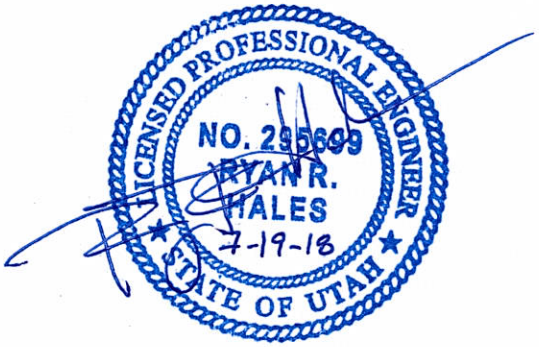

MEMORANDUM

Date: July 19, 2018

To: Terry Diehl

From: Hales Engineering

Subject: South Salt Lake – Riverfront Mixed Use District Trip Generation Study
UT17-1068

Purpose

This memorandum discusses the trip generation study completed for the land use changes to the proposed Riverfront Master Planned Mixed Use District in South Salt Lake, Utah. A vicinity map of the proposed development is shown in Figure 1.

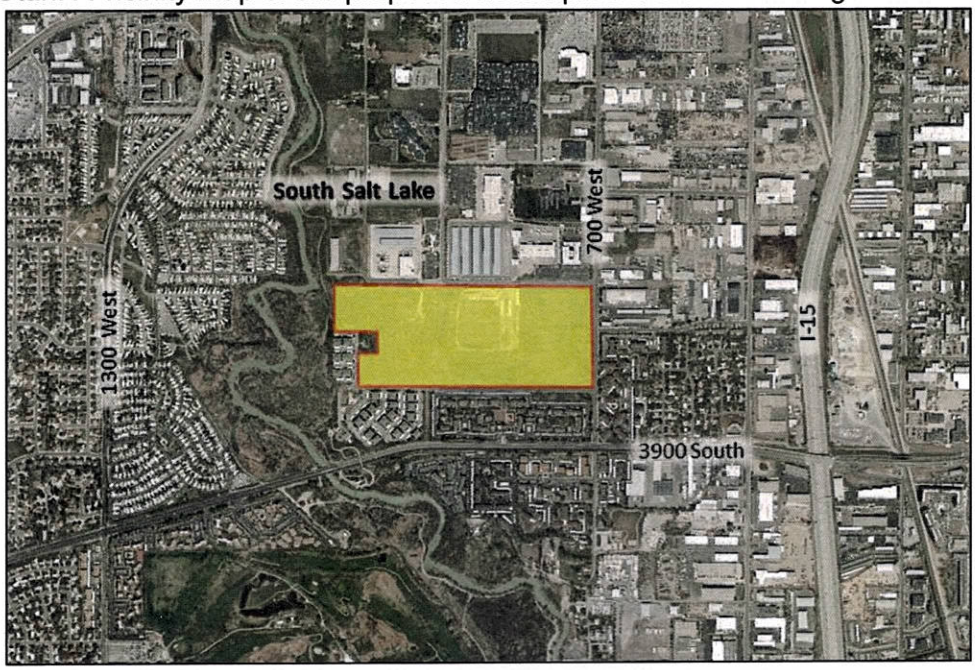

Figure 1 Vicinity map of the proposed development in South Salt Lake, Utah

Background

An updated traffic impact study was completed in June 2017 by Hales Engineering for a project called the Riverfront Master Planned Mixed Use District. This development is north of 3900 South and west of 700 West. Since the June update, a proposed land use change has been presented which would eliminate the 77 single family homes (55 units would still be constructed with this proposal), and 173 townhomes would be constructed on-site.

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

- Single-family Detached Housing 55 units
- Residential Townhouses 173 units
- Apartment 288 units
- General Light Industrial (Flex Office Space) 286,000 sq. ft.
- Elementary School 900 Students

Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation (9th Edition, 2012)*. Trip generation for the newly proposed land use is included in Table 1 (November 2017).

Table 1
South Salt Lake - Riverfront Master Planned Mixed Use District TIS
Trip Generation

Weekday Daily Land Use[1]	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Transit Reduction	Net Trips Entering	Net Trips Exiting	Total Daily Trips
Apartment (220)	288	Dwelling Units	1,869	50%	50%	934	934	5%	888	888	**1,775**
General Light Industrial (110)	286	1,000 Sq. Ft. GFA	2,035	50%	50%	1,017	1,017	5%	966	966	**1,933**
Elementary School (520)	900	Students	1,161	50%	50%	581	581	0%	581	581	**1,161**
Residential Condominium/Townhouse (230)	173	Dwelling Units	1,036	50%	50%	518	518	0%	518	518	**1,036**
Single-Family Detached Housing (210)	55	Dwelling Units	606	50%	50%	303	303	0%	303	303	**606**
Project Total Daily Trips						**3,353**	**3,353**		**3,256**	**3,256**	**6,511**
A.M. Peak Hour Land Use[1]	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Transit Reduction	Net Trips Entering	Net Trips Exiting	Total a.m. Trips
Apartment (220)	288	Dwelling Units	145	20%	80%	29	116	5%	28	110	**138**
General Light Industrial (110)	286	1,000 Sq. Ft. GFA	248	88%	12%	218	30	5%	207	28	**236**
Elementary School (520)	900	Students	405	55%	45%	223	182	0%	223	182	**405**
Residential Condominium/Townhouse (230)	173	Dwelling Units	80	17%	83%	14	66	0%	14	66	**80**
Single-Family Detached Housing (210)	55	Dwelling Units	48	25%	75%	12	36	0%	12	36	**48**
Project Total a.m. Peak Hour Trips						**496**	**431**		**483**	**423**	**907**
P.M. Peak Hour Land Use[1]	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Transit Reduction	Net Trips Entering	Net Trips Exiting	Total p.m. Trips
Apartment (220)	288	Dwelling Units	176	65%	35%	114	62	5%	109	59	**167**
General Light Industrial (110)	286	1,000 Sq. Ft. GFA	252	12%	88%	30	221	5%	29	210	**239**
Elementary School (520)	900	Students	135	49%	51%	66	69	0%	66	69	**135**
Residential Condominium/Townhouse (230)	173	Dwelling Units	94	67%	33%	63	31	0%	63	31	**94**
Single-Family Detached Housing (210)	55	Dwelling Units	61	63%	37%	39	23	0%	39	23	**61**
Project Total p.m. Peak Hour Trips						**313**	**406**		**305**	**392**	**697**

1. Land Use Code from the Institute of Transportation Engineers - 9th Edition Trip Generation Manual (ITE Manual)

SOURCE: Hales Engineering, July 2018

As shown in Table 1, it is anticipated that the proposed residential unit changes (reducing the 132 single family homes to 55 homes and increasing the townhomes to 173 units) will

generate approximately 6,511 trips on an average weekday, including 907 trips during the morning peak hour, and 697 trips during the evening peak hour.

The new land use is anticipated to generate 354 more daily trips, and 32 more during the morning, and 28 more during the evening peak hour. It is anticipated that the additional trips generated will only slightly increase the delay and queuing for the project; however, the change is not drastic enough to change the required mitigations or their timing.

Table 2
South Salt Lake - Riverfront Master Planned Mixed Use District TIS
Trip Generation

Weekday Daily Land Use[1]	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Transit Reduction	Net Trips Entering	Net Trips Exiting	**Total Daily Trips**
Single-Family Detached Housing (210)	132	Dwelling Units	1,356	50%	50%	678	678	5%	644	644	**1,288**
Apartment (220)	288	Dwelling Units	1,869	50%	50%	934	934	5%	888	888	**1,775**
General Light Industrial (110)	286	1,000 Sq. Ft. GFA	2,035	50%	50%	1,017	1,017	5%	966	966	**1,933**
Elementary School (520)	900	Students	1,161	50%	50%	581	581	0%	581	581	**1,161**
Project Total Daily Trips						**3,210**	**3,210**		**3,079**	**3,079**	**6,157**
A.M. Peak Hour Land Use[1]	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Transit Reduction	Net Trips Entering	Net Trips Exiting	**Total a.m. Trips**
Single-Family Detached Housing (210)	132	Dwelling Units	102	25%	75%	26	77	5%	24	73	**97**
Apartment (220)	288	Dwelling Units	145	20%	80%	29	116	5%	28	110	**138**
General Light Industrial (110)	286	1,000 Sq. Ft. GFA	248	88%	12%	218	30	5%	207	28	**236**
Elementary School (520)	900	Students	405	55%	45%	223	182	0%	223	182	**405**
Project Total a.m. Peak Hour Trips						**496**	**405**		**482**	**393**	**875**
P.M. Peak Hour Land Use[1]	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Transit Reduction	Net Trips Entering	Net Trips Exiting	**Total p.m. Trips**
Single-Family Detached Housing (210)	132	Dwelling Units	135	63%	37%	85	50	5%	81	47	**128**
Apartment (220)	288	Dwelling Units	176	65%	35%	114	62	5%	109	59	**167**
General Light Industrial (110)	286	1,000 Sq. Ft. GFA	252	12%	88%	30	221	5%	29	210	**239**
Elementary School (520)	900	Students	135	49%	51%	66	69	0%	66	69	**135**
Project Total p.m. Peak Hour Trips						**296**	**402**		**284**	**385**	**669**

1. Land Use Code from the Institute of Transportation Engineers - 9th Edition Trip Generation Manual (ITE Manual)

SOURCE: Hales Engineering, June 2017

Based on the findings of this study, the previously completed TIS for the Riverfront Master Planned Mixed Use District is anticipated to be an adequate representation for the project and a full TIS update is likely not required as the intersection LOS and recommendations will not change.

Conclusions

The findings of this study are as follows:

- The Riverfront Master Planned Mixed Use District TIS will have 354 more daily trips than the previous land uses planned on-site (June 2017).
- The project is anticipated to generate approximately 32 more trips in the morning and 28 more trips in the evening peak hours of the day.
- A full TIS update would likely not be required for this development, as the overall trips increase slightly and will not likely affect the various intersection LOS.
- The required mitigation measures from the June 2017 study are still recommended and in the timelines identified in that study.

If you have any questions regarding this trip generation study, feel free to contact us at 801-766-4343.