

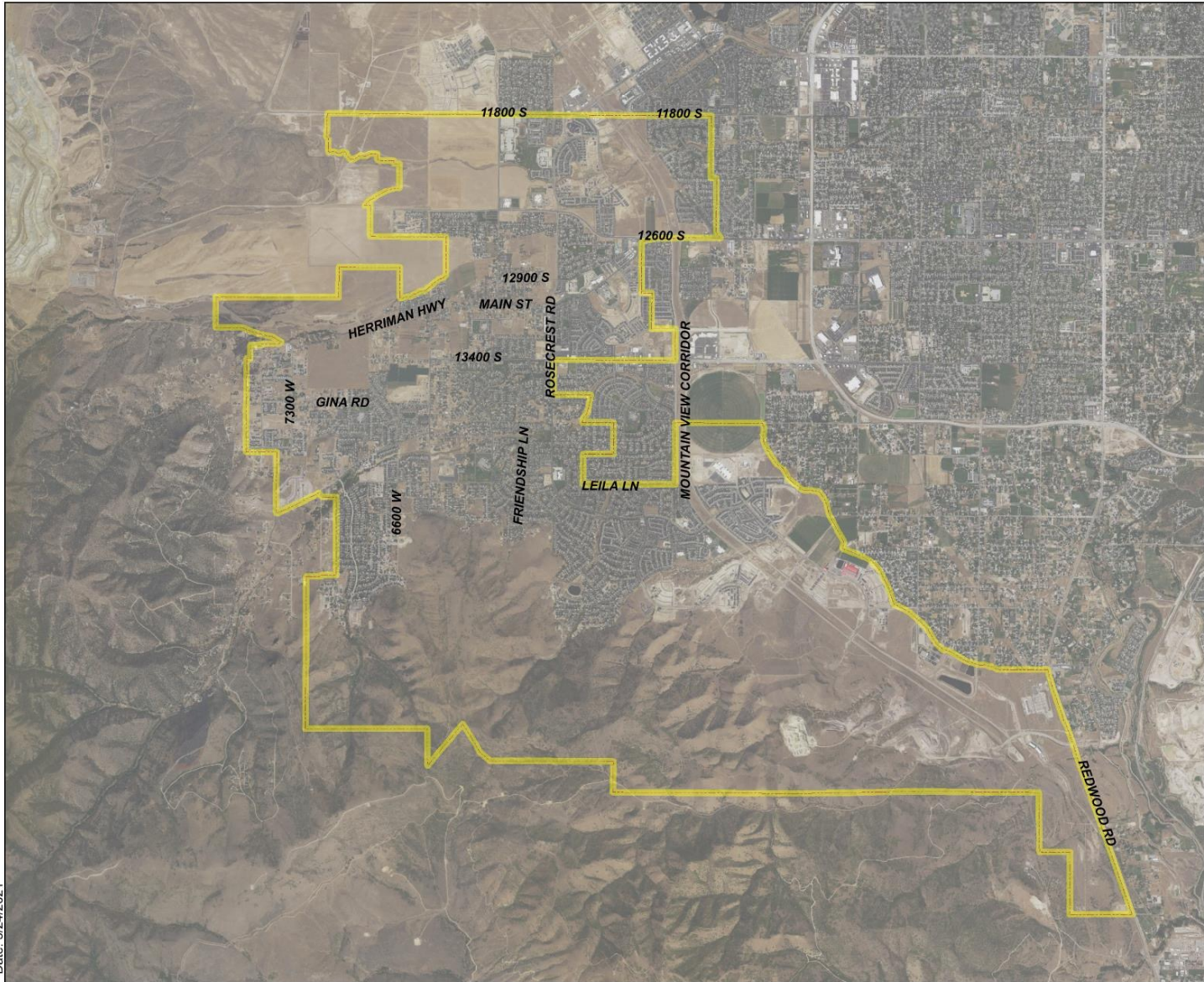


Olympia Hills Transportation Impacts Discussion

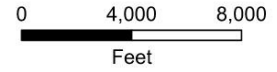
City Council Meeting
March 24, 2021



VICINITY MAP



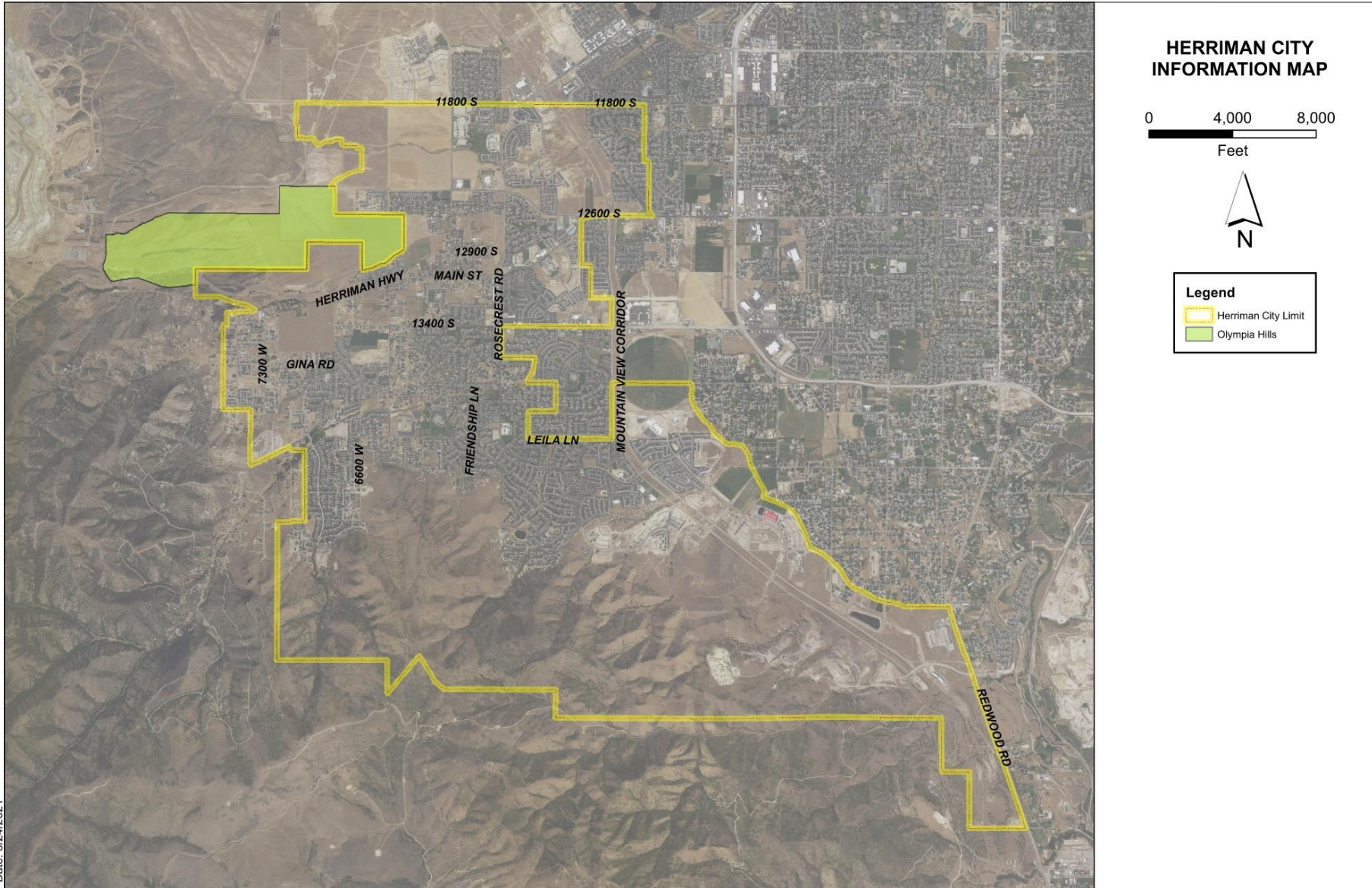
HERRIMAN CITY INFORMATION MAP



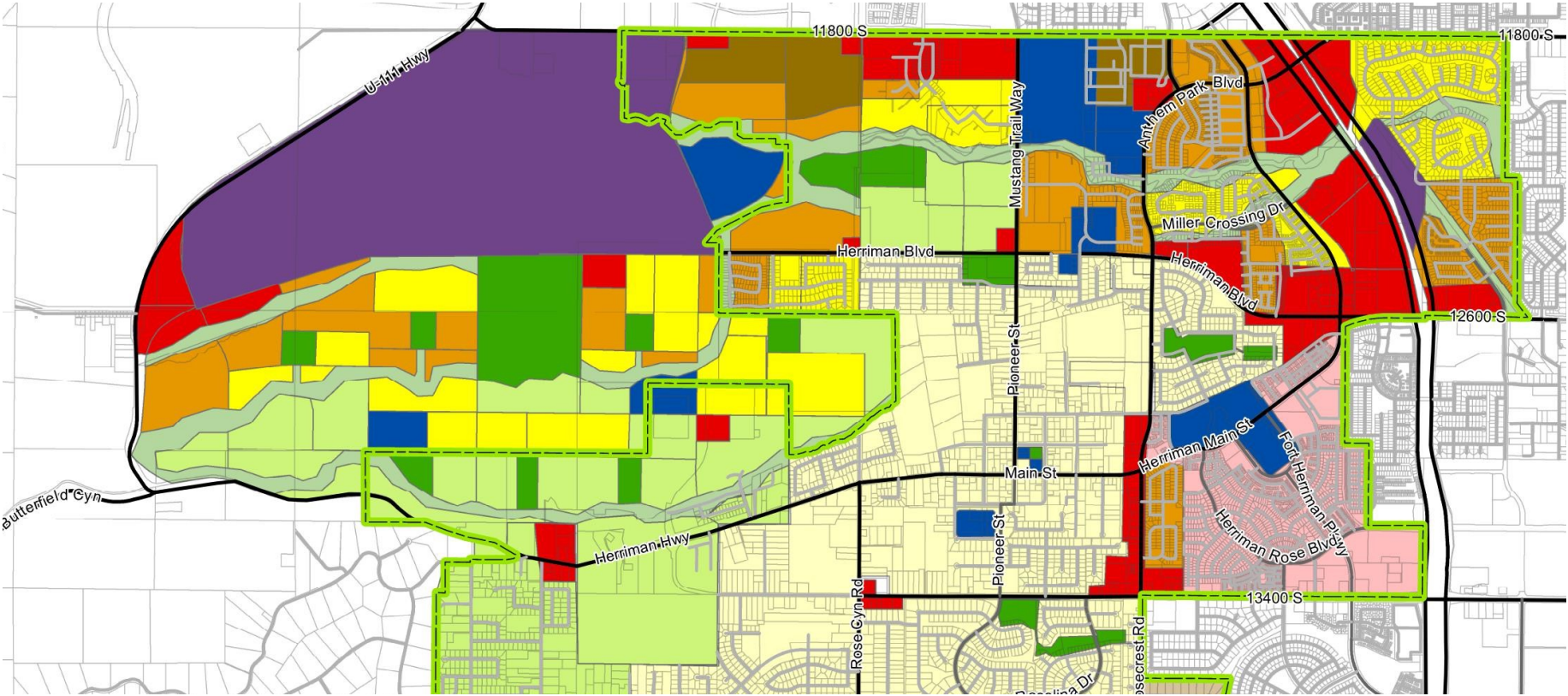
Legend

-  Herriman City Limit

VICINITY MAP



TRAFFIC MODEL BASIS CURRENT-ADOPTED GENERAL PLAN

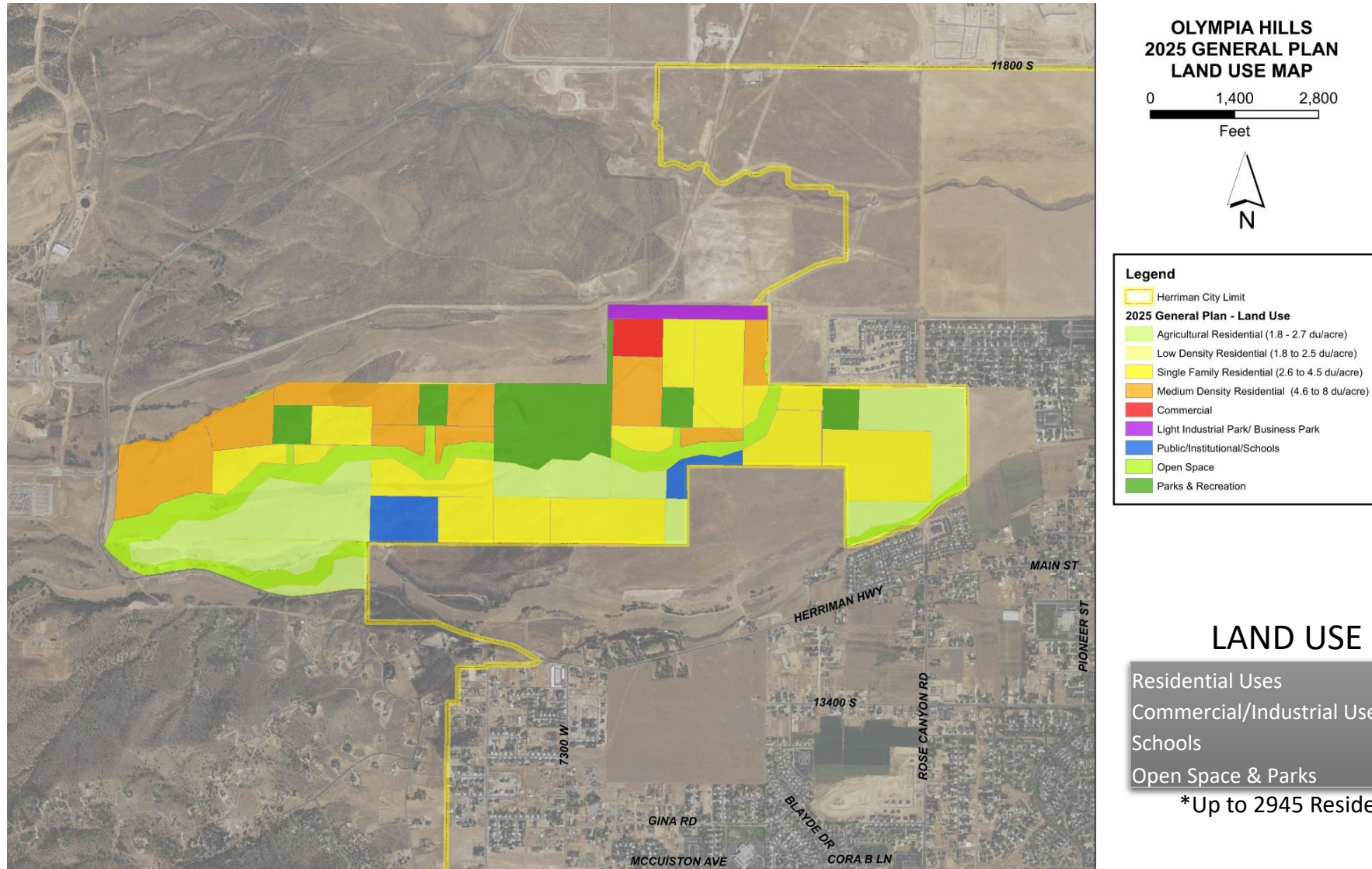


HERRIMAN CITY GENERAL PLAN

Land Use 2025

- Hillside/ Rural Residential (0.5 - 1.7 du/acre)
- Agricultural Residential (1.8 - 3.0 du/acre)
- Low Density Residential (1.8 - 2.5 du/acre)
- Single Family Residential (2.6 - 4.5 du/acre)
- Medium Density Residential (4.6 - 8 du/acre)
- High Density Residential (8 - 20 du/acre)
- Mixed Use
- Mixed Use - Towne Center
- Commercial
- Light Industrial Park/ Business Park
- Public/ Institutional/ Cultural/ Schools
- Military Operational
- Quasi-Public/Utilities
- Resort/ Recreational
- Open Space
- Parks and Recreation
- Herriman City Limit

ANTICIPATED LAND USE FOR OLYMPIA HILLS – 2025 GENERAL PLAN

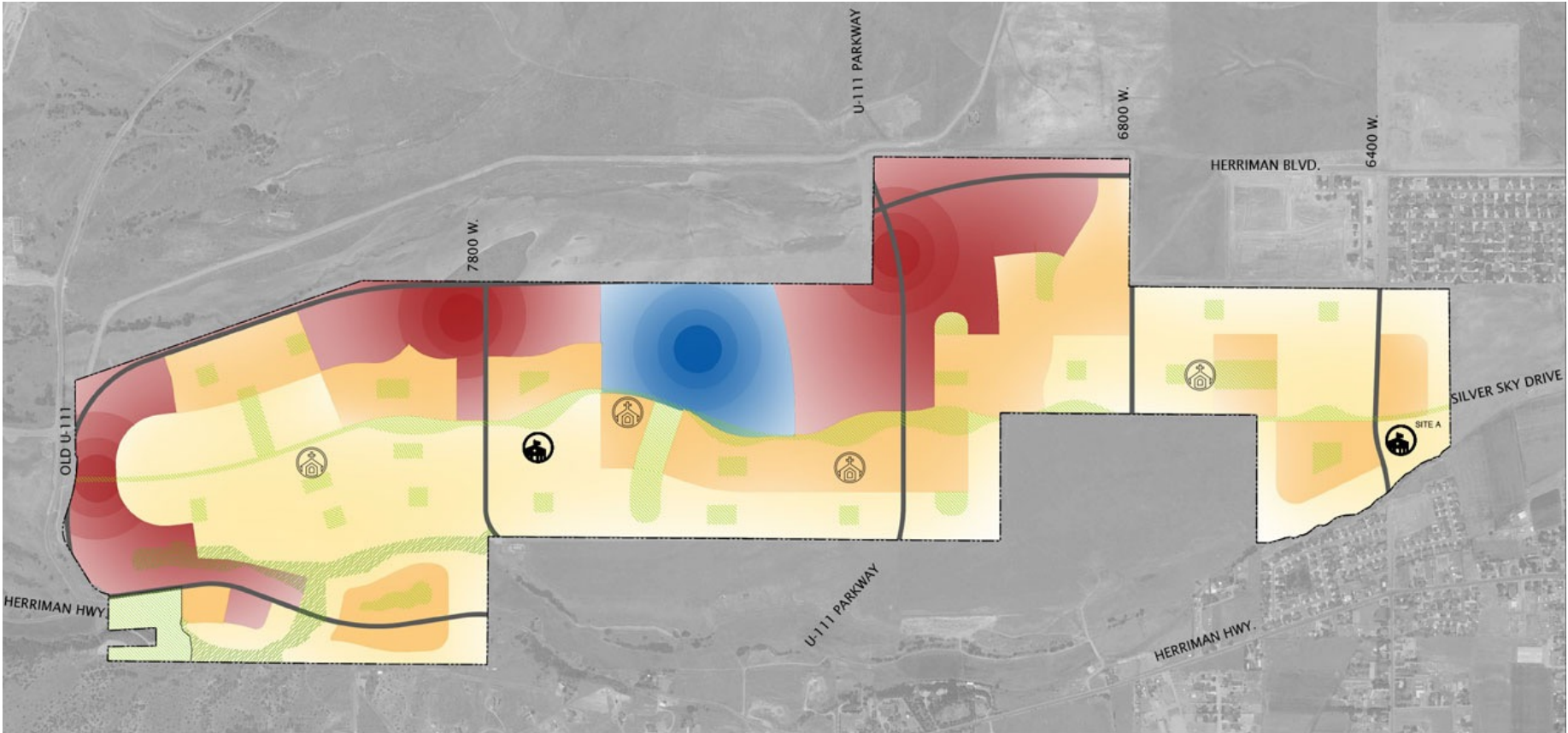


LAND USE SUMMARY

Residential Uses	615.71	acres
Commercial/Industrial Uses	26.28	acres
Schools	27.57	acres
Open Space & Parks	200.10	acres

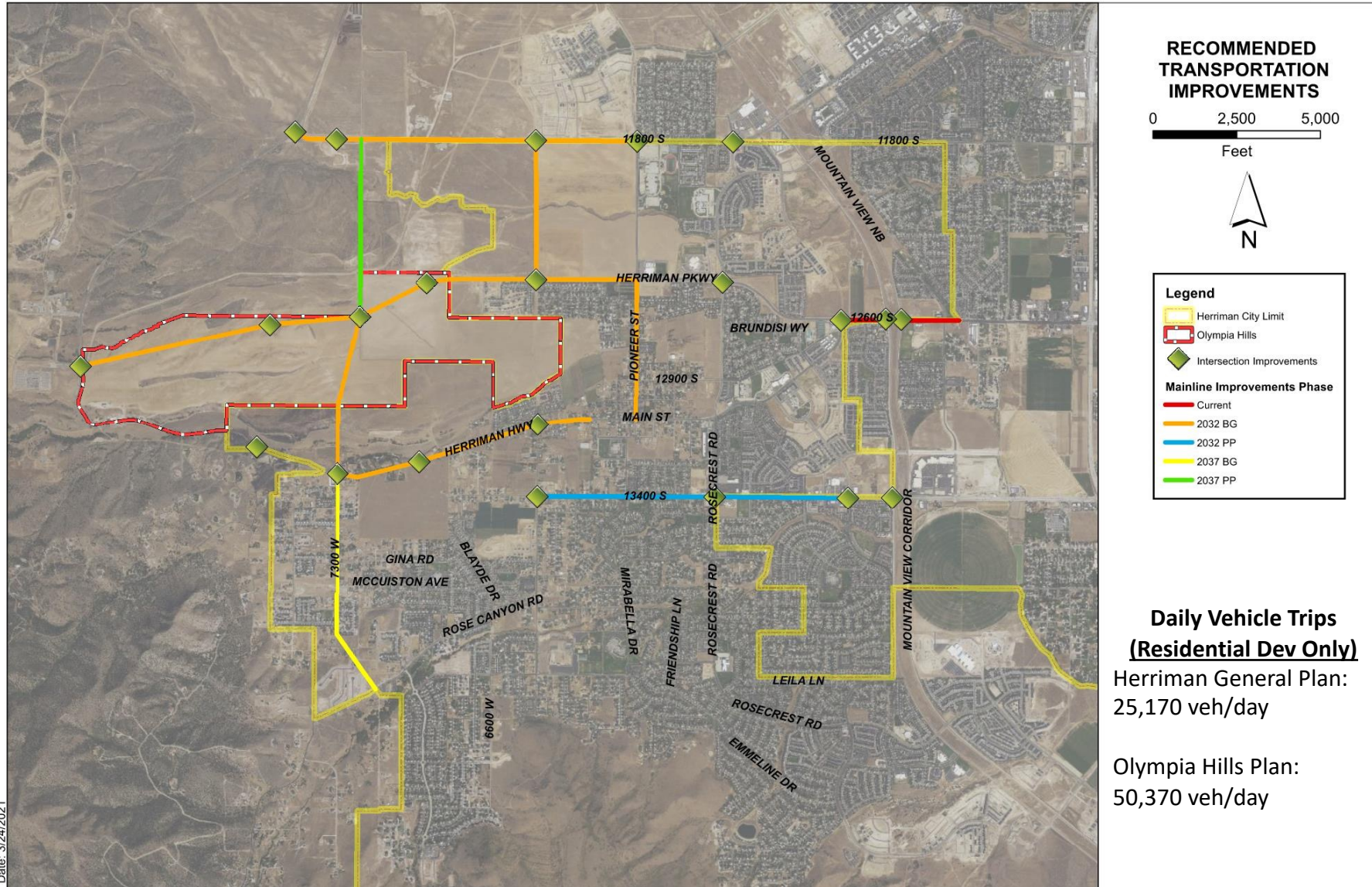
*Up to 2945 Residential Units

APPROVED PLAN FOR OLYMPIA HILLS SALT LAKE COUNTY



Salt Lake County Approved Up To 6330 Residential Units

MITIGATION PROJECTS TO ADDRESS IMPACTS



CONCERNS

- Project funding
 - Construction of new roads
 - Cost for mitigation projects
 - Maintenance Costs
 - Accelerated maintenance needs

- Control
 - Awareness of upcoming development
 - Proactive vs. Reactive approach to improvements
 - Population using the infrastructure generates revenue to fund long-term costs

- Regional Traffic Impacts
 - U-111/Bacchus Hwy/12600 South
 - Jurisdictional transfer to UDOT

Asphalt Treatments						
<u>Life Cycle Year</u>	<u>Treatment</u>	<u>Current Unit Cost (sf)</u>	<u>Inflation Adjusted</u>	<u>Project Cost</u>		
2	Fog Seal/GSB-88	\$ 0.16	\$ 0.17	\$ 10,650.82		
6	Crack Seal	\$ 0.05	\$ 0.06	\$ 3,673.91		
6	Slurry	\$ 0.15	\$ 0.17	\$ 11,021.73		
11	Crack Seal	\$ 0.01	\$ 0.01	\$ 831.34		
11	Microsurface	\$ 0.42	\$ 0.55	\$ 34,916.20		
16	Crack Seal	\$ 0.03	\$ 0.04	\$ 2,821.75		
16	Chip Seal	\$ 0.38	\$ 0.56	\$ 35,742.14		
21	GSB-88	\$ 0.16	\$ 0.27	\$ 17,026.93		
26	Crack Seal	\$ 0.05	\$ 0.10	\$ 6,020.13		
26	Microsurface	\$ 0.42	\$ 0.80	\$ 50,569.07		
31	Slurry Seal	\$ 0.15	\$ 0.32	\$ 20,433.66		
33	Patching	\$ 0.25	\$ 0.56	\$ 35,780.20		
36	Mill & Overlay	\$ 2.75	\$ 6.69	\$ 423,844.95		



STAFF REPORT

DATE: March 18, 2021
TO: The Honorable Mayor and City Council
FROM: Blake Thomas
SUBJECT: Olympia Hills Transportation Impacts Discussion

RECOMMENDATION:

1. Provide feedback to staff regarding priority of transportation infrastructure improvements.
2. Provide direction to staff regarding support letter for jurisdictional transfer of 12600 South.

DISCUSSION: Financial analysis of the transportation impacts Herriman will experience due to the development of Olympia Hills has shown that Herriman will not be able to fund the infrastructure improvements needed to maintain an acceptable level of service. The existing road network's capacity is generally not currently used to full capacity but as development of land occurs the excess capacity will be used up and eventually exceeded. Once the capacity is exceeded, it is recommended that mitigation measures be implemented to increase the capacity. Mitigation measures can include any of the following: Providing new road connections, increase efficiency of intersections by adding traffic signals, and add new lanes to existing roads.

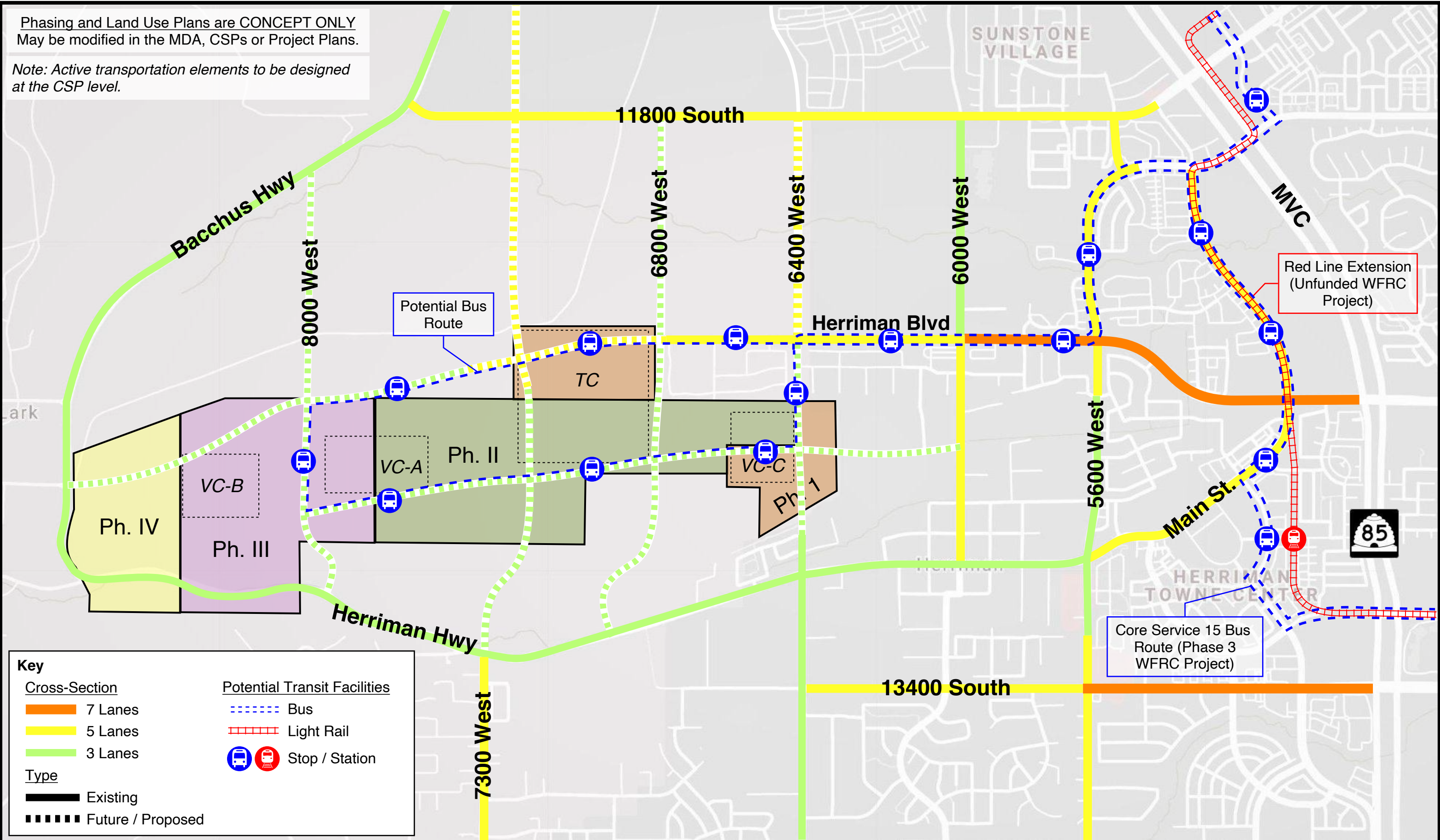
All improvements have a cost associated with them. Staff has been tasked to explore alternative funding opportunities for needed road improvements. There are several options available to fund the improvements. Impact fees have been the main funding source used by Herriman for these types of improvements but limitations arise when there are existing deficiencies in the infrastructure where impact fees can only be used for the portion of cost of the improvement associated necessitated by new growth. Other funding sources include general fund revenue, monies allocated for road improvements and provided to Herriman by the legislature, and grants from UDOT or Wasatch Front Regional Council. One other opportunity is to coordinate with UDOT and our State legislators to transfer ownership and responsibility from Herriman to UDOT of certain roadways.

ALTERNATIVES: None

FISCAL IMPACT: A preliminary fiscal analysis was provided in a previous meeting by the finance director.

Phasing and Land Use Plans are CONCEPT ONLY
 May be modified in the MDA, CSPs or Project Plans.

Note: Active transportation elements to be designed
 at the CSP level.



Intersection		Level of Service Results - Salt Lake County Olympia Hills TIS																												Intersection #																						
		Existing (2019)				Future (2022)				Future (2027)								Future (2032)								Future (2037)								Future (2042)																		
		Background		Background		Background				Plus Project				Background				Plus Project				Background				Plus Project					Background				Plus Project																	
		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM			AM		PM		AM		PM															
O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M	O	M													
1	Bacchus Hwy / 11800 S	a	-	a	-	a	-	c	-	f	D	f	D	D	-	D	-	D	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	1														
2	7300 W / 11800 S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	b	-	c	-	f	B	f	B	e	B	f	C	C	-	F	C	B	-	D	-	C	-	E	D	2								
3	6400 W / 11800 S	-	-	-	-	-	-	-	-	-	-	-	-	b	-	b	-	f	B	f	C	C	-	D	-	B	-	D	-	C	-	E	D	C	-	E	D	C	-	F	D	3										
4	6000 W / 11800 S	B	-	B	-	B	-	B	-	E	C	E	C	C	-	D	-	B	-	A	-	B	-	B	-	B	-	B	-	B	-	B	-	B	-	B	-	B	-	B	-	B	-	4								
5	Freedom Park Dr / 11800 S	B	-	B	-	B	-	C	-	D	-	D	-	C	-	D	-	B	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	5								
6	8000 W / Bacchus Hwy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	a	-	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	c	-	f	C	6						
7	Bingham Canyon / Bacchus Hwy	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	b	-	a	-	b	-	a	-	a	-	a	-	a	-	a	-	7								
8	6400 W / Herriman Blvd	-	-	-	-	-	-	-	-	-	-	-	-	a	-	b	-	d	-	c	-	C	-	D	-	f	B	f	B	C	-	D	-	B	-	B	-	C	-	D	-	D	-	8								
9	6000 W / Herriman Blvd	B	-	A	-	A	-	A	-	A	-	A	-	B	-	B	-	B	-	A	-	B	-	B	-	B	-	B	-	C	-	B	-	B	-	B	-	B	-	D	-	C	-	9								
10	Anthem Park Blvd / Herriman Blvd	C	-	B	-	B	-	B	-	C	-	B	-	E	D	C	-	D	-	B	-	E	D	D	-	E	D	C	-	D	-	D	-	E	D	C	-	F	D	E	D	10										
11	Main St / Herriman Blvd	C	-	A	-	E	C	D	-	E	C	D	-	D	-	D	-	D	-	C	-	F	D	E	C	C	-	D	-	D	-	C	-	E	C	E	C	E	D	D	-	11										
12	SB MVC / 12600 S	C	-	C	-	E	D	E	C	E	D	E	D	E	D	E	C	E	-	F	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	12						
13	NB MVC / 12600 S	C	-	C	-	C	-	C	-	D	-	D	-	D	-	F	C	D	-	F	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	13						
14	Bangerter Hwy / 12600 S	D	-	F	C	C	-	E	D	C	-	D	-	C	-	F	D	C	-	C	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	14						
15	Silver Sky Dr / 6000 W	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	15						
16	Butterfield Cnyn / Herriman Hwy	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	a	-	16						
17	8000 W / Herriman Hwy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	c	-	f	C	17			
18	7300 W / Herriman Hwy	a	-	a	-	a	-	a	-	a	-	a	-	a	-	b	-	b	-	b	-	c	-	d	-	f	B	f	C	D	-	E	D	C	-	C	-	F	C	F	C	18										
19	6800 W / Herriman Hwy	-	-	-	-	-	-	-	-	-	-	-	-	a	-	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C	-	C	-	19		
20	6400 W / Main St	b	-	c	-	c	-	c	-	d	-	f	B	C	-	F	C	C	-	C	-	C	-	C	-	F	D	C	-	C	-	C	-	F	D	C	-	F	C	D	-	E	D	20								
21	5600 W / Main St	B	-	C	-	B	-	B	-	B	-	C	-	B	-	C	-	B	-	B	-	D	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	C	-	21						
22	6400 W / 13400 S	B	-	B	-	B	-	D	-	B	-	F	B	B	-	B	-	B	-	C	-	E	D	D	-	C	-	C	-	C	-	E	C	C	-	F	C	C	-	D	-	D	-	22								
23	5600 W / 13400 S	C	-	D	-	C	-	D	-	C	-	F	D	C	-	E	D	D	-	D	-	D	-	F	D	D	-	F	D	C	-	D	-	C	-	D	-	C	-	E	D	23										
24	5000 W / 13400 S	C	-	C	-	C	-	B	-	D	-	C	-	C	-	C	-	F	C	C	-	D	-	E	C	D	-	D	-	C	-	C	-	D	-	D	-	C	-	D	-	D	-	24								
25	SB MVC / 13400 S	E	D	D	-	D	-	D	-	E	C	D	-	C	-	C	-	F	-	D	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	25				
26	NB MVC / 13400 S	E	C	D	-	D	-	E	D	E	B	E	-	B	-	D	-	F	-	F	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	n/a	-	26				
27	8000 W / Herriman Blvd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	c	-	f	C	27		
28	7300 W / Herriman Blvd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	a	-	c	-	f	B	f	D	b	-	f	D	C	-	F	D	C	-	f	C	C	-	F	C	28										
29	6800 W / Herriman Blvd	-	-	-	-	-	-	-	-	-	-	-	-	a	-	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	D	-	D	-	29	
30	Silver Sky Dr / 6400 W	-	-	-	-	-	-	-	-	-	-	-	-	a	-	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	d	-	d	-	30

Lowercase LOS = Unsignalized Intersection
Uppercase LOS = Signalized Intersection

O = Original Analysis
M = Mitigated Analysis

Notes:
- LOS A, B, C, and D are acceptable levels of service
- LOS E and F are unacceptable levels of service

Intersection	Recommended Improvements										
	2019	2022	2027		2032		2037		2042		
	BG	BG	BG	PP	BG	PP	BG	PP	BG	PP	
1	Bacchus Hwy / 11800 S			1.1		1.2					
2	7300 W / 11800 S						2.1	2.2	2.3	2.4	
3	6400 W / 11800 S					3.1	3.2	3.3	3.4	3.5	3.6
4	6000 W / 11800 S			4.1							
5	Freedom Park Dr / 11800 S				5.1						
6	8000 W / Bacchus Hwy									6.1	
8	6400 W / Herriman Blvd					8.1	8.2	8.3			
10	Anthem Park Blvd / Herriman Blvd			10.1		10.2	10.3		10.4	10.5	
11	Main St / Herriman Blvd		11.1	11.2	11.3		11.4		11.5	11.6	
12	SB MVC / 12600 S		S.4	12.1	12.2	12.3					
13	NB MVC / 12600 S				13.1	13.2					
14	Bangerter Hwy / 12600 S	14.1	14.2	13.1							
17	8000 W / Herriman Hwy									17.1	
18	7300 W / Herriman Hwy					18.1	18.2	20.4		18.3	
19	6800 W / Herriman Hwy					19.1					
20	6400 W / Main St			20.1	20.2	20.3		20.4	20.5	20.6	
22	6400 W / 13400 S			22.1		22.2		22.3	22.4		
23	5600 W / 13400 S			23.1	23.2		23.3	23.4		23.5	
24	5000 W / 13400 S					25.2	24.1				
25	SB MVC / 13400 S	S.6		25.1	25.2						
26	NB MVC / 13400 S	S.6	S.7	26.1	S.18						
27	8000 W / Herriman Blvd									27.1	
28	7300 W / Herriman Blvd					28.1	28.2	28.3	28.4	28.5	
29	6800 W / Herriman Blvd					29.1					
-	11800 South				S.1						
-	Herriman Boulevard				S.2					S.3	
-	12600 South		S.4								
-	Herriman Highway				S.5						
-	13400 South	S.6	S.7			S.8	S.9				
-	7300 West				S.10		S.11	S.12	S.13		
-	6400 West				S.14					S.15	
-	6000 West				S.16						
-	MVC			S.17	S.18	S.18					

Key: BG=Background, PP=Plus Project

Improvement List			
#	Description	#	Description
1.1	Signal, Turn Pockets on All Approaches, Dual SB LT Lanes	20.3	Add RT Pockets on All Approaches, NB & SB PM/PT LT Phasing, EB RT Overlap Phase
1.2	NB RT Lane	20.4	PM/PT LT Phasing on All Approaches
2.1	Signal, Turn Pockets on All Approaches	20.5	EB & WB RT Lanes
2.2	Signal, Turn Pockets on All Approaches	20.6	NB Dual LT Lanes, EB Channelized RT Lane
2.3	PM/PT LT Phasing on All Approaches	22.1	SB & EB LT/T/RT Lanes
2.4	NB & WB Dual Left Turn Lanes	22.2	SB & WB Dual LT Lanes, WB RT Overlap Phase
3.1	Signal, Turn Pockets on All Approaches, EB & WB PM/PT LT Phasing	22.3	WB Dual LT Lanes
3.2	EB & WB RT Lanes, NB PM/PT LT Phasing	22.4	Extend SB LT Lane, WB Dual LT Lanes
3.3	EB Dual LT Lanes, NB & SB PM/PT LT Phasing	23.1	SB & WB Dual LT Lanes, Add SB Thru Lane
3.4	PM/PT LT Phasing on All Approaches, NB Dual LT Lanes	23.2	Extend Turn Lanes on All Approaches, Add WB RT Overlap Phase, Convert NB RT Lane to Shared T/RT Lane
3.5	EB & WB RT Lanes	23.3	Add RT Lanes on All Approaches
3.6	Add SB Thru Lane, Convert NB RT Lane to Shared T/RT Lane, SB RT Overlap Phase	23.4	Extend All Turn Lanes, SB & EB RT Lanes, 2 Thru Lanes on All Approaches
4.1	WB PM/PT LT Phasing, Extend WB LT Storage	23.5	EB Dual LT Lanes, Convert EB RT Lane to Shared T/RT Lane
5.1	WB Dual LT Lanes	24.1	Add WB RT Lane
6.1	Signal, Turn Pockets on All Approaches	25.1	Freeway Grade- Separated Interchange
8.1	Signal, Turn Pockets on All Approaches, EB & WB PM/PT LT Phasing	25.2	Channelized EB/WB RT Lanes, Extend 3 EB Lanes to 5000 W
8.2	Signal, Turn Pockets on All Approaches	26.1	Freeway Grade- Separated Interchange, Northbound Free RT Lane
8.3	PM/PT LT Phasing on All Approaches	27.1	Signal, Turn Pockets on All Approaches
10.1	WB RT Pocket, Extend LT Lanes on All Approaches	28.1	Signal, Turn Pockets on All Approaches
10.2	Convert NB RT to Shared T/RT	28.2	Signal, Turn Pockets on All Approaches
10.3	EB Dual LT Lanes	28.3	PM/PT LT Phasing on All Approaches
10.4	EB & WB RT Lanes	28.4	RT Lanes on All Approaches, PM/PT LT Phasing on All Approaches
10.5	NB & WB Dual LT Lanes, Extend NB LT Lane, Convert NB & SB RT Lanes to Shared T/RT Lanes	28.5	SB EB & WB Dual LT Lanes, WB Channelized RT Lane, Add NB/SB Thru Lanes, Convert EB RT Lane to Share Thru/RT Lane
11.1	NB Channelized RT Lane	29.1	Signal, Turn Pockets on All Approaches, EB PM/PT LT Phasing
11.2	SB Dual LT Lanes	S.1	11800 South: 5-Lane Cross Section Bacchus to 6000 West
11.3	WB Dual LT Lanes	S.2	Herriman Boulevard: 5-Lane Cross Section 6000 West to 6800 West, New 3-Lane Cross Section 6800 West to Bacchus
11.4	Additional NB Thru lane, Convert EB RT to Shared T/RT	S.3	Herriman Boulevard: 7-Lane Cross Section Main to 6000 West, 5-Lane Cross Section 6800 West to 7300 West
11.5	2 NB Thru Lanes, WB Dual LT Lanes, Lengthen SB LT Lanes	S.4	12600 South: Additional Lane Each Direction Main to BH, Three EB Lanes through BH Interchange, WB Lane Trap Right at BH Interchange
11.6	EB RT Lane, Add WB Thru Lane	S.5	Herriman Highway: 3-Lane Cross Section 6200 West to 7300 West
12.1	SB & WB Dual LT Lanes	S.6	13400 South: Extend Three EB Thru Lanes West Through MVC
12.2	Freeway Grade- Separated Interchange	S.7	13400 South: Additional Westbound Lane MVC to 5000 West
12.3	Channelized EB & WB RT Lanes	S.8	13400 South: 7-Lane Cross Section 5000 West to 5600 West, 5-Lane Cross Section 5600 West to 6400 West
13.1	Freeway Grade- Separated Interchange, Additional WB Thru Lane, Channelized EB/WB RT Lanes	S.9	13400 South: 5-Lane Cross Section 5600 West to 6000 West
13.2	Channelized EB & WB RT Lanes, Convert NB Thru lane to be Shared T/RT Lane	S.10	7300 West: New 3-Lane Cross Section Herriman Hwy to Herriman Blvd, New 3-Lane Cross Section Herriman Blvd to 10400 S
14.1	SPII	S.11	7300 West: 3-Lane Cross Section South of Herriman Highway
14.2	Additional LT Lane on NB Off Ramp	S.12	7300 West: 5-Lane Cross Section North of Herriman Boulevard
17.1	Signal, Turn Pockets on All Approaches	S.13	7300 West: 5-Lane Cross Section South of Herriman Highway
18.1	Add WB RT Lane	S.14	6400 West: New 3-Lane Cross Section 10400 South to Main
18.2	Signal, Turn Pockets on All Approaches	S.15	6400 West: 5-Lane Cross Section 11800 S to Herriman Blvd
18.3	SB RT Lane, SB Dual LT Lanes, PM/PT LT Phasing on All Approaches	S.16	6000 West: 5-Lane Cross Section Herriman Blvd to Main
19.1	Signal, Turn Pockets on All Approaches	S.17	MVC: Add Frontage Road Lane NB & SB South of 13400 South
20.1	Signal, Turn Pockets on All Approaches	S.18	MVC Freeway Needed
20.2	WB PM/PT LT Phasing, Add EB RT Pocket		

Sources: [Hales Engineering](#), [WFRC RTP](#), [MVC Interactive Map](#)

