 200 | 52 | 650 | 700 | 149 | 311 | 317 |
| Average Queue (ft) | 100 | 299 | 140 | 4 | 307 | 411 | 71 | 103 | 111 |
| 95th Queue (ft) | 151 | 751 | 250 | 24 | 774 | 815 | 154 | 284 | 273 |
| Link Distance (ft) | 112 | 703 | | | 688 | 688 | | 373 | 373 |
| Upstream Blk Time (%) | 59 | 16 | | | 8 | 20 | | 1 | 1 |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | 3 | 3 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 3 | 46 | 0 | 15 | | 40 | 12 | |
| Queuing Penalty (veh) | | 8 | 40 | 0 | 2 | | 176 | 11 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 151 | 123 | 24 | 36 | 19 | 40 | 22 | 27 |
| Average Queue (ft) | 59 | 54 | 2 | 2 | 1 | 10 | 1 | 2 |
| 95th Queue (ft) | 109 | 92 | 13 | 20 | 10 | 34 | 13 | 15 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 36 | 30 |
| Average Queue (ft) | 12 | 2 |
| 95th Queue (ft) | 37 | 14 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 44 | 5 | 31 |
| Average Queue (ft) | 16 | 0 | 3 |
| 95th Queue (ft) | 42 | 5 | 17 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 70 | 137 | 31 | 109 | 107 | 84 | 119 | 148 |
| Average Queue (ft) | 25 | 63 | 3 | 49 | 51 | 33 | 51 | 70 |
| 95th Queue (ft) | 56 | 107 | 19 | 90 | 91 | 67 | 103 | 121 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Network Summary

Network wide Queuing Penalty: 1527

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 451 | 452 | 100 | 87.8 | *F* |
| | T | 466 | 453 | 97 | 43.7 | *D* |
| | R | 540 | 546 | 101 | 12.7 | *B* |
| | Subtotal | 1,457 | 1,451 | 100 | 45.8 | *D* |
| SB | L | 390 | 398 | 102 | 89.5 | *F* |
| | T | 263 | 256 | 97 | 112.7 | *F* |
| | R | 425 | 416 | 98 | 16.0 | *B* |
| | Subtotal | 1,078 | 1,070 | 99 | 66.5 | *E* |
| EB | L | 540 | 533 | 99 | 88.8 | *F* |
| | T | 990 | 995 | 100 | 51.4 | *D* |
| | R | 246 | 254 | 103 | 10.6 | *B* |
| | Subtotal | 1,776 | 1,782 | 100 | 56.8 | *E* |
| WB | L | 339 | 337 | 99 | 64.8 | *E* |
| | T | 1,715 | 1,711 | 100 | 47.3 | *D* |
| | R | 80 | 84 | 105 | 11.4 | *B* |
| | Subtotal | 2,134 | 2,132 | 100 | 48.7 | *D* |
| **Total** | | 6,447 | 6,435 | 100 | 53.4 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 150 | 143 | 95 | 74.5 | *E* |
| | T | 117 | 117 | 100 | 52.7 | *D* |
| | R | 324 | 331 | 102 | 19.3 | *B* |
| | Subtotal | 591 | 591 | 100 | 39.3 | *D* |
| SB | L | 270 | 261 | 97 | 70.7 | *E* |
| | T | 273 | 268 | 98 | 51.0 | *D* |
| | R | 225 | 238 | 106 | 7.7 | *A* |
| | Subtotal | 768 | 767 | 100 | 44.3 | *D* |
| EB | L | 90 | 88 | 98 | 84.5 | *F* |
| | T | 1,661 | 1,680 | 101 | 24.5 | *C* |
| | R | 170 | 174 | 102 | 10.4 | *B* |
| | Subtotal | 1,921 | 1,942 | 101 | 26.0 | *C* |
| WB | L | 256 | 249 | 97 | 63.2 | *E* |
| | T | 450 | 450 | 100 | 28.8 | *C* |
| | R | 145 | 149 | 103 | 4.8 | *A* |
| | Subtotal | 851 | 848 | 100 | 34.7 | *C* |
| **Total** | | 4,129 | 4,148 | 100 | 33.1 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 15 | 98 | 22.7 | *C* |
| | T | 965 | 957 | 99 | 11.3 | *B* |
| | R | 49 | 51 | 104 | 9.8 | *A* |
| | Subtotal | 1,029 | 1,023 | 99 | 11.4 | *B* |
| SB | L | 78 | 78 | 100 | 75.9 | *E* |
| | T | 850 | 853 | 100 | 4.7 | *A* |
| | R | 5 | 5 | 105 | 2.8 | *A* |
| | Subtotal | 933 | 936 | 100 | 10.6 | *B* |
| EB | L | 75 | 73 | 97 | 83.6 | *F* |
| | T | 5 | 6 | 126 | 78.2 | *E* |
| | R | 30 | 32 | 106 | 61.0 | *E* |
| | Subtotal | 110 | 111 | 101 | 76.8 | *E* |
| WB | L | 77 | 77 | 100 | 60.5 | *E* |
| | T | 2 | 2 | 89 | 76.5 | *E* |
| | R | 286 | 289 | 101 | 39.9 | *D* |
| | Subtotal | 365 | 368 | 101 | 44.4 | *D* |
| **Total** | | 2,436 | 2,438 | 100 | 19.1 | *B* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 4.6 | *A* |
| | T | 339 | 339 | 100 | 0.3 | *A* |
| | R | 3 | 3 | 100 | 0.1 | *A* |
| | Subtotal | 348 | 348 | 100 | 0.4 | *A* |
| SB | L | 33 | 31 | 95 | 3.6 | *A* |
| | T | 642 | 634 | 99 | 1.1 | *A* |
| | R | 26 | 28 | 107 | 1.1 | *A* |
| | Subtotal | 701 | 693 | 99 | 1.2 | *A* |
| ***EB*** | ***L*** | ***116*** | ***112*** | ***97*** | ***24.6*** | ***C*** |
| | R | 12 | 14 | 114 | 15.8 | *C* |
| | Subtotal | 128 | 126 | 98 | 23.6 | *C* |
| WB | L | 20 | 21 | 104 | 13.9 | *B* |
| | T | 5 | 5 | 100 | 23.0 | *C* |
| | R | 135 | 141 | 104 | 9.1 | *A* |
| | Subtotal | 160 | 167 | 104 | 10.1 | *B* |
| **Total** | | 1,338 | 1,334 | 100 | 4.2 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 339 | 338 | 100 | 0.2 | *A* |
| | R | 2 | 2 | 100 | 0.1 | *A* |
| | Subtotal | 341 | 340 | 100 | 0.2 | *A* |
| SB | L | 6 | 5 | 83 | 2.6 | *A* |
| | T | 667 | 662 | 99 | 0.2 | *A* |
| | Subtotal | 673 | 667 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***5*** | ***4*** | ***80*** | ***10.6*** | ***B*** |
| | R | 10 | 11 | 107 | 3.3 | *A* |
| | Subtotal | 15 | 15 | 100 | 5.2 | *A* |
| | | | | | | |
| **Total** | | 1,029 | 1,022 | 99 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 387 | 388 | 100 | 1.1 | *A* |
| | R | 11 | 10 | 89 | 1.2 | *A* |
| | Subtotal | 398 | 398 | 100 | 1.1 | *A* |
| SB | L | 9 | 8 | 89 | 2.5 | *A* |
| | T | 662 | 656 | 99 | 0.4 | *A* |
| | Subtotal | 671 | 664 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***9*** | ***88*** | ***8.7*** | ***A*** |
| | R | 10 | 12 | 117 | 3.1 | *A* |
| | Subtotal | 20 | 21 | 105 | 5.5 | *A* |
| | | | | | | |
| **Total** | | 1,089 | 1,083 | 99 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 9.5 | *A* |
| | T | 345 | 343 | 99 | 4.9 | *A* |
| | R | 130 | 132 | 101 | 3.0 | *A* |
| | Subtotal | 481 | 480 | 100 | 4.4 | *A* |
| SB | L | 70 | 66 | 94 | 10.9 | *B* |
| | T | 560 | 555 | 99 | 5.7 | *A* |
| | R | 69 | 67 | 97 | 4.6 | *A* |
| | Subtotal | 699 | 688 | 98 | 6.1 | *A* |
| EB | L | 23 | 23 | 99 | 9.4 | *A* |
| | T | 11 | 11 | 98 | 9.4 | *A* |
| | R | 17 | 16 | 93 | 4.6 | *A* |
| | Subtotal | 51 | 50 | 98 | 7.9 | *A* |
| WB | L | 165 | 163 | 99 | 10.8 | *B* |
| | T | 17 | 15 | 87 | 10.9 | *B* |
| | R | 30 | 32 | 108 | 5.8 | *A* |
| | Subtotal | 212 | 210 | 99 | 10.0 | *A* |
| **Total** | | 1,444 | 1,428 | 99 | 6.2 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.4 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 2.3 | 0.6 | 2.2 | 1.6 | 0.2 | 1.6 | 0.7 | 0.1 | 0.5 | 3.3 | 1.4 | 1.1 |
| Total Delay (hr) | 13.5 | 14.5 | 0.8 | 6.3 | 23.0 | 0.3 | 11.2 | 5.6 | 1.9 | 10.1 | 8.4 | 1.9 |
| Total Del/Veh (s) | 88.8 | 51.4 | 10.6 | 64.8 | 47.3 | 11.4 | 87.8 | 43.7 | 12.7 | 89.5 | 112.7 | 16.0 |
| Vehicles Entered | 537 | 996 | 254 | 338 | 1712 | 84 | 453 | 452 | 546 | 401 | 259 | 415 |
| Vehicles Exited | 533 | 995 | 254 | 337 | 1711 | 84 | 452 | 453 | 546 | 398 | 256 | 416 |
| Hourly Exit Rate | 533 | 995 | 254 | 337 | 1711 | 84 | 452 | 453 | 546 | 398 | 256 | 416 |
| Input Volume | 540 | 990 | 246 | 339 | 1715 | 80 | 451 | 466 | 540 | 390 | 263 | 425 |
| % of Volume | 99 | 100 | 103 | 99 | 100 | 105 | 100 | 97 | 101 | 102 | 97 | 98 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 1.7 |
| Denied Del/Veh (s) | 0.9 |
| Total Delay (hr) | 97.3 |
| Total Del/Veh (s) | 53.4 |
| Vehicles Entered | 6447 |
| Vehicles Exited | 6435 |
| Hourly Exit Rate | 6435 |
| Input Volume | 6447 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.8 | 0.0 | 0.0 | 0.0 | 3.0 | 0.7 | 0.4 |
| Total Delay (hr) | 2.1 | 11.6 | 0.5 | 4.5 | 3.6 | 0.2 | 3.0 | 1.7 | 1.8 | 5.3 | 3.9 | 0.5 |
| Total Del/Veh (s) | 84.5 | 24.5 | 10.4 | 63.2 | 28.8 | 4.8 | 74.5 | 52.7 | 19.3 | 70.7 | 51.0 | 7.7 |
| Vehicles Entered | 87 | 1678 | 174 | 250 | 452 | 149 | 143 | 117 | 332 | 262 | 268 | 237 |
| Vehicles Exited | 88 | 1680 | 174 | 249 | 450 | 149 | 143 | 117 | 331 | 261 | 268 | 238 |
| Hourly Exit Rate | 88 | 1680 | 174 | 249 | 450 | 149 | 143 | 117 | 331 | 261 | 268 | 238 |
| Input Volume | 90 | 1661 | 170 | 256 | 450 | 145 | 150 | 117 | 324 | 270 | 273 | 225 |
| % of Volume | 98 | 101 | 102 | 97 | 100 | 103 | 95 | 100 | 102 | 97 | 98 | 106 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.7 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 38.8 |
| Total Del/Veh (s) | 33.1 |
| Vehicles Entered | 4149 |
| Vehicles Exited | 4148 |
| Hourly Exit Rate | 4148 |
| Input Volume | 4129 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 1.5 | 0.2 | 0.7 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.1 | 1.4 | 0.0 |
| Denied Del/Veh (s) | 70.0 | 142.2 | 73.5 | 1.1 | 2.6 | 3.9 | 2.5 | 0.4 | 0.4 | 5.5 | 5.9 | 18.3 |
| Total Delay (hr) | 1.7 | 0.1 | 0.5 | 1.3 | 0.0 | 3.2 | 0.1 | 3.0 | 0.1 | 1.6 | 1.1 | 0.0 |
| Total Del/Veh (s) | 83.6 | 78.2 | 61.0 | 60.5 | 76.5 | 39.9 | 22.7 | 11.3 | 9.8 | 75.9 | 4.7 | 2.8 |
| Vehicles Entered | 73 | 6 | 32 | 77 | 2 | 290 | 15 | 961 | 51 | 78 | 853 | 5 |
| Vehicles Exited | 73 | 6 | 32 | 77 | 2 | 289 | 15 | 957 | 51 | 78 | 853 | 5 |
| Hourly Exit Rate | 73 | 6 | 32 | 77 | 2 | 289 | 15 | 957 | 51 | 78 | 853 | 5 |
| Input Volume | 75 | 5 | 30 | 77 | 2 | 286 | 15 | 965 | 49 | 78 | 850 | 5 |
| % of Volume | 97 | 126 | 106 | 100 | 89 | 101 | 98 | 99 | 104 | 100 | 100 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 4.4 |
| Denied Del/Veh (s) | 6.5 |
| Total Delay (hr) | 13.0 |
| Total Del/Veh (s) | 19.1 |
| Vehicles Entered | 2443 |
| Vehicles Exited | 2438 |
| Hourly Exit Rate | 2438 |
| Input Volume | 2436 |
| % of Volume | 100 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.8 | 0.1 | 0.1 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.6 |
| Total Del/Veh (s) | 24.6 | 15.8 | 13.9 | 23.0 | 9.1 | 4.6 | 0.3 | 0.1 | 3.6 | 1.1 | 1.1 | 4.2 |
| Vehicles Entered | 112 | 14 | 21 | 5 | 142 | 6 | 339 | 3 | 31 | 635 | 28 | 1336 |
| Vehicles Exited | 112 | 14 | 21 | 5 | 141 | 6 | 339 | 3 | 31 | 634 | 28 | 1334 |
| Hourly Exit Rate | 112 | 14 | 21 | 5 | 141 | 6 | 339 | 3 | 31 | 634 | 28 | 1334 |
| Input Volume | 116 | 12 | 20 | 5 | 135 | 6 | 339 | 3 | 33 | 642 | 26 | 1338 |
| % of Volume | 97 | 114 | 104 | 100 | 104 | 100 | 100 | 100 | 95 | 99 | 107 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 10.6 | 3.3 | 0.2 | 0.1 | 2.6 | 0.2 | 0.3 |
| Vehicles Entered | 4 | 11 | 338 | 2 | 5 | 662 | 1022 |
| Vehicles Exited | 4 | 11 | 338 | 2 | 5 | 662 | 1022 |
| Hourly Exit Rate | 4 | 11 | 338 | 2 | 5 | 662 | 1022 |
| Input Volume | 5 | 10 | 339 | 2 | 6 | 667 | 1029 |
| % of Volume | 80 | 107 | 100 | 100 | 83 | 99 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 8.7 | 3.1 | 1.1 | 1.2 | 2.5 | 0.4 | 0.7 |
| Vehicles Entered | 9 | 12 | 388 | 10 | 8 | 657 | 1084 |
| Vehicles Exited | 9 | 12 | 388 | 10 | 8 | 656 | 1083 |
| Hourly Exit Rate | 9 | 12 | 388 | 10 | 8 | 656 | 1083 |
| Input Volume | 10 | 10 | 387 | 11 | 9 | 662 | 1089 |
| % of Volume | 88 | 117 | 100 | 89 | 89 | 99 | 99 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.3 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 0.5 | 0.1 | 0.2 | 0.9 | 0.1 |
| Total Del/Veh (s) | 9.4 | 9.4 | 4.6 | 10.8 | 10.9 | 5.8 | 9.5 | 4.9 | 3.0 | 10.9 | 5.7 | 4.6 |
| Vehicles Entered | 23 | 12 | 17 | 163 | 15 | 32 | 5 | 344 | 133 | 66 | 556 | 67 |
| Vehicles Exited | 23 | 11 | 16 | 163 | 15 | 32 | 5 | 343 | 132 | 66 | 555 | 67 |
| Hourly Exit Rate | 23 | 11 | 16 | 163 | 15 | 32 | 5 | 343 | 132 | 66 | 555 | 67 |
| Input Volume | 23 | 11 | 17 | 165 | 17 | 30 | 6 | 345 | 130 | 70 | 560 | 69 |
| % of Volume | 99 | 98 | 93 | 99 | 87 | 108 | 83 | 99 | 101 | 94 | 99 | 97 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.5 |
| Total Del/Veh (s) | 6.2 |
| Vehicles Entered | 1433 |
| Vehicles Exited | 1428 |
| Hourly Exit Rate | 1428 |
| Input Volume | 1444 |
| % of Volume | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 6.8 |
| Denied Del/Veh (s) | 2.9 |
| Total Delay (hr) | 167.4 |
| Total Del/Veh (s) | 67.7 |
| Vehicles Entered | 8614 |
| Vehicles Exited | 8586 |
| Hourly Exit Rate | 8586 |
| Input Volume | 28142 |
| % of Volume | 31 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 377 | 494 | 547 | 472 | 372 | 158 | 221 | 517 | 540 | 505 | 425 | 330 |
| Average Queue (ft) | 264 | 317 | 304 | 284 | 218 | 58 | 126 | 202 | 407 | 362 | 281 | 189 |
| 95th Queue (ft) | 380 | 456 | 445 | 403 | 331 | 118 | 197 | 389 | 541 | 478 | 391 | 293 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1033 | 1033 | 1033 | |
| Upstream Blk Time (%) | | | 0 | | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 11 | 33 | 21 | | 2 | 0 | | 0 | 9 | | 8 | 0 |
| Queuing Penalty (veh) | 35 | 107 | 112 | | 5 | 0 | | 0 | 31 | | 40 | 2 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | R | R | |
| Maximum Queue (ft) | 129 | 200 | 250 | 396 | 431 | 246 | 326 | 402 | 750 | 528 | 186 | |
| Average Queue (ft) | 19 | 182 | 223 | 255 | 211 | 120 | 191 | 266 | 355 | 148 | 60 | |
| 95th Queue (ft) | 72 | 227 | 282 | 448 | 428 | 218 | 306 | 418 | 759 | 433 | 155 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 1001 | 1001 | | |
| Upstream Blk Time (%) | | | | 7 | 5 | | | | 2 | 0 | | |
| Queuing Penalty (veh) | | | | 45 | 33 | | | | 0 | 0 | | |
| Storage Bay Dist (ft) | 250 | 150 | 150 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 27 | 48 | 6 | 7 | 5 | 0 | 2 | 18 | 0 | 0 | |
| Queuing Penalty (veh) | | 45 | 80 | 26 | 35 | 8 | 1 | 6 | 72 | 1 | 0 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 82 | 146 | 378 | 391 | 99 | 620 | 639 | 340 | 321 | 239 | 78 | 238 |
| Average Queue (ft) | 32 | 53 | 229 | 239 | 44 | 30 | 43 | 201 | 151 | 104 | 33 | 131 |
| 95th Queue (ft) | 69 | 104 | 340 | 358 | 83 | 314 | 379 | 314 | 273 | 203 | 61 | 218 |
| Link Distance (ft) | | | 2242 | 2242 | | 1033 | 1033 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 1 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | 0 | 2 | 3 | | | | 5 | 0 | 3 | | 2 |
| Queuing Penalty (veh) | | 0 | 2 | 5 | | | | 11 | 1 | 4 | | 3 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 222 | 254 | 358 | 468 | 174 |
| Average Queue (ft) | 84 | 115 | 227 | 230 | 62 |
| 95th Queue (ft) | 168 | 211 | 357 | 455 | 128 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | | 0 | | 0 | |
| Queuing Penalty (veh) | | 0 | | 0 | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 13 | 5 | |
| Queuing Penalty (veh) | 0 | | 36 | 14 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 132 | 541 | 200 | 54 | 400 | 391 | 149 | 291 | 290 |
| Average Queue (ft) | 89 | 137 | 100 | 6 | 122 | 130 | 56 | 57 | 60 |
| 95th Queue (ft) | 144 | 425 | 209 | 31 | 310 | 307 | 133 | 215 | 204 |
| Link Distance (ft) | 105 | 705 | | | 688 | 688 | | 374 | 374 |
| Upstream Blk Time (%) | 31 | 1 | | | | | | 0 | 0 |
| Queuing Penalty (veh) | 0 | 0 | | | | | | 0 | 1 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 3 | 23 | 0 | 16 | | 26 | 4 | |
| Queuing Penalty (veh) | | 10 | 21 | 0 | 3 | | 125 | 4 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | TR | L | T | TR |
| Maximum Queue (ft) | 164 | 121 | 30 | 10 | 44 | 18 | 33 |
| Average Queue (ft) | 65 | 56 | 3 | 1 | 8 | 1 | 1 |
| 95th Queue (ft) | 126 | 98 | 17 | 8 | 32 | 11 | 16 |
| Link Distance (ft) | 1253 | 986 | | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | |
| Queuing Penalty (veh) | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | 50 | | |
| Storage Blk Time (%) | | | | | 0 | 0 | |
| Queuing Penalty (veh) | | | | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 38 | 24 |
| Average Queue (ft) | 12 | 1 |
| 95th Queue (ft) | 37 | 11 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 40 | 27 |
| Average Queue (ft) | 15 | 2 |
| 95th Queue (ft) | 41 | 15 |
| Link Distance (ft) | 245 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 52 | 140 | 30 | 92 | 125 | 88 | 132 | 142 |
| Average Queue (ft) | 24 | 66 | 3 | 46 | 50 | 32 | 54 | 72 |
| 95th Queue (ft) | 52 | 111 | 18 | 81 | 93 | 68 | 108 | 124 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 1 | |

## Network Summary

Network wide Queuing Penalty: 927

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 500 | 482 | 96 | 96.6 | *F* |
| | T | 478 | 466 | 97 | 44.3 | *D* |
| | R | 540 | 526 | 97 | 13.2 | *B* |
| | Subtotal | 1,518 | 1,474 | 97 | 50.3 | *D* |
| SB | L | 390 | 384 | 98 | 81.8 | *F* |
| | T | 264 | 258 | 98 | 122.9 | *F* |
| | R | 425 | 434 | 102 | 18.2 | *B* |
| | Subtotal | 1,079 | 1,076 | 100 | 66.0 | *E* |
| EB | L | 540 | 534 | 99 | 121.7 | *F* |
| | T | 990 | 978 | 99 | 57.7 | *E* |
| | R | 256 | 260 | 101 | 12.2 | *B* |
| | Subtotal | 1,786 | 1,772 | 99 | 70.3 | *E* |
| WB | L | 340 | 352 | 104 | 70.4 | *E* |
| | T | 1,725 | 1,745 | 101 | 50.2 | *D* |
| | R | 80 | 80 | 100 | 11.5 | *B* |
| | Subtotal | 2,145 | 2,177 | 101 | 52.0 | *D* |
| **Total** | | 6,530 | 6,499 | 100 | 59.3 | *E* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 160 | 164 | 103 | 80.5 | *F* |
| | T | 120 | 121 | 101 | 54.5 | *D* |
| | R | 351 | 355 | 101 | 19.5 | *B* |
| | Subtotal | 631 | 640 | 101 | 41.7 | *D* |
| SB | L | 270 | 258 | 96 | 66.4 | *E* |
| | T | 273 | 274 | 100 | 52.2 | *D* |
| | R | 225 | 234 | 104 | 7.4 | *A* |
| | Subtotal | 768 | 766 | 100 | 43.3 | *D* |
| EB | L | 90 | 90 | 100 | 80.4 | *F* |
| | T | 1,661 | 1,638 | 99 | 22.9 | *C* |
| | R | 170 | 164 | 96 | 10.0 | *A* |
| | Subtotal | 1,921 | 1,892 | 98 | 24.5 | *C* |
| WB | L | 261 | 260 | 100 | 69.1 | *E* |
| | T | 451 | 462 | 102 | 28.1 | *C* |
| | R | 145 | 142 | 98 | 4.7 | *A* |
| | Subtotal | 857 | 864 | 101 | 36.6 | *D* |
| **Total** | | 4,175 | 4,162 | 100 | 33.2 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 16 | 105 | 27.9 | *C* |
| | T | 965 | 965 | 100 | 19.1 | *B* |
| | R | 55 | 53 | 96 | 14.5 | *B* |
| | Subtotal | 1,035 | 1,034 | 100 | 19.0 | *B* |
| SB | L | 90 | 89 | 99 | 110.6 | *F* |
| | T | 850 | 863 | 101 | 6.5 | *A* |
| | R | 5 | 5 | 105 | 4.3 | *A* |
| | Subtotal | 945 | 957 | 101 | 16.2 | *B* |
| EB | L | 75 | 58 | 77 | 141.2 | *F* |
| | T | 5 | 5 | 105 | 138.9 | *F* |
| | R | 30 | 25 | 83 | 94.0 | *F* |
| | Subtotal | 110 | 88 | 80 | 127.7 | *F* |
| WB | L | 90 | 87 | 96 | 78.9 | *E* |
| | T | 2 | 3 | 133 | 88.6 | *F* |
| | R | 341 | 319 | 94 | 85.9 | *F* |
| | Subtotal | 433 | 409 | 94 | 84.4 | *F* |
| **Total** | | 2,524 | 2,488 | 99 | 32.9 | *C* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 7 | 7 | 100 | 5.5 | *A* |
| | T | 339 | 352 | 104 | 0.3 | *A* |
| | R | 3 | 3 | 100 | 0.1 | *A* |
| | Subtotal | 349 | 362 | 104 | 0.4 | *A* |
| SB | L | 33 | 33 | 101 | 3.7 | *A* |
| | T | 642 | 638 | 99 | 1.1 | *A* |
| | R | 31 | 30 | 98 | 1.0 | *A* |
| | Subtotal | 706 | 701 | 99 | 1.2 | *A* |
| ***EB*** | ***L*** | ***156*** | ***152*** | ***98*** | ***26.4*** | ***D*** |
| | R | 25 | 28 | 111 | 17.1 | *C* |
| | Subtotal | 181 | 180 | 99 | 25.0 | *C* |
| WB | L | 20 | 21 | 104 | 14.2 | *B* |
| | T | 5 | 4 | 80 | 20.5 | *C* |
| | R | 135 | 134 | 99 | 8.4 | *A* |
| | Subtotal | 160 | 159 | 99 | 9.5 | *A* |
| **Total** | | 1,396 | 1,402 | 100 | 5.1 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 339 | 350 | 103 | 0.2 | *A* |
| | R | 5 | 6 | 120 | 0.2 | *A* |
| | Subtotal | 344 | 356 | 103 | 0.2 | *A* |
| SB | L | 6 | 8 | 133 | 2.3 | *A* |
| | T | 680 | 676 | 99 | 0.2 | *A* |
| | Subtotal | 686 | 684 | 100 | 0.2 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***10.0*** | ***A*** |
| | R | 10 | 11 | 107 | 2.7 | *A* |
| | Subtotal | 15 | 16 | 107 | 5.0 | *A* |
| **Total** | | 1,045 | 1,056 | 101 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 388 | 401 | 103 | 1.1 | *A* |
| | R | 11 | 12 | 107 | 1.0 | *A* |
| | Subtotal | 399 | 413 | 104 | 1.1 | *A* |
| SB | L | 9 | 8 | 89 | 3.0 | *A* |
| | T | 675 | 672 | 100 | 0.4 | *A* |
| | Subtotal | 684 | 680 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***11*** | ***107*** | ***8.2*** | ***A*** |
| | R | 10 | 12 | 117 | 3.4 | *A* |
| | Subtotal | 20 | 23 | 115 | 5.7 | *A* |
| **Total** | | 1,104 | 1,116 | 101 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 10.6 | *B* |
| | T | 346 | 359 | 104 | 5.1 | *A* |
| | R | 130 | 130 | 100 | 3.4 | *A* |
| | Subtotal | 482 | 494 | 102 | 4.7 | *A* |
| SB | L | 70 | 69 | 98 | 10.4 | *B* |
| | T | 573 | 573 | 100 | 5.7 | *A* |
| | R | 69 | 69 | 100 | 4.6 | *A* |
| | Subtotal | 712 | 711 | 100 | 6.0 | *A* |
| EB | L | 23 | 23 | 99 | 10.3 | *B* |
| | T | 11 | 13 | 116 | 9.9 | *A* |
| | R | 17 | 17 | 99 | 5.0 | *A* |
| | Subtotal | 51 | 53 | 104 | 8.5 | *A* |
| WB | L | 165 | 162 | 98 | 11.0 | *B* |
| | T | 17 | 18 | 104 | 11.9 | *B* |
| | R | 30 | 31 | 104 | 5.7 | *A* |
| | Subtotal | 212 | 211 | 100 | 10.3 | *B* |
| **Total** | | 1,458 | 1,469 | 101 | 6.3 | *A* |

**Intersection:** 3400 North & Innovation Way
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***289*** | ***100*** | ***6.6*** | ***A*** |
| | Subtotal | 288 | 289 | 100 | 6.6 | *A* |
| EB | L | 61 | 60 | 98 | 2.6 | *A* |
| | T | 89 | 87 | 97 | 0.7 | *A* |
| | Subtotal | 150 | 147 | 98 | 1.5 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 438 | 436 | 99 | 4.9 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 1.2 | 1.6 | 0.5 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.8 | 0.3 | 0.6 |
| Denied Del/Veh (s) | 7.8 | 5.8 | 6.4 | 1.6 | 0.2 | 1.6 | 1.0 | 0.2 | 0.6 | 7.0 | 4.9 | 5.0 |
| Total Delay (hr) | 18.7 | 15.8 | 0.9 | 7.0 | 24.8 | 0.3 | 13.4 | 5.8 | 1.9 | 9.1 | 9.3 | 2.2 |
| Total Del/Veh (s) | 121.7 | 57.7 | 12.2 | 70.4 | 50.2 | 11.5 | 96.6 | 44.3 | 13.2 | 81.8 | 122.9 | 18.2 |
| Vehicles Entered | 546 | 979 | 261 | 350 | 1748 | 80 | 482 | 466 | 525 | 392 | 259 | 434 |
| Vehicles Exited | 534 | 978 | 260 | 352 | 1745 | 80 | 482 | 466 | 526 | 384 | 258 | 434 |
| Hourly Exit Rate | 534 | 978 | 260 | 352 | 1745 | 80 | 482 | 466 | 526 | 384 | 258 | 434 |
| Input Volume | 540 | 990 | 256 | 340 | 1725 | 80 | 500 | 478 | 540 | 390 | 264 | 425 |
| % of Volume | 99 | 99 | 101 | 104 | 101 | 100 | 96 | 97 | 97 | 98 | 98 | 102 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 5.5 |
| Denied Del/Veh (s) | 3.0 |
| Total Delay (hr) | 109.2 |
| Total Del/Veh (s) | 59.3 |
| Vehicles Entered | 6522 |
| Vehicles Exited | 6499 |
| Hourly Exit Rate | 6499 |
| Input Volume | 6530 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.9 | 0.0 | 0.0 | 0.0 | 3.0 | 0.7 | 0.4 |
| Total Delay (hr) | 2.1 | 10.6 | 0.5 | 5.1 | 3.7 | 0.2 | 3.7 | 1.8 | 1.9 | 4.8 | 4.0 | 0.5 |
| Total Del/Veh (s) | 80.4 | 22.9 | 10.0 | 69.1 | 28.1 | 4.7 | 80.5 | 54.5 | 19.5 | 66.4 | 52.2 | 7.4 |
| Vehicles Entered | 90 | 1637 | 164 | 260 | 461 | 143 | 162 | 121 | 356 | 258 | 275 | 233 |
| Vehicles Exited | 90 | 1638 | 164 | 260 | 462 | 142 | 164 | 121 | 355 | 258 | 274 | 234 |
| Hourly Exit Rate | 90 | 1638 | 164 | 260 | 462 | 142 | 164 | 121 | 355 | 258 | 274 | 234 |
| Input Volume | 90 | 1661 | 170 | 261 | 451 | 145 | 160 | 120 | 351 | 270 | 273 | 225 |
| % of Volume | 100 | 99 | 96 | 100 | 102 | 98 | 103 | 101 | 101 | 96 | 100 | 104 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.7 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 39.0 |
| Total Del/Veh (s) | 33.2 |
| Vehicles Entered | 4160 |
| Vehicles Exited | 4162 |
| Hourly Exit Rate | 4162 |
| Input Volume | 4175 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 5.9 | 0.4 | 2.6 | 1.9 | 0.1 | 7.5 | 0.0 | 0.2 | 0.0 | 0.4 | 1.7 | 0.0 |
| Denied Del/Veh (s) | 281.0 | 267.3 | 284.3 | 77.4 | 129.3 | 79.7 | 2.8 | 0.6 | 0.8 | 15.6 | 7.2 | 0.2 |
| Total Delay (hr) | 2.4 | 0.2 | 0.7 | 1.9 | 0.1 | 7.9 | 0.1 | 5.2 | 0.2 | 2.8 | 1.6 | 0.0 |
| Total Del/Veh (s) | 141.2 | 138.9 | 94.0 | 78.9 | 88.6 | 85.9 | 27.9 | 19.1 | 14.5 | 110.6 | 6.5 | 4.3 |
| Vehicles Entered | 59 | 5 | 26 | 87 | 3 | 327 | 17 | 967 | 53 | 90 | 863 | 5 |
| Vehicles Exited | 58 | 5 | 25 | 87 | 3 | 319 | 16 | 965 | 53 | 89 | 863 | 5 |
| Hourly Exit Rate | 58 | 5 | 25 | 87 | 3 | 319 | 16 | 965 | 53 | 89 | 863 | 5 |
| Input Volume | 75 | 5 | 30 | 90 | 2 | 341 | 15 | 965 | 55 | 90 | 850 | 5 |
| % of Volume | 77 | 105 | 83 | 96 | 133 | 94 | 105 | 100 | 96 | 99 | 101 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 20.8 |
| Denied Del/Veh (s) | 29.4 |
| Total Delay (hr) | 23.0 |
| Total Del/Veh (s) | 32.9 |
| Vehicles Entered | 2502 |
| Vehicles Exited | 2488 |
| Hourly Exit Rate | 2488 |
| Input Volume | 2524 |
| % of Volume | 99 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 1.1 | 0.1 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 2.0 |
| Total Del/Veh (s) | 26.4 | 17.1 | 14.2 | 20.5 | 8.4 | 5.5 | 0.3 | 0.1 | 3.7 | 1.1 | 1.0 | 5.1 |
| Vehicles Entered | 153 | 28 | 21 | 4 | 133 | 7 | 351 | 3 | 33 | 636 | 29 | 1398 |
| Vehicles Exited | 152 | 28 | 21 | 4 | 134 | 7 | 352 | 3 | 33 | 638 | 30 | 1402 |
| Hourly Exit Rate | 152 | 28 | 21 | 4 | 134 | 7 | 352 | 3 | 33 | 638 | 30 | 1402 |
| Input Volume | 156 | 25 | 20 | 5 | 135 | 7 | 339 | 3 | 33 | 642 | 31 | 1396 |
| % of Volume | 98 | 111 | 104 | 80 | 99 | 100 | 104 | 100 | 101 | 99 | 98 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 10.0 | 2.7 | 0.2 | 0.2 | 2.3 | 0.2 | 0.3 |
| Vehicles Entered | 5 | 11 | 350 | 6 | 8 | 676 | 1056 |
| Vehicles Exited | 5 | 11 | 350 | 6 | 8 | 676 | 1056 |
| Hourly Exit Rate | 5 | 11 | 350 | 6 | 8 | 676 | 1056 |
| Input Volume | 5 | 10 | 339 | 5 | 6 | 680 | 1045 |
| % of Volume | 100 | 107 | 103 | 120 | 133 | 99 | 101 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 8.2 | 3.4 | 1.1 | 1.0 | 3.0 | 0.4 | 0.8 |
| Vehicles Entered | 11 | 12 | 401 | 12 | 8 | 672 | 1116 |
| Vehicles Exited | 11 | 12 | 401 | 12 | 8 | 672 | 1116 |
| Hourly Exit Rate | 11 | 12 | 401 | 12 | 8 | 672 | 1116 |
| Input Volume | 10 | 10 | 388 | 11 | 9 | 675 | 1104 |
| % of Volume | 107 | 117 | 103 | 107 | 89 | 100 | 101 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.6 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.2 | 0.9 | 0.1 |
| Total Del/Veh (s) | 10.3 | 9.9 | 5.0 | 11.0 | 11.9 | 5.7 | 10.6 | 5.1 | 3.4 | 10.4 | 5.7 | 4.6 |
| Vehicles Entered | 23 | 13 | 17 | 163 | 18 | 31 | 5 | 359 | 130 | 69 | 573 | 69 |
| Vehicles Exited | 23 | 13 | 17 | 162 | 18 | 31 | 5 | 359 | 130 | 69 | 573 | 69 |
| Hourly Exit Rate | 23 | 13 | 17 | 162 | 18 | 31 | 5 | 359 | 130 | 69 | 573 | 69 |
| Input Volume | 23 | 11 | 17 | 165 | 17 | 30 | 6 | 346 | 130 | 70 | 573 | 69 |
| % of Volume | 99 | 116 | 99 | 98 | 104 | 104 | 83 | 104 | 100 | 98 | 100 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.6 |
| Total Del/Veh (s) | 6.3 |
| Vehicles Entered | 1470 |
| Vehicles Exited | 1469 |
| Hourly Exit Rate | 1469 |
| Input Volume | 1458 |
| % of Volume | 101 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.3 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.5 | 0.6 |
| Total Del/Veh (s) | 2.6 | 0.7 | 6.6 | 4.9 |
| Vehicles Entered | 60 | 87 | 291 | 438 |
| Vehicles Exited | 60 | 87 | 289 | 436 |
| Hourly Exit Rate | 60 | 87 | 289 | 436 |
| Input Volume | 61 | 89 | 288 | 438 |
| % of Volume | 98 | 97 | 100 | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 27.0 |
| Denied Del/Veh (s) | 11.1 |
| Total Delay (hr) | 190.6 |
| Total Del/Veh (s) | 75.8 |
| Vehicles Entered | 8750 |
| Vehicles Exited | 8720 |
| Hourly Exit Rate | 8720 |
| Input Volume | 28971 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 380 | 516 | 627 | 588 | 408 | 173 | 283 | 509 | 540 | 516 | 463 | 382 |
| Average Queue (ft) | 297 | 369 | 382 | 333 | 232 | 63 | 145 | 233 | 420 | 367 | 297 | 210 |
| 95th Queue (ft) | 422 | 544 | 702 | 574 | 360 | 128 | 238 | 444 | 550 | 490 | 415 | 328 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1014 | 1014 | 1014 | |
| Upstream Blk Time (%) | | | 5 | 0 | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 27 | 47 | 23 | | 4 | 0 | | 0 | 11 | | 11 | 1 |
| Queuing Penalty (veh) | 88 | 156 | 126 | | 10 | 0 | | 0 | 38 | | 56 | 4 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | R | R | |
| Maximum Queue (ft) | 116 | 175 | 250 | 404 | 435 | 240 | 313 | 386 | 732 | 463 | 207 | |
| Average Queue (ft) | 22 | 167 | 241 | 332 | 304 | 113 | 173 | 253 | 379 | 180 | 65 | |
| 95th Queue (ft) | 70 | 192 | 275 | 466 | 526 | 214 | 268 | 414 | 796 | 556 | 160 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 999 | 999 | | |
| Upstream Blk Time (%) | | | | 16 | 13 | | | | 4 | 1 | | |
| Queuing Penalty (veh) | | | | 113 | 91 | | | | 0 | 0 | | |
| Storage Bay Dist (ft) | 250 | 100 | 100 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 54 | 70 | 17 | 7 | 5 | 0 | 1 | 22 | 0 | 0 | |
| Queuing Penalty (veh) | | 92 | 119 | 82 | 38 | 8 | 0 | 1 | 85 | 1 | 0 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 84 | 137 | 354 | 363 | 108 | 787 | 830 | 397 | 366 | 250 | 77 | 257 |
| Average Queue (ft) | 32 | 55 | 217 | 224 | 41 | 25 | 43 | 220 | 157 | 110 | 32 | 149 |
| 95th Queue (ft) | 72 | 105 | 322 | 331 | 80 | 279 | 377 | 357 | 300 | 227 | 60 | 243 |
| Link Distance (ft) | | | 2261 | 2261 | | 1014 | 1014 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 1 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 1 | 1 | | | | 8 | 0 | 3 | | 5 |
| Queuing Penalty (veh) | | | 1 | 2 | | | | 18 | 1 | 4 | | 6 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 285 | 234 | 363 | 398 | 130 |
| Average Queue (ft) | 95 | 118 | 222 | 221 | 56 |
| 95th Queue (ft) | 205 | 214 | 338 | 349 | 100 |
| Link Distance (ft) | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | 0 | | | | |
| Queuing Penalty (veh) | 0 | | | | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 9 | 8 | |
| Queuing Penalty (veh) | 1 | | 26 | 22 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 138 | 649 | 200 | 72 | 550 | 526 | 150 | 361 | 388 |
| Average Queue (ft) | 97 | 282 | 145 | 10 | 188 | 178 | 73 | 92 | 95 |
| 95th Queue (ft) | 151 | 653 | 254 | 46 | 441 | 413 | 157 | 302 | 285 |
| Link Distance (ft) | 105 | 694 | | | 686 | 686 | | 374 | 374 |
| Upstream Blk Time (%) | 55 | 2 | | | 0 | 0 | | 1 | 0 |
| Queuing Penalty (veh) | 0 | 6 | | | 0 | 0 | | 4 | 1 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 5 | 50 | 0 | 26 | | 38 | 6 | |
| Queuing Penalty (veh) | | 16 | 50 | 1 | 4 | | 168 | 7 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 184 | 111 | 30 | 19 | 14 | 41 | 18 | 20 |
| Average Queue (ft) | 83 | 53 | 4 | 0 | 1 | 9 | 1 | 1 |
| 95th Queue (ft) | 151 | 90 | 20 | 9 | 8 | 33 | 9 | 11 |
| Link Distance (ft) | 535 | 986 | | 157 | 157 | | 368 | 368 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 31 | 24 |
| Average Queue (ft) | 13 | 2 |
| 95th Queue (ft) | 38 | 15 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 38 | 6 | 28 |
| Average Queue (ft) | 17 | 0 | 2 |
| 95th Queue (ft) | 42 | 4 | 14 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 67 | 136 | 31 | 91 | 118 | 73 | 121 | 144 |
| Average Queue (ft) | 26 | 65 | 4 | 47 | 54 | 30 | 53 | 73 |
| 95th Queue (ft) | 57 | 109 | 20 | 83 | 95 | 63 | 100 | 120 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 31: 3400 North & Innovation Way

| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 142 |
| Average Queue (ft) | 51 |
| 95th Queue (ft) | 119 |
| Link Distance (ft) | 525 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 1454

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 500 | 481 | 96 | 89.4 | *F* |
| | T | 478 | 488 | 102 | 47.4 | *D* |
| | R | 540 | 529 | 98 | 17.3 | *B* |
| | Subtotal | 1,518 | 1,498 | 99 | 50.3 | *D* |
| SB | L | 390 | 390 | 100 | 71.4 | *E* |
| | T | 264 | 268 | 102 | 54.7 | *D* |
| | R | 425 | 425 | 100 | 19.9 | *B* |
| | Subtotal | 1,079 | 1,083 | 100 | 47.1 | *D* |
| EB | L | 540 | 538 | 100 | 104.3 | *F* |
| | T | 990 | 1,008 | 102 | 56.5 | *E* |
| | R | 256 | 257 | 100 | 11.8 | *B* |
| | Subtotal | 1,786 | 1,803 | 101 | 64.4 | *E* |
| WB | L | 340 | 348 | 102 | 66.0 | *E* |
| | T | 1,725 | 1,748 | 101 | 51.4 | *D* |
| | R | 80 | 80 | 100 | 11.8 | *B* |
| | Subtotal | 2,145 | 2,176 | 101 | 52.3 | *D* |
| **Total** | | 6,530 | 6,560 | 100 | 54.4 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 160 | 154 | 96 | 77.8 | *E* |
| | T | 120 | 117 | 98 | 54.0 | *D* |
| | R | 351 | 361 | 103 | 21.5 | *C* |
| | Subtotal | 631 | 632 | 100 | 41.2 | *D* |
| SB | L | 270 | 269 | 100 | 78.7 | *E* |
| | T | 273 | 274 | 100 | 51.6 | *D* |
| | R | 225 | 227 | 101 | 7.6 | *A* |
| | Subtotal | 768 | 770 | 100 | 48.1 | *D* |
| EB | L | 90 | 92 | 103 | 82.4 | *F* |
| | T | 1,661 | 1,656 | 100 | 22.8 | *C* |
| | R | 170 | 173 | 102 | 10.4 | *B* |
| | Subtotal | 1,921 | 1,921 | 100 | 24.5 | *C* |
| WB | L | 261 | 268 | 103 | 68.2 | *E* |
| | T | 451 | 468 | 104 | 27.5 | *C* |
| | R | 145 | 142 | 98 | 4.6 | *A* |
| | Subtotal | 857 | 878 | 102 | 36.2 | *D* |
| **Total** | | 4,175 | 4,201 | 101 | 33.9 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 16 | 105 | 59.6 | *E* |
| | T | 965 | 956 | 99 | 37.3 | *D* |
| | R | 55 | 56 | 101 | 22.0 | *C* |
| | Subtotal | 1,035 | 1,028 | 99 | 36.8 | *D* |
| SB | L | 90 | 88 | 98 | 40.7 | *D* |
| | T | 850 | 862 | 101 | 8.8 | *A* |
| | R | 5 | 5 | 105 | 11.0 | *B* |
| | Subtotal | 945 | 955 | 101 | 11.8 | *B* |
| EB | L | 75 | 69 | 92 | 94.8 | *F* |
| | T | 5 | 4 | 84 | 132.7 | *F* |
| | R | 30 | 27 | 89 | 60.4 | *E* |
| | Subtotal | 110 | 100 | 91 | 87.0 | *F* |
| WB | L | 90 | 85 | 94 | 66.0 | *E* |
| | T | 2 | 2 | 89 | 83.9 | *F* |
| | R | 341 | 344 | 101 | 49.5 | *D* |
| | Subtotal | 433 | 431 | 100 | 52.9 | *D* |
| **Total** | | 2,524 | 2,514 | 100 | 32.3 | *C* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 7 | 7 | 100 | 7.0 | *A* |
| | T | 339 | 345 | 102 | 0.4 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 349 | 356 | 102 | 0.5 | *A* |
| SB | L | 33 | 34 | 104 | 3.8 | *A* |
| | T | 642 | 651 | 101 | 1.1 | *A* |
| | R | 31 | 33 | 107 | 1.0 | *A* |
| | Subtotal | 706 | 718 | 102 | 1.2 | *A* |
| ***EB*** | ***L*** | ***156*** | ***151*** | ***97*** | ***29.6*** | ***D*** |
| | R | 25 | 27 | 107 | 21.7 | *C* |
| | Subtotal | 181 | 178 | 98 | 28.4 | *D* |
| WB | L | 20 | 23 | 114 | 15.5 | *C* |
| | T | 5 | 5 | 100 | 25.0 | *C* |
| | R | 135 | 137 | 101 | 9.6 | *A* |
| | Subtotal | 160 | 165 | 103 | 10.9 | *B* |
| **Total** | | 1,396 | 1,417 | 101 | 5.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 339 | 344 | 101 | 0.2 | *A* |
| | R | 5 | 5 | 100 | 0.2 | *A* |
| | Subtotal | 344 | 349 | 101 | 0.2 | *A* |
| SB | L | 6 | 5 | 83 | 2.5 | *A* |
| | T | 680 | 693 | 102 | 0.3 | *A* |
| | Subtotal | 686 | 698 | 102 | 0.3 | *A* |
| ***WB*** | ***L*** | ***5*** | ***4*** | ***80*** | ***8.5*** | ***A*** |
| | R | 10 | 12 | 117 | 2.9 | *A* |
| | Subtotal | 15 | 16 | 107 | 4.3 | *A* |
| **Total** | | 1,045 | 1,063 | 102 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 388 | 397 | 102 | 1.1 | *A* |
| | R | 11 | 11 | 98 | 1.0 | *A* |
| | Subtotal | 399 | 408 | 102 | 1.1 | *A* |
| SB | L | 9 | 9 | 100 | 3.1 | *A* |
| | T | 675 | 687 | 102 | 0.4 | *A* |
| | Subtotal | 684 | 696 | 102 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***10*** | ***98*** | ***8.9*** | ***A*** |
| | R | 10 | 9 | 88 | 3.8 | *A* |
| | Subtotal | 20 | 19 | 95 | 6.5 | *A* |
| **Total** | | 1,104 | 1,123 | 102 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 13.3 | *B* |
| | T | 346 | 357 | 103 | 5.1 | *A* |
| | R | 130 | 135 | 104 | 3.3 | *A* |
| | Subtotal | 482 | 497 | 103 | 4.7 | *A* |
| SB | L | 70 | 71 | 101 | 10.7 | *B* |
| | T | 573 | 580 | 101 | 5.6 | *A* |
| | R | 69 | 72 | 104 | 4.3 | *A* |
| | Subtotal | 712 | 723 | 102 | 6.0 | *A* |
| EB | L | 23 | 22 | 95 | 8.8 | *A* |
| | T | 11 | 11 | 98 | 9.1 | *A* |
| | R | 17 | 18 | 104 | 4.8 | *A* |
| | Subtotal | 51 | 51 | 100 | 7.5 | *A* |
| WB | L | 165 | 160 | 97 | 11.1 | *B* |
| | T | 17 | 18 | 104 | 11.4 | *B* |
| | R | 30 | 28 | 94 | 6.9 | *A* |
| | Subtotal | 212 | 206 | 97 | 10.6 | *B* |
| **Total** | | 1,458 | 1,477 | 101 | 6.2 | *A* |

**Intersection:** 3400 North & Innovation Way
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***292*** | ***101*** | ***6.0*** | ***A*** |
| | Subtotal | 288 | 292 | 101 | 6.0 | *A* |
| EB | L | 61 | 60 | 98 | 2.6 | *A* |
| | T | 89 | 88 | 99 | 0.7 | *A* |
| | Subtotal | 150 | 148 | 99 | 1.5 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 438 | 440 | 100 | 4.5 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.5 | 0.3 | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.3 | 0.0 | 0.3 |
| Denied Del/Veh (s) | 3.0 | 1.1 | 2.7 | 1.6 | 0.3 | 1.6 | 0.8 | 0.2 | 0.6 | 2.7 | 0.6 | 2.8 |
| Total Delay (hr) | 15.9 | 16.0 | 0.9 | 6.6 | 25.4 | 0.3 | 12.3 | 6.6 | 2.6 | 7.9 | 4.2 | 2.4 |
| Total Del/Veh (s) | 104.3 | 56.5 | 11.8 | 66.0 | 51.4 | 11.8 | 89.4 | 47.4 | 17.3 | 71.4 | 54.7 | 19.9 |
| Vehicles Entered | 540 | 1011 | 258 | 346 | 1755 | 80 | 486 | 490 | 530 | 391 | 267 | 426 |
| Vehicles Exited | 538 | 1008 | 257 | 348 | 1748 | 80 | 481 | 488 | 529 | 390 | 268 | 425 |
| Hourly Exit Rate | 538 | 1008 | 257 | 348 | 1748 | 80 | 481 | 488 | 529 | 390 | 268 | 425 |
| Input Volume | 540 | 990 | 256 | 340 | 1725 | 80 | 500 | 478 | 540 | 390 | 264 | 425 |
| % of Volume | 100 | 102 | 100 | 102 | 101 | 100 | 96 | 102 | 98 | 100 | 102 | 100 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.2 |
| Denied Del/Veh (s) | 1.2 |
| Total Delay (hr) | 101.0 |
| Total Del/Veh (s) | 54.4 |
| Vehicles Entered | 6580 |
| Vehicles Exited | 6560 |
| Hourly Exit Rate | 6560 |
| Input Volume | 6530 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.9 | 0.0 | 0.0 | 0.0 | 3.0 | 0.8 | 0.4 |
| Total Delay (hr) | 2.2 | 10.7 | 0.5 | 5.2 | 3.6 | 0.2 | 3.4 | 1.8 | 2.2 | 6.0 | 3.9 | 0.5 |
| Total Del/Veh (s) | 82.4 | 22.8 | 10.4 | 68.2 | 27.5 | 4.6 | 77.8 | 54.0 | 21.5 | 78.7 | 51.6 | 7.6 |
| Vehicles Entered | 92 | 1660 | 173 | 269 | 466 | 142 | 155 | 117 | 361 | 268 | 273 | 226 |
| Vehicles Exited | 92 | 1656 | 173 | 268 | 468 | 142 | 154 | 117 | 361 | 269 | 274 | 227 |
| Hourly Exit Rate | 92 | 1656 | 173 | 268 | 468 | 142 | 154 | 117 | 361 | 269 | 274 | 227 |
| Input Volume | 90 | 1661 | 170 | 261 | 451 | 145 | 160 | 120 | 351 | 270 | 273 | 225 |
| % of Volume | 103 | 100 | 102 | 103 | 104 | 98 | 96 | 98 | 103 | 100 | 100 | 101 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.7 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 40.2 |
| Total Del/Veh (s) | 33.9 |
| Vehicles Entered | 4202 |
| Vehicles Exited | 4201 |
| Hourly Exit Rate | 4201 |
| Input Volume | 4175 |
| % of Volume | 101 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 3.9 | 0.2 | 1.4 | 1.0 | 0.0 | 3.9 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 188.3 | 193.9 | 173.6 | 40.4 | 44.7 | 40.2 | 4.2 | 1.5 | 1.3 | 0.5 | 0.1 | 0.0 |
| Total Delay (hr) | 1.9 | 0.1 | 0.5 | 1.6 | 0.0 | 4.8 | 0.3 | 10.1 | 0.3 | 1.0 | 2.1 | 0.0 |
| Total Del/Veh (s) | 94.8 | 132.7 | 60.4 | 66.0 | 83.9 | 49.5 | 59.6 | 37.3 | 22.0 | 40.7 | 8.8 | 11.0 |
| Vehicles Entered | 70 | 4 | 27 | 87 | 2 | 346 | 16 | 963 | 56 | 88 | 862 | 5 |
| Vehicles Exited | 69 | 4 | 27 | 85 | 2 | 344 | 16 | 956 | 56 | 88 | 862 | 5 |
| Hourly Exit Rate | 69 | 4 | 27 | 85 | 2 | 344 | 16 | 956 | 56 | 88 | 862 | 5 |
| Input Volume | 75 | 5 | 30 | 90 | 2 | 341 | 15 | 965 | 55 | 90 | 850 | 5 |
| % of Volume | 92 | 84 | 89 | 94 | 89 | 101 | 105 | 99 | 101 | 98 | 101 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 10.9 |
| Denied Del/Veh (s) | 15.5 |
| Total Delay (hr) | 22.8 |
| Total Del/Veh (s) | 32.3 |
| Vehicles Entered | 2526 |
| Vehicles Exited | 2514 |
| Hourly Exit Rate | 2514 |
| Input Volume | 2524 |
| % of Volume | 100 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Delay (hr) | 1.3 | 0.2 | 0.1 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 2.3 |
| Total Del/Veh (s) | 29.6 | 21.7 | 15.5 | 25.0 | 9.6 | 7.0 | 0.4 | 0.1 | 3.8 | 1.1 | 1.0 | 5.7 |
| Vehicles Entered | 152 | 28 | 23 | 5 | 137 | 7 | 345 | 4 | 34 | 651 | 33 | 1419 |
| Vehicles Exited | 151 | 27 | 23 | 5 | 137 | 7 | 345 | 4 | 34 | 651 | 33 | 1417 |
| Hourly Exit Rate | 151 | 27 | 23 | 5 | 137 | 7 | 345 | 4 | 34 | 651 | 33 | 1417 |
| Input Volume | 156 | 25 | 20 | 5 | 135 | 7 | 339 | 3 | 33 | 642 | 31 | 1396 |
| % of Volume | 97 | 107 | 114 | 100 | 101 | 100 | 102 | 133 | 104 | 101 | 107 | 101 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 8.5 | 2.9 | 0.2 | 0.2 | 2.5 | 0.3 | 0.3 |
| Vehicles Entered | 4 | 12 | 344 | 5 | 5 | 694 | 1064 |
| Vehicles Exited | 4 | 12 | 344 | 5 | 5 | 693 | 1063 |
| Hourly Exit Rate | 4 | 12 | 344 | 5 | 5 | 693 | 1063 |
| Input Volume | 5 | 10 | 339 | 5 | 6 | 680 | 1045 |
| % of Volume | 80 | 117 | 101 | 100 | 83 | 102 | 102 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 8.9 | 3.8 | 1.1 | 1.0 | 3.1 | 0.4 | 0.8 |
| Vehicles Entered | 10 | 9 | 395 | 11 | 9 | 686 | 1120 |
| Vehicles Exited | 10 | 9 | 397 | 11 | 9 | 687 | 1123 |
| Hourly Exit Rate | 10 | 9 | 397 | 11 | 9 | 687 | 1123 |
| Input Volume | 10 | 10 | 388 | 11 | 9 | 675 | 1104 |
| % of Volume | 98 | 88 | 102 | 98 | 100 | 102 | 102 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 | 0.2 | 2.9 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.1 | 0.0 | 0.5 | 0.1 | 0.2 | 0.9 | 0.1 |
| Total Del/Veh (s) | 8.8 | 9.1 | 4.8 | 11.1 | 11.4 | 6.9 | 13.3 | 5.1 | 3.3 | 10.7 | 5.6 | 4.3 |
| Vehicles Entered | 22 | 11 | 18 | 160 | 18 | 28 | 5 | 357 | 135 | 72 | 580 | 72 |
| Vehicles Exited | 22 | 11 | 18 | 160 | 18 | 28 | 5 | 357 | 135 | 71 | 580 | 72 |
| Hourly Exit Rate | 22 | 11 | 18 | 160 | 18 | 28 | 5 | 357 | 135 | 71 | 580 | 72 |
| Input Volume | 23 | 11 | 17 | 165 | 17 | 30 | 6 | 346 | 130 | 70 | 573 | 69 |
| % of Volume | 95 | 98 | 104 | 97 | 104 | 94 | 83 | 103 | 104 | 101 | 101 | 104 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.6 |
| Total Del/Veh (s) | 6.2 |
| Vehicles Entered | 1478 |
| Vehicles Exited | 1477 |
| Hourly Exit Rate | 1477 |
| Input Volume | 1458 |
| % of Volume | 101 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.3 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.5 | 0.6 |
| Total Del/Veh (s) | 2.6 | 0.7 | 6.0 | 4.5 |
| Vehicles Entered | 60 | 88 | 292 | 440 |
| Vehicles Exited | 60 | 88 | 292 | 440 |
| Hourly Exit Rate | 60 | 88 | 292 | 440 |
| Input Volume | 61 | 89 | 288 | 438 |
| % of Volume | 98 | 99 | 101 | 100 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 13.9 |
| Denied Del/Veh (s) | 5.7 |
| Total Delay (hr) | 184.2 |
| Total Del/Veh (s) | 72.7 |
| Vehicles Entered | 8828 |
| Vehicles Exited | 8790 |
| Hourly Exit Rate | 8790 |
| Input Volume | 28971 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 380 | 515 | 616 | 516 | 405 | 212 | 232 | 530 | 550 | 522 | 470 | 376 |
| Average Queue (ft) | 277 | 336 | 336 | 317 | 240 | 65 | 131 | 230 | 426 | 381 | 308 | 216 |
| 95th Queue (ft) | 407 | 503 | 561 | 505 | 363 | 150 | 204 | 453 | 559 | 510 | 435 | 337 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1014 | 1014 | 1014 | |
| Upstream Blk Time (%) | | | 2 | 0 | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 18 | 40 | 24 | | 4 | | | 0 | 13 | | 13 | 1 |
| Queuing Penalty (veh) | 60 | 134 | 131 | | 11 | | | 0 | 43 | | 66 | 6 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | T | R | |
| Maximum Queue (ft) | 104 | 175 | 250 | 403 | 436 | 250 | 291 | 324 | 272 | 216 | 271 | |
| Average Queue (ft) | 21 | 166 | 238 | 323 | 289 | 153 | 172 | 207 | 124 | 104 | 133 | |
| 95th Queue (ft) | 64 | 192 | 278 | 478 | 503 | 277 | 270 | 300 | 222 | 187 | 234 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 999 | 999 | | |
| Upstream Blk Time (%) | | | | 17 | 9 | | | | | | | |
| Queuing Penalty (veh) | | | | 115 | 61 | | | | | | | |
| Storage Bay Dist (ft) | 250 | 100 | 100 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 48 | 64 | 23 | 13 | 13 | 0 | 1 | | 0 | 5 | |
| Queuing Penalty (veh) | | 82 | 108 | 113 | 71 | 22 | 0 | 1 | | 0 | 6 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | B22 | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | | L | T | T | R |
| Maximum Queue (ft) | 99 | 127 | 353 | 354 | 105 | 571 | 998 | 73 | 379 | 322 | 205 | 71 |
| Average Queue (ft) | 36 | 56 | 221 | 228 | 45 | 27 | 46 | 3 | 227 | 159 | 104 | 31 |
| 95th Queue (ft) | 79 | 102 | 325 | 329 | 84 | 285 | 389 | 75 | 357 | 277 | 187 | 58 |
| Link Distance (ft) | | | 2261 | 2261 | | 1014 | 1014 | 1014 | | 1013 | 1013 | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 1 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | | 260 | | | 140 |
| Storage Blk Time (%) | | | 1 | 1 | | | | | 8 | 0 | 3 | |
| Queuing Penalty (veh) | | | 1 | 2 | | | | | 19 | 1 | 5 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | R | L | T | R |
| Maximum Queue (ft) | 259 | 238 | 266 | 382 | 535 | 122 |
| Average Queue (ft) | 139 | 93 | 131 | 247 | 244 | 55 |
| 95th Queue (ft) | 236 | 198 | 232 | 387 | 453 | 99 |
| Link Distance (ft) | | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | | 0 | 0 | | 0 | |
| Queuing Penalty (veh) | | 1 | 0 | | 0 | |
| Storage Bay Dist (ft) | 210 | | | 240 | | |
| Storage Blk Time (%) | 5 | 0 | | 20 | 7 | |
| Queuing Penalty (veh) | 6 | 1 | | 54 | 18 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 133 | 573 | 200 | 80 | 654 | 622 | 144 | 292 | 278 |
| Average Queue (ft) | 87 | 202 | 129 | 10 | 291 | 266 | 61 | 92 | 105 |
| 95th Queue (ft) | 148 | 536 | 235 | 50 | 649 | 597 | 129 | 219 | 228 |
| Link Distance (ft) | 105 | 694 | | | 686 | 686 | | 374 | 374 |
| Upstream Blk Time (%) | 38 | 2 | | | 4 | 1 | | 0 | 0 |
| Queuing Penalty (veh) | 0 | 5 | | | 0 | 0 | | 0 | 0 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 5 | 31 | 0 | 41 | | 23 | 12 | |
| Queuing Penalty (veh) | | 19 | 34 | 2 | 6 | | 102 | 12 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 201 | 128 | 32 | 14 | 16 | 42 | 17 | 22 |
| Average Queue (ft) | 88 | 56 | 4 | 1 | 1 | 10 | 1 | 1 |
| 95th Queue (ft) | 168 | 98 | 20 | 12 | 11 | 35 | 9 | 12 |
| Link Distance (ft) | 535 | 986 | | 157 | 157 | | 368 | 368 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | 0 | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | 0 | 0 | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 36 | 15 |
| Average Queue (ft) | 13 | 1 |
| 95th Queue (ft) | 38 | 9 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 42 | 28 |
| Average Queue (ft) | 15 | 3 |
| 95th Queue (ft) | 42 | 17 |
| Link Distance (ft) | 245 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 57 | 137 | 30 | 102 | 125 | 84 | 126 | 136 |
| Average Queue (ft) | 23 | 67 | 4 | 46 | 54 | 32 | 51 | 70 |
| 95th Queue (ft) | 52 | 115 | 23 | 84 | 99 | 65 | 102 | 121 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 31: 3400 North & Innovation Way

| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 140 |
| Average Queue (ft) | 51 |
| 95th Queue (ft) | 118 |
| Link Distance (ft) | 525 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 1322

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 551 | 548 | 100 | 96.6 | *F* |
| | T | 602 | 599 | 100 | 35.6 | *D* |
| | R | 645 | 629 | 97 | 12.2 | *B* |
| | Subtotal | 1,798 | 1,776 | 99 | 46.1 | *D* |
| SB | L | 350 | 347 | 99 | 95.5 | *F* |
| | T | 383 | 369 | 96 | 105.7 | *F* |
| | R | 405 | 394 | 97 | 13.3 | *B* |
| | Subtotal | 1,138 | 1,110 | 98 | 69.7 | *E* |
| EB | L | 520 | 506 | 97 | 84.8 | *F* |
| | T | 690 | 668 | 97 | 76.5 | *E* |
| | R | 411 | 403 | 98 | 32.1 | *C* |
| | Subtotal | 1,621 | 1,577 | 97 | 67.8 | *E* |
| WB | L | 545 | 531 | 97 | 104.6 | *F* |
| | T | 1,190 | 1,173 | 99 | 55.4 | *E* |
| | R | 75 | 76 | 101 | 12.2 | *B* |
| | Subtotal | 1,810 | 1,780 | 98 | 68.2 | *E* |
| **Total** | | 6,367 | 6,243 | 98 | 62.5 | *E* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 160 | 158 | 99 | 76.4 | *E* |
| | T | 136 | 135 | 99 | 53.6 | *D* |
| | R | 419 | 422 | 101 | 17.9 | *B* |
| | Subtotal | 715 | 715 | 100 | 37.6 | *D* |
| SB | L | 375 | 370 | 99 | 71.8 | *E* |
| | T | 368 | 364 | 99 | 47.6 | *D* |
| | R | 310 | 308 | 99 | 7.5 | *A* |
| | Subtotal | 1,053 | 1,042 | 99 | 44.3 | *D* |
| EB | L | 120 | 114 | 95 | 82.1 | *F* |
| | T | 1,385 | 1,358 | 98 | 24.6 | *C* |
| | R | 180 | 174 | 97 | 10.8 | *B* |
| | Subtotal | 1,685 | 1,646 | 98 | 27.1 | *C* |
| WB | L | 276 | 282 | 102 | 69.2 | *E* |
| | T | 370 | 364 | 98 | 34.8 | *C* |
| | R | 205 | 208 | 102 | 5.7 | *A* |
| | Subtotal | 851 | 854 | 100 | 39.1 | *D* |
| **Total** | | 4,305 | 4,257 | 99 | 35.6 | *D* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 17 | 111 | 52.4 | *D* |
| | T | 1,275 | 1,287 | 101 | 29.9 | *C* |
| | R | 49 | 51 | 104 | 17.7 | *B* |
| | Subtotal | 1,339 | 1,355 | 101 | 29.7 | *C* |
| SB | L | 78 | 70 | 90 | 173.0 | *F* |
| | T | 1,389 | 1,354 | 97 | 7.5 | *A* |
| | R | 5 | 4 | 84 | 5.8 | *A* |
| | Subtotal | 1,472 | 1,428 | 97 | 15.6 | *B* |
| EB | L | 75 | 55 | 73 | 159.3 | *F* |
| | T | 5 | 4 | 84 | 143.8 | *F* |
| | R | 30 | 24 | 79 | 144.5 | *F* |
| | Subtotal | 110 | 83 | 75 | 154.3 | *F* |
| WB | L | 77 | 69 | 90 | 120.4 | *F* |
| | T | 2 | 2 | 89 | 105.3 | *F* |
| | R | 286 | 273 | 96 | 136.5 | *F* |
| | Subtotal | 365 | 344 | 94 | 133.1 | *F* |
| **Total** | | 3,286 | 3,210 | 98 | 38.4 | *D* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 6.2 | *A* |
| | T | 464 | 466 | 100 | 0.4 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 473 | 475 | 100 | 0.5 | *A* |
| SB | L | 33 | 29 | 89 | 4.6 | *A* |
| | T | 766 | 768 | 100 | 1.1 | *A* |
| | R | 26 | 24 | 91 | 1.0 | *A* |
| | Subtotal | 825 | 821 | 100 | 1.2 | *A* |
| ***EB*** | ***L*** | ***116*** | ***117*** | ***101*** | ***39.2*** | ***E*** |
| | R | 12 | 14 | 114 | 30.3 | *D* |
| | Subtotal | 128 | 131 | 102 | 38.2 | *E* |
| WB | L | 20 | 20 | 99 | 16.6 | *C* |
| | T | 5 | 4 | 80 | 26.7 | *D* |
| | R | 135 | 134 | 99 | 10.8 | *B* |
| | Subtotal | 160 | 158 | 99 | 11.9 | *B* |
| **Total** | | 1,587 | 1,585 | 100 | 5.2 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 463 | 464 | 100 | 0.3 | *A* |
| | R | 2 | 3 | 150 | 0.4 | *A* |
| | Subtotal | 465 | 467 | 100 | 0.3 | *A* |
| SB | L | 6 | 6 | 100 | 3.3 | *A* |
| | T | 793 | 794 | 100 | 0.3 | *A* |
| | Subtotal | 799 | 800 | 100 | 0.3 | *A* |
| ***WB*** | ***L*** | ***5*** | ***4*** | ***80*** | ***10.3*** | ***B*** |
| | R | 10 | 11 | 107 | 3.9 | *A* |
| | Subtotal | 15 | 15 | 100 | 5.6 | *A* |
| **Total** | | 1,279 | 1,282 | 100 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 455 | 456 | 100 | 1.2 | *A* |
| | R | 11 | 12 | 107 | 1.3 | *A* |
| | Subtotal | 466 | 468 | 100 | 1.2 | *A* |
| SB | L | 9 | 10 | 111 | 3.5 | *A* |
| | T | 788 | 787 | 100 | 0.4 | *A* |
| | Subtotal | 797 | 797 | 100 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***10*** | ***98*** | ***10.4*** | ***B*** |
| | R | 10 | 11 | 107 | 4.0 | *A* |
| | Subtotal | 20 | 21 | 105 | 7.0 | *A* |
| **Total** | | 1,284 | 1,286 | 100 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 14.0 | *B* |
| | T | 367 | 365 | 99 | 5.8 | *A* |
| | R | 145 | 152 | 105 | 4.0 | *A* |
| | Subtotal | 518 | 523 | 101 | 5.4 | *A* |
| SB | L | 70 | 68 | 97 | 13.6 | *B* |
| | T | 658 | 657 | 100 | 6.8 | *A* |
| | R | 69 | 73 | 105 | 5.8 | *A* |
| | Subtotal | 797 | 798 | 100 | 7.3 | *A* |
| EB | L | 23 | 24 | 103 | 9.8 | *A* |
| | T | 11 | 11 | 98 | 10.4 | *B* |
| | R | 17 | 15 | 87 | 5.2 | *A* |
| | Subtotal | 51 | 50 | 98 | 8.6 | *A* |
| WB | L | 205 | 212 | 104 | 12.4 | *B* |
| | T | 17 | 18 | 104 | 13.3 | *B* |
| | R | 35 | 36 | 104 | 6.8 | *A* |
| | Subtotal | 257 | 266 | 104 | 11.7 | *B* |
| **Total** | | 1,624 | 1,637 | 101 | 7.4 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.3 | 0.6 | 1.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.6 | 0.4 | 0.5 |
| Denied Del/Veh (s) | 2.7 | 0.8 | 2.6 | 4.2 | 3.2 | 5.3 | 1.4 | 0.3 | 0.8 | 6.4 | 3.9 | 4.3 |
| Total Delay (hr) | 12.2 | 14.5 | 3.6 | 16.2 | 18.5 | 0.3 | 15.0 | 5.9 | 2.1 | 9.5 | 11.4 | 1.5 |
| Total Del/Veh (s) | 84.8 | 76.5 | 32.1 | 104.6 | 55.4 | 12.2 | 96.6 | 35.6 | 12.2 | 95.5 | 105.7 | 13.3 |
| Vehicles Entered | 505 | 672 | 405 | 542 | 1176 | 76 | 549 | 595 | 630 | 354 | 376 | 395 |
| Vehicles Exited | 506 | 668 | 403 | 531 | 1173 | 76 | 548 | 599 | 629 | 347 | 369 | 394 |
| Hourly Exit Rate | 506 | 668 | 403 | 531 | 1173 | 76 | 548 | 599 | 629 | 347 | 369 | 394 |
| Input Volume | 520 | 690 | 411 | 545 | 1190 | 75 | 551 | 602 | 645 | 350 | 383 | 405 |
| % of Volume | 97 | 97 | 98 | 97 | 99 | 101 | 100 | 100 | 97 | 99 | 96 | 97 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 4.6 |
| Denied Del/Veh (s) | 2.6 |
| Total Delay (hr) | 110.9 |
| Total Del/Veh (s) | 62.5 |
| Vehicles Entered | 6275 |
| Vehicles Exited | 6243 |
| Hourly Exit Rate | 6243 |
| Input Volume | 6367 |
| % of Volume | 98 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 3.0 | 0.5 | 2.9 | 0.0 | 0.0 | 0.0 | 2.8 | 0.9 | 0.5 |
| Total Delay (hr) | 2.6 | 9.4 | 0.5 | 5.6 | 3.6 | 0.3 | 3.4 | 2.0 | 2.1 | 7.6 | 4.9 | 0.6 |
| Total Del/Veh (s) | 82.1 | 24.6 | 10.8 | 69.2 | 34.8 | 5.7 | 76.4 | 53.6 | 17.9 | 71.8 | 47.6 | 7.5 |
| Vehicles Entered | 114 | 1355 | 174 | 281 | 365 | 208 | 158 | 135 | 423 | 371 | 364 | 309 |
| Vehicles Exited | 114 | 1358 | 174 | 282 | 364 | 208 | 158 | 135 | 422 | 370 | 364 | 308 |
| Hourly Exit Rate | 114 | 1358 | 174 | 282 | 364 | 208 | 158 | 135 | 422 | 370 | 364 | 308 |
| Input Volume | 120 | 1385 | 180 | 276 | 370 | 205 | 160 | 136 | 419 | 375 | 368 | 310 |
| % of Volume | 95 | 98 | 97 | 102 | 98 | 102 | 99 | 99 | 101 | 99 | 99 | 99 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.9 |
| Denied Del/Veh (s) | 0.7 |
| Total Delay (hr) | 42.8 |
| Total Del/Veh (s) | 35.6 |
| Vehicles Entered | 4257 |
| Vehicles Exited | 4257 |
| Hourly Exit Rate | 4257 |
| Input Volume | 4305 |
| % of Volume | 99 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 8.1 | 0.6 | 3.7 | 1.5 | 0.0 | 5.9 | 0.1 | 5.1 | 0.2 | 0.7 | 7.5 | 0.0 |
| Denied Del/Veh (s) | 384.0 | 433.4 | 404.7 | 74.2 | 67.1 | 74.0 | 12.2 | 14.1 | 15.6 | 33.7 | 19.9 | 15.0 |
| Total Delay (hr) | 2.6 | 0.2 | 1.0 | 2.4 | 0.1 | 10.8 | 0.3 | 10.8 | 0.3 | 3.5 | 2.8 | 0.0 |
| Total Del/Veh (s) | 159.3 | 143.8 | 144.5 | 120.4 | 105.3 | 136.5 | 52.4 | 29.9 | 17.7 | 173.0 | 7.5 | 5.8 |
| Vehicles Entered | 56 | 4 | 24 | 71 | 2 | 280 | 18 | 1294 | 51 | 70 | 1354 | 4 |
| Vehicles Exited | 55 | 4 | 24 | 69 | 2 | 273 | 17 | 1287 | 51 | 70 | 1354 | 4 |
| Hourly Exit Rate | 55 | 4 | 24 | 69 | 2 | 273 | 17 | 1287 | 51 | 70 | 1354 | 4 |
| Input Volume | 75 | 5 | 30 | 77 | 2 | 286 | 15 | 1275 | 49 | 78 | 1389 | 5 |
| % of Volume | 73 | 84 | 79 | 90 | 89 | 96 | 111 | 101 | 104 | 90 | 97 | 84 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 33.5 |
| Denied Del/Veh (s) | 36.8 |
| Total Delay (hr) | 34.7 |
| Total Del/Veh (s) | 38.4 |
| Vehicles Entered | 3228 |
| Vehicles Exited | 3210 |
| Hourly Exit Rate | 3210 |
| Input Volume | 3286 |
| % of Volume | 98 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 1.3 | 0.1 | 0.1 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 2.3 |
| Total Del/Veh (s) | 39.2 | 30.3 | 16.6 | 26.7 | 10.8 | 6.2 | 0.4 | 0.1 | 4.6 | 1.1 | 1.0 | 5.2 |
| Vehicles Entered | 117 | 13 | 20 | 4 | 135 | 5 | 466 | 4 | 29 | 768 | 24 | 1585 |
| Vehicles Exited | 117 | 14 | 20 | 4 | 134 | 5 | 466 | 4 | 29 | 768 | 24 | 1585 |
| Hourly Exit Rate | 117 | 14 | 20 | 4 | 134 | 5 | 466 | 4 | 29 | 768 | 24 | 1585 |
| Input Volume | 116 | 12 | 20 | 5 | 135 | 6 | 464 | 3 | 33 | 766 | 26 | 1587 |
| % of Volume | 101 | 114 | 99 | 80 | 99 | 83 | 100 | 133 | 89 | 100 | 91 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| Total Del/Veh (s) | 10.3 | 3.9 | 0.3 | 0.4 | 3.3 | 0.3 | 0.3 |
| Vehicles Entered | 4 | 11 | 464 | 3 | 6 | 795 | 1283 |
| Vehicles Exited | 4 | 11 | 464 | 3 | 6 | 794 | 1282 |
| Hourly Exit Rate | 4 | 11 | 464 | 3 | 6 | 794 | 1282 |
| Input Volume | 5 | 10 | 463 | 2 | 6 | 793 | 1279 |
| % of Volume | 80 | 107 | 100 | 150 | 100 | 100 | 100 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 |
| Total Del/Veh (s) | 10.4 | 4.0 | 1.2 | 1.3 | 3.5 | 0.4 | 0.8 |
| Vehicles Entered | 10 | 11 | 456 | 12 | 10 | 788 | 1287 |
| Vehicles Exited | 10 | 11 | 456 | 12 | 10 | 787 | 1286 |
| Hourly Exit Rate | 10 | 11 | 456 | 12 | 10 | 787 | 1286 |
| Input Volume | 10 | 10 | 455 | 11 | 9 | 788 | 1284 |
| % of Volume | 98 | 107 | 100 | 107 | 111 | 100 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.1 | 0.3 | 0.3 | 0.3 | 2.7 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.7 | 0.1 | 0.1 | 0.0 | 0.6 | 0.2 | 0.3 | 1.3 | 0.1 |
| Total Del/Veh (s) | 9.8 | 10.4 | 5.2 | 12.4 | 13.3 | 6.8 | 14.0 | 5.8 | 4.0 | 13.6 | 6.8 | 5.8 |
| Vehicles Entered | 24 | 11 | 15 | 212 | 18 | 37 | 6 | 366 | 152 | 68 | 656 | 72 |
| Vehicles Exited | 24 | 11 | 15 | 212 | 18 | 36 | 6 | 365 | 152 | 68 | 657 | 73 |
| Hourly Exit Rate | 24 | 11 | 15 | 212 | 18 | 36 | 6 | 365 | 152 | 68 | 657 | 73 |
| Input Volume | 23 | 11 | 17 | 205 | 17 | 35 | 6 | 367 | 145 | 70 | 658 | 69 |
| % of Volume | 103 | 98 | 87 | 104 | 104 | 104 | 100 | 99 | 105 | 97 | 100 | 105 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.1 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 3.4 |
| Total Del/Veh (s) | 7.4 |
| Vehicles Entered | 1637 |
| Vehicles Exited | 1637 |
| Hourly Exit Rate | 1637 |
| Input Volume | 1624 |
| % of Volume | 101 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 39.0 |
| Denied Del/Veh (s) | 15.7 |
| Total Delay (hr) | 205.3 |
| Total Del/Veh (s) | 80.6 |
| Vehicles Entered | 8866 |
| Vehicles Exited | 8803 |
| Hourly Exit Rate | 8803 |
| Input Volume | 30161 |
| % of Volume | 29 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 376 | 454 | 484 | 452 | 425 | 384 | 459 | 515 | 648 | 528 | 359 | 280 |
| Average Queue (ft) | 252 | 297 | 272 | 258 | 207 | 169 | 260 | 300 | 329 | 277 | 215 | 150 |
| 95th Queue (ft) | 362 | 413 | 413 | 384 | 358 | 321 | 456 | 523 | 587 | 426 | 314 | 249 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1033 | 1033 | 1033 | |
| Upstream Blk Time (%) | | | | 0 | 0 | | | | 1 | | | |
| Queuing Penalty (veh) | | | | 0 | 0 | | | | 1 | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 6 | 27 | 19 | | 2 | 7 | 7 | 13 | 1 | | 3 | 0 |
| Queuing Penalty (veh) | 15 | 62 | 97 | | 9 | 16 | 19 | 38 | 6 | | 11 | 1 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | B22 | B22 | NB | NB | NB | NB | NB | SB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | T | T | L | L | T | T | R | L | L | T | R |
| Maximum Queue (ft) | 93 | 18 | 14 | 200 | 250 | 407 | 450 | 242 | 289 | 405 | 916 | 680 |
| Average Queue (ft) | 18 | 0 | 0 | 194 | 246 | 362 | 354 | 130 | 164 | 279 | 494 | 192 |
| 95th Queue (ft) | 59 | 11 | 0 | 214 | 264 | 454 | 532 | 240 | 266 | 467 | 957 | 655 |
| Link Distance (ft) | | 2242 | 2242 | | | 374 | 374 | | | | 1001 | 1001 |
| Upstream Blk Time (%) | | | | | | 26 | 12 | | | | 5 | 2 |
| Queuing Penalty (veh) | | | | | | 208 | 97 | | | | 0 | 0 |
| Storage Bay Dist (ft) | 250 | | | 150 | 150 | | | 150 | 320 | 320 | | |
| Storage Blk Time (%) | | | | 44 | 63 | 7 | 11 | 6 | 1 | 1 | 32 | 0 |
| Queuing Penalty (veh) | | | | 96 | 138 | 36 | 74 | 14 | 2 | 3 | 111 | 0 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | SB |
|---|---|
| Directions Served | R |
| Maximum Queue (ft) | 159 |
| Average Queue (ft) | 44 |
| 95th Queue (ft) | 114 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 200 |
| Storage Blk Time (%) | 0 |
| Queuing Penalty (veh) | 0 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 120 | 137 | 306 | 309 | 117 | 201 | 314 | 384 | 361 | 204 | 97 | 257 |
| Average Queue (ft) | 46 | 63 | 184 | 191 | 50 | 4 | 11 | 235 | 151 | 95 | 43 | 144 |
| 95th Queue (ft) | 91 | 108 | 276 | 284 | 91 | 100 | 189 | 352 | 273 | 176 | 76 | 236 |
| Link Distance (ft) | | | 2242 | 2242 | | 1033 | 1033 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 0 | 0 | | | | 9 | 0 | 2 | 0 | 4 |
| Queuing Penalty (veh) | | | 0 | 1 | | | | 17 | 0 | 4 | 0 | 6 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 276 | 251 | 384 | 728 | 219 |
| Average Queue (ft) | 105 | 126 | 310 | 338 | 68 |
| 95th Queue (ft) | 208 | 220 | 422 | 590 | 145 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | 0 | | | 0 | |
| Queuing Penalty (veh) | 0 | | | 0 | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 1 | | 30 | 11 | |
| Queuing Penalty (veh) | 1 | | 112 | 43 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 142 | 737 | 200 | 99 | 682 | 673 | 150 | 380 | 420 |
| Average Queue (ft) | 102 | 347 | 153 | 11 | 332 | 293 | 75 | 126 | 145 |
| 95th Queue (ft) | 151 | 832 | 255 | 49 | 675 | 643 | 163 | 354 | 373 |
| Link Distance (ft) | 105 | 705 | | | 688 | 688 | | 374 | 374 |
| Upstream Blk Time (%) | 66 | 26 | | | 5 | 2 | | 2 | 2 |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | 13 | 15 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 4 | 58 | 0 | 39 | | 44 | 10 | |
| Queuing Penalty (veh) | | 12 | 49 | 3 | 6 | | 315 | 9 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 214 | 120 | 29 | 23 | 31 | 55 | 24 | 20 |
| Average Queue (ft) | 79 | 56 | 3 | 1 | 2 | 12 | 1 | 1 |
| 95th Queue (ft) | 164 | 95 | 17 | 12 | 17 | 39 | 14 | 12 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | 0 | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | 0 | 0 | | 1 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 40 | 31 |
| Average Queue (ft) | 13 | 2 |
| 95th Queue (ft) | 38 | 16 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 42 | 2 | 33 |
| Average Queue (ft) | 16 | 0 | 3 |
| 95th Queue (ft) | 43 | 2 | 19 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 66 | 186 | 31 | 104 | 126 | 88 | 145 | 163 |
| Average Queue (ft) | 24 | 85 | 5 | 47 | 62 | 35 | 65 | 82 |
| 95th Queue (ft) | 55 | 148 | 24 | 85 | 106 | 71 | 123 | 139 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 2 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 1 | |

## Network Summary

Network wide Queuing Penalty: 1663

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 551 | 540 | 98 | 73.1 | *E* |
| | T | 602 | 592 | 98 | 45.5 | *D* |
| | R | 645 | 647 | 100 | 15.3 | *B* |
| | Subtotal | 1,798 | 1,779 | 99 | 42.9 | *D* |
| SB | L | 350 | 350 | 100 | 86.9 | *F* |
| | T | 383 | 368 | 96 | 80.6 | *F* |
| | R | 405 | 401 | 99 | 10.1 | *B* |
| | Subtotal | 1,138 | 1,119 | 98 | 57.3 | *E* |
| EB | L | 520 | 524 | 101 | 77.7 | *E* |
| | T | 690 | 687 | 100 | 57.9 | *E* |
| | R | 411 | 417 | 101 | 31.9 | *C* |
| | Subtotal | 1,621 | 1,628 | 100 | 57.6 | *E* |
| WB | L | 545 | 548 | 101 | 68.3 | *E* |
| | T | 1,190 | 1,201 | 101 | 40.7 | *D* |
| | R | 75 | 78 | 104 | 11.1 | *B* |
| | Subtotal | 1,810 | 1,827 | 101 | 47.7 | *D* |
| **Total** | | 6,367 | 6,353 | 100 | 50.7 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 160 | 159 | 100 | 75.7 | *E* |
| | T | 136 | 132 | 97 | 55.9 | *E* |
| | R | 419 | 425 | 101 | 19.6 | *B* |
| | Subtotal | 715 | 716 | 100 | 38.8 | *D* |
| SB | L | 375 | 381 | 102 | 81.5 | *F* |
| | T | 368 | 362 | 98 | 52.3 | *D* |
| | R | 310 | 319 | 103 | 8.8 | *A* |
| | Subtotal | 1,053 | 1,062 | 101 | 49.7 | *D* |
| EB | L | 120 | 123 | 102 | 84.6 | *F* |
| | T | 1,385 | 1,380 | 100 | 25.4 | *C* |
| | R | 180 | 180 | 100 | 10.6 | *B* |
| | Subtotal | 1,685 | 1,683 | 100 | 28.1 | *C* |
| WB | L | 276 | 272 | 99 | 69.9 | *E* |
| | T | 370 | 367 | 99 | 34.4 | *C* |
| | R | 205 | 205 | 100 | 5.7 | *A* |
| | Subtotal | 851 | 844 | 99 | 38.9 | *D* |
| **Total** | | 4,305 | 4,305 | 100 | 37.5 | *D* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 15 | 98 | 59.6 | *E* |
| | T | 1,275 | 1,268 | 99 | 34.5 | *C* |
| | R | 49 | 52 | 106 | 30.8 | *C* |
| | Subtotal | 1,339 | 1,335 | 100 | 34.6 | *C* |
| SB | L | 78 | 78 | 100 | 61.7 | *E* |
| | T | 1,389 | 1,387 | 100 | 11.4 | *B* |
| | R | 5 | 5 | 105 | 8.1 | *A* |
| | Subtotal | 1,472 | 1,470 | 100 | 14.1 | *B* |
| EB | L | 75 | 73 | 97 | 89.9 | *F* |
| | T | 5 | 6 | 126 | 80.6 | *F* |
| | R | 30 | 33 | 109 | 69.1 | *E* |
| | Subtotal | 110 | 112 | 102 | 83.3 | *F* |
| WB | L | 77 | 77 | 100 | 64.6 | *E* |
| | T | 2 | 2 | 89 | 90.2 | *F* |
| | R | 286 | 289 | 101 | 50.1 | *D* |
| | Subtotal | 365 | 368 | 101 | 53.4 | *D* |
| **Total** | | 3,286 | 3,285 | 100 | 29.3 | *C* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 5.7 | *A* |
| | T | 464 | 462 | 100 | 0.3 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 473 | 471 | 100 | 0.4 | *A* |
| SB | L | 33 | 32 | 98 | 4.6 | *A* |
| | T | 766 | 754 | 98 | 1.1 | *A* |
| | R | 26 | 29 | 110 | 1.1 | *A* |
| | Subtotal | 825 | 815 | 99 | 1.2 | *A* |
| ***EB*** | ***L*** | ***116*** | ***112*** | ***97*** | ***32.7*** | ***D*** |
| | R | 12 | 13 | 106 | 23.4 | *C* |
| | Subtotal | 128 | 125 | 98 | 31.7 | *D* |
| WB | L | 20 | 23 | 114 | 18.4 | *C* |
| | T | 5 | 5 | 100 | 30.0 | *D* |
| | R | 135 | 142 | 105 | 11.8 | *B* |
| | Subtotal | 160 | 170 | 106 | 13.2 | *B* |
| **Total** | | 1,587 | 1,581 | 100 | 4.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 463 | 461 | 100 | 0.3 | *A* |
| | R | 2 | 2 | 100 | 0.1 | *A* |
| | Subtotal | 465 | 463 | 100 | 0.3 | *A* |
| SB | L | 6 | 4 | 67 | 2.5 | *A* |
| | T | 793 | 786 | 99 | 0.3 | *A* |
| | Subtotal | 799 | 790 | 99 | 0.3 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***11.9*** | ***B*** |
| | R | 10 | 11 | 107 | 3.9 | *A* |
| | Subtotal | 15 | 16 | 107 | 6.4 | *A* |
| | | | | | | |
| **Total** | | 1,279 | 1,269 | 99 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 455 | 453 | 100 | 1.1 | *A* |
| | R | 11 | 11 | 98 | 1.1 | *A* |
| | Subtotal | 466 | 464 | 100 | 1.1 | *A* |
| SB | L | 9 | 9 | 100 | 3.1 | *A* |
| | T | 788 | 779 | 99 | 0.4 | *A* |
| | Subtotal | 797 | 788 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***11*** | ***107*** | ***11.8*** | ***B*** |
| | R | 10 | 9 | 88 | 4.2 | *A* |
| | Subtotal | 20 | 20 | 100 | 8.4 | *A* |
| | | | | | | |
| **Total** | | 1,284 | 1,272 | 99 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 12.4 | *B* |
| | T | 367 | 368 | 100 | 5.7 | *A* |
| | R | 145 | 147 | 102 | 4.1 | *A* |
| | Subtotal | 518 | 521 | 101 | 5.3 | *A* |
| SB | L | 70 | 73 | 104 | 12.2 | *B* |
| | T | 658 | 649 | 99 | 6.4 | *A* |
| | R | 69 | 67 | 97 | 5.1 | *A* |
| | Subtotal | 797 | 789 | 99 | 6.8 | *A* |
| EB | L | 23 | 24 | 103 | 9.4 | *A* |
| | T | 11 | 13 | 116 | 11.6 | *B* |
| | R | 17 | 16 | 93 | 5.0 | *A* |
| | Subtotal | 51 | 53 | 104 | 8.6 | *A* |
| WB | L | 205 | 198 | 97 | 12.2 | *B* |
| | T | 17 | 16 | 93 | 12.0 | *B* |
| | R | 35 | 33 | 95 | 7.4 | *A* |
| | Subtotal | 257 | 247 | 96 | 11.5 | *B* |
| **Total** | | 1,624 | 1,610 | 99 | 7.1 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.1 | 0.3 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.3 | 0.1 | 0.3 |
| Denied Del/Veh (s) | 2.5 | 0.6 | 2.4 | 1.6 | 0.2 | 1.5 | 0.9 | 0.2 | 0.6 | 2.7 | 0.6 | 2.7 |
| Total Delay (hr) | 11.5 | 11.3 | 3.7 | 10.7 | 13.9 | 0.2 | 11.1 | 7.5 | 2.8 | 8.6 | 8.6 | 1.1 |
| Total Del/Veh (s) | 77.7 | 57.9 | 31.9 | 68.3 | 40.7 | 11.1 | 73.1 | 45.5 | 15.3 | 86.9 | 80.6 | 10.1 |
| Vehicles Entered | 524 | 687 | 416 | 551 | 1203 | 77 | 541 | 592 | 648 | 351 | 372 | 400 |
| Vehicles Exited | 524 | 687 | 417 | 548 | 1201 | 78 | 540 | 592 | 647 | 350 | 368 | 401 |
| Hourly Exit Rate | 524 | 687 | 417 | 548 | 1201 | 78 | 540 | 592 | 647 | 350 | 368 | 401 |
| Input Volume | 520 | 690 | 411 | 545 | 1190 | 75 | 551 | 602 | 645 | 350 | 383 | 405 |
| % of Volume | 101 | 100 | 101 | 101 | 101 | 104 | 98 | 98 | 100 | 100 | 96 | 99 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.0 |
| Denied Del/Veh (s) | 1.1 |
| Total Delay (hr) | 91.2 |
| Total Del/Veh (s) | 50.7 |
| Vehicles Entered | 6362 |
| Vehicles Exited | 6353 |
| Hourly Exit Rate | 6353 |
| Input Volume | 6367 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.5 | 0.3 | 0.2 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 3.0 | 0.5 | 2.9 | 0.0 | 0.0 | 0.0 | 5.0 | 3.0 | 2.2 |
| Total Delay (hr) | 2.9 | 9.9 | 0.5 | 5.4 | 3.6 | 0.3 | 3.4 | 2.1 | 2.3 | 8.9 | 5.4 | 0.8 |
| Total Del/Veh (s) | 84.6 | 25.4 | 10.6 | 69.9 | 34.4 | 5.7 | 75.7 | 55.9 | 19.6 | 81.5 | 52.3 | 8.8 |
| Vehicles Entered | 123 | 1381 | 181 | 272 | 368 | 205 | 158 | 133 | 424 | 383 | 362 | 319 |
| Vehicles Exited | 123 | 1380 | 180 | 272 | 367 | 205 | 159 | 132 | 425 | 381 | 362 | 319 |
| Hourly Exit Rate | 123 | 1380 | 180 | 272 | 367 | 205 | 159 | 132 | 425 | 381 | 362 | 319 |
| Input Volume | 120 | 1385 | 180 | 276 | 370 | 205 | 160 | 136 | 419 | 375 | 368 | 310 |
| % of Volume | 102 | 100 | 100 | 99 | 99 | 100 | 100 | 97 | 101 | 102 | 98 | 103 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 1.5 |
| Denied Del/Veh (s) | 1.2 |
| Total Delay (hr) | 45.6 |
| Total Del/Veh (s) | 37.5 |
| Vehicles Entered | 4309 |
| Vehicles Exited | 4305 |
| Hourly Exit Rate | 4305 |
| Input Volume | 4305 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 1.6 | 0.1 | 0.6 | 0.0 | 0.0 | 0.3 | 0.0 | 1.8 | 0.1 | 0.0 | 0.5 | 0.0 |
| Denied Del/Veh (s) | 77.7 | 67.0 | 63.7 | 1.4 | 1.3 | 3.7 | 7.3 | 5.1 | 6.7 | 2.2 | 1.3 | 0.7 |
| Total Delay (hr) | 1.9 | 0.1 | 0.7 | 1.4 | 0.1 | 4.1 | 0.2 | 12.3 | 0.5 | 1.4 | 4.4 | 0.0 |
| Total Del/Veh (s) | 89.9 | 80.6 | 69.1 | 64.6 | 90.2 | 50.1 | 59.6 | 34.5 | 30.8 | 61.7 | 11.4 | 8.1 |
| Vehicles Entered | 73 | 6 | 33 | 77 | 2 | 293 | 15 | 1268 | 52 | 78 | 1386 | 5 |
| Vehicles Exited | 73 | 6 | 33 | 77 | 2 | 289 | 15 | 1268 | 52 | 78 | 1387 | 5 |
| Hourly Exit Rate | 73 | 6 | 33 | 77 | 2 | 289 | 15 | 1268 | 52 | 78 | 1387 | 5 |
| Input Volume | 75 | 5 | 30 | 77 | 2 | 286 | 15 | 1275 | 49 | 78 | 1389 | 5 |
| % of Volume | 97 | 126 | 109 | 100 | 89 | 101 | 98 | 99 | 106 | 100 | 100 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 5.1 |
| Denied Del/Veh (s) | 5.6 |
| Total Delay (hr) | 27.0 |
| Total Del/Veh (s) | 29.3 |
| Vehicles Entered | 3288 |
| Vehicles Exited | 3285 |
| Hourly Exit Rate | 3285 |
| Input Volume | 3286 |
| % of Volume | 100 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 1.0 | 0.1 | 0.1 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 2.1 |
| Total Del/Veh (s) | 32.7 | 23.4 | 18.4 | 30.0 | 11.8 | 5.7 | 0.3 | 0.1 | 4.6 | 1.1 | 1.1 | 4.7 |
| Vehicles Entered | 113 | 13 | 23 | 5 | 142 | 5 | 462 | 4 | 32 | 754 | 29 | 1582 |
| Vehicles Exited | 112 | 13 | 23 | 5 | 142 | 5 | 462 | 4 | 32 | 754 | 29 | 1581 |
| Hourly Exit Rate | 112 | 13 | 23 | 5 | 142 | 5 | 462 | 4 | 32 | 754 | 29 | 1581 |
| Input Volume | 116 | 12 | 20 | 5 | 135 | 6 | 464 | 3 | 33 | 766 | 26 | 1587 |
| % of Volume | 97 | 106 | 114 | 100 | 105 | 83 | 100 | 133 | 98 | 98 | 110 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| Total Del/Veh (s) | 11.9 | 3.9 | 0.3 | 0.1 | 2.5 | 0.3 | 0.3 |
| Vehicles Entered | 5 | 11 | 460 | 2 | 4 | 786 | 1268 |
| Vehicles Exited | 5 | 11 | 461 | 2 | 4 | 786 | 1269 |
| Hourly Exit Rate | 5 | 11 | 461 | 2 | 4 | 786 | 1269 |
| Input Volume | 5 | 10 | 463 | 2 | 6 | 793 | 1279 |
| % of Volume | 100 | 107 | 100 | 100 | 67 | 99 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 |
| Total Del/Veh (s) | 11.8 | 4.2 | 1.1 | 1.1 | 3.1 | 0.4 | 0.8 |
| Vehicles Entered | 11 | 9 | 452 | 11 | 9 | 780 | 1272 |
| Vehicles Exited | 11 | 9 | 453 | 11 | 9 | 779 | 1272 |
| Hourly Exit Rate | 11 | 9 | 453 | 11 | 9 | 779 | 1272 |
| Input Volume | 10 | 10 | 455 | 11 | 9 | 788 | 1284 |
| % of Volume | 107 | 88 | 100 | 98 | 100 | 99 | 99 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 2.9 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.7 | 0.1 | 0.1 | 0.0 | 0.6 | 0.2 | 0.3 | 1.2 | 0.1 |
| Total Del/Veh (s) | 9.4 | 11.6 | 5.0 | 12.2 | 12.0 | 7.4 | 12.4 | 5.7 | 4.1 | 12.2 | 6.4 | 5.1 |
| Vehicles Entered | 24 | 13 | 16 | 198 | 16 | 33 | 6 | 369 | 147 | 73 | 649 | 67 |
| Vehicles Exited | 24 | 13 | 16 | 198 | 16 | 33 | 6 | 368 | 147 | 73 | 649 | 67 |
| Hourly Exit Rate | 24 | 13 | 16 | 198 | 16 | 33 | 6 | 368 | 147 | 73 | 649 | 67 |
| Input Volume | 23 | 11 | 17 | 205 | 17 | 35 | 6 | 367 | 145 | 70 | 658 | 69 |
| % of Volume | 103 | 116 | 93 | 97 | 93 | 95 | 100 | 100 | 102 | 104 | 99 | 97 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 3.2 |
| Total Del/Veh (s) | 7.1 |
| Vehicles Entered | 1611 |
| Vehicles Exited | 1610 |
| Hourly Exit Rate | 1610 |
| Input Volume | 1624 |
| % of Volume | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 8.6 |
| Denied Del/Veh (s) | 3.5 |
| Total Delay (hr) | 180.2 |
| Total Del/Veh (s) | 70.1 |
| Vehicles Entered | 8948 |
| Vehicles Exited | 8927 |
| Hourly Exit Rate | 8927 |
| Input Volume | 30161 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 369 | 438 | 355 | 327 | 351 | 372 | 395 | 434 | 433 | 360 | 276 | 214 |
| Average Queue (ft) | 244 | 291 | 231 | 225 | 180 | 183 | 214 | 255 | 257 | 232 | 187 | 123 |
| 95th Queue (ft) | 361 | 414 | 326 | 307 | 322 | 340 | 353 | 402 | 379 | 323 | 261 | 201 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1033 | 1033 | 1033 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 6 | 25 | 10 | | 0 | 8 | 1 | 3 | 0 | | 1 | 0 |
| Queuing Penalty (veh) | 15 | 57 | 53 | | 1 | 19 | 2 | 7 | 1 | | 2 | 0 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | T | R | |
| Maximum Queue (ft) | 60 | 200 | 250 | 405 | 428 | 250 | 301 | 330 | 336 | 290 | 211 | |
| Average Queue (ft) | 16 | 184 | 236 | 324 | 267 | 180 | 175 | 209 | 195 | 177 | 91 | |
| 95th Queue (ft) | 44 | 231 | 284 | 467 | 458 | 288 | 281 | 310 | 301 | 275 | 168 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 1001 | 1001 | | |
| Upstream Blk Time (%) | | | | 10 | 4 | | | | | | | |
| Queuing Penalty (veh) | | | | 76 | 34 | | | | | | | |
| Storage Bay Dist (ft) | 250 | 150 | 150 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 26 | 45 | 15 | 19 | 12 | 0 | 1 | 1 | 10 | 0 | |
| Queuing Penalty (veh) | | 56 | 99 | 82 | 122 | 27 | 0 | 3 | 3 | 43 | 1 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 126 | 151 | 320 | 324 | 126 | 204 | 313 | 406 | 423 | 281 | 102 | 238 |
| Average Queue (ft) | 51 | 66 | 190 | 198 | 50 | 7 | 18 | 230 | 150 | 94 | 42 | 144 |
| 95th Queue (ft) | 97 | 113 | 275 | 286 | 93 | 149 | 240 | 365 | 290 | 201 | 77 | 231 |
| Link Distance (ft) | | | 2242 | 2242 | | 1033 | 1033 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 0 | 0 | | | | 10 | 0 | 2 | 0 | 3 |
| Queuing Penalty (veh) | | | 0 | 1 | | | | 18 | 0 | 4 | 0 | 5 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 231 | 290 | 384 | 747 | 308 |
| Average Queue (ft) | 101 | 136 | 327 | 400 | 113 |
| 95th Queue (ft) | 193 | 236 | 433 | 761 | 415 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | | 0 | | 3 | 0 |
| Queuing Penalty (veh) | | 0 | | 0 | 0 |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 36 | 12 | |
| Queuing Penalty (veh) | 1 | | 132 | 44 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 134 | 594 | 200 | 71 | 709 | 711 | 149 | 393 | 389 |
| Average Queue (ft) | 93 | 183 | 126 | 10 | 312 | 318 | 62 | 192 | 201 |
| 95th Queue (ft) | 148 | 502 | 228 | 45 | 723 | 717 | 142 | 397 | 405 |
| Link Distance (ft) | 105 | 705 | | | 688 | 688 | | 374 | 374 |
| Upstream Blk Time (%) | 38 | 1 | | | 5 | 5 | | 1 | 1 |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | 8 | 9 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 5 | 30 | 0 | 34 | | 26 | 16 | |
| Queuing Penalty (veh) | | 15 | 28 | 3 | 5 | | 194 | 13 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 156 | 136 | 27 | 9 | 24 | 47 | 25 | 37 |
| Average Queue (ft) | 71 | 62 | 3 | 0 | 1 | 11 | 1 | 1 |
| 95th Queue (ft) | 126 | 108 | 17 | 5 | 10 | 38 | 11 | 14 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | | | 0 | 0 | |
| Queuing Penalty (veh) | | | | | | 1 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 35 | 2 | 27 |
| Average Queue (ft) | 13 | 0 | 1 |
| 95th Queue (ft) | 37 | 0 | 11 |
| Link Distance (ft) | 263 | 320 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 44 | 4 | 25 |
| Average Queue (ft) | 16 | 0 | 3 |
| 95th Queue (ft) | 43 | 4 | 17 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 68 | 166 | 35 | 104 | 134 | 103 | 140 | 164 |
| Average Queue (ft) | 25 | 77 | 5 | 49 | 63 | 34 | 61 | 80 |
| 95th Queue (ft) | 57 | 132 | 24 | 87 | 109 | 71 | 116 | 134 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 1 | |

## Network Summary

Network wide Queuing Penalty: 1187

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 600 | 572 | 95 | 87.5 | *F* |
| | T | 614 | 596 | 97 | 41.0 | *D* |
| | R | 645 | 620 | 96 | 16.2 | *B* |
| | Subtotal | 1,859 | 1,788 | 96 | 47.3 | *D* |
| SB | L | 350 | 347 | 99 | 71.5 | *E* |
| | T | 384 | 374 | 97 | 63.9 | *E* |
| | R | 405 | 409 | 101 | 14.0 | *B* |
| | Subtotal | 1,139 | 1,130 | 99 | 48.2 | *D* |
| EB | L | 520 | 508 | 98 | 77.8 | *E* |
| | T | 690 | 680 | 99 | 74.7 | *E* |
| | R | 421 | 411 | 98 | 32.0 | *C* |
| | Subtotal | 1,631 | 1,599 | 98 | 64.7 | *E* |
| WB | L | 546 | 557 | 102 | 63.7 | *E* |
| | T | 1,190 | 1,187 | 100 | 50.4 | *D* |
| | R | 75 | 72 | 96 | 11.3 | *B* |
| | Subtotal | 1,811 | 1,816 | 100 | 52.9 | *D* |
| **Total** | | 6,440 | 6,333 | 98 | 53.5 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 170 | 170 | 100 | 80.2 | *F* |
| | T | 139 | 136 | 98 | 56.6 | *E* |
| | R | 446 | 445 | 100 | 20.1 | *C* |
| | Subtotal | 755 | 751 | 99 | 40.3 | *D* |
| SB | L | 375 | 375 | 100 | 81.0 | *F* |
| | T | 368 | 368 | 100 | 50.3 | *D* |
| | R | 310 | 309 | 100 | 8.3 | *A* |
| | Subtotal | 1,053 | 1,052 | 100 | 48.9 | *D* |
| EB | L | 120 | 117 | 98 | 80.6 | *F* |
| | T | 1,385 | 1,353 | 98 | 24.6 | *C* |
| | R | 180 | 181 | 101 | 10.5 | *B* |
| | Subtotal | 1,685 | 1,651 | 98 | 27.0 | *C* |
| WB | L | 281 | 283 | 101 | 75.8 | *E* |
| | T | 371 | 365 | 98 | 33.8 | *C* |
| | R | 205 | 212 | 104 | 5.6 | *A* |
| | Subtotal | 857 | 860 | 100 | 40.7 | *D* |
| **Total** | | 4,350 | 4,314 | 99 | 37.5 | *D* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 16 | 105 | 109.9 | *F* |
| | T | 1,275 | 1,231 | 97 | 75.2 | *E* |
| | R | 55 | 51 | 92 | 54.4 | *D* |
| | Subtotal | 1,345 | 1,298 | 97 | 74.8 | *E* |
| SB | L | 90 | 85 | 94 | 73.0 | *E* |
| | T | 1,390 | 1,377 | 99 | 14.2 | *B* |
| | R | 5 | 5 | 105 | 12.3 | *B* |
| | Subtotal | 1,485 | 1,467 | 99 | 17.6 | *B* |
| EB | L | 75 | 49 | 65 | 187.5 | *F* |
| | T | 5 | 3 | 63 | 138.6 | *F* |
| | R | 30 | 22 | 73 | 131.8 | *F* |
| | Subtotal | 110 | 74 | 67 | 169.0 | *F* |
| WB | L | 90 | 85 | 94 | 101.0 | *F* |
| | T | 2 | 2 | 89 | 88.6 | *F* |
| | R | 341 | 329 | 96 | 115.4 | *F* |
| | Subtotal | 433 | 416 | 96 | 112.3 | *F* |
| **Total** | | 3,374 | 3,255 | 96 | 56.8 | *E* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 7 | 6 | 86 | 8.8 | *A* |
| | T | 464 | 466 | 100 | 0.4 | *A* |
| | R | 3 | 3 | 100 | 0.2 | *A* |
| | Subtotal | 474 | 475 | 100 | 0.5 | *A* |
| SB | L | 33 | 30 | 92 | 4.1 | *A* |
| | T | 766 | 772 | 101 | 1.1 | *A* |
| | R | 31 | 31 | 101 | 1.0 | *A* |
| | Subtotal | 830 | 833 | 100 | 1.2 | *A* |
| ***EB*** | ***L*** | ***156*** | ***150*** | ***96*** | ***61.7*** | ***F*** |
| | R | 25 | 27 | 107 | 49.7 | *E* |
| | Subtotal | 181 | 177 | 98 | 59.9 | *F* |
| WB | L | 20 | 20 | 99 | 18.2 | *C* |
| | T | 5 | 6 | 120 | 28.5 | *D* |
| | R | 135 | 134 | 99 | 12.3 | *B* |
| | Subtotal | 160 | 160 | 100 | 13.6 | *B* |
| **Total** | | 1,645 | 1,645 | 100 | 8.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 464 | 464 | 100 | 0.3 | *A* |
| | R | 5 | 6 | 120 | 0.3 | *A* |
| | Subtotal | 469 | 470 | 100 | 0.3 | *A* |
| SB | L | 6 | 6 | 100 | 3.8 | *A* |
| | T | 805 | 812 | 101 | 0.3 | *A* |
| | Subtotal | 811 | 818 | 101 | 0.3 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***10.8*** | ***B*** |
| | R | 10 | 12 | 117 | 3.6 | *A* |
| | Subtotal | 15 | 17 | 113 | 5.7 | *A* |
| **Total** | | 1,295 | 1,305 | 101 | 0.4 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 459 | 460 | 100 | 1.2 | *A* |
| | R | 11 | 14 | 124 | 1.1 | *A* |
| | Subtotal | 470 | 474 | 101 | 1.2 | *A* |
| SB | L | 9 | 7 | 78 | 3.4 | *A* |
| | T | 800 | 812 | 102 | 0.4 | *A* |
| | Subtotal | 809 | 819 | 101 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***11*** | ***107*** | ***12.7*** | ***B*** |
| | R | 10 | 11 | 107 | 3.5 | *A* |
| | Subtotal | 20 | 22 | 110 | 8.1 | *A* |
| **Total** | | 1,300 | 1,315 | 101 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 15.0 | *B* |
| | T | 367 | 371 | 101 | 6.1 | *A* |
| | R | 145 | 150 | 104 | 4.4 | *A* |
| | Subtotal | 518 | 527 | 102 | 5.7 | *A* |
| SB | L | 70 | 67 | 95 | 13.6 | *B* |
| | T | 671 | 683 | 102 | 6.6 | *A* |
| | R | 69 | 70 | 101 | 5.5 | *A* |
| | Subtotal | 810 | 820 | 101 | 7.1 | *A* |
| EB | L | 23 | 26 | 112 | 10.2 | *B* |
| | T | 11 | 11 | 98 | 10.3 | *B* |
| | R | 17 | 19 | 110 | 5.3 | *A* |
| | Subtotal | 51 | 56 | 110 | 8.6 | *A* |
| WB | L | 205 | 211 | 103 | 12.1 | *B* |
| | T | 17 | 19 | 110 | 13.7 | *B* |
| | R | 35 | 36 | 104 | 7.9 | *A* |
| | Subtotal | 257 | 266 | 104 | 11.6 | *B* |
| **Total** | | 1,637 | 1,669 | 102 | 7.4 | *A* |

**Intersection:** 3400 North & Innovation Way
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***300*** | ***104*** | ***9.3*** | ***A*** |
| | Subtotal | 288 | 300 | 104 | 9.3 | *A* |
| EB | L | 61 | 58 | 95 | 2.7 | *A* |
| | T | 89 | 82 | 92 | 0.8 | *A* |
| | Subtotal | 150 | 140 | 93 | 1.6 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 438 | 440 | 100 | 6.9 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.3 | 0.1 | 0.3 | 0.2 | 0.0 | 0.0 | 0.3 | 0.1 | 0.2 | 0.3 | 0.1 | 0.3 |
| Denied Del/Veh (s) | 2.4 | 0.6 | 2.4 | 1.5 | 0.1 | 1.5 | 1.6 | 0.5 | 1.1 | 2.7 | 0.6 | 2.7 |
| Total Delay (hr) | 11.2 | 14.3 | 3.7 | 10.1 | 17.0 | 0.2 | 14.2 | 6.9 | 2.8 | 6.9 | 6.9 | 1.6 |
| Total Del/Veh (s) | 77.8 | 74.7 | 32.0 | 63.7 | 50.4 | 11.3 | 87.5 | 41.0 | 16.2 | 71.5 | 63.9 | 14.0 |
| Vehicles Entered | 510 | 681 | 413 | 556 | 1185 | 73 | 576 | 589 | 620 | 346 | 375 | 410 |
| Vehicles Exited | 508 | 680 | 411 | 557 | 1187 | 72 | 572 | 596 | 620 | 347 | 374 | 409 |
| Hourly Exit Rate | 508 | 680 | 411 | 557 | 1187 | 72 | 572 | 596 | 620 | 347 | 374 | 409 |
| Input Volume | 520 | 690 | 421 | 546 | 1190 | 75 | 600 | 614 | 645 | 350 | 384 | 405 |
| % of Volume | 98 | 99 | 98 | 102 | 100 | 96 | 95 | 97 | 96 | 99 | 97 | 101 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.2 |
| Denied Del/Veh (s) | 1.2 |
| Total Delay (hr) | 95.8 |
| Total Del/Veh (s) | 53.5 |
| Vehicles Entered | 6334 |
| Vehicles Exited | 6333 |
| Hourly Exit Rate | 6333 |
| Input Volume | 6440 |
| % of Volume | 98 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 3.0 | 0.5 | 2.9 | 0.0 | 0.0 | 0.0 | 2.8 | 1.0 | 0.7 |
| Total Delay (hr) | 2.8 | 9.4 | 0.5 | 6.1 | 3.5 | 0.3 | 3.9 | 2.1 | 2.5 | 8.6 | 5.2 | 0.7 |
| Total Del/Veh (s) | 80.6 | 24.6 | 10.5 | 75.8 | 33.8 | 5.6 | 80.2 | 56.6 | 20.1 | 81.0 | 50.3 | 8.3 |
| Vehicles Entered | 117 | 1351 | 182 | 283 | 366 | 212 | 168 | 136 | 445 | 370 | 367 | 310 |
| Vehicles Exited | 117 | 1353 | 181 | 283 | 365 | 212 | 170 | 136 | 445 | 375 | 368 | 309 |
| Hourly Exit Rate | 117 | 1353 | 181 | 283 | 365 | 212 | 170 | 136 | 445 | 375 | 368 | 309 |
| Input Volume | 120 | 1385 | 180 | 281 | 371 | 205 | 170 | 139 | 446 | 375 | 368 | 310 |
| % of Volume | 98 | 98 | 101 | 101 | 98 | 104 | 100 | 98 | 100 | 100 | 100 | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.9 |
| Denied Del/Veh (s) | 0.8 |
| Total Delay (hr) | 45.7 |
| Total Del/Veh (s) | 37.5 |
| Vehicles Entered | 4307 |
| Vehicles Exited | 4314 |
| Hourly Exit Rate | 4314 |
| Input Volume | 4350 |
| % of Volume | 99 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 11.0 | 0.6 | 4.6 | 3.5 | 0.1 | 15.2 | 0.2 | 15.9 | 0.7 | 0.0 | 0.2 | 0.0 |
| Denied Del/Veh (s) | 527.0 | 443.3 | 518.0 | 140.3 | 153.0 | 152.7 | 38.9 | 44.1 | 46.9 | 1.3 | 0.5 | 0.4 |
| Total Delay (hr) | 2.8 | 0.2 | 0.8 | 2.5 | 0.0 | 11.1 | 0.5 | 26.8 | 0.8 | 1.7 | 5.4 | 0.0 |
| Total Del/Veh (s) | 187.5 | 138.6 | 131.8 | 101.0 | 88.6 | 115.4 | 109.9 | 75.2 | 54.4 | 73.0 | 14.2 | 12.3 |
| Vehicles Entered | 52 | 4 | 23 | 88 | 2 | 342 | 16 | 1268 | 53 | 86 | 1378 | 5 |
| Vehicles Exited | 49 | 3 | 22 | 85 | 2 | 329 | 16 | 1231 | 51 | 85 | 1377 | 5 |
| Hourly Exit Rate | 49 | 3 | 22 | 85 | 2 | 329 | 16 | 1231 | 51 | 85 | 1377 | 5 |
| Input Volume | 75 | 5 | 30 | 90 | 2 | 341 | 15 | 1275 | 55 | 90 | 1390 | 5 |
| % of Volume | 65 | 63 | 73 | 94 | 89 | 96 | 105 | 97 | 92 | 94 | 99 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 52.0 |
| Denied Del/Veh (s) | 55.1 |
| Total Delay (hr) | 52.7 |
| Total Del/Veh (s) | 56.8 |
| Vehicles Entered | 3317 |
| Vehicles Exited | 3255 |
| Hourly Exit Rate | 3255 |
| Input Volume | 3374 |
| % of Volume | 96 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 2.7 | 0.4 | 0.1 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 4.0 |
| Total Del/Veh (s) | 61.7 | 49.7 | 18.2 | 28.5 | 12.3 | 8.8 | 0.4 | 0.2 | 4.1 | 1.1 | 1.0 | 8.7 |
| Vehicles Entered | 153 | 27 | 20 | 6 | 134 | 6 | 466 | 3 | 29 | 772 | 31 | 1647 |
| Vehicles Exited | 150 | 27 | 20 | 6 | 134 | 6 | 466 | 3 | 30 | 772 | 31 | 1645 |
| Hourly Exit Rate | 150 | 27 | 20 | 6 | 134 | 6 | 466 | 3 | 30 | 772 | 31 | 1645 |
| Input Volume | 156 | 25 | 20 | 5 | 135 | 7 | 464 | 3 | 33 | 766 | 31 | 1645 |
| % of Volume | 96 | 107 | 99 | 120 | 99 | 86 | 100 | 100 | 92 | 101 | 101 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| Total Del/Veh (s) | 10.8 | 3.6 | 0.3 | 0.3 | 3.8 | 0.3 | 0.4 |
| Vehicles Entered | 5 | 12 | 465 | 6 | 6 | 812 | 1306 |
| Vehicles Exited | 5 | 12 | 464 | 6 | 6 | 812 | 1305 |
| Hourly Exit Rate | 5 | 12 | 464 | 6 | 6 | 812 | 1305 |
| Input Volume | 5 | 10 | 464 | 5 | 6 | 805 | 1295 |
| % of Volume | 100 | 117 | 100 | 120 | 100 | 101 | 101 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 |
| Total Del/Veh (s) | 12.7 | 3.5 | 1.2 | 1.1 | 3.4 | 0.4 | 0.8 |
| Vehicles Entered | 11 | 11 | 460 | 14 | 7 | 810 | 1313 |
| Vehicles Exited | 11 | 11 | 460 | 14 | 7 | 812 | 1315 |
| Hourly Exit Rate | 11 | 11 | 460 | 14 | 7 | 812 | 1315 |
| Input Volume | 10 | 10 | 459 | 11 | 9 | 800 | 1300 |
| % of Volume | 107 | 107 | 100 | 124 | 78 | 102 | 101 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.2 | 2.7 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.7 | 0.1 | 0.1 | 0.0 | 0.6 | 0.2 | 0.3 | 1.3 | 0.1 |
| Total Del/Veh (s) | 10.2 | 10.3 | 5.3 | 12.1 | 13.7 | 7.9 | 15.0 | 6.1 | 4.4 | 13.6 | 6.6 | 5.5 |
| Vehicles Entered | 26 | 11 | 19 | 211 | 19 | 36 | 6 | 370 | 149 | 68 | 685 | 70 |
| Vehicles Exited | 26 | 11 | 19 | 211 | 19 | 36 | 6 | 371 | 150 | 67 | 683 | 70 |
| Hourly Exit Rate | 26 | 11 | 19 | 211 | 19 | 36 | 6 | 371 | 150 | 67 | 683 | 70 |
| Input Volume | 23 | 11 | 17 | 205 | 17 | 35 | 6 | 367 | 145 | 70 | 671 | 69 |
| % of Volume | 112 | 98 | 110 | 103 | 110 | 104 | 100 | 101 | 104 | 95 | 102 | 101 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 3.5 |
| Total Del/Veh (s) | 7.4 |
| Vehicles Entered | 1670 |
| Vehicles Exited | 1669 |
| Hourly Exit Rate | 1669 |
| Input Volume | 1637 |
| % of Volume | 102 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.3 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.8 | 0.8 |
| Total Del/Veh (s) | 2.7 | 0.8 | 9.3 | 6.9 |
| Vehicles Entered | 57 | 82 | 302 | 441 |
| Vehicles Exited | 58 | 82 | 300 | 440 |
| Hourly Exit Rate | 58 | 82 | 300 | 440 |
| Input Volume | 61 | 89 | 288 | 438 |
| % of Volume | 95 | 92 | 104 | 100 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 55.2 |
| Denied Del/Veh (s) | 21.8 |
| Total Delay (hr) | 214.0 |
| Total Del/Veh (s) | 82.3 |
| Vehicles Entered | 9033 |
| Vehicles Exited | 8977 |
| Hourly Exit Rate | 8977 |
| Input Volume | 30968 |
| % of Volume | 29 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 369 | 470 | 473 | 413 | 350 | 345 | 355 | 415 | 447 | 389 | 314 | 262 |
| Average Queue (ft) | 231 | 282 | 271 | 255 | 199 | 176 | 208 | 247 | 277 | 258 | 211 | 147 |
| 95th Queue (ft) | 353 | 421 | 404 | 361 | 334 | 316 | 316 | 359 | 388 | 357 | 293 | 231 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1014 | 1014 | 1014 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 6 | 21 | 18 | | 2 | 7 | 0 | 0 | 1 | | 2 | 0 |
| Queuing Penalty (veh) | 14 | 50 | 93 | | 10 | 16 | 0 | 1 | 3 | | 9 | 0 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | T | R | |
| Maximum Queue (ft) | 73 | 175 | 250 | 404 | 446 | 250 | 268 | 302 | 295 | 272 | 246 | |
| Average Queue (ft) | 19 | 168 | 246 | 370 | 361 | 170 | 155 | 188 | 170 | 153 | 109 | |
| 95th Queue (ft) | 49 | 189 | 266 | 456 | 514 | 304 | 243 | 273 | 266 | 255 | 196 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 999 | 999 | | |
| Upstream Blk Time (%) | | | | 27 | 17 | | | | | | | |
| Queuing Penalty (veh) | | | | 222 | 132 | | | | | | | |
| Storage Bay Dist (ft) | 250 | 100 | 100 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 53 | 64 | 23 | 16 | 12 | 0 | 0 | 0 | 5 | 1 | |
| Queuing Penalty (veh) | | 117 | 142 | 139 | 104 | 27 | 0 | 0 | 1 | 21 | 2 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 111 | 151 | 299 | 316 | 108 | 394 | 511 | 410 | 378 | 213 | 95 | 280 |
| Average Queue (ft) | 45 | 66 | 188 | 193 | 49 | 10 | 15 | 246 | 159 | 94 | 42 | 155 |
| 95th Queue (ft) | 92 | 115 | 276 | 281 | 89 | 176 | 216 | 386 | 303 | 179 | 76 | 256 |
| Link Distance (ft) | | | 2261 | 2261 | | 1014 | 1014 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 0 | 0 | | | | 13 | 0 | 1 | 0 | 6 |
| Queuing Penalty (veh) | | | 0 | 1 | | | | 25 | 0 | 3 | 0 | 9 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 312 | 286 | 385 | 829 | 447 |
| Average Queue (ft) | 120 | 141 | 316 | 398 | 97 |
| 95th Queue (ft) | 239 | 240 | 435 | 762 | 341 |
| Link Distance (ft) | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | 0 | | | 1 | 0 |
| Queuing Penalty (veh) | 0 | | | 0 | 0 |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 1 | | 35 | 11 | |
| Queuing Penalty (veh) | 1 | | 128 | 40 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 128 | 695 | 200 | 99 | 716 | 727 | 149 | 391 | 399 |
| Average Queue (ft) | 98 | 398 | 179 | 15 | 543 | 523 | 80 | 216 | 230 |
| 95th Queue (ft) | 144 | 769 | 246 | 62 | 880 | 884 | 162 | 396 | 405 |
| Link Distance (ft) | 105 | 694 | | | 686 | 686 | | 374 | 374 |
| Upstream Blk Time (%) | 66 | 5 | | | 24 | 18 | | 1 | 1 |
| Queuing Penalty (veh) | 0 | 15 | | | 0 | 0 | | 6 | 9 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 7 | 66 | 1 | 62 | | 36 | 21 | |
| Queuing Penalty (veh) | | 30 | 64 | 4 | 9 | | 254 | 20 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 303 | 145 | 30 | 16 | 9 | 41 | 24 | 44 |
| Average Queue (ft) | 127 | 61 | 4 | 1 | 0 | 10 | 1 | 2 |
| 95th Queue (ft) | 259 | 108 | 19 | 12 | 6 | 35 | 11 | 18 |
| Link Distance (ft) | 535 | 986 | | 157 | 157 | | 368 | 368 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 37 | 28 |
| Average Queue (ft) | 14 | 2 |
| 95th Queue (ft) | 39 | 16 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 36 | 2 | 31 |
| Average Queue (ft) | 16 | 0 | 3 |
| 95th Queue (ft) | 42 | 2 | 17 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 67 | 165 | 37 | 115 | 138 | 97 | 153 | 159 |
| Average Queue (ft) | 26 | 81 | 5 | 49 | 63 | 35 | 69 | 87 |
| 95th Queue (ft) | 58 | 137 | 25 | 93 | 113 | 71 | 127 | 140 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 1 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 1 | |

## Intersection: 31: 3400 North & Innovation Way

| Movement | EB | SB |
|---|---|---|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 80 | 206 |
| Average Queue (ft) | 3 | 63 |
| 95th Queue (ft) | 82 | 169 |
| Link Distance (ft) | 694 | 525 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Network Summary

Network wide Queuing Penalty: 1721

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 600 | 570 | 95 | 87.9 | *F* |
| | T | 614 | 596 | 97 | 40.0 | *D* |
| | R | 645 | 607 | 94 | 15.6 | *B* |
| | Subtotal | 1,859 | 1,773 | 95 | 47.0 | *D* |
| SB | L | 350 | 351 | 100 | 72.4 | *E* |
| | T | 384 | 394 | 103 | 63.3 | *E* |
| | R | 405 | 402 | 99 | 14.4 | *B* |
| | Subtotal | 1,139 | 1,147 | 101 | 48.9 | *D* |
| EB | L | 520 | 524 | 101 | 79.7 | *E* |
| | T | 690 | 689 | 100 | 74.4 | *E* |
| | R | 421 | 429 | 102 | 23.7 | *C* |
| | Subtotal | 1,631 | 1,642 | 101 | 62.8 | *E* |
| WB | L | 546 | 540 | 99 | 63.2 | *E* |
| | T | 1,190 | 1,188 | 100 | 50.1 | *D* |
| | R | 75 | 73 | 97 | 11.4 | *B* |
| | Subtotal | 1,811 | 1,801 | 99 | 52.5 | *D* |
| **Total** | | 6,440 | 6,363 | 99 | 53.1 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 170 | 173 | 102 | 80.3 | *F* |
| | T | 140 | 140 | 100 | 52.7 | *D* |
| | R | 446 | 442 | 99 | 19.7 | *B* |
| | Subtotal | 756 | 755 | 100 | 39.7 | *D* |
| SB | L | 375 | 378 | 101 | 75.4 | *E* |
| | T | 368 | 366 | 99 | 50.1 | *D* |
| | R | 310 | 300 | 97 | 7.6 | *A* |
| | Subtotal | 1,053 | 1,044 | 99 | 47.0 | *D* |
| EB | L | 120 | 116 | 97 | 82.6 | *F* |
| | T | 1,385 | 1,355 | 98 | 25.6 | *C* |
| | R | 180 | 177 | 98 | 10.3 | *B* |
| | Subtotal | 1,685 | 1,648 | 98 | 28.0 | *C* |
| WB | L | 281 | 277 | 99 | 68.9 | *E* |
| | T | 371 | 368 | 99 | 34.6 | *C* |
| | R | 205 | 206 | 101 | 5.5 | *A* |
| | Subtotal | 857 | 851 | 99 | 38.7 | *D* |
| **Total** | | 4,350 | 4,298 | 99 | 36.9 | *D* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 14 | 92 | 109.5 | *F* |
| | T | 1,275 | 1,220 | 96 | 73.9 | *E* |
| | R | 55 | 54 | 98 | 52.0 | *D* |
| | Subtotal | 1,345 | 1,288 | 96 | 73.4 | *E* |
| SB | L | 90 | 86 | 95 | 68.6 | *E* |
| | T | 1,390 | 1,410 | 101 | 13.4 | *B* |
| | R | 5 | 4 | 84 | 13.3 | *B* |
| | Subtotal | 1,485 | 1,500 | 101 | 16.6 | *B* |
| EB | L | 75 | 60 | 80 | 141.0 | *F* |
| | T | 5 | 4 | 84 | 71.4 | *E* |
| | R | 30 | 27 | 89 | 106.4 | *F* |
| | Subtotal | 110 | 91 | 83 | 127.7 | *F* |
| WB | L | 90 | 85 | 94 | 89.8 | *F* |
| | T | 2 | 2 | 89 | 84.9 | *F* |
| | R | 341 | 316 | 93 | 104.5 | *F* |
| | Subtotal | 433 | 403 | 93 | 101.3 | *F* |
| **Total** | | 3,374 | 3,282 | 97 | 53.1 | *D* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 620 | 618 | 100 | 0.4 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 623 | 622 | 100 | 0.4 | *A* |
| SB | T | 809 | 798 | 99 | 1.1 | *A* |
| | R | 21 | 22 | 104 | 1.0 | *A* |
| | Subtotal | 830 | 820 | 99 | 1.1 | *A* |
| EB | R | 15 | 17 | 111 | 5.7 | *A* |
| | Subtotal | 15 | 17 | 113 | 5.7 | *A* |
| ***WB*** | ***R*** | ***135*** | ***137*** | ***101*** | ***6.3*** | ***A*** |
| | Subtotal | 135 | 137 | 101 | 6.3 | *A* |
| **Total** | | 1,604 | 1,596 | 100 | 1.3 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 613 | 613 | 100 | 0.4 | *A* |
| | R | 5 | 5 | 100 | 0.2 | *A* |
| | Subtotal | 618 | 618 | 100 | 0.4 | *A* |
| SB | L | 6 | 6 | 100 | 3.6 | *A* |
| | T | 818 | 807 | 99 | 0.2 | *A* |
| | Subtotal | 824 | 813 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***13.3*** | ***B*** |
| | R | 10 | 9 | 88 | 4.2 | *A* |
| | Subtotal | 15 | 14 | 93 | 7.5 | *A* |
| **Total** | | 1,456 | 1,445 | 99 | 0.4 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 459 | 458 | 100 | 1.2 | *A* |
| | R | 11 | 13 | 116 | 1.4 | *A* |
| | Subtotal | 470 | 471 | 100 | 1.2 | *A* |
| SB | L | 9 | 8 | 89 | 2.9 | *A* |
| | T | 814 | 805 | 99 | 0.2 | *A* |
| | Subtotal | 823 | 813 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***10*** | ***13*** | ***127*** | ***11.4*** | ***B*** |
| | R | 10 | 12 | 117 | 3.7 | *A* |
| | Subtotal | 20 | 25 | 125 | 7.7 | *A* |
| **Total** | | 1,313 | 1,309 | 100 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 15.9 | *B* |
| | T | 367 | 363 | 99 | 6.6 | *A* |
| | R | 145 | 142 | 98 | 4.3 | *A* |
| | Subtotal | 518 | 511 | 99 | 6.1 | *A* |
| SB | L | 103 | 102 | 99 | 14.7 | *B* |
| | T | 652 | 648 | 99 | 7.1 | *A* |
| | R | 69 | 66 | 95 | 6.0 | *A* |
| | Subtotal | 824 | 816 | 99 | 8.0 | *A* |
| EB | L | 23 | 25 | 108 | 9.8 | *A* |
| | T | 11 | 12 | 107 | 9.3 | *A* |
| | R | 17 | 19 | 110 | 5.6 | *A* |
| | Subtotal | 51 | 56 | 110 | 8.3 | *A* |
| WB | L | 225 | 226 | 100 | 11.7 | *B* |
| | T | 17 | 21 | 122 | 11.2 | *B* |
| | R | 35 | 36 | 104 | 7.7 | *A* |
| | Subtotal | 277 | 283 | 102 | 11.2 | *B* |
| **Total** | | 1,670 | 1,666 | 100 | 7.9 | *A* |

**Intersection:** 1200 West & East Access
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 7 | 7 | 100 | 5.7 | *A* |
| | T | 462 | 462 | 100 | 0.2 | *A* |
| | Subtotal | 469 | 469 | 100 | 0.3 | *A* |
| SB | T | 812 | 802 | 99 | 0.3 | *A* |
| | R | 10 | 10 | 98 | 0.1 | *A* |
| | Subtotal | 822 | 812 | 99 | 0.3 | *A* |
| ***EB*** | ***L*** | ***156*** | ***155*** | ***100*** | ***38.9*** | ***E*** |
| | R | 10 | 10 | 98 | 26.3 | *D* |
| | Subtotal | 166 | 165 | 99 | 38.1 | *E* |
| | | | | | | |
| **Total** | | 1,458 | 1,446 | 99 | 4.7 | *A* |

# *SimTraffic LOS Report*

**Project:** **Lehi Innovation Pointe TIS**
**Analysis Period:** ***Mitigated Future (2040) Plus Project***
**Time Period:** ***Evening Peak Hour*** **Project #:** ***UT16-902***

**Intersection:** **3400 North & Innovation Way**
**Type:** **Unsignalized**

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***289*** | ***100*** | ***8.5*** | ***A*** |
| | Subtotal | 288 | 289 | 100 | 8.5 | *A* |
| EB | L | 61 | 58 | 95 | 2.6 | *A* |
| | T | 89 | 86 | 96 | 0.7 | *A* |
| | Subtotal | 150 | 144 | 96 | 1.5 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 438 | 433 | 99 | 6.2 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.1 | 0.3 | 0.2 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.3 | 0.1 | 0.3 |
| Denied Del/Veh (s) | 2.5 | 0.6 | 2.4 | 1.5 | 0.1 | 1.5 | 1.3 | 0.4 | 0.8 | 2.7 | 0.6 | 2.7 |
| Total Delay (hr) | 11.8 | 14.4 | 2.8 | 9.8 | 16.9 | 0.2 | 14.2 | 6.7 | 2.6 | 7.2 | 7.2 | 1.6 |
| Total Del/Veh (s) | 79.7 | 74.4 | 23.7 | 63.2 | 50.1 | 11.4 | 87.9 | 40.0 | 15.6 | 72.4 | 63.3 | 14.4 |
| Vehicles Entered | 523 | 688 | 429 | 544 | 1188 | 73 | 571 | 587 | 604 | 351 | 395 | 402 |
| Vehicles Exited | 524 | 689 | 429 | 540 | 1188 | 73 | 570 | 596 | 607 | 351 | 394 | 402 |
| Hourly Exit Rate | 524 | 689 | 429 | 540 | 1188 | 73 | 570 | 596 | 607 | 351 | 394 | 402 |
| Input Volume | 520 | 690 | 421 | 546 | 1190 | 75 | 600 | 614 | 645 | 350 | 384 | 405 |
| % of Volume | 101 | 100 | 102 | 99 | 100 | 97 | 95 | 97 | 94 | 100 | 103 | 99 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.1 |
| Denied Del/Veh (s) | 1.2 |
| Total Delay (hr) | 95.5 |
| Total Del/Veh (s) | 53.1 |
| Vehicles Entered | 6355 |
| Vehicles Exited | 6363 |
| Hourly Exit Rate | 6363 |
| Input Volume | 6440 |
| % of Volume | 99 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 3.0 | 0.5 | 2.9 | 0.0 | 0.0 | 0.0 | 2.7 | 1.0 | 0.5 |
| Total Delay (hr) | 2.8 | 9.9 | 0.5 | 5.4 | 3.6 | 0.3 | 3.9 | 2.1 | 2.4 | 8.0 | 5.1 | 0.6 |
| Total Del/Veh (s) | 82.6 | 25.6 | 10.3 | 68.9 | 34.6 | 5.5 | 80.3 | 52.7 | 19.7 | 75.4 | 50.1 | 7.6 |
| Vehicles Entered | 116 | 1357 | 176 | 273 | 366 | 205 | 172 | 140 | 443 | 376 | 365 | 300 |
| Vehicles Exited | 116 | 1355 | 177 | 277 | 368 | 206 | 173 | 140 | 442 | 378 | 366 | 300 |
| Hourly Exit Rate | 116 | 1355 | 177 | 277 | 368 | 206 | 173 | 140 | 442 | 378 | 366 | 300 |
| Input Volume | 120 | 1385 | 180 | 281 | 371 | 205 | 170 | 140 | 446 | 375 | 368 | 310 |
| % of Volume | 97 | 98 | 98 | 99 | 99 | 101 | 102 | 100 | 99 | 101 | 99 | 97 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.9 |
| Denied Del/Veh (s) | 0.7 |
| Total Delay (hr) | 44.8 |
| Total Del/Veh (s) | 36.9 |
| Vehicles Entered | 4289 |
| Vehicles Exited | 4298 |
| Hourly Exit Rate | 4298 |
| Input Volume | 4350 |
| % of Volume | 99 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 6.2 | 0.4 | 3.0 | 3.3 | 0.1 | 12.8 | 0.2 | 11.6 | 0.5 | 0.0 | 0.4 | 0.0 |
| Denied Del/Veh (s) | 311.3 | 264.4 | 331.1 | 128.7 | 178.1 | 134.8 | 36.1 | 32.4 | 32.4 | 1.3 | 1.0 | 0.0 |
| Total Delay (hr) | 2.5 | 0.1 | 0.8 | 2.2 | 0.0 | 9.8 | 0.5 | 26.2 | 0.8 | 1.7 | 5.3 | 0.0 |
| Total Del/Veh (s) | 141.0 | 71.4 | 106.4 | 89.8 | 84.9 | 104.5 | 109.5 | 73.9 | 52.0 | 68.6 | 13.4 | 13.3 |
| Vehicles Entered | 61 | 4 | 27 | 86 | 2 | 328 | 15 | 1253 | 56 | 87 | 1410 | 4 |
| Vehicles Exited | 60 | 4 | 27 | 85 | 2 | 316 | 14 | 1220 | 54 | 86 | 1410 | 4 |
| Hourly Exit Rate | 60 | 4 | 27 | 85 | 2 | 316 | 14 | 1220 | 54 | 86 | 1410 | 4 |
| Input Volume | 75 | 5 | 30 | 90 | 2 | 341 | 15 | 1275 | 55 | 90 | 1390 | 5 |
| % of Volume | 80 | 84 | 89 | 94 | 89 | 93 | 92 | 96 | 98 | 95 | 101 | 84 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 38.5 |
| Denied Del/Veh (s) | 40.7 |
| Total Delay (hr) | 49.8 |
| Total Del/Veh (s) | 53.1 |
| Vehicles Entered | 3333 |
| Vehicles Exited | 3282 |
| Hourly Exit Rate | 3282 |
| Input Volume | 3374 |
| % of Volume | 97 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBR | WBR | NBT | NBR | SBT | SBR | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.2 | 0.1 | 0.0 | 0.2 | 0.0 | 0.6 |
| Total Del/Veh (s) | 5.7 | 6.3 | 0.4 | 0.1 | 1.1 | 1.0 | 1.3 |
| Vehicles Entered | 17 | 137 | 618 | 4 | 798 | 23 | 1597 |
| Vehicles Exited | 17 | 137 | 618 | 4 | 798 | 22 | 1596 |
| Hourly Exit Rate | 17 | 137 | 618 | 4 | 798 | 22 | 1596 |
| Input Volume | 15 | 135 | 620 | 3 | 809 | 21 | 1604 |
| % of Volume | 111 | 101 | 100 | 133 | 99 | 104 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 13.3 | 4.2 | 0.4 | 0.2 | 3.6 | 0.2 | 0.4 |
| Vehicles Entered | 5 | 9 | 613 | 5 | 6 | 808 | 1446 |
| Vehicles Exited | 5 | 9 | 613 | 5 | 6 | 807 | 1445 |
| Hourly Exit Rate | 5 | 9 | 613 | 5 | 6 | 807 | 1445 |
| Input Volume | 5 | 10 | 613 | 5 | 6 | 818 | 1456 |
| % of Volume | 100 | 88 | 100 | 100 | 100 | 99 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.3 |
| Total Del/Veh (s) | 11.4 | 3.7 | 1.2 | 1.4 | 2.9 | 0.2 | 0.7 |
| Vehicles Entered | 13 | 11 | 458 | 13 | 8 | 805 | 1308 |
| Vehicles Exited | 13 | 12 | 458 | 13 | 8 | 805 | 1309 |
| Hourly Exit Rate | 13 | 12 | 458 | 13 | 8 | 805 | 1309 |
| Input Volume | 10 | 10 | 459 | 11 | 9 | 814 | 1313 |
| % of Volume | 127 | 117 | 100 | 116 | 89 | 99 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.2 | 2.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.7 | 0.1 | 0.1 | 0.0 | 0.7 | 0.2 | 0.4 | 1.3 | 0.1 |
| Total Del/Veh (s) | 9.8 | 9.3 | 5.6 | 11.7 | 11.2 | 7.7 | 15.9 | 6.6 | 4.3 | 14.7 | 7.1 | 6.0 |
| Vehicles Entered | 25 | 11 | 19 | 226 | 21 | 36 | 6 | 362 | 141 | 102 | 649 | 67 |
| Vehicles Exited | 25 | 12 | 19 | 226 | 21 | 36 | 6 | 363 | 142 | 102 | 648 | 66 |
| Hourly Exit Rate | 25 | 12 | 19 | 226 | 21 | 36 | 6 | 363 | 142 | 102 | 648 | 66 |
| Input Volume | 23 | 11 | 17 | 225 | 17 | 35 | 6 | 367 | 145 | 103 | 652 | 69 |
| % of Volume | 108 | 107 | 110 | 100 | 122 | 104 | 100 | 99 | 98 | 99 | 99 | 95 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.1 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 3.7 |
| Total Del/Veh (s) | 7.9 |
| Vehicles Entered | 1665 |
| Vehicles Exited | 1666 |
| Hourly Exit Rate | 1666 |
| Input Volume | 1670 |
| % of Volume | 100 |

## 24: 1200 West & East Access Performance by movement

| Movement | EBL | EBR | NBL | NBT | SBT | SBR | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 1.7 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 1.9 |
| Total Del/Veh (s) | 38.9 | 26.3 | 5.7 | 0.2 | 0.3 | 0.1 | 4.7 |
| Vehicles Entered | 156 | 10 | 7 | 462 | 802 | 10 | 1447 |
| Vehicles Exited | 155 | 10 | 7 | 462 | 802 | 10 | 1446 |
| Hourly Exit Rate | 155 | 10 | 7 | 462 | 802 | 10 | 1446 |
| Input Volume | 156 | 10 | 7 | 462 | 812 | 10 | 1458 |
| % of Volume | 100 | 98 | 100 | 100 | 99 | 98 | 99 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.8 | 0.5 |
| Total Delay (hr) | 0.0 | 0.0 | 0.7 | 0.7 |
| Total Del/Veh (s) | 2.6 | 0.7 | 8.5 | 6.2 |
| Vehicles Entered | 58 | 86 | 289 | 433 |
| Vehicles Exited | 58 | 86 | 289 | 433 |
| Hourly Exit Rate | 58 | 86 | 289 | 433 |
| Input Volume | 61 | 89 | 288 | 438 |
| % of Volume | 95 | 96 | 100 | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 41.6 |
| Denied Del/Veh (s) | 16.5 |
| Total Delay (hr) | 208.5 |
| Total Del/Veh (s) | 80.2 |
| Vehicles Entered | 9027 |
| Vehicles Exited | 8992 |
| Hourly Exit Rate | 8992 |
| Input Volume | 32589 |
| % of Volume | 28 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 374 | 433 | 439 | 416 | 333 | 357 | 352 | 419 | 437 | 386 | 308 | 259 |
| Average Queue (ft) | 244 | 292 | 269 | 255 | 193 | 163 | 200 | 240 | 282 | 256 | 210 | 148 |
| 95th Queue (ft) | 356 | 412 | 398 | 372 | 317 | 293 | 304 | 364 | 393 | 351 | 290 | 231 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1014 | 1014 | 1014 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 6 | 26 | 20 | | 2 | 4 | 0 | 0 | 1 | | 2 | 0 |
| Queuing Penalty (veh) | 14 | 60 | 104 | | 9 | 10 | 0 | 1 | 3 | | 7 | 0 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | T | R | |
| Maximum Queue (ft) | 87 | 175 | 250 | 404 | 443 | 250 | 274 | 307 | 281 | 283 | 238 | |
| Average Queue (ft) | 20 | 168 | 247 | 371 | 345 | 164 | 160 | 194 | 177 | 162 | 107 | |
| 95th Queue (ft) | 57 | 187 | 259 | 455 | 516 | 296 | 250 | 276 | 261 | 255 | 192 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 999 | 999 | | |
| Upstream Blk Time (%) | | | | 28 | 15 | | | | | | | |
| Queuing Penalty (veh) | | | | 227 | 121 | | | | | | | |
| Storage Bay Dist (ft) | 250 | 100 | 100 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 53 | 64 | 23 | 15 | 11 | 0 | 0 | 0 | 5 | 1 | |
| Queuing Penalty (veh) | | 117 | 142 | 136 | 95 | 25 | 0 | 0 | 0 | 20 | 2 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 103 | 128 | 316 | 330 | 102 | 98 | 410 | 396 | 355 | 255 | 86 | 270 |
| Average Queue (ft) | 45 | 65 | 195 | 199 | 46 | 4 | 15 | 230 | 158 | 100 | 41 | 158 |
| 95th Queue (ft) | 91 | 110 | 287 | 295 | 84 | 100 | 216 | 358 | 284 | 199 | 71 | 267 |
| Link Distance (ft) | | | 2261 | 2261 | | 1014 | 1014 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 0 | 1 | | | | 10 | 0 | 3 | | 7 |
| Queuing Penalty (veh) | | | 0 | 1 | | | | 18 | 1 | 7 | | 10 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 300 | 325 | 384 | 774 | 185 |
| Average Queue (ft) | 118 | 137 | 325 | 375 | 69 |
| 95th Queue (ft) | 241 | 250 | 433 | 673 | 135 |
| Link Distance (ft) | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | 1 | 0 | | 0 | |
| Queuing Penalty (veh) | 2 | 0 | | 0 | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 1 | | 33 | 14 | |
| Queuing Penalty (veh) | 1 | | 123 | 52 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 138 | 685 | 200 | 90 | 724 | 717 | 149 | 376 | 388 |
| Average Queue (ft) | 98 | 353 | 170 | 15 | 539 | 512 | 79 | 207 | 220 |
| 95th Queue (ft) | 149 | 721 | 249 | 66 | 880 | 865 | 159 | 382 | 397 |
| Link Distance (ft) | 105 | 694 | | | 686 | 686 | | 374 | 374 |
| Upstream Blk Time (%) | 54 | 2 | | | 22 | 17 | | 0 | 1 |
| Queuing Penalty (veh) | 0 | 6 | | | 0 | 0 | | 3 | 7 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 5 | 60 | 0 | 62 | | 37 | 20 | |
| Queuing Penalty (veh) | | 20 | 59 | 4 | 9 | | 259 | 19 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|
| Directions Served | R | R | T | TR | T | TR |
| Maximum Queue (ft) | 42 | 94 | 19 | 34 | 18 | 19 |
| Average Queue (ft) | 14 | 45 | 1 | 2 | 1 | 0 |
| 95th Queue (ft) | 40 | 74 | 15 | 19 | 9 | 6 |
| Link Distance (ft) | 535 | 986 | 157 | 157 | 368 | 368 |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | | | | | | |
| Storage Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 38 | 29 |
| Average Queue (ft) | 12 | 3 |
| 95th Queue (ft) | 37 | 17 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 42 | 28 |
| Average Queue (ft) | 17 | 2 |
| 95th Queue (ft) | 43 | 15 |
| Link Distance (ft) | 245 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 60 | 177 | 33 | 107 | 137 | 118 | 167 | 180 |
| Average Queue (ft) | 26 | 84 | 5 | 51 | 64 | 47 | 70 | 90 |
| 95th Queue (ft) | 55 | 141 | 23 | 90 | 114 | 90 | 135 | 155 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 1 | 2 | |
| Queuing Penalty (veh) | | | | 0 | | 2 | 2 | |

## Intersection: 24: 1200 West & East Access

| Movement | EB | NB | NB | NB | SB |
|---|---|---|---|---|---|
| Directions Served | LR | L | T | T | TR |
| Maximum Queue (ft) | 238 | 32 | 12 | 3 | 2 |
| Average Queue (ft) | 94 | 4 | 0 | 0 | 0 |
| 95th Queue (ft) | 186 | 21 | 8 | 3 | 2 |
| Link Distance (ft) | 602 | | 122 | 122 | 142 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | 50 | | | |
| Storage Blk Time (%) | | 0 | | | |
| Queuing Penalty (veh) | | 0 | | | |

## Intersection: 31: 3400 North & Innovation Way

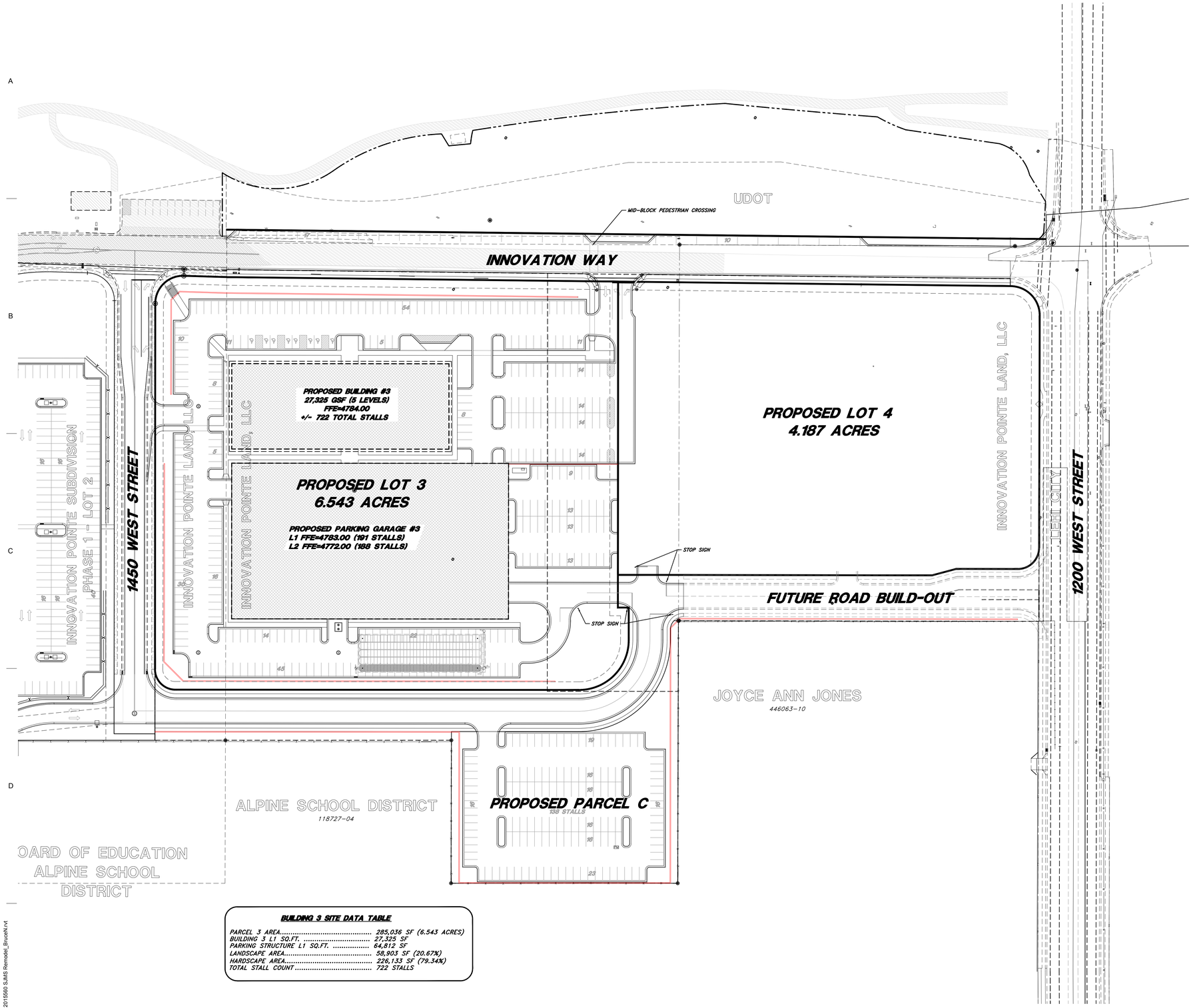
| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 132 |
| Average Queue (ft) | 57 |
| 95th Queue (ft) | 171 |
| Link Distance (ft) | 525 |
| Upstream Blk Time (%) | 1 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 1700

# APPENDIX C

## Site Plan






Scale: 1" = 50'

50 0 25 50 60 70 80 90 100

Graphic Scale

**BUILDING 3 SITE DATA TABLE**

| | |
|---|---|
| PARCEL 3 AREA | 285,036 SF (6.543 ACRES) |
| BUILDING 3 L1 SQ.FT. | 27,325 SF |
| PARKING STRUCTURE L1 SQ.FT. | 64,812 SF |
| LANDSCAPE AREA | 58,903 SF (20.67%) |
| HARDSCAPE AREA | 226,133 SF (79.34%) |
| TOTAL STALL COUNT | 722 STALLS |

**PARCEL C SITE DATA TABLE**

| | |
|---|---|
| PARCEL C AREA | 55,443 SF (1.27 ACRES) |
| LANDSCAPE AREA | 12,516 SF (22.57%) |
| HARDSCAPE AREA | 42,927 SF (77.43%) |
| TOTAL STALL COUNT | 138 STALLS |

*GENERAL SITE NOTES:*

1. *Stalls designated as handicap will require a painted handicap symbol and sign. (See Details)*
2. *Fire lane markings and signs to be installed as directed by the Fire Marshall.*
3. *Aisle markings, directional arrows and stop bars will be painted at each driveway as shown on the plans.*
4. *Building sidewalks, ramps, and bollards are building contractor responsible items. See architectural plans.*
5. *All dimensions are to back of curb unless otherwise noted.*

*ALL CONSTRUCTION TO CONFORM TO LEHI CITY STANDARDS AND SPECIFICATIONS IN RIGHT OF WAY*

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ARCHITECTS
**MHTN Architects, Inc.**
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Salt Lake City, Utah 84111
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Ogden, Utah 84403 Main (801)394-4515
S.L.C (801)521-0222 FAX 801-392-7544
WWW.GREATBASINENGINEERING.COM

# INNOVATION POINTE THREE
# INNOVATION POINTE BUILDINGS 3
1633 WEST INNOVATION WAY
LEHI, UT 84043

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SEAL

MHTN PROJECT NO. -
DRAWN BY: RC CHECKED BY: CM

REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

| NO. | DATE | DESCRIPTION |
|---|---|---|

ISSUE
SCHEMATIC DESIGN
FEBRUARY 12, 2020

SHEET NAME
OVERALL
SITE PLAN
V23-I

Original drawing is 30 x 42. Do not scale contents of this drawing.

SHEET NUMBER
CS100



V:\A16 2015561 ERMS Remodel_BruceN_backup\A16 2015560 SJMS Remodel_BruceN.rvt
1/28/2016 10:56:20 AM

W:\13N905 - Innovation Pointe\DWG\Building 3-S4-F.dwg, 2/12/2020 12:41:39 PM, RebeccaC, 1:1

# APPENDIX D

## 95th Percentile Queue Length Reports

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Existing (2020) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LTR | R | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 263 | -- | 456 | 498 | 297 | 189 | 286 | -- | 375 | -- | 100 | 396 | 564 | -- | -- | 287 | 694 |
| 2: 1200 West & Timpanogos Highway (SR-92) | 220 | 180 | 163 | -- | 302 | 94 | 354 | -- | 72 | -- | 75 | 340 | 315 | -- | -- | 51 | 218 |
| 3: Triumph Boulevard & 3400 North | 44 | -- | -- | 865 | 87 | -- | 59 | 73 | -- | 154 | -- | -- | -- | -- | 930 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 12 | -- | 7 | 12 | 30 | -- | 10 | 11 | -- | 115 | -- | -- | -- | -- | 83 | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 2 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | 31 | -- | -- | -- |
| 7: 1200 West & 3200 North | 21 | -- | 80 | 86 | 60 | -- | 90 | 108 | -- | 56 | -- | -- | -- | -- | 97 | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Existing (2020) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 301 | 308 | 440 | -- | 383 | 178 | 413 | -- | 433 | -- | 70 | 362 | 324 | -- | -- | -- | 65 | 470 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 202 | 188 | 133 | -- | 293 | 88 | 335 | -- | 76 | -- | 85 | 406 | 301 | -- | -- | -- | 52 | 206 | 220 |
| 3: Triumph Boulevard & 3400 North | 15 | -- | 271 | 364 | 98 | -- | 137 | 136 | -- | 134 | -- | -- | -- | -- | 295 | -- | 199 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 14 | -- | 6 | 9 | 29 | -- | 8 | 11 | -- | 115 | -- | -- | -- | -- | -- | 84 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 13 | -- | -- | -- | -- | -- | -- | -- | -- | 31 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | -- | 16 | -- | -- | -- | -- | -- | -- | -- | -- | 30 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 21 | -- | 77 | 80 | 64 | -- | 94 | 111 | -- | 53 | -- | -- | -- | -- | -- | 99 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Existing (2020) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 322 | 323 | 472 | -- | 388 | -- | 264 | 591 | -- | 449 | -- | 70 | 450 | 317 | -- | -- | -- | 84 | 460 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 213 | 213 | 142 | -- | 292 | -- | 86 | 327 | -- | 80 | -- | 85 | 387 | 332 | -- | -- | -- | 55 | 211 | 138 |
| 3: Triumph Boulevard & 3400 North | 14 | -- | 400 | 501 | 124 | -- | -- | 197 | 185 | -- | 135 | -- | -- | -- | -- | 397 | -- | 223 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 16 | -- | 5 | 5 | 32 | -- | -- | 13 | 13 | -- | 160 | -- | -- | -- | -- | -- | 86 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 34 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 4 | 12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 23 | -- | 85 | 87 | 67 | -- | -- | 90 | 104 | -- | 54 | -- | -- | -- | -- | -- | 97 | -- | -- | -- |
| 8: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Future (2025) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 348 | 306 | 486 | -- | 445 | 418 | 955 | -- | 443 | -- | 106 | 442 | 378 | -- | -- | -- | 59 | 449 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 242 | 208 | 197 | -- | 354 | 110 | 355 | -- | 84 | -- | 82 | 327 | 349 | -- | -- | -- | 59 | 232 | 225 |
| 3: Triumph Boulevard & 3400 North | 24 | -- | 774 | 815 | 154 | -- | 284 | 273 | -- | 151 | -- | -- | -- | -- | 751 | -- | 250 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 13 | -- | 20 | 10 | 34 | -- | 13 | 15 | -- | 109 | -- | -- | -- | -- | -- | 92 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 14 | -- | -- | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 5 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 19 | -- | 90 | 91 | 67 | -- | 103 | 121 | -- | 56 | -- | -- | -- | -- | -- | 107 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Future (2025) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 255 | 218 | 438 | -- | 362 | 294 | 759 | -- | 418 | -- | 118 | 393 | 293 | -- | -- | -- | 72 | 426 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 218 | 211 | 168 | -- | 357 | 128 | 455 | -- | 87 | -- | 83 | 349 | 314 | -- | -- | -- | 61 | 238 | 347 |
| 3: Triumph Boulevard & 3400 North | 31 | -- | 310 | 307 | 133 | -- | 215 | 204 | -- | 144 | -- | -- | -- | -- | 425 | -- | 209 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 17 | -- | -- | 8 | 32 | -- | 11 | 16 | -- | 126 | -- | -- | -- | -- | -- | 98 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 11 | -- | -- | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- | -- | 41 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 18 | -- | 81 | 93 | 68 | -- | 108 | 124 | -- | 52 | -- | -- | -- | -- | -- | 111 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Future (2025) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 234 | 214 | 496 | -- | 341 | -- | 358 | 796 | -- | 483 | -- | 128 | 545 | 341 | -- | -- | -- | 70 | 446 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 243 | 214 | 205 | -- | 338 | -- | 100 | 349 | -- | 89 | -- | 80 | 327 | 357 | -- | -- | -- | 60 | 264 | 328 |
| 3: Triumph Boulevard & 3400 North | 46 | -- | 441 | 413 | 157 | -- | -- | 302 | 285 | -- | 151 | -- | -- | -- | -- | 653 | -- | 254 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 20 | -- | 9 | 8 | 33 | -- | -- | 9 | 11 | -- | 151 | -- | -- | -- | -- | -- | 90 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 4 | 14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 20 | -- | 83 | 95 | 63 | -- | -- | 100 | 120 | -- | 57 | -- | -- | -- | -- | -- | 109 | -- | -- | -- |
| 8: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 119 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Future (2025) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 235 | 277 | 491 | -- | 285 | -- | 234 | 205 | -- | 455 | -- | 150 | 476 | 329 | -- | -- | -- | 64 | 460 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 236 | 232 | 198 | -- | 387 | -- | 99 | 453 | -- | 91 | -- | 84 | 327 | 357 | -- | -- | -- | 58 | 232 | 337 |
| 3: Triumph Boulevard & 3400 North | 50 | -- | 649 | 597 | 129 | -- | -- | 219 | 228 | -- | 148 | -- | -- | -- | -- | 536 | -- | 235 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 20 | -- | 12 | 11 | 35 | -- | -- | 9 | 12 | -- | 168 | -- | -- | -- | -- | -- | 98 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | -- | 17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 23 | -- | 84 | 99 | 65 | -- | -- | 102 | 121 | -- | 52 | -- | -- | -- | -- | -- | 115 | -- | -- | -- |
| 8: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 118 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Future (2040) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 239 | 240 | 493 | -- | 367 | 385 | 957 | -- | 388 | -- | 321 | 385 | 490 | -- | -- | -- | 59 | 394 | 6 |
| 2: 1200 West & Timpanogos Highway (SR-92) | 236 | 220 | 208 | -- | 422 | 145 | 590 | -- | 100 | -- | 91 | 280 | 352 | -- | -- | -- | 76 | 225 | 145 |
| 3: Triumph Boulevard & 3400 North | 49 | -- | 675 | 643 | 163 | -- | 354 | 373 | -- | 151 | -- | -- | -- | -- | 832 | -- | 255 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 17 | -- | 12 | 17 | 39 | -- | 14 | 12 | -- | 164 | -- | -- | -- | -- | -- | 95 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 16 | -- | -- | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 2 | 19 | -- | -- | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 24 | -- | 85 | 106 | 71 | -- | 123 | 139 | -- | 55 | -- | -- | -- | -- | -- | 148 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Future (2040) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 258 | 288 | 463 | -- | 296 | 168 | 288 | -- | 388 | -- | 340 | 318 | 378 | -- | -- | -- | 44 | 291 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 231 | 236 | 193 | -- | 433 | 415 | 761 | -- | 105 | -- | 93 | 281 | 365 | -- | -- | -- | 77 | 246 | 195 |
| 3: Triumph Boulevard & 3400 North | 45 | -- | 723 | 717 | 142 | -- | 397 | 405 | -- | 148 | -- | -- | -- | -- | 502 | -- | 228 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 17 | -- | 5 | 10 | 38 | -- | 11 | 14 | -- | 126 | -- | -- | -- | -- | -- | 108 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | 0 | 11 | -- | -- | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 4 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 24 | -- | 87 | 109 | 71 | -- | 116 | 134 | -- | 57 | -- | -- | -- | -- | -- | 132 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Future (2040) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | | WB | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LT | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 228 | 304 | 485 | -- | 258 | -- | 196 | 261 | -- | 387 | -- | -- | 316 | 366 | 338 | -- | -- | -- | 49 | 317 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 256 | 240 | 239 | -- | 435 | -- | 341 | 762 | -- | 104 | -- | -- | 89 | 279 | 386 | -- | -- | -- | 76 | 241 | 196 |
| 3: Triumph Boulevard & 3400 North | 62 | -- | 880 | 884 | 162 | -- | -- | 396 | 405 | -- | -- | 144 | -- | -- | -- | -- | 769 | -- | 246 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 19 | -- | 12 | 6 | 35 | -- | -- | 11 | 18 | -- | -- | 259 | -- | -- | -- | -- | -- | 108 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 39 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 2 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 25 | -- | 93 | 113 | 71 | -- | -- | 127 | 140 | -- | -- | 58 | -- | -- | -- | -- | -- | 137 | -- | -- | -- |
| 8: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 169 | -- | -- | -- | -- | 82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Future (2040) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

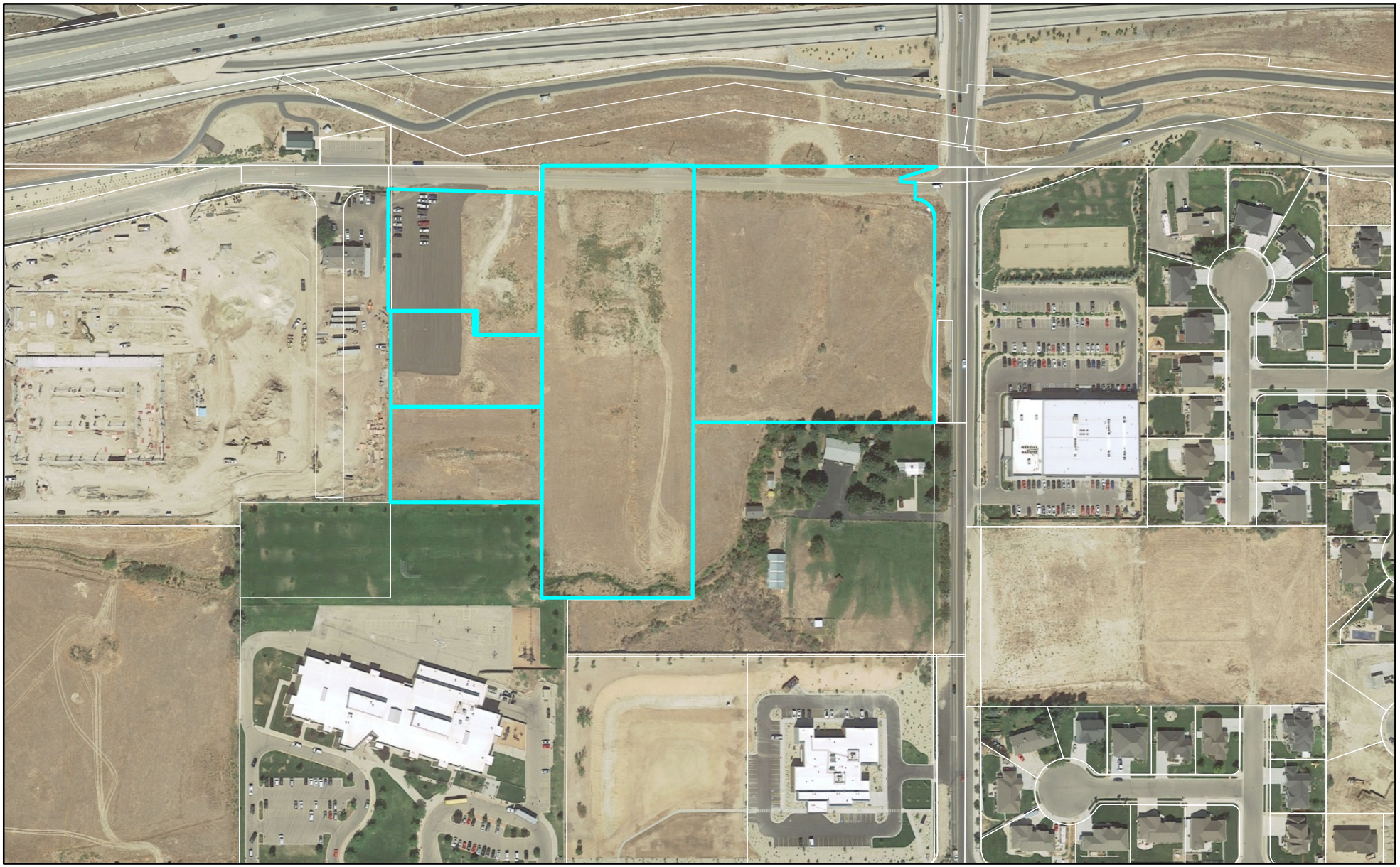
HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | | WB | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LR | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 223 | 296 | 486 | -- | 263 | -- | 192 | 258 | -- | 384 | -- | -- | 293 | 362 | 334 | -- | -- | -- | 57 | 316 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 267 | 250 | 241 | -- | 433 | -- | 135 | 673 | -- | 101 | -- | -- | 84 | 291 | 358 | -- | -- | -- | 71 | 242 | 158 |
| 3: Triumph Boulevard & 3400 North | 66 | -- | 880 | 865 | 159 | -- | -- | 382 | 397 | -- | -- | 149 | -- | -- | -- | -- | 721 | -- | 249 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | -- | -- | 15 | 19 | -- | -- | -- | 9 | 6 | -- | -- | -- | 40 | -- | -- | -- | -- | -- | 74 | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 23 | -- | 90 | 114 | 90 | -- | -- | 135 | 155 | -- | -- | 55 | -- | -- | -- | -- | -- | 141 | -- | -- | -- |
| 8: 1200 West & East Access | 21 | -- | 6 | -- | -- | -- | -- | -- | 2 | -- | 186 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 171 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

# Innovation Pointe Phase 2 Subdivsion

Aerial

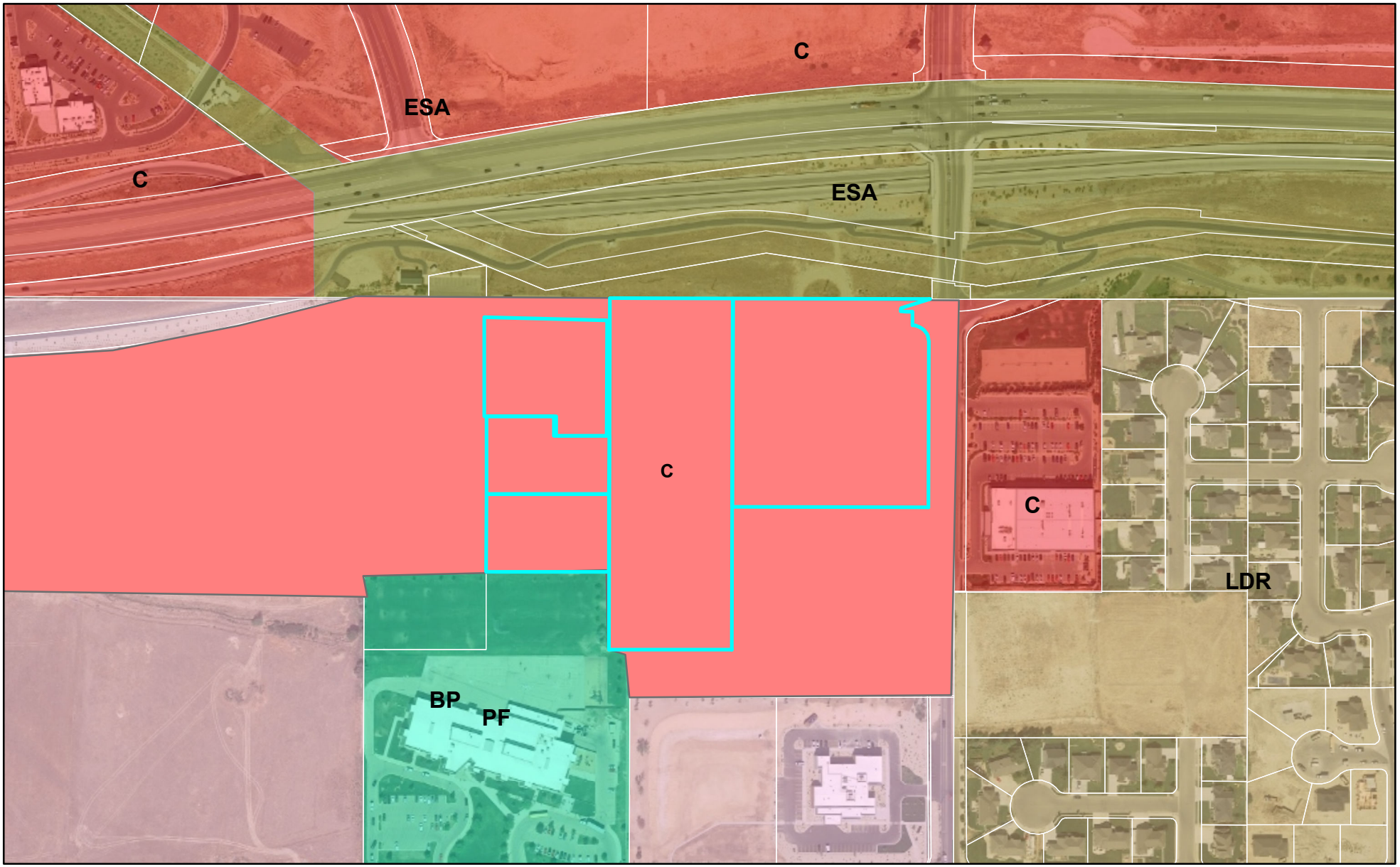


0 300 600 Feet

LEHI CITY

# Innovation Pointe Phase 2 Subdivsion

General Plan



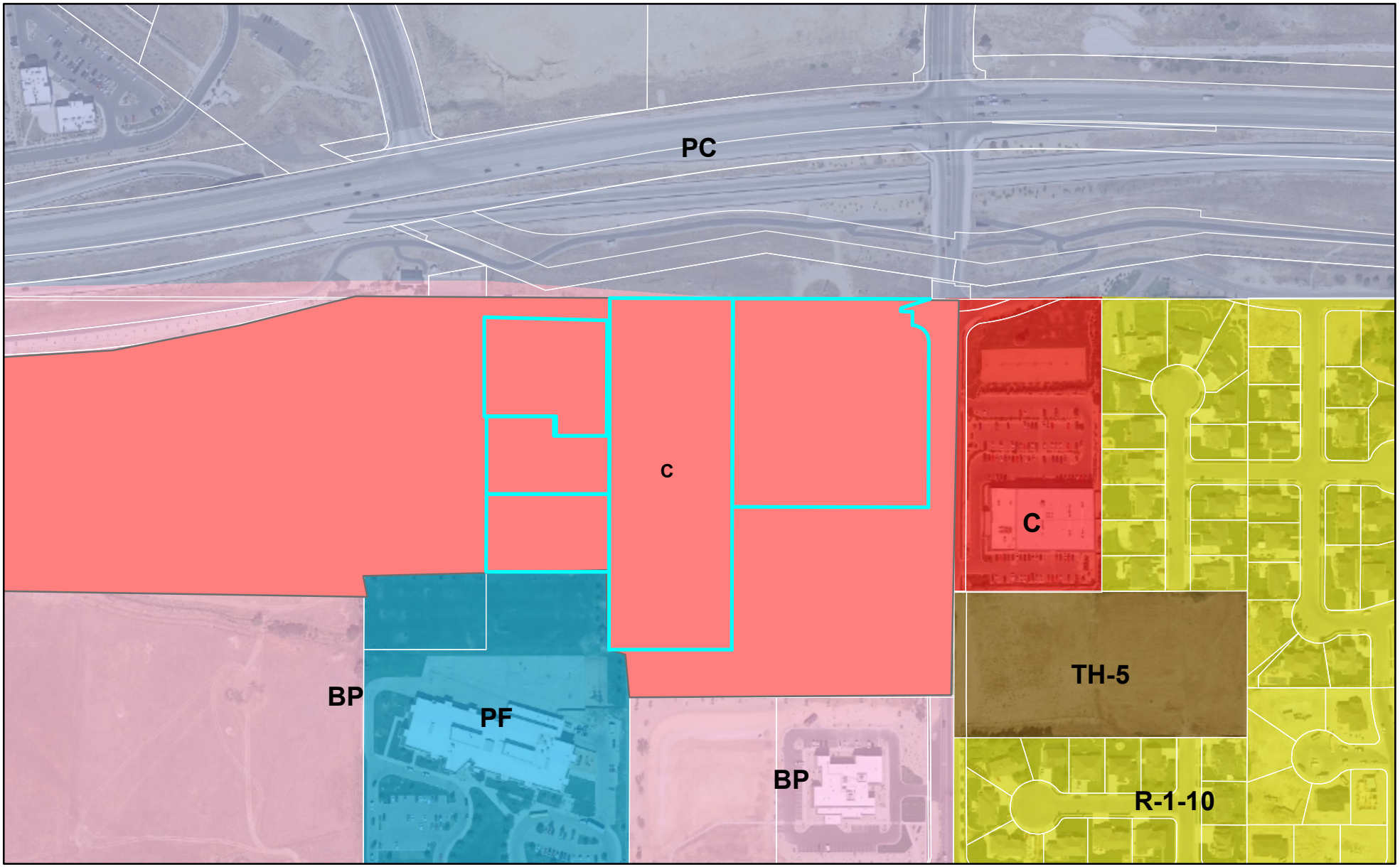

0 370 740 Feet



LEHI CITY

# Innovation Pointe Phase 2 Subdivsion

Zoning




0 370 740 Feet



LEHI CITY

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Brittney Harris
Submitting Department: Planning Division
Item Type: Ordinance
Agenda Section:

---

**Subject:**
Consideration of Ordinance #31-2020, approval of the Ellsworth Zone Change from TH-5 to RA-1 on 0.34 acres located at 1015 East 1840 North.
Petitioner: Richard Ellsworth

**Suggested Action:**

**Attachments**:
CC Staff Report Ellsworth Zone Change 06.09.2020.docx

Ellsworth Zone Change DRC 4.29.2020.docx

Ord 31-2020.docx

Zone Change Narrative.pdf

Ellsworth Zone Change Map.pdf

Ellsworth- Aerial Map.pdf

Ellsworth-General Plan Map.pdf

Ellsworth-Zoning Map.pdf

# ELLSWORTH ZONE CHANGE
## CITY COUNCIL REPORT

| | | | |
|---|---|---|---|
| **Applicant** | Richard Ellsworth | | |
| **Meeting Date** | June 9, 2020 | | |
| **Requested Action/Purpose** | Approval of a proposed zone change | | |
| **Location** | 1015 East 1840 North | | |
| **Project Area** | 0.34 acres | | |
| **Existing Zoning** | TH-5 | | |
| **Proposed Zoning** | RA-1 | | |
| **Existing General Plan Land Use Designation** | Very Low Density Residential (VLDR) | | |
| **Adjacent Zoning and Land Use** | *North* | R-1-10 | Church Parking Lot |
| | *South* | TH-5 | Undeveloped |
| | *East* | TH-5 | Undeveloped |
| | *West* | R-1-8 | Single Family Homes |
| **Date of DRC Review** | April 29, 2020 | | |
| **Date of Planning Commission Review** | May 14,2020 | | |
| **Assigned Planner** | Brittney Harris | | |

## REQUIRED ACTION

| | |
|---|---|
| **Planning Commission** | Review and recommendation |
| **City Council** | Final approval |

## APPLICABLE GENERAL PLAN GOALS AND POLICIES

From Section 04.060 Criteria for Approval, of the Lehi City Development Code, the Planning Commission should consider the following factors, among others, when reviewing a zone amendment:

1. The effect of the proposed amendment on the character of the surrounding area;
2. Consistency with the goals and policies of the General Plan;
3. Consistency and compatibility of the proposed zone with the General Plan land uses of nearby and adjoining properties;
4. The suitability of the properties for the uses requested and their suitability for the existing uses identified by the General Plan;
5. Whether a change in the uses allowed for the affected properties will unduly affect the uses, or proposed uses for nearby and adjoining properties;
6. The gain to the public health, safety, and welfare from the existing classification to the proposed amendment; and
7. The overall community benefit of the proposed amendment.

## APPLICABLE DEVELOPMENT CODE REGULATIONS

**Section 04.060** Criteria for Approval, of the Lehi City Development Code, the Planning Commission should consider the following factors, among others, when reviewing a zone amendment:

8. The effect of the proposed amendment on the character of the surrounding area;
9. Consistency with the goals and policies of the General Plan;
10. Consistency and compatibility of the proposed zone with the General Plan land uses of nearby and adjoining properties;
11. The suitability of the properties for the uses requested and their suitability for the existing uses identified by the General Plan;

12. Whether a change in the uses allowed for the affected properties will unduly affect the uses, or proposed uses for nearby and adjoining properties;
13. The gain to the public health, safety, and welfare from the existing classification to the proposed amendment; and
14. The overall community benefit of the proposed amendment.

## PROPERTY HISTORY

**June 2, 2009** Property brought into the City as part of the Smith-Ellsworth Annexation

## REPORT ANALYSIS

The applicant requests approval of a proposed zone change from the Transitional Holding (TH-5) zone to residential/agriculture (RA-1). The TH-5 zone allows for properties to annex into the City without water dedication; however, it does not allow any development without a rezone and the correlating water dedication. The applicant wishes to build a home on this property and complete the required water dedication.

The surrounding properties are not in the RA-1 zone but are of a similar single-family nature. The proposed RA-1 zone on this property will fit in to the surrounding neighborhood and provides a greater diversity of lot sizes in the neighborhood.

DRC reviewed the proposed zone change and had the following comments:

1. A line extension and equipment upgrade are required for power service.
2. Sewer mainline extension will be required to provide sewer service to this lot.
3. Existing sewer main ends at this location, approximately. Depth must be verified to see if you can service proposed lot.
4. There is no storm drain in the immediate area
5. As a condition of recording the Zone Change ordinance and prior to submission of an application for preliminary subdivision, the owner needs to complete the required water dedication for the RA-1 Zone. The amount of culinary water is 1.13-acre feet per acre and irrigation water is 2.56-acre feet per acre.
6. Show proposed zoning on the lot.

Please consider including all DRC comments in your motion.

## PLANNING DIVISION RECOMMENDATION

Planning Division staff recommends **APPROVAL** of the Ellsworth zone change including the DRC comments from April 29, 2020. This recommendation is based on the following findings:

1. The proposed zone change to RA-1 will increase the housing and zoning diversity in the neighborhood while maintaining the single family nature.
2. The proposed zone change is consistent with the goals and policies of the General Plan.
3. The proposed RA-1 zone is consistent with the VLDR General Plan Land Use designation.
4. The proposed zone change will not adversely affect the surrounding properties.
5. The proposed zone change allows for a larger lot development that animal rights. These features may represent gains to the public health, safety, and welfare for the surrounding neighborhood.

## PLANNING COMMISSION RECOMMENDATION

The Planning Commission reviewed the proposed zone change on May 14, 2020. The minutes and motion from this meeting are as follows:

**3.3 Public hearing and recommendation of Richard Ellsworth's request for review of the Ellsworth Zone Change from TH-5 (transitional holding) to RA-1 (residential/agriculture) on 0.34 acres located at 1015 East 1840 North.**

The applicant Richard Ellsworth was available for questions.

Commissioner Hemmert opened the public hearing.

Commissioner Hemmert closed the public hearing.

**Motion:** Commissioner Nielsen moved to approve Richard Ellsworth's request for review of the Ellsworth Zone Change from TH-5 (transitional holding) to RA-1 (residential/agriculture) on 0.34 acres located at 1015 East 1840 North, including all DRC comments and findings stated in the reports; Commissioner Everett seconded.

**Vote**: Commissioner Hemmert, yes; Commissioner Nielsen, yes; Commissioner Ellis, yes; Commissioner Everett, yes; Commissioner Bunker, yes; Commissioner Hereth, yes; Commissioner Eyre, yes. The motion passed unanimously.

**Ellsworth Zone Change**
**DRC Redline Comments**

*Richard Ellsworth- requests review of the Ellsworth Zone Change from TH-5 to RA-1 on 0.34 acres located at 1015 East 1840 North*

DRC Members Present: Glade Kirkham, Kerry Evans, Greg Allred, Kim Struthers, Gary Smith, Joshua Bunnell, Ross Dinsdale, Trent Dyer
Representatives of the Applicant Present: none due to COVID-19 restrictions
Date of Plans Reviewed: 4/15/2020
Time Start: n/a
Time End: n/a

**DRC REDLINE COMMENTS:**
**Glade – Power:**
1. A line extension and equipment upgrade are required for power service.

**Kerry – Fire:** No comments.
**Greg – Water/Sewer:**
2. Sewer mainline extension will be required to provide sewer service to this lot.
3. Existing sewer main ends at this location, approximately. Depth must be verified to see if you can service proposed lot.
4. There is no storm drain in the immediate area

**Trent – Parks:** No comments.
**Gary – Building/Inspections:** No comments
**JD – Streets:** No comments
**Ross – Engineering:** No comments
**Kim – Planning:**
5. As a condition of recording the Zone Change ordinance and prior to submission of an application for preliminary subdivision, the owner needs to complete the required water dedication for the RA-1 Zone. The amount of culinary water is 1.13 acre feet per acre and irrigation water is 2.56 acre feet per acre.
6. Show proposed zoning on the lot.

General comment: A future road connection will be required to 1200 East in order to meet the connectivity requirements. This future road connection would come with future development of the property.

***Consistency with the elements of the Lehi City General Plan.***

This area has a proposed **RA-1** on the General Plan that has been filed concurrently.

***Effect of the proposed amendment on the existing goals, objectives, and policies of the Lehi City General Plan.***

From the Lehi City General Plan Land Use Element the following goals and policies related to development should be considered:

1. Maximize opportunities to create an overall pattern of planned and orderly development with a system of land uses, adequately and efficiently served by a balanced and energy-efficient system of transportation, and community services that are sensitive to the natural physical qualities of the area.

THIS ITEM NEEDS ENVELOPES AND WILL BE SCHEDULED FOR PLANNING COMMISSION ON MAY 14th

**Note: This list of corrections and deficiencies should not be considered as an all-inclusive or final list. The items listed need to be corrected and resolved and a new set of information submitted for review by the DRC. Further corrections and deficiencies may still be noted as the DRC further reviews the resubmitted information.**

**ORDINANCE NO: 31-2020**

**AN ORDINANCE APPROVING THE ELLSWORTH ZONE DISTRICT DESIGNATION AMENDMENT AND ZONING DISTRICT MAP AMENDMENT AT 1015 EAST 1840 NORTH**

WHEREAS, Richard Ellsworth, authorized agent for the owner of property located at 1015 East 1840 North and further described by the legal description attached as Exhibit "A", has applied for an amendment to the Zone District and Zoning District Map; and

WHEREAS, the applicant seeks to have said parcel designated as RA-1 (Residential/Agriculture); and

WHEREAS, following a public hearing on May 14, 2020, the Lehi City Planning Commission reviewed the proposed Zoning District Designation and Zoning District Map amendment and forwarded it to the City Council to decide on the proposed amendment; and

WHEREAS, on June 9, 2020, the City Council held a duly noticed meeting to receive public comment and ascertain the facts regarding this matter, which facts and comments are found in the hearing record and which include the staff report, minutes from the Planning Commission meeting of May 14, 2020; and

WHEREAS, after considering the facts and comments presented to the Municipal Council, the Council finds: (i) the request for a Zone District Designation amendment and Zoning District amendment is consistent with the Lehi City General Plan Land Use Map adopted by the Lehi City Council on October 25, 2011 (and as subsequently amended); and (ii) such action furthers the health, safety and welfare of the citizens of Lehi.

NOW, THEREFORE, BE IT ORDAINED by the City Council of Lehi City, Utah as follows:

PART I:

The Zone District Designation and the Zoning District Map of the property described on Exhibit "A" are hereby amended to RA-1.

PART II:

A. If a provision of this Ordinance 31 -2020 conflicts with a provision of a previously adopted ordinance concerning the same title, chapter, and/or section number amended herein, the provision in this Ordinance shall prevail.

B. This ordinance and its various section, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder shall not be affected thereby.

C. The City Council hereby directs that the official copy of the Lehi City Code be updated to reflect the provisions enacted by this Ordinance.

D. This Ordinance shall take effect immediately after being posted or published as required by law.

Approved and Adopted by the City Council of Lehi City this 9th day of June, 2020.

ATTEST

_____ _____

Mark Johnson, Mayor Teisha Wilson, City Recorder

EXHIBIT “A”

ELLSWORTH ZONE CHANGE LEGAL DESCRIPTION

Beginning at a point which is South 00°41'03" East 1272.11' and West 910.73' from the East Quarter Corner of Section 4, Township 5 South Range 1 East, Salt Lake Base and Meridian; thence North 89°46'21" West 100 feet; thence North 00°13'39" East 151.42 feet along Summer Crest Plat F; thence along 1900 North Lehi Church Subdivision the following two courses 1) North 88°00'27" East 75.12 feet; 2) thence Southwesterly 38.63 feet along the arc of a 24 foot radius curve to the right, (chord bears: South 45°52'57" East 34.59 feet); thence South 00°13'39" West 130.35 feet along 1900 North Lehi Church Subdivision and its extension thereof to the point of beginning.

4/10/20

Lehi City
Attn: City Council and Staff

Subject: Ellsworth Property Zone Change

The property owner, Richard Ellsworth, located at 1840 North and 1015 East (serial number 12:016:0183) is requesting a zone change for the Lehi City zoning map of for a portion of the property (approximately 0.35 acres). This zone change submittal is requesting approximately 0.35 acres to change the zoning designation to RA-1 zoning from the current TH-5 zoning. The remaining property will stay TH-5. We feel this is an appropriate request based on the criteria below:

(a) In general, what is the topography, vegetation, and other natural features present on the property proposed to be annexed? Flat Farm Land

(b) What is the existing land use(s) of the property proposed for zone change and those requested by the owner? Pastures

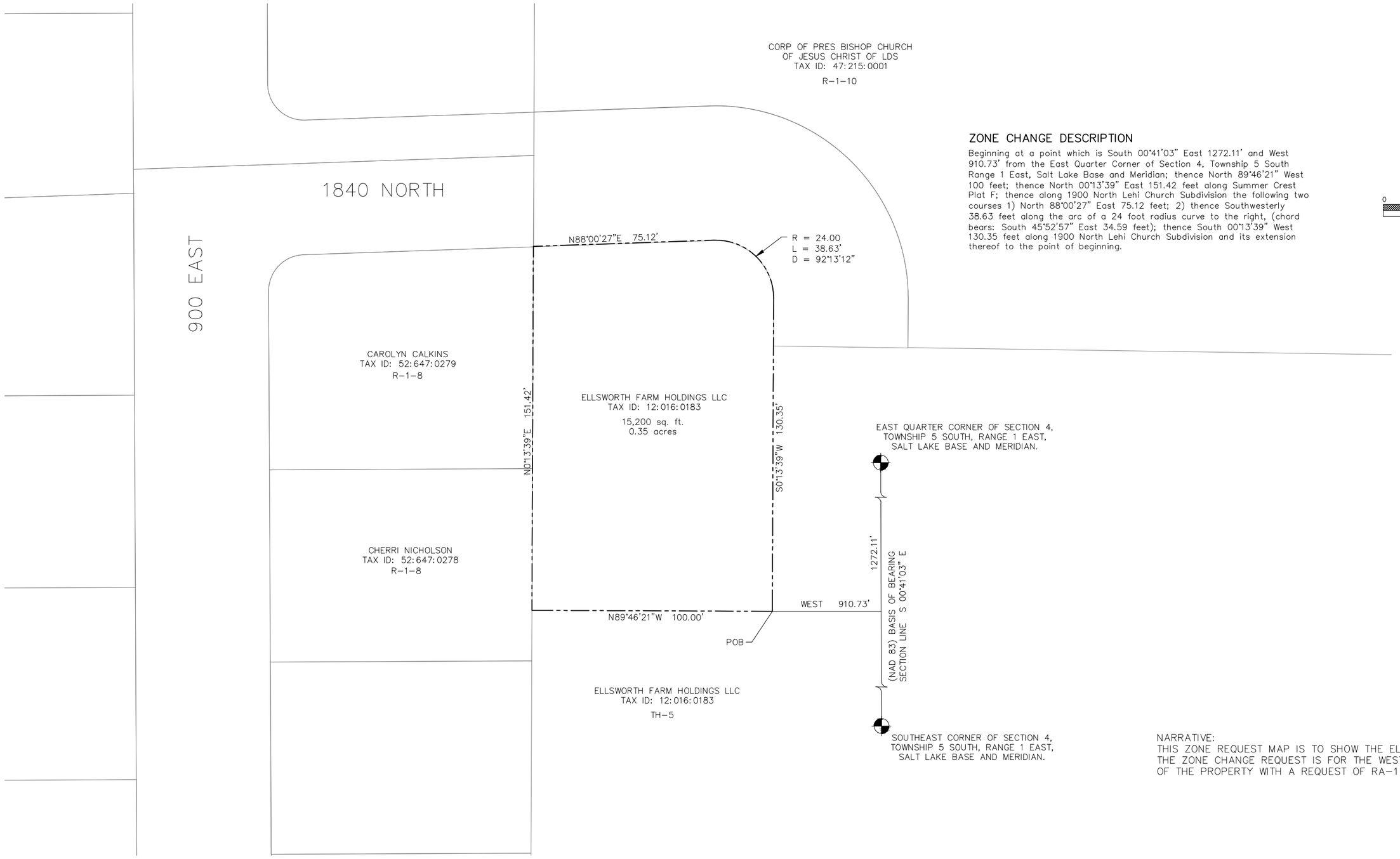
(c) What is the current and potential (if the property were developed) population and residential density of the proposed area? The intent would be to develop 1 lot located in the northwest corner of the property.

(d) How will the proposed zone change comply with and achieve Lehi City's land use(s), goals and policies outlined in the Lehi City General Plan? The request is in line with the land use goals of this area and similar to the surrounding zoning.

(e) What are the current and potential (if the property were developed) demands for City provided facilities and services to the area proposed for annexation, including culinary water, irrigation water, wastewater,transportation facilities, drainage, fire protection, solid waste, parks and recreation, and police protection? Current impact of 1 lot with the remainder of the property to stay TH-5.

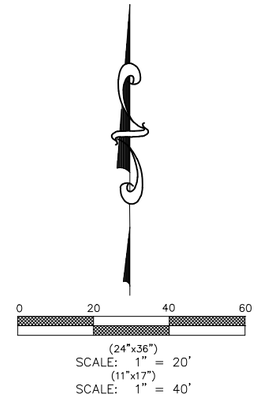
(f) Are the water rights necessary for zone change, found in Section 27-040 of the Lehi Development Code available for dedication to Lehi City upon changing the zone? The owner anticipates the purchase of culinary and irrigation water shares from the city for the 1\3 acre of property proposed to be the RA-1 zoning.

Thank you for your consideration of this matter.




## ZONE CHANGE DESCRIPTION

Beginning at a point which is South 00°41'03" East 1272.11' and West 910.73' from the East Quarter Corner of Section 4, Township 5 South Range 1 East, Salt Lake Base and Meridian; thence North 89°46'21" West 100 feet; thence North 00°13'39" East 151.42 feet along Summer Crest Plat F; thence along 1900 North Lehi Church Subdivision the following two courses 1) North 88°00'27" East 75.12 feet; 2) thence Southwesterly 38.63 feet along the arc of a 24 foot radius curve to the right, (chord bears: South 45°52'57" East 34.59 feet); thence South 00°13'39" West 130.35 feet along 1900 North Lehi Church Subdivision and its extension thereof to the point of beginning.




NARRATIVE:
THIS ZONE REQUEST MAP IS TO SHOW THE ELLSWORTH PROPERTY.
THE ZONE CHANGE REQUEST IS FOR THE WESTERN 0.35 ACRES
OF THE PROPERTY WITH A REQUEST OF RA-1



| REVISIONS | | | | | |
|---|---|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY | | |
| 1 | | | | DESIGNED BY: | TGT |
| 2 | | | | DRAWN BY: | WS |
| 3 | | | | CHECK BY: | TGT |
| 4 | | | | DATE: | 4/15/20 |
| J:\FILE | | | | CDGD FILE: | |

**TRANE ENGINEERING, P.C.**
CONSULTING ENGINEERS AND LAND SURVEYORS
27 EAST MAIN LEHI, UTAH 84043 (801) 768-4544

LEHI, UTAH

*ELLSWORTH PROPERTY*

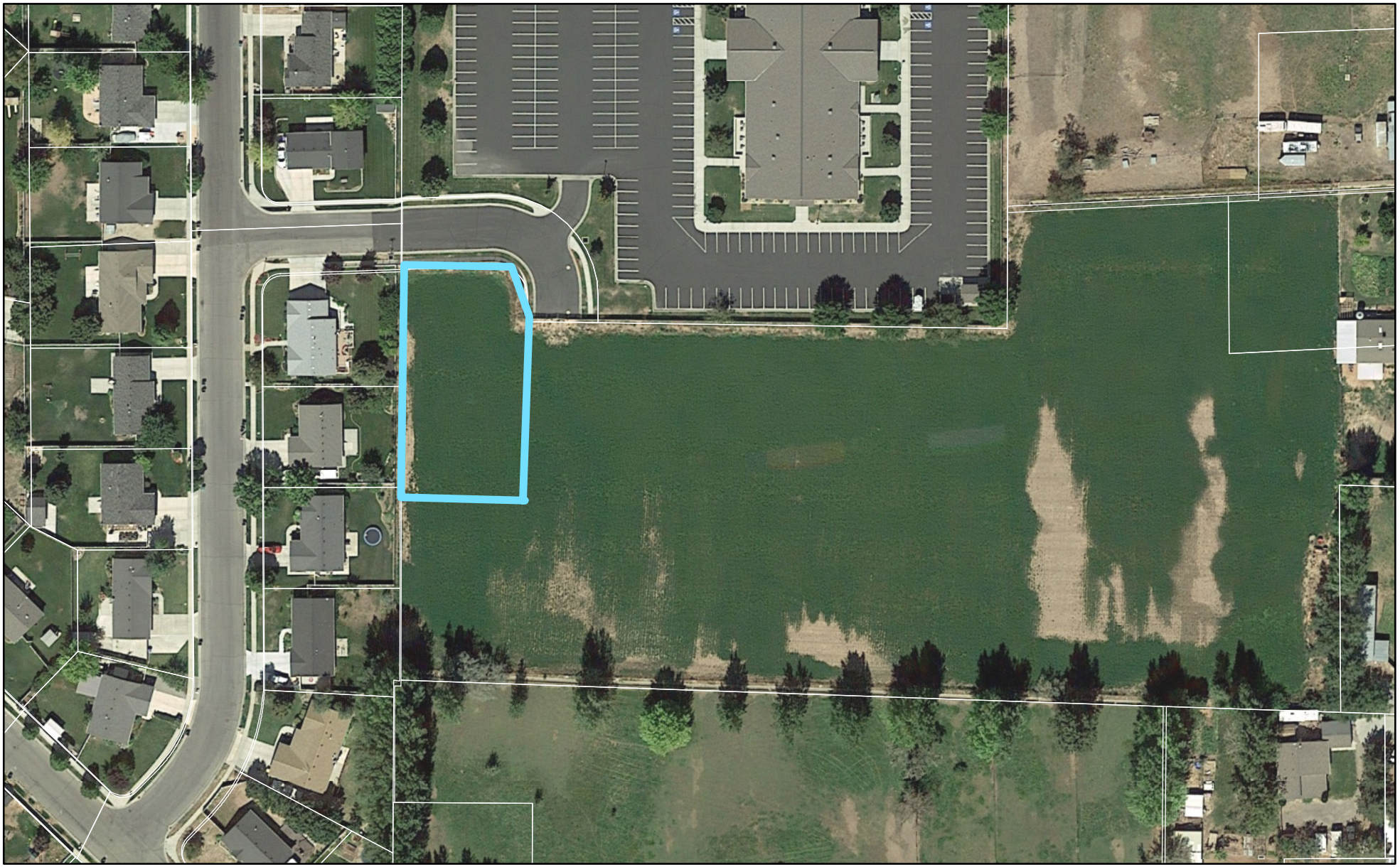
ZONE CHANGE

JOB KP

SHEET NO. 1

# Ellsworth Zone Change

Aerial



0 130 260 Feet



LEHI CITY

# Ellsworth Zone Change

General Plan



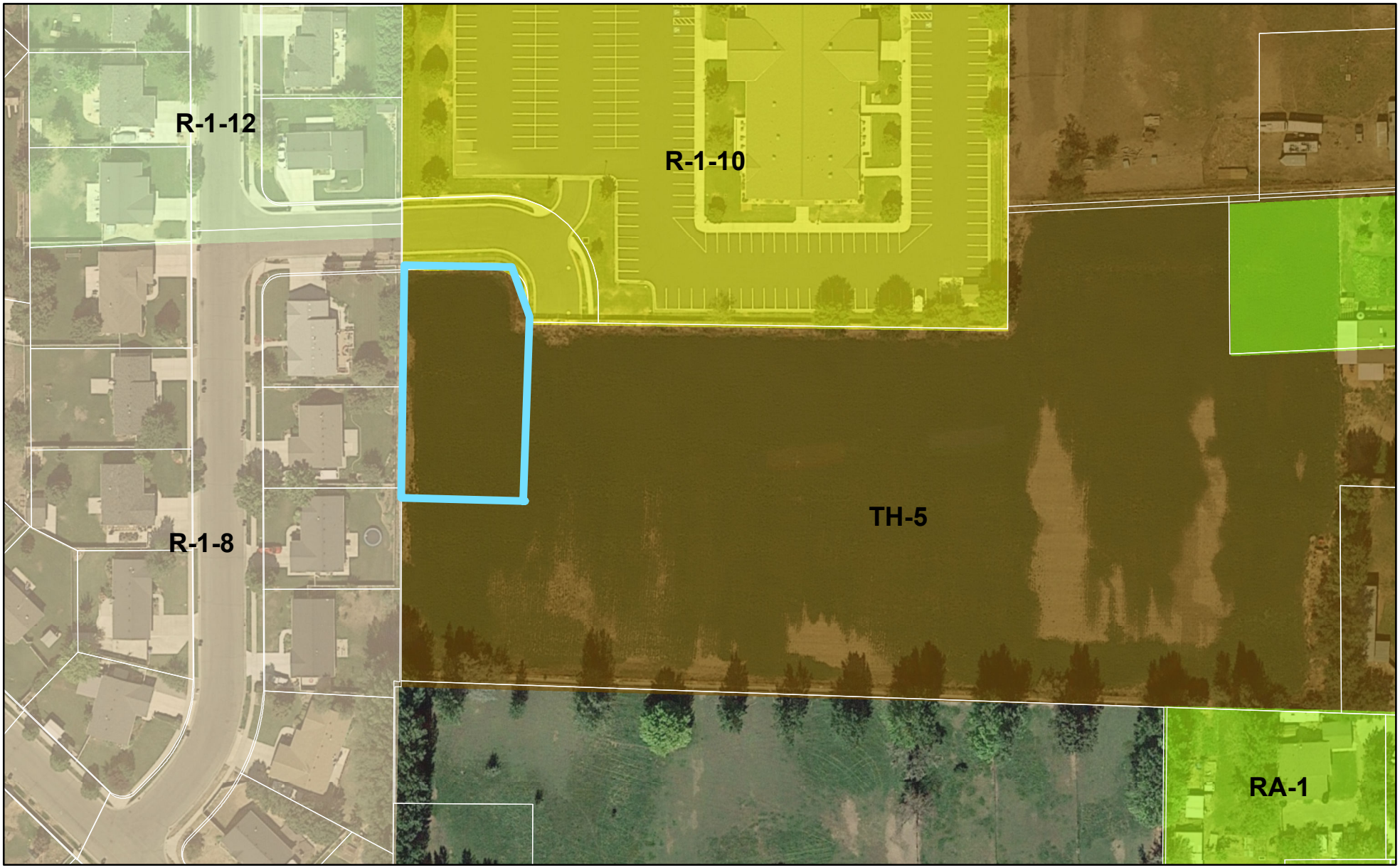

0 130 260 Feet



LEHI CITY

# Ellsworth Zone Change

Zoning




0 130 260 Feet

LEHI CITY

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Sierra Pierson
Submitting Department: Planning Division
Item Type: Action Item
Agenda Section:

---

**Subject:**
Consideration of Resolution #2020-40, approval of a street name change for the southern portion of Holbrook Way to Miller Campus Drive.
Petitioner: Intermountain Healthcare

**Suggested Action:**

**Attachments**:
CC Staff Report Primary Children's Hospital Road Name Change 06.09.20.docx

Primary Children's Hospital Road Name Change DRC 5.27.2020.docx

Res 2020-40.doc

Primary Children's Hospital Road Name Change - narrative.pdf

Primary Children's Hospital Road Name Change - Map.pdf

# PRIMARY CHILDREN'S HOSPITAL ROAD NAME CHANGE

## CITY COUNCIL REPORT

| | |
|---|---|
| **Applicant** | Intermountain Healthcare |
| **Meeting Date** | July 9, 2020 |
| **Requested Action/Purpose** | Approval of a proposed amendment to the Lehi City Development Code |
| **Date of DRC Review** | May 27, 2020 |

## REQUIRED ACTION

| | |
|---|---|
| **City Council** | Final approval |

## REPORT ANALYSIS

The applicant requests review and approval of the proposed road name change. The applicant proposes to change the southern portion of Holbrook Way to "Miller Campus Drive". The name of the road would recognize the contributions of the Miller Family towards the Primary Children's Hospital. The road would change names after it crosses Waterbury Drive. A map showing the portion of Holbrook Way has been included in the packet. Currently, no buildings address off of this portion of Holbrook Way, so the change of the road names would not influence any existing addresses.

The DRC did not have any comments regarding changing the name of the road.

## PLANNING DIVISION RECOMMENDATION

The Planning Division staff recommends **APPROVAL** to the City Council for the proposed Primary Children's Hospital road name change. The recommendation is based on the following findings:

1. The proposed amendment to the Lehi City Development Code is not detrimental to the public health, safety, and welfare of Lehi City.
2. The proposed Development Code amendment is in conformance with the purposes, intent, and provisions of the General Plan and its various elements.
3. Additional findings based upon information presented during the public hearing.

**Primary Children's Hospital Road Name Change**
**DRC Redline Comments**

*Intermountain Healthcare – requests review of a road name change to change the southern portion of Holbrook Way to Miller Campus Drive.*

DRC Members Present: Glade Kirkham, Kerry Evans, Greg Allred, Kim Struthers, Gary Smith, Joshua Bunnell, Ross Dinsdale, Trent Dyer
Representatives of the Applicant Present: N/A
Date of Plans Reviewed: 5/19/2020
Time Start: N/A
Time End: N/A

**DRC REDLINE COMMENTS:**
**Glade – Power: No comment**
**Kerry – Fire: No comment**
**Greg – Water/Sewer: No comment**
**Trent – Parks: No comment**
**Gary – Building/Inspections: No comment**
**JD – Streets: No comment**
**Ross – Engineering: No comment**
**Kim – Planning: No comment**

THIS ITEM WILL BE SCHEDULED FOR CITY COUNCIL ON JUNE 9TH

**Note: This list of corrections and deficiencies should not be considered as an all-inclusive or final list. The items listed need to be corrected and resolved and a new set of information submitted for review by the DRC. Further corrections and deficiencies may still be noted as the DRC further reviews the resubmitted information.**

LEHI CITY

**RESOLUTION #: 2020-40**

**A RESOLUTION CHANGING THE NAME FROM HOLBROOK WAY TO MILLER CAMPUS DRIVE ON THE SOUTHERN PORTION OF HOBROOK WAY**.

**WHEREAS**, Intermountain Healthcare is requesting a name change for the southern section of Holbrook Way to Miller Campus Drive; and

**WHEREAS**, there are no existing homes or businesses off the existing Holbrook Way that would require re-addressing; and

**NOW, THEREFORE,** be it resolved by the Municipal Council of Lehi City, Utah, that the southern section of Holbrook Way be renamed to Miller Campus Drive.

Approved and Adopted by the City Council of Lehi City this 9th day of June, 2020.

_____
Mark Johnson
Mayor

Attest:

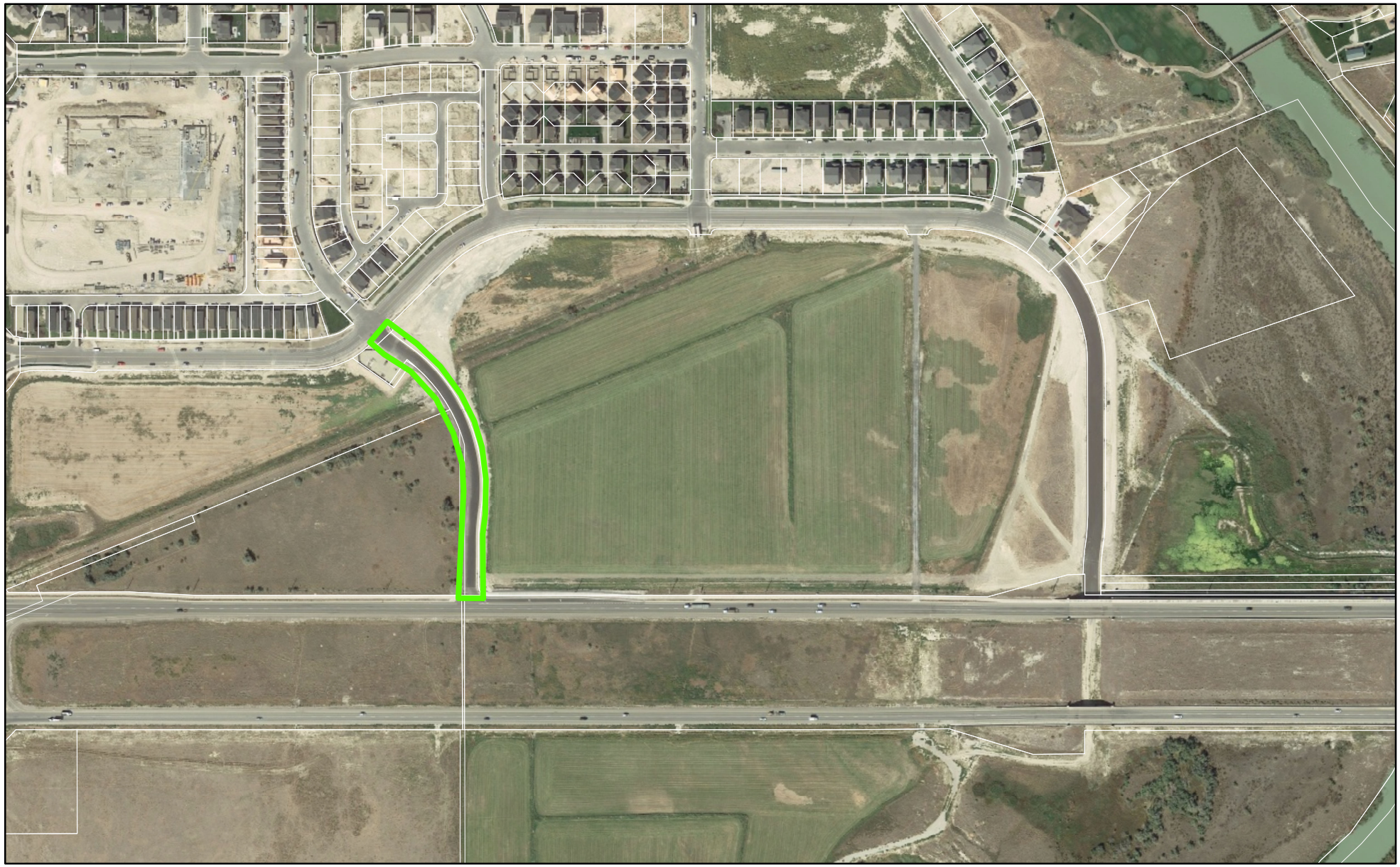
_____
Teisha Wilson, City Recorder

Primary Children's Hospital Road Name Change

With the construction of the new Primary Children's Hospital planned in Lehi, we would like to propose that the southern end of the street currently named Holbrook Way be changed to "Miller Campus Drive". This change recognizes the significant contributions of Gail Miller and the entire Miller family, who have – through their substantial philanthropy and service to the community and Intermountain Healthcare – made the construction of Primary Children's Hospital in Lehi a reality. The hospital will serve some of the most critically ill and injured children across the Intermountain West, and will be a cherished asset to an area with one of the highest birth rates in the country. In changing the street name to "Miller Campus Drive" the entire community will be affirming the generation-spanning legacy set by Gail and the Miller Family towards the health and wellbeing of Lehi's children. In association with this change, we would like to request the address for the new Hospital become "One Miller Campus Drive".

Changing the name of the southern end of this street to "Miller Campus Drive" will not have a negative impact on the surrounding area, as there are no other existing developments along this portion of the street. With vacant property to the west, Primary Children's Hospital will be the first development completed on the renamed "Miller Campus Drive".

# Primary Children's Hospital Road Name Change



0 450 900 Feet

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Brittney Harris
Submitting Department: Planning Division
Item Type: Ordinance
Agenda Section:

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**Subject:**
Consideration of Ordinance #32-2020, a Development Code Amendment to Table 37.070 adding a parking requirement for Short Term Rentals.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
CC Staff Report Table 37.070.B Development Code Amendment 06.09.2020.docx

Ord 32-2020.docx

Table 37.070 STR Parking DRC 05.06.2020.docx

TBL37.070 Parking- Short Term Rentals.pdf

# TABLE 37-070 DEVELOPMENT CODE AMENDMENT

## CITY COUNCIL REPORT

| | |
|---|---|
| **Applicant** | Lehi City |
| **Meeting Date** | June 9, 2020 |
| **Requested Action/Purpose** | Approval of a proposed amendment to the Lehi City Development Code |
| **Date of DRC Review** | May 6, 2020 |
| **Date of Planning Commission Review** | May 14,2020 |

## REQUIRED ACTION

| | |
|---|---|
| **Planning Commission** | Review and recommendation |
| **City Council** | Final approval |

## APPLICABLE DEVELOPMENT CODE REGULATIONS

**Section 04.060. Criteria for Approval.**
No amendment to this Code, or the Zoning District Map(s), may be recommended for approval by the Commission nor approved by the City Council unless such amendment or conditions thereto are consistent with the General Plan. In considering a Code amendment, or Zoning District Map(s) amendment, the applicant shall identify, and the City Staff, DRC, Commission, and the City Council may consider the following factors, among others:

1. The effect of the proposed amendment on the character of the surrounding area;
2. Consistency with the goals and policies of the General Plan.
3. Consistency and Compatibility of the proposed zone with the General Plan land uses of nearby and adjoining properties.
4. The suitability of the properties for the uses requested and their suitability for the existing uses identified by the General Plan;
5. Whether a change in the uses allowed for the affected properties will unduly affect the uses, or proposed uses for nearby and adjoining properties;
6. The gain to the public health, safety and welfare from the existing classification to the proposed amendment; and
7. The overall community benefit of the proposed amendment.

## REPORT ANALYSIS

The City requests approval of the proposed Development Code amendment to Table 37-070 Table of Off-Street Parking Requirements. The Development Code Amendment, approved earlier this year, allowing for Short Term Rentals (STRs) did not designate a specific parking requirement. The proposed amendment adds Short Term Rentals to the Table of Off-Street Parking Requirements and requires at least one stall per bedroom. Chapter 12 of the Development Code specifies additional requirements for STRs and requires a parking plan showing where the required spots will be provided.

DRC reviewed the proposed Development Code Amendment and had no comments.

During Planning Commission review they noticed both “parking stalls” and “parking spaces” used in the table. City Council may wish to include in their motion updating the table to use a uniform term of either “parking stalls” or “parking spaces”. In the same Planning Commission review it was clarified that the requirement for parking is for the number of rented rooms rather than the total rooms of the structure.

## PLANNING DIVISION RECOMMENDATION

The Planning Division staff recommends **APPROVAL** of the proposed amendment to Table 37-070-B of the Development Code. The recommendation is based on the following findings:

1. The proposed amendment specifies a parking requirement for Short Term Rentals, ensuring adequate off-street parking is provided for this use.
2. The proposed amendment to the Lehi City Development Code is not detrimental to the public health, safety, and welfare of Lehi City.
3. The proposed Development Code amendment is in conformance with the purposes, intent, and provisions of the General Plan and its various elements.
4. Additional findings based upon information presented during the public hearing.

## PLANNING COMMISSION RECOMMENDATION

The Planning Commission reviewed the proposed amendment on May 14, 2020. The minutes and motion from this meeting are as follows:

**3.7 Public hearing and recommendation of Lehi City's request for review of a Development Code amendment to Table 37.070 adding a parking requirement for Short Term Rentals.**

Commissioners asked clarifying questions about parking the parkin requirement to the staff. Commissioner Nielsen was concerned about the 1:1 ratio for every room. He asked about the difference between someone who has 5 bedrooms with children compared to someone with 5 bedrooms that is a more of a party house.

Commissioner Hemmert opened the public hearing.

Commissioner Hemmert closed the public hearing.

**Motion**: Commissioner Everett motioned to recommend approval of of Lehi City's request for review of a Development Code amendment to Table 37.070 adding a parking requirement for Short Term Rentals, including all DRC comments and findings stated in the report. Commissioner Ellis seconded.

**Vote**: Commissioner Hemmert, yes; Commissioner Nielsen, no; Commissioner Ellis, yes; Commissioner Everett, yes; Commissioner Bunker, yes; Commissioner Hereth, yes; Commissioner Eyre, yes. The motion passed.

**ORDINANCE NO: 32-2020**

# AN ORDINANCE AMENDING THE LEHI CITY DEVELOPMENT CODE TABLE 37.070 PARKING REQUIREMENTS FOR SHORT TERM RENTALS

WHEREAS, it has become necessary to amend Table 37.070 of the Lehi City Development Code, updating the parking requirements to include short term rentals as a use and adding a parking requirement, and;

WHEREAS, this amendment seeks to regulate parking for short term rentals, and;

WHEREAS, following a public hearing on May 14, 2020, the Lehi City Planning Commission reviewed the proposed revisions and forwarded a positive recommendation to the City Council; and

WHEREAS, on June 9, 2020 the City Council held a duly noticed meeting to receive public comment and ascertain the facts regarding this matter, which facts and comments are found in the hearing record and which include the staff report, minutes from the Planning Commission meeting of May 14, 2020, and the positive recommendation of the Planning Commission; and,

WHEREAS, after considering the facts and comments presented to the Municipal Council, the Council finds: Table 37.070 of the Lehi City Development Code should be amended; and such action furthers the health, safety, and welfare of the citizens of Lehi.

NOW, THEREFORE, BE IT ORDAINED by the City Council of Lehi City, Utah as follows:

PART I:

Table 37.070 of the Lehi City Development Code is hereby amended.

PART II:

A. If a provision of this Ordinance 32 -2020 conflicts with a provision of a previously adopted ordinance concerning the same title, chapter, and/or section number amended herein, the provision in this Ordinance shall prevail.

B. This ordinance and its various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder shall not be affected thereby.

C. The City Council hereby directs that the official copy of the Lehi City Code be updated to reflect the provisions enacted by this Ordinance.

D. This Ordinance shall take effect immediately after being posted or published as required by law.

Approved and Adopted by the City Council of Lehi City this 9th day of June 2020.

ATTEST

| | |
|---|---|
| _____ | _____ |
| Mark Johnson, Mayor | Teisha Wilson, City Recorder |

**Development Code Table 37-070 Amendment**
**DRC Redline Comments**

*Lehi City- requests review of a Development Code Amendment to Table 37-070 adding parking requirements for Short Term Rentals*

DRC Members Present: Glade Kirkham, Kerry Evans, Greg Allred, Kim Struthers, Gary Smith, Joshua Bunnell, Ross Dinsdale, Trent Dyer
Representatives of the Applicant Present: None due to COVID-19
Date of Plans Reviewed: 4/29/20
Time Start: N/A
Time End: N/A

**DRC REDLINE COMMENTS:**
**Glade – Power:** No comments
**Kerry – Fire:** No comments
**Greg – Water/Sewer:** No comments
**Trent – Parks:** No comments
**Gary – Building/Inspections:** No comments
**JD – Streets:** No comments
**Ross – Engineering:** No comments
**Kim – Planning:** No comments

THIS ITEM IS SCHEDULED FOR PLANNING COMMISSION ON MAY 26th

**Note: This list of corrections and deficiencies should not be considered as an all-inclusive or final list. The items listed need to be corrected and resolved and a new set of information submitted for review by the DRC. Further corrections and deficiencies may still be noted as the DRC further reviews the resubmitted information.**

| USE | PARKING SPACES REQUIRED |
|---|---|
| Manufacturing, Industrial, Wholesale establishments | 1 stall for each person employed during regular working hours and adequate spaces for all company owned vehicles and visitors |
| Medical Clinics | 1 space for each 250 square feet of gross floor area |
| Museums, Civic Uses | As approved by the Planning Commission |
| Night Club | 1 stall for each 300 square feet of gross floor area |
| Personal Services | 1 stall for each 300 square feet of gross floor area |
| Plant Nursery with Outdoor Display | 10 stalls per acre |
| Research and Development Facilities/Medical or Dental Laboratory | 1 stall for each 300 square feet of gross floor area |
| Restaurants Dine-in/Brew Pub | 1 stall for each 2.5 seats plus 0.5 spaces per employee on the largest shift (minimum of 5 employee spaces) |
| Restaurants – Drive-thru (Food establishment with large proportion of take-out business) | 1 stall per 150 square feet of gross floor area (does not include drive thru stalls or waiting areas) |
| Retail Stores | 1 stall for each 300 square feet of gross floor area |
| Schools – Vocational and Technical | 1 stall for each employee plus 1 stall per each 3 students at maximum capacity |
| Short Term Rentals | 1 stall per bedroom |
| Sports Fields, Sporting Facilities, Arenas | 1 stall for every 3 seats at maximum capacity or as approved by the Planning Commission |
| Theaters, Sports Arenas, Public Assembly Areas | 1 stall for each 3 seats at the maximum seating capacity or as approved by the Planning Commission |
| Other non-residential uses not otherwise listed | 1 stall per each 500 square feet of gross floor area or as approved by the Planning Commission |
| MIXED USES | |
| Mixed Use – Residential/Commercial | Required parking based on total of combined uses with up to 30% reduction upon Planning Commission approval and a recommendation by a licensed traffic engineer. In cases with more than one owner or where uses exist with different peak use periods, a shared parking agreement may be required. |

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Sierra Pierson
Submitting Department: Planning Division
Item Type: Ordinance
Agenda Section:

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**Subject:**
Consideration of  Ordinance #33-2020, a Development Code Amendment to Chapter 20, adding a home office with mobile services as an allowed use.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
CC Staff Report Ch 20 Development Code Amendment 06.09.2020.docx

Ord 33-2020.docx

Ch 20 Home Occupation Development Code Amendment DRC 3.11.2020.docx

Ch20HomeOccupations - mobile businesses - text.pdf

# CHAPTER 20 DEVELOPMENT CODE AMENDMENT

## CITY COUNCIL REPORT

| | |
|---|---|
| **Applicant** | Lehi City |
| **Meeting Date** | June 9, 2020 |
| **Requested Action/Purpose** | Approval of a proposed amendment to the Lehi City Development Code |
| **Date of DRC Review** | March 11, 2020 |
| **Date of Planning Commission Review** | May 14, 2020 |

## REQUIRED ACTION

| | |
|---|---|
| **Planning Commission** | Review and recommendation |
| **City Council** | Final approval |

## APPLICABLE DEVELOPMENT CODE REGULATIONS

**Section 04.060. Criteria for Approval.**
No amendment to this Code, or the Zoning District Map(s), may be recommended for approval by the Commission nor approved by the City Council unless such amendment or conditions thereto are consistent with the General Plan. In considering a Code amendment, or Zoning District Map(s) amendment, the applicant shall identify, and the City Staff, DRC, Commission, and the City Council may consider the following factors, among others:

1. The effect of the proposed amendment on the character of the surrounding area;
2. Consistency with the goals and policies of the General Plan.
3. Consistency and Compatibility of the proposed zone with the General Plan land uses of nearby and adjoining properties.
4. The suitability of the properties for the uses requested and their suitability for the existing uses identified by the General Plan;
5. Whether a change in the uses allowed for the affected properties will unduly affect the uses, or proposed uses for nearby and adjoining properties;
6. The gain to the public health, safety and welfare from the existing classification to the proposed amendment; and
7. The overall community benefit of the proposed amendment.

## REPORT ANALYSIS

The applicant requests approval of the proposed amendment to Chapter 20 of the Lehi City Development Code. The proposed amendment would add mobile services as an allowed Home Occupation. Mobile Home Occupations will be defined as “a personal service or pet grooming facility business that operates out of a mobile unit.” The amendment will require mobile home occupations to obtain a business license and have a home office for the Lehi City address of the mobile home occupation. The amendment will also list requirements for mobile home occupations. These requirements will include not providing services while the mobile unit is in motion, not using the mobile unit as living or sleeping quarters, ensuring the mobile unit will be self-contained, providing parking regulations, and providing fresh water for each business day. Finally, the mobile unit will need to be customized to anchor all furniture and to ensure chemicals will be stored in cabinets with safety latches.

The Planning Commission tabled the proposed amendment two previous times on March 26, 2020 and April 23, 2020, meeting. During the May 14, 2020 meeting, the Planning Commission moved on the item with the comment to remove K-5 as the information is redundant of section K-1.

The DRC had one comment:

1. On letter E, add “or sanitary sewer”

Please include the DRC comment as part of the motion.

## PLANNING DIVISION RECOMMENDATION

The Planning Division staff recommends an **APPROVAL of** the proposed amendment to Chapter 20 – Home Occupations of the Development Code, including the DRC comments from March 11, 2020. The recommendation is based on the following findings:

1. The proposed amendment to the Lehi City Development Code is/is not detrimental to the public health, safety, and welfare of Lehi City.
2. The proposed Development Code amendment is/is not in conformance with the purposes, intent, and provisions of the General Plan and its various elements.
3. Additional findings based upon information presented during the public hearing.

## PLANNING COMMISSION RECOMMENDATION

The Planning Commission reviewed the proposed amendment on May 14, 2020. The minutes and motion from this meeting are as follows:

**3.1 Recommendation of Lehi City’s request for review of a Development Code amendment to Chapter 20, adding a home office with mobile services as an allowed use. (Tabled from the April 23, 2020 meeting)**

The Commissioners discussed the Development Code amendment. Chairman Hemmert felt that K5 wasn’t needed since it was stated in K1.

**Motion**: Commissioner Nielsen recommended approval of also including we removed L5 from the new language to repetitive of K1; including all DRC comments and findings stated in the staff report. Commissioner Eyre Seconded.

**Vote**: Commissioner Hemmert, yes; Commissioner Nielsen, yes; Commissioner Ellis, yes; Commissioner Everett, yes; Commissioner Bunker, yes; Commissioner Hereth, yes; Commissioner Eyre, yes. The motion passed unanimously.

**ORDINANCE NO: 33-2020**

**AN ORDINANCE AMENDING THE LEHI CITY DEVELOPMENT CODE CHAPTER 20 ADDING MOBILE HOME OCCUPATIONS**

WHEREAS, it has become necessary to amend Chapter 20 of the Lehi City Development Code, adding mobile home occupations as an allowed home occupation, and;

WHEREAS, following a public hearing on May 14, 2020, the Lehi City Planning Commission reviewed the proposed revisions and forwarded a positive recommendation to the City Council; and

WHEREAS, on June 9, 2020 the City Council held a duly noticed meeting to receive public comment and ascertain the facts regarding this matter, which facts and comments are found in the hearing record and which include the staff report, minutes from the Planning Commission meeting of May 14, 2020, and the positive recommendation of the Planning Commission; and,

WHEREAS, after considering the facts and comments presented to the Municipal Council, the Council finds: Chapter 20 of the Lehi City Development Code should be amended; and such action furthers the health, safety, and welfare of the citizens of Lehi.

NOW, THEREFORE, BE IT ORDAINED by the City Council of Lehi City, Utah as follows:

PART I:

Chapter 20 of the Lehi City Development Code is hereby amended.

PART II:

A. If a provision of this Ordinance 33 -2020 conflicts with a provision of a previously adopted ordinance concerning the same title, chapter, and/or section number amended herein, the provision in this Ordinance shall prevail.

B. This ordinance and its various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder shall not be affected thereby.

C. The City Council hereby directs that the official copy of the Lehi City Code be updated to reflect the provisions enacted by this Ordinance.

D. This Ordinance shall take effect immediately after being posted or published as required by law.

Approved and Adopted by the City Council of Lehi City this 9th day of June 2020.

ATTEST

| | |
|---|---|
| _____ | _____ |
| Mark Johnson, Mayor | Teisha Wilson, City Recorder |

**Ch 20 Home Occupation Development Code Amendment**
**DRC Redline Comments**

*Lehi City – requests review of a Development Code Amendment to Chapter 20, Home Occupations, adding a home office with mobile services*

DRC Members Present: Glade Kirkham, Kerry Evans, Greg Allred, Kim Struthers, Gary Smith, Joshua Bunnell, Ross Dinsdale, Trent Dyer
Representatives of the Applicant Present: None
Date of Plans Reviewed: 3/05/2020
Time Start: 4:40 PM
Time End: 4:42 PM

**DRC REDLINE COMMENTS:**
**Glade – Power: No comment**
**Kerry – Fire: No comment**
**Greg – Water/Sewer: No comment**
**Trent – Parks: No comment**
**Gary – Building/Inspections: No comment**
**JD – Streets: No comment**
**Ross – Engineering: No comment**
**Kim – Planning:**
1. On letter E, add "or sanitary sewer"

THIS ITEM CAN BE SCHEDULED FOR PLANNING COMMISSION

**Note: This list of corrections and deficiencies should not be considered as an all-inclusive or final list. The items listed need to be corrected and resolved and a new set of information submitted for review by the DRC. Further corrections and deficiencies may still be noted as the DRC further reviews the resubmitted information.**

# CHAPTER 20

# HOME OCCUPATIONS

*(Amended 05/22/18)*

Section 20.010. Purpose.
Section 20.020. Requirements of Approval.
Section 20.030. Employees.
Section 20.040. Patrons.
Section 20.050. Prohibited Home Occupations.
Section 20.060. Appeals.
Section 20.070. Noncompliance and Revocation.
Section 20.080. Business License Required.

**Section 20.010. Purpose.** *(Amended 03/28/00; 01/08/13; 04/11/17)*

It is the intent of Lehi City to encourage business activities in appropriate commercial districts. Business activities may be conducted within a residence on a limited basis provided that the proposed activity complies with the standards and provisions of this Chapter. All home occupations shall be secondary and incidental to the residential use of the structure. Home occupations are a temporary privilege that can be revoked at any time if disruption of the residential neighborhood occurs, or if the applicant fails to comply with any condition of approval.

**Section 20.020. Requirements of Approval.** *(Amended 03/28/00; 8/10/04; 12/08/09; 01/08/13; 03/11/14; 04/11/17; 08/29/17)*

To protect the character of residential neighborhoods in the City, a Home Occupation Permit shall be obtained prior to use of a residential dwelling or accessory building for a business. An application for a Home Occupation Permit may be approved provided:

A. the applicant resides in the residence for which the permit is being sought;

B. no alteration to the exterior of the residence is made and the residence maintains the general character and appearance of a residential dwelling;

C. the home occupation occupies no more than 25% of the total finished, livable floor area of the dwelling;

D. the home occupation is carried out within the home, garage, accessory building, or other space of a residential property but is not observable by the general public from the street in front of the residence, and the business activities do not create a nuisance for adjacent properties or disrupt the normal residential character of the neighborhood in which the residence is located;

E. any space that is used for the business in a garage or accessory building is counted toward the maximum allowed square footage for the home occupation;

F. garage doors remain closed while business is conducted therein;

G. required off-street parking for both the residence and home occupation is maintained as per Table 37.090 and Section 20.040.B of this Code;

H. a home occupation located in a garage or accessory building complies with all applicable building and fire codes, which may require approval for business activities by the Building Official and fire marshal;

I. if the home occupation is swimming lessons, they are conducted within an accessory building covering the swimming pool;

J. if the home occupation involves raising, keeping, caring, or selling of animals, an inspection by the Animal Control Officer shall occur prior to issuance of a business license;

K. a certificate of occupancy is first issued for the residence;

L. the applicant obtains a Lehi City Business License for the home occupation on an annual basis;

M. there are no signs or product displays;

N. no more than one home occupation is approved per residence unless the applicant can demonstrate the additional home occupations will not impact the residential nature of the area;

O. the applicant provides off-street parking for all vehicles related to the home occupation, that no on-street parking related to the business is allowed, and the business activities do not create a demand for on-street parking;

P. there is no storage or parking of tractor trailers, semi-trucks, or other heavy equipment on the premises or on the streets in the vicinity of the premises of the home occupation, except that not more than one truck of one-ton capacity or less may be parked at the premises during off hours;

Q. to ensure the home occupation, once authorized, does not become a nuisance to the neighbors, the Zoning Administrator may impose operating con-

ditions initially and also subsequently to protect the public health, safety, peace, and welfare of the residents of the surrounding residential area;

R. the home occupation is clearly incidental and secondary to the residential use of the dwelling and does not change the character of the building from common residential uses;

S. activities in connection with the home occupation are not in conflict with the objectives and characteristics of the district in which the home occupation is located; and

T. if the applicant for a home occupation is not the legal owner of the residence, the applicant presents written permission from the legal owner of the residence to conduct the activities proposed.

**Section 20.030. Employees.**
*(Amended 03/28/00; 01/08/13)*

A. Residents of the dwelling for which a home occupation has been approved may be employed by the home occupation.

B. Recognizing that for some home occupations additional employees are necessary or practical, the City may allow one employee not residing in the premises to work at the location of a home occupation during daytime business hours. Off-street parking shall be required for all on-premises employees of an approved home occupation.

C. Off-premise employees shall not be allowed to frequent the premise of a home occupation.

**Section 20.040. Patrons.** *(Amended 07/18/02; 8/10/04; 01/08/13; 03/11/14; 04/11/17)*

A. A home occupation shall not create the demand for more than two patrons per hour, with the exception of daycare, in-home child instruction, and swimming lessons as provided in this section. In no case, shall the number of clients exceed 12 per hour and 24 per day.

B. Off-street parking is required for all patrons of an approved home occupation.

C. In the case of in-home child instruction, including preschools, dance, music, and art instruction, there shall not be more than 12 children at one time nor more than two classes or sessions per day.

D. In the case of child day care, the total number of children that may be allowed in attendance at one time shall conform to the Utah State Regulations for residential child care found at Utah Admin. Code R430-50-1, *et seq.* In order to maintain the validity of a Lehi City business license for any child day care, the applicant shall obtain and keep valid a Utah Department of Health child care certificate. Any child day care home occupation shall also strictly comply with all other requirements set forth in Utah Admin. Code § R430-50-1, *et seq.*

E. In the case of swimming lessons, the following provisions shall apply:

1. the total number of patrons that may be allowed in attendance at one time shall be limited to six.

2. there shall be no more than four classes or sessions per day.

3. the license holder and any other instructors shall have and maintain current certifications issued by the American Red Cross in each of: 1) cardio-pulmonary resuscitation; 2) first aid; and 3) swim coaches safety training or water safety instruction.

4. the pool facility shall meet all State requirements for pool cleanliness, microbes, sanitation, chemicals, lifesaving apparatus, periodic sampling of water, and water purification treatment.

5. the pool design must be an in-ground built-in pool. Temporary, portable, or above ground pools shall not be used.

6. all instructors are required to have YMCA accreditation or other nationally approved accreditation standards for swim instruction.

F. For child day care and in-home child instruction and swimming lessons, the backyard of the home is required to be fully fenced and all gates shall have self-closing latches.

G. For any business expecting patrons, including salons, daycare, in-home child instruction, and swimming lessons, the applicant must pass a fire and safety inspection prior to the issuance of a business license.

**Section 20.050. Mobile Home Occupations.**

A. Mobile Home Occupation shall be defined as a personal service or pet grooming facility business that operates out of a mobile unit.

B. A Home Occupation Permit may be issued for

a Mobile Home Occupation if the use meets the definition of personal services or pet grooming facility in this Code and all other requirements listed in this Chapter.

C. The business license for a Mobile Home Occupation shall have a residential address in Lehi City for the home office.

D. No services shall be provided while the mobile unit is in motion.

E. The mobile unit shall be self-contained and self-supporting. The unit shall not connect into any city utilities or dispose of waste in city storm drain.

F. The mobile unit shall have fresh water for each business day. Should the fresh water run out during a business day, the business shall discontinue operations until the fresh water holding tank has been refilled.~~,~~

G. All furniture shall be anchored to the mobile unit and chemicals shall be stored in cabinets with safety catches.

H. No part of the mobile unit shall be used for living or sleeping quarters.

I. Mobile Home Occupation operators and vendors shall comply with the Lehi City Municipal Code Title 5, Chapter 3, Noise Control.

J. Mobile Home Occupations shall, at all times, comply with all applicable laws to this type of service and all county health department regulations.

K. Parking of the mobile unit shall comply to the following:

1. Mobile Home Occupations shall not be parked in a manner that impedes vehicular or pedestrian traffic flow or public safety. A minimum clearance of 15 feet shall be kept between the Mobile Home Occupation and any fire hydrant, utility box, ADA accessibility ramp, or building entrance.

2. A Mobile Home Occupation shall not park on any landscaped parking strip.

3. Mobile Home Occupations shall not be operated on public streets where the speed limit exceeds 35 miles per hour, or at any locations that are otherwise deemed hazardous by Lehi City, unless the roadway or location has been closed to vehicular traffic for a public event.

4. Mobile Home Occupations shall be parked lawfully on public right-of-way. Mobile Home Occupations shall be parked so that neither the vehicle or customers interfere with public access to adjacent parking stalls, driveways, or entrances of existing buildings or uses.

5. Each Mobile Home Occupations operator shall ensure that its use of the right-of-way, including the sidewalk, does not interfere with or limit sidewalk users' passage.

6. All Mobile Home Occupations shall be removed from the public right-of-way at the close of each business day. Mobile Home Occupations shall park off-street during non-business hours. Parking of the Mobile Home Occupation can occur in a driveway as allowed by the CC&Rs of the subdivision. No services shall be provided while the mobile unit is parked in the driveway.

**Section 20.060. Prohibited Home Occupations.**

*(New 12/08/09; Amended 01/08/13; 08/29/17)*

For the purpose of protecting residential character, the following types of businesses and those of a similar nature are prohibited as home occupations:

A. body art facilities;

B. clinics, hospitals, and related medical and dental facilities, excluding outpatient counseling and therapy services;

C. animal and veterinary clinics, kennels, or other facilities which entail the raising, or keeping of dogs, cats or other animals in excess of what is permitted by Table 12.070 of this Code;

D. restaurants;

E. automobile, truck, or recreational vehicle related businesses, including repair services, retail or wholesale sales, painting and auto body repair;

F. construction or landscape maintenance businesses that require equipment, materials, or vehicles to be stored at the home;

G. ambulance services;

H. retail sales businesses, excluding internet sales;

I. sexually oriented businesses; and

K. engine or appliance repair services.

**Section 20.070 Appeals.** *(Amended 01/08/13; 12/13/16)*
If an applicant for a Home Occupation Permit is either denied a permit or desires to appeal any condition of approval placed on the application by the Zoning Administrator, the applicant may present an appeal to the Hearing Examiner within ten days of the decision, as per Section 03.040. The applicant shall notify the Zoning Administrator, in writing, of the appeal. The Zoning Administrator will schedule an appeal hearing with the Hearing Examiner and provide at least 14 days' public notice consistent with the notification procedures of Section 03.080. At the hearing, the Hearing Examiner may hear from the Zoning Administrator, staff, applicant, public and other interested parties prior to making a decision on the appeal. Following the hearing, the Hearing Examiner may approve, approve with conditions, or deny the appeal.

**Section 20.080. Noncompliance and Revocation.**
Any Home Occupation Permit shall be revoked by the Zoning Administrator upon violation of any of the requirements of this Chapter, or upon failure to comply with any condition of the permit, unless the violation is corrected within ten days of receipt of written notice of the violation. A permit may be revoked for repeated violations of the requirements of this Chapter, notwithstanding compliance to the violation notice.

**Section 20.090. Business License Required.**
*(New 12/08/09)*
A Home Occupation Permit is not a business license. Granting of the permit shall not relieve the permittee of any other license requirement of the City or of any other public agency, including the requirement to obtain a business license.

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Sierra Pierson
Submitting Department: Planning Division
Item Type: Ordinance
Agenda Section:

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**Subject:**
Consideration of Ordinance #34-2020, a Development Code Amendment to Chapters 12 and 26, adding requirements for storage containers on residential property.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
CC Staff Report Chapter 12 and 26 Development Code Amendment 06.09.20.docx

Ord 34-2020.docx

Chapter 12 and 26 Development Code Amendments DRC 04.29.2020.docx

Ch 12 and 26 Development Code Amendment - portable storage container sheds.pdf

# CHAPTER 12 AND 26 DEVELOPMENT CODE AMENDMENT

## CITY COUNCIL REPORT

| | |
|---|---|
| **Applicant** | Lehi City |
| **Meeting Date** | June 9, 2020 |
| **Requested Action/Purpose** | Approval of a proposed amendment to the Lehi City Development Code |
| **Date of DRC Review** | April 29, 2020 |
| **Date of Planning Commission Review** | May 14, 2020 |

## REQUIRED ACTION

| | |
|---|---|
| **Planning Commission** | Review and recommendation |
| **City Council** | Final approval |

## APPLICABLE DEVELOPMENT CODE REGULATIONS

**Section 04.060. Criteria for Approval.**
No amendment to this Code, or the Zoning District Map(s), may be recommended for approval by the Commission nor approved by the City Council unless such amendment or conditions thereto are consistent with the General Plan. In considering a Code amendment, or Zoning District Map(s) amendment, the applicant shall identify, and the City Staff, DRC, Commission, and the City Council may consider the following factors, among others:

1. The effect of the proposed amendment on the character of the surrounding area;
2. Consistency with the goals and policies of the General Plan.
3. Consistency and Compatibility of the proposed zone with the General Plan land uses of nearby and adjoining properties.
4. The suitability of the properties for the uses requested and their suitability for the existing uses identified by the General Plan;
5. Whether a change in the uses allowed for the affected properties will unduly affect the uses, or proposed uses for nearby and adjoining properties;
6. The gain to the public health, safety and welfare from the existing classification to the proposed amendment; and
7. The overall community benefit of the proposed amendment.

## REPORT ANALYSIS

The applicant requests review and approval of the proposed Development Code amendment to Chapters 12 and 26. The amendment would allow for portable storage containers to be stored on residential property if they are conversed to a storage shed. Previously, portable storage containers were not allowed on a residential lot on a permanent basis.

The amendment in Chapter 12 includes an exception to allow for storage containers on residential properties if they meet the requirements of permanent storage sheds in Section 26.100. The amendment in Chapter 26 includes a new section regarding portable storage container shed conversions. The requirements for the portable storage container shed conversions includes covering the shed in specified building materials, including a roof feature on the storage container, and meeting all other accessory structure requirements. The proposed amendment also states which residential zones would allow for a storage container shed conversion. The amendment also specifies the process of applying for a portable storage container shed conversion. The process includes submitting plans for review and approval by the Zoning Administrator or designee.

The Planning Commission did propose an amendment to the proposed text during their May 14th meeting. The recommendation to the amendment included only allowing the portable storage container shed conversions on larger lots within the TH-5, A-5, A-1, RA-1 and R-1-22 zones as opposed to all very low density to low-density residential zones. The text has been updated to reflect the change.

DRC reviewed the proposed Development Code Amendment and had four comments including the following:
1. Add "(as described in Chapter 12)
2. Include glass as an allowed material.
3. Provide example pictures and figure references in the Code.

## PLANNING DIVISION RECOMMENDATION

The Planning Division staff recommends **APPROVAL** to the City Council for the proposed amendment to Chapter 12 and 26 of the Development Code. The recommendation is based on the following findings:

1. The proposed amendment allows additional opportunities for residents to have storage on their property while balancing it with ensuring a minimum level of aesthetics.
2. The proposed amendment to the Lehi City Development Code is not detrimental to the public health, safety, and welfare of Lehi City.
3. The proposed Development Code amendment is in conformance with the purposes, intent, and provisions of the General Plan and its various elements.
4. Additional findings based upon information presented during the public hearing.

## PLANNING COMMISSION RECOMMENDATION

The Planning Commission reviewed the proposed amendment on May 14, 2020. The minutes and motion from this meeting are as follows:

**3.6 Public hearing and recommendation of Lehi City's request for review of Development Code Amendments to Chapter 12 and 26, adding requirements for storage containers on residential property.**

Commissioners asked clarifying questions to the staff.

Commissioner Hemmert opened the public hearing.

Commissioner Hemmert closed the public hearing.

**Motion**: Commissioner Ellis moved to recommend approval of Lehi City's request for review of Development Code Amendments to Chapter 12 and 26, adding requirements for storage containers on residential property, including all DRC comments and findings stated in the report. Also, with change that the lot sizes/zones TH-5, A-5, A-1, RA-1, and R-1-22 be restricted. Commissioner Bunker seconded the motion.

**Vote**: Commissioner Hemmert, yes; Commissioner Nielsen, yes; Commissioner Ellis, yes; Commissioner Everett, yes; Commissioner Bunker, yes; Commissioner Hereth, yes; Commissioner Eyre, yes. The motion passed unanimously.

**ORDINANCE NO: 34-2020**

**AN ORDINANCE AMENDING THE LEHI CITY DEVELOPMENT CODE CHAPTER 12 AND 26 ALLOWING PORTABLE STORAGE CONTAINER CONVERSIONS**

WHEREAS, it has become necessary to amend Chapter 12 and 26 of the Lehi City Development Code, allowing portable storage containers on residential property if converted into a portable storage container shed, and;

WHEREAS, following a public hearing on May 14, 2020, the Lehi City Planning Commission reviewed the proposed revisions and forwarded a positive recommendation to the City Council; and

WHEREAS, on June 9, 2020 the City Council held a duly noticed meeting to receive public comment and ascertain the facts regarding this matter, which facts and comments are found in the hearing record and which include the staff report, minutes from the Planning Commission meeting of May 14, 2020, and the positive recommendation of the Planning Commission; and,

WHEREAS, after considering the facts and comments presented to the Municipal Council, the Council finds: Chapter 12 and 26 of the Lehi City Development Code should be amended; and such action furthers the health, safety, and welfare of the citizens of Lehi.

NOW, THEREFORE, BE IT ORDAINED by the City Council of Lehi City, Utah as follows:

PART I:

Chapter 12 and 26 of the Lehi City Development Code is hereby amended.

PART II:

A. If a provision of this Ordinance 34-2020 conflicts with a provision of a previously adopted ordinance concerning the same title, chapter, and/or section number amended herein, the provision in this Ordinance shall prevail.

B. This ordinance and its various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder shall not be affected thereby.

C. The City Council hereby directs that the official copy of the Lehi City Code be updated to reflect the provisions enacted by this Ordinance.

D. This Ordinance shall take effect immediately after being posted or published as

required by law.

Approved and Adopted by the City Council of Lehi City this 9th day of June 2020.

ATTEST

| | |
|---|---|
| _____ | _____ |
| Mark Johnson, Mayor | Teisha Wilson, City Recorder |

**Development Code Amendments to Chapter 12 and 26**
**DRC Redline Comments**

*Lehi City – requests review of Development Code Amendments to Chapter 12 and 26, adding requirements for storage containers on residential property.*

DRC Members Present: Glade Kirkham, Kerry Evans, Greg Allred, Kim Struthers, Gary Smith, Joshua Bunnell, Ross Dinsdale, Trent Dyer
Representatives of the Applicant Present: N/A
Date of Plans Reviewed: 04/21/2020
Time Start: N/A
Time End: N/A

**DRC REDLINE COMMENTS:**
**Glade – Power: No comments**
**Kerry – Fire: No comments**
**Greg – Water/Sewer: No comments**
**Trent – Parks:**
1. Should building material coverage be a percentage of the shipping container instead of complete coverage? I think exposed painted portions of the container would look fine (better than a Tuff-shed).

**Gary – Building/Inspections: No comments**
**JD – Streets: No comments**
**Ross – Engineering: No comments**
**Kim – Planning:**
2. Add "(as described in Chapter 12)
3. Include glass as an allowed material.
4. Provide example pictures and figure references in the Code

THIS ITEM WILL BE SCHEDULED FOR PLANNING COMMISSION ON MAY 14TH

**Note: This list of corrections and deficiencies should not be considered as an all-inclusive or final list. The items listed need to be corrected and resolved and a new set of information submitted for review by the DRC. Further corrections and deficiencies may still be noted as the DRC further reviews the resubmitted information.**

walkways and trash storage areas.

6. The Lehi City Police Department may provide recommendations regarding the security of the site. Such recommendations may include, but are not limited to, on site security personnel, security lighting, security fencing, secured parking, information signs, and building design and landscaping to reduce places of potential concealment.

C. Liquor Stores and Private Clubs**.** Applications to establish a liquor store or private club shall be reviewed and considered as a conditional use within the zoning districts authorized pursuant to Chapter 9 of this Code and shall comply with the following requirements in addition to the other provisions of this Code:

1. No liquor store or private club shall be located within 600 feet of any residential zone or use, including the Mixed Use Zoning District measured in a straight line from the closest property line of the proposed store or club to the closest zone district boundary or property line of the residential use.

2. No liquor store or private club shall be located within 600 feet of any public building, school, park, or church measured in a straight line from the closest property line of the proposed store or club to the closest property line of the public building, school, park, or church.

D. Portable Storage Containers.

1. Portable storage containers shall not be allowed on a permanent basis in any residential zoning district unless the storage container meets the requirements of a permanent storage shed in Section 26.100.~~.~~

2. Portable storage containers may be allowed on a permanent basis as a Conditional Use in the Industrial, Technical Manufacturing, Commercial, TH-5, A-5, and A-1 Zones subject to the provisions of this section and any other reasonable conditions the Planning Commission may impose to ensure compatibility with adjacent uses. For the TH-5, A-5, and A-1 Zones, the parcel shall have a minimum of five acres in size.

3. Portable storage containers may be allowed on a temporary basis as a Conditional Use in the Regional Commercial and Mixed Use Zones for a time period not to exceed 12 months and subject to the provisions of this section and any other reasonable conditions the Planning Commission may impose to ensure compatibility with adjacent uses.

4. One portable storage container may be temporarily placed on property located in any zone during a period of ongoing construction, not to exceed 12 months. Once construction is completed, the containers shall be removed.

5. One portable storage container may be placed on property located in any zone for an emergency situation, such as the need for storage following a house fire or flood, or for the purpose of moving, and shall be removed within 60 days.

6. Portable storage containers are not permitted on vacant property except where allowed in the TH-5, A-5, and A-1 Zones as part of an ongoing agricultural operation.

7. Vertical stacking of portable storage containers and stacking of any other materials or merchandise on top of any portable storage container shall be prohibited.

8. No portable storage container shall be placed or located on a required parking space, circulation aisle/lane, fire access lane, or public right-of-way.

9. With the exception of containers used for construction, moving or emergency purposes as described above, all portable storage containers shall be located to the rear 50% of the site they are to be located on, and shall not be visible from a public street. Screening in the form of fencing, landscaping, or a combination of both may be required so that the portable storage container is not visible from a public street or to buffer the container from surrounding properties as deemed appropriate by the Planning Commission.

10. All containers and their screening and landscaping shall be maintained in good repair. Any dilapidated, dangerous, rusted, or unsightly containers shall be repaired or removed. Graffiti shall be removed within seven days.

11. Containers shall be used for storage purposes only. Storage is limited to materials, products, or equipment used, produced, sold, or manufactured on the site of a legally conforming business or agricultural use.

# CHAPTER 26

# ACCESSORY USES, BUILDINGS AND STRUCTURES

Section 26.010. Purpose.
Section 26.020. General Requirements.
Section 26.030. Accessory Dwelling Units
Section 26.040. Location of Accessory Buildings.
Section 26.050. Maximum Coverage of Accessory Buildings.
Section 26.060. Maximum Height of Accessory Buildings.
Section 26.070. Architectural Considerations for Accessory Buildings and Structures.
Section 26.080. Handicapped Access.
Section 26.090. Accessory Uses.
Section 26.100. Portable Storage Container Shed Conversions.

## Section 26.010. Purpose.

This Chapter identifies the requirements and general provisions, applicable in all zoning districts, for accessory uses, buildings and structures which are incidental and subordinate to the principal use and which are located on the same lot.

Accessory uses, buildings and structures, incidental and subordinate to an established and authorized use as defined in Chapter 39, may be approved by the Zoning Administrator, provided that such accessory use, building and structure conform to the requirements of this Chapter. Approval of an accessory use, building or structure may be reviewed and approved concurrently with the review and approval of the principal use or as an independent review and approval following the establishment of the principal use.

## Section 26.020. General Requirements.

*(Amended 11/18/08)*

In addition to the use limitations and other regulations for the zoning district in which the accessory use, building or structure is proposed, no accessory use, building or structure shall be allowed unless it complies with the following requirements:

A. All accessory use(s), building(s) or structure(s) shall be incidental and subordinate to the principal use or structure in area, extent, and purpose.

B. An accessory use, building or structure shall be under the same ownership or control as the principal use or structure.

C. No accessory use, building or structure shall be established or constructed before the principal use is in operation or the structure is under construction in accordance with the requirements of this Code.

D. No signage shall be approved or maintained in connection with an accessory use or structure.

E. No accessory building or structure shall include a residential dwelling or have kitchen facilities or be rented or otherwise used as a separate dwelling.

F. Agricultural buildings used for agricultural purposes only, such as barns, silos, bins, and farm machinery sheds in the TH-5, A-5, A-1 and RA-1 Agricultural zoning districts shall not be considered accessory buildings. Such buildings are principal agricultural buildings and shall comply with the bulk and intensity requirements of the zoning district they are located in.

## Section 26.030. Accessory Dwelling Units.

*(New 08/28/18; amended 03/26/19; 06/11/19)*

One Accessory Dwelling Unit (ADU) may be allowed in an owner-occupied single-family detached home after obtaining all required permits and approvals. Any person constructing or causing the construction of an ADU shall first obtain a permit from the Planning Division. As long as the unit is rented and in use, an active ADU license is required, and the ADU shall meet the following:

A. Owner Occupancy Required. The owner of the primary residence shall live in the dwelling in which the ADU was created. The owner shall sign an affidavit therein stating that the primary dwelling will be owner occupied. This affidavit shall be recorded against the property and is required for all owners of the property who operate an accessory dwelling unit.

B. Appearance. The ADU shall not alter the appearance of the structure as a single-family residence. The structure shall not show external evidence of occupancy by more than one family.

C. Parking. ADUs shall provide off-street parking at a rate of either two stalls per unit or one stall per bedroom, whichever is greater. The minimum stall size is 9x20 feet. A lighted walkway must connect from the parking area to the entrance of the ADU. Parking areas shall be constructed of an appropriate material as set forth in Section 37.070(B)(4).

D. Size. The floor space of an ADU shall

comprise no more than 49% of the living area of the primary dwelling.

E. Zoning. ADUs shall only be allowed in single-family detached residential homes. ADUs shall not be allowed in any Planned Unit Developments, Planned Residential Developments, Resort Communities, or Planned Communities.

F. Lot Size. The lot for a single-family home with an ADU shall be a minimum of 8,000 square feet in size. Flag lots shall maintain a minimum 8,000 square foot size on the flag portion of the lot.

G. Frontage Requirements. The lot for a single-family home with an ADU shall have a minimum 80 feet of frontage on a public street. Exceptions are allowed for cul-de-sac lots located along the arc of a cul-de-sac bulb which shall require a minimum 60 feet of frontage on a public street. Exceptions are allowed for flag lots which shall require a minimum 20 feet of frontage on a public street.

H. Building Division Approval. In addition to the approval required from the Planning Division, all ADUs shall be required to obtain a building permit from the Building Division and shall conform to all applicable standards in the City's adopted building codes. The applicant shall obtain all necessary building permits and pay all applicable fees, including impact fees, prior to constructing the ADU.

I. Compliance with CC&Rs and other neighborhood regulations. All accessory apartments shall be subject to any conditions, covenants, and restrictions (CC&Rs) or other neighborhood regulations that may apply to the subject property.

**Section 26.040. Location of Accessory Buildings.**
*(Amended 10/25/05; 7/10/07; 05/08/18)*

A. Front Yards. All accessory buildings and structures are prohibited in any required front yard area.

B. Side Yards. The location of all accessory buildings and structures shall be as follows:

1. Agriculture, Residential, Mixed Use and Planned Community Districts.

(a) All accessory buildings and structures shall maintain the side yard required for the principal building, except that accessory buildings and structures located either at least six (6) feet to the rear of the principal building or have a minimum 10 foot setback from the principal building may have a minimum side yard of sixteen (16) inches, provided the accessory building or structure complies with the requirements of the International Building Code and International Fire Code.

(b) Accessory buildings and structures shall not be located closer than 12 feet to a dwelling on an adjacent lot or property and shall not be located within any required utility easement(s).

2. Other Districts.

(a) Accessory buildings and structures may be built to the side lot line in the Commercial (C), Technology and Manufacturing (T-M), Business Park (BP), Light Industrial (LI), Historical/Industrial (HI) and Industrial (I) districts provided the building and structure complies with all applicable requirements of the International Building Code, the International Fire Code and is not located within any required utility easement(s) and is not subject to the requirements of Section 12-080(A)(2) of this Code.

3. Corner Lots.

(a) Notwithstanding Section 26.030 (B) (1) and Section 26.030 (B) (2) all accessory buildings and structures shall maintain the minimum corner side yard required for the principal building as identified in Table 05-040-A, Table 05-040-B and Table 05-040-C.

C. Rear Yards. The location of accessory buildings and structures shall be as follows:

1. Agriculture, Residential, Mixed Use and Planned Community Districts.

(a) Accessory buildings and structures shall maintain the rear yard requirements for the principle structure as identified in Table 05-040-A, but may be located within sixteen (16) inches of the rear property line provided that the accessory building or structure is not subject to the requirements of Section 12-080 of this Code and it meets all the applicable requirements of the International Building Code and the International Fire Code; except that accessory buildings and structures located in the rear yards of corner lots, located adjacent to the side yard of an adjacent lot shall not be closer than ten (10) feet to the rear property line and is not

located within any required utility easement(s).

2. Other Districts.
(a) Accessory buildings and structures may be built to the rear lot line in the Commercial (C), Technology and Manufacturing (T-M), Business Park (BP), Light Industrial (LI), Historical/Industrial (HI) and Industrial (I) districts provided the building or structure is not subject to the requirements of Section 12-080 of this Code and it complies with all applicable requirements of the International Building Code and the International Fire Code and is not located within any required utility easement(s).

**Section 26.050. Maximum Coverage of Accessory Buildings and Structures.**
No accessory building(s) or structure(s) shall cover more than 30% of the rear yard of any lot or parcel as identified in Table 05-040-A, Table 05-040-B and Table 05-040-C, consistent with the requirements of Section 12-020(G) of this Code.

**Section 26.060. Maximum Height of Accessory Buildings and Structures.**
*(Amended 11/18/08)*

A. All accessory buildings and structures shall be limited to one story.

B. The maximum height of an accessory building shall be according to the following table:

| Zone District Classification | Max. bld. Height |
|---|---|
| TH-5, A-5, A-1, RA-1(>22,000 sq. ft.), R-1-22 | 28 ft. |
| RA-1 (< 22,000 sq. ft.), R-1-15, R-1-12, R-1-10, R-1-8, R-2, R-2.5, R-3, MU, PC, RC, all other non-residential zones. | 24 ft. |

**Section 26.070. Architectural Considerations.**
*(New 11/18/08)*
Exterior building materials including roofing and architectural designs and colors used for accessory buildings and structures shall be comparable to, or architecturally harmonious with, the existing main residential structure.

**Section 26.080. Handicapped Access.**
*(Amended 11/28/06)*
Uncovered handicapped access ramps are required to comply with the provisions of Section 12-020(E)(1). Covered handicapped ramps or any other covered facilities for handicapped access that encroach into required setback and yard areas may be authorized by the Planning Commission as a Conditional Use by following the requirements and procedures of Chapter 9.

**Section 26.090. Accessory Uses.**
*(Amended 10/14/03)*
Tennis courts are required to maintain a minimum setback from side and rear property lines of fifteen feet and must not be located within any required utility easements. Swimming pools are required to maintain a minimum setback from side and rear property lines of four feet as identified in Section 12.020(E)(2) and must not be located within any required utility easements.

**Section 26.100. Portable Storage Container Shed Conversions**
Portable storage containers shall not be allowed on a permanent basis in any residential zoning district unless the storage container has been converted into a shed.

The conversion of a portable storage container into a shed shall meet the following criteria:
A. The portable storage container shed shall be placed on a residential lot in a TH-5, A-5, A-1, RA-1, R-1-22 zone.
B. The portable storage container shed shall be covered in one of the following building materials: hardy board, brick, board and batten, stone, fiber cement siding, wood, or as otherwise approved by the Zoning Administrator or designee.
    a. The materials used on the portable storage container shed shall be of comparable material to the existing main residential structure.
C. The portable storage container shed shall include a roof feature.
    a. Roofs may be pitched or flat. If a flat roof is used, it must have at least a four-degree angle.
    b. The roof shall be built from similar materials to that of the existing main residential structure's roof.
D. The portable storage container shed shall meet all other accessory structure

requirements of this code, including placement and height

E. Plans for the portable storage container shed shall be submitted to the Planning Division for review and approval by the Zoning Administrator or designee. Plans shall include a list of building materials, colors, proposed location of the shed, and a drawing or model of the converted portable storage container shed.

F. The portable storage container shed shall be approved by the Zoning Administrator or designee prior to the portable storage container being stored on site and converted into a shed. When the conversion is complete, an inspection shall take place to ensure compliance with this code.

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Action Item
Agenda Section:

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**Subject:**
FY 2020 Budget Amendment
a. Public Hearing
b. Consideration of Resolution #2020-41, approving an amendment to the current Lehi City FY2020 Budget.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
Res 2020-41.docx

Budget Adjustment #3.pdf

**RESOLUTION NO. 2020-41**

**A RESOLUTION AMENDING THE BUDGET FOR THE CITY OF LEHI FOR FISCAL YEAR 2020 (JULY 1, 2019 – JUNE 30, 2020).**

**WHEREAS,** the City of Lehi has previously adopted a budget for Fiscal Year 2020; and

**WHEREAS,** for the purpose of amending the Fiscal Year 2020 Budget, a public hearing was scheduled and notice thereof published in the Daily Herald, a newspaper of general circulation in the city of Lehi, at least seven (7) days prior to the time of said hearing, describing the proposed budget and providing the time and place for such public hearing; and

**WHEREAS,** a public hearing was duly held at the time and place provided in said notice; and

**WHEREAS,** the City Council received all competent evidence offered in support of and opposed to said proposed budget amendments and it appearing that the proposed budget is in accordance with the provisions of Section 10-6-101 et seq., Utah Code Annotated (1953); and

**WHEREAS,** all of said proceedings were duly and regularly conducted;

**THEREFORE, BE IT RESOLVED** by the Mayor and City Council of the City of Lehi, Utah;

**Section 1. Lehi City Budget.** The Lehi city budget for fiscal year 2019-2020 shall be amended according to the attached detail identified as "Attachment A"

**Section 2.** This resolution shall take effect immediately upon its adoption.

Approved and Adopted by the City Council of Lehi City this 6th day of June 2020.

_____
Mayor Mark Johnson
Lehi City

Attest:

_____
Teisha Wilson, City Recorder




# ANNUAL OPERATING AND CAPITAL BUDGET

## Budget Amendment #3

## FISCAL YEAR 2019-2020

Lehi City
Budget Amendment #2
Fiscal Year 2019-20
February 2020

## Amendment 3a – Road Projects

- A water main break in Traverse Mountain resulted in emergency repairs. This amendment is to pay for the cost of those repairs.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| Water | Capital Projects | 0 | 60,000 | 60,000 | Reserves |

## Amendment 3b – Fiber Feasibility Study

- The City recently hired consultants to conduct a study to evaluate the feasibility of a city-wide fiber network.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| Capital Projects | Fiber Feasibility | 0 | 85,000 | 85,000 | Reserves |

## Amendment 3c – Year-End CIP Transfer

- Every year, the budget is amended to allow any general fund surplus to be transferred to the Capital Projects fund. These funds will be use on future, one-time projects.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| General Fund | Transfer to Capital Projects | 1,120,140 | 2,300,000 | 3,420,140 | General Fund Reserves |

## Amendment 3d – Liability Insurance

- The City's budget for its main insurance policy was insufficient. This amendment will increase that line item to cover the premium. This budget has been increased for FY 2020-2021. Funds will be transferred from the General Fund to cover the cost.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| Risk | Insurance Premiums | 750,000 | 125,000 | 875,000 | GF Reserves |

## Amendment 3e – UDOT Trails Grant

- For the past few years, UDOT has been managing and funding a grant to turn old rail lines into trails. Although as a city, we do not pay for the projects, we still need to show the project on our books, since we will ultimately own it.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| Capital Projects | Trails | 105,000 | 190,000 | 295,000 | Federal Grant |

## Amendment 3f – SR-92 Bridge

- A project to build a bridge/trail over SR-92 is about to begin construction. Funding for the bridge will come via grant funds. Most of the project will occur in the next fiscal year, but some funds may need to be allocated prior to the end of the year.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| Capital Projects | SR-92 Bridge | 0 | 100,000 | 100,000 | TIGER Grant |

## Amendment 3g – Parks Grant

- Each year Utah County allocates funds from tourism taxes to cities in the County for parks and recreation projects. Due to the pandemic, these funds will not be available this year. The proposal is to use reserves to fund the project (Pickleball Courts) this year.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| General Fund | Parks Equipment | 55,000 | 31,000 | 86,000 | GF Reserves |

## Amendment 3h – Transfer Capitalized Interest

- When the City issued bonds for the construction of the Police Station, funds were set aside to cover a portion of the debt service payment for the first year. These funds are currently in the Capital Projects fund. They need to be moved to the Debt Service fund, which is where the debt payments will occur.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| Capital Projects | Transfer to Debt Service | 0 | 248,014 | 248,014 | Bond Proceeds |

## Amendment 3i – TSSD Expenses

- TSSD costs are increasing faster than Sewer fund revenues. Changes to this budget item have been made for FY 2020-2021. However the 2020 budget needs to be adjusted as well.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| RDA | TSSD | 7,469,782 | 1,500,000 | 8,969,782 | Revenues, Reserves |

## Amendment 3j – North Point Fees

- The line item for North Point has not been adjusted in several years. An adjustment needs to be made this year to cover the costs. Some of this increase can be covered with revenues, while the rest will come from fund balance in the Garbage Fund.

| Fund | Account | Current Budget | New Allocation | Amended Budget | Funding Source |
|---|---|---|---|---|---|
| Garbage | Operations Expense | 825,000 | 125,000 | 950,000 | Revenues, Reserves |

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Resolution
Agenda Section:

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**Subject:**
FY2021 Consolidated Fee Schedule Amendment
a. Public Hearing
b. Consideration of Resolution #2020-42, approving an amendment to the Lehi City Consolidated Fee Schedule for FY2021 to include fees for Willow Park.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
Res 2020-42.docx

willow park fees.docx

**RESOLUTION NO. 2020-42**

**A RESOLUTION AMENDING THE LEHI CITY CONSOLIDATED FEE SCHEDULE TO INCLUDE FEES FOR WILLOW PARKS.**

**WHEREAS**, Ordinances enacted by the Lehi City Council provide for the establishment and revision of the City Fee Schedule by Resolution; and

**WHEREAS**, it is necessary, from time to time, to update said fee schedule; and

**THEREFORE, BE IT RESOLVED** by the City Council of Lehi City that the following rates be hereby adopted and implemented as outlined in Exhibit A.

Approved and Adopted by the City Council of Lehi City this 6th day of June, 2020

_____
Mark Johnson, Mayor

Attest:

_____
Teisha Wilson, City Recorder

## Reservation Fees

**Group Areas #1, #5, #6, #8, #9, #10**

**Pavilion - Day Use**

$65 for one time slot

*9 am-2:30 pm, 4:30 pm-10 pm*

$100 for the entire day *(9 am-10 pm)*

**Overnight Camping**

$175 per group area

**Sites within Areas #3, #7, #11, #12, #13**

**Overnight Camping**

$20 per site

No more than 2 vehicles or 10 people per site.

**Sites within Areas #2, #4**

**Overnight Camping**

$20 per site

Sites in these areas are only available on a

first come-first served basis. Check-in is when a site becomes available. Check-out is at 1 pm.

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Resolution
Agenda Section:

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**Subject:**
Consideration of Resolution #2020-43, adopting the Municipal Wastewater Planning Program (MWPP) Annual Report for the year 2019.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
Res 2020-43.docx

2019 MWPP ResponseSummary.pdf

LEHI CITY

**RESOLUTION #: 2020-43**

**A RESOLUTION APPROVING THE 2019 MUNICIPAL WASTEWATER PLANNING PROGRAM SELF-ASSESSMENT REPORT**.

**RESOLVED** that Lehi City informs the Water Quality Board the following actions were taken by the City Council.

1. Reviewed the attached Municipal Wastewater Planning Program Report for 2019.

2. Have taken all appropriate actions necessary to maintain effluent requirements contained in the UPDES Permit (If Applicable)

Approved and Adopted by the City Council of Lehi City this 9th day of June, 2020.

_____
Mark Johnson, Mayor
Lehi City

Attest:

_____
Teisha Wilson, City Recorder

# *Municipal Wastewater Planning Program (MWPP)*
# *Annual Report*
# *for the year ending 2019*
# *LEHI CITY*

Thank you for filling out the reqested information. Please let DWQ know when it is approved by the Council.

Please download a copy of your form by clicking "Download PDF" below.

Below is a summary of your responses

Download PDF

SUBMIT BY APRIL 15, 2020

Are you the person responsible for completing this report for your organization?

- (●) **Yes**
- ( ) No

## *Financial Evaluation Section*

Form completed by:



Alyson Alger

# Part I: GENERAL QUESTIONS

| | Yes | No |
|---|---|---|
| Are sewer revenues maintained in a dedicated purpose enterprise/district account? | ◉ | ○ |

| | Yes | No |
|---|---|---|
| Are you collecting 95% or more of your anticipated sewer revenue? | ◉ | ○ |
| Are Debt Service Reserve Fund[6] requirements being met? | ◉ | ○ |

What was the User Charge[16] for 2019?

33

Do you have a water and/or sewer customer assistance program * (CAP)?

- ○ Yes
- ◉ **No**

# Part II: OPERATING REVENUES AND RESERVES

| | Yes | No |
|---|---|---|
| Are property taxes or other assessments applied to the sewer systems[15]? | ○ | ◉ |

| | Yes | No |
|---|---|---|
| Are sewer revenues[14] sufficient to cover operations & maintenance costs[9], and repair & replacement costs[12] (OM&R) at this time? | ◉ | ○ |
| Are projected sewer revenues sufficient to cover OM&R costs for the ***next five years***? | ○ | ◉ |
| Does the sewer system have sufficient staff to provide proper OM&R? | ◉ | ○ |
| Has a repair and replacement sinking fund[13] been established for the sewer system? | ○ | ◉ |
| Is the repair & replacement sinking fund sufficient to meet anticipated needs? | ○ | ◉ |

## Part III: CAPITAL IMPROVEMENTS REVENUES AND RESERVES

| | Yes | No |
|---|---|---|
| Are sewer revenues sufficient to cover all costs of current capital improvements[3] projects? | ◉ | ○ |
| Has a Capital Improvements Reserve Fund[4] been established to provide for anticipated capital improvement projects? | ○ | ◉ |
| Are projected Capital Improvements Reserve Funds sufficient for the ***next five years***? | ○ | ◉ |
| Are projected Capital Improvements Reserve Funds sufficient for the ***next ten years***? | ○ | ◉ |
| Are projected Capital Improvements Reserve Funds sufficient for the ***next twenty years***? | ○ | ◉ |



## Part IV: FISCAL SUSTAINABILITY REVIEW

| | Yes | No |
|---|---|---|
| Have you completed a Rate Study[11] within the last five years? | ○ | ◉ |
| Do you charge Impact fees[8]? | ◉ | ○ |

2019 Impact Fee =

$761.43

| | Yes | No |
|---|---|---|
| Have you completed an Impact Fee Study in accordance with UCA 11-36a-3 within the last five years? | ◉ | ○ |
| Do you maintain a Plan of Operations[10]? | ◉ | ○ |
| Have you updated your Capital Facility Plan[2] within the last five years? | ◉ | ○ |

| | Yes | No |
|---|---|---|
| Do you use an Asset Management[1] system for your sewer systems? | ◉ | ○ |

Describe the Asset Management System (check all that apply)

- ☑ **Spreadsheet**
- ☑ **GIS**
- ☑ **Accounting Software**
- ☑ **Specialized Software**

☑ Specialized software

☐ Other

| | Yes | No |
|---|---|---|
| Do you know the total replacement cost of your sewer system capital assets? | ○ | ◉ |

| | Yes | No |
|---|---|---|
| Do you fund sewer system capital improvements annually with sewer revenues at 2% or more of the total replacement cost? | ○ | ◉ |
| What is the sewer/treatment system annual asset renewal* cost as a percentage of its total replacement cost? | ○ | ◉ |

**What is the sewer/treatment system annual asset renewal * cost as a percentage of its total replacement cost?**

0

## Part V: PROJECTED CAPITAL INVESTMENT COSTS

**Cost of projected capital improvements**

| | Cost | Purpose of Improvements | | |
|---|---|---|---|---|
| | Please enter a valid numerical value | Replace/Restore | New Technology | Increase Capacity |
| 2020 | 1415000 | ☑ | ☐ | ☑ |
| 2020 thru 2024 | 7075000 | ☑ | ☐ | ☑ |

| | Cost | Purpose of Improvements | | |
|---|---|---|---|---|
| 2025 thru 2029 | 7075000 | ☑ | ☐ | ☑ |
| 2030 thru 2034 | Please enter a valid numerical value 707500 | Replace/Restore ☑ | New Technology ☐ | Increase Capacity ☑ |
| 2035 thru 2039 | 707500 | ☑ | ☐ | ☑ |

This is the end of the Financial questions

To the best of my knowledge, the Financial section is completed and accurate.

☑ **Yes**

## *Collections System Section*

Form completed by:

May Receive Continuing Education /units (CEUs)

Weston Winters

## Part I: SYSTEM DESCRIPTION

What is the largest diameter pipe in the collection system (diameter in inches)?

36"

What is the average depth of the collection system (in feet)?

10

What is the total length of sewer pipe in the system (length in miles)?

276

How many lift/pump stations are in the collection system?

4

What is the largest capacity lift/pump station in the collection system (design capacity in gallons per minute)?

We have 2 Lift Stations rated at 3000 GPM according to our engineer.

Do seasonal daily peak flows exceed the average peak daily flow by 100 percent or more?

- ○ Yes
- ◉ **No**

What year was your collection system first constructed (approximately)?

1954

In what year was the largest diameter sewer pipe in the collection system constructed, replaced or renewed? (If more than one, cite the oldest)

2005

## PART II: DISCHARGES



How many days last year was there a sewage bypass, overflow or

basement flooding in the system due to rain or snowmelt?

0

How many days last year was there a sewage bypass, overflow or basement flooding due to equipment failure (except plugged laterals)?

0

*The Utah Sewer Management Program defines two classes of sanitary sewer overflows (SSOs):*

**Class 1**- a Significant SSO means a SSO or backup that is not caused by a private lateral obstruction or problem that:

*(a) affects more than five private structures;*
*(b) affects one or more public, commercial or industrial structure(s);*
*(c) may result in a public health risk to the general public;*
*(d) has a spill volume that exceeds 5,000 gallons, excluding those in single private structures; or*
*(e) discharges to Waters of the state.*

**Class 2** - a Non-Significant SSO means a SSO or backup that is not caused by a private lateral obstruction or problem that does not meet the Class 1 SSO criteria.

Below include the number of SSOs that occurred in year: 2019

| | Number |
|---|---|
| Number of Class 1 SSOs in Calendar year | 0 |
| Number of Class 2 SSOs in Calendar year | 0 |



Please indicate what caused the SSO(s) in the previous question.

N/A

Please specify whether the SSOs were caused by contract or tributary community, etc.

N/A

## Part III: NEW DEVELOPMENT

Did an industry or other development enter the community or expand production in the past two years, such that flow or wastewater loadings to the sewerage system increased by 10% or more?

- ○ Yes
- ◉ **No**

Are new developments (industrial, commercial, or residential) anticipated in the next 2 - 3 years that will increase flow or BOD5 loadings to the sewerage system by 25% or more?

- ○ Yes
- ◉ **No**

Number of new commercial/industrial connections in the last year

56

Number of new residential sewer connections added in the last year



1094

Equivalent residential connections[7] served

19500

## Part IV: OPERATOR CERTIFICATION

How many collection system operators do you employ?

6

Approximate population served

66000

*State of Utah Administrative Rules requires all public system operators considered to be in Direct Responsible Charge (DRC) to be appropriately certified at least at the Facility's Grade.*

List the designated Chief Operator/DRC for the Collection System below:

| | Name<br>First and Last Name | Grade | Email<br>Please enter full email address |
|---|---|---|---|
| Chief Operator/DRC | Weston Winters | IV | wwinters@lehi-ut.gov |

List all other Collection System operators with DRC responsibilities in the field, by certification grade, separate names by commas:

| | Name<br>separate by comma |
|---|---|
| SLS[17] Grade I: | |

| | |
|---|---|
| Collection Grade I: | Name |
| Collection Grade II: | separate by comma |
| Collection Grade III: | |
| Collection Grade IV: | Weston Winters |

List all other Collection System operators by certification grade, separate names by commas:

| | Name<br><br>separate by comma |
|---|---|
| SLS[17] Grade I: | |
| Collection Grade I: | |
| Collection Grade II: | Dari Claek Todd Trapp |
| Collection Grade III: | |
| Collection Grade IV: | Weston Winters Derek Smith Josh Brittain |
| No Current Collection Certification: | |

Is/are your collection DRC operator(s) currently certified at the appropriate grade for this facility?

- (●) **Yes**
- ( ) No

## Part V: FACILITY MAINTENANCE

| | Yes | No |
|---|---|---|
| Have you implemented a preventative maintenance program for your collection system? | (●) | ( ) |
| Have you updated the collection system operations and maintenance manual within | (●) | ( ) |

| | Yes | No |
|---|---|---|
| the past 5 years? | | |
| Do you have a written emergency response plan for sewer systems? | ◉ | ○ |
| Do you have a written safety plan for sewer systems? | ◉ | ○ |
| Is the entire collections system TV inspected at least every 5 years? | ◉ | ○ |
| Is at least 85% of the collections system mapped in GIS? | ◉ | ○ |

## Part VI: SSMP EVALUATION

| | Yes | No |
|---|---|---|
| Has your system completed a Sewer System Management Plan (SSMP)? | ◉ | ○ |
| Has the SSMP been adopted by the permittee's governing body at a public meeting? | ◉ | ○ |
| Has the completed SSMP been public noticed? | ◉ | ○ |
| During the annual assessment of the SSMP, were any adjustments needed based on the performance of the plan? | ○ | ◉ |

**Date of Public Notice**

04/15/2015

**During 2019, was any part of the SSMP audited as part of the five year audit?**

332

○ Yes

◉ **No**

Have you completed a System Evaluation and Capacity Assurance Plan (SECAP) as defined by the Utah Sewer Management Program?

◉ **Yes**

○ No

## Part VII: NARRATIVE EVALUATION

This section should be completed with the system operators.

Describe the physical condition of the sewerage system: (lift stations, etc. included)

The sewer system is in generally good condition. There are 4 lift stations that are checked daily, with preventative maintenance performed monthly. All wet wells and vaults have been spray lined for a protection barrier. We have a continuing rehabilitation program for the existing system.

What sewerage system capital improvements[3] does the utility need to implement in the next 10 years?

An additional lift station and line up-sizing as per the Master Plan for the wastewater collection system.

What sewerage system problems, other than plugging, have you had over the last year?

Some infiltration, structural damage, and deterioration due to the aging parts of the system. Those issues are addressed and resolved through maintenance and rehabilitation.



Is your utility currently preparing or updating its capital facilities plan[2]?

Is your utility currently preparing or updating its capital facilities plan?

- (●) **Yes**
- ( ) No

Does the municipality/district pay for the continuing education expenses of operators?

- (●) **100% Covered**
- ( ) Partially cover
- ( ) Does not pay

Is there a written policy regarding continuing education and training for wastewater operators?

- (●) **Yes**
- ( ) No

Any additional comments?

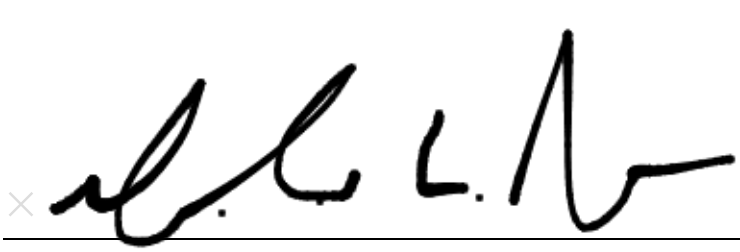
None

This is the end of the Collections System questions

To the best of my knowledge, the Collections System section is completed and accurate.

- [x] **Yes**

I have reviewed this report and to the best of my knowledge the information provided in this report is correct.



clear

Has this been adopted by the council? If no, what date will it be presented to the council?

- ◯ Yes
- ◉ **No**

What date will it be presented to the council?

Date format ex. mm/dd/yyyy

06/09/2020

Please log in.

Email dnorman@lehi-ut.gov

PIN ••••

NOTE: This questionnaire has been compiled for your benefit to assist you in evaluating the technical and financial needs of your wastewater systems. If you received financial assistance from the Water Quality Board, annual submittal of this report is a condition of that assistance. Please answer questions as accurately as possible to give you the best evaluation of your facility. If you need assistance, please send an email to wqinfodata@utah.gov and we will contact you as soon as possible. You may also visit our Frequently Asked Questions page.

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# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Resolution
Agenda Section:

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**Subject:**
Public Safety and Firefighter Tier II Contributory Retirement System. (Tabled from the May 26, 2020 meeting.)
a. Un-table Resolution #2020-31
b. Consideration of Resolution #2020-31, taking formal action to pick up required employee contributions in the new Public Safety and Firefighter Tier II Contributory Retirement System.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
Res 2020-31.docx

**RESOLUTION NO. 2020-31**

**A RESOLUTION OF THE LEHI CITY COUNCIL TAKING FORMAL ACTION TO PICK UP REQUIRED EMPLOYEE CONTRIBUTIONS IN THE NEW PUBLIC SAFETY AND FIREFIGHTER TIER II CONTRIBUTORY RETIREMENT SYSTEM**

WHEREAS, the city employs employees who are eligible for and participate as members in the New Public Safety and Firefighter Tier II Contributory Retirement System administered by the Utah Retirement Systems;

WHEREAS, in accordance with federal and state law, including Section 414(h)(2) of the Internal Revenue Code, employers may take formal action to pick up required employee contributions, which will be paid by the employer in lieu of employee contributions;

WHEREAS, the city has been paying, and now desires to formally pick up, a portion of the employee contributions required to be paid under Subsection 49-23-301(2)(c), as enacted in S.B. Public Safety and Firefighter Tier II Retirement Enhancements (2020 General Session), for all state employees participating in the New Public Safety and Firefighter Tier II Contributory Retirement System;

WHEREAS, the Mayor and City Council are duly authorized to take this formal action on behalf of the city as a participating employer with the Utah Retirement Systems;

WHEREAS, on June 9, 2020, the City Council held a duly noticed public meeting to ascertain the facts regarding this matter, which facts and comments are found in the meeting record; and,

WHEREAS, after considering the facts and comments presented to the City Council, the Council finds: (i) that it should pick up required employee contributions in the New Public Safety and Firefighter Tier II Contributory Retirement System; and (ii) such action furthers the health, safety and welfare of the citizens of Lehi.

NOW, THEREFORE, be it resolved by the City Council of Lehi City, Utah, as follows:

1. That the Mayor and City Council declares that beginning July 1, 2020, the city shall prospectively pick up and pay required employee contributions for all city employees who are members of the New Public Safety and Firefighter Tier II Contributory Retirement System (Fiscal Year 2020-2021 2.27%).

2. That the picked-up contributions paid by the employer, even though designated as employee contributions for state law purposes, are being paid by the city in lieu of the required employee contributions.

3. That the picked-up contributions will not be included in the gross income of the employees for tax reporting purposes, that is, for federal or state income tax withholding taxes, until distributed from the Utah Retirements Systems, so that the contributions are treated as employer contributions pursuant to Section 414(h)(2) of the Internal Revenue Code.

4. That the picked-up contributions are a supplement and not a salary reduction to the city employees who are eligible for and participating members in the New Public Safety and Firefighter Tier II Contributory Retirement System.

5. That from and after the date of this pick up, a city employee may not have a cash or deferred election right with respect to the designated employee contributions, including that the employees may not be permitted to opt out of the pick up and may not be entitled to any option of choosing to receive the contributed amounts directly instead of having them paid by the city on behalf of its employees to the Utah Retirement Systems.

6. This resolution shall take effect immediately.

Approved and Adopted by the City Council of Lehi City, Utah this 9th day of June, 2020.

| LEHI CITY | ATTEST |
| --- | --- |
| _____ | _____ |
| Mark Johnson, Mayor | Teisha Wilson, City Recorder |

**EXHIBIT “A”**

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha Wilson
Submitting Department:
Item Type: Resolution
Agenda Section:

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**Subject:**
Consideration of Resolution #2020-44, taking formal action to pick up required employee contributions in the new Public Safety and Firefighter Tier I Contributory Retirement System.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
Res 2020-44.docx

LEHI CITY

**RESOLUTION NO. 2020-44**

**A RESOLUTION OF THE LEHI CITY COUNCIL TAKING FORMAL ACTION TO PICK UP REQUIRED EMPLOYEE CONTRIBUTIONS IN THE PUBLIC SAFETY AND FIREFIGHTER TIER I RETIREMENT SYSTEM**

WHEREAS, the City participates in the Utah Retirement System for all eligible employees; and

WHEREAS, the City contributes to the Utah Retirement Contributory Retirement Plan as allowed.

NOW THEREFORE, be it resolved by the City Council of Lehi City, Utah, as follows; the City formally agrees to fund ("pick-up") 100% of the required member contribution for all eligible employees required to contribute to the Utah Retirement Systems Contributory Retirement Plan for the 2019-2020 Fiscal Year (effective July 1, 2019) and for the 2020-2021 Fiscal Year (effective July 1, 2020) according to the applicable Utah Retirement System Retirement Contribution Rates.

Approved and Adopted by the City Council of Lehi City, Utah this 9th day of June, 2020.

LEHI CITY

_____

Mark Johnson, Mayor

ATTEST

_____

Teisha Wilson, City Recorder

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Ordinance
Agenda Section:

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**Subject:**
Consideration of Ordinance #35-2020, repealing and reenacting Lehi City Code Chapter 10-7, Flood Damage Prevention.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
Ord 35-2020.docx

LEHI CITY ORDINANCE #____

AN ORDINANCE OF THE LEHI CITY COUNCIL
REPEALING AND REENACTING LEHI CITY CODE CHAPTER 10-7, FLOOD DAMAGE PREVENTION

WHEREAS, the Legislature of the State of Utah has, in Utah Code Ann. 10-8-84, conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Federal Emergency Management Agency has identified special flood hazard areas within the boundaries of Lehi City and such areas may be subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare, and

WHEREAS, Lehi City has been accepted for participation in the National Flood Insurance Program and the city council desires to continue to meet the requirements of Title 44 Code of Federal Regulations, Sections 59 and 60 necessary for such participation; and

WHEREAS, Lehi City is required, pursuant to Title 15A of the Utah Code, to administer and enforce the State building codes, and such building codes contain certain provisions that apply to the design and construction of buildings and structures in flood hazard areas.

NOW, THEREFORE, BE IT ORDAINED BY THE LEHI CITY COUNCIL AS FOLLOWS:

SECTION 1. CHAPTER REPEALED AND REENACTED. Lehi City Code Chapter 10-7 is hereby repealed and reenacted to read:

CHAPTER 7

FLOOD DAMAGE PREVENTION

ARTICLE A. GENERAL PROVISIONS

10-7A-1: STATUTORY AUTHORIZATION: The legislature of the State of Utah has in Utah Code Annotated 10-8-84 delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City Council of Lehi adopts the regulations of this chapter to minimize flood losses.

10-7A-2: FINDINGS OF FACT:

A. The flood hazard areas of the City are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.

B. Flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses

vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed or otherwise protected from flood damage.

10-7A-3: STATEMENT OF PURPOSE: It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by enacting provisions designed to:

A. protect human life and health;

B. minimize expenditure of public money for costly flood control projects;

C. minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. minimize prolonged business interruptions;

E. minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;

F. help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and

G. ensure that potential buyers are notified that property is in a flood area.

10-7A-4: METHODS OF REDUCING FLOOD LOSSES: In order to accomplish its purposes, this chapter includes methods and provisions to:

A. restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;

B. require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters;

D. control filling, grading, dredging and other development which may increase flood damage; and

E. prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

10-7A-5: DEFINITIONS: Unless specifically defined in this section, words or phrases used in this chapter shall be interpreted to give them the meaning they have in common usage and to give this chapter its most reasonable application. As used in this chapter:

ALLUVIAL FAN FLOODING means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows, active processes of erosion, sediment transport and deposition, and unpredictable flow paths.

APEX means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.

APPEAL means a request for a review of the building official's interpretation of any provision of this chapter, or a request for a variance.

AREA OF SHALLOW FLOODING means a designated AO, AH, or VO zone on the City's Flood Insurance Rate Map (FIRM) with a one percent chance or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

AREA OF SPECIAL FLOOD HAZARD is the land in the floodplain within the City subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map (FHBM). After detailed ratemaking has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AE, AH, AO, A1-99, VO, V1-30, VE or V.

BASE FLOOD means the flood having a one percent chance of being equaled or exceeded in any given year.

BASE FLOOD ELEVATION (BFE) is the water surface elevation of the one percent annual chance flood event. It is the height in relation to mean sea level expected to be reached by the waters of the base flood at pertinent points in the floodplains of coastal and riverine areas. It is also the elevation shown on the FIRM and found in the accompanying Flood Insurance Study (FIS) for Zones A, AE, AH, A1-A30, AR, V1-V30, or VE that indicates the water surface elevation resulting from the flood that has a one percent chance of equaling or exceeding that level in any given year.

BASEMENT means any area of the building having its floor sub-grade, or below ground level, on all sides.

CRITICAL FEATURE means an integral and readily identifiable part of a flood protection system without which the flood protection provided by the entire system would be compromised.

DEVELOPMENT means any manmade change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

ELEVATED BUILDING means a non-basement building (i) built, in the case of a building in Zones A1-30, AE, A, A99, AO, AH, B, C, X, and D, to have the top of the elevated floor, or in the case of a building in Zones V1-30, VE, or V, to have the bottom of the lowest horizontal structure member of the elevated floor elevated above the ground level by means of pilings, column posts and piers, or shear walls parallel to the floor of the water and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones A1-30, AE, A, A99, AO, AH, B, C, X, and D, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters. In the case of Zones V1-30, VE, or V, "elevated building" also includes a building otherwise meeting the definition of "elevated building," even though the lower area is enclosed by means of

breakaway walls if the breakaway walls met the standards of Section 60.3(e)(5) of the National Flood Insurance Program regulations.

EXISTING CONSTRUCTION means for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. "Existing construction" may also be referred to as "existing structures."

EXISTING MANUFACTURED HOME PARK OR SUBDIVISION means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads, is completed before the effective date of the floodplain management regulations adopted by the City.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

FLOOD or FLOODING means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters, or the unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD INSURANCE RATE MAP (FIRM) means an official map of the City on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the City. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

FLOOD INSURANCE STUDY is the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, water surface elevation of the base flood, as well as the Flood Boundary-Floodway Map, if applicable, Flood Insurance Rate Map and supporting technical data.

FLOODPLAIN or FLOOD-PRONE AREA means any land area susceptible to being inundated by water from any source.

FLOODPLAIN MANAGEMENT means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

FLOODPLAIN MANAGEMENT REGULATIONS means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances such as a floodplain ordinance, grading ordinance and erosion control ordinance, and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

FLOOD PROTECTION SYSTEM means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the areas within the City subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes dams, reservoirs, levees

or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

FLOOD PROOFING means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODWAY or REGULATORY FLOODWAY means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

FUNCTIONALLY DEPENDENT USE means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

HIGHEST ADJACENT GRADE means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

HISTORIC STRUCTURE means any structure that is:

A. listed individually in the National Register of Historic Places, which is a listing maintained by the Department of Interior, or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

B. certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

C. individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

D. individually listed on a local community's inventory of historic places in communities with historic preservation programs that have been certified either:

    1. by an approved state program as determined by the Secretary of the Interior or;

    2. directly by the Secretary of the Interior in states without approved programs.

LEVEE means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water to provide protection from temporary flooding.

LEVEE SYSTEM means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

LOWEST FLOOR means the lowest floor of the lowest enclosed area, including basement. An unfinished or flood resistant enclosure, usable solely for parking or vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirement of Section 60.3 of the National Flood Insurance Program regulations.

MANUFACTURED HOME means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

MANUFACTURED HOME PARK OR SUBDIVISION means a parcel or contiguous parcels of land divided into two or more manufactured home lots for rent or sale.

MEAN SEA LEVEL means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on the City's Flood Insurance Rate Map are referenced.

NEW CONSTRUCTION means, for the purpose of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by the City and includes any subsequent improvements to such structures.

NEW MANUFACTURED HOME PARK OR SUBDIVISION means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads, is completed on or after the effective date of floodplain management regulations adopted by the City.

RECREATIONAL VEHICLE means a vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projections, designed to be self-propelled or permanently towable by a light duty truck, and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

START OF CONSTRUCTION includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

STRUCTURE means a building with two or more outside rigid walls and a fully secured roof, that is affixed to a permanent site; a manufactured home, also known as a mobile home, transported to its site in one or more sections, and affixed to a permanent foundation; or a travel trailer without wheels, built on a chassis and affixed to a permanent foundation, that is regulated under the City's floodplain management and building ordinances or laws.

SUBSTANTIAL DAMAGE means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before "start of construction" of the improvement. This includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

A. any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the code enforcement official and which are the minimum necessary conditions or

B. any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure."

VARIANCE is a grant of relief to a person from the requirement of this chapter when specific enforcement would result in unnecessary hardship (what defines an unnecessary hardship?). A variance, therefore, permits construction or development in a manner otherwise prohibited by this chapter.

VIOLATION means the failure of a structure or other development to be fully compliant with the City's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) of the National Flood Insurance Program regulations is presumed to be in violation until such time as that documentation is provided.

WATER SURFACE ELEVATION means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, where specified, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

10-7A-6: APPLICABILITY: This chapter shall apply to all areas of special flood hazard within the jurisdiction of the City.

10-7A-7: BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD: The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for Utah County, Utah and Incorporated Areas", dated June 19, 2020, with accompanying Flood Insurance Rate Maps and Flood Boundary-Floodway Maps (FIRM and FBFM) and any revisions thereto are hereby adopted by reference and declared to be a part of this chapter.

10-7A-8: ESTABLISHMENT OF DEVELOPMENT PERMIT: A development permit shall be required to ensure conformance with the provisions of this chapter.

10-7A-9: COMPLIANCE: No structure or land shall hereafter be located, altered, or have its use changed without full compliance with the terms of this chapter and other applicable regulations.

10-7A-10: ABROGATION AND GREATER RESTRICTIONS: This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

10-7A-11: INTERPRETATION: In the interpretation and application of this chapter, all provisions shall be considered as minimum requirements, liberally construed in favor of the City, and deemed neither to limit nor repeal any other powers granted under State statutes.

10-7A-12: WARNING AND DISCLAIMER OF LIABILITY: The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the City or any official or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

10-7A-13: SEVERABILITY: If any section, provision, or portion of this ordinance is adjudged unconstitutional or invalid by a court, the remainder of the ordinance shall not be affected.

## ARTICLE B. ADMINISTRATION

10-7B-1: DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR: The building official is hereby appointed the Floodplain Administrator to administer and implement the provisions of this chapter and other appropriate sections of 44 CFR, National Flood Insurance Program Regulations, pertaining to floodplain management.

10-7B-2: DUTIES & RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR: Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

A. maintain and hold open for public inspection all records pertaining to the provisions of this chapter;

B. review permit applications to determine whether proposed building site, including the placement of manufactured homes, will be reasonably safe from flooding;

C. review, approve or deny all applications for development permits required by adoption of this chapter;

D. review permits for proposed development to assure that all necessary permits have been

obtained from those Federal, State or local governmental agencies, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334, from which prior approval is required;

E. provide interpretation as to the exact location of the boundaries of the areas of special flood hazards, for example, where there appears to be a conflict between a mapped boundary and actual field conditions;

F. notify, in riverine situations, adjacent communities and the State Floodplain Manager, Division of Emergency Management, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency;

G. assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained;

H. obtain, review and reasonably utilize any base flood elevation data and floodway data available from a Federal, State or other source, in order to administer the provisions of this chapter when base flood elevation data has not been provided in accordance with this chapter;

I. when a regulatory floodway has not been designated, require that no new construction, substantial improvements, or other development, including fill, shall be permitted within Zones A1-30 and AE on the City's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the City; and

J. under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Program regulations, approve certain development in Zones A1-30, AE, and AH on the City's FIRM which increases the water surface elevation of the base flood by more than one foot, provided that the City first applies for a conditional FIRM revision through FEMA.

10-7B-3: PERMIT PROCEDURES: Application for a Development Permit shall be presented to the Floodplain Administrator on furnished forms and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:

A. elevation in relation to mean sea level of the lowest floor, including basement, of all new and substantially improved structures;

B. elevation in relation to mean sea level to which any nonresidential structure shall be floodproofed;

C. a certificate from a registered professional engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of this chapter; and

D. a description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.

10-7B-4: APPROVAL OR DENIAL OF DEVELOPMENT PERMIT: Approval or denial of a Development Permit by the Floodplain Administrator shall be based on all of the provisions of this chapter and the following relevant factors:

A. the danger to life and property due to flooding or erosion damage;

B. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

C. the danger that materials may be swept onto other lands to the injury of others;

D. the compatibility of the proposed use with existing and anticipated development;

E. the safety of access to the property in times of flood for ordinary and emergency vehicles;

F. the costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;

G. the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;

H. the necessity to the facility of a waterfront location, where applicable;

I. the availability of alternative locations, not subject to flooding or erosion damage, for the proposed use; and

J. the relationship of the proposed use to the comprehensive plan for that area.

10-7B-5: VARIANCES:

A. The land use hearing examiner as established by the City shall hear and render judgment on requests for variances from the requirements of this chapter.

B. Variances may be issued for the reconstruction, rehabilitation or restoration of structures, upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure, listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this chapter.

C. Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the relevant factors in Section 10-7B-4 of this chapter have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.

D. Upon consideration of the factors noted in this section and the intent of this chapter, the land use hearing examiner may attach such conditions to the granting of variances as deemed necessary to further the purpose and objectives of this chapter.

E. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

F. Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

G. Prerequisites for granting variances:

1. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

2. Variances shall only be issued upon:

a. a showing of good and sufficient cause;

b. a determination that failure to grant the variance would result in exceptional hardship to the applicant; and

c. a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, the creation of nuisances, causing fraud on or victimization of the public, or a conflict with existing local laws or ordinances.

3. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

H. Variances may be issued by the land use hearing examiner for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided the criteria outlined in Section 10-7B-4 are met, and the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

I. The Floodplain Administrator shall maintain a record of all actions involving a variance and shall report variances to the State Floodplain Manager, the State Division of Emergency Management, and Federal Emergency Management Agency.

10-7B-11: APPEALS:

A. The land use hearing examiner shall hear and render judgement on an appeal only when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the enforcement or administration of this chapter.

B. Any person or persons aggrieved by the decision of the land use hearing examiner may appeal such decision in the courts of competent jurisdiction.

C. The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report appeals to the Federal Emergency Management Agency upon request.

## ARTICLE C. PROVISIONS FOR FLOOD HAZARD REDUCTION

10-7C-1: GENERAL STANDARDS: In all areas of special flood hazards, the standards set out in this article C are required for all new construction and substantial improvements.

10-7C-2: ANCHORING: All new construction or substantial improvements shall be designed or modified and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

10-7C-3: CONSTRUCTION MATERIALS AND METHODS:

A. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

B. All new construction or substantial improvements shall be constructed with materials resistant to flood damage.

C. All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and located so as to prevent water from entering or accumulating within the components during conditions of flooding.

10-7C-4: UTILITIES:

A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

B. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

C. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

10-7C-5: SPECIFIC STANDARDS: In all areas of special flood hazards where base flood elevation data has been provided as set forth in section 10-7A-7, Basis for Establishing the Areas of Special Flood Hazard, the standards set forth in sections 10-7C-6 through 10-7C-13 of this article are required.

10-7C-6: RESIDENTIAL CONSTRUCTION. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above the base flood elevation. A registered professional engineer, architect, or land surveyor shall submit a certification to the Floodplain Administrator that the standard of this subsection is satisfied.

10-7C-7: NONRESIDENTIAL CONSTRUCTION: New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to or above the base flood level or together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall develop and review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification which includes the specific elevation in relation to mean sea level to which such structures are floodproofed shall be maintained by the Floodplain Administrator.

10-7C-8: Enclosures: New construction and substantial improvements with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

A. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.

B. The bottom of all openings shall be no higher than one foot above grade.

C. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they permit the automatic entry and exit of floodwaters.

10-7C-9: Manufactured Homes:

A. All manufactured homes placed within Zone A on the City's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

B. Manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the City's FIRM on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above

the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

C. Manufactured homes placed or substantially improved on sites in an existing manufactured home park or subdivision with Zones A1-30, AH and AE on the City's FIRM that are not subject to the provisions of this section shall be elevated so that either:

1. the lowest floor of the manufactured home is at or above the base flood elevation, or

2. the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and are securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

10-7C-10: RECREATIONAL VEHICLES: Recreational vehicles placed on sites within Zones A1-30, AH, and AE on the City's FIRM shall either:

A. be on the site for fewer than 180 consecutive days;

B. be fully licensed and ready for highway use, or

C. meet the permit requirements of 10-7C-9 and the elevation and anchoring requirements for manufactured homes. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

10-7C-11: STANDARDS FOR SUBDIVISION PROPOSALS:

A. All subdivision proposals including the placement of manufactured home parks and subdivisions shall be consistent with article A.

B. All proposals for the development of subdivisions including the placement of manufactured home parks and subdivisions shall meet Development Permit requirements of Sections 10-7B-3 and 10-7B-4 and the provisions of this article C.

C. Base flood elevation data shall be generated for subdivision proposals and other proposed development including the placement of manufactured home parks and subdivisions which are greater than 50 lots or 5 acres, whichever is lesser, if not otherwise provided pursuant to this chapter.

D. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.

E. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

10-7C-12: STANDARDS FOR AREAS OF SHALLOW FLOODING IN AO AND AH ZONES: Located within the areas of special flood hazard are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

A. Within Zone AO, all new construction and substantial improvements of residential structures shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the City's FIRM, or at least two feet if no depth number is specified.

B. Within Zone AO, all new construction and substantial improvements of non-residential structures:

    1. shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the City's FIRM, or at least two feet if no depth number is specified, or

    2. together with attendant utility and sanitary facilities, shall be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

C. A registered professional engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this section are satisfied.

D. Within Zones AH and AO, adequate drainage paths around structures on slopes shall be required to guide flood waters around and away from proposed structures.

10-7C-13: FLOODWAYS: Located within areas of special flood hazard established in this chapter are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

A. Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

B. If subsection A of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this article C.

C. Under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community **first** applies for a conditional FIRM and floodway revision through FEMA.

D. Until a regulatory floodway is designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the City.

**10-7C-14: PENALTIES:** No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violation of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a class C misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than $750 or imprisoned for not more than 90 days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case and all costs necessary to come into compliance with the ordinance. Nothing herein contained shall prevent Lehi City from taking such other lawful action as is necessary to prevent or remedy any violation.

Section 2. Effective Date. It is hereby found and declared by the Lehi City Council that severe flooding has occurred in the past within its jurisdiction and will certainly occur within the future; that flooding is likely to result in infliction of serious personal injury or death, and is likely to result in substantial injury or destruction of property within its jurisdiction. In order to effectively comply with minimum standards for coverage under the National Flood Insurance Program and in order to effectively remedy the situation described herein, it is necessary that this ordinance become effective immediately. Therefore, this ordinance, being necessary for the immediate preservation of the public peace, health and safety, shall be in full force and effect from and after its passage and approval.

PASSED AND ADOPTED by the City Council this ____ day of _____, 2020.

_____
Mark Johnson, Mayor

ATTEST:

_____
City Recorder

# City Council Agenda Item Report

Meeting Date: June 9, 2020
Submitted by: Teisha WIlson
Submitting Department:
Item Type: Resolution
Agenda Section:

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**Subject:**
Consideration of Resolution #2020-45, approval of an agreement for professional services with RB&G Engineering, Inc.
Petitioner: Lehi City

**Suggested Action:**

**Attachments**:
Res 2020-45.docx

RBG-Lehi SS CEM Agreement.pdf

LEHI CITY

**RESOLUTION NO. 2020-__**

**A RESOLUTION OF THE LEHI CITY COUNCIL APPROVING AN AGREEMENT FOR PROFESSIONAL SERVICES WITH RB&G ENGINEERING, INC.**

WHEREAS**,** City desires to contract for professional engineering services for the widening of Lehi Main Street from Commerce Drive in Saratoga Springs to 2300 West in Lehi;

WHEREAS, City issued a Request for Bids to identify firms and companies which would best serve the needs of the City to perform such services;

WHEREAS, City selected RB&G Engineering, Inc. and now desires to contract with them to perform the work specified in the contract documents;

WHEREAS, on June 9th, 2020, the City Council held a duly noticed public meeting to ascertain the facts regarding this matter, which facts and comments are found in the meeting record; and,

WHEREAS, after considering the facts and comments presented to the City Council, the Council finds: (i) that it should approve an Agreement for Professional Services with RB&G Engineering, Inc.; and (ii) such action furthers the health, safety and welfare of the citizens of Lehi.

NOW, THEREFORE, be it resolved by the City Council of Lehi City, Utah, as follows:

1. The Agreement for Professional Services between Lehi City and RB&G Engineering, Inc. attached hereto as Exhibit "A" is hereby approved and the Mayor is authorized to execute the Agreement and take all other such action as is necessary to make it effective.

2. This resolution shall take effect immediately.

Approved and Adopted by the City Council of Lehi City, Utah this 9th day of June, 2020.

LEHI CITY

_____

Mark Johnson, Mayor

ATTEST

_____

Teisha Wilson, City Recorder

EXHIBIT “A”

RB&G ENGINEERING, INC.

1435 West 820 North
Provo, Utah 84601-1343
801-374-5771 Provo
801-521-5771 Salt Lake City
801-374-5773 Fax

Project No. 202014
Contract No. 202014.000

# PROFESSIONAL SERVICES AGREEMENT

LEHI CITY ("CLIENT") hereby authorizes RB&G ENGINEERING, INC. ("ENGINEER"), a Utah corporation, to provide the services described below subject to the terms and conditions set forth below and on all exhibits, attachments, references, and documents incorporated herein.

**CLIENT INFORMATION**

Lehi City
153 North 100 East
Lehi, UT 84043
(385) 201-2710 (phone)
(385) 201-1710 (fax)

*Contact/Project Representative:*
Brad Kenison

**BILLING INFORMATION**

Lehi City
153 North 100 East
Lehi, UT 84043

**PROJECT DESCRIPTION**

Saratoga Spr Crossroads Blvd-Lehi Main St CEM
Lehi, UT

**A. ENGINEER'S SERVICES:** ENGINEER shall provide the services set forth in the exhibits and documents attached hereto and by this reference made a part hereof. Services not expressly set forth in the exhibits or attachments or otherwise incidental to or implicit in those services, as determined solely by ENGINEER, are not a service of ENGINEER.

**B. COMPENSATION:** ENGINEER shall be compensated as decribed in "Payment" in Exhibit A and any additional exhibits and documents attached hereto and by this reference made a part hereof. CLIENT shall pay a retainage fee of $ N/A prior to commencement of ENGINEER's services. Said fee shall be applied to the final invoice for services provided hereunder.

**C. ATTACHMENTS:** The following exhibits and attachments are incorporated herein by reference and are made a part of this Professional Services Agreement:

Exhibit A: Terms and Conditions
Exhibit B: General
Attachment: Project Proposal(s)

Having read, understood and agreed to the foregoing, and the terms and conditions set forth in Exhibit A, CLIENT and ENGINEER, by and through their authorized representatives, have subscribed their names hereto effective as of 6/4/2020.

**CLIENT**
LEHI CITY

By _____
Printed _____
Title _____
Date _____

**ENGINEER**
RB&G ENGINEERING, INC.

By _____
Printed Scott A. Hendricks
Title Principal
Date 06/04/2020

RB&G ENGINEERING, INC.

# EXHIBIT A
## TERMS AND CONDITIONS

Project No. 202014
Contract No.

**1** 'Claims (or Claim)' means any and all demands, actions, rights, liabilities, damages, costs, expenses, and/or fees (incl. expert and attorney's fees) (collectively "demands, etc.") of any nature whatsoever actually or allegedly arising directly or indirectly out of or related to the project or RB&G, *et al*.'s services, whenever accrued, known, discovered, or discoverable, for death, disability, disfigurement, bodily or personal injury, property damage or economic loss, including but not limited to demands, etc., for or arising out of breach of contract (express or implied), breach of warranty (express or implied), negligence (professional, simple or gross, sole or joint, active or passive), negligent misrepresentation, fraud, constructive fraud, strict products liability, strict liability, failure to warn or disclose, indemnity, contribution, subrogation, reimbursement, exoneration, or violation of statute, code, ordinance, rule or regulation.

**2** 'RB&G, *et al.*' means RB&G ENGINEERING, INC. (RB&G), its subconsultants of any tier, and their respective owners, officers, agents, and employees.

**3** 'Hazardous Materials' means any and all hazardous, toxic, infectious and/or other dangerous irritants, contaminants, pollutants, substances and/or materials of any nature whatsoever (collectively "materials, etc"), whether organic, inorganic, chemical, biological, vaporous, gaseous, liquid, and/or solid, now or hereafter subject to federal, state, and/or local law, rules, and regulation.

**4** Payment. CLIENT will be invoiced from time to time as the Project progresses. Payment is due upon receipt of invoice. Invoices not paid within 30 days of date of invoice will accrue interest at 1.5 percent per month. If CLIENT disputes part of an invoice, it shall timely pay the undisputed portion of the invoice. RB&G may, in its sole discretion and without notice, suspend its services and withhold deliverables pending receipt of past due payments.

**5** Supplied Information. RB&G, *et al.* are entitled to rely on any and all information supplied by, through or on behalf of CLIENT and have no legal or contractual duty to verify the accuracy or reliability of such information. CLIENT waives and agrees to hold harmless, indemnify and defend RB&G, *et al.* from and against any and all Claims arising out of any actual or alleged deficiency in any such information; excepting only such Claims as arise out of an indemnitee's actual sole negligence.

**6** Construction Estimates. RB&G's opinions, if any, of probable construction costs, quantities or time are contingent upon factors over which RB&G has no control. RB&G makes no warranty, express or implied, regarding the accuracy of such opinions.

**7** Construction Phase Services. RB&G's construction observation services, if any, are neither exhaustive nor continuous and consist solely of periodic site visits to determine in general whether construction is progressing in conformance with the plans and specifications. RB&G's recommendation, if any, of payments to the contractor is based solely upon said services. RB&G is not responsible for: (a) the timeliness, means, methods or sequences of construction or for the safety of workers or others at the project site; or (b) the performance, acts, errors or omissions of the contractor or its subcontractors, regardless of tier. RB&G, *et al.*'s review, if any, of submittals and shop drawings ("submittals") is for the sole purpose of determining general conformance with design intent; not to verify the accuracy or completeness of the details contained therein, which remains the sole responsibility of the contractor. RB&G has no obligation to: (a) review submittals not required under the contract documents; (b) review a submittal more than three (3) times; or (c) respond to materially identical requests for information or clarification ("RFIs/RFCs") more than two (2) times, aggregate. RB&G shall be paid for additional reviews of submittals or RFIs/RFCs on a time and expense basis.

**8** No Construction Phase Services. Should CLIENT elect at any time not to have RB&G provide construction phase services, CLIENT waives and agrees to hold harmless, indemnify and defend RB&G, *et al.* from and against any and all Claims arising out of or in any way related to any alleged or actual material difference between design and construction; excepting only such Claims as arise out of an indemnitee's actual sole negligence.

**9** Representatives. Approvals, decisions, authorizations and representations by CLIENT's or RB&G's designated representative shall be binding upon CLIENT and RB&G, respectively.

**10** Record Documents. Record documents, if any, prepared by RB&G record variations between design and actual construction solely as recorded by the contractor. RB&G is entitled to rely upon and has no legal or contractual duty to verify the accuracy, reliability or completeness of this information provided by the contractor. CLIENT waives and agrees to hold harmless, indemnify and defend RB&G, *et al*. from and against any and all Claims arising out of any actual or alleged deficiency in such information; excepting only such Claims as arise out of an indemnitee's actual sole negligence.

**11** Access. CLIENT warrants RB&G adequate and timely access to all property reasonably necessary to the performance of RB&G, *et al*.'s services.

**12** Ownership of Documents. RB&G retains ownership of any and all proprietary rights in and to all plans, drawings, specifications, reports, notes, data, logs, calculations, documents, and other instruments obtained or prepared by or on behalf of RB&G, *et al*., regardless of medium, except where this agreement is terminated prior to completion or CLIENT has not paid RB&G, CLIENT is granted a non-exclusive, non-transferrable license to use said instruments solely as an integrated set for the construction, operation, maintenance and repair of the project for which said instruments were prepared. Any modification of or use on other projects of such instruments by or on behalf of CLIENT without RB&G's prior express written consent is at CLIENT's sole risk, and CLIENT waives and agrees to hold harmless, indemnify and defend RB&G, *et al*. from and against any and all Claims arising out of any such nonpermissive modification or use; excepting such Claims as arise out of an indemnitee's actual sole negligence.

**13** Site Conditions; Underground Utilities. RB&G's services contemplate (i) the absence of Hazardous Materials on, in or under the project site and (ii) site conditions like those represented in information provided by, through or on behalf of CLIENT and/or those reasonably anticipated for a site of this nature and locality. Should Hazardous Materials be discovered or actual site conditions vary materially from those represented or anticipated, either party shall have an absolute and unconditional right to terminate this agreement. CLIENT waives and agrees to hold harmless, indemnify and defend RB&G, *et al*. from and against any and all Claims arising out of or related to (i) the detection, generation, presence, escape, release, discharge, movement, seepage, stabilization, abatement, handling, removal, transportation, storage or disposal of Hazardous Materials or (ii) any material change in represented or anticipated site conditions; excepting only such Claims as arise out of an indemnitee's actual sole negligence.

**14** Standard of Care. RB&G's services shall be performed in accordance with and judged solely by the skill and care ordinarily exercised by members of the same profession performing like services in the State of Utah at the same time. RB&G makes no other representation or any warranty, express or implied, regarding the quality of RB&G's services or the instruments thereof.

**15** Limitation of Liability. In recognition and equitable allocation of the relative risks and benefits of the project, CLIENT limits the total aggregate liability of RB&G, *et al*. to CLIENT and its successors and assigns on any and all Claims to $50,000. For purposes of this section, attorney fees, expert fees and other costs incurred by RB&G, *et al*. and their insurance carriers in the defense of such Claims shall be included in calculating total aggregate liability.

**16** Consequential Damages. CLIENT and RB&G mutually waive any and all Claims they have or may against each other for consequential damages of any nature whatsoever, including but not limited to Claims for loss of business, income, profits, use or reputation.

**17** Dispute Resolution. Any and all disputes arising out of or related to this agreement shall be submitted to mediation before a mutually-acceptable mediator prior to initiation of litigation or other binding adjudicative procedures. In the event the parties are unable to agree on a mediator, said mediator shall be appointed by a court of competent jurisdiction. The parties shall provide such discovery as may be deemed necessary by the mediator to have an effective mediation.

**18** Applicable Law; Jurisdiction; Venue. This agreement shall be interpreted and enforced in and according to the laws of the State of Utah. Jurisdiction shall be in any court of competent jurisdiction in the State of Utah. Venue of any dispute resolution process arising out of or related to this agreement shall be exclusively in Utah County, State of Utah.

**19** Assignment; Subcontracting. Neither party shall assign its rights or claims under this agreement without the prior, express, written consent of the other. RB&G may subcontract any portion of its services without such consent.

**20** Force Majeure. Any default in the performance of this agreement by either party caused by any fact or event beyond the defaulting party's reasonable control shall not constitute a breach of this agreement.

**21** No Third Party Rights. No third party beneficiary rights are intended or created under this agreement, nor does this agreement create any cause of action in favor of any third party against either party hereto.

**22** Limitation Periods. For statutory limitation of actions purposes, any and all Claims shall be deemed to have accrued no later than the date of substantial completion of RB&G's services.

**23** Termination. This agreement may be terminated by either party with or without cause upon seven (7) days written notice. If this agreement is terminated through no fault of RB&G, CLIENT shall pay RB&G for services performed and expenses incurred through the date of termination.

**24** Miscellaneous. This agreement constitutes the entire and integrated agreement by and between the parties and supersedes all prior or contemporaneous written or oral negotiations, representations, or agreements. Acceptance or use of RB&G's services hereunder shall constitute acceptance of this agreement whether or not signed by CLIENT. In the event any provision herein or portion thereof is invalid or unenforceable, the remaining provisions shall remain valid and enforceable. Waiver of a breach of [illegible] provision is not a waiver of a subsequent breach of the same or any other provision

RB&G ENGINEERING, INC.

Project No. 202014
Contract No. 202014.000

# EXHIBIT B
## GENERAL

Appended to and made a part of the Professional Services Agreement ("Agreement") by and between LEHI CITY ("CLIENT") and RB&G ENGINEERING, INC. ("ENGINEER")

### 1. ADDITIONAL TERMS AND CONDITIONS

No change.

### 2. SERVICES AND COMPENSATION:

See attached proposal.

May 15, 2020

RB&G ENGINEERING, INC.

Mr. Brad Kenison, P.E., P.L.S.
Lehi Assistant City Engineer
153 North 100 East
Lehi, Utah 84043

Re: Revised Proposal to Provide Construction Engineering Services
Saratoga Springs Crossroads Blvd / Lehi Main Street Widening Project

Dear Brad,

In accordance with your request, we are pleased to submit herewith a revised proposal to provide construction engineering services for roadway and bridge improvements for the Saratoga Springs Crossroads Blvd / Lehi Main Street Widening Project.

The scope of the project includes reconstruction and widening along Crossroads Blvd / Lehi Main Street from Commerce Drive in Saratoga Springs to 2300 West in Lehi. The design will include connection to improvements beginning at the project side leg of both of the noted intersections at each project end, as well as tying to other side streets.

The project has included right-of-way acquisitions to accommodate proposed improvements for a 5-lane roadway, including four 12-foot wide travel lanes and one 12-foot wide center turning lane, and minimum 5-foot wide bike lanes (some portions two foot buffered) on each side of the roadway for generally about 70- to 74-feet of pavement. Anticipated roadside improvements include added curb and gutter, and 5- to 10-foot sidewalks/trail. The project includes the replacement of the Jordan River Bridge with a new wider structure, which will also carry several suspended utilities. The existing Jordan River Parkway Trail undercrossing culvert will also be extended to accommodate the widened roadway section, and trail connections will be made to the main line sidewalks. Roadway intersection improvements will include ADA compliant sidewalks, ramps and/or cross walks, etc. as needed. At several locations intersection improvements will include new or modified traffic signal infrastructure; including poles/mast arms, bases, cabinets, junction boxes, and conduits, etc. Utility infrastructure construction and relocations will include significant power, culinary and pressurized irrigation water, storm drainage, and communication facilities. Construction work also includes ATMS in part of the corridor, as well as some street lighting. Power for the street lights will be through new buried conduits, placed for use by Lehi Power or Rocky Mountain Power respectively. Construction of a wetland mitigation area near Willow Lane and Willow Way is also part of the project.

The scope of services includes construction engineering management services for the noted roadway improvements including widening and reconstruction on the mainline roadway, and short reconstruction tie-ins of various intersection legs in the corridor. This proposal reflects all required construction engineering services for the roadway widening and reconstruction improvements, including materials QA testing, but excluding actual dynamic pile testing beyond

inspecting/monitoring the testing and reviewing the results. It has also been reduced with the understanding the City utilities (waterlines) work will generally be inspected by City staff, with our staff only monitoring testing needs for bedding, backfill and concrete, conducting that testing, coordinating with City staff on this work, and measuring and summarizing all quantities for payment. No surveying has been included as it is understood that it will be provided by the contractor, with only some coordination required to ensure exposed utility GIS shots can be obtained by Lehi City and Saratoga Springs City staff during the course of the work and installations. The scope of services also includes for the Wetlands Mitigation construction oversight and post construction monitoring in accordance with the USACE 404 permits.

RB&G Engineering, Inc. will be responsible for performing the following contracted construction engineering activities as described below.

**5Z1 PROJECT MANAGEMENT**

OVERVIEW: Provide project management and oversight of CEM work progress and resource scheduling.

DELIVERABLES: Progress Report and Schedule Updates
Budget Updates
Monthly Invoicing
Contract Modifications

RESPONSIBILITY: RB&G Project Manager

**CEM CONSTRUCTION ENGINEERING MANAGEMENT**

OVERVIEW: Provide Construction Engineering Management Services throughout construction of the project, to inspect and document the work. Assist the Cites in holding a Pre-bid meeting to review with potential bidders the scope, contract documents, and bidding requirements of the project. Obtain pay quantities and prepare/review and authorize progress payments. Conduct and review for conformance applicable material testing and results and other contractor submittals required by the specifications. Coordinate with the contractor, third-party PI firm, affected power and utility companies, various staff for Lehi City, Saratoga Springs City, and Utah County, other agencies, and property owners/developers as necessary during the course of the work. Coordinate and prepare required change orders. Hold a pre-construction meeting, participate in meetings to coordinate utility relocations, and hold periodic construction coordination meetings, anticipated at least bi-weekly through substantial completion. Prepare agendas and minutes of these meetings, and other progress reports as needed. Prepare a set of As-Built plans at the conclusion of the construction and provide to both Cities. It is anticipated the Cities' desired monitoring effort will include usually 2/3-time to full-time construction observation presence on site by generally one or two inspectors (ranging from full time assumed for up to twenty four weeks, to only half time by one inspector for portions of the project during colder parts of winter, or as needed as assumed on the attached detail breakdown); and part time involvement by the field engineer, a utility engineer, and resident engineer

for the anticipated working days (see attached estimates) of the project. This anticipates only about four weeks of full winter shut down with work otherwise occurring from June 15, 2020 to substantial completion by September 3, 2021. The estimated hours are contained in the cost proposal. Should the actual construction time be significantly increased over the noted working days, either by design or construction change order, as agreed to by the City, this will require a contract modification to adjust the construction inspection time accordingly. Any underruns would simply not be billed. Project SWPPP inspections, Wetlands Mitigation construction oversight, and post-construction monitoring in accordance with the USACE 404 permits are also included in this contract. Construction materials quality assurance testing and reporting are included in this contract as well. Coordinate with the contractor for any contractor provided testing and review for acceptance, including asphalt paving related coring/densities, etc.; and also dynamic pile testing. All construction survey is to be provided by the contractor, or others, and these services are not included in this proposal.

DELIVERABLES: Progress Reports and Payment Estimates/Authorizations
Agendas and Minutes of Construction Coordination Mtgs
Received Contractor Submittals
Construction Materials Testing Results
Inspection Reports
Construction Correspondence
As-built Plan Set

RESPONSIBILITY: RB&G Resident Engineer

**6E1 WETLAND MITIGATION CONSTRUCTION AND MONITORING**

OVERVIEW: Provide Wetland Mitigation Site Construction Monitoring and Post-Construction 5-Year Monitoring. PEC will perform construction monitoring inspections during the construction of the wetland mitigation site to ensure compliance with the USACE permit. It is estimated that monitoring will occur over 90 calendar days with four hours per day (260 hours) during the construction timeframe. Construction monitoring will assess erosion control, construction, irrigation installation and tree planting. A daily inspection log will be kept verifying quantities and pay items. PEC will communicate with the project team and the USACE to keep the project in compliance with permit requirements. The goals of the mitigation site are to improve water quality and hydrologic function, create new wetland habitat and enhance existing wetland habitat. PEC will annually monitor the mitigation site during the growing season for a minimum of five years to assess whether goals and objectives were met. Monitoring observations will include hydrology, vegetation establishment, and invasive species. Photos will be taken at established monitoring points. Monitoring will occur every June, July, and August with a final report produced and send to the USACE prior to October 31st each year. Each year of monitoring will take approximately 72 hours (total of 360 for five years).

| | |
|---|---|
| DELIVERABLES: | Daily inspection log including quantities and pay items.<br>Inspection Reports<br>Received Contractor Submittals<br>Construction Materials Testing Results as applicable<br>Progress Reports and Related Payment Estimates/Auth.<br>Construction Correspondence<br>Mitigation site monitoring annual final report; sent to USACE prior to October 31st each year.<br>As-Built Plan Set |
| RESPONSIBILITY: | PEC Environmental Manager/RB&G Resident Engineer |

Funding for the project largely comes from local sales tax funds collected by Utah County in agreement with Mountainlands Association of Governments on the project need for this regionally significant roadway. Therefore, the project will be constructed by Lehi City (in partnership with Saratoga Springs City), in accordance with normal Lehi City procurement processes and policies, and in accordance with APWA and both City standards and specifications for the contract documents as prepared in the design. Advertisement of the construction will be through Lehi City. The actual project and construction costs within the authorized funded budget will be reimbursed to the City by Utah County and Saratoga Springs City for their portion as the work progresses.

It is understood that the project intent is to award May 26, 2020, and begin construction in mid-June subject to contractor preference on start time. The project schedule anticipates substantial completion by September 3, 2021 (approximately 64 weeks maximum excluding a four-week winter shutdown), with physical completion by October 1, 2021.

We propose to complete the above scope of work billed at our standard hourly rates (as shown on the attached estimates). We anticipate the work can be completed within the hours and direct costs as also shown thereon (for the awarded bid based on the shown allowed construction time), with a Not-to-Exceed Cost of $900,930.

We appreciate the opportunity to provide this proposal to you. If there are any questions or you need any modifications to this scope, please don't hesitate to call me. We look forward to providing these services for Lehi City and Saratoga Springs City upon receiving a contract and Notice to Proceed, and based on City Notice of Award to the Contractor for the project.

Sincerely,

RB&G ENGINEERING, INC.

Scott Hendricks, P.E.
Principal II/Project Manager

Attachments

**SARATOGA SPRINGS CROSSROADS BLVD./LEHI MAIN ST.**
**CONSTRUCTION ENGINEERING**
**COST PROPOSAL**
**3/15/2020**

| | | | |
|---|---|---|---|
| Resident Engineer, PE V | 784 hours @ | $155.00 | $121,520.00 |
| Field Engineer, PE IV | 1116 hours @ | $130.00 | $145,080.00 |
| GeoTech Engineer, PE IV | 24 hours @ | $120.00 | $2,880.00 |
| Asst Field Engineer, PE II | 0 hours @ | $110.00 | $0.00 |
| Inspector/PE I | 1624 hours @ | $95.00 | $154,280.00 |
| Inspector/EIT | 640 hours @ | $80.00 | $51,200.00 |
| Inspector/Tech PEC | 1600 hours @ | $75.00 | $120,000.00 |
| Utility Engineer PEC | 240 hours @ | $150.00 | $36,000.00 |
| Office Manager | 0 hours @ | $57.00 | $0.00 |
| CAD Manager/Drafter | 0 hours @ | $105.00 | $0.00 |
| Lab Manager | 140 hours @ | $105.00 | $14,700.00 |
| Materials Technician III | 150 hours @ | $75.00 | $11,250.00 |
| Materials Technician II | 480 hours @ | $55.00 | $26,400.00 |
| Materials Technician I | 2370 hours @ | $50.00 | $118,500.00 |
| Business Manager | 38 hours @ | $120.00 | $4,560.00 |
| Clerical | 136 hours @ | $60.00 | $8,160.00 |
| Environ. Manager, LA PEC | 104 hours @ | $225.00 | $23,400.00 |
| Environ. Monitor, PEC | 350 hours @ | $120.00 | $42,000.00 |
| Environ. Controls Super., PEC | 280 hours @ | $75.00 | $21,000.00 |
| **Total** | | | **$900,930.00** |

SARATOGA SPRINGS CROSSROADS BLVD./LEHI MAIN ST.
CEM Labor
3/15/2020

| **Labor** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Weeks | Calendar Days | Wk Days | |
| | Project Length = | total (~CS to CC) | | | | 68 | 474 | 340 | Assumes CS 6/15/2020 and CC Runs to 10/01/2021. = 474 cal days ~ 68 weeks (CC = PC). |
| | | insp. active (CS to PC) | | | | 64 | 446 | 320 | Assumes Time and work both start about 6/15/2020, and w/ 4 week winter suspension run to SC 9/03/2021 and PC 10/01/2021. Assumes 474 less 28 = net 446 calendar days ~ 64 weeks CS (Actual Start) to PC. |
| | | matls. active full time (CS to SC) | | | | 60 | 418 | 300 | Assumes Work Starts 6/15/2020 and w/ 4 week winter susp SC runs to 9/03/2021. Assumes 446 less 28 = net 418 calendar days ~60 weeks CS to SC. |
| | | | | | | | | | |
| | | | | | | | | | |
| | | PreConstruction | Construction | | | | Post Construction | Total | |
| | | Total Hours | Staff | Hours/Week | Weeks | Total Hours | Total Hours | | |
| Resident Engineer | | | 1 | 16 | 8 | 128 | | | |
| | | | 1 | 12 | 48 | 576 | | | |
| | | | 1 | 8 | 8 | 64 | | | |
| | Total | 8 | 1 | | 64 | 768 | 8 | 784 | |
| Field Engineer | | | 1 | 24 | 8 | 192 | | | |
| | | | 1 | 20 | 10 | 200 | | | |
| | | | 1 | 16 | 38 | 608 | | | |
| | | | 1 | 12 | 8 | 96 | | | |
| | Total | 8 | 1 | | 64 | 1096 | 12 | 1116 | |
| Asst Field Engineer | | | 1 | 45 | 0 | 0 | | | |
| | | | 1 | 40 | 0 | 0 | | | |
| | Total | 0 | 1 | | 0 | 0 | 0 | 0 | |
| Inspector/EIT | | | 2 | 40 | 24 | 1920 | | | Near Full Time on site x 2 |
| | | | 2 | 32 | 20 | 1280 | | | 2/3 Time on site x 2 |
| | | | 1 | 40 | 8 | 320 | | | Near Full Time on site x 1 |
| | | | 1 | 32 | 4 | 128 | | | 2/3 Time on site x 1 |
| | | | 1 | 24 | 8 | 192 | | | 1/2 Time on site 1 |
| | Total | 8 | 1 | | 64 | 3840 | 16 | 3864 | |
| Utility Engineer | | | 1 | 12 | 20 | 240 | | 240 | |
| Office Manager | | | 1 | 6 | 0 | 0 | 0 | | |
| | | | 1 | 4 | 0 | 0 | | | |
| | Total | 0 | 1 | | 0 | 0 | 0 | 0 | |
| Lab Manager | | | | | | 140 | | 140 | |
| Materials Technician | | | Staff | Hours/Day | Days | | | | |
| | Light | 0 | 1 | 4 | 60 | 240 | 0 | | Mostly intermittent; maybe proctors, occasional concrete - winter, float |
| | Medium Light | 0 | 1 | 8 | 80 | 640 | 0 | | Mostly concrete and/or grade prep only |
| | Normal | 0 | 1.5 | 8 | 125 | 1500 | 0 | | Earthwork/Aggegates + concrete or trench |
| | UTBC | 0 | 2 | 8 | 20 | 320 | 0 | | Pvmt Only. 17,000 ton done over 20 days total |
| | HMA | 0 | 2 | 10 | 15 | 300 | 0 | | 18,825 ton over 15 days total |
| | Total | 0 | | | 300 | 3000 | 0 | 3000 | |
| | | | Staff | Hours/Week | Weeks | | | | |
| Business Manager | | 2 | 1 | 0.5 | 68 | 34 | 2 | 38 | |
| Clerical | | 4 | 1 | 2 | 64 | 128 | 4 | 136 | |
| TOTAL | | | | | | | | 9318 | |

## Crossroads Scope of Work- Environmental and SWPPP Tasks (PEC)

**Mitigation Site Construction Monitoring:** PEC will perform construction monitoring inspections during the construction of the wetland mitigation site to ensure compliance with the USACE permit. It is estimated that monitoring will occur over 90 calendar days with 4 hours per day (260 hours) during the construction timeframe. Construction monitoring will assess erosion control, construction, irrigation installation and tree planting. A daily inspection log will be kept verifying quantities and pay items. PEC will communicate with the client and the USACE to keep the project in compliance with permit requirements.

**Main Street/ Crossroads SWPPP Inspections:** PEC will perform SWPPP inspections for the roadway construction during the active construction period. It is estimated inspection will occur 4 hours a day, once per week until construction is be completed (9 months of active construction-144 hours). If frequent rain events occur during construction additional inspections may be required per the Utah Department of Environmental Quality (DEQ). These additional inspections will be billed on a time and expense basis at the approval of the owner.

**Monitoring (5 Year):** The goals of the mitigation site are to improve water quality and hydrologic function, create new wetland habitat and enhance existing wetland habitat. PEC Will annually monitor the mitigation site during the growing season for a minimum of 5 years to assess whether goals and objectives were met. Monitoring observations will include hydrology, vegetation establishment, and invasive species. Photos will be taken at established monitoring points. Monitoring will occur every June, July, and August with a final report produced and send to the USACE prior to October 31st each year. Each year of monitoring will take approximately 72 hours (total of 360 for 5 years).

**LEHI MAIN STREET SARATOGA SPRINGS CROSSROADS BLVD**
**COMMERCE DRIVE TO 2300 WEST**
**CONSTRUCTION MANAGEMENT MAN HOUR ESTIMATE**

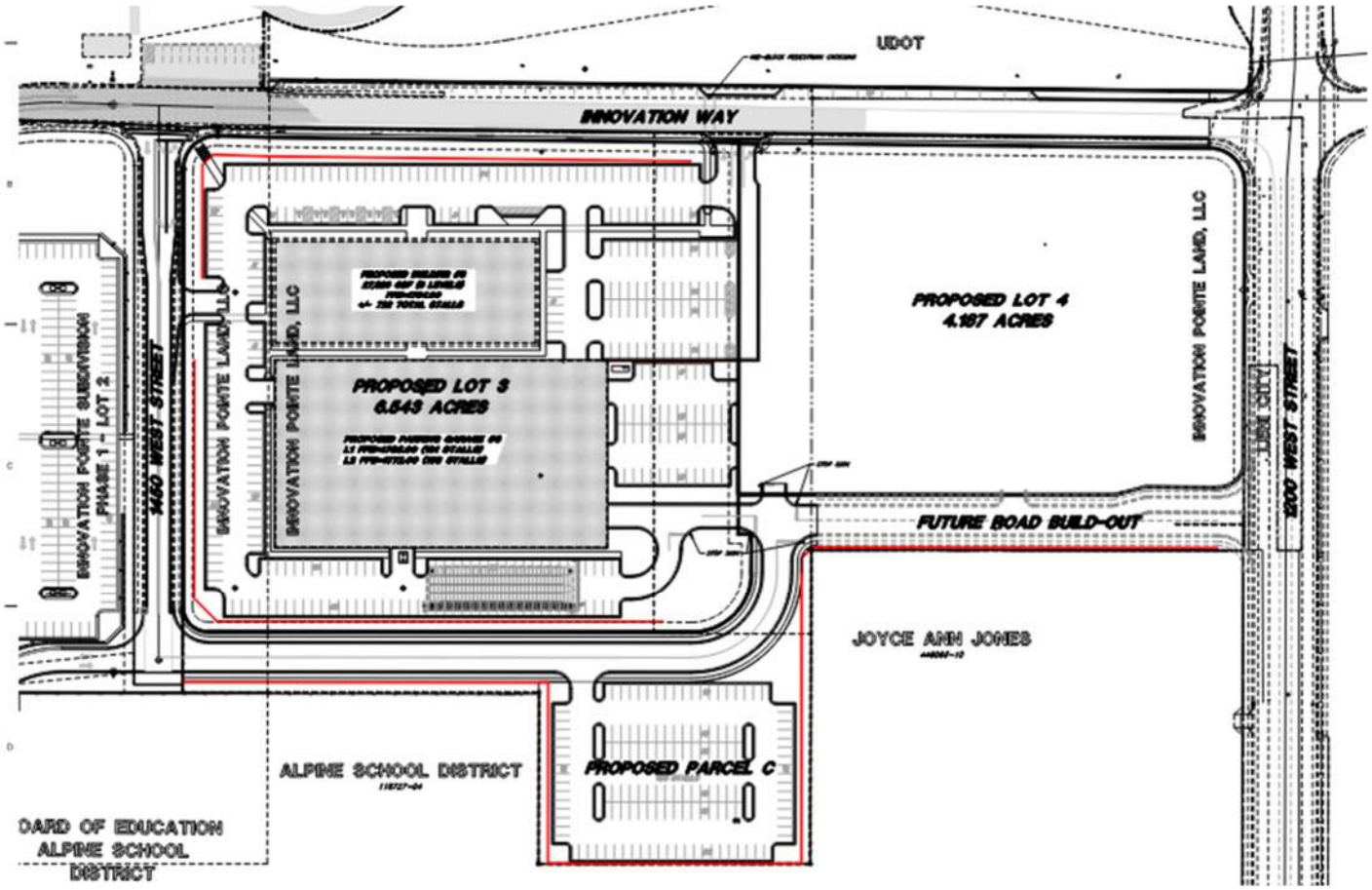
| | | ENVIRONMENTAL MONITOR | ENVIRONMENTAL QC/QA | ENVIRONMENTAL TECHNICIAN | CONSTRUCTION INSPECTOR | UTILITY ENGINEER | HOURS PER TASK | SUBCONSULTANTS | COST PER TASK |
|---|---|---|---|---|---|---|---|---|---|
| **RATE** | | $ 120.00 | $ 225.00 | $ 75.00 | $ 75.00 | $ 150.00 | | | |
| **TASK DESCRIPTION:** | | **LABOR HOURS:** | | | | | | | |
| | | | | | | | | | |
| **1.01** | Mitigation Site Construction Monitoring | 180 | 40 | 40 | 0 | 0 | 260 | $ - | $ 33,600.00 |
| **1.02** | Roadway SWPPP Inspections | 10 | 24 | 80 | 0 | 0 | 114 | $ - | $ 12,600.00 |
| **1.03** | Mitigation Site Annual Monitoring (5 Years) | 160 | 40 | 160 | 0 | 0 | 360 | $ - | $ 40,200.00 |
| **1.04** | Construction Inspection & Utility Coordination | 0 | 0 | 0 | 1600 | 240 | 1840 | $ - | $ 156,000.00 |
| | **Task 1 Subtotal** | **350** | **104** | **280** | **1600** | **240** | **2574** | $ - | $ 242,400.00 |
| | **TOTAL LABOR HOURS** | 350 | 104 | 280 | 1600 | 240 | **2574** | | |
| | **LABOR COSTS** | **$ 42,000.00** | **$ 23,400.00** | **$ 21,000.00** | **$ 120,000.00** | **$ 36,000.00** | **$ 242,400.00** | | **$ 242,400.00** |

| | |
|---|---|
| Task Costs | $ 242,400.00 |
| Subconsultants | $ - |
| Direct Expenses | $ - |
| **GRAND TOTAL** | **$ 242,400.00** |

HALES ENGINEERING
innovative transportation solutions

# Innovation Pointe

## Traffic Impact Study




## Lehi, Utah

**May 28, 2020**

**UT16-902**

LICENSED PROFESSIONAL ENGINEER
NO. 295699
RYAN R.
HALES
05/28/2020
STATE OF UTAH



1220 North 500 West, Ste. 202 Lehi, UT 84043 p 801.766.4343
www.halesengineering.com

# EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Innovation Pointe development located in Lehi, Utah. The proposed project is located south of Timpanogos Highway (SR-92), between 1200 West and Triumph Boulevard.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways near the site. Future 2025 and 2040 conditions were also analyzed.

The evening peak hour level of service (LOS) was computed for each study intersection. The results of this analysis are shown in Table ES-1. Recommended storage lengths are shown in Table ES-2.

**TABLE ES-1**
**LOS Analysis - Evening Peak Hour**
**Lehi - Innovation Pointe TIS**

| Intersection | Level of Service (Sec/Veh)[1] | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Existing (2020) | | | Future (2025) | | | | Future (2040) | | | |
| | Background | Mitigated Background | Plus Project | Background | Mitigated Background | Plus Project | Mitigated Plus Project | Background | Mitigated Background | Plus Project | Mitigated Plus Project |
| Triumph Boulevard / Timpanogos Highway (SR-92) | E (67.9) | D (52.3) | D (54.7) | E (62.8) | D (53.4) | E (59.3) | D (54.4) | E (62.5) | D (50.7) | D (53.5) | D (53.1) |
| 1200 West / Timpanogos Highway (SR-92) | C (33.5) | C (34) | C (34.2) | C (32.2) | C (33.1) | C (33.2) | C (33.9) | D (35.6) | D (37.5) | D (37.5) | D (36.9) |
| 3400 North / Triumph Boulevard | f (>50) / WBT | B (18.6) | C (27.6) | D (50) | B (19.1) | C (32.9) | C (32.3) | D (38.4) | C (29.3) | E (56.8) | D (53.1) |
| Innovation Way / 1200 West | c (21) / WBT | c (21.3) / EBL | d (25.2) / EBL | c (20.9) / EBL | c (24.6) / EBL | d (26.4) / EBL | d (29.6) / EBL | e (39.2) / EBL | d (32.7) / EBL | f (>50) / EBL | a (6.3) / WBR |
| Aces Athletics North Access / 1200 West | b (11.4) / WBL | a (5.7) / WBL | a (8.3) / WBL | a (9.4) / WBL | b (10.6) / WBL | a (10) / WBL | a (8.5) / WBL | b (10.3) / WBL | b (11.9) / WBL | b (10.8) / WBL | b (13.3) / WBL |
| Aces Athletics South Access / 1200 West | a (6.6) / WBL | a (9.1) / WBL | a (9.7) / WBL | a (10) / WBL | a (8.7) / WBL | a (8.2) / WBL | a (8.9) / WBL | b (10.4) / WBL | b (11.8) / WBL | b (12.7) / WBL | b (11.4) / WBL |
| 3200 North / 1200 West | A (5.3) | A (5.3) | A (5.5) | A (6.3) | A (6.2) | A (6.3) | A (6.2) | A (7.4) | A (7.1) | A (7.4) | A (7.9) |
| East Access / 1200 West[2] | - | - | - | - | - | - | - | - | - | - | e (38.9) / EBL |
| 3400 North / Innovation Way[2] | - | - | a (4) / SBR | - | - | a (6.6) / SBR | a (6) / SBR | - | - | a (9.3) / SBR | a (8.5) / SBR |

1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average for roundabout, signalized, all-way stop-controlled intersections and the worst approach for all other unsignalized intersections. Uppercase LOS used for signalized, roundabout, and all-way stop-controlled intersections. Lowercase LOS used for one-way & two-way stop-controlled intersections.
2. This intersection is project-related and was only analyzed in "plus project" scenarios.

Source: Hales Engineering, May 2020

| TABLE ES-2<br>Recommended Storage Lengths<br>Lehi - Innovation Pointe TIS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Intersection | Storage Length (feet) | | | | | | | |
| | Northbound | | Southbound | | Eastbound | | Westbound | |
| | LT | RT | LT | RT | LT | RT | LT | RT |
| 3400 North / Triumph Boulevard | - | - | - | - | - | - | - | 100 |
| Triumph Boulevard / Timpanogos Highway (SR-92) | 100 | 150 | - | - | - | - | - | - |
| Source: Hales Engineering, May 2020 | | | | | | | | |

## SUMMARY OF KEY FINDINGS/RECOMMENDATIONS

The following is a summary of key findings and recommendations:

**Existing 2020 Background Conditions**

- The Triumph Boulevard / Timpanogos Highway (SR-92) and 3400 North / Triumph Boulevard intersections are currently operating at an unacceptable LOS during the evening peak hour:
  - ***Recommendation:*** **Per UDOT's I-15 corridor plan, construct an additional through lane on the eastbound and westbound approaches of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection, and construct dual left-turn lanes on the westbound approach to mirror the eastbound approach.**
  - ***Recommendation:*** **Add a separate right-turn pocket to the northbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection.**
  - ***Recommendation:*** **Convert the left through lane on the northbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection to a second left-turn lane.**
  - ***Recommendation:*** **Restripe the southbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection to ensure that the right lane flows into one of the two right-turn lanes. Add a sign that says, "Right lane must turn right." It is currently ambiguous whether drivers should enter the thru lane from the right lane or the left lane.**
  - ***Recommendation:*** **Widen Triumph Boulevard to five lanes through the study area and to the south.**
  - ***Recommendation:*** **Restripe the westbound approach of the 3400 North / Triumph Boulevard intersection to create a dedicated right-turn pocket.**

- ***Recommendation:*** **Signalize the 3400 North / Triumph Boulevard intersection. While it is located close to an adjacent signalized intersection and not typically recommended, the morning peak hour volumes and projected future growth in the area necessitate it.**

**Existing 2020 Plus Project Conditions**

- All study intersections are anticipated to operate at an acceptable LOS during the evening peak hour in existing (2020) plus project conditions.
  - The development will consist of a single office building.

**Future 2025 Background Conditions**

- The Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to operate at an unacceptable LOS during the evening peak hour:
  - ***Recommendation:*** **Widen the structure to accommodate dual left-turn lanes, two through lanes, and a right-turn pocket on the northbound approach.**

**Future 2025 Plus Project Conditions**

- The Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to operate at an unacceptable LOS during the evening peak hour:
  - ***Recommendation:*** **Install permissive-protected left-turn phasing to the southbound approach of the 3400 North / Triumph Boulevard intersection.**
  - ***Recommendation:*** **Change the southbound approach lane configuration. Convert the inner right-turn lane into an exclusive through lane.**

**Future 2040 Background Conditions**

- The Triumph Boulevard / Timpanogos Highway (SR-92) and Innovation Way / 1200 West intersections are anticipated to operate at an unacceptable LOS during the evening peak hour:
  - ***Recommendation:*** **Change the southbound approach lane configuration. Convert the inner right-turn lane into an exclusive through lane.**
  - ***Recommendation:*** **Install permissive / protected left-turn phasing on the southbound approach of the 3400 North / Triumph Boulevard intersection.**

**Future 2040 Plus Project Conditions**

- The 3400 North / Triumph Boulevard and Innovation Way / 3400 North intersections are anticipated to operate at an unacceptable LOS during the evening peak hour conditions:
  - ***Recommendation:*** **Construct the East Access on 1200 West as proposed and restrict the movements on Innovation Way to right-in/right-out only.**

- ***Recommendation:*** **Add a right-turn overlap phase to the eastbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection.**

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# I. INTRODUCTION

## A. Purpose

This study addresses the traffic impacts associated with the Innovation Pointe development located in Lehi, Utah. The proposed project is located south of Timpanogos Highway (SR-92), between 1200 West and Triumph Boulevard. Figure 1 shows a vicinity map of the proposed development.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways near the site. Future 2025 and 2040 conditions were also analyzed.




**Figure 1: Vicinity map showing the project location in Lehi, 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:

- Triumph Boulevard / Timpanogos Highway (SR-92)
- 1200 West / Timpanogos Highway (SR-92)
- 3400 North / Triumph Boulevard
- Innovation Way / 1200 West
- Aces Athletics North Access / 1200 West
- Aces Athletics South Access / 1200 West
- 3200 North / 1200 West

## 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. Figure 2 provides a visual representation of each LOS letter designation.

The *Highway Capacity Manual* (HCM), 6$^{th}$ Edition, 2016 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 and all-way stop 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 approach.

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 B. Hales Engineering also calculated the 95$^{th}$ percentile queue lengths for the study intersections using SimTraffic. The detailed queue length reports are provided in Appendix D.

## 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**

| Level of Service | Description of Traffic Conditions | Average Delay (seconds/vehicle) |
|---|---|---|
| | **Signalized Intersections** | **Overall Intersection** |
| A | Extremely favorable progression and an extremely low level of control delay. Individual users are virtually unaffected by others in the traffic stream. | 0 ≤ 10.0 |
| B | Good progression and a low level of control delay. The presence of other users in the traffic stream becomes noticeable. | > 10.0 and ≤ 20.0 |
| C | Fair progression and a moderate level of control delay. The operation of individual users becomes somewhat affected by interactions with others in the traffic stream. | >20.0 and ≤ 35.0 |
| D | Marginal progression with relatively elevated levels of control delay. Operating conditions are noticeably more constrained. | > 35.0 and ≤ 55.0 |
| E | Poor progression with unacceptably elevated levels of control delay. Operating conditions are at or near capacity. | > 55.0 and ≤ 80.0 |
| F | Unacceptable progression with forced or breakdown operating conditions. | > 80.0 |
| | **Unsignalized Intersections** | **Worst Approach** |
| A | Free Flow / Insignificant Delay | 0 ≤ 10.0 |
| B | Stable Operations / Minimum Delays | >10.0 and ≤ 15.0 |
| C | Stable Operations / Acceptable Delays | >15.0 and ≤ 25.0 |
| D | Approaching Unstable Flows / Tolerable Delays | >25.0 and ≤ 35.0 |
| E | Unstable Operations / Significant Delays Can Occur | >35.0 and ≤ 50.0 |
| F | Forced Flows / Unpredictable Flows / Excessive Delays Occur | > 50.0 |

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 6th Edition, 2016 Methodology (Transportation Research Board)

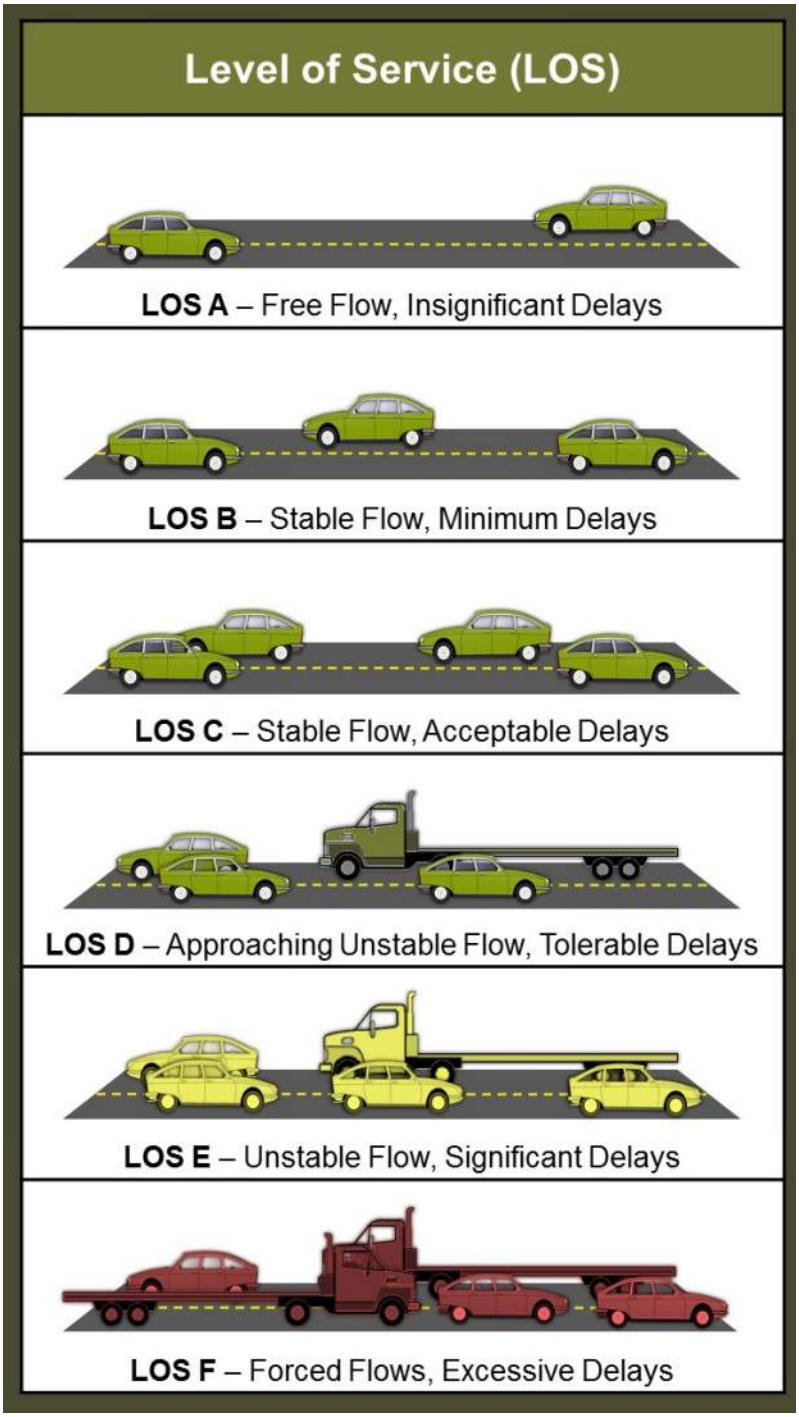



**Figure 2: Visual representation of the LOS letter designations**

# II. EXISTING (2020) 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:

Timpanogos Highway (SR-92) – is a state-maintained roadway (classified by UDOT access management standards as a "System Priority-Urban Importance" facility, or access category 3 roadway) that serves as an east/west connection from I-15 to several communities in northern Utah County, as well as to American Fork Canyon. As an access category 3 roadway, the minimum signal spacing is one-half mile, and no unsignalized access is permitted. Timpanogos Highway (SR-92) has two travel lanes in each direction separated by a wide center median, with separate right- and left-turn lanes at signalized intersection. A separate commuter lane also exists on this corridor but was excluded from these analyses as it is grade-separated from all study intersections. The posted speed limit in the vicinity of the project site is 55 mph.

Triumph Boulevard – is a city-maintained roadway that currently connects Traverse Mountain and the new Mountain Point Medical Center to Timpanogos Highway (SR-92). According to the Lehi City Transportation Master Plan, Triumph Boulevard is classified as an "arterial" roadway, that will eventually cross I-15, connecting the 2300 West. The posted speed limit on Triumph Boulevard is 30 mph.

1200 West – is a city-maintained roadway that runs north/south connecting to Timpanogos Highway (SR-92) and the I-15 / 2100 North (SR-85) interchange. 1200 West is classified by the Lehi City Transportation Master Plan as an "arterial." 1200 West currently has one travel lane in each direction, and the posted speed limit is 25 mph.

Innovation Way – is a city-maintained roadway that runs parallel to Timpanogos Highway (SR-92) between 3400 North and 1200 West. The posted speed limit on Innovation Way is 25 mph.

## 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:

- Triumph Boulevard / Timpanogos Highway (SR-92)

- 1200 West / Timpanogos Highway (SR-92)
- 3400 North / Triumph Boulevard
- Innovation Way / 1200 West
- Aces Athletics North Access / 1200 West
- Aces Athletics South Access / 1200 West
- 3200 North / 1200 West

The Triumph Boulevard counts were performed on Tuesday, July 9, 2019 and all other counts were performed on Wednesday, June 29, 2016 (with the exception of the 3200 North / 1200 West intersection which was counted on May 11, 2016). All counts were grown to 2020 with an assumed 3% growth rate. The morning peak hour was determined to be between 8:00 and 9:00 a.m., and the evening peak hour was determined to be between 5:00 and 6:00 p.m. The evening peak hour volumes were approximately 24% higher than the morning peak hour volumes. Therefore, the evening peak hour volumes were used in the analysis to represent the worst-case conditions. Detailed count data are included in Appendix A.

Building #2 in the Innovation Pointe commercial development was under construction at the time counts were taken on Triumph Boulevard. It is presumed that it is now complete. Trips were added to existing (2020) background conditions to reflect the added traffic from this office building. Building #1 was partially occupied at the time the counts were completed and the full number of trips generated by the building were added to the road network as a conservative measure.

Figure 3 shows the existing evening peak hour volumes as well as intersection geometry at the study intersections.

## D. Level of Service Analysis

Hales Engineering determined that the Triumph Boulevard / Timpanogos Highway (SR-92) and 3400 North / Triumph Boulevard intersections are currently operating at unacceptable levels of service during the evening peak hour, as shown in Table 2. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2020) conditions.

## E. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queueing was observed during the evening peak hour at the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (600 feet, westbound approach and 1,400 feet, northbound approach) and the 3400 North / Triumph Boulevard intersection (900 feet, westbound approach).

## F. Mitigation Measures

According to the Mountainland Association of Governments (MAG) Regional Transportation Plan, Triumph Boulevard is planned to be widened to five lanes. Additionally, Timpanogos Highway

(SR-92) is planned to be widened with an additional through lane in both directions as part of UDOT's I-15 Technology Corridor project. As a part of this project, dual left-turn lanes are anticipated to be added to the westbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection.

In addition to the SR-92 widening, it is recommended that dual left turn lanes be installed on the northbound approach, converting the existing leftmost through lane into a left-turn trap. A separate right-turn pocket should also be added. The existing pavement is wide enough to accommodate the installation if all lanes on the northbound approach are reduced to approximately 11.5 feet wide.

It is also recommended that the westbound approach of the 3400 North / Triumph Boulevard intersection be restriped to accommodate a shared thru/left-turn lane and a separate right-turn lane. 3400 North is wide enough to accomplish this without constructing additional pavement.

In conjunction with the right-turn pocket, the 3400 North / Triumph Boulevard intersection warrants a traffic signal, based on high anticipated southbound left-turn movements during the morning peak hour. While it would be spaced very closely to the adjacent traffic signal to the north, the future growth anticipated in the area necessitates it. For this reason, it is recommended that a traffic signal be installed at this location.

In performing the analysis, a safety concern was identified. On the southbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection, two travel lanes split into two left-turn lanes, a thru lane, and two right-turn lanes. The dashed striping ends 150 feet from the start of the turn lanes, and it is very ambiguous as to whether the right lane or the left lane should utilize the single thru lane at the intersection. The dashed line follows a pavement joint, which proceeds to follow down the middle of the thru lane. It is recommended that this portion of Triumph Boulevard be restriped such that the right lane may only use the right-turn lanes, supplemented with a sign that warns drivers that the right lane must turn right.

## G. Mitigated Scenario

With the proposed improvements, all study intersections are anticipated to operate at an acceptable LOS, as shown in Table 3.

**Lehi Innovation Pointe TIS**
**Existing (2020) Background**

**Evening Peak Hour**
**Figure 3**




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**Table 2: Existing (2020) Background Evening Peak Hour LOS**

| Intersection | | | Level of Service | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 67.9 | E |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 33.5 | C |
| 3400 North / Triumph Boulevard | EB/WB Stop | WBT | >50 | f |
| Innovation Way / 1200 West | EB/WB Stop | WBT | 21.0 | c |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 11.4 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 6.6 | a |
| 3200 North / 1200 West | Signal | - | 5.3 | A |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 3: Mitigated Existing (2020) Background Evening Peak Hour LOS**

| Intersection | | | Level of Service | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 52.3 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 34.0 | C |
| 3400 North / Triumph Boulevard | Signal | - | 18.6 | B |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 21.3 | c |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 5.7 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 9.1 | a |
| 3200 North / 1200 West | Signal | - | 5.3 | A |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

# 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 Innovation Pointe development is located south of Timpanogos Highway (SR-92), between Triumph Boulevard and 1200 West. The new portion of the development will consist of a single office building. A concept plan for the proposed development is provided in Appendix C.

The proposed land use for the development has been identified as follows:

- General Office Building 137,000 sq. ft.

## C. Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 10th Edition, 2017. Trip generation for the proposed project is included in Table 4.

The total trip generation for the development is as follows:

- Daily Trips: 1,354
- Morning Peak Hour Trips: 147
- Evening Peak Hour Trips: 145

## Table 4: Trip Generation

**Table 4**
**Lehi - Innovation Pointe**
**Trip Generation**

| **Weekday Daily** Land Use[1] | # of Units | Unit Type | Trip Generation | % Entering | % Exiting | Trips Entering | Trips Exiting | Transit Reduction | Net Trips Entering | Net Trips Exiting | **Total Daily Trips** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building (710) | 137 | 1,000 Sq. Ft. GFA | 1,440 | 50% | 50% | 720 | 720 | 6% | 677 | 677 | **1,354** |
| Project Total Daily Trips | | | | | | **720** | **720** | | **677** | **677** | **1,354** |
| **Morning Peak Hour** Land Use[1] | # of Units | Unit Type | Trip Generation | % Entering | % Exiting | Trips Entering | Trips Exiting | Transit Reduction | Net Trips Entering | Net Trips Exiting | **Total a.m. Trips** |
| General Office Building (710) | 137 | 1,000 Sq. Ft. GFA | 156 | 86% | 14% | 134 | 22 | 6% | 126 | 21 | **147** |
| Project Total a.m. Peak Hour Trips | | | | | | **134** | **22** | | **126** | **21** | **147** |
| **Evening Peak Hour** Land Use[1] | # of Units | Unit Type | Trip Generation | % Entering | % Exiting | Trips Entering | Trips Exiting | Transit Reduction | Net Trips Entering | Net Trips Exiting | **Total p.m. Trips** |
| General Office Building (710) | 137 | 1,000 Sq. Ft. GFA | 154 | 16% | 84% | 25 | 129 | 6% | 24 | 121 | **145** |
| Project Total p.m. Peak Hour Trips | | | | | | **25** | **129** | | **24** | **121** | **145** |

1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 10th Edition, 2017.

SOURCE: Hales Engineering, May 2020

## 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. The resulting distribution of project generated trips during the evening peak hour is as follows:

To/From Project:

- 65% West
- 5% North
- 5% South
- 25% East

These trip distribution assumptions were used to assign the evening peak hour generated traffic at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 4.

**Lehi Innovation Pointe TIS**
**Trip Assignment**

**Evening Peak Hour**
**Figure 4**



## E. Access

The proposed access for the site will be gained at the following locations (see also concept plan in Appendix C):

3400 North:

- 3400 North is currently accessed via the existing Innovation Way intersection.

1200 West:

- 1200 West is also currently accessed via Innovation Way.
- A future East Access is planned approximately 350 feet south of the Innovation Way / 1200 West intersection. It will not be included in the analysis until the Innovation Way / 1200 West intersection performs at an unacceptable LOS, at which point it will be needed. It is anticipated that the access will be stop-controlled.

# IV. EXISTING (2020) PLUS PROJECT CONDITIONS

## A. Purpose

The purpose of the existing (2020) 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 (2020) background traffic volumes to predict turning movement volumes for existing (2020) plus project conditions. Existing (2020) plus project evening peak hour turning movement volumes are shown in Figure 5.

## C. Level of Service Analysis

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

## D. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour at the 3400 North / Triumph Boulevard intersection (500 feet, northbound) and the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (470 feet, northbound and westbound).

## E. Mitigation Measures

No mitigation measures are recommended.

**Lehi Innovation Pointe TIS**
**Existing (2020) Plus Project**

**Evening Peak Hour**
**Figure 5**




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**Table 5: Existing (2020) Plus Project Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 54.7 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 34.2 | C |
| 3400 North / Triumph Boulevard | Signal | - | 27.6 | C |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 25.2 | d |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 8.3 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 9.7 | a |
| 3200 North / 1200 West | Signal | - | 5.5 | A |
| Innovation Way / 3400 North | SB Stop | SBR | 4.0 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

# V. FUTURE (2025) BACKGROUND CONDITIONS

## A. Purpose

The purpose of the future (2025) 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 MAG Regional Transportation Plan, there are no projects planned in the study area before 2025. Therefore, no changes were made.

## C. Traffic Volumes

Hales Engineering obtained future (2025) forecasted volumes from the Wasatch Front Regional Council (WFRC) / Mountainland Association of Governments (MAG) travel demand model. Peak period turning movement counts were estimated using National Cooperative Highway Research Program (NCHRP) 255 methodologies which utilize existing peak period turn volumes and future average weekday daily traffic (AWDT) volumes to project the future turn volumes at the major intersections. Future (2025) evening peak hour turning movement volumes are shown in Figure 6.

## D. Level of Service Analysis

Hales Engineering determined that the Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to operate at an unacceptable LOS during the evening peak hour in future (2025) background conditions, as shown in Table 6. These results serve as a baseline condition for the impact analysis of the proposed development for future (2025) conditions.

## E. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour at the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (450 feet, east- and westbound approaches, 950 feet, southbound approach, and 1,300 feet, northbound approach) and at the 3400 North / Triumph Boulevard intersection (750 feet, westbound approach).

## F. Mitigation Measures

Some improvements will need to be made to the northbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection to operate at an acceptable LOS. It is recommended

that two through lanes be constructed on the northbound approach in addition to the dual left-turn lanes recommended earlier. The inherent difficulty with this recommendation; however, is that the northbound approach is located on a bridge over a commuter lane. According to the MAG Regional Transportation Plan, the commuter lanes along Timpanogos Highway (SR-92) are planned to be widened, so perhaps replacing the bridge with a wider one could be done in conjunction with this project.

It is also recommended that a right-turn overlap phase be added to the northbound approach.

## G. Mitigated Scenario

With the proposed improvements, it is anticipated that the Triumph Boulevard / Timpanogos Highway (SR-92) intersection will operate at an acceptable LOS D, as shown in Table 7.

**Lehi Innovation Pointe TIS**
**Future (2025) Background**

**Evening Peak Hour**
**Figure 6**




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**Table 6: Future (2025) Background Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 62.8 | E |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 32.2 | C |
| 3400 North / Triumph Boulevard | Signal | - | 50.0 | D |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 20.9 | c |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 9.4 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 10.0 | a |
| 3200 North / 1200 West | Signal | - | 6.3 | A |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 7: Mitigated Future (2025) Background Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Approach[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 53.4 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 33.1 | C |
| 3400 North / Triumph Boulevard | Signal | - | 19.1 | B |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 24.6 | c |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 10.6 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 8.7 | a |
| 3200 North / 1200 West | Signal | - | 6.2 | A |

1. Approach indicated for non-all-way stop-controlled intersections where delay and LOS represents worst approach. SB = Southbound approach, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for non-AWSC intersections.

Source: Hales Engineering, April 2020

# VI. FUTURE (2025) PLUS PROJECT CONDITIONS

## A. Purpose

The purpose of the future (2025) 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 (2025) background traffic volumes to predict turning movement volumes for future (2025) plus project conditions. Future (2025) plus project evening peak hour turning movement volumes are shown in Figure 7.

## C. Level of Service Analysis

Hales Engineering determined that the Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to operate at an unacceptable LOS E during the evening peak hour in future (2025) plus project conditions, as shown in Table 8.

## D. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour at the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (800 feet, southbound approach and 500 feet, northbound approach) and at the 3400 North / Triumph Boulevard intersection (650 feet, westbound approach).

## E. Mitigation Measures

While the 3400 North / Triumph Boulevard intersection is operating at an acceptable LOS, it creates a queueing problem for the Triumph Boulevard / Timpanogos Highway (SR-92) intersection. The southbound queue extends into the intersection and hinders the operation. Permissive / Protected left-turn phasing is warranted on the southbound approach of the 3400 North / Triumph Boulevard intersection, according to UDOT left-turn guidelines. For this reason, it is recommended that permissive / protected phasing be installed on the southbound approach only.

Currently, the lane configuration of the southbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection is two left-turn lanes, a single thru lane, and two right-turn lanes. Due to the change in future volumes, a better option may be to change the

configuration to two left-turn lanes, two thru lanes, and a single right-turn lane. This would only require restriping without any additional improvements.

## F. Mitigated Scenario

With the proposed improvements, it is anticipated that the Triumph Boulevard / Timpanogos Highway (SR-92) intersection will operate at an acceptable LOS D, as shown in Table 9.

**Lehi Innovation Pointe TIS**
**Future (2025) Plus Project**

**Evening Peak Hour**
**Figure 7**




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**Table 8: Future (2025) Plus Project Evening Peak Hour LOS**

| Intersection | | | Level of Service | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 59.3 | E |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 33.2 | C |
| 3400 North / Triumph Boulevard | Signal | - | 32.9 | C |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 26.4 | d |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 10.0 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 8.2 | a |
| 3200 North / 1200 West | Signal | - | 6.3 | A |
| Innovation Way / 3400 North | SB Stop | SBR | 6.6 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 9: Mitigated Future (2025) Plus Project Evening Peak Hour LOS**

| Intersection | | | Level of Service | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 54.4 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 33.9 | C |
| 3400 North / Triumph Boulevard | Signal | - | 32.3 | C |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 29.6 | d |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 8.5 | a |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 8.9 | a |
| 3200 North / 1200 West | Signal | - | 6.2 | A |
| Innovation Way / 3400 North | SB Stop | SBR | 6.0 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

# VII. FUTURE (2040) BACKGROUND CONDITIONS

## A. Purpose

The purpose of the future (2040) 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 MAG Regional Transportation Plan, the commuter lanes along Timpanogos Highway (SR-92) are planned to be widened. However, because they are not part of the study intersections, no changes were made to the roadway network for the future (2040) analysis.

## C. Traffic Volumes

Hales Engineering obtained future (2040) forecasted volumes from the WFRC / MAG travel demand model. Peak period turning movement counts were estimated using National Cooperative Highway Research Program (NCHRP) 255 methodologies which utilize existing peak period turn volumes and future average weekday daily traffic (AWDT) volumes to project the future turn volumes at the major intersections. The widening of the commuter lanes is anticipated to lower volumes on Timpanogos Highway (SR-92). Future (2040) background evening peak hour turning movement volumes are shown in Figure 8.

## D. Level of Service Analysis

Hales Engineering determined that the Triumph Boulevard / Timpanogos Highway (SR-92) and Innovation Way / 1200 West intersections are anticipated to operate at unacceptable levels of service during the evening peak hour in future (2040) background conditions, as shown in Table 10. These results serve as a baseline condition for the impact analysis of the proposed development for future (2040) conditions.

## E. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour on all approaches of the Triumph Boulevard / Timpanogos Highway intersection with the highest being 950 feet on the southbound approach. Significant queueing is also anticipated on the westbound approach of the 3400 North / Triumph Boulevard intersection with a queue of 800 feet.

## F. Mitigation Measures

While the 3400 North / Triumph Boulevard intersection is operating at an acceptable LOS, it creates a queueing problem for the Triumph Boulevard / Timpanogos Highway (SR-92) intersection. The southbound queue extends into the intersection and hinders the operation. Permissive / Protected left-turn phasing is recommended on the southbound approach of the 3400 North / Triumph Boulevard intersection.

It is also recommended that the lane configuration of the southbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection be changed to dual left-turn lanes, two through lanes, and a single right-turn lane. This should only require restriping.

## G. Mitigated Scenario

With these improvements, nearly all study intersections are anticipated to operate at an acceptable LOS in future (2020) background conditions, as shown in Table 11. Because of the location of the Innovation Way / 1200 West intersection, both in its terms of proximity to Timpanogos Highway (SR-92) and its position on a grade, it cannot be mitigated. Drivers will learn to adapt and reroute.

**Lehi Innovation Pointe TIS**
**Future (2040) Background**

**Evening Peak Hour**
**Figure 8**




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**Table 10: Future (2040) Background Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Approach[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 62.5 | E |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 35.6 | D |
| 3400 North / Triumph Boulevard | Signal | - | 38.4 | D |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 39.2 | e |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 10.3 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 10.4 | b |
| 3200 North / 1200 West | Signal | - | 7.4 | A |

1. Approach indicated for non-all-way stop-controlled intersections where delay and LOS represents worst approach. SB = Southbound approach, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for non-AWSC intersections.

Source: Hales Engineering, April 2020

**Table 11: Mitigated Future (2040) Background Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Approach[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 50.7 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 37.5 | D |
| 3400 North / Triumph Boulevard | Signal | - | 29.3 | C |
| Innovation Way / 1200 West | EB/WB Stop | EBL | 32.7 | d |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 11.9 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 11.8 | b |
| 3200 North / 1200 West | Signal | - | 7.1 | A |

1. Approach indicated for non-all-way stop-controlled intersections where delay and LOS represents worst approach. SB = Southbound approach, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for non-AWSC intersections.

Source: Hales Engineering, April 2020

# VIII. FUTURE (2040) PLUS PROJECT CONDITIONS

## A. Purpose

The purpose of the future (2040) 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 (2040) background traffic volumes to predict turning movement volumes for future (2040) plus project conditions. Future (2040) plus project evening peak hour turning movement volumes are shown in Figure 9.

## C. Level of Service Analysis

Hales Engineering determined that the 3400 North / Triumph Boulevard and Innovation Way / 1200 West intersections are anticipated to operate at an unacceptable LOS during the evening peak hour in future (2040) plus project conditions, as shown in Table 12.

## D. Queuing Analysis

Hales Engineering calculated the 95$^{th}$ percentile queue lengths for each of the study intersections. Some significant queuing is anticipated during the evening peak hour at the Triumph Boulevard / Timpanogos Highway (SR-92) intersection (eastbound, 390 feet and northbound, 480 feet) and at the 3400 North / Triumph Boulevard intersection (800 feet, westbound approach and 900 feet, northbound approach).

## E. Mitigation Measures

Because the unique location of the Innovation Way / 1200 West intersection on a grade, the intersection itself cannot be mitigated. For this reason, it is recommended that the proposed East Access be constructed before 2040 and that the Innovation Way / 1200 West intersection be restricted to right-in/right-out movements only.

While the Triumph Boulevard / Timpanogos Highway (SR-92) intersection is anticipated to perform at an acceptable LOS in the future (2040) plus project scenario, its proximity to the 3400 North / Triumph Boulevard intersection creates some operational problems. For this reason, it is recommended that a right-turn overlap phase be added to the eastbound approach of the Triumph Boulevard / Timpanogos Highway (SR-92) intersection.

## F. Mitigated Scenario

With the proposed improvements, it is anticipated that the 3400 North / Triumph Boulevard and Innovation Way / 1200 West intersections will perform at an acceptable LOS, as shown in Table 13. The East Access / 1200 West intersection is anticipated to perform at LOS E. However, little can be done to mitigate this intersection as the volumes do not warrant a signal. Drivers will learn to adapt and reroute.

Left-turn movements and some right-turn movements were rerouted from Innovation Way to the East Access.

## G. Recommended Storage Lengths

Hales Engineering determined recommended storage lengths based on the 95$^{th}$ percentile queue lengths given in the future (2040) plus project scenario. These storage lengths do not include the taper length. Recommended storage lengths for the study intersections are shown in Table 14. Intersections shown in Table 14 include new intersections and existing intersections that have recommended storage length changes.

**Lehi Innovation Pointe TIS**
**Future (2040) Plus Project**

**Evening Peak Hour**
**Figure 9**




**Hales Engineering**
**1220 North 500 West, Ste. 202 Lehi, Utah 84043**

**801.766.4343**
**05/27/2020**

412

**Table 12: Future (2040) Plus Project Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 53.5 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 37.5 | D |
| 3400 North / Triumph Boulevard | Signal | - | 56.8 | E |
| Innovation Way / 1200 West | EB/WB Stop | EBL | >50 | f |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 10.8 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 12.7 | b |
| 3200 North / 1200 West | Signal | - | 7.4 | A |
| Innovation Way / 3400 North | SB Stop | SBR | 9.3 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 13: Mitigated Future (2040) Plus Project Evening Peak Hour LOS**

| Intersection | | Level of Service | | |
|---|---|---|---|---|
| Description | Control | Movement[1] | Aver. Delay (Sec/Veh) | LOS[2] |
| Triumph Boulevard / Timpanogos Highway (SR-92) | Signal | - | 53.1 | D |
| 1200 West / Timpanogos Highway (SR-92) | Signal | - | 36.9 | D |
| 3400 North / Triumph Boulevard | Signal | - | 53.1 | D |
| Innovation Way / 1200 West | EB/WB Stop | WBR | 6.3 | a |
| Aces Athletics North Access / 1200 West | WB Stop | WBL | 13.3 | b |
| Aces Athletics South Access / 1200 West | WB Stop | WBL | 11.4 | b |
| 3200 North / 1200 West | Signal | - | 7.9 | A |
| East Access / 1200 West | EB Stop | EBL | 38.9 | e |
| Innovation Way / 3400 North | SB Stop | SBR | 8.5 | a |

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 non-AWSC intersections.

Source: Hales Engineering, May 2020

**Table 14: Recommended Storage Lengths**

| Recommended Storage Lengths<br>Lehi - Innovation Pointe TIS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Intersection | Storage Length (feet) | | | | | | | |
| | Northbound | | Southbound | | Eastbound | | Westbound | |
| | LT | RT | LT | RT | LT | RT | LT | RT |
| 3400 North / Triumph Boulevard | - | - | - | - | - | - | - | 100 |
| Triumph Boulevard / Timpanogos Highway (SR-92) | 100 | 150 | - | - | - | - | - | - |

Source: Hales Engineering, May 2020

# APPENDIX A

## Turning Movement Counts

# TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

## Intersection Turning Movement Summary

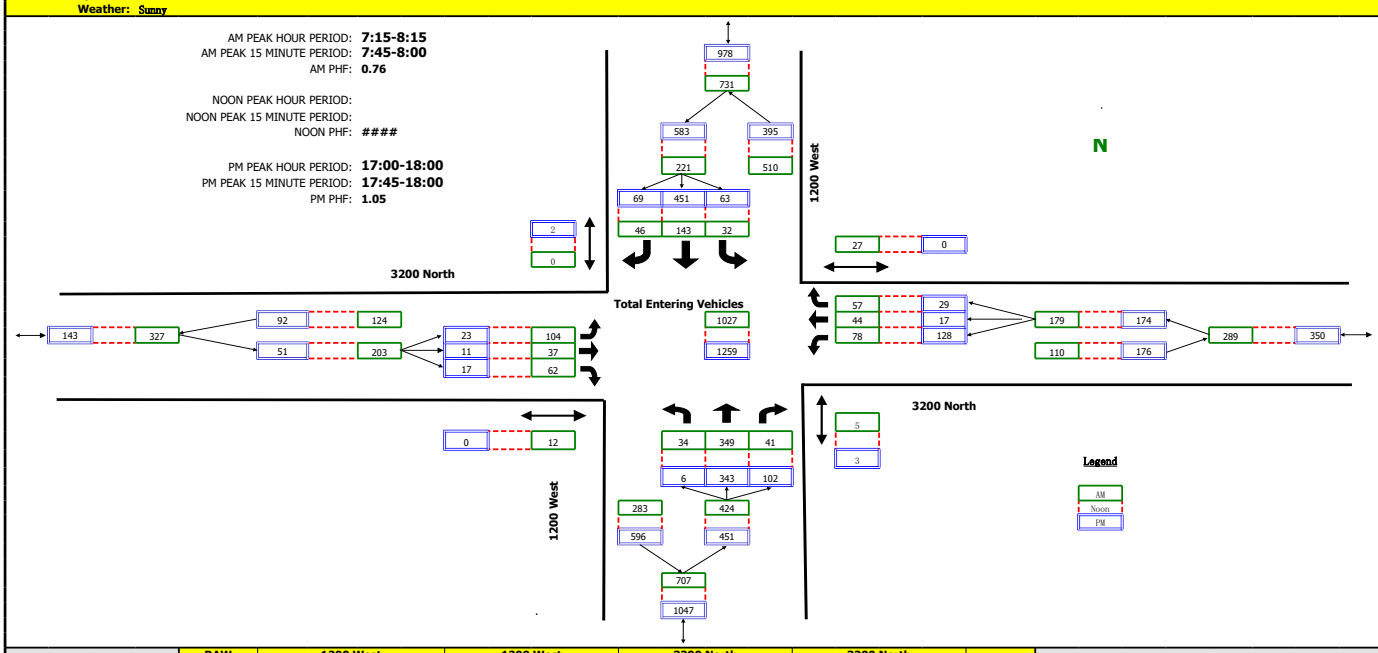
**Intersection:** 1200 West / 3200 North
**North/South:** 1200 West
**East/West:** 3200 North
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:** Sunny

**Date:** 5-11-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **7:15-8:15**
AM PEAK 15 MINUTE PERIOD: **7:45-8:00**
AM PHF: **0.76**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: **####**

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:45-18:00**
PM PHF: **1.05**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | 3200 North Eastbound | | | | 3200 North Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 3 | 56 | 15 | 0 | 6 | 25 | 1 | 0 | 12 | 2 | 1 | 0 | 25 | 1 | 12 | 0 | 159 |
| 7:15-7:30 | 15 | 67 | 9 | 0 | 8 | 31 | 4 | 0 | 13 | 4 | 1 | 0 | 17 | 4 | 8 | 1 | 181 |
| 7:30-7:45 | 9 | 76 | 6 | 3 | 6 | 30 | 13 | 0 | 16 | 6 | 14 | 8 | 22 | 9 | 10 | 14 | 217 |
| 7:45-8:00 | 2 | 97 | 9 | 1 | 6 | 40 | 21 | 0 | 46 | 21 | 31 | 3 | 22 | 24 | 18 | 9 | 337 |
| 8:00-8:15 | 4 | 70 | 12 | 0 | 8 | 26 | 3 | 0 | 17 | 2 | 9 | 0 | 8 | 2 | 15 | 0 | 176 |
| 8:15-8:30 | 1 | 82 | 10 | 0 | 3 | 35 | 4 | 0 | 7 | 3 | 2 | 3 | 20 | 5 | 5 | 2 | 177 |
| 8:30-8:45 | 4 | 59 | 14 | 0 | 5 | 33 | 2 | 2 | 9 | 1 | 1 | 0 | 18 | 4 | 7 | 5 | 157 |
| 8:45-9:00 | 4 | 73 | 10 | 0 | 3 | 36 | 11 | 0 | 16 | 3 | 9 | 1 | 17 | 13 | 9 | 12 | 204 |

**NOON PERIOD COUNTS**

| Period | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

**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 | 64 | 32 | 0 | 9 | 79 | 9 | 0 | 9 | 4 | 8 | 0 | 19 | 2 | 10 | 0 | 246 |
| 16:15-16:30 | 1 | 70 | 24 | 1 | 8 | 80 | 5 | 0 | 9 | 0 | 2 | 1 | 24 | 2 | 11 | 1 | 236 |
| 16:30-16:45 | 1 | 63 | 20 | 0 | 15 | 94 | 12 | 0 | 4 | 4 | 2 | 1 | 36 | 1 | 7 | 0 | 259 |
| 16:45-17:00 | 2 | 65 | 23 | 0 | 11 | 86 | 10 | 0 | 8 | 1 | 3 | 0 | 23 | 0 | 12 | 0 | 244 |
| 17:00-17:15 | 1 | 66 | 23 | 2 | 16 | 112 | 19 | 0 | 9 | 4 | 4 | 0 | 22 | 5 | 7 | 0 | 288 |
| 17:15-17:30 | 0 | 77 | 18 | 1 | 14 | 109 | 15 | 0 | 4 | 0 | 1 | 0 | 39 | 1 | 6 | 0 | 284 |
| 17:30-17:45 | 2 | 73 | 23 | 0 | 14 | 81 | 14 | 1 | 2 | 3 | 4 | 0 | 18 | 5 | 7 | 0 | 246 |
| 17:45-18:00 | 2 | 89 | 27 | 0 | 12 | 99 | 13 | 1 | 5 | 3 | 6 | 0 | 35 | 4 | 6 | 0 | 301 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

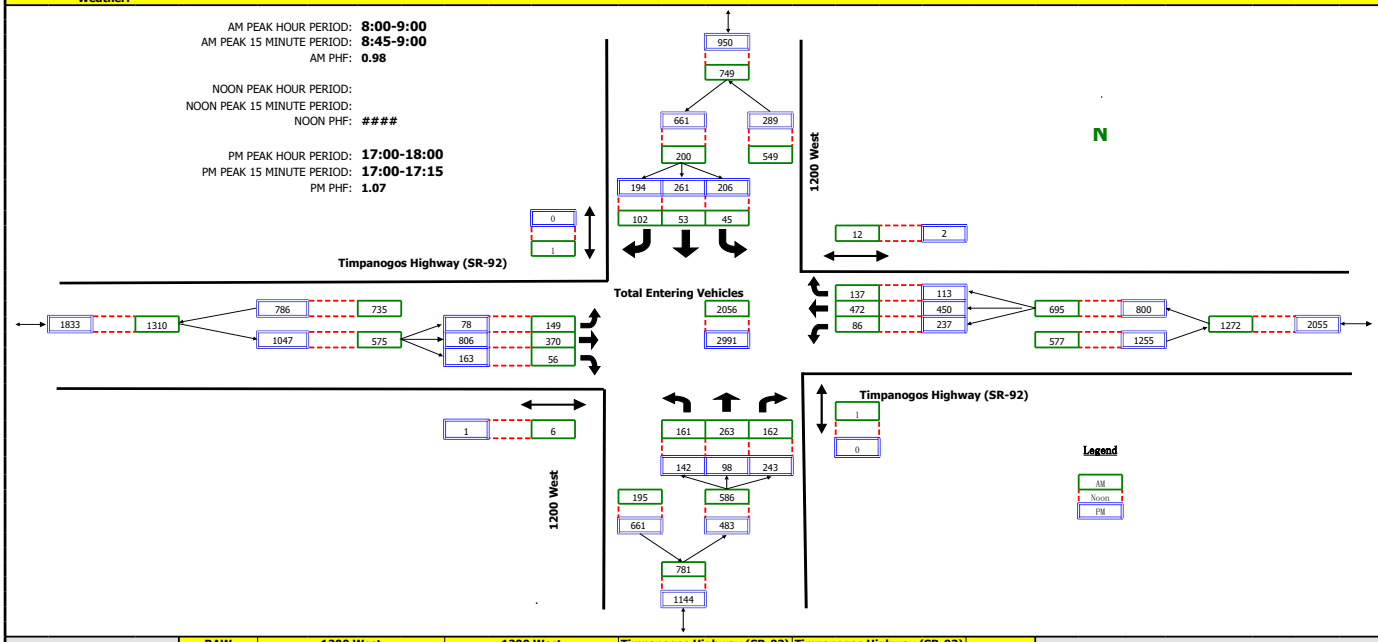
**Intersection:** 1200 West / Timpanogos Highway (SR-92)
**North/South:** 1200 West
**East/West:** Timpanogos Highway (SR-92)
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:**

**Date:** 6-29-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **8:00-9:00**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.98**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: ####

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:00-17:15**
PM PHF: **1.07**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | Timpanogos Highway (SR-92) Eastbound | | | | Timpanogos Highway (SR-92) Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 20 | 30 | 35 | 0 | 6 | 6 | 17 | 0 | 14 | 60 | 5 | 0 | 13 | 74 | 12 | 1 | 292 |
| 7:15-7:30 | 24 | 23 | 28 | 0 | 11 | 10 | 19 | 0 | 12 | 61 | 13 | 0 | 11 | 91 | 12 | 0 | 315 |
| 7:30-7:45 | 32 | 51 | 36 | 0 | 20 | 14 | 14 | 0 | 28 | 83 | 10 | 0 | 11 | 92 | 13 | 2 | 404 |
| 7:45-8:00 | 47 | 57 | 61 | 0 | 13 | 12 | 14 | 0 | 28 | 102 | 12 | 0 | 13 | 103 | 30 | 1 | 492 |
| 8:00-8:15 | 39 | 60 | 41 | 0 | 18 | 17 | 26 | 1 | 30 | 74 | 12 | 0 | 22 | 100 | 41 | 1 | 480 |
| 8:15-8:30 | 33 | 45 | 25 | 0 | 8 | 11 | 19 | 0 | 24 | 74 | 11 | 1 | 14 | 107 | 23 | 2 | 394 |
| 8:30-8:45 | 34 | 46 | 36 | 1 | 8 | 11 | 16 | 0 | 32 | 79 | 14 | 1 | 12 | 116 | 24 | 7 | 428 |
| 8:45-9:00 | 37 | 83 | 42 | 0 | 6 | 8 | 30 | 0 | 46 | 102 | 13 | 3 | 28 | 96 | 34 | 1 | 525 |
| **NOON PERIOD COUNTS** | | | | | | | | | | | | | | | | | |
| **Period** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** | **M** | **N** | **O** | **P** | **TOTAL** |
| 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 |
| **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 | 31 | 11 | 40 | 0 | 15 | 48 | 32 | 0 | 19 | 122 | 22 | 0 | 20 | 90 | 8 | 1 | 458 |
| 16:15-16:30 | 22 | 16 | 20 | 0 | 37 | 31 | 32 | 0 | 16 | 148 | 35 | 2 | 38 | 118 | 8 | 0 | 521 |
| 16:30-16:45 | 25 | 17 | 36 | 0 | 22 | 58 | 37 | 1 | 6 | 118 | 34 | 1 | 65 | 155 | 19 | 2 | 592 |
| 16:45-17:00 | 28 | 12 | 42 | 0 | 30 | 77 | 40 | 0 | 16 | 150 | 37 | 0 | 40 | 90 | 8 | 0 | 570 |
| 17:00-17:15 | 28 | 20 | 55 | 0 | 57 | 84 | 48 | 0 | 21 | 179 | 48 | 0 | 53 | 87 | 21 | 0 | 701 |
| 17:15-17:30 | 36 | 20 | 49 | 0 | 46 | 56 | 52 | 0 | 18 | 184 | 21 | 0 | 62 | 98 | 28 | 0 | 670 |
| 17:30-17:45 | 32 | 28 | 52 | 0 | 47 | 50 | 36 | 0 | 14 | 184 | 23 | 1 | 49 | 108 | 33 | 2 | 656 |
| 17:45-18:00 | 30 | 19 | 60 | 0 | 33 | 42 | 36 | 0 | 16 | 169 | 53 | 0 | 47 | 107 | 18 | 0 | 630 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

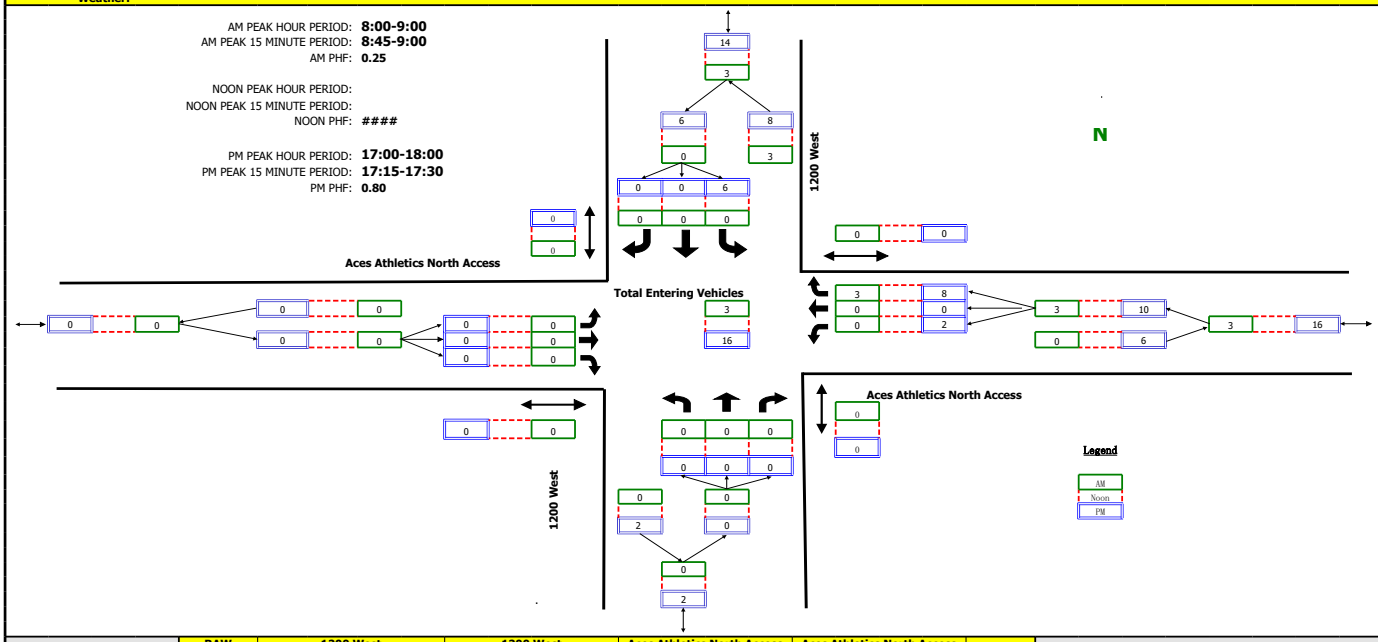
**Intersection:** 1200 West / Aces Athletics North Access
**North/South:** 1200 West
**East/West:** Aces Athletics North Access
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:**

**Date:** 6-29-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **8:00-9:00**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.25**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: **####**

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:15-17:30**
PM PHF: **0.80**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | Aces Athletics North Access Eastbound | | | | Aces Athletics North Access Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15-7:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30-7:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45-8:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00-8:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15-8:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30-8:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45-9:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |

**NOON PERIOD COUNTS**

| Period | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

**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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00-17:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| 17:15-17:30 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 5 |
| 17:30-17:45 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 5 |
| 17:45-18:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

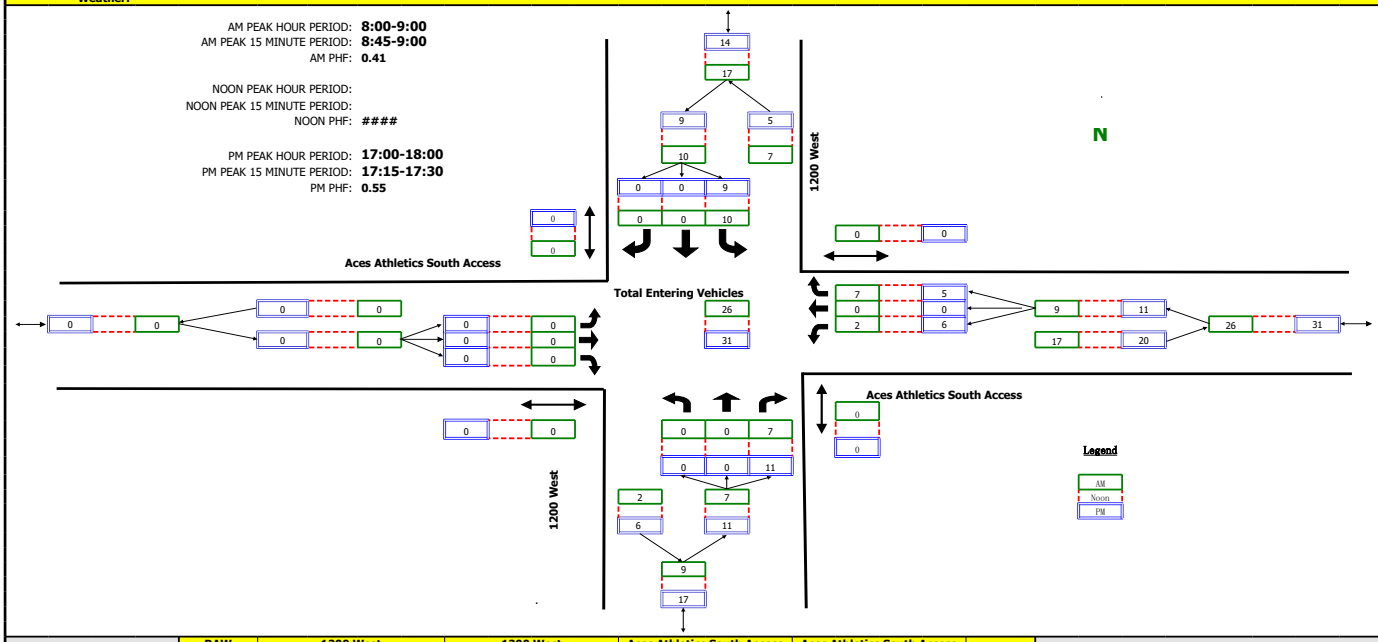
**Intersection:** 1200 West / Aces Athletics South Access
**North/South:** 1200 West
**East/West:** Aces Athletics South Access
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:**

**Date:** 6-29-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **8:00-9:00**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.41**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: **####**

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:15-17:30**
PM PHF: **0.55**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | Aces Athletics South Access Eastbound | | | | Aces Athletics South Access Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| 7:15-7:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 7:30-7:45 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| 7:45-8:00 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| 8:00-8:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 8:15-8:30 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 |
| 8:30-8:45 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:45-9:00 | 0 | 0 | 4 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 16 |

**NOON PERIOD COUNTS**

| Period | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

**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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| 17:00-17:15 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| 17:15-17:30 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 14 |
| 17:30-17:45 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 |
| 17:45-18:00 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 6 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

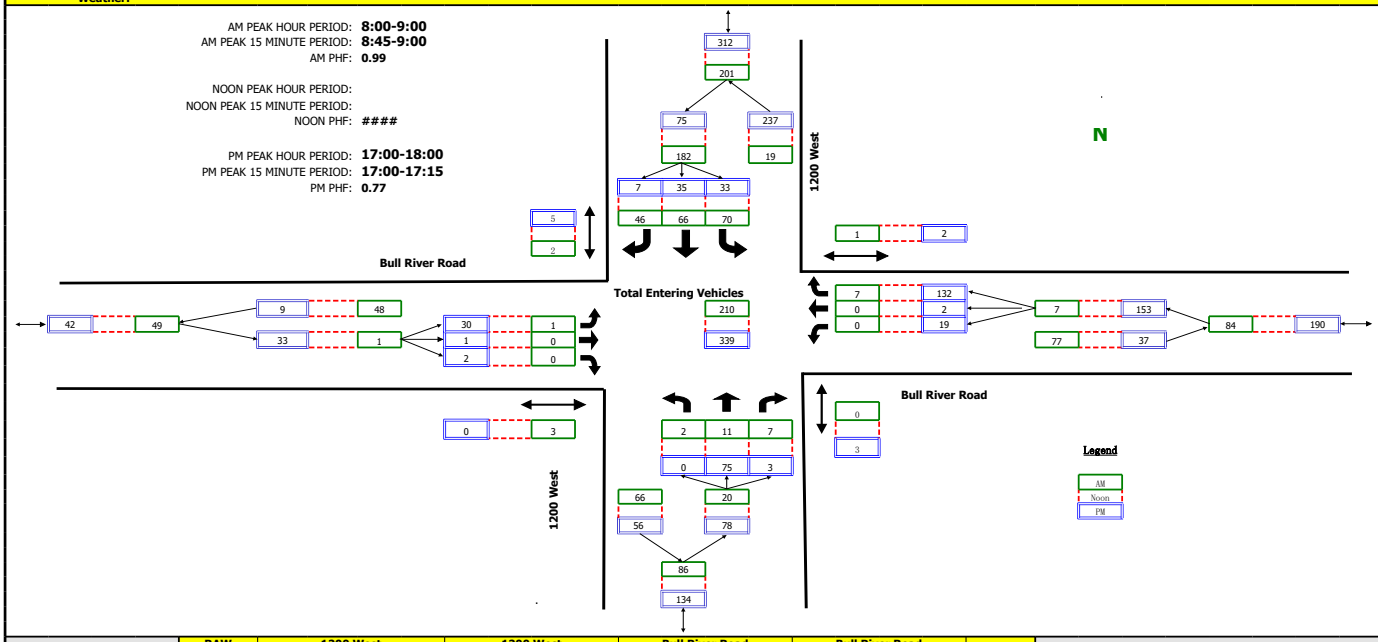
**Intersection:** 1200 West / Bull River Road
**North/South:** 1200 West
**East/West:** Bull River Road
**Jurisdiction:** Lehi
**Project Title:** Lehi Bull River Road Office Buildings TIS
**Project No:** UT16-901
**Weather:**

**Date:** 6-29-16, Wed
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 4

AM PEAK HOUR PERIOD: **8:00-9:00**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.99**

NOON PEAK HOUR PERIOD:
NOON PEAK 15 MINUTE PERIOD:
NOON PHF: **####**

PM PEAK HOUR PERIOD: **17:00-18:00**
PM PEAK 15 MINUTE PERIOD: **17:00-17:15**
PM PHF: **0.77**




| RAW COUNT SUMMARIES | 1200 West Northbound | | | | 1200 West Southbound | | | | Bull River Road Eastbound | | | | Bull River Road Westbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 2 | 0 | 0 | 6 | 11 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 23 |
| 7:15-7:30 | 1 | 2 | 2 | 0 | 17 | 5 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 33 |
| 7:30-7:45 | 0 | 1 | 1 | 0 | 20 | 15 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 40 |
| 7:45-8:00 | 0 | 2 | 2 | 0 | 14 | 16 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 46 |
| 8:00-8:15 | 0 | 0 | 3 | 0 | 14 | 17 | 10 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 45 |
| 8:15-8:30 | 0 | 1 | 1 | 0 | 13 | 11 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 37 |
| 8:30-8:45 | 2 | 3 | 0 | 0 | 15 | 21 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 52 |
| 8:45-9:00 | 0 | 6 | 2 | 0 | 20 | 10 | 13 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 53 |
| **NOON PERIOD COUNTS** | | | | | | | | | | | | | | | | | |
| **Period** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** | **M** | **N** | **O** | **P** | **TOTAL** |
| 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 |
| **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 | 12 | 0 | 2 | 6 | 8 | 2 | 0 | 6 | 0 | 1 | 0 | 1 | 0 | 19 | 0 | 56 |
| 16:15-16:30 | 0 | 8 | 0 | 2 | 9 | 11 | 1 | 0 | 6 | 0 | 1 | 0 | 2 | 0 | 13 | 0 | 51 |
| 16:30-16:45 | 0 | 13 | 0 | 1 | 6 | 7 | 2 | 1 | 4 | 0 | 4 | 0 | 4 | 0 | 23 | 0 | 63 |
| 16:45-17:00 | 0 | 15 | 1 | 5 | 7 | 5 | 1 | 1 | 8 | 0 | 0 | 0 | 1 | 0 | 13 | 1 | 51 |
| 17:00-17:15 | 0 | 17 | 1 | 0 | 13 | 6 | 2 | 0 | 6 | 0 | 1 | 0 | 5 | 1 | 58 | 2 | 110 |
| 17:15-17:30 | 0 | 25 | 0 | 0 | 2 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 1 | 0 | 16 | 0 | 56 |
| 17:30-17:45 | 0 | 15 | 0 | 3 | 9 | 6 | 2 | 0 | 8 | 0 | 0 | 0 | 5 | 0 | 16 | 0 | 61 |
| 17:45-18:00 | 0 | 10 | 2 | 0 | 5 | 13 | 2 | 4 | 7 | 1 | 1 | 0 | 6 | 1 | 27 | 0 | 75 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

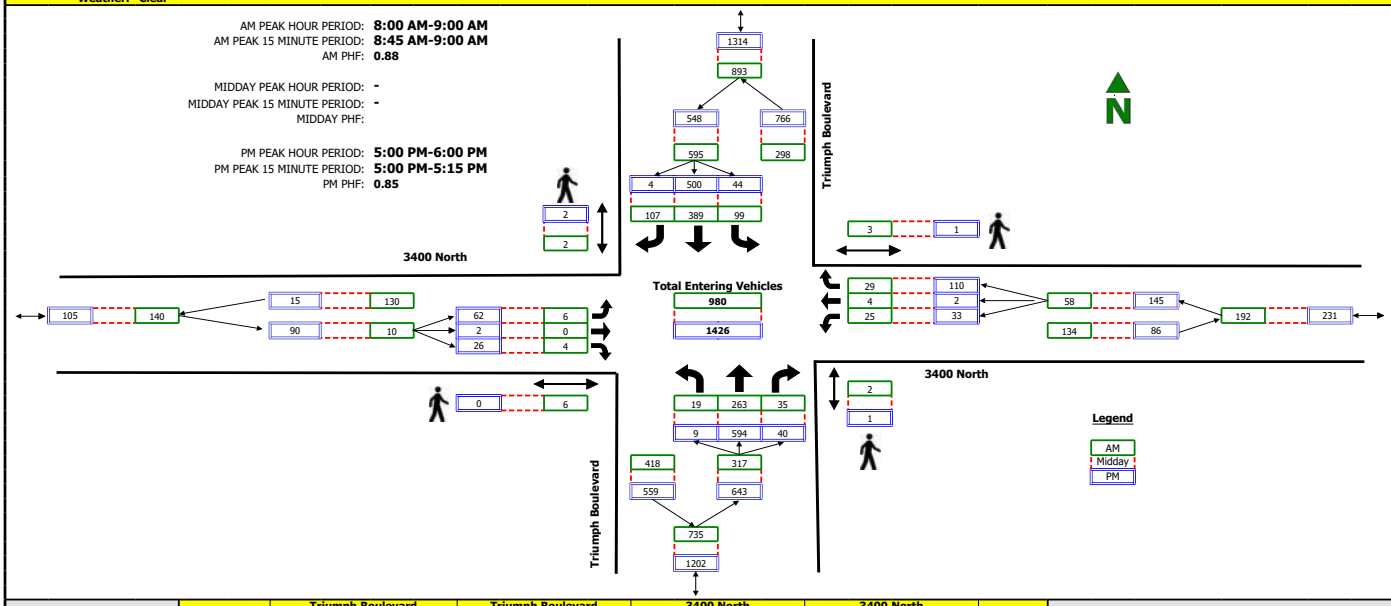
# Intersection Turning Movement Summary

| | | | |
|---|---|---|---|
| **Intersection:** | **Triumph Boulevard / 3400 North** | **Date:** | **7-9-19, Tue** |
| **North/South:** | **Triumph Boulevard** | **Day of Week Adjustment:** | **100.0%** |
| **East/West:** | **3400 North** | **Month of Year Adjustment:** | **100.0%** |
| **Jurisdiction:** | **Lehi** | **Adjustment Station #:** | **0** |
| **Project Title:** | **3400 North Triumph Boulevard TS** | **Growth Rate:** | **3.0%** |
| **Project No:** | **UT19-1507** | **Number of Years:** | **1** |
| **Weather:** | **Clear** | | |

AM PEAK HOUR PERIOD: **8:00 AM-9:00 AM**
AM PEAK 15 MINUTE PERIOD: **8:45 AM-9:00 AM**
AM PHF: **0.88**

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: **5:00 PM-5:15 PM**
PM PHF: **0.85**




| RAW COUNT SUMMARIES | Triumph Boulevard Northbound | | | | Triumph Boulevard Southbound | | | | 3400 North Eastbound | | | | 3400 North 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 | 1 | 34 | 5 | 0 | 17 | 33 | 6 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 0 | 102 |
| 7:15 - 7:30 | 1 | 65 | 7 | 0 | 11 | 57 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 6 | 0 | 152 |
| 7:30 - 7:45 | 0 | 47 | 2 | 0 | 16 | 70 | 6 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 6 | 0 | 151 |
| 7:45 - 8:00 | 6 | 63 | 8 | 0 | 23 | 100 | 15 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 5 | 1 | 225 |
| 8:00 - 8:15 | 5 | 39 | 15 | 2 | 27 | 88 | 26 | 1 | 5 | 0 | 0 | 2 | 14 | 1 | 5 | 1 | 225 |
| 8:15 - 8:30 | 2 | 64 | 6 | 0 | 22 | 93 | 18 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 8 | 0 | 217 |
| 8:30 - 8:45 | 4 | 66 | 2 | 0 | 28 | 92 | 26 | 0 | 1 | 0 | 2 | 1 | 2 | 0 | 6 | 0 | 229 |
| 8:45 - 9:00 | 7 | 86 | 11 | 0 | 19 | 105 | 34 | 1 | 0 | 0 | 1 | 1 | 5 | 3 | 9 | 2 | 280 |

**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 | 68 | 3 | 0 | 6 | 93 | 1 | 0 | 19 | 0 | 3 | 1 | 9 | 0 | 31 | 0 | 233 |
| 16:15 - 16:30 | 1 | 85 | 1 | 0 | 12 | 88 | 3 | 1 | 15 | 1 | 8 | 0 | 9 | 0 | 35 | 3 | 258 |
| 16:30 - 16:45 | 0 | 107 | 4 | 0 | 9 | 93 | 4 | 2 | 15 | 2 | 7 | 0 | 12 | 0 | 39 | 0 | 292 |
| 16:45 - 17:00 | 1 | 80 | 4 | 0 | 10 | 85 | 1 | 7 | 13 | 2 | 3 | 0 | 8 | 0 | 22 | 7 | 229 |
| 17:00 - 17:15 | 2 | 168 | 17 | 0 | 17 | 123 | 2 | 0 | 18 | 1 | 15 | 0 | 12 | 1 | 41 | 0 | 417 |
| 17:15 - 17:30 | 2 | 155 | 11 | 1 | 8 | 132 | 0 | 1 | 17 | 0 | 4 | 0 | 11 | 0 | 25 | 0 | 365 |
| 17:30 - 17:45 | 1 | 155 | 6 | 0 | 8 | 124 | 1 | 0 | 13 | 1 | 5 | 0 | 6 | 1 | 22 | 0 | 343 |
| 17:45 - 18:00 | 4 | 99 | 5 | 0 | 10 | 106 | 1 | 1 | 12 | 0 | 1 | 0 | 3 | 0 | 19 | 1 | 260 |

TrafficCounts

2364 North 1450 East
Lehi, UT 84043
801.636.0891

# Intersection Turning Movement Summary

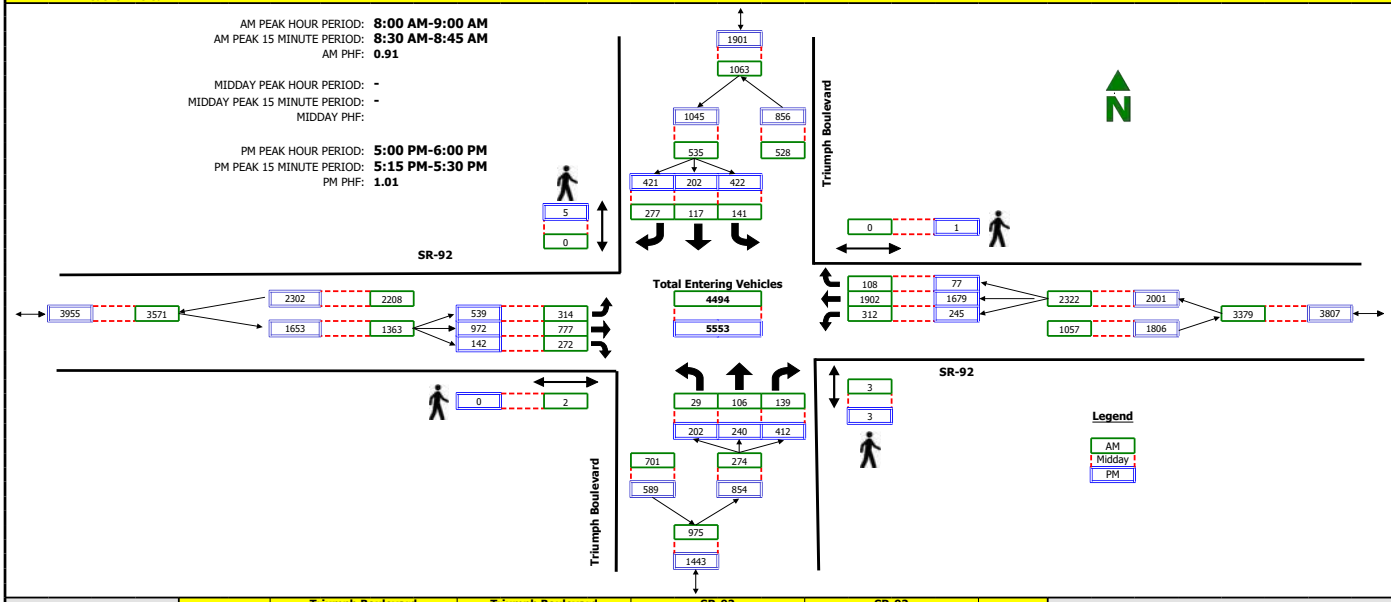
**Intersection:** Triumph Boulevard / SR-92
**North/South:** Triumph Boulevard
**East/West:** SR-92
**Jurisdiction:** Lehi
**Project Title:** 3400 North Triumph Boulevard TS
**Project No:** UT19-1507
**Weather:** Clear

**Date:** 7-9-19, Tue
**Day of Week Adjustment:** 100.0%
**Month of Year Adjustment:** 100.0%
**Adjustment Station #:** 0
**Growth Rate:** 3.0%
**Number of Years:** 1

AM PEAK HOUR PERIOD: **8:00 AM-9:00 AM**
AM PEAK 15 MINUTE PERIOD: **8:30 AM-8:45 AM**
AM PHF: **0.91**

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: **1.01**




| RAW COUNT SUMMARIES | Triumph Boulevard Northbound | | | | Triumph Boulevard Southbound | | | | SR-92 Eastbound | | | | SR-92 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 | 15 | 10 | 20 | 0 | 21 | 6 | 58 | 0 | 23 | 109 | 36 | 0 | 30 | 456 | 13 | 0 | 797 |
| 7:15 - 7:30 | 14 | 10 | 41 | 0 | 16 | 11 | 44 | 0 | 28 | 126 | 17 | 0 | 57 | 504 | 11 | 0 | 879 |
| 7:30 - 7:45 | 14 | 11 | 36 | 0 | 27 | 13 | 77 | 0 | 35 | 147 | 30 | 0 | 52 | 456 | 19 | 0 | 917 |
| 7:45 - 8:00 | 7 | 20 | 39 | 0 | 49 | 28 | 49 | 0 | 69 | 162 | 69 | 0 | 80 | 432 | 36 | 0 | 1040 |
| 8:00 - 8:15 | 4 | 13 | 37 | 1 | 25 | 31 | 46 | 0 | 60 | 161 | 77 | 1 | 70 | 437 | 22 | 0 | 983 |
| 8:15 - 8:30 | 11 | 33 | 22 | 1 | 29 | 34 | 58 | 0 | 80 | 189 | 62 | 1 | 66 | 458 | 31 | 0 | 1073 |
| 8:30 - 8:45 | 9 | 19 | 37 | 1 | 37 | 30 | 105 | 0 | 61 | 201 | 66 | 0 | 73 | 559 | 33 | 0 | 1230 |
| 8:45 - 9:00 | 4 | 38 | 39 | 0 | 46 | 19 | 60 | 0 | 104 | 203 | 59 | 0 | 94 | 393 | 19 | 0 | 1078 |

**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 | 46 | 31 | 47 | 0 | 50 | 28 | 114 | 0 | 135 | 151 | 21 | 0 | 61 | 339 | 36 | 2 | 1059 |
| 16:15 - 16:30 | 59 | 38 | 45 | 0 | 87 | 26 | 104 | 0 | 114 | 223 | 32 | 0 | 34 | 335 | 37 | 1 | 1134 |
| 16:30 - 16:45 | 58 | 37 | 82 | 0 | 75 | 46 | 74 | 0 | 179 | 189 | 27 | 0 | 46 | 374 | 38 | 1 | 1225 |
| 16:45 - 17:00 | 61 | 40 | 61 | 0 | 85 | 38 | 74 | 0 | 166 | 269 | 40 | 0 | 60 | 312 | 25 | 0 | 1231 |
| 17:00 - 17:15 | 68 | 60 | 91 | 0 | 123 | 58 | 112 | 1 | 167 | 213 | 32 | 0 | 49 | 379 | 11 | 0 | 1363 |
| 17:15 - 17:30 | 57 | 52 | 118 | 0 | 72 | 49 | 108 | 4 | 121 | 247 | 29 | 0 | 59 | 445 | 17 | 1 | 1374 |
| 17:30 - 17:45 | 40 | 66 | 111 | 0 | 102 | 52 | 93 | 0 | 114 | 225 | 45 | 0 | 62 | 393 | 17 | 0 | 1320 |
| 17:45 - 18:00 | 31 | 55 | 80 | 3 | 113 | 37 | 96 | 0 | 121 | 259 | 32 | 0 | 68 | 413 | 30 | 0 | 1335 |

# APPENDIX B

## LOS Results

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 358 | 255 | 71 | 194.7 | *F* |
| | T | 362 | 255 | 71 | 95.6 | *F* |
| | R | 412 | 304 | 74 | 113.1 | *F* |
| | Subtotal | 1,132 | 814 | 72 | 133.2 | *F* |
| SB | L | 422 | 432 | 102 | 72.7 | *E* |
| | T | 205 | 198 | 97 | 61.4 | *E* |
| | R | 421 | 424 | 101 | 19.1 | *B* |
| | Subtotal | 1,048 | 1,054 | 101 | 49.0 | *D* |
| EB | L | 539 | 537 | 100 | 76.0 | *E* |
| | T | 972 | 968 | 100 | 35.9 | *D* |
| | R | 173 | 177 | 102 | 5.8 | *A* |
| | Subtotal | 1,684 | 1,682 | 100 | 45.5 | *D* |
| WB | L | 245 | 250 | 102 | 75.2 | *E* |
| | T | 1,679 | 1,687 | 100 | 70.0 | *E* |
| | R | 77 | 78 | 101 | 30.5 | *C* |
| | Subtotal | 2,001 | 2,015 | 101 | 69.1 | *E* |
| **Total** | | 5,866 | 5,565 | 95 | 67.9 | *E* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 142 | 141 | 99 | 72.0 | *E* |
| | T | 105 | 106 | 101 | 48.7 | *D* |
| | R | 322 | 320 | 99 | 15.6 | *B* |
| | Subtotal | 569 | 567 | 100 | 35.8 | *D* |
| SB | L | 206 | 207 | 101 | 68.9 | *E* |
| | T | 264 | 266 | 101 | 53.4 | *D* |
| | R | 194 | 201 | 103 | 7.0 | *A* |
| | Subtotal | 664 | 674 | 102 | 44.3 | *D* |
| EB | L | 78 | 72 | 92 | 76.4 | *E* |
| | T | 1,565 | 1,479 | 94 | 27.7 | *C* |
| | R | 163 | 158 | 97 | 14.3 | *B* |
| | Subtotal | 1,806 | 1,709 | 95 | 28.5 | *C* |
| WB | L | 253 | 247 | 98 | 62.7 | *E* |
| | T | 450 | 459 | 102 | 24.7 | *C* |
| | R | 113 | 114 | 101 | 3.9 | *A* |
| | Subtotal | 816 | 820 | 100 | 33.3 | *C* |
| **Total** | | 3,856 | 3,770 | 98 | 33.5 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 9 | 8 | 86 | 136.3 | *F* |
| | T | 682 | 538 | 79 | 133.1 | *F* |
| | R | 49 | 38 | 77 | 136.2 | *F* |
| | Subtotal | 740 | 584 | 79 | 133.3 | *F* |
| SB | L | 78 | 74 | 95 | 23.6 | *C* |
| | T | 603 | 610 | 101 | 2.6 | *A* |
| | R | 4 | 3 | 80 | 1.1 | *A* |
| | Subtotal | 685 | 687 | 100 | 4.9 | *A* |
| EB | L | 62 | 32 | 51 | 355.4 | *F* |
| | T | 2 | 1 | 44 | 195.3 | *F* |
| | R | 26 | 14 | 54 | 273.2 | *F* |
| | Subtotal | 90 | 47 | 52 | 327.5 | *F* |
| ***WB*** | ***L*** | ***77*** | ***38*** | ***50*** | ***475.6*** | ***F*** |
| | T | 2 | 1 | 44 | 520.6 | *F* |
| | R | 286 | 142 | 50 | 454.1 | *F* |
| | Subtotal | 365 | 181 | 50 | 459.0 | *F* |
| **Total** | | 1,880 | 1,499 | 80 | 127.5 | *F* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 4 | 4 | 100 | 3.6 | *A* |
| | T | 321 | 321 | 100 | 0.3 | *A* |
| | R | 3 | 3 | 100 | 0.1 | *A* |
| | Subtotal | 328 | 328 | 100 | 0.3 | *A* |
| SB | L | 33 | 31 | 95 | 3.5 | *A* |
| | T | 622 | 613 | 99 | 1.1 | *A* |
| | R | 26 | 28 | 107 | 1.0 | *A* |
| | Subtotal | 681 | 672 | 99 | 1.2 | *A* |
| EB | L | 116 | 116 | 100 | 19.8 | *C* |
| | R | 12 | 14 | 114 | 13.3 | *B* |
| | Subtotal | 128 | 130 | 102 | 19.1 | *C* |
| ***WB*** | ***L*** | ***19*** | ***17*** | ***88*** | ***12.7*** | ***B*** |
| | T | 2 | 2 | 100 | 21.0 | *C* |
| | R | 132 | 132 | 100 | 7.3 | *A* |
| | Subtotal | 153 | 151 | 99 | 8.1 | *A* |
| **Total** | | 1,290 | 1,281 | 99 | 3.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 320 | 318 | 99 | 0.2 | *A* |
| | R | 2 | 4 | 200 | 0.2 | *A* |
| | Subtotal | 322 | 322 | 100 | 0.2 | *A* |
| SB | L | 6 | 5 | 83 | 3.0 | *A* |
| | T | 648 | 640 | 99 | 0.2 | *A* |
| | Subtotal | 654 | 645 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***2*** | ***1*** | ***50*** | ***11.4*** | ***B*** |
| | R | 8 | 10 | 125 | 3.2 | *A* |
| | Subtotal | 10 | 11 | 110 | 3.9 | *A* |
| **Total** | | 985 | 978 | 99 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 386 | 387 | 100 | 1.0 | *A* |
| | R | 11 | 10 | 89 | 1.1 | *A* |
| | Subtotal | 397 | 397 | 100 | 1.0 | *A* |
| SB | L | 9 | 8 | 89 | 2.8 | *A* |
| | T | 640 | 633 | 99 | 0.4 | *A* |
| | Subtotal | 649 | 641 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***6*** | ***5*** | ***83*** | ***6.6*** | ***A*** |
| | R | 5 | 5 | 100 | 3.2 | *A* |
| | Subtotal | 11 | 10 | 91 | 4.9 | *A* |
| **Total** | | 1,056 | 1,048 | 99 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 9.3 | *A* |
| | T | 345 | 347 | 101 | 4.5 | *A* |
| | R | 102 | 104 | 102 | 3.0 | *A* |
| | Subtotal | 453 | 457 | 101 | 4.2 | *A* |
| SB | L | 63 | 60 | 95 | 9.5 | *A* |
| | T | 513 | 506 | 99 | 4.4 | *A* |
| | R | 69 | 69 | 100 | 3.7 | *A* |
| | Subtotal | 645 | 635 | 98 | 4.8 | *A* |
| EB | L | 23 | 22 | 95 | 8.9 | *A* |
| | T | 11 | 13 | 116 | 8.3 | *A* |
| | R | 17 | 19 | 110 | 4.3 | *A* |
| | Subtotal | 51 | 54 | 106 | 7.1 | *A* |
| WB | L | 128 | 128 | 100 | 10.1 | *B* |
| | T | 17 | 19 | 110 | 10.0 | *A* |
| | R | 29 | 29 | 101 | 5.5 | *A* |
| | Subtotal | 174 | 176 | 101 | 9.3 | *A* |
| **Total** | | 1,324 | 1,322 | 100 | 5.3 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.1 | 0.1 | 0.2 | 0.0 | 3.7 | 2.4 | 4.5 | 0.3 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 2.5 | 0.8 | 2.3 | 1.7 | 0.4 | 1.8 | 50.8 | 34.2 | 52.5 | 2.8 | 0.9 | 0.5 |
| Total Delay (hr) | 11.6 | 9.8 | 0.3 | 5.4 | 33.8 | 0.7 | 14.6 | 7.0 | 9.9 | 8.8 | 3.5 | 2.3 |
| Total Del/Veh (s) | 76.0 | 35.9 | 5.8 | 75.2 | 70.0 | 30.5 | 194.7 | 95.6 | 113.1 | 72.7 | 61.4 | 19.1 |
| Vehicles Entered | 540 | 968 | 178 | 251 | 1688 | 79 | 257 | 252 | 303 | 432 | 198 | 422 |
| Vehicles Exited | 537 | 968 | 177 | 250 | 1687 | 78 | 255 | 255 | 304 | 432 | 198 | 424 |
| Hourly Exit Rate | 537 | 968 | 177 | 250 | 1687 | 78 | 255 | 255 | 304 | 432 | 198 | 424 |
| Input Volume | 539 | 972 | 173 | 245 | 1679 | 77 | 358 | 362 | 412 | 422 | 205 | 421 |
| % of Volume | 100 | 100 | 102 | 102 | 100 | 101 | 71 | 71 | 74 | 102 | 97 | 101 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 12.0 |
| Denied Del/Veh (s) | 7.8 |
| Total Delay (hr) | 107.5 |
| Total Del/Veh (s) | 67.9 |
| Vehicles Entered | 5568 |
| Vehicles Exited | 5565 |
| Hourly Exit Rate | 5565 |
| Input Volume | 5866 |
| % of Volume | 95 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.3 | 2.9 | 0.0 | 0.0 | 0.0 | 3.1 | 0.6 | 0.3 |
| Total Delay (hr) | 1.5 | 11.6 | 0.6 | 4.4 | 3.2 | 0.1 | 2.9 | 1.4 | 1.4 | 4.1 | 4.0 | 0.4 |
| Total Del/Veh (s) | 76.4 | 27.7 | 14.3 | 62.7 | 24.7 | 3.9 | 72.0 | 48.7 | 15.6 | 68.9 | 53.4 | 7.0 |
| Vehicles Entered | 72 | 1476 | 157 | 247 | 460 | 114 | 142 | 107 | 320 | 209 | 267 | 201 |
| Vehicles Exited | 72 | 1479 | 158 | 247 | 459 | 114 | 141 | 106 | 320 | 207 | 266 | 201 |
| Hourly Exit Rate | 72 | 1479 | 158 | 247 | 459 | 114 | 141 | 106 | 320 | 207 | 266 | 201 |
| Input Volume | 78 | 1565 | 163 | 253 | 450 | 113 | 142 | 105 | 322 | 206 | 264 | 194 |
| % of Volume | 92 | 94 | 97 | 98 | 102 | 101 | 99 | 101 | 99 | 101 | 101 | 103 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.6 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 35.7 |
| Total Del/Veh (s) | 33.5 |
| Vehicles Entered | 3772 |
| Vehicles Exited | 3770 |
| Hourly Exit Rate | 3770 |
| Input Volume | 3856 |
| % of Volume | 98 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 15.5 | 0.5 | 6.9 | 11.5 | 0.3 | 46.7 | 0.7 | 59.5 | 4.3 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 845.4 | 929.3 | 859.8 | 559.2 | 548.5 | 585.8 | 281.7 | 321.6 | 316.8 | 0.3 | 0.0 | 0.0 |
| Total Delay (hr) | 3.6 | 0.1 | 1.1 | 5.8 | 0.1 | 21.2 | 0.3 | 20.9 | 1.6 | 0.5 | 0.4 | 0.0 |
| Total Del/Veh (s) | 355.4 | 195.3 | 273.2 | 475.6 | 520.6 | 454.1 | 136.3 | 133.1 | 136.2 | 23.6 | 2.6 | 1.1 |
| Vehicles Entered | 34 | 1 | 15 | 42 | 1 | 160 | 8 | 551 | 40 | 74 | 610 | 3 |
| Vehicles Exited | 32 | 1 | 14 | 38 | 1 | 142 | 8 | 538 | 38 | 74 | 610 | 3 |
| Hourly Exit Rate | 32 | 1 | 14 | 38 | 1 | 142 | 8 | 538 | 38 | 74 | 610 | 3 |
| Input Volume | 62 | 2 | 26 | 77 | 2 | 286 | 9 | 682 | 49 | 78 | 603 | 4 |
| % of Volume | 51 | 44 | 54 | 50 | 44 | 50 | 86 | 79 | 77 | 95 | 101 | 80 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 146.0 |
| Denied Del/Veh (s) | 280.8 |
| Total Delay (hr) | 55.5 |
| Total Del/Veh (s) | 127.5 |
| Vehicles Entered | 1539 |
| Vehicles Exited | 1499 |
| Hourly Exit Rate | 1499 |
| Input Volume | 1880 |
| % of Volume | 80 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.6 | 0.1 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.3 |
| Total Del/Veh (s) | 19.8 | 13.3 | 12.7 | 21.0 | 7.3 | 3.6 | 0.3 | 0.1 | 3.5 | 1.1 | 1.0 | 3.7 |
| Vehicles Entered | 116 | 14 | 17 | 2 | 132 | 4 | 320 | 3 | 31 | 613 | 28 | 1280 |
| Vehicles Exited | 116 | 14 | 17 | 2 | 132 | 4 | 321 | 3 | 31 | 613 | 28 | 1281 |
| Hourly Exit Rate | 116 | 14 | 17 | 2 | 132 | 4 | 321 | 3 | 31 | 613 | 28 | 1281 |
| Input Volume | 116 | 12 | 19 | 2 | 132 | 4 | 321 | 3 | 33 | 622 | 26 | 1290 |
| % of Volume | 100 | 114 | 88 | 100 | 100 | 100 | 100 | 100 | 95 | 99 | 107 | 99 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 11.4 | 3.2 | 0.2 | 0.2 | 3.0 | 0.2 | 0.3 |
| Vehicles Entered | 1 | 10 | 318 | 4 | 5 | 640 | 978 |
| Vehicles Exited | 1 | 10 | 318 | 4 | 5 | 640 | 978 |
| Hourly Exit Rate | 1 | 10 | 318 | 4 | 5 | 640 | 978 |
| Input Volume | 2 | 8 | 320 | 2 | 6 | 648 | 985 |
| % of Volume | 50 | 125 | 99 | 200 | 83 | 99 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 6.6 | 3.2 | 1.0 | 1.1 | 2.8 | 0.4 | 0.7 |
| Vehicles Entered | 5 | 5 | 387 | 10 | 8 | 631 | 1046 |
| Vehicles Exited | 5 | 5 | 387 | 10 | 8 | 633 | 1048 |
| Hourly Exit Rate | 5 | 5 | 387 | 10 | 8 | 633 | 1048 |
| Input Volume | 6 | 5 | 386 | 11 | 9 | 640 | 1056 |
| % of Volume | 83 | 100 | 100 | 89 | 89 | 99 | 99 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.5 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.4 | 0.1 | 0.0 | 0.0 | 0.4 | 0.1 | 0.2 | 0.6 | 0.1 |
| Total Del/Veh (s) | 8.9 | 8.3 | 4.3 | 10.1 | 10.0 | 5.5 | 9.3 | 4.5 | 3.0 | 9.5 | 4.4 | 3.7 |
| Vehicles Entered | 22 | 13 | 18 | 128 | 19 | 28 | 6 | 348 | 103 | 60 | 508 | 69 |
| Vehicles Exited | 22 | 13 | 19 | 128 | 19 | 29 | 6 | 347 | 104 | 60 | 506 | 69 |
| Hourly Exit Rate | 22 | 13 | 19 | 128 | 19 | 29 | 6 | 347 | 104 | 60 | 506 | 69 |
| Input Volume | 23 | 11 | 17 | 128 | 17 | 29 | 6 | 345 | 102 | 63 | 513 | 69 |
| % of Volume | 95 | 116 | 110 | 100 | 110 | 101 | 100 | 101 | 102 | 95 | 99 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.0 |
| Total Del/Veh (s) | 5.3 |
| Vehicles Entered | 1322 |
| Vehicles Exited | 1322 |
| Hourly Exit Rate | 1322 |
| Input Volume | 1324 |
| % of Volume | 100 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 158.6 |
| Denied Del/Veh (s) | 73.3 |
| Total Delay (hr) | 209.1 |
| Total Del/Veh (s) | 97.2 |
| Vehicles Entered | 7454 |
| Vehicles Exited | 7410 |
| Hourly Exit Rate | 7410 |
| Input Volume | 22982 |
| % of Volume | 32 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | L | T | T | T | R | L | T |
| Maximum Queue (ft) | 370 | 441 | 472 | 446 | 174 | 586 | 828 | 805 | 440 | 345 | 250 | 438 |
| Average Queue (ft) | 242 | 287 | 270 | 260 | 26 | 275 | 527 | 506 | 383 | 88 | 248 | 416 |
| 95th Queue (ft) | 346 | 403 | 405 | 387 | 100 | 564 | 801 | 779 | 501 | 287 | 263 | 456 |
| Link Distance (ft) | | | 810 | 810 | | | 3361 | 3361 | | | | 394 |
| Upstream Blk Time (%) | | | 0 | | | | | | | | | 56 |
| Queuing Penalty (veh) | | | 0 | | | | | | | | | 291 |
| Storage Bay Dist (ft) | 230 | 230 | | | 230 | 400 | | | 250 | 250 | 100 | |
| Storage Blk Time (%) | 6 | 25 | 13 | 11 | | 0 | 21 | 38 | 30 | | 88 | 40 |
| Queuing Penalty (veh) | 29 | 122 | 72 | 19 | | 2 | 53 | 243 | 169 | | 114 | 145 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | NB | SB | SB | SB | SB | SB |
|---|---|---|---|---|---|---|
| Directions Served | TR | L | L | T | R | R |
| Maximum Queue (ft) | 448 | 310 | 338 | 313 | 210 | 184 |
| Average Queue (ft) | 367 | 195 | 230 | 171 | 130 | 82 |
| 95th Queue (ft) | 498 | 277 | 317 | 286 | 202 | 175 |
| Link Distance (ft) | 394 | | | 1012 | 1012 | |
| Upstream Blk Time (%) | 19 | | | | | |
| Queuing Penalty (veh) | 96 | | | | | |
| Storage Bay Dist (ft) | | 320 | 320 | | | 200 |
| Storage Blk Time (%) | | 0 | 1 | 0 | 0 | 0 |
| Queuing Penalty (veh) | | 0 | 2 | 2 | 1 | 0 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | L | T | T | R | L | T | R |
| Maximum Queue (ft) | 113 | 129 | 380 | 377 | 96 | 358 | 309 | 208 | 58 | 233 | 205 | 226 |
| Average Queue (ft) | 23 | 45 | 226 | 241 | 41 | 193 | 147 | 99 | 26 | 127 | 78 | 94 |
| 95th Queue (ft) | 59 | 85 | 333 | 346 | 75 | 315 | 254 | 181 | 51 | 220 | 163 | 180 |
| Link Distance (ft) | | | 3361 | 3361 | | | 1013 | 1013 | | | 371 | 371 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | 260 | | | 140 | 210 | | |
| Storage Blk Time (%) | | | 1 | 2 | | 5 | 0 | 3 | | 3 | 0 | |
| Queuing Penalty (veh) | | | 1 | 3 | | 11 | 0 | 3 | | 3 | 0 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | SB | SB | SB |
|---|---|---|---|
| Directions Served | L | T | R |
| Maximum Queue (ft) | 329 | 414 | 116 |
| Average Queue (ft) | 181 | 209 | 52 |
| 95th Queue (ft) | 302 | 354 | 94 |
| Link Distance (ft) | | 931 | 931 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 240 | | |
| Storage Blk Time (%) | 5 | 7 | |
| Queuing Penalty (veh) | 14 | 14 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | TR | L | T | TR |
| Maximum Queue (ft) | 143 | 773 | 75 | 735 | 116 | 104 | 117 |
| Average Queue (ft) | 113 | 666 | 7 | 671 | 38 | 12 | 16 |
| 95th Queue (ft) | 154 | 930 | 44 | 865 | 87 | 59 | 73 |
| Link Distance (ft) | 112 | 720 | | 692 | | 394 | 394 |
| Upstream Blk Time (%) | 85 | 75 | | 62 | | | |
| Queuing Penalty (veh) | 0 | 0 | | 0 | | | |
| Storage Bay Dist (ft) | | | 50 | | 50 | | |
| Storage Blk Time (%) | | | 0 | 66 | 11 | 2 | |
| Queuing Penalty (veh) | | | 0 | 6 | 36 | 2 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 152 | 116 | 26 | 12 | 20 | 41 | 16 | 16 |
| Average Queue (ft) | 60 | 49 | 1 | 1 | 1 | 8 | 1 | 1 |
| 95th Queue (ft) | 115 | 83 | 12 | 7 | 12 | 30 | 10 | 11 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 371 | 371 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | | | 0 | 0 | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 33 | 24 |
| Average Queue (ft) | 9 | 2 |
| 95th Queue (ft) | 32 | 15 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 34 | 2 | 28 |
| Average Queue (ft) | 8 | 0 | 3 |
| 95th Queue (ft) | 31 | 2 | 17 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 64 | 116 | 31 | 93 | 115 | 79 | 113 | 127 |
| Average Queue (ft) | 27 | 56 | 4 | 44 | 43 | 25 | 41 | 61 |
| 95th Queue (ft) | 56 | 97 | 21 | 80 | 86 | 60 | 90 | 108 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Network Summary

Network wide Queuing Penalty: 1452

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 358 | 367 | 102 | 73.9 | *E* |
| | T | 362 | 362 | 100 | 56.1 | *E* |
| | R | 412 | 420 | 102 | 20.4 | *C* |
| | Subtotal | 1,132 | 1,149 | 102 | 48.7 | *D* |
| SB | L | 422 | 414 | 98 | 108.1 | *F* |
| | T | 205 | 206 | 101 | 57.7 | *E* |
| | R | 421 | 429 | 102 | 15.0 | *B* |
| | Subtotal | 1,048 | 1,049 | 100 | 60.1 | *E* |
| EB | L | 539 | 538 | 100 | 96.2 | *F* |
| | T | 972 | 980 | 101 | 37.6 | *D* |
| | R | 173 | 176 | 102 | 6.2 | *A* |
| | Subtotal | 1,684 | 1,694 | 101 | 52.9 | *D* |
| WB | L | 245 | 244 | 99 | 76.3 | *E* |
| | T | 1,679 | 1,700 | 101 | 47.4 | *D* |
| | R | 77 | 77 | 100 | 10.6 | *B* |
| | Subtotal | 2,001 | 2,021 | 101 | 49.5 | *D* |
| **Total** | | 5,866 | 5,913 | 101 | 52.3 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 142 | 141 | 99 | 69.8 | *E* |
| | T | 105 | 102 | 97 | 49.4 | *D* |
| | R | 322 | 318 | 99 | 17.6 | *B* |
| | Subtotal | 569 | 561 | 99 | 36.5 | *D* |
| SB | L | 206 | 203 | 99 | 64.6 | *E* |
| | T | 264 | 268 | 102 | 54.2 | *D* |
| | R | 194 | 200 | 103 | 6.9 | *A* |
| | Subtotal | 664 | 671 | 101 | 43.2 | *D* |
| EB | L | 78 | 75 | 96 | 73.7 | *E* |
| | T | 1,565 | 1,576 | 101 | 30.2 | *C* |
| | R | 163 | 164 | 101 | 11.6 | *B* |
| | Subtotal | 1,806 | 1,815 | 100 | 30.3 | *C* |
| WB | L | 253 | 252 | 100 | 59.2 | *E* |
| | T | 450 | 458 | 102 | 24.6 | *C* |
| | R | 113 | 113 | 100 | 3.9 | *A* |
| | Subtotal | 816 | 823 | 101 | 32.4 | *C* |
| **Total** | | 3,856 | 3,870 | 100 | 34.0 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 9 | 8 | 86 | 11.9 | *B* |
| | T | 682 | 690 | 101 | 14.6 | *B* |
| | R | 49 | 51 | 104 | 16.1 | *B* |
| | Subtotal | 740 | 749 | 101 | 14.7 | *B* |
| SB | L | 78 | 74 | 95 | 43.9 | *D* |
| | T | 603 | 610 | 101 | 5.4 | *A* |
| | R | 4 | 4 | 107 | 4.9 | *A* |
| | Subtotal | 685 | 688 | 100 | 9.5 | *A* |
| EB | L | 62 | 60 | 96 | 78.6 | *E* |
| | T | 2 | 2 | 89 | 63.3 | *E* |
| | R | 26 | 24 | 92 | 42.3 | *D* |
| | Subtotal | 90 | 86 | 96 | 68.1 | *E* |
| WB | L | 77 | 80 | 104 | 51.7 | *D* |
| | T | 2 | 3 | 133 | 44.0 | *D* |
| | R | 286 | 291 | 102 | 25.9 | *C* |
| | Subtotal | 365 | 374 | 102 | 31.6 | *C* |
| **Total** | | 1,880 | 1,897 | 101 | 18.6 | *B* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 4 | 4 | 100 | 6.2 | *A* |
| | T | 321 | 311 | 97 | 0.3 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 328 | 319 | 97 | 0.4 | *A* |
| SB | L | 33 | 31 | 95 | 3.3 | *A* |
| | T | 622 | 625 | 100 | 1.2 | *A* |
| | R | 26 | 28 | 107 | 1.1 | *A* |
| | Subtotal | 681 | 684 | 100 | 1.3 | *A* |
| ***EB*** | ***L*** | ***116*** | ***119*** | ***103*** | ***21.3*** | ***C*** |
| | R | 12 | 12 | 98 | 15.2 | *C* |
| | Subtotal | 128 | 131 | 102 | 20.7 | *C* |
| WB | L | 19 | 18 | 94 | 13.0 | *B* |
| | T | 2 | 3 | 150 | 19.5 | *C* |
| | R | 132 | 132 | 100 | 7.7 | *A* |
| | Subtotal | 153 | 153 | 100 | 8.6 | *A* |
| **Total** | | 1,290 | 1,287 | 100 | 3.9 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 320 | 311 | 97 | 0.2 | *A* |
| | R | 2 | 3 | 150 | 0.1 | *A* |
| | Subtotal | 322 | 314 | 98 | 0.2 | *A* |
| SB | L | 6 | 6 | 100 | 2.5 | *A* |
| | T | 648 | 649 | 100 | 0.2 | *A* |
| | Subtotal | 654 | 655 | 100 | 0.2 | *A* |
| ***WB*** | ***L*** | ***2*** | ***2*** | ***100*** | ***5.7*** | ***A*** |
| | R | 8 | 9 | 112 | 2.8 | *A* |
| | Subtotal | 10 | 11 | 110 | 3.3 | *A* |
| **Total** | | 985 | 980 | 99 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 386 | 377 | 98 | 1.0 | *A* |
| | R | 11 | 11 | 98 | 0.9 | *A* |
| | Subtotal | 397 | 388 | 98 | 1.0 | *A* |
| SB | L | 9 | 9 | 100 | 2.5 | *A* |
| | T | 640 | 641 | 100 | 0.4 | *A* |
| | Subtotal | 649 | 650 | 100 | 0.4 | *A* |
| ***WB*** | ***L*** | ***6*** | ***5*** | ***83*** | ***9.1*** | ***A*** |
| | R | 5 | 5 | 100 | 2.9 | *A* |
| | Subtotal | 11 | 10 | 91 | 6.0 | *A* |
| **Total** | | 1,056 | 1,048 | 99 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Existing (2020) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 7.8 | *A* |
| | T | 345 | 338 | 98 | 4.3 | *A* |
| | R | 102 | 102 | 100 | 3.0 | *A* |
| | Subtotal | 453 | 446 | 98 | 4.0 | *A* |
| SB | L | 63 | 65 | 103 | 9.4 | *A* |
| | T | 513 | 507 | 99 | 4.7 | *A* |
| | R | 69 | 74 | 107 | 3.9 | *A* |
| | Subtotal | 645 | 646 | 100 | 5.1 | *A* |
| EB | L | 23 | 20 | 86 | 9.4 | *A* |
| | T | 11 | 9 | 80 | 9.3 | *A* |
| | R | 17 | 17 | 99 | 3.7 | *A* |
| | Subtotal | 51 | 46 | 90 | 7.3 | *A* |
| WB | L | 128 | 123 | 96 | 9.3 | *A* |
| | T | 17 | 17 | 99 | 10.0 | *A* |
| | R | 29 | 29 | 101 | 4.9 | *A* |
| | Subtotal | 174 | 169 | 97 | 8.6 | *A* |
| **Total** | | 1,324 | 1,307 | 99 | 5.3 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 2.4 | 0.5 | 2.1 | 1.6 | 0.2 | 1.7 | 0.9 | 1.0 | 1.8 | 2.8 | 0.9 | 0.5 |
| Total Delay (hr) | 14.7 | 10.4 | 0.3 | 5.3 | 22.9 | 0.2 | 7.6 | 5.8 | 2.4 | 12.8 | 3.4 | 1.8 |
| Total Del/Veh (s) | 96.2 | 37.6 | 6.2 | 76.3 | 47.4 | 10.6 | 73.9 | 56.1 | 20.4 | 108.1 | 57.7 | 15.0 |
| Vehicles Entered | 540 | 981 | 176 | 242 | 1703 | 76 | 367 | 364 | 420 | 419 | 206 | 428 |
| Vehicles Exited | 538 | 980 | 176 | 244 | 1700 | 77 | 367 | 362 | 420 | 414 | 206 | 429 |
| Hourly Exit Rate | 538 | 980 | 176 | 244 | 1700 | 77 | 367 | 362 | 420 | 414 | 206 | 429 |
| Input Volume | 539 | 972 | 173 | 245 | 1679 | 77 | 358 | 362 | 412 | 422 | 205 | 421 |
| % of Volume | 100 | 101 | 102 | 99 | 101 | 100 | 102 | 100 | 102 | 98 | 101 | 102 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 1.7 |
| Denied Del/Veh (s) | 1.0 |
| Total Delay (hr) | 87.5 |
| Total Del/Veh (s) | 52.3 |
| Vehicles Entered | 5922 |
| Vehicles Exited | 5913 |
| Hourly Exit Rate | 5913 |
| Input Volume | 5866 |
| % of Volume | 101 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.3 | 2.9 | 0.0 | 0.0 | 0.0 | 3.1 | 0.6 | 0.3 |
| Total Delay (hr) | 1.6 | 13.4 | 0.5 | 4.2 | 3.2 | 0.1 | 2.8 | 1.5 | 1.6 | 3.8 | 4.1 | 0.4 |
| Total Del/Veh (s) | 73.7 | 30.2 | 11.6 | 59.2 | 24.6 | 3.9 | 69.8 | 49.4 | 17.6 | 64.6 | 54.2 | 6.9 |
| Vehicles Entered | 74 | 1576 | 164 | 252 | 459 | 113 | 141 | 103 | 319 | 204 | 267 | 200 |
| Vehicles Exited | 75 | 1576 | 164 | 252 | 458 | 113 | 141 | 102 | 318 | 203 | 268 | 200 |
| Hourly Exit Rate | 75 | 1576 | 164 | 252 | 458 | 113 | 141 | 102 | 318 | 203 | 268 | 200 |
| Input Volume | 78 | 1565 | 163 | 253 | 450 | 113 | 142 | 105 | 322 | 206 | 264 | 194 |
| % of Volume | 96 | 101 | 101 | 100 | 102 | 100 | 99 | 97 | 99 | 99 | 102 | 103 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.6 |
| Denied Del/Veh (s) | 0.5 |
| Total Delay (hr) | 37.1 |
| Total Del/Veh (s) | 34.0 |
| Vehicles Entered | 3872 |
| Vehicles Exited | 3870 |
| Hourly Exit Rate | 3870 |
| Input Volume | 3856 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.6 | 0.0 | 0.2 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 37.4 | 29.5 | 24.6 | 1.0 | 0.6 | 3.6 | 3.2 | 0.8 | 0.7 | 1.7 | 0.4 | 0.1 |
| Total Delay (hr) | 1.3 | 0.0 | 0.3 | 1.2 | 0.0 | 2.1 | 0.0 | 2.8 | 0.2 | 0.9 | 0.9 | 0.0 |
| Total Del/Veh (s) | 78.6 | 63.3 | 42.3 | 51.7 | 44.0 | 25.9 | 11.9 | 14.6 | 16.1 | 43.9 | 5.4 | 4.9 |
| Vehicles Entered | 61 | 2 | 25 | 80 | 3 | 292 | 8 | 692 | 51 | 74 | 610 | 4 |
| Vehicles Exited | 60 | 2 | 24 | 80 | 3 | 291 | 8 | 690 | 51 | 74 | 610 | 4 |
| Hourly Exit Rate | 60 | 2 | 24 | 80 | 3 | 291 | 8 | 690 | 51 | 74 | 610 | 4 |
| Input Volume | 62 | 2 | 26 | 77 | 2 | 286 | 9 | 682 | 49 | 78 | 603 | 4 |
| % of Volume | 96 | 89 | 92 | 104 | 133 | 102 | 86 | 101 | 104 | 95 | 101 | 107 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 1.4 |
| Denied Del/Veh (s) | 2.7 |
| Total Delay (hr) | 9.9 |
| Total Del/Veh (s) | 18.6 |
| Vehicles Entered | 1902 |
| Vehicles Exited | 1897 |
| Hourly Exit Rate | 1897 |
| Input Volume | 1880 |
| % of Volume | 101 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.7 | 0.1 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.4 |
| Total Del/Veh (s) | 21.3 | 15.2 | 13.0 | 19.5 | 7.7 | 6.2 | 0.3 | 0.1 | 3.3 | 1.2 | 1.1 | 3.9 |
| Vehicles Entered | 119 | 12 | 18 | 3 | 133 | 5 | 311 | 4 | 31 | 625 | 28 | 1289 |
| Vehicles Exited | 119 | 12 | 18 | 3 | 132 | 4 | 311 | 4 | 31 | 625 | 28 | 1287 |
| Hourly Exit Rate | 119 | 12 | 18 | 3 | 132 | 4 | 311 | 4 | 31 | 625 | 28 | 1287 |
| Input Volume | 116 | 12 | 19 | 2 | 132 | 4 | 321 | 3 | 33 | 622 | 26 | 1290 |
| % of Volume | 103 | 98 | 94 | 150 | 100 | 100 | 97 | 133 | 95 | 100 | 107 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 5.7 | 2.8 | 0.2 | 0.1 | 2.5 | 0.2 | 0.3 |
| Vehicles Entered | 2 | 9 | 310 | 3 | 6 | 649 | 979 |
| Vehicles Exited | 2 | 9 | 311 | 3 | 6 | 649 | 980 |
| Hourly Exit Rate | 2 | 9 | 311 | 3 | 6 | 649 | 980 |
| Input Volume | 2 | 8 | 320 | 2 | 6 | 648 | 985 |
| % of Volume | 100 | 112 | 97 | 150 | 100 | 100 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 9.1 | 2.9 | 1.0 | 0.9 | 2.5 | 0.4 | 0.7 |
| Vehicles Entered | 5 | 4 | 376 | 11 | 9 | 641 | 1046 |
| Vehicles Exited | 5 | 5 | 377 | 11 | 9 | 641 | 1048 |
| Hourly Exit Rate | 5 | 5 | 377 | 11 | 9 | 641 | 1048 |
| Input Volume | 6 | 5 | 386 | 11 | 9 | 640 | 1056 |
| % of Volume | 83 | 100 | 98 | 98 | 100 | 100 | 99 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.3 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.4 | 0.1 | 0.2 | 0.7 | 0.1 |
| Total Del/Veh (s) | 9.4 | 9.3 | 3.7 | 9.3 | 10.0 | 4.9 | 7.8 | 4.3 | 3.0 | 9.4 | 4.7 | 3.9 |
| Vehicles Entered | 20 | 9 | 17 | 124 | 17 | 29 | 6 | 337 | 101 | 65 | 507 | 73 |
| Vehicles Exited | 20 | 9 | 17 | 123 | 17 | 29 | 6 | 338 | 102 | 65 | 507 | 74 |
| Hourly Exit Rate | 20 | 9 | 17 | 123 | 17 | 29 | 6 | 338 | 102 | 65 | 507 | 74 |
| Input Volume | 23 | 11 | 17 | 128 | 17 | 29 | 6 | 345 | 102 | 63 | 513 | 69 |
| % of Volume | 86 | 80 | 99 | 96 | 99 | 101 | 100 | 98 | 100 | 103 | 99 | 107 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 1.9 |
| Total Del/Veh (s) | 5.3 |
| Vehicles Entered | 1305 |
| Vehicles Exited | 1307 |
| Hourly Exit Rate | 1307 |
| Input Volume | 1324 |
| % of Volume | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 3.7 |
| Denied Del/Veh (s) | 1.7 |
| Total Delay (hr) | 150.7 |
| Total Del/Veh (s) | 67.3 |
| Vehicles Entered | 7821 |
| Vehicles Exited | 7807 |
| Hourly Exit Rate | 7807 |
| Input Volume | 25574 |
| % of Volume | 31 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 373 | 477 | 495 | 443 | 307 | 96 | 255 | 544 | 557 | 546 | 478 | 388 |
| Average Queue (ft) | 281 | 335 | 266 | 240 | 173 | 32 | 112 | 209 | 430 | 403 | 331 | 215 |
| 95th Queue (ft) | 394 | 471 | 440 | 362 | 283 | 70 | 199 | 449 | 565 | 524 | 456 | 334 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1045 | 1045 | 1045 | |
| Upstream Blk Time (%) | | | 0 | | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 14 | 39 | 11 | | 1 | | | 0 | 11 | | 9 | 1 |
| Queuing Penalty (veh) | 47 | 126 | 57 | | 1 | | | 0 | 28 | | 44 | 4 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | SB | SB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | R | L | L | T | R | R |
| Maximum Queue (ft) | 86 | 245 | 381 | 412 | 250 | 349 | 385 | 490 | 216 | 191 |
| Average Queue (ft) | 25 | 159 | 218 | 265 | 172 | 239 | 272 | 200 | 117 | 64 |
| 95th Queue (ft) | 65 | 243 | 359 | 440 | 308 | 366 | 400 | 413 | 195 | 160 |
| Link Distance (ft) | | | 373 | 373 | | | | 1001 | 1001 | |
| Upstream Blk Time (%) | | | 1 | 8 | | | | | | |
| Queuing Penalty (veh) | | | 3 | 47 | | | | | | |
| Storage Bay Dist (ft) | 250 | 150 | | | 150 | 320 | 320 | | | 200 |
| Storage Blk Time (%) | | 12 | 27 | 38 | 8 | 2 | 9 | 0 | 0 | 0 |
| Queuing Penalty (veh) | | 21 | 48 | 155 | 21 | 4 | 18 | 0 | 1 | 0 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 84 | 98 | 432 | 445 | 105 | 311 | 641 | 359 | 305 | 201 | 57 | 228 |
| Average Queue (ft) | 26 | 49 | 286 | 295 | 49 | 11 | 19 | 187 | 137 | 100 | 26 | 123 |
| 95th Queue (ft) | 65 | 87 | 403 | 409 | 85 | 187 | 252 | 301 | 235 | 177 | 52 | 202 |
| Link Distance (ft) | | | 2242 | 2242 | | 1045 | 1045 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 9 | 11 | | | | 4 | 0 | 2 | | 1 |
| Queuing Penalty (veh) | | | 7 | 18 | | | | 9 | 0 | 2 | | 1 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 166 | 227 | 325 | 382 | 110 |
| Average Queue (ft) | 67 | 103 | 179 | 208 | 49 |
| 95th Queue (ft) | 133 | 188 | 293 | 335 | 88 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 4 | 7 | |
| Queuing Penalty (veh) | 0 | | 10 | 14 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 127 | 435 | 200 | 32 | 352 | 436 | 114 | 175 | 174 |
| Average Queue (ft) | 73 | 103 | 94 | 2 | 78 | 143 | 43 | 37 | 47 |
| 95th Queue (ft) | 134 | 295 | 199 | 15 | 271 | 364 | 98 | 137 | 136 |
| Link Distance (ft) | 112 | 703 | | | 688 | 688 | | 373 | 373 |
| Upstream Blk Time (%) | 14 | 0 | | | 0 | 1 | | | |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | | |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 4 | 17 | 0 | 8 | | 16 | 6 | |
| Queuing Penalty (veh) | | 12 | 16 | 0 | 1 | | 53 | 6 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 140 | 98 | 21 | 12 | 18 | 39 | 14 | 20 |
| Average Queue (ft) | 62 | 50 | 2 | 0 | 1 | 7 | 0 | 1 |
| 95th Queue (ft) | 115 | 84 | 14 | 6 | 9 | 29 | 8 | 11 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | | | 0 | 0 | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 33 | 24 |
| Average Queue (ft) | 9 | 2 |
| 95th Queue (ft) | 31 | 13 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 31 | 27 |
| Average Queue (ft) | 8 | 2 |
| 95th Queue (ft) | 30 | 16 |
| Link Distance (ft) | 245 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 58 | 126 | 31 | 89 | 97 | 77 | 114 | 130 |
| Average Queue (ft) | 23 | 56 | 4 | 42 | 43 | 30 | 45 | 63 |
| 95th Queue (ft) | 53 | 99 | 21 | 77 | 80 | 64 | 94 | 111 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Network Summary

Network wide Queuing Penalty: 776

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 407 | 406 | 100 | 70.4 | *E* |
| | T | 373 | 380 | 102 | 61.7 | *E* |
| | R | 412 | 407 | 99 | 23.2 | *C* |
| | Subtotal | 1,192 | 1,193 | 100 | 51.5 | *D* |
| SB | L | 422 | 415 | 98 | 112.7 | *F* |
| | T | 206 | 202 | 98 | 64.9 | *E* |
| | R | 421 | 419 | 99 | 15.8 | *B* |
| | Subtotal | 1,049 | 1,036 | 99 | 64.2 | *E* |
| EB | L | 539 | 543 | 101 | 104.1 | *F* |
| | T | 972 | 971 | 100 | 38.6 | *D* |
| | R | 183 | 184 | 100 | 6.1 | *A* |
| | Subtotal | 1,694 | 1,698 | 100 | 56.0 | *E* |
| WB | L | 246 | 244 | 99 | 74.2 | *E* |
| | T | 1,689 | 1,689 | 100 | 47.6 | *D* |
| | R | 77 | 76 | 98 | 11.0 | *B* |
| | Subtotal | 2,012 | 2,009 | 100 | 49.4 | *D* |
| **Total** | | 5,948 | 5,936 | 100 | 54.7 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 152 | 151 | 100 | 68.0 | *E* |
| | T | 108 | 109 | 101 | 51.0 | *D* |
| | R | 349 | 360 | 103 | 18.7 | *B* |
| | Subtotal | 609 | 620 | 102 | 36.4 | *D* |
| SB | L | 206 | 208 | 101 | 68.9 | *E* |
| | T | 264 | 263 | 100 | 54.0 | *D* |
| | R | 194 | 192 | 99 | 6.7 | *A* |
| | Subtotal | 664 | 663 | 100 | 45.0 | *D* |
| EB | L | 78 | 75 | 96 | 76.0 | *E* |
| | T | 1,565 | 1,554 | 99 | 29.4 | *C* |
| | R | 163 | 165 | 101 | 11.3 | *B* |
| | Subtotal | 1,806 | 1,794 | 99 | 29.7 | *C* |
| WB | L | 258 | 253 | 98 | 61.0 | *E* |
| | T | 451 | 456 | 101 | 24.5 | *C* |
| | R | 113 | 115 | 102 | 4.1 | *A* |
| | Subtotal | 822 | 824 | 100 | 32.9 | *C* |
| **Total** | | 3,901 | 3,901 | 100 | 34.2 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 9 | 9 | 97 | 21.3 | *C* |
| | T | 682 | 698 | 102 | 25.7 | *C* |
| | R | 55 | 52 | 94 | 26.4 | *C* |
| | Subtotal | 746 | 759 | 102 | 25.7 | *C* |
| SB | L | 90 | 86 | 95 | 65.8 | *E* |
| | T | 604 | 597 | 99 | 8.0 | *A* |
| | R | 4 | 4 | 107 | 10.1 | *B* |
| | Subtotal | 698 | 687 | 98 | 15.2 | *B* |
| EB | L | 62 | 52 | 84 | 103.5 | *F* |
| | T | 2 | 2 | 89 | 92.1 | *F* |
| | R | 26 | 24 | 92 | 58.4 | *E* |
| | Subtotal | 90 | 78 | 87 | 89.3 | *F* |
| WB | L | 90 | 85 | 94 | 48.9 | *D* |
| | T | 2 | 3 | 133 | 42.2 | *D* |
| | R | 341 | 334 | 98 | 36.7 | *D* |
| | Subtotal | 433 | 422 | 97 | 39.2 | *D* |
| **Total** | | 1,968 | 1,946 | 99 | 27.6 | *C* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 5 | 4 | 80 | 6.8 | *A* |
| | T | 321 | 326 | 102 | 0.3 | *A* |
| | R | 3 | 3 | 100 | 0.1 | *A* |
| | Subtotal | 329 | 333 | 101 | 0.4 | *A* |
| SB | L | 33 | 32 | 98 | 3.5 | *A* |
| | T | 622 | 617 | 99 | 1.2 | *A* |
| | R | 31 | 34 | 111 | 1.1 | *A* |
| | Subtotal | 686 | 683 | 100 | 1.3 | *A* |
| ***EB*** | ***L*** | ***156*** | ***158*** | ***101*** | ***25.2*** | ***D*** |
| | R | 25 | 28 | 111 | 17.9 | *C* |
| | Subtotal | 181 | 186 | 103 | 24.1 | *C* |
| WB | L | 19 | 20 | 104 | 12.4 | *B* |
| | T | 2 | 2 | 100 | 16.9 | *C* |
| | R | 132 | 135 | 102 | 8.0 | *A* |
| | Subtotal | 153 | 157 | 103 | 8.7 | *A* |
| **Total** | | 1,349 | 1,359 | 101 | 5.1 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 321 | 323 | 101 | 0.2 | *A* |
| | R | 2 | 2 | 100 | 0.1 | *A* |
| | Subtotal | 323 | 325 | 101 | 0.2 | *A* |
| SB | L | 6 | 5 | 83 | 2.3 | *A* |
| | T | 660 | 659 | 100 | 0.2 | *A* |
| | Subtotal | 666 | 664 | 100 | 0.2 | *A* |
| ***WB*** | ***L*** | ***2*** | ***2*** | ***100*** | ***8.3*** | ***A*** |
| | R | 8 | 10 | 125 | 3.6 | *A* |
| | Subtotal | 10 | 12 | 120 | 4.4 | *A* |
| | | | | | | |
| **Total** | | 998 | 1,001 | 100 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 387 | 392 | 101 | 1.0 | *A* |
| | R | 11 | 12 | 107 | 1.0 | *A* |
| | Subtotal | 398 | 404 | 102 | 1.0 | *A* |
| SB | L | 9 | 7 | 78 | 2.3 | *A* |
| | T | 652 | 654 | 100 | 0.4 | *A* |
| | Subtotal | 661 | 661 | 100 | 0.4 | *A* |
| ***WB*** | ***L*** | ***6*** | ***5*** | ***83*** | ***9.7*** | ***A*** |
| | R | 5 | 5 | 100 | 3.7 | *A* |
| | Subtotal | 11 | 10 | 91 | 6.7 | *A* |
| | | | | | | |
| **Total** | | 1,070 | 1,075 | 100 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Existing (2020) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 12.1 | *B* |
| | T | 346 | 351 | 101 | 4.6 | *A* |
| | R | 102 | 104 | 102 | 2.9 | *A* |
| | Subtotal | 454 | 461 | 102 | 4.3 | *A* |
| SB | L | 63 | 61 | 97 | 9.5 | *A* |
| | T | 526 | 522 | 99 | 4.7 | *A* |
| | R | 69 | 76 | 110 | 4.0 | *A* |
| | Subtotal | 658 | 659 | 100 | 5.1 | *A* |
| EB | L | 23 | 24 | 103 | 8.9 | *A* |
| | T | 11 | 14 | 124 | 9.3 | *A* |
| | R | 17 | 18 | 104 | 4.0 | *A* |
| | Subtotal | 51 | 56 | 110 | 7.4 | *A* |
| WB | L | 128 | 129 | 101 | 10.1 | *B* |
| | T | 17 | 18 | 104 | 11.2 | *B* |
| | R | 29 | 28 | 97 | 5.9 | *A* |
| | Subtotal | 174 | 175 | 101 | 9.5 | *A* |
| **Total** | | 1,338 | 1,351 | 101 | 5.5 | *A* |

**Intersection:** 3400 North & Innovation Way
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***279*** | ***97*** | ***4.0*** | ***A*** |
| | Subtotal | 288 | 279 | 97 | 4.0 | *A* |
| EB | L | 61 | 56 | 92 | 2.5 | *A* |
| | T | 87 | 84 | 97 | 0.7 | *A* |
| | Subtotal | 148 | 140 | 95 | 1.4 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 436 | 419 | 96 | 3.2 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.3 | 0.4 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 2.6 | 0.8 | 2.3 | 1.6 | 0.2 | 1.7 | 1.8 | 1.7 | 2.3 | 3.3 | 1.7 | 1.2 |
| Total Delay (hr) | 16.0 | 10.5 | 0.3 | 5.2 | 22.6 | 0.2 | 8.2 | 6.7 | 2.7 | 13.8 | 3.8 | 1.9 |
| Total Del/Veh (s) | 104.1 | 38.6 | 6.1 | 74.2 | 47.6 | 11.0 | 70.4 | 61.7 | 23.2 | 112.7 | 64.9 | 15.8 |
| Vehicles Entered | 547 | 973 | 184 | 244 | 1688 | 76 | 406 | 380 | 407 | 420 | 205 | 420 |
| Vehicles Exited | 543 | 971 | 184 | 244 | 1689 | 76 | 406 | 380 | 407 | 415 | 202 | 419 |
| Hourly Exit Rate | 543 | 971 | 184 | 244 | 1689 | 76 | 406 | 380 | 407 | 415 | 202 | 419 |
| Input Volume | 539 | 972 | 183 | 246 | 1689 | 77 | 407 | 373 | 412 | 422 | 206 | 421 |
| % of Volume | 101 | 100 | 100 | 99 | 100 | 98 | 100 | 102 | 99 | 98 | 98 | 99 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.2 |
| Denied Del/Veh (s) | 1.3 |
| Total Delay (hr) | 91.7 |
| Total Del/Veh (s) | 54.7 |
| Vehicles Entered | 5950 |
| Vehicles Exited | 5936 |
| Hourly Exit Rate | 5936 |
| Input Volume | 5948 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.8 | 0.0 | 0.0 | 0.0 | 3.1 | 0.7 | 0.3 |
| Total Delay (hr) | 1.6 | 12.8 | 0.5 | 4.5 | 3.1 | 0.1 | 2.9 | 1.6 | 1.9 | 4.1 | 4.0 | 0.4 |
| Total Del/Veh (s) | 76.0 | 29.4 | 11.3 | 61.0 | 24.5 | 4.1 | 68.0 | 51.0 | 18.7 | 68.9 | 54.0 | 6.7 |
| Vehicles Entered | 75 | 1554 | 165 | 255 | 457 | 115 | 150 | 109 | 361 | 208 | 262 | 193 |
| Vehicles Exited | 75 | 1554 | 165 | 253 | 456 | 115 | 151 | 109 | 360 | 208 | 263 | 192 |
| Hourly Exit Rate | 75 | 1554 | 165 | 253 | 456 | 115 | 151 | 109 | 360 | 208 | 263 | 192 |
| Input Volume | 78 | 1565 | 163 | 258 | 451 | 113 | 152 | 108 | 349 | 206 | 264 | 194 |
| % of Volume | 96 | 99 | 101 | 98 | 101 | 102 | 100 | 101 | 103 | 101 | 100 | 99 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.6 |
| Denied Del/Veh (s) | 0.5 |
| Total Delay (hr) | 37.6 |
| Total Del/Veh (s) | 34.2 |
| Vehicles Entered | 3904 |
| Vehicles Exited | 3901 |
| Hourly Exit Rate | 3901 |
| Input Volume | 3901 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 2.1 | 0.1 | 1.1 | 0.1 | 0.0 | 0.4 | 0.0 | 0.3 | 0.0 | 0.2 | 1.5 | 0.0 |
| Denied Del/Veh (s) | 127.3 | 164.2 | 152.0 | 2.8 | 7.6 | 4.8 | 2.7 | 1.8 | 1.6 | 10.3 | 8.8 | 5.1 |
| Total Delay (hr) | 1.6 | 0.1 | 0.4 | 1.2 | 0.0 | 3.4 | 0.1 | 5.0 | 0.4 | 1.6 | 1.3 | 0.0 |
| Total Del/Veh (s) | 103.5 | 92.1 | 58.4 | 48.9 | 42.2 | 36.7 | 21.3 | 25.7 | 26.4 | 65.8 | 8.0 | 10.1 |
| Vehicles Entered | 53 | 2 | 24 | 85 | 3 | 335 | 9 | 699 | 53 | 86 | 599 | 4 |
| Vehicles Exited | 52 | 2 | 24 | 85 | 3 | 334 | 9 | 698 | 52 | 86 | 597 | 4 |
| Hourly Exit Rate | 52 | 2 | 24 | 85 | 3 | 334 | 9 | 698 | 52 | 86 | 597 | 4 |
| Input Volume | 62 | 2 | 26 | 90 | 2 | 341 | 9 | 682 | 55 | 90 | 604 | 4 |
| % of Volume | 84 | 89 | 92 | 94 | 133 | 98 | 97 | 102 | 94 | 95 | 99 | 107 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 5.9 |
| Denied Del/Veh (s) | 10.7 |
| Total Delay (hr) | 15.0 |
| Total Del/Veh (s) | 27.6 |
| Vehicles Entered | 1952 |
| Vehicles Exited | 1946 |
| Hourly Exit Rate | 1946 |
| Input Volume | 1968 |
| % of Volume | 99 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Delay (hr) | 1.1 | 0.1 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.9 |
| Total Del/Veh (s) | 25.2 | 17.9 | 12.4 | 16.9 | 8.0 | 6.8 | 0.3 | 0.1 | 3.5 | 1.2 | 1.1 | 5.1 |
| Vehicles Entered | 158 | 28 | 20 | 2 | 136 | 4 | 326 | 3 | 32 | 617 | 34 | 1360 |
| Vehicles Exited | 158 | 28 | 20 | 2 | 135 | 4 | 326 | 3 | 32 | 617 | 34 | 1359 |
| Hourly Exit Rate | 158 | 28 | 20 | 2 | 135 | 4 | 326 | 3 | 32 | 617 | 34 | 1359 |
| Input Volume | 156 | 25 | 19 | 2 | 132 | 5 | 321 | 3 | 33 | 622 | 31 | 1349 |
| % of Volume | 101 | 111 | 104 | 100 | 102 | 80 | 102 | 100 | 98 | 99 | 111 | 101 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 8.3 | 3.6 | 0.2 | 0.1 | 2.3 | 0.2 | 0.3 |
| Vehicles Entered | 2 | 10 | 323 | 2 | 5 | 659 | 1001 |
| Vehicles Exited | 2 | 10 | 323 | 2 | 5 | 659 | 1001 |
| Hourly Exit Rate | 2 | 10 | 323 | 2 | 5 | 659 | 1001 |
| Input Volume | 2 | 8 | 321 | 2 | 6 | 660 | 998 |
| % of Volume | 100 | 125 | 101 | 100 | 83 | 100 | 100 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 9.7 | 3.7 | 1.0 | 1.0 | 2.3 | 0.4 | 0.7 |
| Vehicles Entered | 5 | 5 | 391 | 12 | 7 | 654 | 1074 |
| Vehicles Exited | 5 | 5 | 392 | 12 | 7 | 654 | 1075 |
| Hourly Exit Rate | 5 | 5 | 392 | 12 | 7 | 654 | 1075 |
| Input Volume | 6 | 5 | 387 | 11 | 9 | 652 | 1070 |
| % of Volume | 83 | 100 | 101 | 107 | 78 | 100 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.8 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.4 | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.2 | 0.7 | 0.1 |
| Total Del/Veh (s) | 8.9 | 9.3 | 4.0 | 10.1 | 11.2 | 5.9 | 12.1 | 4.6 | 2.9 | 9.5 | 4.7 | 4.0 |
| Vehicles Entered | 24 | 14 | 18 | 128 | 18 | 28 | 6 | 350 | 104 | 61 | 522 | 76 |
| Vehicles Exited | 24 | 14 | 18 | 129 | 18 | 28 | 6 | 351 | 104 | 61 | 522 | 76 |
| Hourly Exit Rate | 24 | 14 | 18 | 129 | 18 | 28 | 6 | 351 | 104 | 61 | 522 | 76 |
| Input Volume | 23 | 11 | 17 | 128 | 17 | 29 | 6 | 346 | 102 | 63 | 526 | 69 |
| % of Volume | 103 | 124 | 104 | 101 | 104 | 97 | 100 | 101 | 102 | 97 | 99 | 110 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.1 |
| Total Del/Veh (s) | 5.5 |
| Vehicles Entered | 1349 |
| Vehicles Exited | 1351 |
| Hourly Exit Rate | 1351 |
| Input Volume | 1338 |
| % of Volume | 101 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.3 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.3 | 0.4 |
| Total Del/Veh (s) | 2.5 | 0.7 | 4.0 | 3.2 |
| Vehicles Entered | 56 | 84 | 280 | 420 |
| Vehicles Exited | 56 | 84 | 279 | 419 |
| Hourly Exit Rate | 56 | 84 | 279 | 419 |
| Input Volume | 61 | 87 | 288 | 436 |
| % of Volume | 92 | 97 | 97 | 96 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 8.7 |
| Denied Del/Veh (s) | 4.0 |
| Total Delay (hr) | 161.4 |
| Total Del/Veh (s) | 71.0 |
| Vehicles Entered | 7936 |
| Vehicles Exited | 7913 |
| Hourly Exit Rate | 7913 |
| Input Volume | 26394 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 374 | 475 | 529 | 509 | 343 | 89 | 259 | 520 | 551 | 537 | 501 | 388 |
| Average Queue (ft) | 283 | 345 | 299 | 268 | 167 | 33 | 117 | 197 | 428 | 395 | 329 | 219 |
| 95th Queue (ft) | 397 | 500 | 580 | 477 | 293 | 70 | 209 | 424 | 550 | 515 | 445 | 330 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1026 | 1026 | 1026 | |
| Upstream Blk Time (%) | | | 1 | 0 | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 19 | 40 | 10 | | 1 | | 0 | 0 | 11 | | 9 | 1 |
| Queuing Penalty (veh) | 61 | 131 | 56 | | 1 | | 0 | 0 | 27 | | 45 | 3 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | SB | SB | SB | SB | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | R | L | L | T | R | R | | |
| Maximum Queue (ft) | 129 | 249 | 381 | 421 | 250 | 341 | 386 | 541 | 375 | 178 | | |
| Average Queue (ft) | 29 | 173 | 243 | 298 | 193 | 240 | 275 | 245 | 140 | 58 | | |
| 95th Queue (ft) | 84 | 255 | 388 | 472 | 323 | 370 | 406 | 591 | 384 | 143 | | |
| Link Distance (ft) | | | 373 | 373 | | | | 999 | 999 | | | |
| Upstream Blk Time (%) | | | 1 | 13 | | | | 1 | 1 | | | |
| Queuing Penalty (veh) | | | 4 | 70 | | | | 0 | 0 | | | |
| Storage Bay Dist (ft) | 250 | 100 | | | 150 | 320 | 320 | | | 200 | | |
| Storage Blk Time (%) | | 34 | 53 | 45 | 9 | 5 | 12 | 0 | 0 | 0 | | |
| Queuing Penalty (veh) | | 69 | 109 | 186 | 25 | 10 | 25 | 2 | 1 | 0 | | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 74 | 144 | 410 | 414 | 102 | 69 | 384 | 386 | 296 | 210 | 61 | 229 |
| Average Queue (ft) | 24 | 49 | 276 | 287 | 49 | 2 | 14 | 204 | 141 | 99 | 28 | 127 |
| 95th Queue (ft) | 59 | 101 | 383 | 390 | 85 | 71 | 204 | 332 | 245 | 177 | 55 | 213 |
| Link Distance (ft) | | | 2261 | 2261 | | 1026 | 1026 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 6 | 8 | | | | 6 | 0 | 2 | | 2 |
| Queuing Penalty (veh) | | | 5 | 13 | | | | 14 | 0 | 2 | | 2 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 178 | 235 | 324 | 357 | 110 |
| Average Queue (ft) | 74 | 119 | 184 | 207 | 48 |
| 95th Queue (ft) | 142 | 213 | 292 | 327 | 86 |
| Link Distance (ft) | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | | | 5 | 7 | |
| Queuing Penalty (veh) | | | 14 | 14 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 127 | 462 | 200 | 20 | 423 | 513 | 142 | 234 | 222 |
| Average Queue (ft) | 78 | 146 | 113 | 2 | 122 | 192 | 56 | 59 | 68 |
| 95th Queue (ft) | 135 | 397 | 223 | 14 | 400 | 501 | 124 | 197 | 185 |
| Link Distance (ft) | 112 | 693 | | | 686 | 686 | | 373 | 373 |
| Upstream Blk Time (%) | 21 | 0 | | | 1 | 2 | | 0 | 0 |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | 0 | 0 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 3 | 25 | | 11 | | 26 | 9 | |
| Queuing Penalty (veh) | | 13 | 26 | | 1 | | 82 | 10 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 192 | 109 | 31 | 6 | 5 | 35 | 30 | 30 |
| Average Queue (ft) | 85 | 52 | 3 | 0 | 0 | 9 | 1 | 1 |
| 95th Queue (ft) | 160 | 86 | 16 | 5 | 5 | 32 | 13 | 13 |
| Link Distance (ft) | 535 | 986 | | 157 | 157 | | 368 | 368 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | 0 | | | 0 | 0 | |
| Queuing Penalty (veh) | | | 0 | | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 35 | 28 |
| Average Queue (ft) | 10 | 2 |
| 95th Queue (ft) | 34 | 13 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 37 | 4 | 19 |
| Average Queue (ft) | 9 | 0 | 1 |
| 95th Queue (ft) | 32 | 4 | 12 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 63 | 122 | 33 | 103 | 113 | 85 | 120 | 120 |
| Average Queue (ft) | 24 | 56 | 5 | 45 | 48 | 29 | 42 | 61 |
| 95th Queue (ft) | 54 | 97 | 23 | 85 | 87 | 67 | 90 | 104 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 31: 3400 North & Innovation Way

| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 79 |
| Average Queue (ft) | 43 |
| 95th Queue (ft) | 67 |
| Link Distance (ft) | 525 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 1023

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 451 | 425 | 94 | 71.7 | *E* |
| | T | 466 | 449 | 96 | 60.3 | *E* |
| | R | 540 | 505 | 93 | 35.5 | *D* |
| | Subtotal | 1,457 | 1,379 | 95 | 54.7 | *D* |
| SB | L | 390 | 369 | 95 | 182.1 | *F* |
| | T | 263 | 259 | 99 | 100.7 | *F* |
| | R | 425 | 429 | 101 | 17.9 | *B* |
| | Subtotal | 1,078 | 1,057 | 98 | 95.5 | *F* |
| EB | L | 540 | 528 | 98 | 102.7 | *F* |
| | T | 990 | 1,010 | 102 | 45.9 | *D* |
| | R | 246 | 242 | 98 | 9.3 | *A* |
| | Subtotal | 1,776 | 1,780 | 100 | 57.8 | *E* |
| WB | L | 339 | 336 | 99 | 89.5 | *F* |
| | T | 1,715 | 1,720 | 100 | 49.6 | *D* |
| | R | 80 | 73 | 91 | 10.6 | *B* |
| | Subtotal | 2,134 | 2,129 | 100 | 54.6 | *D* |
| **Total** | | 6,447 | 6,345 | 98 | 62.8 | *E* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 150 | 152 | 102 | 80.7 | *F* |
| | T | 117 | 117 | 100 | 50.5 | *D* |
| | R | 324 | 326 | 101 | 18.5 | *B* |
| | Subtotal | 591 | 595 | 101 | 40.7 | *D* |
| SB | L | 270 | 266 | 99 | 68.8 | *E* |
| | T | 273 | 264 | 97 | 47.2 | *D* |
| | R | 225 | 227 | 101 | 7.8 | *A* |
| | Subtotal | 768 | 757 | 99 | 43.0 | *D* |
| EB | L | 90 | 86 | 96 | 82.2 | *F* |
| | T | 1,661 | 1,626 | 98 | 21.6 | *C* |
| | R | 170 | 170 | 100 | 9.9 | *A* |
| | Subtotal | 1,921 | 1,882 | 98 | 23.3 | *C* |
| WB | L | 256 | 255 | 100 | 66.6 | *E* |
| | T | 450 | 456 | 101 | 27.8 | *C* |
| | R | 145 | 143 | 99 | 4.6 | *A* |
| | Subtotal | 851 | 854 | 100 | 35.5 | *D* |
| **Total** | | 4,129 | 4,088 | 99 | 32.2 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 13 | 85 | 29.8 | *C* |
| | T | 965 | 931 | 97 | 49.8 | *D* |
| | R | 49 | 45 | 91 | 65.0 | *E* |
| | Subtotal | 1,029 | 989 | 96 | 50.2 | *D* |
| SB | L | 78 | 76 | 98 | 125.5 | *F* |
| | T | 850 | 843 | 99 | 9.0 | *A* |
| | R | 5 | 5 | 105 | 9.0 | *A* |
| | Subtotal | 933 | 924 | 99 | 18.6 | *B* |
| EB | L | 75 | 46 | 61 | 184.0 | *F* |
| | T | 5 | 3 | 63 | 125.8 | *F* |
| | R | 30 | 19 | 63 | 162.9 | *F* |
| | Subtotal | 110 | 68 | 62 | 175.5 | *F* |
| WB | L | 77 | 77 | 100 | 88.3 | *F* |
| | T | 2 | 3 | 133 | 87.2 | *F* |
| | R | 286 | 270 | 94 | 109.4 | *F* |
| | Subtotal | 365 | 350 | 96 | 104.6 | *F* |
| **Total** | | 2,436 | 2,331 | 96 | 50.0 | *D* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 4 | 67 | 5.2 | *A* |
| | T | 339 | 345 | 102 | 0.3 | *A* |
| | R | 3 | 2 | 67 | 0.1 | *A* |
| | Subtotal | 348 | 351 | 101 | 0.4 | *A* |
| SB | L | 33 | 30 | 92 | 3.4 | *A* |
| | T | 642 | 633 | 99 | 1.1 | *A* |
| | R | 26 | 28 | 107 | 0.9 | *A* |
| | Subtotal | 701 | 691 | 99 | 1.2 | *A* |
| ***EB*** | ***L*** | ***116*** | ***110*** | ***95*** | ***20.9*** | ***C*** |
| | R | 12 | 14 | 114 | 11.5 | *B* |
| | Subtotal | 128 | 124 | 97 | 19.8 | *C* |
| WB | L | 20 | 21 | 104 | 12.9 | *B* |
| | T | 5 | 5 | 100 | 20.0 | *C* |
| | R | 135 | 138 | 102 | 8.3 | *A* |
| | Subtotal | 160 | 164 | 103 | 9.2 | *A* |
| **Total** | | 1,338 | 1,330 | 99 | 3.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 339 | 343 | 101 | 0.2 | *A* |
| | R | 2 | 2 | 100 | 0.3 | *A* |
| | Subtotal | 341 | 345 | 101 | 0.2 | *A* |
| SB | L | 6 | 6 | 100 | 2.9 | *A* |
| | T | 667 | 660 | 99 | 0.2 | *A* |
| | Subtotal | 673 | 666 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***9.4*** | ***A*** |
| | R | 10 | 10 | 98 | 3.1 | *A* |
| | Subtotal | 15 | 15 | 100 | 5.2 | *A* |
| **Total** | | 1,029 | 1,026 | 100 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 387 | 393 | 102 | 1.1 | *A* |
| | R | 11 | 10 | 89 | 1.1 | *A* |
| | Subtotal | 398 | 403 | 101 | 1.1 | *A* |
| SB | L | 9 | 9 | 100 | 2.7 | *A* |
| | T | 662 | 655 | 99 | 0.4 | *A* |
| | Subtotal | 671 | 664 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***10*** | ***98*** | ***10.0*** | ***A*** |
| | R | 10 | 12 | 117 | 4.0 | *A* |
| | Subtotal | 20 | 22 | 110 | 6.7 | *A* |
| **Total** | | 1,089 | 1,089 | 100 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 11.2 | *B* |
| | T | 345 | 352 | 102 | 5.2 | *A* |
| | R | 130 | 125 | 96 | 3.4 | *A* |
| | Subtotal | 481 | 482 | 100 | 4.8 | *A* |
| SB | L | 70 | 70 | 100 | 11.3 | *B* |
| | T | 560 | 553 | 99 | 5.6 | *A* |
| | R | 69 | 71 | 103 | 4.4 | *A* |
| | Subtotal | 699 | 694 | 99 | 6.1 | *A* |
| EB | L | 23 | 22 | 95 | 10.2 | *B* |
| | T | 11 | 13 | 116 | 10.2 | *B* |
| | R | 17 | 19 | 110 | 4.0 | *A* |
| | Subtotal | 51 | 54 | 106 | 8.0 | *A* |
| WB | L | 165 | 164 | 99 | 10.7 | *B* |
| | T | 17 | 17 | 99 | 10.7 | *B* |
| | R | 30 | 30 | 101 | 6.3 | *A* |
| | Subtotal | 212 | 211 | 100 | 10.1 | *A* |
| **Total** | | 1,444 | 1,441 | 100 | 6.3 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.2 | 0.4 | 0.8 | 0.0 | 0.3 | 0.2 | 0.5 | 1.0 | 0.5 | 0.8 |
| Denied Del/Veh (s) | 2.6 | 0.7 | 2.4 | 3.9 | 1.7 | 2.3 | 2.3 | 2.0 | 3.3 | 8.9 | 6.8 | 6.8 |
| Total Delay (hr) | 15.6 | 13.1 | 0.6 | 8.7 | 24.3 | 0.2 | 8.6 | 7.6 | 5.0 | 19.8 | 7.6 | 2.2 |
| Total Del/Veh (s) | 102.7 | 45.9 | 9.3 | 89.5 | 49.6 | 10.6 | 71.7 | 60.3 | 35.5 | 182.1 | 100.7 | 17.9 |
| Vehicles Entered | 534 | 1013 | 243 | 340 | 1726 | 73 | 426 | 449 | 506 | 382 | 263 | 428 |
| Vehicles Exited | 528 | 1010 | 242 | 336 | 1720 | 73 | 425 | 449 | 505 | 369 | 259 | 429 |
| Hourly Exit Rate | 528 | 1010 | 242 | 336 | 1720 | 73 | 425 | 449 | 505 | 369 | 259 | 429 |
| Input Volume | 540 | 990 | 246 | 339 | 1715 | 80 | 451 | 466 | 540 | 390 | 263 | 425 |
| % of Volume | 98 | 102 | 98 | 99 | 100 | 91 | 94 | 96 | 93 | 95 | 99 | 101 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 5.2 |
| Denied Del/Veh (s) | 2.9 |
| Total Delay (hr) | 113.3 |
| Total Del/Veh (s) | 62.8 |
| Vehicles Entered | 6383 |
| Vehicles Exited | 6345 |
| Hourly Exit Rate | 6345 |
| Input Volume | 6447 |
| % of Volume | 98 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.8 | 0.0 | 0.0 | 0.0 | 3.0 | 0.8 | 0.4 |
| Total Delay (hr) | 2.0 | 9.9 | 0.5 | 4.9 | 3.6 | 0.2 | 3.5 | 1.7 | 1.7 | 5.2 | 3.5 | 0.5 |
| Total Del/Veh (s) | 82.2 | 21.6 | 9.9 | 66.6 | 27.8 | 4.6 | 80.7 | 50.5 | 18.5 | 68.8 | 47.2 | 7.8 |
| Vehicles Entered | 87 | 1621 | 171 | 255 | 457 | 143 | 152 | 116 | 325 | 266 | 265 | 227 |
| Vehicles Exited | 86 | 1626 | 170 | 255 | 456 | 143 | 152 | 117 | 326 | 266 | 264 | 227 |
| Hourly Exit Rate | 86 | 1626 | 170 | 255 | 456 | 143 | 152 | 117 | 326 | 266 | 264 | 227 |
| Input Volume | 90 | 1661 | 170 | 256 | 450 | 145 | 150 | 117 | 324 | 270 | 273 | 225 |
| % of Volume | 96 | 98 | 100 | 100 | 101 | 99 | 102 | 100 | 101 | 99 | 97 | 101 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.7 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 37.1 |
| Total Del/Veh (s) | 32.2 |
| Vehicles Entered | 4085 |
| Vehicles Exited | 4088 |
| Hourly Exit Rate | 4088 |
| Input Volume | 4129 |
| % of Volume | 99 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 11.8 | 0.8 | 5.6 | 0.4 | 0.0 | 1.6 | 0.1 | 7.1 | 0.4 | 0.4 | 3.3 | 0.1 |
| Denied Del/Veh (s) | 575.2 | 554.8 | 631.0 | 18.4 | 18.0 | 21.0 | 29.6 | 26.6 | 28.1 | 17.2 | 14.1 | 51.3 |
| Total Delay (hr) | 2.5 | 0.1 | 0.9 | 1.9 | 0.1 | 8.6 | 0.1 | 13.2 | 0.8 | 2.7 | 2.1 | 0.0 |
| Total Del/Veh (s) | 184.0 | 125.8 | 162.9 | 88.3 | 87.2 | 109.4 | 29.8 | 49.8 | 65.0 | 125.5 | 9.0 | 9.0 |
| Vehicles Entered | 47 | 3 | 20 | 78 | 3 | 278 | 12 | 946 | 46 | 77 | 844 | 5 |
| Vehicles Exited | 46 | 3 | 19 | 77 | 3 | 270 | 13 | 931 | 45 | 76 | 843 | 5 |
| Hourly Exit Rate | 46 | 3 | 19 | 77 | 3 | 270 | 13 | 931 | 45 | 76 | 843 | 5 |
| Input Volume | 75 | 5 | 30 | 77 | 2 | 286 | 15 | 965 | 49 | 78 | 850 | 5 |
| % of Volume | 61 | 63 | 63 | 100 | 133 | 94 | 85 | 97 | 91 | 98 | 99 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 31.6 |
| Denied Del/Veh (s) | 47.0 |
| Total Delay (hr) | 33.1 |
| Total Del/Veh (s) | 50.0 |
| Vehicles Entered | 2359 |
| Vehicles Exited | 2331 |
| Hourly Exit Rate | 2331 |
| Input Volume | 2436 |
| % of Volume | 96 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.6 | 0.0 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.4 |
| Total Del/Veh (s) | 20.9 | 11.5 | 12.9 | 20.0 | 8.3 | 5.2 | 0.3 | 0.1 | 3.4 | 1.1 | 0.9 | 3.7 |
| Vehicles Entered | 110 | 14 | 21 | 5 | 138 | 4 | 346 | 2 | 30 | 634 | 28 | 1332 |
| Vehicles Exited | 110 | 14 | 21 | 5 | 138 | 4 | 345 | 2 | 30 | 633 | 28 | 1330 |
| Hourly Exit Rate | 110 | 14 | 21 | 5 | 138 | 4 | 345 | 2 | 30 | 633 | 28 | 1330 |
| Input Volume | 116 | 12 | 20 | 5 | 135 | 6 | 339 | 3 | 33 | 642 | 26 | 1338 |
| % of Volume | 95 | 114 | 104 | 100 | 102 | 67 | 102 | 67 | 92 | 99 | 107 | 99 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 9.4 | 3.1 | 0.2 | 0.3 | 2.9 | 0.2 | 0.3 |
| Vehicles Entered | 5 | 10 | 344 | 2 | 6 | 660 | 1027 |
| Vehicles Exited | 5 | 10 | 343 | 2 | 6 | 660 | 1026 |
| Hourly Exit Rate | 5 | 10 | 343 | 2 | 6 | 660 | 1026 |
| Input Volume | 5 | 10 | 339 | 2 | 6 | 667 | 1029 |
| % of Volume | 100 | 98 | 101 | 100 | 100 | 99 | 100 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 10.0 | 4.0 | 1.1 | 1.1 | 2.7 | 0.4 | 0.8 |
| Vehicles Entered | 10 | 12 | 394 | 10 | 9 | 655 | 1090 |
| Vehicles Exited | 10 | 12 | 393 | 10 | 9 | 655 | 1089 |
| Hourly Exit Rate | 10 | 12 | 393 | 10 | 9 | 655 | 1089 |
| Input Volume | 10 | 10 | 387 | 11 | 9 | 662 | 1089 |
| % of Volume | 98 | 117 | 102 | 89 | 100 | 99 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.4 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.1 | 0.0 | 0.5 | 0.1 | 0.2 | 0.9 | 0.1 |
| Total Del/Veh (s) | 10.2 | 10.2 | 4.0 | 10.7 | 10.7 | 6.3 | 11.2 | 5.2 | 3.4 | 11.3 | 5.6 | 4.4 |
| Vehicles Entered | 22 | 13 | 19 | 165 | 18 | 30 | 5 | 353 | 126 | 71 | 553 | 71 |
| Vehicles Exited | 22 | 13 | 19 | 164 | 17 | 30 | 5 | 352 | 125 | 70 | 553 | 71 |
| Hourly Exit Rate | 22 | 13 | 19 | 164 | 17 | 30 | 5 | 352 | 125 | 70 | 553 | 71 |
| Input Volume | 23 | 11 | 17 | 165 | 17 | 30 | 6 | 345 | 130 | 70 | 560 | 69 |
| % of Volume | 95 | 116 | 110 | 99 | 99 | 101 | 83 | 102 | 96 | 100 | 99 | 103 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.5 |
| Total Del/Veh (s) | 6.3 |
| Vehicles Entered | 1446 |
| Vehicles Exited | 1441 |
| Hourly Exit Rate | 1441 |
| Input Volume | 1444 |
| % of Volume | 100 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 37.6 |
| Denied Del/Veh (s) | 15.7 |
| Total Delay (hr) | 201.6 |
| Total Del/Veh (s) | 82.2 |
| Vehicles Entered | 8546 |
| Vehicles Exited | 8466 |
| Hourly Exit Rate | 8466 |
| Input Volume | 28142 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 377 | 484 | 577 | 503 | 324 | 141 | 288 | 521 | 558 | 520 | 439 | 364 |
| Average Queue (ft) | 278 | 334 | 313 | 288 | 204 | 51 | 157 | 249 | 423 | 373 | 300 | 208 |
| 95th Queue (ft) | 398 | 488 | 542 | 471 | 313 | 106 | 281 | 474 | 560 | 495 | 416 | 323 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1045 | 1045 | 1045 | |
| Upstream Blk Time (%) | | | 1 | 0 | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 17 | 38 | 17 | | 1 | | 2 | 3 | 11 | | 10 | 1 |
| Queuing Penalty (veh) | 56 | 126 | 91 | | 3 | | 9 | 11 | 37 | | 54 | 4 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | SB | SB | SB | SB | SB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | R | L | L | T | R | R | | |
| Maximum Queue (ft) | 89 | 248 | 393 | 423 | 250 | 348 | 399 | 855 | 571 | 207 | | |
| Average Queue (ft) | 22 | 165 | 274 | 364 | 232 | 270 | 326 | 459 | 216 | 70 | | |
| 95th Queue (ft) | 59 | 258 | 437 | 486 | 306 | 415 | 475 | 955 | 663 | 172 | | |
| Link Distance (ft) | | | 373 | 373 | | | | 1001 | 1001 | | | |
| Upstream Blk Time (%) | | | 1 | 24 | | | | 6 | 1 | | | |
| Queuing Penalty (veh) | | | 10 | 159 | | | | 0 | 0 | | | |
| Storage Bay Dist (ft) | 250 | 150 | | | 150 | 320 | 320 | | | 200 | | |
| Storage Blk Time (%) | | 18 | 32 | 52 | 28 | 13 | 28 | 11 | 1 | 0 | | |
| Queuing Penalty (veh) | | 40 | 72 | 283 | 95 | 35 | 73 | 42 | 2 | 0 | | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 86 | 126 | 352 | 373 | 104 | 491 | 410 | 377 | 341 | 221 | 72 | 256 |
| Average Queue (ft) | 31 | 51 | 210 | 216 | 43 | 14 | 19 | 213 | 148 | 98 | 33 | 142 |
| 95th Queue (ft) | 69 | 99 | 321 | 332 | 82 | 203 | 246 | 349 | 273 | 190 | 59 | 242 |
| Link Distance (ft) | | | 2242 | 2242 | | 1045 | 1045 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 1 | 1 | | | | 8 | 0 | 3 | | 6 |
| Queuing Penalty (veh) | | | 1 | 2 | | | | 17 | 0 | 4 | | 7 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 239 | 257 | 367 | 406 | 138 |
| Average Queue (ft) | 91 | 110 | 231 | 211 | 58 |
| 95th Queue (ft) | 197 | 208 | 354 | 355 | 110 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | 0 | 0 | | | |
| Queuing Penalty (veh) | 1 | 0 | | | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 13 | 5 | |
| Queuing Penalty (veh) | 0 | | 35 | 13 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 147 | 673 | 200 | 52 | 650 | 700 | 149 | 311 | 317 |
| Average Queue (ft) | 100 | 299 | 140 | 4 | 307 | 411 | 71 | 103 | 111 |
| 95th Queue (ft) | 151 | 751 | 250 | 24 | 774 | 815 | 154 | 284 | 273 |
| Link Distance (ft) | 112 | 703 | | | 688 | 688 | | 373 | 373 |
| Upstream Blk Time (%) | 59 | 16 | | | 8 | 20 | | 1 | 1 |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | 3 | 3 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 3 | 46 | 0 | 15 | | 40 | 12 | |
| Queuing Penalty (veh) | | 8 | 40 | 0 | 2 | | 176 | 11 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 151 | 123 | 24 | 36 | 19 | 40 | 22 | 27 |
| Average Queue (ft) | 59 | 54 | 2 | 2 | 1 | 10 | 1 | 2 |
| 95th Queue (ft) | 109 | 92 | 13 | 20 | 10 | 34 | 13 | 15 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 36 | 30 |
| Average Queue (ft) | 12 | 2 |
| 95th Queue (ft) | 37 | 14 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 44 | 5 | 31 |
| Average Queue (ft) | 16 | 0 | 3 |
| 95th Queue (ft) | 42 | 5 | 17 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 70 | 137 | 31 | 109 | 107 | 84 | 119 | 148 |
| Average Queue (ft) | 25 | 63 | 3 | 49 | 51 | 33 | 51 | 70 |
| 95th Queue (ft) | 56 | 107 | 19 | 90 | 91 | 67 | 103 | 121 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Network Summary

Network wide Queuing Penalty: 1527

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 451 | 452 | 100 | 87.8 | *F* |
| | T | 466 | 453 | 97 | 43.7 | *D* |
| | R | 540 | 546 | 101 | 12.7 | *B* |
| | Subtotal | 1,457 | 1,451 | 100 | 45.8 | *D* |
| SB | L | 390 | 398 | 102 | 89.5 | *F* |
| | T | 263 | 256 | 97 | 112.7 | *F* |
| | R | 425 | 416 | 98 | 16.0 | *B* |
| | Subtotal | 1,078 | 1,070 | 99 | 66.5 | *E* |
| EB | L | 540 | 533 | 99 | 88.8 | *F* |
| | T | 990 | 995 | 100 | 51.4 | *D* |
| | R | 246 | 254 | 103 | 10.6 | *B* |
| | Subtotal | 1,776 | 1,782 | 100 | 56.8 | *E* |
| WB | L | 339 | 337 | 99 | 64.8 | *E* |
| | T | 1,715 | 1,711 | 100 | 47.3 | *D* |
| | R | 80 | 84 | 105 | 11.4 | *B* |
| | Subtotal | 2,134 | 2,132 | 100 | 48.7 | *D* |
| **Total** | | 6,447 | 6,435 | 100 | 53.4 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 150 | 143 | 95 | 74.5 | *E* |
| | T | 117 | 117 | 100 | 52.7 | *D* |
| | R | 324 | 331 | 102 | 19.3 | *B* |
| | Subtotal | 591 | 591 | 100 | 39.3 | *D* |
| SB | L | 270 | 261 | 97 | 70.7 | *E* |
| | T | 273 | 268 | 98 | 51.0 | *D* |
| | R | 225 | 238 | 106 | 7.7 | *A* |
| | Subtotal | 768 | 767 | 100 | 44.3 | *D* |
| EB | L | 90 | 88 | 98 | 84.5 | *F* |
| | T | 1,661 | 1,680 | 101 | 24.5 | *C* |
| | R | 170 | 174 | 102 | 10.4 | *B* |
| | Subtotal | 1,921 | 1,942 | 101 | 26.0 | *C* |
| WB | L | 256 | 249 | 97 | 63.2 | *E* |
| | T | 450 | 450 | 100 | 28.8 | *C* |
| | R | 145 | 149 | 103 | 4.8 | *A* |
| | Subtotal | 851 | 848 | 100 | 34.7 | *C* |
| **Total** | | 4,129 | 4,148 | 100 | 33.1 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 15 | 98 | 22.7 | *C* |
| | T | 965 | 957 | 99 | 11.3 | *B* |
| | R | 49 | 51 | 104 | 9.8 | *A* |
| | Subtotal | 1,029 | 1,023 | 99 | 11.4 | *B* |
| SB | L | 78 | 78 | 100 | 75.9 | *E* |
| | T | 850 | 853 | 100 | 4.7 | *A* |
| | R | 5 | 5 | 105 | 2.8 | *A* |
| | Subtotal | 933 | 936 | 100 | 10.6 | *B* |
| EB | L | 75 | 73 | 97 | 83.6 | *F* |
| | T | 5 | 6 | 126 | 78.2 | *E* |
| | R | 30 | 32 | 106 | 61.0 | *E* |
| | Subtotal | 110 | 111 | 101 | 76.8 | *E* |
| WB | L | 77 | 77 | 100 | 60.5 | *E* |
| | T | 2 | 2 | 89 | 76.5 | *E* |
| | R | 286 | 289 | 101 | 39.9 | *D* |
| | Subtotal | 365 | 368 | 101 | 44.4 | *D* |
| **Total** | | 2,436 | 2,438 | 100 | 19.1 | *B* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 4.6 | *A* |
| | T | 339 | 339 | 100 | 0.3 | *A* |
| | R | 3 | 3 | 100 | 0.1 | *A* |
| | Subtotal | 348 | 348 | 100 | 0.4 | *A* |
| SB | L | 33 | 31 | 95 | 3.6 | *A* |
| | T | 642 | 634 | 99 | 1.1 | *A* |
| | R | 26 | 28 | 107 | 1.1 | *A* |
| | Subtotal | 701 | 693 | 99 | 1.2 | *A* |
| ***EB*** | ***L*** | ***116*** | ***112*** | ***97*** | ***24.6*** | ***C*** |
| | R | 12 | 14 | 114 | 15.8 | *C* |
| | Subtotal | 128 | 126 | 98 | 23.6 | *C* |
| WB | L | 20 | 21 | 104 | 13.9 | *B* |
| | T | 5 | 5 | 100 | 23.0 | *C* |
| | R | 135 | 141 | 104 | 9.1 | *A* |
| | Subtotal | 160 | 167 | 104 | 10.1 | *B* |
| **Total** | | 1,338 | 1,334 | 100 | 4.2 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 339 | 338 | 100 | 0.2 | *A* |
| | R | 2 | 2 | 100 | 0.1 | *A* |
| | Subtotal | 341 | 340 | 100 | 0.2 | *A* |
| SB | L | 6 | 5 | 83 | 2.6 | *A* |
| | T | 667 | 662 | 99 | 0.2 | *A* |
| | Subtotal | 673 | 667 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***5*** | ***4*** | ***80*** | ***10.6*** | ***B*** |
| | R | 10 | 11 | 107 | 3.3 | *A* |
| | Subtotal | 15 | 15 | 100 | 5.2 | *A* |
| | | | | | | |
| **Total** | | 1,029 | 1,022 | 99 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 387 | 388 | 100 | 1.1 | *A* |
| | R | 11 | 10 | 89 | 1.2 | *A* |
| | Subtotal | 398 | 398 | 100 | 1.1 | *A* |
| SB | L | 9 | 8 | 89 | 2.5 | *A* |
| | T | 662 | 656 | 99 | 0.4 | *A* |
| | Subtotal | 671 | 664 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***9*** | ***88*** | ***8.7*** | ***A*** |
| | R | 10 | 12 | 117 | 3.1 | *A* |
| | Subtotal | 20 | 21 | 105 | 5.5 | *A* |
| | | | | | | |
| **Total** | | 1,089 | 1,083 | 99 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 9.5 | *A* |
| | T | 345 | 343 | 99 | 4.9 | *A* |
| | R | 130 | 132 | 101 | 3.0 | *A* |
| | Subtotal | 481 | 480 | 100 | 4.4 | *A* |
| SB | L | 70 | 66 | 94 | 10.9 | *B* |
| | T | 560 | 555 | 99 | 5.7 | *A* |
| | R | 69 | 67 | 97 | 4.6 | *A* |
| | Subtotal | 699 | 688 | 98 | 6.1 | *A* |
| EB | L | 23 | 23 | 99 | 9.4 | *A* |
| | T | 11 | 11 | 98 | 9.4 | *A* |
| | R | 17 | 16 | 93 | 4.6 | *A* |
| | Subtotal | 51 | 50 | 98 | 7.9 | *A* |
| WB | L | 165 | 163 | 99 | 10.8 | *B* |
| | T | 17 | 15 | 87 | 10.9 | *B* |
| | R | 30 | 32 | 108 | 5.8 | *A* |
| | Subtotal | 212 | 210 | 99 | 10.0 | *A* |
| **Total** | | 1,444 | 1,428 | 99 | 6.2 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.4 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 2.3 | 0.6 | 2.2 | 1.6 | 0.2 | 1.6 | 0.7 | 0.1 | 0.5 | 3.3 | 1.4 | 1.1 |
| Total Delay (hr) | 13.5 | 14.5 | 0.8 | 6.3 | 23.0 | 0.3 | 11.2 | 5.6 | 1.9 | 10.1 | 8.4 | 1.9 |
| Total Del/Veh (s) | 88.8 | 51.4 | 10.6 | 64.8 | 47.3 | 11.4 | 87.8 | 43.7 | 12.7 | 89.5 | 112.7 | 16.0 |
| Vehicles Entered | 537 | 996 | 254 | 338 | 1712 | 84 | 453 | 452 | 546 | 401 | 259 | 415 |
| Vehicles Exited | 533 | 995 | 254 | 337 | 1711 | 84 | 452 | 453 | 546 | 398 | 256 | 416 |
| Hourly Exit Rate | 533 | 995 | 254 | 337 | 1711 | 84 | 452 | 453 | 546 | 398 | 256 | 416 |
| Input Volume | 540 | 990 | 246 | 339 | 1715 | 80 | 451 | 466 | 540 | 390 | 263 | 425 |
| % of Volume | 99 | 100 | 103 | 99 | 100 | 105 | 100 | 97 | 101 | 102 | 97 | 98 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 1.7 |
| Denied Del/Veh (s) | 0.9 |
| Total Delay (hr) | 97.3 |
| Total Del/Veh (s) | 53.4 |
| Vehicles Entered | 6447 |
| Vehicles Exited | 6435 |
| Hourly Exit Rate | 6435 |
| Input Volume | 6447 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.8 | 0.0 | 0.0 | 0.0 | 3.0 | 0.7 | 0.4 |
| Total Delay (hr) | 2.1 | 11.6 | 0.5 | 4.5 | 3.6 | 0.2 | 3.0 | 1.7 | 1.8 | 5.3 | 3.9 | 0.5 |
| Total Del/Veh (s) | 84.5 | 24.5 | 10.4 | 63.2 | 28.8 | 4.8 | 74.5 | 52.7 | 19.3 | 70.7 | 51.0 | 7.7 |
| Vehicles Entered | 87 | 1678 | 174 | 250 | 452 | 149 | 143 | 117 | 332 | 262 | 268 | 237 |
| Vehicles Exited | 88 | 1680 | 174 | 249 | 450 | 149 | 143 | 117 | 331 | 261 | 268 | 238 |
| Hourly Exit Rate | 88 | 1680 | 174 | 249 | 450 | 149 | 143 | 117 | 331 | 261 | 268 | 238 |
| Input Volume | 90 | 1661 | 170 | 256 | 450 | 145 | 150 | 117 | 324 | 270 | 273 | 225 |
| % of Volume | 98 | 101 | 102 | 97 | 100 | 103 | 95 | 100 | 102 | 97 | 98 | 106 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.7 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 38.8 |
| Total Del/Veh (s) | 33.1 |
| Vehicles Entered | 4149 |
| Vehicles Exited | 4148 |
| Hourly Exit Rate | 4148 |
| Input Volume | 4129 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 1.5 | 0.2 | 0.7 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.1 | 1.4 | 0.0 |
| Denied Del/Veh (s) | 70.0 | 142.2 | 73.5 | 1.1 | 2.6 | 3.9 | 2.5 | 0.4 | 0.4 | 5.5 | 5.9 | 18.3 |
| Total Delay (hr) | 1.7 | 0.1 | 0.5 | 1.3 | 0.0 | 3.2 | 0.1 | 3.0 | 0.1 | 1.6 | 1.1 | 0.0 |
| Total Del/Veh (s) | 83.6 | 78.2 | 61.0 | 60.5 | 76.5 | 39.9 | 22.7 | 11.3 | 9.8 | 75.9 | 4.7 | 2.8 |
| Vehicles Entered | 73 | 6 | 32 | 77 | 2 | 290 | 15 | 961 | 51 | 78 | 853 | 5 |
| Vehicles Exited | 73 | 6 | 32 | 77 | 2 | 289 | 15 | 957 | 51 | 78 | 853 | 5 |
| Hourly Exit Rate | 73 | 6 | 32 | 77 | 2 | 289 | 15 | 957 | 51 | 78 | 853 | 5 |
| Input Volume | 75 | 5 | 30 | 77 | 2 | 286 | 15 | 965 | 49 | 78 | 850 | 5 |
| % of Volume | 97 | 126 | 106 | 100 | 89 | 101 | 98 | 99 | 104 | 100 | 100 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 4.4 |
| Denied Del/Veh (s) | 6.5 |
| Total Delay (hr) | 13.0 |
| Total Del/Veh (s) | 19.1 |
| Vehicles Entered | 2443 |
| Vehicles Exited | 2438 |
| Hourly Exit Rate | 2438 |
| Input Volume | 2436 |
| % of Volume | 100 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.8 | 0.1 | 0.1 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.6 |
| Total Del/Veh (s) | 24.6 | 15.8 | 13.9 | 23.0 | 9.1 | 4.6 | 0.3 | 0.1 | 3.6 | 1.1 | 1.1 | 4.2 |
| Vehicles Entered | 112 | 14 | 21 | 5 | 142 | 6 | 339 | 3 | 31 | 635 | 28 | 1336 |
| Vehicles Exited | 112 | 14 | 21 | 5 | 141 | 6 | 339 | 3 | 31 | 634 | 28 | 1334 |
| Hourly Exit Rate | 112 | 14 | 21 | 5 | 141 | 6 | 339 | 3 | 31 | 634 | 28 | 1334 |
| Input Volume | 116 | 12 | 20 | 5 | 135 | 6 | 339 | 3 | 33 | 642 | 26 | 1338 |
| % of Volume | 97 | 114 | 104 | 100 | 104 | 100 | 100 | 100 | 95 | 99 | 107 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 10.6 | 3.3 | 0.2 | 0.1 | 2.6 | 0.2 | 0.3 |
| Vehicles Entered | 4 | 11 | 338 | 2 | 5 | 662 | 1022 |
| Vehicles Exited | 4 | 11 | 338 | 2 | 5 | 662 | 1022 |
| Hourly Exit Rate | 4 | 11 | 338 | 2 | 5 | 662 | 1022 |
| Input Volume | 5 | 10 | 339 | 2 | 6 | 667 | 1029 |
| % of Volume | 80 | 107 | 100 | 100 | 83 | 99 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 8.7 | 3.1 | 1.1 | 1.2 | 2.5 | 0.4 | 0.7 |
| Vehicles Entered | 9 | 12 | 388 | 10 | 8 | 657 | 1084 |
| Vehicles Exited | 9 | 12 | 388 | 10 | 8 | 656 | 1083 |
| Hourly Exit Rate | 9 | 12 | 388 | 10 | 8 | 656 | 1083 |
| Input Volume | 10 | 10 | 387 | 11 | 9 | 662 | 1089 |
| % of Volume | 88 | 117 | 100 | 89 | 89 | 99 | 99 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.3 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 0.5 | 0.1 | 0.2 | 0.9 | 0.1 |
| Total Del/Veh (s) | 9.4 | 9.4 | 4.6 | 10.8 | 10.9 | 5.8 | 9.5 | 4.9 | 3.0 | 10.9 | 5.7 | 4.6 |
| Vehicles Entered | 23 | 12 | 17 | 163 | 15 | 32 | 5 | 344 | 133 | 66 | 556 | 67 |
| Vehicles Exited | 23 | 11 | 16 | 163 | 15 | 32 | 5 | 343 | 132 | 66 | 555 | 67 |
| Hourly Exit Rate | 23 | 11 | 16 | 163 | 15 | 32 | 5 | 343 | 132 | 66 | 555 | 67 |
| Input Volume | 23 | 11 | 17 | 165 | 17 | 30 | 6 | 345 | 130 | 70 | 560 | 69 |
| % of Volume | 99 | 98 | 93 | 99 | 87 | 108 | 83 | 99 | 101 | 94 | 99 | 97 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.5 |
| Total Del/Veh (s) | 6.2 |
| Vehicles Entered | 1433 |
| Vehicles Exited | 1428 |
| Hourly Exit Rate | 1428 |
| Input Volume | 1444 |
| % of Volume | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 6.8 |
| Denied Del/Veh (s) | 2.9 |
| Total Delay (hr) | 167.4 |
| Total Del/Veh (s) | 67.7 |
| Vehicles Entered | 8614 |
| Vehicles Exited | 8586 |
| Hourly Exit Rate | 8586 |
| Input Volume | 28142 |
| % of Volume | 31 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 377 | 494 | 547 | 472 | 372 | 158 | 221 | 517 | 540 | 505 | 425 | 330 |
| Average Queue (ft) | 264 | 317 | 304 | 284 | 218 | 58 | 126 | 202 | 407 | 362 | 281 | 189 |
| 95th Queue (ft) | 380 | 456 | 445 | 403 | 331 | 118 | 197 | 389 | 541 | 478 | 391 | 293 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1033 | 1033 | 1033 | |
| Upstream Blk Time (%) | | | 0 | | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 11 | 33 | 21 | | 2 | 0 | | 0 | 9 | | 8 | 0 |
| Queuing Penalty (veh) | 35 | 107 | 112 | | 5 | 0 | | 0 | 31 | | 40 | 2 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | R | R | |
| Maximum Queue (ft) | 129 | 200 | 250 | 396 | 431 | 246 | 326 | 402 | 750 | 528 | 186 | |
| Average Queue (ft) | 19 | 182 | 223 | 255 | 211 | 120 | 191 | 266 | 355 | 148 | 60 | |
| 95th Queue (ft) | 72 | 227 | 282 | 448 | 428 | 218 | 306 | 418 | 759 | 433 | 155 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 1001 | 1001 | | |
| Upstream Blk Time (%) | | | | 7 | 5 | | | | 2 | 0 | | |
| Queuing Penalty (veh) | | | | 45 | 33 | | | | 0 | 0 | | |
| Storage Bay Dist (ft) | 250 | 150 | 150 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 27 | 48 | 6 | 7 | 5 | 0 | 2 | 18 | 0 | 0 | |
| Queuing Penalty (veh) | | 45 | 80 | 26 | 35 | 8 | 1 | 6 | 72 | 1 | 0 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 82 | 146 | 378 | 391 | 99 | 620 | 639 | 340 | 321 | 239 | 78 | 238 |
| Average Queue (ft) | 32 | 53 | 229 | 239 | 44 | 30 | 43 | 201 | 151 | 104 | 33 | 131 |
| 95th Queue (ft) | 69 | 104 | 340 | 358 | 83 | 314 | 379 | 314 | 273 | 203 | 61 | 218 |
| Link Distance (ft) | | | 2242 | 2242 | | 1033 | 1033 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 1 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | 0 | 2 | 3 | | | | 5 | 0 | 3 | | 2 |
| Queuing Penalty (veh) | | 0 | 2 | 5 | | | | 11 | 1 | 4 | | 3 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 222 | 254 | 358 | 468 | 174 |
| Average Queue (ft) | 84 | 115 | 227 | 230 | 62 |
| 95th Queue (ft) | 168 | 211 | 357 | 455 | 128 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | | 0 | | 0 | |
| Queuing Penalty (veh) | | 0 | | 0 | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 13 | 5 | |
| Queuing Penalty (veh) | 0 | | 36 | 14 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 132 | 541 | 200 | 54 | 400 | 391 | 149 | 291 | 290 |
| Average Queue (ft) | 89 | 137 | 100 | 6 | 122 | 130 | 56 | 57 | 60 |
| 95th Queue (ft) | 144 | 425 | 209 | 31 | 310 | 307 | 133 | 215 | 204 |
| Link Distance (ft) | 105 | 705 | | | 688 | 688 | | 374 | 374 |
| Upstream Blk Time (%) | 31 | 1 | | | | | | 0 | 0 |
| Queuing Penalty (veh) | 0 | 0 | | | | | | 0 | 1 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 3 | 23 | 0 | 16 | | 26 | 4 | |
| Queuing Penalty (veh) | | 10 | 21 | 0 | 3 | | 125 | 4 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | TR | L | T | TR |
| Maximum Queue (ft) | 164 | 121 | 30 | 10 | 44 | 18 | 33 |
| Average Queue (ft) | 65 | 56 | 3 | 1 | 8 | 1 | 1 |
| 95th Queue (ft) | 126 | 98 | 17 | 8 | 32 | 11 | 16 |
| Link Distance (ft) | 1253 | 986 | | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | |
| Queuing Penalty (veh) | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | 50 | | |
| Storage Blk Time (%) | | | | | 0 | 0 | |
| Queuing Penalty (veh) | | | | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 38 | 24 |
| Average Queue (ft) | 12 | 1 |
| 95th Queue (ft) | 37 | 11 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 40 | 27 |
| Average Queue (ft) | 15 | 2 |
| 95th Queue (ft) | 41 | 15 |
| Link Distance (ft) | 245 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 52 | 140 | 30 | 92 | 125 | 88 | 132 | 142 |
| Average Queue (ft) | 24 | 66 | 3 | 46 | 50 | 32 | 54 | 72 |
| 95th Queue (ft) | 52 | 111 | 18 | 81 | 93 | 68 | 108 | 124 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 1 | |

## Network Summary

Network wide Queuing Penalty: 927

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 500 | 482 | 96 | 96.6 | *F* |
| | T | 478 | 466 | 97 | 44.3 | *D* |
| | R | 540 | 526 | 97 | 13.2 | *B* |
| | Subtotal | 1,518 | 1,474 | 97 | 50.3 | *D* |
| SB | L | 390 | 384 | 98 | 81.8 | *F* |
| | T | 264 | 258 | 98 | 122.9 | *F* |
| | R | 425 | 434 | 102 | 18.2 | *B* |
| | Subtotal | 1,079 | 1,076 | 100 | 66.0 | *E* |
| EB | L | 540 | 534 | 99 | 121.7 | *F* |
| | T | 990 | 978 | 99 | 57.7 | *E* |
| | R | 256 | 260 | 101 | 12.2 | *B* |
| | Subtotal | 1,786 | 1,772 | 99 | 70.3 | *E* |
| WB | L | 340 | 352 | 104 | 70.4 | *E* |
| | T | 1,725 | 1,745 | 101 | 50.2 | *D* |
| | R | 80 | 80 | 100 | 11.5 | *B* |
| | Subtotal | 2,145 | 2,177 | 101 | 52.0 | *D* |
| **Total** | | 6,530 | 6,499 | 100 | 59.3 | *E* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 160 | 164 | 103 | 80.5 | *F* |
| | T | 120 | 121 | 101 | 54.5 | *D* |
| | R | 351 | 355 | 101 | 19.5 | *B* |
| | Subtotal | 631 | 640 | 101 | 41.7 | *D* |
| SB | L | 270 | 258 | 96 | 66.4 | *E* |
| | T | 273 | 274 | 100 | 52.2 | *D* |
| | R | 225 | 234 | 104 | 7.4 | *A* |
| | Subtotal | 768 | 766 | 100 | 43.3 | *D* |
| EB | L | 90 | 90 | 100 | 80.4 | *F* |
| | T | 1,661 | 1,638 | 99 | 22.9 | *C* |
| | R | 170 | 164 | 96 | 10.0 | *A* |
| | Subtotal | 1,921 | 1,892 | 98 | 24.5 | *C* |
| WB | L | 261 | 260 | 100 | 69.1 | *E* |
| | T | 451 | 462 | 102 | 28.1 | *C* |
| | R | 145 | 142 | 98 | 4.7 | *A* |
| | Subtotal | 857 | 864 | 101 | 36.6 | *D* |
| **Total** | | 4,175 | 4,162 | 100 | 33.2 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 16 | 105 | 27.9 | *C* |
| | T | 965 | 965 | 100 | 19.1 | *B* |
| | R | 55 | 53 | 96 | 14.5 | *B* |
| | Subtotal | 1,035 | 1,034 | 100 | 19.0 | *B* |
| SB | L | 90 | 89 | 99 | 110.6 | *F* |
| | T | 850 | 863 | 101 | 6.5 | *A* |
| | R | 5 | 5 | 105 | 4.3 | *A* |
| | Subtotal | 945 | 957 | 101 | 16.2 | *B* |
| EB | L | 75 | 58 | 77 | 141.2 | *F* |
| | T | 5 | 5 | 105 | 138.9 | *F* |
| | R | 30 | 25 | 83 | 94.0 | *F* |
| | Subtotal | 110 | 88 | 80 | 127.7 | *F* |
| WB | L | 90 | 87 | 96 | 78.9 | *E* |
| | T | 2 | 3 | 133 | 88.6 | *F* |
| | R | 341 | 319 | 94 | 85.9 | *F* |
| | Subtotal | 433 | 409 | 94 | 84.4 | *F* |
| **Total** | | 2,524 | 2,488 | 99 | 32.9 | *C* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 7 | 7 | 100 | 5.5 | *A* |
| | T | 339 | 352 | 104 | 0.3 | *A* |
| | R | 3 | 3 | 100 | 0.1 | *A* |
| | Subtotal | 349 | 362 | 104 | 0.4 | *A* |
| SB | L | 33 | 33 | 101 | 3.7 | *A* |
| | T | 642 | 638 | 99 | 1.1 | *A* |
| | R | 31 | 30 | 98 | 1.0 | *A* |
| | Subtotal | 706 | 701 | 99 | 1.2 | *A* |
| ***EB*** | ***L*** | ***156*** | ***152*** | ***98*** | ***26.4*** | ***D*** |
| | R | 25 | 28 | 111 | 17.1 | *C* |
| | Subtotal | 181 | 180 | 99 | 25.0 | *C* |
| WB | L | 20 | 21 | 104 | 14.2 | *B* |
| | T | 5 | 4 | 80 | 20.5 | *C* |
| | R | 135 | 134 | 99 | 8.4 | *A* |
| | Subtotal | 160 | 159 | 99 | 9.5 | *A* |
| **Total** | | 1,396 | 1,402 | 100 | 5.1 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 339 | 350 | 103 | 0.2 | *A* |
| | R | 5 | 6 | 120 | 0.2 | *A* |
| | Subtotal | 344 | 356 | 103 | 0.2 | *A* |
| SB | L | 6 | 8 | 133 | 2.3 | *A* |
| | T | 680 | 676 | 99 | 0.2 | *A* |
| | Subtotal | 686 | 684 | 100 | 0.2 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***10.0*** | ***A*** |
| | R | 10 | 11 | 107 | 2.7 | *A* |
| | Subtotal | 15 | 16 | 107 | 5.0 | *A* |
| **Total** | | 1,045 | 1,056 | 101 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 388 | 401 | 103 | 1.1 | *A* |
| | R | 11 | 12 | 107 | 1.0 | *A* |
| | Subtotal | 399 | 413 | 104 | 1.1 | *A* |
| SB | L | 9 | 8 | 89 | 3.0 | *A* |
| | T | 675 | 672 | 100 | 0.4 | *A* |
| | Subtotal | 684 | 680 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***11*** | ***107*** | ***8.2*** | ***A*** |
| | R | 10 | 12 | 117 | 3.4 | *A* |
| | Subtotal | 20 | 23 | 115 | 5.7 | *A* |
| **Total** | | 1,104 | 1,116 | 101 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 10.6 | *B* |
| | T | 346 | 359 | 104 | 5.1 | *A* |
| | R | 130 | 130 | 100 | 3.4 | *A* |
| | Subtotal | 482 | 494 | 102 | 4.7 | *A* |
| SB | L | 70 | 69 | 98 | 10.4 | *B* |
| | T | 573 | 573 | 100 | 5.7 | *A* |
| | R | 69 | 69 | 100 | 4.6 | *A* |
| | Subtotal | 712 | 711 | 100 | 6.0 | *A* |
| EB | L | 23 | 23 | 99 | 10.3 | *B* |
| | T | 11 | 13 | 116 | 9.9 | *A* |
| | R | 17 | 17 | 99 | 5.0 | *A* |
| | Subtotal | 51 | 53 | 104 | 8.5 | *A* |
| WB | L | 165 | 162 | 98 | 11.0 | *B* |
| | T | 17 | 18 | 104 | 11.9 | *B* |
| | R | 30 | 31 | 104 | 5.7 | *A* |
| | Subtotal | 212 | 211 | 100 | 10.3 | *B* |
| **Total** | | 1,458 | 1,469 | 101 | 6.3 | *A* |

**Intersection:** 3400 North & Innovation Way
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***289*** | ***100*** | ***6.6*** | ***A*** |
| | Subtotal | 288 | 289 | 100 | 6.6 | *A* |
| EB | L | 61 | 60 | 98 | 2.6 | *A* |
| | T | 89 | 87 | 97 | 0.7 | *A* |
| | Subtotal | 150 | 147 | 98 | 1.5 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 438 | 436 | 99 | 4.9 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 1.2 | 1.6 | 0.5 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.8 | 0.3 | 0.6 |
| Denied Del/Veh (s) | 7.8 | 5.8 | 6.4 | 1.6 | 0.2 | 1.6 | 1.0 | 0.2 | 0.6 | 7.0 | 4.9 | 5.0 |
| Total Delay (hr) | 18.7 | 15.8 | 0.9 | 7.0 | 24.8 | 0.3 | 13.4 | 5.8 | 1.9 | 9.1 | 9.3 | 2.2 |
| Total Del/Veh (s) | 121.7 | 57.7 | 12.2 | 70.4 | 50.2 | 11.5 | 96.6 | 44.3 | 13.2 | 81.8 | 122.9 | 18.2 |
| Vehicles Entered | 546 | 979 | 261 | 350 | 1748 | 80 | 482 | 466 | 525 | 392 | 259 | 434 |
| Vehicles Exited | 534 | 978 | 260 | 352 | 1745 | 80 | 482 | 466 | 526 | 384 | 258 | 434 |
| Hourly Exit Rate | 534 | 978 | 260 | 352 | 1745 | 80 | 482 | 466 | 526 | 384 | 258 | 434 |
| Input Volume | 540 | 990 | 256 | 340 | 1725 | 80 | 500 | 478 | 540 | 390 | 264 | 425 |
| % of Volume | 99 | 99 | 101 | 104 | 101 | 100 | 96 | 97 | 97 | 98 | 98 | 102 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 5.5 |
| Denied Del/Veh (s) | 3.0 |
| Total Delay (hr) | 109.2 |
| Total Del/Veh (s) | 59.3 |
| Vehicles Entered | 6522 |
| Vehicles Exited | 6499 |
| Hourly Exit Rate | 6499 |
| Input Volume | 6530 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.9 | 0.0 | 0.0 | 0.0 | 3.0 | 0.7 | 0.4 |
| Total Delay (hr) | 2.1 | 10.6 | 0.5 | 5.1 | 3.7 | 0.2 | 3.7 | 1.8 | 1.9 | 4.8 | 4.0 | 0.5 |
| Total Del/Veh (s) | 80.4 | 22.9 | 10.0 | 69.1 | 28.1 | 4.7 | 80.5 | 54.5 | 19.5 | 66.4 | 52.2 | 7.4 |
| Vehicles Entered | 90 | 1637 | 164 | 260 | 461 | 143 | 162 | 121 | 356 | 258 | 275 | 233 |
| Vehicles Exited | 90 | 1638 | 164 | 260 | 462 | 142 | 164 | 121 | 355 | 258 | 274 | 234 |
| Hourly Exit Rate | 90 | 1638 | 164 | 260 | 462 | 142 | 164 | 121 | 355 | 258 | 274 | 234 |
| Input Volume | 90 | 1661 | 170 | 261 | 451 | 145 | 160 | 120 | 351 | 270 | 273 | 225 |
| % of Volume | 100 | 99 | 96 | 100 | 102 | 98 | 103 | 101 | 101 | 96 | 100 | 104 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.7 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 39.0 |
| Total Del/Veh (s) | 33.2 |
| Vehicles Entered | 4160 |
| Vehicles Exited | 4162 |
| Hourly Exit Rate | 4162 |
| Input Volume | 4175 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 5.9 | 0.4 | 2.6 | 1.9 | 0.1 | 7.5 | 0.0 | 0.2 | 0.0 | 0.4 | 1.7 | 0.0 |
| Denied Del/Veh (s) | 281.0 | 267.3 | 284.3 | 77.4 | 129.3 | 79.7 | 2.8 | 0.6 | 0.8 | 15.6 | 7.2 | 0.2 |
| Total Delay (hr) | 2.4 | 0.2 | 0.7 | 1.9 | 0.1 | 7.9 | 0.1 | 5.2 | 0.2 | 2.8 | 1.6 | 0.0 |
| Total Del/Veh (s) | 141.2 | 138.9 | 94.0 | 78.9 | 88.6 | 85.9 | 27.9 | 19.1 | 14.5 | 110.6 | 6.5 | 4.3 |
| Vehicles Entered | 59 | 5 | 26 | 87 | 3 | 327 | 17 | 967 | 53 | 90 | 863 | 5 |
| Vehicles Exited | 58 | 5 | 25 | 87 | 3 | 319 | 16 | 965 | 53 | 89 | 863 | 5 |
| Hourly Exit Rate | 58 | 5 | 25 | 87 | 3 | 319 | 16 | 965 | 53 | 89 | 863 | 5 |
| Input Volume | 75 | 5 | 30 | 90 | 2 | 341 | 15 | 965 | 55 | 90 | 850 | 5 |
| % of Volume | 77 | 105 | 83 | 96 | 133 | 94 | 105 | 100 | 96 | 99 | 101 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 20.8 |
| Denied Del/Veh (s) | 29.4 |
| Total Delay (hr) | 23.0 |
| Total Del/Veh (s) | 32.9 |
| Vehicles Entered | 2502 |
| Vehicles Exited | 2488 |
| Hourly Exit Rate | 2488 |
| Input Volume | 2524 |
| % of Volume | 99 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 1.1 | 0.1 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 2.0 |
| Total Del/Veh (s) | 26.4 | 17.1 | 14.2 | 20.5 | 8.4 | 5.5 | 0.3 | 0.1 | 3.7 | 1.1 | 1.0 | 5.1 |
| Vehicles Entered | 153 | 28 | 21 | 4 | 133 | 7 | 351 | 3 | 33 | 636 | 29 | 1398 |
| Vehicles Exited | 152 | 28 | 21 | 4 | 134 | 7 | 352 | 3 | 33 | 638 | 30 | 1402 |
| Hourly Exit Rate | 152 | 28 | 21 | 4 | 134 | 7 | 352 | 3 | 33 | 638 | 30 | 1402 |
| Input Volume | 156 | 25 | 20 | 5 | 135 | 7 | 339 | 3 | 33 | 642 | 31 | 1396 |
| % of Volume | 98 | 111 | 104 | 80 | 99 | 100 | 104 | 100 | 101 | 99 | 98 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 10.0 | 2.7 | 0.2 | 0.2 | 2.3 | 0.2 | 0.3 |
| Vehicles Entered | 5 | 11 | 350 | 6 | 8 | 676 | 1056 |
| Vehicles Exited | 5 | 11 | 350 | 6 | 8 | 676 | 1056 |
| Hourly Exit Rate | 5 | 11 | 350 | 6 | 8 | 676 | 1056 |
| Input Volume | 5 | 10 | 339 | 5 | 6 | 680 | 1045 |
| % of Volume | 100 | 107 | 103 | 120 | 133 | 99 | 101 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 8.2 | 3.4 | 1.1 | 1.0 | 3.0 | 0.4 | 0.8 |
| Vehicles Entered | 11 | 12 | 401 | 12 | 8 | 672 | 1116 |
| Vehicles Exited | 11 | 12 | 401 | 12 | 8 | 672 | 1116 |
| Hourly Exit Rate | 11 | 12 | 401 | 12 | 8 | 672 | 1116 |
| Input Volume | 10 | 10 | 388 | 11 | 9 | 675 | 1104 |
| % of Volume | 107 | 117 | 103 | 107 | 89 | 100 | 101 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 2.6 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.2 | 0.9 | 0.1 |
| Total Del/Veh (s) | 10.3 | 9.9 | 5.0 | 11.0 | 11.9 | 5.7 | 10.6 | 5.1 | 3.4 | 10.4 | 5.7 | 4.6 |
| Vehicles Entered | 23 | 13 | 17 | 163 | 18 | 31 | 5 | 359 | 130 | 69 | 573 | 69 |
| Vehicles Exited | 23 | 13 | 17 | 162 | 18 | 31 | 5 | 359 | 130 | 69 | 573 | 69 |
| Hourly Exit Rate | 23 | 13 | 17 | 162 | 18 | 31 | 5 | 359 | 130 | 69 | 573 | 69 |
| Input Volume | 23 | 11 | 17 | 165 | 17 | 30 | 6 | 346 | 130 | 70 | 573 | 69 |
| % of Volume | 99 | 116 | 99 | 98 | 104 | 104 | 83 | 104 | 100 | 98 | 100 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.6 |
| Total Del/Veh (s) | 6.3 |
| Vehicles Entered | 1470 |
| Vehicles Exited | 1469 |
| Hourly Exit Rate | 1469 |
| Input Volume | 1458 |
| % of Volume | 101 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.3 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.5 | 0.6 |
| Total Del/Veh (s) | 2.6 | 0.7 | 6.6 | 4.9 |
| Vehicles Entered | 60 | 87 | 291 | 438 |
| Vehicles Exited | 60 | 87 | 289 | 436 |
| Hourly Exit Rate | 60 | 87 | 289 | 436 |
| Input Volume | 61 | 89 | 288 | 438 |
| % of Volume | 98 | 97 | 100 | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 27.0 |
| Denied Del/Veh (s) | 11.1 |
| Total Delay (hr) | 190.6 |
| Total Del/Veh (s) | 75.8 |
| Vehicles Entered | 8750 |
| Vehicles Exited | 8720 |
| Hourly Exit Rate | 8720 |
| Input Volume | 28971 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 380 | 516 | 627 | 588 | 408 | 173 | 283 | 509 | 540 | 516 | 463 | 382 |
| Average Queue (ft) | 297 | 369 | 382 | 333 | 232 | 63 | 145 | 233 | 420 | 367 | 297 | 210 |
| 95th Queue (ft) | 422 | 544 | 702 | 574 | 360 | 128 | 238 | 444 | 550 | 490 | 415 | 328 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1014 | 1014 | 1014 | |
| Upstream Blk Time (%) | | | 5 | 0 | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 27 | 47 | 23 | | 4 | 0 | | 0 | 11 | | 11 | 1 |
| Queuing Penalty (veh) | 88 | 156 | 126 | | 10 | 0 | | 0 | 38 | | 56 | 4 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | R | R | |
| Maximum Queue (ft) | 116 | 175 | 250 | 404 | 435 | 240 | 313 | 386 | 732 | 463 | 207 | |
| Average Queue (ft) | 22 | 167 | 241 | 332 | 304 | 113 | 173 | 253 | 379 | 180 | 65 | |
| 95th Queue (ft) | 70 | 192 | 275 | 466 | 526 | 214 | 268 | 414 | 796 | 556 | 160 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 999 | 999 | | |
| Upstream Blk Time (%) | | | | 16 | 13 | | | | 4 | 1 | | |
| Queuing Penalty (veh) | | | | 113 | 91 | | | | 0 | 0 | | |
| Storage Bay Dist (ft) | 250 | 100 | 100 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 54 | 70 | 17 | 7 | 5 | 0 | 1 | 22 | 0 | 0 | |
| Queuing Penalty (veh) | | 92 | 119 | 82 | 38 | 8 | 0 | 1 | 85 | 1 | 0 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 84 | 137 | 354 | 363 | 108 | 787 | 830 | 397 | 366 | 250 | 77 | 257 |
| Average Queue (ft) | 32 | 55 | 217 | 224 | 41 | 25 | 43 | 220 | 157 | 110 | 32 | 149 |
| 95th Queue (ft) | 72 | 105 | 322 | 331 | 80 | 279 | 377 | 357 | 300 | 227 | 60 | 243 |
| Link Distance (ft) | | | 2261 | 2261 | | 1014 | 1014 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 1 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 1 | 1 | | | | 8 | 0 | 3 | | 5 |
| Queuing Penalty (veh) | | | 1 | 2 | | | | 18 | 1 | 4 | | 6 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 285 | 234 | 363 | 398 | 130 |
| Average Queue (ft) | 95 | 118 | 222 | 221 | 56 |
| 95th Queue (ft) | 205 | 214 | 338 | 349 | 100 |
| Link Distance (ft) | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | 0 | | | | |
| Queuing Penalty (veh) | 0 | | | | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 9 | 8 | |
| Queuing Penalty (veh) | 1 | | 26 | 22 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 138 | 649 | 200 | 72 | 550 | 526 | 150 | 361 | 388 |
| Average Queue (ft) | 97 | 282 | 145 | 10 | 188 | 178 | 73 | 92 | 95 |
| 95th Queue (ft) | 151 | 653 | 254 | 46 | 441 | 413 | 157 | 302 | 285 |
| Link Distance (ft) | 105 | 694 | | | 686 | 686 | | 374 | 374 |
| Upstream Blk Time (%) | 55 | 2 | | | 0 | 0 | | 1 | 0 |
| Queuing Penalty (veh) | 0 | 6 | | | 0 | 0 | | 4 | 1 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 5 | 50 | 0 | 26 | | 38 | 6 | |
| Queuing Penalty (veh) | | 16 | 50 | 1 | 4 | | 168 | 7 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 184 | 111 | 30 | 19 | 14 | 41 | 18 | 20 |
| Average Queue (ft) | 83 | 53 | 4 | 0 | 1 | 9 | 1 | 1 |
| 95th Queue (ft) | 151 | 90 | 20 | 9 | 8 | 33 | 9 | 11 |
| Link Distance (ft) | 535 | 986 | | 157 | 157 | | 368 | 368 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 31 | 24 |
| Average Queue (ft) | 13 | 2 |
| 95th Queue (ft) | 38 | 15 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 38 | 6 | 28 |
| Average Queue (ft) | 17 | 0 | 2 |
| 95th Queue (ft) | 42 | 4 | 14 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 67 | 136 | 31 | 91 | 118 | 73 | 121 | 144 |
| Average Queue (ft) | 26 | 65 | 4 | 47 | 54 | 30 | 53 | 73 |
| 95th Queue (ft) | 57 | 109 | 20 | 83 | 95 | 63 | 100 | 120 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 31: 3400 North & Innovation Way

| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 142 |
| Average Queue (ft) | 51 |
| 95th Queue (ft) | 119 |
| Link Distance (ft) | 525 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 1454

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 500 | 481 | 96 | 89.4 | *F* |
| | T | 478 | 488 | 102 | 47.4 | *D* |
| | R | 540 | 529 | 98 | 17.3 | *B* |
| | Subtotal | 1,518 | 1,498 | 99 | 50.3 | *D* |
| SB | L | 390 | 390 | 100 | 71.4 | *E* |
| | T | 264 | 268 | 102 | 54.7 | *D* |
| | R | 425 | 425 | 100 | 19.9 | *B* |
| | Subtotal | 1,079 | 1,083 | 100 | 47.1 | *D* |
| EB | L | 540 | 538 | 100 | 104.3 | *F* |
| | T | 990 | 1,008 | 102 | 56.5 | *E* |
| | R | 256 | 257 | 100 | 11.8 | *B* |
| | Subtotal | 1,786 | 1,803 | 101 | 64.4 | *E* |
| WB | L | 340 | 348 | 102 | 66.0 | *E* |
| | T | 1,725 | 1,748 | 101 | 51.4 | *D* |
| | R | 80 | 80 | 100 | 11.8 | *B* |
| | Subtotal | 2,145 | 2,176 | 101 | 52.3 | *D* |
| **Total** | | 6,530 | 6,560 | 100 | 54.4 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 160 | 154 | 96 | 77.8 | *E* |
| | T | 120 | 117 | 98 | 54.0 | *D* |
| | R | 351 | 361 | 103 | 21.5 | *C* |
| | Subtotal | 631 | 632 | 100 | 41.2 | *D* |
| SB | L | 270 | 269 | 100 | 78.7 | *E* |
| | T | 273 | 274 | 100 | 51.6 | *D* |
| | R | 225 | 227 | 101 | 7.6 | *A* |
| | Subtotal | 768 | 770 | 100 | 48.1 | *D* |
| EB | L | 90 | 92 | 103 | 82.4 | *F* |
| | T | 1,661 | 1,656 | 100 | 22.8 | *C* |
| | R | 170 | 173 | 102 | 10.4 | *B* |
| | Subtotal | 1,921 | 1,921 | 100 | 24.5 | *C* |
| WB | L | 261 | 268 | 103 | 68.2 | *E* |
| | T | 451 | 468 | 104 | 27.5 | *C* |
| | R | 145 | 142 | 98 | 4.6 | *A* |
| | Subtotal | 857 | 878 | 102 | 36.2 | *D* |
| **Total** | | 4,175 | 4,201 | 101 | 33.9 | *C* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 16 | 105 | 59.6 | *E* |
| | T | 965 | 956 | 99 | 37.3 | *D* |
| | R | 55 | 56 | 101 | 22.0 | *C* |
| | Subtotal | 1,035 | 1,028 | 99 | 36.8 | *D* |
| SB | L | 90 | 88 | 98 | 40.7 | *D* |
| | T | 850 | 862 | 101 | 8.8 | *A* |
| | R | 5 | 5 | 105 | 11.0 | *B* |
| | Subtotal | 945 | 955 | 101 | 11.8 | *B* |
| EB | L | 75 | 69 | 92 | 94.8 | *F* |
| | T | 5 | 4 | 84 | 132.7 | *F* |
| | R | 30 | 27 | 89 | 60.4 | *E* |
| | Subtotal | 110 | 100 | 91 | 87.0 | *F* |
| WB | L | 90 | 85 | 94 | 66.0 | *E* |
| | T | 2 | 2 | 89 | 83.9 | *F* |
| | R | 341 | 344 | 101 | 49.5 | *D* |
| | Subtotal | 433 | 431 | 100 | 52.9 | *D* |
| **Total** | | 2,524 | 2,514 | 100 | 32.3 | *C* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 7 | 7 | 100 | 7.0 | *A* |
| | T | 339 | 345 | 102 | 0.4 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 349 | 356 | 102 | 0.5 | *A* |
| SB | L | 33 | 34 | 104 | 3.8 | *A* |
| | T | 642 | 651 | 101 | 1.1 | *A* |
| | R | 31 | 33 | 107 | 1.0 | *A* |
| | Subtotal | 706 | 718 | 102 | 1.2 | *A* |
| ***EB*** | ***L*** | ***156*** | ***151*** | ***97*** | ***29.6*** | ***D*** |
| | R | 25 | 27 | 107 | 21.7 | *C* |
| | Subtotal | 181 | 178 | 98 | 28.4 | *D* |
| WB | L | 20 | 23 | 114 | 15.5 | *C* |
| | T | 5 | 5 | 100 | 25.0 | *C* |
| | R | 135 | 137 | 101 | 9.6 | *A* |
| | Subtotal | 160 | 165 | 103 | 10.9 | *B* |
| **Total** | | 1,396 | 1,417 | 101 | 5.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 339 | 344 | 101 | 0.2 | *A* |
| | R | 5 | 5 | 100 | 0.2 | *A* |
| | Subtotal | 344 | 349 | 101 | 0.2 | *A* |
| SB | L | 6 | 5 | 83 | 2.5 | *A* |
| | T | 680 | 693 | 102 | 0.3 | *A* |
| | Subtotal | 686 | 698 | 102 | 0.3 | *A* |
| ***WB*** | ***L*** | ***5*** | ***4*** | ***80*** | ***8.5*** | ***A*** |
| | R | 10 | 12 | 117 | 2.9 | *A* |
| | Subtotal | 15 | 16 | 107 | 4.3 | *A* |
| **Total** | | 1,045 | 1,063 | 102 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 388 | 397 | 102 | 1.1 | *A* |
| | R | 11 | 11 | 98 | 1.0 | *A* |
| | Subtotal | 399 | 408 | 102 | 1.1 | *A* |
| SB | L | 9 | 9 | 100 | 3.1 | *A* |
| | T | 675 | 687 | 102 | 0.4 | *A* |
| | Subtotal | 684 | 696 | 102 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***10*** | ***98*** | ***8.9*** | ***A*** |
| | R | 10 | 9 | 88 | 3.8 | *A* |
| | Subtotal | 20 | 19 | 95 | 6.5 | *A* |
| **Total** | | 1,104 | 1,123 | 102 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2025) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 13.3 | *B* |
| | T | 346 | 357 | 103 | 5.1 | *A* |
| | R | 130 | 135 | 104 | 3.3 | *A* |
| | Subtotal | 482 | 497 | 103 | 4.7 | *A* |
| SB | L | 70 | 71 | 101 | 10.7 | *B* |
| | T | 573 | 580 | 101 | 5.6 | *A* |
| | R | 69 | 72 | 104 | 4.3 | *A* |
| | Subtotal | 712 | 723 | 102 | 6.0 | *A* |
| EB | L | 23 | 22 | 95 | 8.8 | *A* |
| | T | 11 | 11 | 98 | 9.1 | *A* |
| | R | 17 | 18 | 104 | 4.8 | *A* |
| | Subtotal | 51 | 51 | 100 | 7.5 | *A* |
| WB | L | 165 | 160 | 97 | 11.1 | *B* |
| | T | 17 | 18 | 104 | 11.4 | *B* |
| | R | 30 | 28 | 94 | 6.9 | *A* |
| | Subtotal | 212 | 206 | 97 | 10.6 | *B* |
| **Total** | | 1,458 | 1,477 | 101 | 6.2 | *A* |

**Intersection:** 3400 North & Innovation Way
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***292*** | ***101*** | ***6.0*** | ***A*** |
| | Subtotal | 288 | 292 | 101 | 6.0 | *A* |
| EB | L | 61 | 60 | 98 | 2.6 | *A* |
| | T | 89 | 88 | 99 | 0.7 | *A* |
| | Subtotal | 150 | 148 | 99 | 1.5 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 438 | 440 | 100 | 4.5 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.5 | 0.3 | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.3 | 0.0 | 0.3 |
| Denied Del/Veh (s) | 3.0 | 1.1 | 2.7 | 1.6 | 0.3 | 1.6 | 0.8 | 0.2 | 0.6 | 2.7 | 0.6 | 2.8 |
| Total Delay (hr) | 15.9 | 16.0 | 0.9 | 6.6 | 25.4 | 0.3 | 12.3 | 6.6 | 2.6 | 7.9 | 4.2 | 2.4 |
| Total Del/Veh (s) | 104.3 | 56.5 | 11.8 | 66.0 | 51.4 | 11.8 | 89.4 | 47.4 | 17.3 | 71.4 | 54.7 | 19.9 |
| Vehicles Entered | 540 | 1011 | 258 | 346 | 1755 | 80 | 486 | 490 | 530 | 391 | 267 | 426 |
| Vehicles Exited | 538 | 1008 | 257 | 348 | 1748 | 80 | 481 | 488 | 529 | 390 | 268 | 425 |
| Hourly Exit Rate | 538 | 1008 | 257 | 348 | 1748 | 80 | 481 | 488 | 529 | 390 | 268 | 425 |
| Input Volume | 540 | 990 | 256 | 340 | 1725 | 80 | 500 | 478 | 540 | 390 | 264 | 425 |
| % of Volume | 100 | 102 | 100 | 102 | 101 | 100 | 96 | 102 | 98 | 100 | 102 | 100 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.2 |
| Denied Del/Veh (s) | 1.2 |
| Total Delay (hr) | 101.0 |
| Total Del/Veh (s) | 54.4 |
| Vehicles Entered | 6580 |
| Vehicles Exited | 6560 |
| Hourly Exit Rate | 6560 |
| Input Volume | 6530 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 2.9 | 0.4 | 2.9 | 0.0 | 0.0 | 0.0 | 3.0 | 0.8 | 0.4 |
| Total Delay (hr) | 2.2 | 10.7 | 0.5 | 5.2 | 3.6 | 0.2 | 3.4 | 1.8 | 2.2 | 6.0 | 3.9 | 0.5 |
| Total Del/Veh (s) | 82.4 | 22.8 | 10.4 | 68.2 | 27.5 | 4.6 | 77.8 | 54.0 | 21.5 | 78.7 | 51.6 | 7.6 |
| Vehicles Entered | 92 | 1660 | 173 | 269 | 466 | 142 | 155 | 117 | 361 | 268 | 273 | 226 |
| Vehicles Exited | 92 | 1656 | 173 | 268 | 468 | 142 | 154 | 117 | 361 | 269 | 274 | 227 |
| Hourly Exit Rate | 92 | 1656 | 173 | 268 | 468 | 142 | 154 | 117 | 361 | 269 | 274 | 227 |
| Input Volume | 90 | 1661 | 170 | 261 | 451 | 145 | 160 | 120 | 351 | 270 | 273 | 225 |
| % of Volume | 103 | 100 | 102 | 103 | 104 | 98 | 96 | 98 | 103 | 100 | 100 | 101 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.7 |
| Denied Del/Veh (s) | 0.6 |
| Total Delay (hr) | 40.2 |
| Total Del/Veh (s) | 33.9 |
| Vehicles Entered | 4202 |
| Vehicles Exited | 4201 |
| Hourly Exit Rate | 4201 |
| Input Volume | 4175 |
| % of Volume | 101 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 3.9 | 0.2 | 1.4 | 1.0 | 0.0 | 3.9 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 188.3 | 193.9 | 173.6 | 40.4 | 44.7 | 40.2 | 4.2 | 1.5 | 1.3 | 0.5 | 0.1 | 0.0 |
| Total Delay (hr) | 1.9 | 0.1 | 0.5 | 1.6 | 0.0 | 4.8 | 0.3 | 10.1 | 0.3 | 1.0 | 2.1 | 0.0 |
| Total Del/Veh (s) | 94.8 | 132.7 | 60.4 | 66.0 | 83.9 | 49.5 | 59.6 | 37.3 | 22.0 | 40.7 | 8.8 | 11.0 |
| Vehicles Entered | 70 | 4 | 27 | 87 | 2 | 346 | 16 | 963 | 56 | 88 | 862 | 5 |
| Vehicles Exited | 69 | 4 | 27 | 85 | 2 | 344 | 16 | 956 | 56 | 88 | 862 | 5 |
| Hourly Exit Rate | 69 | 4 | 27 | 85 | 2 | 344 | 16 | 956 | 56 | 88 | 862 | 5 |
| Input Volume | 75 | 5 | 30 | 90 | 2 | 341 | 15 | 965 | 55 | 90 | 850 | 5 |
| % of Volume | 92 | 84 | 89 | 94 | 89 | 101 | 105 | 99 | 101 | 98 | 101 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 10.9 |
| Denied Del/Veh (s) | 15.5 |
| Total Delay (hr) | 22.8 |
| Total Del/Veh (s) | 32.3 |
| Vehicles Entered | 2526 |
| Vehicles Exited | 2514 |
| Hourly Exit Rate | 2514 |
| Input Volume | 2524 |
| % of Volume | 100 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Delay (hr) | 1.3 | 0.2 | 0.1 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 2.3 |
| Total Del/Veh (s) | 29.6 | 21.7 | 15.5 | 25.0 | 9.6 | 7.0 | 0.4 | 0.1 | 3.8 | 1.1 | 1.0 | 5.7 |
| Vehicles Entered | 152 | 28 | 23 | 5 | 137 | 7 | 345 | 4 | 34 | 651 | 33 | 1419 |
| Vehicles Exited | 151 | 27 | 23 | 5 | 137 | 7 | 345 | 4 | 34 | 651 | 33 | 1417 |
| Hourly Exit Rate | 151 | 27 | 23 | 5 | 137 | 7 | 345 | 4 | 34 | 651 | 33 | 1417 |
| Input Volume | 156 | 25 | 20 | 5 | 135 | 7 | 339 | 3 | 33 | 642 | 31 | 1396 |
| % of Volume | 97 | 107 | 114 | 100 | 101 | 100 | 102 | 133 | 104 | 101 | 107 | 101 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 8.5 | 2.9 | 0.2 | 0.2 | 2.5 | 0.3 | 0.3 |
| Vehicles Entered | 4 | 12 | 344 | 5 | 5 | 694 | 1064 |
| Vehicles Exited | 4 | 12 | 344 | 5 | 5 | 693 | 1063 |
| Hourly Exit Rate | 4 | 12 | 344 | 5 | 5 | 693 | 1063 |
| Input Volume | 5 | 10 | 339 | 5 | 6 | 680 | 1045 |
| % of Volume | 80 | 117 | 101 | 100 | 83 | 102 | 102 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 8.9 | 3.8 | 1.1 | 1.0 | 3.1 | 0.4 | 0.8 |
| Vehicles Entered | 10 | 9 | 395 | 11 | 9 | 686 | 1120 |
| Vehicles Exited | 10 | 9 | 397 | 11 | 9 | 687 | 1123 |
| Hourly Exit Rate | 10 | 9 | 397 | 11 | 9 | 687 | 1123 |
| Input Volume | 10 | 10 | 388 | 11 | 9 | 675 | 1104 |
| % of Volume | 98 | 88 | 102 | 98 | 100 | 102 | 102 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 | 0.2 | 2.9 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.5 | 0.1 | 0.1 | 0.0 | 0.5 | 0.1 | 0.2 | 0.9 | 0.1 |
| Total Del/Veh (s) | 8.8 | 9.1 | 4.8 | 11.1 | 11.4 | 6.9 | 13.3 | 5.1 | 3.3 | 10.7 | 5.6 | 4.3 |
| Vehicles Entered | 22 | 11 | 18 | 160 | 18 | 28 | 5 | 357 | 135 | 72 | 580 | 72 |
| Vehicles Exited | 22 | 11 | 18 | 160 | 18 | 28 | 5 | 357 | 135 | 71 | 580 | 72 |
| Hourly Exit Rate | 22 | 11 | 18 | 160 | 18 | 28 | 5 | 357 | 135 | 71 | 580 | 72 |
| Input Volume | 23 | 11 | 17 | 165 | 17 | 30 | 6 | 346 | 130 | 70 | 573 | 69 |
| % of Volume | 95 | 98 | 104 | 97 | 104 | 94 | 83 | 103 | 104 | 101 | 101 | 104 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 2.6 |
| Total Del/Veh (s) | 6.2 |
| Vehicles Entered | 1478 |
| Vehicles Exited | 1477 |
| Hourly Exit Rate | 1477 |
| Input Volume | 1458 |
| % of Volume | 101 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.3 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.5 | 0.6 |
| Total Del/Veh (s) | 2.6 | 0.7 | 6.0 | 4.5 |
| Vehicles Entered | 60 | 88 | 292 | 440 |
| Vehicles Exited | 60 | 88 | 292 | 440 |
| Hourly Exit Rate | 60 | 88 | 292 | 440 |
| Input Volume | 61 | 89 | 288 | 438 |
| % of Volume | 98 | 99 | 101 | 100 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 13.9 |
| Denied Del/Veh (s) | 5.7 |
| Total Delay (hr) | 184.2 |
| Total Del/Veh (s) | 72.7 |
| Vehicles Entered | 8828 |
| Vehicles Exited | 8790 |
| Hourly Exit Rate | 8790 |
| Input Volume | 28971 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 380 | 515 | 616 | 516 | 405 | 212 | 232 | 530 | 550 | 522 | 470 | 376 |
| Average Queue (ft) | 277 | 336 | 336 | 317 | 240 | 65 | 131 | 230 | 426 | 381 | 308 | 216 |
| 95th Queue (ft) | 407 | 503 | 561 | 505 | 363 | 150 | 204 | 453 | 559 | 510 | 435 | 337 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1014 | 1014 | 1014 | |
| Upstream Blk Time (%) | | | 2 | 0 | | | | | | | | |
| Queuing Penalty (veh) | | | 0 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 18 | 40 | 24 | | 4 | | | 0 | 13 | | 13 | 1 |
| Queuing Penalty (veh) | 60 | 134 | 131 | | 11 | | | 0 | 43 | | 66 | 6 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | T | R | |
| Maximum Queue (ft) | 104 | 175 | 250 | 403 | 436 | 250 | 291 | 324 | 272 | 216 | 271 | |
| Average Queue (ft) | 21 | 166 | 238 | 323 | 289 | 153 | 172 | 207 | 124 | 104 | 133 | |
| 95th Queue (ft) | 64 | 192 | 278 | 478 | 503 | 277 | 270 | 300 | 222 | 187 | 234 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 999 | 999 | | |
| Upstream Blk Time (%) | | | | 17 | 9 | | | | | | | |
| Queuing Penalty (veh) | | | | 115 | 61 | | | | | | | |
| Storage Bay Dist (ft) | 250 | 100 | 100 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 48 | 64 | 23 | 13 | 13 | 0 | 1 | | 0 | 5 | |
| Queuing Penalty (veh) | | 82 | 108 | 113 | 71 | 22 | 0 | 1 | | 0 | 6 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | B22 | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | | L | T | T | R |
| Maximum Queue (ft) | 99 | 127 | 353 | 354 | 105 | 571 | 998 | 73 | 379 | 322 | 205 | 71 |
| Average Queue (ft) | 36 | 56 | 221 | 228 | 45 | 27 | 46 | 3 | 227 | 159 | 104 | 31 |
| 95th Queue (ft) | 79 | 102 | 325 | 329 | 84 | 285 | 389 | 75 | 357 | 277 | 187 | 58 |
| Link Distance (ft) | | | 2261 | 2261 | | 1014 | 1014 | 1014 | | 1013 | 1013 | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 1 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | | 260 | | | 140 |
| Storage Blk Time (%) | | | 1 | 1 | | | | | 8 | 0 | 3 | |
| Queuing Penalty (veh) | | | 1 | 2 | | | | | 19 | 1 | 5 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | R | L | T | R |
| Maximum Queue (ft) | 259 | 238 | 266 | 382 | 535 | 122 |
| Average Queue (ft) | 139 | 93 | 131 | 247 | 244 | 55 |
| 95th Queue (ft) | 236 | 198 | 232 | 387 | 453 | 99 |
| Link Distance (ft) | | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | | 0 | 0 | | 0 | |
| Queuing Penalty (veh) | | 1 | 0 | | 0 | |
| Storage Bay Dist (ft) | 210 | | | 240 | | |
| Storage Blk Time (%) | 5 | 0 | | 20 | 7 | |
| Queuing Penalty (veh) | 6 | 1 | | 54 | 18 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 133 | 573 | 200 | 80 | 654 | 622 | 144 | 292 | 278 |
| Average Queue (ft) | 87 | 202 | 129 | 10 | 291 | 266 | 61 | 92 | 105 |
| 95th Queue (ft) | 148 | 536 | 235 | 50 | 649 | 597 | 129 | 219 | 228 |
| Link Distance (ft) | 105 | 694 | | | 686 | 686 | | 374 | 374 |
| Upstream Blk Time (%) | 38 | 2 | | | 4 | 1 | | 0 | 0 |
| Queuing Penalty (veh) | 0 | 5 | | | 0 | 0 | | 0 | 0 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 5 | 31 | 0 | 41 | | 23 | 12 | |
| Queuing Penalty (veh) | | 19 | 34 | 2 | 6 | | 102 | 12 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 201 | 128 | 32 | 14 | 16 | 42 | 17 | 22 |
| Average Queue (ft) | 88 | 56 | 4 | 1 | 1 | 10 | 1 | 1 |
| 95th Queue (ft) | 168 | 98 | 20 | 12 | 11 | 35 | 9 | 12 |
| Link Distance (ft) | 535 | 986 | | 157 | 157 | | 368 | 368 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | 0 | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | 0 | 0 | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 36 | 15 |
| Average Queue (ft) | 13 | 1 |
| 95th Queue (ft) | 38 | 9 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 42 | 28 |
| Average Queue (ft) | 15 | 3 |
| 95th Queue (ft) | 42 | 17 |
| Link Distance (ft) | 245 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 57 | 137 | 30 | 102 | 125 | 84 | 126 | 136 |
| Average Queue (ft) | 23 | 67 | 4 | 46 | 54 | 32 | 51 | 70 |
| 95th Queue (ft) | 52 | 115 | 23 | 84 | 99 | 65 | 102 | 121 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 31: 3400 North & Innovation Way

| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 140 |
| Average Queue (ft) | 51 |
| 95th Queue (ft) | 118 |
| Link Distance (ft) | 525 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 1322

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 551 | 548 | 100 | 96.6 | *F* |
| | T | 602 | 599 | 100 | 35.6 | *D* |
| | R | 645 | 629 | 97 | 12.2 | *B* |
| | Subtotal | 1,798 | 1,776 | 99 | 46.1 | *D* |
| SB | L | 350 | 347 | 99 | 95.5 | *F* |
| | T | 383 | 369 | 96 | 105.7 | *F* |
| | R | 405 | 394 | 97 | 13.3 | *B* |
| | Subtotal | 1,138 | 1,110 | 98 | 69.7 | *E* |
| EB | L | 520 | 506 | 97 | 84.8 | *F* |
| | T | 690 | 668 | 97 | 76.5 | *E* |
| | R | 411 | 403 | 98 | 32.1 | *C* |
| | Subtotal | 1,621 | 1,577 | 97 | 67.8 | *E* |
| WB | L | 545 | 531 | 97 | 104.6 | *F* |
| | T | 1,190 | 1,173 | 99 | 55.4 | *E* |
| | R | 75 | 76 | 101 | 12.2 | *B* |
| | Subtotal | 1,810 | 1,780 | 98 | 68.2 | *E* |
| **Total** | | 6,367 | 6,243 | 98 | 62.5 | *E* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 160 | 158 | 99 | 76.4 | *E* |
| | T | 136 | 135 | 99 | 53.6 | *D* |
| | R | 419 | 422 | 101 | 17.9 | *B* |
| | Subtotal | 715 | 715 | 100 | 37.6 | *D* |
| SB | L | 375 | 370 | 99 | 71.8 | *E* |
| | T | 368 | 364 | 99 | 47.6 | *D* |
| | R | 310 | 308 | 99 | 7.5 | *A* |
| | Subtotal | 1,053 | 1,042 | 99 | 44.3 | *D* |
| EB | L | 120 | 114 | 95 | 82.1 | *F* |
| | T | 1,385 | 1,358 | 98 | 24.6 | *C* |
| | R | 180 | 174 | 97 | 10.8 | *B* |
| | Subtotal | 1,685 | 1,646 | 98 | 27.1 | *C* |
| WB | L | 276 | 282 | 102 | 69.2 | *E* |
| | T | 370 | 364 | 98 | 34.8 | *C* |
| | R | 205 | 208 | 102 | 5.7 | *A* |
| | Subtotal | 851 | 854 | 100 | 39.1 | *D* |
| **Total** | | 4,305 | 4,257 | 99 | 35.6 | *D* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 17 | 111 | 52.4 | *D* |
| | T | 1,275 | 1,287 | 101 | 29.9 | *C* |
| | R | 49 | 51 | 104 | 17.7 | *B* |
| | Subtotal | 1,339 | 1,355 | 101 | 29.7 | *C* |
| SB | L | 78 | 70 | 90 | 173.0 | *F* |
| | T | 1,389 | 1,354 | 97 | 7.5 | *A* |
| | R | 5 | 4 | 84 | 5.8 | *A* |
| | Subtotal | 1,472 | 1,428 | 97 | 15.6 | *B* |
| EB | L | 75 | 55 | 73 | 159.3 | *F* |
| | T | 5 | 4 | 84 | 143.8 | *F* |
| | R | 30 | 24 | 79 | 144.5 | *F* |
| | Subtotal | 110 | 83 | 75 | 154.3 | *F* |
| WB | L | 77 | 69 | 90 | 120.4 | *F* |
| | T | 2 | 2 | 89 | 105.3 | *F* |
| | R | 286 | 273 | 96 | 136.5 | *F* |
| | Subtotal | 365 | 344 | 94 | 133.1 | *F* |
| **Total** | | 3,286 | 3,210 | 98 | 38.4 | *D* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 6.2 | *A* |
| | T | 464 | 466 | 100 | 0.4 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 473 | 475 | 100 | 0.5 | *A* |
| SB | L | 33 | 29 | 89 | 4.6 | *A* |
| | T | 766 | 768 | 100 | 1.1 | *A* |
| | R | 26 | 24 | 91 | 1.0 | *A* |
| | Subtotal | 825 | 821 | 100 | 1.2 | *A* |
| ***EB*** | ***L*** | ***116*** | ***117*** | ***101*** | ***39.2*** | ***E*** |
| | R | 12 | 14 | 114 | 30.3 | *D* |
| | Subtotal | 128 | 131 | 102 | 38.2 | *E* |
| WB | L | 20 | 20 | 99 | 16.6 | *C* |
| | T | 5 | 4 | 80 | 26.7 | *D* |
| | R | 135 | 134 | 99 | 10.8 | *B* |
| | Subtotal | 160 | 158 | 99 | 11.9 | *B* |
| **Total** | | 1,587 | 1,585 | 100 | 5.2 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 463 | 464 | 100 | 0.3 | *A* |
| | R | 2 | 3 | 150 | 0.4 | *A* |
| | Subtotal | 465 | 467 | 100 | 0.3 | *A* |
| SB | L | 6 | 6 | 100 | 3.3 | *A* |
| | T | 793 | 794 | 100 | 0.3 | *A* |
| | Subtotal | 799 | 800 | 100 | 0.3 | *A* |
| ***WB*** | ***L*** | ***5*** | ***4*** | ***80*** | ***10.3*** | ***B*** |
| | R | 10 | 11 | 107 | 3.9 | *A* |
| | Subtotal | 15 | 15 | 100 | 5.6 | *A* |
| **Total** | | 1,279 | 1,282 | 100 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 455 | 456 | 100 | 1.2 | *A* |
| | R | 11 | 12 | 107 | 1.3 | *A* |
| | Subtotal | 466 | 468 | 100 | 1.2 | *A* |
| SB | L | 9 | 10 | 111 | 3.5 | *A* |
| | T | 788 | 787 | 100 | 0.4 | *A* |
| | Subtotal | 797 | 797 | 100 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***10*** | ***98*** | ***10.4*** | ***B*** |
| | R | 10 | 11 | 107 | 4.0 | *A* |
| | Subtotal | 20 | 21 | 105 | 7.0 | *A* |
| **Total** | | 1,284 | 1,286 | 100 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 14.0 | *B* |
| | T | 367 | 365 | 99 | 5.8 | *A* |
| | R | 145 | 152 | 105 | 4.0 | *A* |
| | Subtotal | 518 | 523 | 101 | 5.4 | *A* |
| SB | L | 70 | 68 | 97 | 13.6 | *B* |
| | T | 658 | 657 | 100 | 6.8 | *A* |
| | R | 69 | 73 | 105 | 5.8 | *A* |
| | Subtotal | 797 | 798 | 100 | 7.3 | *A* |
| EB | L | 23 | 24 | 103 | 9.8 | *A* |
| | T | 11 | 11 | 98 | 10.4 | *B* |
| | R | 17 | 15 | 87 | 5.2 | *A* |
| | Subtotal | 51 | 50 | 98 | 8.6 | *A* |
| WB | L | 205 | 212 | 104 | 12.4 | *B* |
| | T | 17 | 18 | 104 | 13.3 | *B* |
| | R | 35 | 36 | 104 | 6.8 | *A* |
| | Subtotal | 257 | 266 | 104 | 11.7 | *B* |
| **Total** | | 1,624 | 1,637 | 101 | 7.4 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.2 | 0.3 | 0.6 | 1.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.6 | 0.4 | 0.5 |
| Denied Del/Veh (s) | 2.7 | 0.8 | 2.6 | 4.2 | 3.2 | 5.3 | 1.4 | 0.3 | 0.8 | 6.4 | 3.9 | 4.3 |
| Total Delay (hr) | 12.2 | 14.5 | 3.6 | 16.2 | 18.5 | 0.3 | 15.0 | 5.9 | 2.1 | 9.5 | 11.4 | 1.5 |
| Total Del/Veh (s) | 84.8 | 76.5 | 32.1 | 104.6 | 55.4 | 12.2 | 96.6 | 35.6 | 12.2 | 95.5 | 105.7 | 13.3 |
| Vehicles Entered | 505 | 672 | 405 | 542 | 1176 | 76 | 549 | 595 | 630 | 354 | 376 | 395 |
| Vehicles Exited | 506 | 668 | 403 | 531 | 1173 | 76 | 548 | 599 | 629 | 347 | 369 | 394 |
| Hourly Exit Rate | 506 | 668 | 403 | 531 | 1173 | 76 | 548 | 599 | 629 | 347 | 369 | 394 |
| Input Volume | 520 | 690 | 411 | 545 | 1190 | 75 | 551 | 602 | 645 | 350 | 383 | 405 |
| % of Volume | 97 | 97 | 98 | 97 | 99 | 101 | 100 | 100 | 97 | 99 | 96 | 97 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 4.6 |
| Denied Del/Veh (s) | 2.6 |
| Total Delay (hr) | 110.9 |
| Total Del/Veh (s) | 62.5 |
| Vehicles Entered | 6275 |
| Vehicles Exited | 6243 |
| Hourly Exit Rate | 6243 |
| Input Volume | 6367 |
| % of Volume | 98 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 3.0 | 0.5 | 2.9 | 0.0 | 0.0 | 0.0 | 2.8 | 0.9 | 0.5 |
| Total Delay (hr) | 2.6 | 9.4 | 0.5 | 5.6 | 3.6 | 0.3 | 3.4 | 2.0 | 2.1 | 7.6 | 4.9 | 0.6 |
| Total Del/Veh (s) | 82.1 | 24.6 | 10.8 | 69.2 | 34.8 | 5.7 | 76.4 | 53.6 | 17.9 | 71.8 | 47.6 | 7.5 |
| Vehicles Entered | 114 | 1355 | 174 | 281 | 365 | 208 | 158 | 135 | 423 | 371 | 364 | 309 |
| Vehicles Exited | 114 | 1358 | 174 | 282 | 364 | 208 | 158 | 135 | 422 | 370 | 364 | 308 |
| Hourly Exit Rate | 114 | 1358 | 174 | 282 | 364 | 208 | 158 | 135 | 422 | 370 | 364 | 308 |
| Input Volume | 120 | 1385 | 180 | 276 | 370 | 205 | 160 | 136 | 419 | 375 | 368 | 310 |
| % of Volume | 95 | 98 | 97 | 102 | 98 | 102 | 99 | 99 | 101 | 99 | 99 | 99 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.9 |
| Denied Del/Veh (s) | 0.7 |
| Total Delay (hr) | 42.8 |
| Total Del/Veh (s) | 35.6 |
| Vehicles Entered | 4257 |
| Vehicles Exited | 4257 |
| Hourly Exit Rate | 4257 |
| Input Volume | 4305 |
| % of Volume | 99 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 8.1 | 0.6 | 3.7 | 1.5 | 0.0 | 5.9 | 0.1 | 5.1 | 0.2 | 0.7 | 7.5 | 0.0 |
| Denied Del/Veh (s) | 384.0 | 433.4 | 404.7 | 74.2 | 67.1 | 74.0 | 12.2 | 14.1 | 15.6 | 33.7 | 19.9 | 15.0 |
| Total Delay (hr) | 2.6 | 0.2 | 1.0 | 2.4 | 0.1 | 10.8 | 0.3 | 10.8 | 0.3 | 3.5 | 2.8 | 0.0 |
| Total Del/Veh (s) | 159.3 | 143.8 | 144.5 | 120.4 | 105.3 | 136.5 | 52.4 | 29.9 | 17.7 | 173.0 | 7.5 | 5.8 |
| Vehicles Entered | 56 | 4 | 24 | 71 | 2 | 280 | 18 | 1294 | 51 | 70 | 1354 | 4 |
| Vehicles Exited | 55 | 4 | 24 | 69 | 2 | 273 | 17 | 1287 | 51 | 70 | 1354 | 4 |
| Hourly Exit Rate | 55 | 4 | 24 | 69 | 2 | 273 | 17 | 1287 | 51 | 70 | 1354 | 4 |
| Input Volume | 75 | 5 | 30 | 77 | 2 | 286 | 15 | 1275 | 49 | 78 | 1389 | 5 |
| % of Volume | 73 | 84 | 79 | 90 | 89 | 96 | 111 | 101 | 104 | 90 | 97 | 84 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 33.5 |
| Denied Del/Veh (s) | 36.8 |
| Total Delay (hr) | 34.7 |
| Total Del/Veh (s) | 38.4 |
| Vehicles Entered | 3228 |
| Vehicles Exited | 3210 |
| Hourly Exit Rate | 3210 |
| Input Volume | 3286 |
| % of Volume | 98 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 1.3 | 0.1 | 0.1 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 2.3 |
| Total Del/Veh (s) | 39.2 | 30.3 | 16.6 | 26.7 | 10.8 | 6.2 | 0.4 | 0.1 | 4.6 | 1.1 | 1.0 | 5.2 |
| Vehicles Entered | 117 | 13 | 20 | 4 | 135 | 5 | 466 | 4 | 29 | 768 | 24 | 1585 |
| Vehicles Exited | 117 | 14 | 20 | 4 | 134 | 5 | 466 | 4 | 29 | 768 | 24 | 1585 |
| Hourly Exit Rate | 117 | 14 | 20 | 4 | 134 | 5 | 466 | 4 | 29 | 768 | 24 | 1585 |
| Input Volume | 116 | 12 | 20 | 5 | 135 | 6 | 464 | 3 | 33 | 766 | 26 | 1587 |
| % of Volume | 101 | 114 | 99 | 80 | 99 | 83 | 100 | 133 | 89 | 100 | 91 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| Total Del/Veh (s) | 10.3 | 3.9 | 0.3 | 0.4 | 3.3 | 0.3 | 0.3 |
| Vehicles Entered | 4 | 11 | 464 | 3 | 6 | 795 | 1283 |
| Vehicles Exited | 4 | 11 | 464 | 3 | 6 | 794 | 1282 |
| Hourly Exit Rate | 4 | 11 | 464 | 3 | 6 | 794 | 1282 |
| Input Volume | 5 | 10 | 463 | 2 | 6 | 793 | 1279 |
| % of Volume | 80 | 107 | 100 | 150 | 100 | 100 | 100 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 |
| Total Del/Veh (s) | 10.4 | 4.0 | 1.2 | 1.3 | 3.5 | 0.4 | 0.8 |
| Vehicles Entered | 10 | 11 | 456 | 12 | 10 | 788 | 1287 |
| Vehicles Exited | 10 | 11 | 456 | 12 | 10 | 787 | 1286 |
| Hourly Exit Rate | 10 | 11 | 456 | 12 | 10 | 787 | 1286 |
| Input Volume | 10 | 10 | 455 | 11 | 9 | 788 | 1284 |
| % of Volume | 98 | 107 | 100 | 107 | 111 | 100 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.1 | 0.3 | 0.3 | 0.3 | 2.7 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.7 | 0.1 | 0.1 | 0.0 | 0.6 | 0.2 | 0.3 | 1.3 | 0.1 |
| Total Del/Veh (s) | 9.8 | 10.4 | 5.2 | 12.4 | 13.3 | 6.8 | 14.0 | 5.8 | 4.0 | 13.6 | 6.8 | 5.8 |
| Vehicles Entered | 24 | 11 | 15 | 212 | 18 | 37 | 6 | 366 | 152 | 68 | 656 | 72 |
| Vehicles Exited | 24 | 11 | 15 | 212 | 18 | 36 | 6 | 365 | 152 | 68 | 657 | 73 |
| Hourly Exit Rate | 24 | 11 | 15 | 212 | 18 | 36 | 6 | 365 | 152 | 68 | 657 | 73 |
| Input Volume | 23 | 11 | 17 | 205 | 17 | 35 | 6 | 367 | 145 | 70 | 658 | 69 |
| % of Volume | 103 | 98 | 87 | 104 | 104 | 104 | 100 | 99 | 105 | 97 | 100 | 105 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.1 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 3.4 |
| Total Del/Veh (s) | 7.4 |
| Vehicles Entered | 1637 |
| Vehicles Exited | 1637 |
| Hourly Exit Rate | 1637 |
| Input Volume | 1624 |
| % of Volume | 101 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 39.0 |
| Denied Del/Veh (s) | 15.7 |
| Total Delay (hr) | 205.3 |
| Total Del/Veh (s) | 80.6 |
| Vehicles Entered | 8866 |
| Vehicles Exited | 8803 |
| Hourly Exit Rate | 8803 |
| Input Volume | 30161 |
| % of Volume | 29 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 376 | 454 | 484 | 452 | 425 | 384 | 459 | 515 | 648 | 528 | 359 | 280 |
| Average Queue (ft) | 252 | 297 | 272 | 258 | 207 | 169 | 260 | 300 | 329 | 277 | 215 | 150 |
| 95th Queue (ft) | 362 | 413 | 413 | 384 | 358 | 321 | 456 | 523 | 587 | 426 | 314 | 249 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1033 | 1033 | 1033 | |
| Upstream Blk Time (%) | | | | 0 | 0 | | | | 1 | | | |
| Queuing Penalty (veh) | | | | 0 | 0 | | | | 1 | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 6 | 27 | 19 | | 2 | 7 | 7 | 13 | 1 | | 3 | 0 |
| Queuing Penalty (veh) | 15 | 62 | 97 | | 9 | 16 | 19 | 38 | 6 | | 11 | 1 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | B22 | B22 | NB | NB | NB | NB | NB | SB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | T | T | L | L | T | T | R | L | L | T | R |
| Maximum Queue (ft) | 93 | 18 | 14 | 200 | 250 | 407 | 450 | 242 | 289 | 405 | 916 | 680 |
| Average Queue (ft) | 18 | 0 | 0 | 194 | 246 | 362 | 354 | 130 | 164 | 279 | 494 | 192 |
| 95th Queue (ft) | 59 | 11 | 0 | 214 | 264 | 454 | 532 | 240 | 266 | 467 | 957 | 655 |
| Link Distance (ft) | | 2242 | 2242 | | | 374 | 374 | | | | 1001 | 1001 |
| Upstream Blk Time (%) | | | | | | 26 | 12 | | | | 5 | 2 |
| Queuing Penalty (veh) | | | | | | 208 | 97 | | | | 0 | 0 |
| Storage Bay Dist (ft) | 250 | | | 150 | 150 | | | 150 | 320 | 320 | | |
| Storage Blk Time (%) | | | | 44 | 63 | 7 | 11 | 6 | 1 | 1 | 32 | 0 |
| Queuing Penalty (veh) | | | | 96 | 138 | 36 | 74 | 14 | 2 | 3 | 111 | 0 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | SB |
|---|---|
| Directions Served | R |
| Maximum Queue (ft) | 159 |
| Average Queue (ft) | 44 |
| 95th Queue (ft) | 114 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 200 |
| Storage Blk Time (%) | 0 |
| Queuing Penalty (veh) | 0 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 120 | 137 | 306 | 309 | 117 | 201 | 314 | 384 | 361 | 204 | 97 | 257 |
| Average Queue (ft) | 46 | 63 | 184 | 191 | 50 | 4 | 11 | 235 | 151 | 95 | 43 | 144 |
| 95th Queue (ft) | 91 | 108 | 276 | 284 | 91 | 100 | 189 | 352 | 273 | 176 | 76 | 236 |
| Link Distance (ft) | | | 2242 | 2242 | | 1033 | 1033 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 0 | 0 | | | | 9 | 0 | 2 | 0 | 4 |
| Queuing Penalty (veh) | | | 0 | 1 | | | | 17 | 0 | 4 | 0 | 6 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 276 | 251 | 384 | 728 | 219 |
| Average Queue (ft) | 105 | 126 | 310 | 338 | 68 |
| 95th Queue (ft) | 208 | 220 | 422 | 590 | 145 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | 0 | | | 0 | |
| Queuing Penalty (veh) | 0 | | | 0 | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 1 | | 30 | 11 | |
| Queuing Penalty (veh) | 1 | | 112 | 43 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 142 | 737 | 200 | 99 | 682 | 673 | 150 | 380 | 420 |
| Average Queue (ft) | 102 | 347 | 153 | 11 | 332 | 293 | 75 | 126 | 145 |
| 95th Queue (ft) | 151 | 832 | 255 | 49 | 675 | 643 | 163 | 354 | 373 |
| Link Distance (ft) | 105 | 705 | | | 688 | 688 | | 374 | 374 |
| Upstream Blk Time (%) | 66 | 26 | | | 5 | 2 | | 2 | 2 |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | 13 | 15 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 4 | 58 | 0 | 39 | | 44 | 10 | |
| Queuing Penalty (veh) | | 12 | 49 | 3 | 6 | | 315 | 9 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 214 | 120 | 29 | 23 | 31 | 55 | 24 | 20 |
| Average Queue (ft) | 79 | 56 | 3 | 1 | 2 | 12 | 1 | 1 |
| 95th Queue (ft) | 164 | 95 | 17 | 12 | 17 | 39 | 14 | 12 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | 0 | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | 0 | 0 | | 1 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 40 | 31 |
| Average Queue (ft) | 13 | 2 |
| 95th Queue (ft) | 38 | 16 |
| Link Distance (ft) | 263 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 42 | 2 | 33 |
| Average Queue (ft) | 16 | 0 | 3 |
| 95th Queue (ft) | 43 | 2 | 19 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 66 | 186 | 31 | 104 | 126 | 88 | 145 | 163 |
| Average Queue (ft) | 24 | 85 | 5 | 47 | 62 | 35 | 65 | 82 |
| 95th Queue (ft) | 55 | 148 | 24 | 85 | 106 | 71 | 123 | 139 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 2 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 1 | |

## Network Summary

Network wide Queuing Penalty: 1663

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 551 | 540 | 98 | 73.1 | *E* |
| | T | 602 | 592 | 98 | 45.5 | *D* |
| | R | 645 | 647 | 100 | 15.3 | *B* |
| | Subtotal | 1,798 | 1,779 | 99 | 42.9 | *D* |
| SB | L | 350 | 350 | 100 | 86.9 | *F* |
| | T | 383 | 368 | 96 | 80.6 | *F* |
| | R | 405 | 401 | 99 | 10.1 | *B* |
| | Subtotal | 1,138 | 1,119 | 98 | 57.3 | *E* |
| EB | L | 520 | 524 | 101 | 77.7 | *E* |
| | T | 690 | 687 | 100 | 57.9 | *E* |
| | R | 411 | 417 | 101 | 31.9 | *C* |
| | Subtotal | 1,621 | 1,628 | 100 | 57.6 | *E* |
| WB | L | 545 | 548 | 101 | 68.3 | *E* |
| | T | 1,190 | 1,201 | 101 | 40.7 | *D* |
| | R | 75 | 78 | 104 | 11.1 | *B* |
| | Subtotal | 1,810 | 1,827 | 101 | 47.7 | *D* |
| **Total** | | 6,367 | 6,353 | 100 | 50.7 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 160 | 159 | 100 | 75.7 | *E* |
| | T | 136 | 132 | 97 | 55.9 | *E* |
| | R | 419 | 425 | 101 | 19.6 | *B* |
| | Subtotal | 715 | 716 | 100 | 38.8 | *D* |
| SB | L | 375 | 381 | 102 | 81.5 | *F* |
| | T | 368 | 362 | 98 | 52.3 | *D* |
| | R | 310 | 319 | 103 | 8.8 | *A* |
| | Subtotal | 1,053 | 1,062 | 101 | 49.7 | *D* |
| EB | L | 120 | 123 | 102 | 84.6 | *F* |
| | T | 1,385 | 1,380 | 100 | 25.4 | *C* |
| | R | 180 | 180 | 100 | 10.6 | *B* |
| | Subtotal | 1,685 | 1,683 | 100 | 28.1 | *C* |
| WB | L | 276 | 272 | 99 | 69.9 | *E* |
| | T | 370 | 367 | 99 | 34.4 | *C* |
| | R | 205 | 205 | 100 | 5.7 | *A* |
| | Subtotal | 851 | 844 | 99 | 38.9 | *D* |
| **Total** | | 4,305 | 4,305 | 100 | 37.5 | *D* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 15 | 98 | 59.6 | *E* |
| | T | 1,275 | 1,268 | 99 | 34.5 | *C* |
| | R | 49 | 52 | 106 | 30.8 | *C* |
| | Subtotal | 1,339 | 1,335 | 100 | 34.6 | *C* |
| SB | L | 78 | 78 | 100 | 61.7 | *E* |
| | T | 1,389 | 1,387 | 100 | 11.4 | *B* |
| | R | 5 | 5 | 105 | 8.1 | *A* |
| | Subtotal | 1,472 | 1,470 | 100 | 14.1 | *B* |
| EB | L | 75 | 73 | 97 | 89.9 | *F* |
| | T | 5 | 6 | 126 | 80.6 | *F* |
| | R | 30 | 33 | 109 | 69.1 | *E* |
| | Subtotal | 110 | 112 | 102 | 83.3 | *F* |
| WB | L | 77 | 77 | 100 | 64.6 | *E* |
| | T | 2 | 2 | 89 | 90.2 | *F* |
| | R | 286 | 289 | 101 | 50.1 | *D* |
| | Subtotal | 365 | 368 | 101 | 53.4 | *D* |
| **Total** | | 3,286 | 3,285 | 100 | 29.3 | *C* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 5 | 83 | 5.7 | *A* |
| | T | 464 | 462 | 100 | 0.3 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 473 | 471 | 100 | 0.4 | *A* |
| SB | L | 33 | 32 | 98 | 4.6 | *A* |
| | T | 766 | 754 | 98 | 1.1 | *A* |
| | R | 26 | 29 | 110 | 1.1 | *A* |
| | Subtotal | 825 | 815 | 99 | 1.2 | *A* |
| ***EB*** | ***L*** | ***116*** | ***112*** | ***97*** | ***32.7*** | ***D*** |
| | R | 12 | 13 | 106 | 23.4 | *C* |
| | Subtotal | 128 | 125 | 98 | 31.7 | *D* |
| WB | L | 20 | 23 | 114 | 18.4 | *C* |
| | T | 5 | 5 | 100 | 30.0 | *D* |
| | R | 135 | 142 | 105 | 11.8 | *B* |
| | Subtotal | 160 | 170 | 106 | 13.2 | *B* |
| **Total** | | 1,587 | 1,581 | 100 | 4.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 463 | 461 | 100 | 0.3 | *A* |
| | R | 2 | 2 | 100 | 0.1 | *A* |
| | Subtotal | 465 | 463 | 100 | 0.3 | *A* |
| SB | L | 6 | 4 | 67 | 2.5 | *A* |
| | T | 793 | 786 | 99 | 0.3 | *A* |
| | Subtotal | 799 | 790 | 99 | 0.3 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***11.9*** | ***B*** |
| | R | 10 | 11 | 107 | 3.9 | *A* |
| | Subtotal | 15 | 16 | 107 | 6.4 | *A* |
| | | | | | | |
| **Total** | | 1,279 | 1,269 | 99 | 0.3 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 455 | 453 | 100 | 1.1 | *A* |
| | R | 11 | 11 | 98 | 1.1 | *A* |
| | Subtotal | 466 | 464 | 100 | 1.1 | *A* |
| SB | L | 9 | 9 | 100 | 3.1 | *A* |
| | T | 788 | 779 | 99 | 0.4 | *A* |
| | Subtotal | 797 | 788 | 99 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***11*** | ***107*** | ***11.8*** | ***B*** |
| | R | 10 | 9 | 88 | 4.2 | *A* |
| | Subtotal | 20 | 20 | 100 | 8.4 | *A* |
| | | | | | | |
| **Total** | | 1,284 | 1,272 | 99 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Background*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 12.4 | *B* |
| | T | 367 | 368 | 100 | 5.7 | *A* |
| | R | 145 | 147 | 102 | 4.1 | *A* |
| | Subtotal | 518 | 521 | 101 | 5.3 | *A* |
| SB | L | 70 | 73 | 104 | 12.2 | *B* |
| | T | 658 | 649 | 99 | 6.4 | *A* |
| | R | 69 | 67 | 97 | 5.1 | *A* |
| | Subtotal | 797 | 789 | 99 | 6.8 | *A* |
| EB | L | 23 | 24 | 103 | 9.4 | *A* |
| | T | 11 | 13 | 116 | 11.6 | *B* |
| | R | 17 | 16 | 93 | 5.0 | *A* |
| | Subtotal | 51 | 53 | 104 | 8.6 | *A* |
| WB | L | 205 | 198 | 97 | 12.2 | *B* |
| | T | 17 | 16 | 93 | 12.0 | *B* |
| | R | 35 | 33 | 95 | 7.4 | *A* |
| | Subtotal | 257 | 247 | 96 | 11.5 | *B* |
| **Total** | | 1,624 | 1,610 | 99 | 7.1 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.1 | 0.3 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.3 | 0.1 | 0.3 |
| Denied Del/Veh (s) | 2.5 | 0.6 | 2.4 | 1.6 | 0.2 | 1.5 | 0.9 | 0.2 | 0.6 | 2.7 | 0.6 | 2.7 |
| Total Delay (hr) | 11.5 | 11.3 | 3.7 | 10.7 | 13.9 | 0.2 | 11.1 | 7.5 | 2.8 | 8.6 | 8.6 | 1.1 |
| Total Del/Veh (s) | 77.7 | 57.9 | 31.9 | 68.3 | 40.7 | 11.1 | 73.1 | 45.5 | 15.3 | 86.9 | 80.6 | 10.1 |
| Vehicles Entered | 524 | 687 | 416 | 551 | 1203 | 77 | 541 | 592 | 648 | 351 | 372 | 400 |
| Vehicles Exited | 524 | 687 | 417 | 548 | 1201 | 78 | 540 | 592 | 647 | 350 | 368 | 401 |
| Hourly Exit Rate | 524 | 687 | 417 | 548 | 1201 | 78 | 540 | 592 | 647 | 350 | 368 | 401 |
| Input Volume | 520 | 690 | 411 | 545 | 1190 | 75 | 551 | 602 | 645 | 350 | 383 | 405 |
| % of Volume | 101 | 100 | 101 | 101 | 101 | 104 | 98 | 98 | 100 | 100 | 96 | 99 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.0 |
| Denied Del/Veh (s) | 1.1 |
| Total Delay (hr) | 91.2 |
| Total Del/Veh (s) | 50.7 |
| Vehicles Entered | 6362 |
| Vehicles Exited | 6353 |
| Hourly Exit Rate | 6353 |
| Input Volume | 6367 |
| % of Volume | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.5 | 0.3 | 0.2 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 3.0 | 0.5 | 2.9 | 0.0 | 0.0 | 0.0 | 5.0 | 3.0 | 2.2 |
| Total Delay (hr) | 2.9 | 9.9 | 0.5 | 5.4 | 3.6 | 0.3 | 3.4 | 2.1 | 2.3 | 8.9 | 5.4 | 0.8 |
| Total Del/Veh (s) | 84.6 | 25.4 | 10.6 | 69.9 | 34.4 | 5.7 | 75.7 | 55.9 | 19.6 | 81.5 | 52.3 | 8.8 |
| Vehicles Entered | 123 | 1381 | 181 | 272 | 368 | 205 | 158 | 133 | 424 | 383 | 362 | 319 |
| Vehicles Exited | 123 | 1380 | 180 | 272 | 367 | 205 | 159 | 132 | 425 | 381 | 362 | 319 |
| Hourly Exit Rate | 123 | 1380 | 180 | 272 | 367 | 205 | 159 | 132 | 425 | 381 | 362 | 319 |
| Input Volume | 120 | 1385 | 180 | 276 | 370 | 205 | 160 | 136 | 419 | 375 | 368 | 310 |
| % of Volume | 102 | 100 | 100 | 99 | 99 | 100 | 100 | 97 | 101 | 102 | 98 | 103 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 1.5 |
| Denied Del/Veh (s) | 1.2 |
| Total Delay (hr) | 45.6 |
| Total Del/Veh (s) | 37.5 |
| Vehicles Entered | 4309 |
| Vehicles Exited | 4305 |
| Hourly Exit Rate | 4305 |
| Input Volume | 4305 |
| % of Volume | 100 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 1.6 | 0.1 | 0.6 | 0.0 | 0.0 | 0.3 | 0.0 | 1.8 | 0.1 | 0.0 | 0.5 | 0.0 |
| Denied Del/Veh (s) | 77.7 | 67.0 | 63.7 | 1.4 | 1.3 | 3.7 | 7.3 | 5.1 | 6.7 | 2.2 | 1.3 | 0.7 |
| Total Delay (hr) | 1.9 | 0.1 | 0.7 | 1.4 | 0.1 | 4.1 | 0.2 | 12.3 | 0.5 | 1.4 | 4.4 | 0.0 |
| Total Del/Veh (s) | 89.9 | 80.6 | 69.1 | 64.6 | 90.2 | 50.1 | 59.6 | 34.5 | 30.8 | 61.7 | 11.4 | 8.1 |
| Vehicles Entered | 73 | 6 | 33 | 77 | 2 | 293 | 15 | 1268 | 52 | 78 | 1386 | 5 |
| Vehicles Exited | 73 | 6 | 33 | 77 | 2 | 289 | 15 | 1268 | 52 | 78 | 1387 | 5 |
| Hourly Exit Rate | 73 | 6 | 33 | 77 | 2 | 289 | 15 | 1268 | 52 | 78 | 1387 | 5 |
| Input Volume | 75 | 5 | 30 | 77 | 2 | 286 | 15 | 1275 | 49 | 78 | 1389 | 5 |
| % of Volume | 97 | 126 | 109 | 100 | 89 | 101 | 98 | 99 | 106 | 100 | 100 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 5.1 |
| Denied Del/Veh (s) | 5.6 |
| Total Delay (hr) | 27.0 |
| Total Del/Veh (s) | 29.3 |
| Vehicles Entered | 3288 |
| Vehicles Exited | 3285 |
| Hourly Exit Rate | 3285 |
| Input Volume | 3286 |
| % of Volume | 100 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 1.0 | 0.1 | 0.1 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 2.1 |
| Total Del/Veh (s) | 32.7 | 23.4 | 18.4 | 30.0 | 11.8 | 5.7 | 0.3 | 0.1 | 4.6 | 1.1 | 1.1 | 4.7 |
| Vehicles Entered | 113 | 13 | 23 | 5 | 142 | 5 | 462 | 4 | 32 | 754 | 29 | 1582 |
| Vehicles Exited | 112 | 13 | 23 | 5 | 142 | 5 | 462 | 4 | 32 | 754 | 29 | 1581 |
| Hourly Exit Rate | 112 | 13 | 23 | 5 | 142 | 5 | 462 | 4 | 32 | 754 | 29 | 1581 |
| Input Volume | 116 | 12 | 20 | 5 | 135 | 6 | 464 | 3 | 33 | 766 | 26 | 1587 |
| % of Volume | 97 | 106 | 114 | 100 | 105 | 83 | 100 | 133 | 98 | 98 | 110 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| Total Del/Veh (s) | 11.9 | 3.9 | 0.3 | 0.1 | 2.5 | 0.3 | 0.3 |
| Vehicles Entered | 5 | 11 | 460 | 2 | 4 | 786 | 1268 |
| Vehicles Exited | 5 | 11 | 461 | 2 | 4 | 786 | 1269 |
| Hourly Exit Rate | 5 | 11 | 461 | 2 | 4 | 786 | 1269 |
| Input Volume | 5 | 10 | 463 | 2 | 6 | 793 | 1279 |
| % of Volume | 100 | 107 | 100 | 100 | 67 | 99 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 |
| Total Del/Veh (s) | 11.8 | 4.2 | 1.1 | 1.1 | 3.1 | 0.4 | 0.8 |
| Vehicles Entered | 11 | 9 | 452 | 11 | 9 | 780 | 1272 |
| Vehicles Exited | 11 | 9 | 453 | 11 | 9 | 779 | 1272 |
| Hourly Exit Rate | 11 | 9 | 453 | 11 | 9 | 779 | 1272 |
| Input Volume | 10 | 10 | 455 | 11 | 9 | 788 | 1284 |
| % of Volume | 107 | 88 | 100 | 98 | 100 | 99 | 99 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 2.9 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.7 | 0.1 | 0.1 | 0.0 | 0.6 | 0.2 | 0.3 | 1.2 | 0.1 |
| Total Del/Veh (s) | 9.4 | 11.6 | 5.0 | 12.2 | 12.0 | 7.4 | 12.4 | 5.7 | 4.1 | 12.2 | 6.4 | 5.1 |
| Vehicles Entered | 24 | 13 | 16 | 198 | 16 | 33 | 6 | 369 | 147 | 73 | 649 | 67 |
| Vehicles Exited | 24 | 13 | 16 | 198 | 16 | 33 | 6 | 368 | 147 | 73 | 649 | 67 |
| Hourly Exit Rate | 24 | 13 | 16 | 198 | 16 | 33 | 6 | 368 | 147 | 73 | 649 | 67 |
| Input Volume | 23 | 11 | 17 | 205 | 17 | 35 | 6 | 367 | 145 | 70 | 658 | 69 |
| % of Volume | 103 | 116 | 93 | 97 | 93 | 95 | 100 | 100 | 102 | 104 | 99 | 97 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 3.2 |
| Total Del/Veh (s) | 7.1 |
| Vehicles Entered | 1611 |
| Vehicles Exited | 1610 |
| Hourly Exit Rate | 1610 |
| Input Volume | 1624 |
| % of Volume | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 8.6 |
| Denied Del/Veh (s) | 3.5 |
| Total Delay (hr) | 180.2 |
| Total Del/Veh (s) | 70.1 |
| Vehicles Entered | 8948 |
| Vehicles Exited | 8927 |
| Hourly Exit Rate | 8927 |
| Input Volume | 30161 |
| % of Volume | 30 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 369 | 438 | 355 | 327 | 351 | 372 | 395 | 434 | 433 | 360 | 276 | 214 |
| Average Queue (ft) | 244 | 291 | 231 | 225 | 180 | 183 | 214 | 255 | 257 | 232 | 187 | 123 |
| 95th Queue (ft) | 361 | 414 | 326 | 307 | 322 | 340 | 353 | 402 | 379 | 323 | 261 | 201 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1033 | 1033 | 1033 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 6 | 25 | 10 | | 0 | 8 | 1 | 3 | 0 | | 1 | 0 |
| Queuing Penalty (veh) | 15 | 57 | 53 | | 1 | 19 | 2 | 7 | 1 | | 2 | 0 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | T | R | |
| Maximum Queue (ft) | 60 | 200 | 250 | 405 | 428 | 250 | 301 | 330 | 336 | 290 | 211 | |
| Average Queue (ft) | 16 | 184 | 236 | 324 | 267 | 180 | 175 | 209 | 195 | 177 | 91 | |
| 95th Queue (ft) | 44 | 231 | 284 | 467 | 458 | 288 | 281 | 310 | 301 | 275 | 168 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 1001 | 1001 | | |
| Upstream Blk Time (%) | | | | 10 | 4 | | | | | | | |
| Queuing Penalty (veh) | | | | 76 | 34 | | | | | | | |
| Storage Bay Dist (ft) | 250 | 150 | 150 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 26 | 45 | 15 | 19 | 12 | 0 | 1 | 1 | 10 | 0 | |
| Queuing Penalty (veh) | | 56 | 99 | 82 | 122 | 27 | 0 | 3 | 3 | 43 | 1 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 126 | 151 | 320 | 324 | 126 | 204 | 313 | 406 | 423 | 281 | 102 | 238 |
| Average Queue (ft) | 51 | 66 | 190 | 198 | 50 | 7 | 18 | 230 | 150 | 94 | 42 | 144 |
| 95th Queue (ft) | 97 | 113 | 275 | 286 | 93 | 149 | 240 | 365 | 290 | 201 | 77 | 231 |
| Link Distance (ft) | | | 2242 | 2242 | | 1033 | 1033 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 0 | 0 | | | | 10 | 0 | 2 | 0 | 3 |
| Queuing Penalty (veh) | | | 0 | 1 | | | | 18 | 0 | 4 | 0 | 5 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 231 | 290 | 384 | 747 | 308 |
| Average Queue (ft) | 101 | 136 | 327 | 400 | 113 |
| 95th Queue (ft) | 193 | 236 | 433 | 761 | 415 |
| Link Distance (ft) | 370 | 370 | | 931 | 931 |
| Upstream Blk Time (%) | | 0 | | 3 | 0 |
| Queuing Penalty (veh) | | 0 | | 0 | 0 |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 0 | | 36 | 12 | |
| Queuing Penalty (veh) | 1 | | 132 | 44 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 134 | 594 | 200 | 71 | 709 | 711 | 149 | 393 | 389 |
| Average Queue (ft) | 93 | 183 | 126 | 10 | 312 | 318 | 62 | 192 | 201 |
| 95th Queue (ft) | 148 | 502 | 228 | 45 | 723 | 717 | 142 | 397 | 405 |
| Link Distance (ft) | 105 | 705 | | | 688 | 688 | | 374 | 374 |
| Upstream Blk Time (%) | 38 | 1 | | | 5 | 5 | | 1 | 1 |
| Queuing Penalty (veh) | 0 | 0 | | | 0 | 0 | | 8 | 9 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 5 | 30 | 0 | 34 | | 26 | 16 | |
| Queuing Penalty (veh) | | 15 | 28 | 3 | 5 | | 194 | 13 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 156 | 136 | 27 | 9 | 24 | 47 | 25 | 37 |
| Average Queue (ft) | 71 | 62 | 3 | 0 | 1 | 11 | 1 | 1 |
| 95th Queue (ft) | 126 | 108 | 17 | 5 | 10 | 38 | 11 | 14 |
| Link Distance (ft) | 1253 | 986 | | 157 | 157 | | 370 | 370 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | | | 0 | 0 | |
| Queuing Penalty (veh) | | | | | | 1 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 35 | 2 | 27 |
| Average Queue (ft) | 13 | 0 | 1 |
| 95th Queue (ft) | 37 | 0 | 11 |
| Link Distance (ft) | 263 | 320 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 44 | 4 | 25 |
| Average Queue (ft) | 16 | 0 | 3 |
| 95th Queue (ft) | 43 | 4 | 17 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 68 | 166 | 35 | 104 | 134 | 103 | 140 | 164 |
| Average Queue (ft) | 25 | 77 | 5 | 49 | 63 | 34 | 61 | 80 |
| 95th Queue (ft) | 57 | 132 | 24 | 87 | 109 | 71 | 116 | 134 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 1 | |

## Network Summary

Network wide Queuing Penalty: 1187

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 600 | 572 | 95 | 87.5 | *F* |
| | T | 614 | 596 | 97 | 41.0 | *D* |
| | R | 645 | 620 | 96 | 16.2 | *B* |
| | Subtotal | 1,859 | 1,788 | 96 | 47.3 | *D* |
| SB | L | 350 | 347 | 99 | 71.5 | *E* |
| | T | 384 | 374 | 97 | 63.9 | *E* |
| | R | 405 | 409 | 101 | 14.0 | *B* |
| | Subtotal | 1,139 | 1,130 | 99 | 48.2 | *D* |
| EB | L | 520 | 508 | 98 | 77.8 | *E* |
| | T | 690 | 680 | 99 | 74.7 | *E* |
| | R | 421 | 411 | 98 | 32.0 | *C* |
| | Subtotal | 1,631 | 1,599 | 98 | 64.7 | *E* |
| WB | L | 546 | 557 | 102 | 63.7 | *E* |
| | T | 1,190 | 1,187 | 100 | 50.4 | *D* |
| | R | 75 | 72 | 96 | 11.3 | *B* |
| | Subtotal | 1,811 | 1,816 | 100 | 52.9 | *D* |
| **Total** | | 6,440 | 6,333 | 98 | 53.5 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 170 | 170 | 100 | 80.2 | *F* |
| | T | 139 | 136 | 98 | 56.6 | *E* |
| | R | 446 | 445 | 100 | 20.1 | *C* |
| | Subtotal | 755 | 751 | 99 | 40.3 | *D* |
| SB | L | 375 | 375 | 100 | 81.0 | *F* |
| | T | 368 | 368 | 100 | 50.3 | *D* |
| | R | 310 | 309 | 100 | 8.3 | *A* |
| | Subtotal | 1,053 | 1,052 | 100 | 48.9 | *D* |
| EB | L | 120 | 117 | 98 | 80.6 | *F* |
| | T | 1,385 | 1,353 | 98 | 24.6 | *C* |
| | R | 180 | 181 | 101 | 10.5 | *B* |
| | Subtotal | 1,685 | 1,651 | 98 | 27.0 | *C* |
| WB | L | 281 | 283 | 101 | 75.8 | *E* |
| | T | 371 | 365 | 98 | 33.8 | *C* |
| | R | 205 | 212 | 104 | 5.6 | *A* |
| | Subtotal | 857 | 860 | 100 | 40.7 | *D* |
| **Total** | | 4,350 | 4,314 | 99 | 37.5 | *D* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 16 | 105 | 109.9 | *F* |
| | T | 1,275 | 1,231 | 97 | 75.2 | *E* |
| | R | 55 | 51 | 92 | 54.4 | *D* |
| | Subtotal | 1,345 | 1,298 | 97 | 74.8 | *E* |
| SB | L | 90 | 85 | 94 | 73.0 | *E* |
| | T | 1,390 | 1,377 | 99 | 14.2 | *B* |
| | R | 5 | 5 | 105 | 12.3 | *B* |
| | Subtotal | 1,485 | 1,467 | 99 | 17.6 | *B* |
| EB | L | 75 | 49 | 65 | 187.5 | *F* |
| | T | 5 | 3 | 63 | 138.6 | *F* |
| | R | 30 | 22 | 73 | 131.8 | *F* |
| | Subtotal | 110 | 74 | 67 | 169.0 | *F* |
| WB | L | 90 | 85 | 94 | 101.0 | *F* |
| | T | 2 | 2 | 89 | 88.6 | *F* |
| | R | 341 | 329 | 96 | 115.4 | *F* |
| | Subtotal | 433 | 416 | 96 | 112.3 | *F* |
| **Total** | | 3,374 | 3,255 | 96 | 56.8 | *E* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 7 | 6 | 86 | 8.8 | *A* |
| | T | 464 | 466 | 100 | 0.4 | *A* |
| | R | 3 | 3 | 100 | 0.2 | *A* |
| | Subtotal | 474 | 475 | 100 | 0.5 | *A* |
| SB | L | 33 | 30 | 92 | 4.1 | *A* |
| | T | 766 | 772 | 101 | 1.1 | *A* |
| | R | 31 | 31 | 101 | 1.0 | *A* |
| | Subtotal | 830 | 833 | 100 | 1.2 | *A* |
| ***EB*** | ***L*** | ***156*** | ***150*** | ***96*** | ***61.7*** | ***F*** |
| | R | 25 | 27 | 107 | 49.7 | *E* |
| | Subtotal | 181 | 177 | 98 | 59.9 | *F* |
| WB | L | 20 | 20 | 99 | 18.2 | *C* |
| | T | 5 | 6 | 120 | 28.5 | *D* |
| | R | 135 | 134 | 99 | 12.3 | *B* |
| | Subtotal | 160 | 160 | 100 | 13.6 | *B* |
| **Total** | | 1,645 | 1,645 | 100 | 8.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 464 | 464 | 100 | 0.3 | *A* |
| | R | 5 | 6 | 120 | 0.3 | *A* |
| | Subtotal | 469 | 470 | 100 | 0.3 | *A* |
| SB | L | 6 | 6 | 100 | 3.8 | *A* |
| | T | 805 | 812 | 101 | 0.3 | *A* |
| | Subtotal | 811 | 818 | 101 | 0.3 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***10.8*** | ***B*** |
| | R | 10 | 12 | 117 | 3.6 | *A* |
| | Subtotal | 15 | 17 | 113 | 5.7 | *A* |
| **Total** | | 1,295 | 1,305 | 101 | 0.4 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 459 | 460 | 100 | 1.2 | *A* |
| | R | 11 | 14 | 124 | 1.1 | *A* |
| | Subtotal | 470 | 474 | 101 | 1.2 | *A* |
| SB | L | 9 | 7 | 78 | 3.4 | *A* |
| | T | 800 | 812 | 102 | 0.4 | *A* |
| | Subtotal | 809 | 819 | 101 | 0.4 | *A* |
| ***WB*** | ***L*** | ***10*** | ***11*** | ***107*** | ***12.7*** | ***B*** |
| | R | 10 | 11 | 107 | 3.5 | *A* |
| | Subtotal | 20 | 22 | 110 | 8.1 | *A* |
| **Total** | | 1,300 | 1,315 | 101 | 0.8 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 15.0 | *B* |
| | T | 367 | 371 | 101 | 6.1 | *A* |
| | R | 145 | 150 | 104 | 4.4 | *A* |
| | Subtotal | 518 | 527 | 102 | 5.7 | *A* |
| SB | L | 70 | 67 | 95 | 13.6 | *B* |
| | T | 671 | 683 | 102 | 6.6 | *A* |
| | R | 69 | 70 | 101 | 5.5 | *A* |
| | Subtotal | 810 | 820 | 101 | 7.1 | *A* |
| EB | L | 23 | 26 | 112 | 10.2 | *B* |
| | T | 11 | 11 | 98 | 10.3 | *B* |
| | R | 17 | 19 | 110 | 5.3 | *A* |
| | Subtotal | 51 | 56 | 110 | 8.6 | *A* |
| WB | L | 205 | 211 | 103 | 12.1 | *B* |
| | T | 17 | 19 | 110 | 13.7 | *B* |
| | R | 35 | 36 | 104 | 7.9 | *A* |
| | Subtotal | 257 | 266 | 104 | 11.6 | *B* |
| **Total** | | 1,637 | 1,669 | 102 | 7.4 | *A* |

**Intersection:** 3400 North & Innovation Way
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***300*** | ***104*** | ***9.3*** | ***A*** |
| | Subtotal | 288 | 300 | 104 | 9.3 | *A* |
| EB | L | 61 | 58 | 95 | 2.7 | *A* |
| | T | 89 | 82 | 92 | 0.8 | *A* |
| | Subtotal | 150 | 140 | 93 | 1.6 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 438 | 440 | 100 | 6.9 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.3 | 0.1 | 0.3 | 0.2 | 0.0 | 0.0 | 0.3 | 0.1 | 0.2 | 0.3 | 0.1 | 0.3 |
| Denied Del/Veh (s) | 2.4 | 0.6 | 2.4 | 1.5 | 0.1 | 1.5 | 1.6 | 0.5 | 1.1 | 2.7 | 0.6 | 2.7 |
| Total Delay (hr) | 11.2 | 14.3 | 3.7 | 10.1 | 17.0 | 0.2 | 14.2 | 6.9 | 2.8 | 6.9 | 6.9 | 1.6 |
| Total Del/Veh (s) | 77.8 | 74.7 | 32.0 | 63.7 | 50.4 | 11.3 | 87.5 | 41.0 | 16.2 | 71.5 | 63.9 | 14.0 |
| Vehicles Entered | 510 | 681 | 413 | 556 | 1185 | 73 | 576 | 589 | 620 | 346 | 375 | 410 |
| Vehicles Exited | 508 | 680 | 411 | 557 | 1187 | 72 | 572 | 596 | 620 | 347 | 374 | 409 |
| Hourly Exit Rate | 508 | 680 | 411 | 557 | 1187 | 72 | 572 | 596 | 620 | 347 | 374 | 409 |
| Input Volume | 520 | 690 | 421 | 546 | 1190 | 75 | 600 | 614 | 645 | 350 | 384 | 405 |
| % of Volume | 98 | 99 | 98 | 102 | 100 | 96 | 95 | 97 | 96 | 99 | 97 | 101 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.2 |
| Denied Del/Veh (s) | 1.2 |
| Total Delay (hr) | 95.8 |
| Total Del/Veh (s) | 53.5 |
| Vehicles Entered | 6334 |
| Vehicles Exited | 6333 |
| Hourly Exit Rate | 6333 |
| Input Volume | 6440 |
| % of Volume | 98 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 3.0 | 0.5 | 2.9 | 0.0 | 0.0 | 0.0 | 2.8 | 1.0 | 0.7 |
| Total Delay (hr) | 2.8 | 9.4 | 0.5 | 6.1 | 3.5 | 0.3 | 3.9 | 2.1 | 2.5 | 8.6 | 5.2 | 0.7 |
| Total Del/Veh (s) | 80.6 | 24.6 | 10.5 | 75.8 | 33.8 | 5.6 | 80.2 | 56.6 | 20.1 | 81.0 | 50.3 | 8.3 |
| Vehicles Entered | 117 | 1351 | 182 | 283 | 366 | 212 | 168 | 136 | 445 | 370 | 367 | 310 |
| Vehicles Exited | 117 | 1353 | 181 | 283 | 365 | 212 | 170 | 136 | 445 | 375 | 368 | 309 |
| Hourly Exit Rate | 117 | 1353 | 181 | 283 | 365 | 212 | 170 | 136 | 445 | 375 | 368 | 309 |
| Input Volume | 120 | 1385 | 180 | 281 | 371 | 205 | 170 | 139 | 446 | 375 | 368 | 310 |
| % of Volume | 98 | 98 | 101 | 101 | 98 | 104 | 100 | 98 | 100 | 100 | 100 | 100 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.9 |
| Denied Del/Veh (s) | 0.8 |
| Total Delay (hr) | 45.7 |
| Total Del/Veh (s) | 37.5 |
| Vehicles Entered | 4307 |
| Vehicles Exited | 4314 |
| Hourly Exit Rate | 4314 |
| Input Volume | 4350 |
| % of Volume | 99 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 11.0 | 0.6 | 4.6 | 3.5 | 0.1 | 15.2 | 0.2 | 15.9 | 0.7 | 0.0 | 0.2 | 0.0 |
| Denied Del/Veh (s) | 527.0 | 443.3 | 518.0 | 140.3 | 153.0 | 152.7 | 38.9 | 44.1 | 46.9 | 1.3 | 0.5 | 0.4 |
| Total Delay (hr) | 2.8 | 0.2 | 0.8 | 2.5 | 0.0 | 11.1 | 0.5 | 26.8 | 0.8 | 1.7 | 5.4 | 0.0 |
| Total Del/Veh (s) | 187.5 | 138.6 | 131.8 | 101.0 | 88.6 | 115.4 | 109.9 | 75.2 | 54.4 | 73.0 | 14.2 | 12.3 |
| Vehicles Entered | 52 | 4 | 23 | 88 | 2 | 342 | 16 | 1268 | 53 | 86 | 1378 | 5 |
| Vehicles Exited | 49 | 3 | 22 | 85 | 2 | 329 | 16 | 1231 | 51 | 85 | 1377 | 5 |
| Hourly Exit Rate | 49 | 3 | 22 | 85 | 2 | 329 | 16 | 1231 | 51 | 85 | 1377 | 5 |
| Input Volume | 75 | 5 | 30 | 90 | 2 | 341 | 15 | 1275 | 55 | 90 | 1390 | 5 |
| % of Volume | 65 | 63 | 73 | 94 | 89 | 96 | 105 | 97 | 92 | 94 | 99 | 105 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 52.0 |
| Denied Del/Veh (s) | 55.1 |
| Total Delay (hr) | 52.7 |
| Total Del/Veh (s) | 56.8 |
| Vehicles Entered | 3317 |
| Vehicles Exited | 3255 |
| Hourly Exit Rate | 3255 |
| Input Volume | 3374 |
| % of Volume | 96 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBL | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 2.7 | 0.4 | 0.1 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 4.0 |
| Total Del/Veh (s) | 61.7 | 49.7 | 18.2 | 28.5 | 12.3 | 8.8 | 0.4 | 0.2 | 4.1 | 1.1 | 1.0 | 8.7 |
| Vehicles Entered | 153 | 27 | 20 | 6 | 134 | 6 | 466 | 3 | 29 | 772 | 31 | 1647 |
| Vehicles Exited | 150 | 27 | 20 | 6 | 134 | 6 | 466 | 3 | 30 | 772 | 31 | 1645 |
| Hourly Exit Rate | 150 | 27 | 20 | 6 | 134 | 6 | 466 | 3 | 30 | 772 | 31 | 1645 |
| Input Volume | 156 | 25 | 20 | 5 | 135 | 7 | 464 | 3 | 33 | 766 | 31 | 1645 |
| % of Volume | 96 | 107 | 99 | 120 | 99 | 86 | 100 | 100 | 92 | 101 | 101 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| Total Del/Veh (s) | 10.8 | 3.6 | 0.3 | 0.3 | 3.8 | 0.3 | 0.4 |
| Vehicles Entered | 5 | 12 | 465 | 6 | 6 | 812 | 1306 |
| Vehicles Exited | 5 | 12 | 464 | 6 | 6 | 812 | 1305 |
| Hourly Exit Rate | 5 | 12 | 464 | 6 | 6 | 812 | 1305 |
| Input Volume | 5 | 10 | 464 | 5 | 6 | 805 | 1295 |
| % of Volume | 100 | 117 | 100 | 120 | 100 | 101 | 101 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 |
| Total Del/Veh (s) | 12.7 | 3.5 | 1.2 | 1.1 | 3.4 | 0.4 | 0.8 |
| Vehicles Entered | 11 | 11 | 460 | 14 | 7 | 810 | 1313 |
| Vehicles Exited | 11 | 11 | 460 | 14 | 7 | 812 | 1315 |
| Hourly Exit Rate | 11 | 11 | 460 | 14 | 7 | 812 | 1315 |
| Input Volume | 10 | 10 | 459 | 11 | 9 | 800 | 1300 |
| % of Volume | 107 | 107 | 100 | 124 | 78 | 102 | 101 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.2 | 2.7 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.7 | 0.1 | 0.1 | 0.0 | 0.6 | 0.2 | 0.3 | 1.3 | 0.1 |
| Total Del/Veh (s) | 10.2 | 10.3 | 5.3 | 12.1 | 13.7 | 7.9 | 15.0 | 6.1 | 4.4 | 13.6 | 6.6 | 5.5 |
| Vehicles Entered | 26 | 11 | 19 | 211 | 19 | 36 | 6 | 370 | 149 | 68 | 685 | 70 |
| Vehicles Exited | 26 | 11 | 19 | 211 | 19 | 36 | 6 | 371 | 150 | 67 | 683 | 70 |
| Hourly Exit Rate | 26 | 11 | 19 | 211 | 19 | 36 | 6 | 371 | 150 | 67 | 683 | 70 |
| Input Volume | 23 | 11 | 17 | 205 | 17 | 35 | 6 | 367 | 145 | 70 | 671 | 69 |
| % of Volume | 112 | 98 | 110 | 103 | 110 | 104 | 100 | 101 | 104 | 95 | 102 | 101 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 3.5 |
| Total Del/Veh (s) | 7.4 |
| Vehicles Entered | 1670 |
| Vehicles Exited | 1669 |
| Hourly Exit Rate | 1669 |
| Input Volume | 1637 |
| % of Volume | 102 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.3 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.8 | 0.8 |
| Total Del/Veh (s) | 2.7 | 0.8 | 9.3 | 6.9 |
| Vehicles Entered | 57 | 82 | 302 | 441 |
| Vehicles Exited | 58 | 82 | 300 | 440 |
| Hourly Exit Rate | 58 | 82 | 300 | 440 |
| Input Volume | 61 | 89 | 288 | 438 |
| % of Volume | 95 | 92 | 104 | 100 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 55.2 |
| Denied Del/Veh (s) | 21.8 |
| Total Delay (hr) | 214.0 |
| Total Del/Veh (s) | 82.3 |
| Vehicles Entered | 9033 |
| Vehicles Exited | 8977 |
| Hourly Exit Rate | 8977 |
| Input Volume | 30968 |
| % of Volume | 29 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 369 | 470 | 473 | 413 | 350 | 345 | 355 | 415 | 447 | 389 | 314 | 262 |
| Average Queue (ft) | 231 | 282 | 271 | 255 | 199 | 176 | 208 | 247 | 277 | 258 | 211 | 147 |
| 95th Queue (ft) | 353 | 421 | 404 | 361 | 334 | 316 | 316 | 359 | 388 | 357 | 293 | 231 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1014 | 1014 | 1014 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 6 | 21 | 18 | | 2 | 7 | 0 | 0 | 1 | | 2 | 0 |
| Queuing Penalty (veh) | 14 | 50 | 93 | | 10 | 16 | 0 | 1 | 3 | | 9 | 0 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | T | R | |
| Maximum Queue (ft) | 73 | 175 | 250 | 404 | 446 | 250 | 268 | 302 | 295 | 272 | 246 | |
| Average Queue (ft) | 19 | 168 | 246 | 370 | 361 | 170 | 155 | 188 | 170 | 153 | 109 | |
| 95th Queue (ft) | 49 | 189 | 266 | 456 | 514 | 304 | 243 | 273 | 266 | 255 | 196 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 999 | 999 | | |
| Upstream Blk Time (%) | | | | 27 | 17 | | | | | | | |
| Queuing Penalty (veh) | | | | 222 | 132 | | | | | | | |
| Storage Bay Dist (ft) | 250 | 100 | 100 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 53 | 64 | 23 | 16 | 12 | 0 | 0 | 0 | 5 | 1 | |
| Queuing Penalty (veh) | | 117 | 142 | 139 | 104 | 27 | 0 | 0 | 1 | 21 | 2 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 111 | 151 | 299 | 316 | 108 | 394 | 511 | 410 | 378 | 213 | 95 | 280 |
| Average Queue (ft) | 45 | 66 | 188 | 193 | 49 | 10 | 15 | 246 | 159 | 94 | 42 | 155 |
| 95th Queue (ft) | 92 | 115 | 276 | 281 | 89 | 176 | 216 | 386 | 303 | 179 | 76 | 256 |
| Link Distance (ft) | | | 2261 | 2261 | | 1014 | 1014 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 0 | 0 | | | | 13 | 0 | 1 | 0 | 6 |
| Queuing Penalty (veh) | | | 0 | 1 | | | | 25 | 0 | 3 | 0 | 9 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 312 | 286 | 385 | 829 | 447 |
| Average Queue (ft) | 120 | 141 | 316 | 398 | 97 |
| 95th Queue (ft) | 239 | 240 | 435 | 762 | 341 |
| Link Distance (ft) | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | 0 | | | 1 | 0 |
| Queuing Penalty (veh) | 0 | | | 0 | 0 |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 1 | | 35 | 11 | |
| Queuing Penalty (veh) | 1 | | 128 | 40 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 128 | 695 | 200 | 99 | 716 | 727 | 149 | 391 | 399 |
| Average Queue (ft) | 98 | 398 | 179 | 15 | 543 | 523 | 80 | 216 | 230 |
| 95th Queue (ft) | 144 | 769 | 246 | 62 | 880 | 884 | 162 | 396 | 405 |
| Link Distance (ft) | 105 | 694 | | | 686 | 686 | | 374 | 374 |
| Upstream Blk Time (%) | 66 | 5 | | | 24 | 18 | | 1 | 1 |
| Queuing Penalty (veh) | 0 | 15 | | | 0 | 0 | | 6 | 9 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 7 | 66 | 1 | 62 | | 36 | 21 | |
| Queuing Penalty (veh) | | 30 | 64 | 4 | 9 | | 254 | 20 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 303 | 145 | 30 | 16 | 9 | 41 | 24 | 44 |
| Average Queue (ft) | 127 | 61 | 4 | 1 | 0 | 10 | 1 | 2 |
| 95th Queue (ft) | 259 | 108 | 19 | 12 | 6 | 35 | 11 | 18 |
| Link Distance (ft) | 535 | 986 | | 157 | 157 | | 368 | 368 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 50 | | | 50 | | |
| Storage Blk Time (%) | | | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 0 | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 37 | 28 |
| Average Queue (ft) | 14 | 2 |
| 95th Queue (ft) | 39 | 16 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LR | TR | L |
| Maximum Queue (ft) | 36 | 2 | 31 |
| Average Queue (ft) | 16 | 0 | 3 |
| 95th Queue (ft) | 42 | 2 | 17 |
| Link Distance (ft) | 245 | 664 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | 50 |
| Storage Blk Time (%) | | | 0 |
| Queuing Penalty (veh) | | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 67 | 165 | 37 | 115 | 138 | 97 | 153 | 159 |
| Average Queue (ft) | 26 | 81 | 5 | 49 | 63 | 35 | 69 | 87 |
| 95th Queue (ft) | 58 | 137 | 25 | 93 | 113 | 71 | 127 | 140 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 1 | | 0 | 1 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | 1 | |

## Intersection: 31: 3400 North & Innovation Way

| Movement | EB | SB |
|---|---|---|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 80 | 206 |
| Average Queue (ft) | 3 | 63 |
| 95th Queue (ft) | 82 | 169 |
| Link Distance (ft) | 694 | 525 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Network Summary

Network wide Queuing Penalty: 1721

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 600 | 570 | 95 | 87.9 | *F* |
| | T | 614 | 596 | 97 | 40.0 | *D* |
| | R | 645 | 607 | 94 | 15.6 | *B* |
| | Subtotal | 1,859 | 1,773 | 95 | 47.0 | *D* |
| SB | L | 350 | 351 | 100 | 72.4 | *E* |
| | T | 384 | 394 | 103 | 63.3 | *E* |
| | R | 405 | 402 | 99 | 14.4 | *B* |
| | Subtotal | 1,139 | 1,147 | 101 | 48.9 | *D* |
| EB | L | 520 | 524 | 101 | 79.7 | *E* |
| | T | 690 | 689 | 100 | 74.4 | *E* |
| | R | 421 | 429 | 102 | 23.7 | *C* |
| | Subtotal | 1,631 | 1,642 | 101 | 62.8 | *E* |
| WB | L | 546 | 540 | 99 | 63.2 | *E* |
| | T | 1,190 | 1,188 | 100 | 50.1 | *D* |
| | R | 75 | 73 | 97 | 11.4 | *B* |
| | Subtotal | 1,811 | 1,801 | 99 | 52.5 | *D* |
| **Total** | | 6,440 | 6,363 | 99 | 53.1 | *D* |

**Intersection:** 1200 West & Timpanogos Highway (SR-92)
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 170 | 173 | 102 | 80.3 | *F* |
| | T | 140 | 140 | 100 | 52.7 | *D* |
| | R | 446 | 442 | 99 | 19.7 | *B* |
| | Subtotal | 756 | 755 | 100 | 39.7 | *D* |
| SB | L | 375 | 378 | 101 | 75.4 | *E* |
| | T | 368 | 366 | 99 | 50.1 | *D* |
| | R | 310 | 300 | 97 | 7.6 | *A* |
| | Subtotal | 1,053 | 1,044 | 99 | 47.0 | *D* |
| EB | L | 120 | 116 | 97 | 82.6 | *F* |
| | T | 1,385 | 1,355 | 98 | 25.6 | *C* |
| | R | 180 | 177 | 98 | 10.3 | *B* |
| | Subtotal | 1,685 | 1,648 | 98 | 28.0 | *C* |
| WB | L | 281 | 277 | 99 | 68.9 | *E* |
| | T | 371 | 368 | 99 | 34.6 | *C* |
| | R | 205 | 206 | 101 | 5.5 | *A* |
| | Subtotal | 857 | 851 | 99 | 38.7 | *D* |
| **Total** | | 4,350 | 4,298 | 99 | 36.9 | *D* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** Triumph Boulevard & 3400 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 15 | 14 | 92 | 109.5 | *F* |
| | T | 1,275 | 1,220 | 96 | 73.9 | *E* |
| | R | 55 | 54 | 98 | 52.0 | *D* |
| | Subtotal | 1,345 | 1,288 | 96 | 73.4 | *E* |
| SB | L | 90 | 86 | 95 | 68.6 | *E* |
| | T | 1,390 | 1,410 | 101 | 13.4 | *B* |
| | R | 5 | 4 | 84 | 13.3 | *B* |
| | Subtotal | 1,485 | 1,500 | 101 | 16.6 | *B* |
| EB | L | 75 | 60 | 80 | 141.0 | *F* |
| | T | 5 | 4 | 84 | 71.4 | *E* |
| | R | 30 | 27 | 89 | 106.4 | *F* |
| | Subtotal | 110 | 91 | 83 | 127.7 | *F* |
| WB | L | 90 | 85 | 94 | 89.8 | *F* |
| | T | 2 | 2 | 89 | 84.9 | *F* |
| | R | 341 | 316 | 93 | 104.5 | *F* |
| | Subtotal | 433 | 403 | 93 | 101.3 | *F* |
| **Total** | | 3,374 | 3,282 | 97 | 53.1 | *D* |

**Intersection:** 1200 West & Innovation Way/Bull River Road
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 620 | 618 | 100 | 0.4 | *A* |
| | R | 3 | 4 | 133 | 0.1 | *A* |
| | Subtotal | 623 | 622 | 100 | 0.4 | *A* |
| SB | T | 809 | 798 | 99 | 1.1 | *A* |
| | R | 21 | 22 | 104 | 1.0 | *A* |
| | Subtotal | 830 | 820 | 99 | 1.1 | *A* |
| EB | R | 15 | 17 | 111 | 5.7 | *A* |
| | Subtotal | 15 | 17 | 113 | 5.7 | *A* |
| ***WB*** | ***R*** | ***135*** | ***137*** | ***101*** | ***6.3*** | ***A*** |
| | Subtotal | 135 | 137 | 101 | 6.3 | *A* |
| **Total** | | 1,604 | 1,596 | 100 | 1.3 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & Aces Athletics North
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 613 | 613 | 100 | 0.4 | *A* |
| | R | 5 | 5 | 100 | 0.2 | *A* |
| | Subtotal | 618 | 618 | 100 | 0.4 | *A* |
| SB | L | 6 | 6 | 100 | 3.6 | *A* |
| | T | 818 | 807 | 99 | 0.2 | *A* |
| | Subtotal | 824 | 813 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***5*** | ***5*** | ***100*** | ***13.3*** | ***B*** |
| | R | 10 | 9 | 88 | 4.2 | *A* |
| | Subtotal | 15 | 14 | 93 | 7.5 | *A* |
| **Total** | | 1,456 | 1,445 | 99 | 0.4 | *A* |

**Intersection:** 1200 West & Aces Athletics South
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | T | 459 | 458 | 100 | 1.2 | *A* |
| | R | 11 | 13 | 116 | 1.4 | *A* |
| | Subtotal | 470 | 471 | 100 | 1.2 | *A* |
| SB | L | 9 | 8 | 89 | 2.9 | *A* |
| | T | 814 | 805 | 99 | 0.2 | *A* |
| | Subtotal | 823 | 813 | 99 | 0.2 | *A* |
| ***WB*** | ***L*** | ***10*** | ***13*** | ***127*** | ***11.4*** | ***B*** |
| | R | 10 | 12 | 117 | 3.7 | *A* |
| | Subtotal | 20 | 25 | 125 | 7.7 | *A* |
| **Total** | | 1,313 | 1,309 | 100 | 0.7 | *A* |

# SimTraffic LOS Report

**Project:** Lehi Innovation Pointe TIS
**Analysis Period:** *Mitigated Future (2040) Plus Project*
**Time Period:** *Evening Peak Hour* **Project #:** *UT16-902*

**Intersection:** 1200 West & 3200 North
**Type:** Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 6 | 6 | 100 | 15.9 | *B* |
| | T | 367 | 363 | 99 | 6.6 | *A* |
| | R | 145 | 142 | 98 | 4.3 | *A* |
| | Subtotal | 518 | 511 | 99 | 6.1 | *A* |
| SB | L | 103 | 102 | 99 | 14.7 | *B* |
| | T | 652 | 648 | 99 | 7.1 | *A* |
| | R | 69 | 66 | 95 | 6.0 | *A* |
| | Subtotal | 824 | 816 | 99 | 8.0 | *A* |
| EB | L | 23 | 25 | 108 | 9.8 | *A* |
| | T | 11 | 12 | 107 | 9.3 | *A* |
| | R | 17 | 19 | 110 | 5.6 | *A* |
| | Subtotal | 51 | 56 | 110 | 8.3 | *A* |
| WB | L | 225 | 226 | 100 | 11.7 | *B* |
| | T | 17 | 21 | 122 | 11.2 | *B* |
| | R | 35 | 36 | 104 | 7.7 | *A* |
| | Subtotal | 277 | 283 | 102 | 11.2 | *B* |
| **Total** | | 1,670 | 1,666 | 100 | 7.9 | *A* |

**Intersection:** 1200 West & East Access
**Type:** Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| NB | L | 7 | 7 | 100 | 5.7 | *A* |
| | T | 462 | 462 | 100 | 0.2 | *A* |
| | Subtotal | 469 | 469 | 100 | 0.3 | *A* |
| SB | T | 812 | 802 | 99 | 0.3 | *A* |
| | R | 10 | 10 | 98 | 0.1 | *A* |
| | Subtotal | 822 | 812 | 99 | 0.3 | *A* |
| ***EB*** | ***L*** | ***156*** | ***155*** | ***100*** | ***38.9*** | ***E*** |
| | R | 10 | 10 | 98 | 26.3 | *D* |
| | Subtotal | 166 | 165 | 99 | 38.1 | *E* |
| | | | | | | |
| **Total** | | 1,458 | 1,446 | 99 | 4.7 | *A* |

# *SimTraffic LOS Report*

**Project:** **Lehi Innovation Pointe TIS**
**Analysis Period:** ***Mitigated Future (2040) Plus Project***
**Time Period:** ***Evening Peak Hour*** **Project #:** ***UT16-902***

**Intersection:** **3400 North & Innovation Way**
**Type:** **Unsignalized**

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|---|---|---|---|---|---|---|
| | | | Avg | % | Avg | LOS |
| ***SB*** | ***R*** | ***288*** | ***289*** | ***100*** | ***8.5*** | ***A*** |
| | Subtotal | 288 | 289 | 100 | 8.5 | *A* |
| EB | L | 61 | 58 | 95 | 2.6 | *A* |
| | T | 89 | 86 | 96 | 0.7 | *A* |
| | Subtotal | 150 | 144 | 96 | 1.5 | *A* |
| | | | | | | |
| | | | | | | |
| **Total** | | 438 | 433 | 99 | 6.2 | *A* |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.4 | 0.1 | 0.3 | 0.2 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.3 | 0.1 | 0.3 |
| Denied Del/Veh (s) | 2.5 | 0.6 | 2.4 | 1.5 | 0.1 | 1.5 | 1.3 | 0.4 | 0.8 | 2.7 | 0.6 | 2.7 |
| Total Delay (hr) | 11.8 | 14.4 | 2.8 | 9.8 | 16.9 | 0.2 | 14.2 | 6.7 | 2.6 | 7.2 | 7.2 | 1.6 |
| Total Del/Veh (s) | 79.7 | 74.4 | 23.7 | 63.2 | 50.1 | 11.4 | 87.9 | 40.0 | 15.6 | 72.4 | 63.3 | 14.4 |
| Vehicles Entered | 523 | 688 | 429 | 544 | 1188 | 73 | 571 | 587 | 604 | 351 | 395 | 402 |
| Vehicles Exited | 524 | 689 | 429 | 540 | 1188 | 73 | 570 | 596 | 607 | 351 | 394 | 402 |
| Hourly Exit Rate | 524 | 689 | 429 | 540 | 1188 | 73 | 570 | 596 | 607 | 351 | 394 | 402 |
| Input Volume | 520 | 690 | 421 | 546 | 1190 | 75 | 600 | 614 | 645 | 350 | 384 | 405 |
| % of Volume | 101 | 100 | 102 | 99 | 100 | 97 | 95 | 97 | 94 | 100 | 103 | 99 |

## 1: Triumph Boulevard & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 2.1 |
| Denied Del/Veh (s) | 1.2 |
| Total Delay (hr) | 95.5 |
| Total Del/Veh (s) | 53.1 |
| Vehicles Entered | 6355 |
| Vehicles Exited | 6363 |
| Hourly Exit Rate | 6363 |
| Input Volume | 6440 |
| % of Volume | 99 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 3.0 | 0.5 | 2.9 | 0.0 | 0.0 | 0.0 | 2.7 | 1.0 | 0.5 |
| Total Delay (hr) | 2.8 | 9.9 | 0.5 | 5.4 | 3.6 | 0.3 | 3.9 | 2.1 | 2.4 | 8.0 | 5.1 | 0.6 |
| Total Del/Veh (s) | 82.6 | 25.6 | 10.3 | 68.9 | 34.6 | 5.5 | 80.3 | 52.7 | 19.7 | 75.4 | 50.1 | 7.6 |
| Vehicles Entered | 116 | 1357 | 176 | 273 | 366 | 205 | 172 | 140 | 443 | 376 | 365 | 300 |
| Vehicles Exited | 116 | 1355 | 177 | 277 | 368 | 206 | 173 | 140 | 442 | 378 | 366 | 300 |
| Hourly Exit Rate | 116 | 1355 | 177 | 277 | 368 | 206 | 173 | 140 | 442 | 378 | 366 | 300 |
| Input Volume | 120 | 1385 | 180 | 281 | 371 | 205 | 170 | 140 | 446 | 375 | 368 | 310 |
| % of Volume | 97 | 98 | 98 | 99 | 99 | 101 | 102 | 100 | 99 | 101 | 99 | 97 |

## 2: 1200 West & Timpanogos Highway (SR-92) Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.9 |
| Denied Del/Veh (s) | 0.7 |
| Total Delay (hr) | 44.8 |
| Total Del/Veh (s) | 36.9 |
| Vehicles Entered | 4289 |
| Vehicles Exited | 4298 |
| Hourly Exit Rate | 4298 |
| Input Volume | 4350 |
| % of Volume | 99 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 6.2 | 0.4 | 3.0 | 3.3 | 0.1 | 12.8 | 0.2 | 11.6 | 0.5 | 0.0 | 0.4 | 0.0 |
| Denied Del/Veh (s) | 311.3 | 264.4 | 331.1 | 128.7 | 178.1 | 134.8 | 36.1 | 32.4 | 32.4 | 1.3 | 1.0 | 0.0 |
| Total Delay (hr) | 2.5 | 0.1 | 0.8 | 2.2 | 0.0 | 9.8 | 0.5 | 26.2 | 0.8 | 1.7 | 5.3 | 0.0 |
| Total Del/Veh (s) | 141.0 | 71.4 | 106.4 | 89.8 | 84.9 | 104.5 | 109.5 | 73.9 | 52.0 | 68.6 | 13.4 | 13.3 |
| Vehicles Entered | 61 | 4 | 27 | 86 | 2 | 328 | 15 | 1253 | 56 | 87 | 1410 | 4 |
| Vehicles Exited | 60 | 4 | 27 | 85 | 2 | 316 | 14 | 1220 | 54 | 86 | 1410 | 4 |
| Hourly Exit Rate | 60 | 4 | 27 | 85 | 2 | 316 | 14 | 1220 | 54 | 86 | 1410 | 4 |
| Input Volume | 75 | 5 | 30 | 90 | 2 | 341 | 15 | 1275 | 55 | 90 | 1390 | 5 |
| % of Volume | 80 | 84 | 89 | 94 | 89 | 93 | 92 | 96 | 98 | 95 | 101 | 84 |

## 3: Triumph Boulevard & 3400 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 38.5 |
| Denied Del/Veh (s) | 40.7 |
| Total Delay (hr) | 49.8 |
| Total Del/Veh (s) | 53.1 |
| Vehicles Entered | 3333 |
| Vehicles Exited | 3282 |
| Hourly Exit Rate | 3282 |
| Input Volume | 3374 |
| % of Volume | 97 |

## 4: 1200 West & Innovation Way/Bull River Road Performance by movement

| Movement | EBR | WBR | NBT | NBR | SBT | SBR | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.2 | 0.1 | 0.0 | 0.2 | 0.0 | 0.6 |
| Total Del/Veh (s) | 5.7 | 6.3 | 0.4 | 0.1 | 1.1 | 1.0 | 1.3 |
| Vehicles Entered | 17 | 137 | 618 | 4 | 798 | 23 | 1597 |
| Vehicles Exited | 17 | 137 | 618 | 4 | 798 | 22 | 1596 |
| Hourly Exit Rate | 17 | 137 | 618 | 4 | 798 | 22 | 1596 |
| Input Volume | 15 | 135 | 620 | 3 | 809 | 21 | 1604 |
| % of Volume | 111 | 101 | 100 | 133 | 99 | 104 | 100 |

## 5: 1200 West & Aces Athletics North Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 |
| Total Del/Veh (s) | 13.3 | 4.2 | 0.4 | 0.2 | 3.6 | 0.2 | 0.4 |
| Vehicles Entered | 5 | 9 | 613 | 5 | 6 | 808 | 1446 |
| Vehicles Exited | 5 | 9 | 613 | 5 | 6 | 807 | 1445 |
| Hourly Exit Rate | 5 | 9 | 613 | 5 | 6 | 807 | 1445 |
| Input Volume | 5 | 10 | 613 | 5 | 6 | 818 | 1456 |
| % of Volume | 100 | 88 | 100 | 100 | 100 | 99 | 99 |

## 6: 1200 West & Aces Athletics South Performance by movement

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.3 |
| Total Del/Veh (s) | 11.4 | 3.7 | 1.2 | 1.4 | 2.9 | 0.2 | 0.7 |
| Vehicles Entered | 13 | 11 | 458 | 13 | 8 | 805 | 1308 |
| Vehicles Exited | 13 | 12 | 458 | 13 | 8 | 805 | 1309 |
| Hourly Exit Rate | 13 | 12 | 458 | 13 | 8 | 805 | 1309 |
| Input Volume | 10 | 10 | 459 | 11 | 9 | 814 | 1313 |
| % of Volume | 127 | 117 | 100 | 116 | 89 | 99 | 100 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.2 | 2.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.1 | 0.0 | 0.0 | 0.7 | 0.1 | 0.1 | 0.0 | 0.7 | 0.2 | 0.4 | 1.3 | 0.1 |
| Total Del/Veh (s) | 9.8 | 9.3 | 5.6 | 11.7 | 11.2 | 7.7 | 15.9 | 6.6 | 4.3 | 14.7 | 7.1 | 6.0 |
| Vehicles Entered | 25 | 11 | 19 | 226 | 21 | 36 | 6 | 362 | 141 | 102 | 649 | 67 |
| Vehicles Exited | 25 | 12 | 19 | 226 | 21 | 36 | 6 | 363 | 142 | 102 | 648 | 66 |
| Hourly Exit Rate | 25 | 12 | 19 | 226 | 21 | 36 | 6 | 363 | 142 | 102 | 648 | 66 |
| Input Volume | 23 | 11 | 17 | 225 | 17 | 35 | 6 | 367 | 145 | 103 | 652 | 69 |
| % of Volume | 108 | 107 | 110 | 100 | 122 | 104 | 100 | 99 | 98 | 99 | 99 | 95 |

## 7: 1200 West & 3200 North Performance by movement

| Movement | All |
|---|---|
| Denied Delay (hr) | 0.1 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 3.7 |
| Total Del/Veh (s) | 7.9 |
| Vehicles Entered | 1665 |
| Vehicles Exited | 1666 |
| Hourly Exit Rate | 1666 |
| Input Volume | 1670 |
| % of Volume | 100 |

## 24: 1200 West & East Access Performance by movement

| Movement | EBL | EBR | NBL | NBT | SBT | SBR | All |
|---|---|---|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 1.7 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 1.9 |
| Total Del/Veh (s) | 38.9 | 26.3 | 5.7 | 0.2 | 0.3 | 0.1 | 4.7 |
| Vehicles Entered | 156 | 10 | 7 | 462 | 802 | 10 | 1447 |
| Vehicles Exited | 155 | 10 | 7 | 462 | 802 | 10 | 1446 |
| Hourly Exit Rate | 155 | 10 | 7 | 462 | 802 | 10 | 1446 |
| Input Volume | 156 | 10 | 7 | 462 | 812 | 10 | 1458 |
| % of Volume | 100 | 98 | 100 | 100 | 99 | 98 | 99 |

## 31: 3400 North & Innovation Way Performance by movement

| Movement | EBL | EBT | SBR | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.1 | 0.1 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.8 | 0.5 |
| Total Delay (hr) | 0.0 | 0.0 | 0.7 | 0.7 |
| Total Del/Veh (s) | 2.6 | 0.7 | 8.5 | 6.2 |
| Vehicles Entered | 58 | 86 | 289 | 433 |
| Vehicles Exited | 58 | 86 | 289 | 433 |
| Hourly Exit Rate | 58 | 86 | 289 | 433 |
| Input Volume | 61 | 89 | 288 | 438 |
| % of Volume | 95 | 96 | 100 | 99 |

## Total Network Performance

| | |
|---|---|
| Denied Delay (hr) | 41.6 |
| Denied Del/Veh (s) | 16.5 |
| Total Delay (hr) | 208.5 |
| Total Del/Veh (s) | 80.2 |
| Vehicles Entered | 9027 |
| Vehicles Exited | 8992 |
| Hourly Exit Rate | 8992 |
| Input Volume | 32589 |
| % of Volume | 28 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | EB | WB | WB | WB | WB | WB | WB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | T | R | L | L | T | T | T | T |
| Maximum Queue (ft) | 374 | 433 | 439 | 416 | 333 | 357 | 352 | 419 | 437 | 386 | 308 | 259 |
| Average Queue (ft) | 244 | 292 | 269 | 255 | 193 | 163 | 200 | 240 | 282 | 256 | 210 | 148 |
| 95th Queue (ft) | 356 | 412 | 398 | 372 | 317 | 293 | 304 | 364 | 393 | 351 | 290 | 231 |
| Link Distance (ft) | | | 809 | 809 | 809 | | | | 1014 | 1014 | 1014 | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 230 | 230 | | | | 230 | 400 | 400 | | | | 250 |
| Storage Blk Time (%) | 6 | 26 | 20 | | 2 | 4 | 0 | 0 | 1 | | 2 | 0 |
| Queuing Penalty (veh) | 14 | 60 | 104 | | 9 | 10 | 0 | 1 | 3 | | 7 | 0 |

## Intersection: 1: Triumph Boulevard & Timpanogos Highway (SR-92)

| Movement | WB | NB | NB | NB | NB | NB | SB | SB | SB | SB | SB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | R | L | L | T | T | R | L | L | T | T | R | |
| Maximum Queue (ft) | 87 | 175 | 250 | 404 | 443 | 250 | 274 | 307 | 281 | 283 | 238 | |
| Average Queue (ft) | 20 | 168 | 247 | 371 | 345 | 164 | 160 | 194 | 177 | 162 | 107 | |
| 95th Queue (ft) | 57 | 187 | 259 | 455 | 516 | 296 | 250 | 276 | 261 | 255 | 192 | |
| Link Distance (ft) | | | | 374 | 374 | | | | 999 | 999 | | |
| Upstream Blk Time (%) | | | | 28 | 15 | | | | | | | |
| Queuing Penalty (veh) | | | | 227 | 121 | | | | | | | |
| Storage Bay Dist (ft) | 250 | 100 | 100 | | | 150 | 320 | 320 | | | 200 | |
| Storage Blk Time (%) | | 53 | 64 | 23 | 15 | 11 | 0 | 0 | 0 | 5 | 1 | |
| Queuing Penalty (veh) | | 117 | 142 | 136 | 95 | 25 | 0 | 0 | 0 | 20 | 2 | |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | EB | EB | EB | EB | EB | B22 | B22 | WB | WB | WB | WB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | L | T | T | R | T | T | L | T | T | R | L |
| Maximum Queue (ft) | 103 | 128 | 316 | 330 | 102 | 98 | 410 | 396 | 355 | 255 | 86 | 270 |
| Average Queue (ft) | 45 | 65 | 195 | 199 | 46 | 4 | 15 | 230 | 158 | 100 | 41 | 158 |
| 95th Queue (ft) | 91 | 110 | 287 | 295 | 84 | 100 | 216 | 358 | 284 | 199 | 71 | 267 |
| Link Distance (ft) | | | 2261 | 2261 | | 1014 | 1014 | | 1013 | 1013 | | |
| Upstream Blk Time (%) | | | | | | | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | | 0 | | | | | |
| Storage Bay Dist (ft) | 315 | 315 | | | 315 | | | 260 | | | 140 | 210 |
| Storage Blk Time (%) | | | 0 | 1 | | | | 10 | 0 | 3 | | 7 |
| Queuing Penalty (veh) | | | 0 | 1 | | | | 18 | 1 | 7 | | 10 |

## Intersection: 2: 1200 West & Timpanogos Highway (SR-92)

| Movement | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|
| Directions Served | T | R | L | T | R |
| Maximum Queue (ft) | 300 | 325 | 384 | 774 | 185 |
| Average Queue (ft) | 118 | 137 | 325 | 375 | 69 |
| 95th Queue (ft) | 241 | 250 | 433 | 673 | 135 |
| Link Distance (ft) | 368 | 368 | | 931 | 931 |
| Upstream Blk Time (%) | 1 | 0 | | 0 | |
| Queuing Penalty (veh) | 2 | 0 | | 0 | |
| Storage Bay Dist (ft) | | | 240 | | |
| Storage Blk Time (%) | 1 | | 33 | 14 | |
| Queuing Penalty (veh) | 1 | | 123 | 52 | |

## Intersection: 3: Triumph Boulevard & 3400 North

| Movement | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LT | R | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 138 | 685 | 200 | 90 | 724 | 717 | 149 | 376 | 388 |
| Average Queue (ft) | 98 | 353 | 170 | 15 | 539 | 512 | 79 | 207 | 220 |
| 95th Queue (ft) | 149 | 721 | 249 | 66 | 880 | 865 | 159 | 382 | 397 |
| Link Distance (ft) | 105 | 694 | | | 686 | 686 | | 374 | 374 |
| Upstream Blk Time (%) | 54 | 2 | | | 22 | 17 | | 0 | 1 |
| Queuing Penalty (veh) | 0 | 6 | | | 0 | 0 | | 3 | 7 |
| Storage Bay Dist (ft) | | | 100 | 50 | | | 50 | | |
| Storage Blk Time (%) | | 5 | 60 | 0 | 62 | | 37 | 20 | |
| Queuing Penalty (veh) | | 20 | 59 | 4 | 9 | | 259 | 19 | |

## Intersection: 4: 1200 West & Innovation Way/Bull River Road

| Movement | EB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|
| Directions Served | R | R | T | TR | T | TR |
| Maximum Queue (ft) | 42 | 94 | 19 | 34 | 18 | 19 |
| Average Queue (ft) | 14 | 45 | 1 | 2 | 1 | 0 |
| 95th Queue (ft) | 40 | 74 | 15 | 19 | 9 | 6 |
| Link Distance (ft) | 535 | 986 | 157 | 157 | 368 | 368 |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | | | | | | |
| Storage Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |

## Intersection: 5: 1200 West & Aces Athletics North

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 38 | 29 |
| Average Queue (ft) | 12 | 3 |
| 95th Queue (ft) | 37 | 17 |
| Link Distance (ft) | 373 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 6: 1200 West & Aces Athletics South

| Movement | WB | SB |
|---|---|---|
| Directions Served | LR | L |
| Maximum Queue (ft) | 42 | 28 |
| Average Queue (ft) | 17 | 2 |
| 95th Queue (ft) | 43 | 15 |
| Link Distance (ft) | 245 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 50 |
| Storage Blk Time (%) | | 0 |
| Queuing Penalty (veh) | | 0 |

## Intersection: 7: 1200 West & 3200 North

| Movement | EB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LTR | LTR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 60 | 177 | 33 | 107 | 137 | 118 | 167 | 180 |
| Average Queue (ft) | 26 | 84 | 5 | 51 | 64 | 47 | 70 | 90 |
| 95th Queue (ft) | 55 | 141 | 23 | 90 | 114 | 90 | 135 | 155 |
| Link Distance (ft) | 1539 | 1128 | | 945 | 945 | | 664 | 664 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | | 100 | | | 100 | | |
| Storage Blk Time (%) | | | | 0 | | 1 | 2 | |
| Queuing Penalty (veh) | | | | 0 | | 2 | 2 | |

## Intersection: 24: 1200 West & East Access

| Movement | EB | NB | NB | NB | SB |
|---|---|---|---|---|---|
| Directions Served | LR | L | T | T | TR |
| Maximum Queue (ft) | 238 | 32 | 12 | 3 | 2 |
| Average Queue (ft) | 94 | 4 | 0 | 0 | 0 |
| 95th Queue (ft) | 186 | 21 | 8 | 3 | 2 |
| Link Distance (ft) | 602 | | 122 | 122 | 142 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | 50 | | | |
| Storage Blk Time (%) | | 0 | | | |
| Queuing Penalty (veh) | | 0 | | | |

## Intersection: 31: 3400 North & Innovation Way

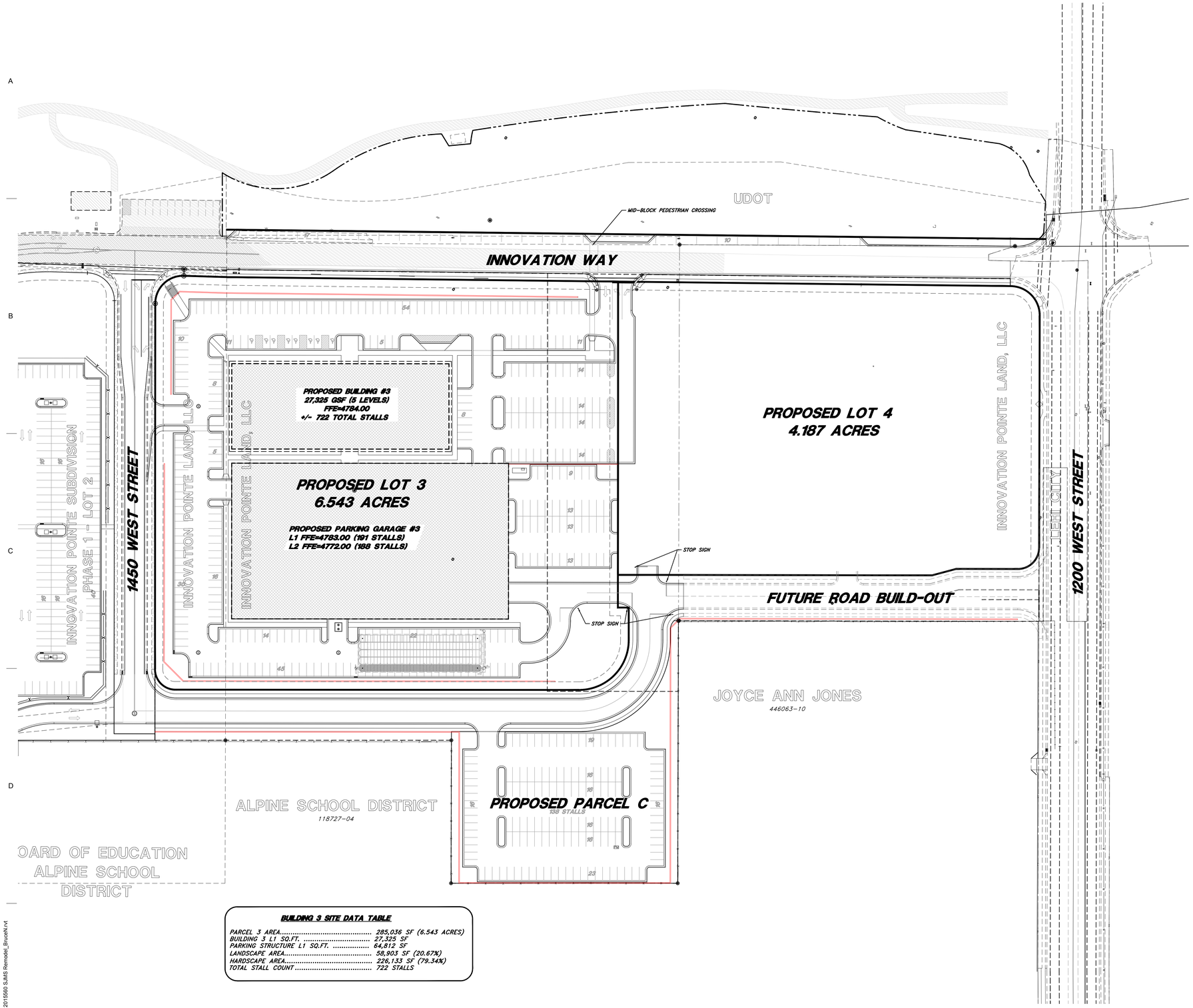
| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 132 |
| Average Queue (ft) | 57 |
| 95th Queue (ft) | 171 |
| Link Distance (ft) | 525 |
| Upstream Blk Time (%) | 1 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 1700

# APPENDIX C

## Site Plan






Scale: 1" = 50'

50 0 25 50 60 70 80 90 100

Graphic Scale

**BUILDING 3 SITE DATA TABLE**

| | |
|---|---|
| PARCEL 3 AREA | 285,036 SF (6.543 ACRES) |
| BUILDING 3 L1 SQ.FT. | 27,325 SF |
| PARKING STRUCTURE L1 SQ.FT. | 64,812 SF |
| LANDSCAPE AREA | 58,903 SF (20.67%) |
| HARDSCAPE AREA | 226,133 SF (79.34%) |
| TOTAL STALL COUNT | 722 STALLS |

**PARCEL C SITE DATA TABLE**

| | |
|---|---|
| PARCEL C AREA | 55,443 SF (1.27 ACRES) |
| LANDSCAPE AREA | 12,516 SF (22.57%) |
| HARDSCAPE AREA | 42,927 SF (77.43%) |
| TOTAL STALL COUNT | 138 STALLS |

*GENERAL SITE NOTES:*

1. *Stalls designated as handicap will require a painted handicap symbol and sign. (See Details)*
2. *Fire lane markings and signs to be installed as directed by the Fire Marshall.*
3. *Aisle markings, directional arrows and stop bars will be painted at each driveway as shown on the plans.*
4. *Building sidewalks, ramps, and bollards are building contractor responsible items. See architectural plans.*
5. *All dimensions are to back of curb unless otherwise noted.*

*ALL CONSTRUCTION TO CONFORM TO LEHI CITY STANDARDS AND SPECIFICATIONS IN RIGHT OF WAY*

MHTN
ARCHITECTS
**MHTN Architects, Inc.**
420 East South Temple
Suite 100
Salt Lake City, Utah 84111
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GREAT BASIN ENGINEERING INC
5746 South 1475 East Suite 200
Ogden, Utah 84403 Main (801)394-4515
S.L.C (801)521-0222 FAX 801-392-7544
WWW.GREATBASINENGINEERING.COM

# INNOVATION POINTE THREE
# INNOVATION POINTE BUILDINGS 3
1633 WEST INNOVATION WAY
LEHI, UT 84043

©2015 MHTN ARCHITECTS, INC.

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SEAL

MHTN PROJECT NO. -
DRAWN BY: RC CHECKED BY: CM

REVISIONS
CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

| NO. | DATE | DESCRIPTION |
|---|---|---|

ISSUE
SCHEMATIC DESIGN
FEBRUARY 12, 2020

SHEET NAME
OVERALL
SITE PLAN
V23-I

Original drawing is 30 x 42. Do not scale contents of this drawing.

SHEET NUMBER
CS100



V:\A16 2015561 ERMS Remodel_BruceN_backup\A16 2015560 SJMS Remodel_BruceN.rvt
1/28/2016 10:56:20 AM

W:\13N905 - Innovation Pointe\DWG\Building 3-S4-F.dwg, 2/12/2020 12:41:39 PM, RebeccaC, 1:1

# APPENDIX D

## 95th Percentile Queue Length Reports

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Existing (2020) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LTR | R | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 263 | -- | 456 | 498 | 297 | 189 | 286 | -- | 375 | -- | 100 | 396 | 564 | -- | -- | 287 | 694 |
| 2: 1200 West & Timpanogos Highway (SR-92) | 220 | 180 | 163 | -- | 302 | 94 | 354 | -- | 72 | -- | 75 | 340 | 315 | -- | -- | 51 | 218 |
| 3: Triumph Boulevard & 3400 North | 44 | -- | -- | 865 | 87 | -- | 59 | 73 | -- | 154 | -- | -- | -- | -- | 930 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 12 | -- | 7 | 12 | 30 | -- | 10 | 11 | -- | 115 | -- | -- | -- | -- | 83 | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 2 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | 31 | -- | -- | -- |
| 7: 1200 West & 3200 North | 21 | -- | 80 | 86 | 60 | -- | 90 | 108 | -- | 56 | -- | -- | -- | -- | 97 | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Existing (2020) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 301 | 308 | 440 | -- | 383 | 178 | 413 | -- | 433 | -- | 70 | 362 | 324 | -- | -- | -- | 65 | 470 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 202 | 188 | 133 | -- | 293 | 88 | 335 | -- | 76 | -- | 85 | 406 | 301 | -- | -- | -- | 52 | 206 | 220 |
| 3: Triumph Boulevard & 3400 North | 15 | -- | 271 | 364 | 98 | -- | 137 | 136 | -- | 134 | -- | -- | -- | -- | 295 | -- | 199 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 14 | -- | 6 | 9 | 29 | -- | 8 | 11 | -- | 115 | -- | -- | -- | -- | -- | 84 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 13 | -- | -- | -- | -- | -- | -- | -- | -- | 31 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | -- | 16 | -- | -- | -- | -- | -- | -- | -- | -- | 30 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 21 | -- | 77 | 80 | 64 | -- | 94 | 111 | -- | 53 | -- | -- | -- | -- | -- | 99 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Existing (2020) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 322 | 323 | 472 | -- | 388 | -- | 264 | 591 | -- | 449 | -- | 70 | 450 | 317 | -- | -- | -- | 84 | 460 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 213 | 213 | 142 | -- | 292 | -- | 86 | 327 | -- | 80 | -- | 85 | 387 | 332 | -- | -- | -- | 55 | 211 | 138 |
| 3: Triumph Boulevard & 3400 North | 14 | -- | 400 | 501 | 124 | -- | -- | 197 | 185 | -- | 135 | -- | -- | -- | -- | 397 | -- | 223 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 16 | -- | 5 | 5 | 32 | -- | -- | 13 | 13 | -- | 160 | -- | -- | -- | -- | -- | 86 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 34 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 4 | 12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 23 | -- | 85 | 87 | 67 | -- | -- | 90 | 104 | -- | 54 | -- | -- | -- | -- | -- | 97 | -- | -- | -- |
| 8: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Future (2025) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 348 | 306 | 486 | -- | 445 | 418 | 955 | -- | 443 | -- | 106 | 442 | 378 | -- | -- | -- | 59 | 449 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 242 | 208 | 197 | -- | 354 | 110 | 355 | -- | 84 | -- | 82 | 327 | 349 | -- | -- | -- | 59 | 232 | 225 |
| 3: Triumph Boulevard & 3400 North | 24 | -- | 774 | 815 | 154 | -- | 284 | 273 | -- | 151 | -- | -- | -- | -- | 751 | -- | 250 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 13 | -- | 20 | 10 | 34 | -- | 13 | 15 | -- | 109 | -- | -- | -- | -- | -- | 92 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 14 | -- | -- | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 5 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 19 | -- | 90 | 91 | 67 | -- | 103 | 121 | -- | 56 | -- | -- | -- | -- | -- | 107 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Future (2025) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 255 | 218 | 438 | -- | 362 | 294 | 759 | -- | 418 | -- | 118 | 393 | 293 | -- | -- | -- | 72 | 426 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 218 | 211 | 168 | -- | 357 | 128 | 455 | -- | 87 | -- | 83 | 349 | 314 | -- | -- | -- | 61 | 238 | 347 |
| 3: Triumph Boulevard & 3400 North | 31 | -- | 310 | 307 | 133 | -- | 215 | 204 | -- | 144 | -- | -- | -- | -- | 425 | -- | 209 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 17 | -- | -- | 8 | 32 | -- | 11 | 16 | -- | 126 | -- | -- | -- | -- | -- | 98 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 11 | -- | -- | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- | -- | 41 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 18 | -- | 81 | 93 | 68 | -- | 108 | 124 | -- | 52 | -- | -- | -- | -- | -- | 111 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Future (2025) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 234 | 214 | 496 | -- | 341 | -- | 358 | 796 | -- | 483 | -- | 128 | 545 | 341 | -- | -- | -- | 70 | 446 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 243 | 214 | 205 | -- | 338 | -- | 100 | 349 | -- | 89 | -- | 80 | 327 | 357 | -- | -- | -- | 60 | 264 | 328 |
| 3: Triumph Boulevard & 3400 North | 46 | -- | 441 | 413 | 157 | -- | -- | 302 | 285 | -- | 151 | -- | -- | -- | -- | 653 | -- | 254 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 20 | -- | 9 | 8 | 33 | -- | -- | 9 | 11 | -- | 151 | -- | -- | -- | -- | -- | 90 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 4 | 14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 20 | -- | 83 | 95 | 63 | -- | -- | 100 | 120 | -- | 57 | -- | -- | -- | -- | -- | 109 | -- | -- | -- |
| 8: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 119 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Future (2025) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 235 | 277 | 491 | -- | 285 | -- | 234 | 205 | -- | 455 | -- | 150 | 476 | 329 | -- | -- | -- | 64 | 460 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 236 | 232 | 198 | -- | 387 | -- | 99 | 453 | -- | 91 | -- | 84 | 327 | 357 | -- | -- | -- | 58 | 232 | 337 |
| 3: Triumph Boulevard & 3400 North | 50 | -- | 649 | 597 | 129 | -- | -- | 219 | 228 | -- | 148 | -- | -- | -- | -- | 536 | -- | 235 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 20 | -- | 12 | 11 | 35 | -- | -- | 9 | 12 | -- | 168 | -- | -- | -- | -- | -- | 98 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | -- | 17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 23 | -- | 84 | 99 | 65 | -- | -- | 102 | 121 | -- | 52 | -- | -- | -- | -- | -- | 115 | -- | -- | -- |
| 8: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 118 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Future (2040) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 239 | 240 | 493 | -- | 367 | 385 | 957 | -- | 388 | -- | 321 | 385 | 490 | -- | -- | -- | 59 | 394 | 6 |
| 2: 1200 West & Timpanogos Highway (SR-92) | 236 | 220 | 208 | -- | 422 | 145 | 590 | -- | 100 | -- | 91 | 280 | 352 | -- | -- | -- | 76 | 225 | 145 |
| 3: Triumph Boulevard & 3400 North | 49 | -- | 675 | 643 | 163 | -- | 354 | 373 | -- | 151 | -- | -- | -- | -- | 832 | -- | 255 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 17 | -- | 12 | 17 | 39 | -- | 14 | 12 | -- | 164 | -- | -- | -- | -- | -- | 95 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 16 | -- | -- | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 2 | 19 | -- | -- | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 24 | -- | 85 | 106 | 71 | -- | 123 | 139 | -- | 55 | -- | -- | -- | -- | -- | 148 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Future (2040) Background**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | EB | | | | WB | | | | | | B2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | R | T | TR | L | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 258 | 288 | 463 | -- | 296 | 168 | 288 | -- | 388 | -- | 340 | 318 | 378 | -- | -- | -- | 44 | 291 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 231 | 236 | 193 | -- | 433 | 415 | 761 | -- | 105 | -- | 93 | 281 | 365 | -- | -- | -- | 77 | 246 | 195 |
| 3: Triumph Boulevard & 3400 North | 45 | -- | 723 | 717 | 142 | -- | 397 | 405 | -- | 148 | -- | -- | -- | -- | 502 | -- | 228 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 17 | -- | 5 | 10 | 38 | -- | 11 | 14 | -- | 126 | -- | -- | -- | -- | -- | 108 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | 0 | 11 | -- | -- | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 4 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 24 | -- | 87 | 109 | 71 | -- | 116 | 134 | -- | 57 | -- | -- | -- | -- | -- | 132 | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Future (2040) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | | WB | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LT | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 228 | 304 | 485 | -- | 258 | -- | 196 | 261 | -- | 387 | -- | -- | 316 | 366 | 338 | -- | -- | -- | 49 | 317 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 256 | 240 | 239 | -- | 435 | -- | 341 | 762 | -- | 104 | -- | -- | 89 | 279 | 386 | -- | -- | -- | 76 | 241 | 196 |
| 3: Triumph Boulevard & 3400 North | 62 | -- | 880 | 884 | 162 | -- | -- | 396 | 405 | -- | -- | 144 | -- | -- | -- | -- | 769 | -- | 246 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | 19 | -- | 12 | 6 | 35 | -- | -- | 11 | 18 | -- | -- | 259 | -- | -- | -- | -- | -- | 108 | -- | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 39 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | 2 | 17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 25 | -- | 93 | 113 | 71 | -- | -- | 127 | 140 | -- | -- | 58 | -- | -- | -- | -- | -- | 137 | -- | -- | -- |
| 8: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 169 | -- | -- | -- | -- | 82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## *SimTraffic Queueing Report*

**Project: Lehi Innovation Pointe TIS**

**Analysis: Mitigated Future (2040) Plus Project**

**Time Period: Evening Peak Hour**

95th Percentile Queue Length (feet)

HALES ENGINEERING
innovative transportation solutions

**Project #: UT16-902**

| Intersection | NB | | | | SB | | | | | EB | | | | | WB | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | TR | L | LR | R | T | TR | L | LR | LTR | R | T | L | LR | LT | LTR | R | T | T |
| 1: Triumph Boulevard & Timpanogos Highway (SR-92) | 223 | 296 | 486 | -- | 263 | -- | 192 | 258 | -- | 384 | -- | -- | 293 | 362 | 334 | -- | -- | -- | 57 | 316 | -- |
| 2: 1200 West & Timpanogos Highway (SR-92) | 267 | 250 | 241 | -- | 433 | -- | 135 | 673 | -- | 101 | -- | -- | 84 | 291 | 358 | -- | -- | -- | 71 | 242 | 158 |
| 3: Triumph Boulevard & 3400 North | 66 | -- | 880 | 865 | 159 | -- | -- | 382 | 397 | -- | -- | 149 | -- | -- | -- | -- | 721 | -- | 249 | -- | -- |
| 4: 1200 West & Innovation Way/Bull River Road | -- | -- | 15 | 19 | -- | -- | -- | 9 | 6 | -- | -- | -- | 40 | -- | -- | -- | -- | -- | 74 | -- | -- |
| 5: 1200 West & Aces Athletics North | -- | -- | -- | -- | 17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- | -- |
| 6: 1200 West & Aces Athletics South | -- | -- | -- | -- | 15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- | -- |
| 7: 1200 West & 3200 North | 23 | -- | 90 | 114 | 90 | -- | -- | 135 | 155 | -- | -- | 55 | -- | -- | -- | -- | -- | 141 | -- | -- | -- |
| 8: 1200 West & East Access | 21 | -- | 6 | -- | -- | -- | -- | -- | 2 | -- | 186 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9: 3400 North & Innovation Way | -- | -- | -- | -- | -- | 171 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |