PARK CITY COUNCIL MEETING
SUMMIT COUNTY, UTAH
June 1, 2023

The Council of Park City, Utah, will hold its regular meeting in person at the Marsac Municipal Building, City Council Chambers, at 445 Marsac Avenue, Park City, Utah 84060. Meetings will also be available online with options to listen, watch, or participate virtually. Click here for more information.

CLOSED SESSION - 2:00 p.m.
The Council may consider a motion to enter into a closed session for specific purposes allowed under the Open and Public Meetings Act (Utah Code § 52-4-205), including to discuss the purchase, exchange, lease, or sale of real property; litigation; the character, competence, or fitness of an individual; for attorney-client communications (Utah Code section 78B-1-137); or any other lawful purpose.

WORK SESSION

3:15 p.m. - Deer Valley Development Company Petition for the City to Vacate Portions of Right-Of-Way on Deer Valley Drive West and South, and to Dedicate Doe Pass Road to the City, as Part of the Snow Park Village Base Area MPD and Subdivision Application. No Action Will Be Taken.
Deer Valley Discussion Agenda
Exhibit A: Deer Valley's Vacation Petition
Exhibit B: Snow Park Village Transportation Analysis April 2023
Exhibit C: WCG Transportation AnalysisTechnical Review Memorandum April 2023
Exhibit D: Letter from PCFD Snow Park Right-of-Way Vacation
Exhibit E: Exhibit for Lakeside - New Doe Pass
Exhibit F: Turnaround Comparison - In the Trees
Exhibit G: Letter of Support for Vacation - Trails End Condos
Exhibit H: Letter of Support High Valley Transit
Exhibit I: Public Comments

5:15 p.m. - Break

REGULAR MEETING - 5:30 p.m.

I. ROLL CALL

II. APPOINTMENTS

1. Appointment of Greg Hembrock and Reappointment of Seth Beal to Serve on the Library Board for Three-Year Terms Beginning July 2023
FY24 Library Board Appointments Staff Report
Exhibit A: Library Board Appointments Recommendation Letter

III. COMMUNICATIONS AND DISCLOSURES FROM COUNCIL AND STAFF
Council Questions and Comments

Staff Communications Reports

1. Emerging Disruptors Update
   Emerging Disruptors Staff Report

IV. PUBLIC INPUT (ANY MATTER OF CITY BUSINESS NOT SCHEDULED ON THE AGENDA)

V. CONSIDERATION OF MINUTES

1. Consideration to Approve the City Council Meeting Minutes from May 11, 2023
   May 11, 2023 Minutes

VI. CONSENT AGENDA

1. Request to Authorize the City Manager to Execute a Contract with Jacobs Engineering Group Inc. for a Water Quality Consultant for 3Kings Water Treatment Plant, Not to Exceed $145,340.00, in a Form Approved by the City Attorney
   3Kings WTP Water Quality Consultant Staff Report
   Exhibit A: 3Kings WTP Water Quality Consultant Scope of Work

2. Request to Approve the 2023 Pavement Management Bids and Authorize the City Manager to Enter into Agreements in a Form Approved by the City Attorney's Office with: Morgan Pavement Maintenance for Type II Slurry Seals, Sealcoat of Trails, and Crack Sealing in the Amount of $247,066.49; and Morgan Asphalt, Inc. for Rotomilling, Pavement Overlays, and Utility Adjustments in the Amount of $1,174,764.88
   2023 Pavement Management Program Staff Report
   Exhibit A: 2023 Pavement Map
   Exhibit B: 2023 Pavement Management RFP
   Exhibit C: 2023 Pavement Management Bid Packet Submissions from Recommended Bidders
   Exhibit D: 2023 Pavement Management Bid Result Matrix

VII. NEW BUSINESS

1. Consideration to Approve Ordinance 2023-27, an Ordinance Amending Title 11-15, Park City Landscaping and Maintenance of Soil Cover, of the Municipal Code of Park City
   (A) Public Hearing (B) Action
   Landscaping Soil Cover Amendments Staff Report
   Exhibit A: Soil Cover Draft Code Amendments
   Exhibit B: Ordinance No. 2023-27

2. Consideration to Authorize the City Manager to Execute the Following: a Construction Agreement with Granite Construction Company in a Form Approved by the City Attorney, Not to Exceed $1,743,177 to Construct Corridor Improvements; a Design Professional Services Agreement with HDR Engineers, Inc., in a Form Approved by the City Attorney, Not to Exceed $350,000 to Provide Public Involvement Support and Construction Management Services
   (A) Public Input (B) Action
   SR-248 Corridor Improvements Staff Report
   Exhibit A: Site Improvements Map
   Exhibit B: Granite Construction Company Bid Schedule

3. Consideration to Set the Date of June 22, 2023, for a Public Hearing on Ordinance 2023-31, an Ordinance Establishing Compensation for the Elected and Statutory Officers for FY 2024
   (A) Public Hearing (B) Action
   Council Compensation Staff Report

Exhibit A: FY24 Council Compensation Ordinance

VIII. OLD BUSINESS

1. Childcare Discussion
   Park City Cares About Kids Proposal
   Developmental and Workforce Benefits of High-Quality Childcare
   Park City Child Care Needs Assessment

2. Discuss FY2023-24 City Manager's Recommended Budget
   (A) Public Hearing
   Budget Staff Report

3. Sundance Film Festival 2023 Debrief
   (A) Public Input
   2023 Sundance Film Festival Staff Report

IX. ADJOURNMENT

A majority of City Council members may meet socially after the meeting. If so, the location will be announced by the Mayor. City business will not be conducted. Pursuant to the Americans with Disabilities Act, individuals needing special accommodations during the meeting should notify the City Recorder at 435-615-5007 at least 24 hours prior to the meeting.

***Parking is available at no charge for Council meeting attendees who park in the China Bridge parking structure.**

City Council Agenda

Subject: **Deer Valley ROW Vacation Petition for the Redevelopment of the Snow Park Village Base Area**
Author: **Alexandra Ananth, Sr. Planner**
Date: **June 1, 2023**
Type of Item: **Work Session – Petition to Vacate Public ROW**

Agenda

Deer Valley Development Company (DVDC) will give a presentation including the following:

1. Application history and overview
2. Alternatives – what is entitled vs. what is planned
    a. Old Plans
3. Traffic simulation exercise
4. Specifics of the ROW Vacation Petition – Exhibits and square feet, etc.
5. DVDC's petition for Good Cause and no material injury

This is a Work Session only; no public input will be taken, and the Council will not act. The public may submit input to planning@parkcity.org, which will be made part of the public record.

The next public hearing is scheduled for June 15, 2023. Public input will be taken at this meeting.

Exhibits

Exhibit A: Applicant's ROW Vacation Petition
Exhibit B: Applicant's final Transportation Analysis – SLM Alternative
Exhibit C: WCG's Third-Party Transportation Analysis Technical Review Memorandum
Exhibit D: Letter from the Park City Fire District dated March 6, 2023
Exhibit E: Applicants Exhibit for Lakeside Condominiums
Exhibit F: Applicant's U-turn Comparison for In the Trees Condominiums
Exhibit G: Letter of Support from the Trails End Condominiums dated February 22, 2022
Exhibit H: Letter of Support from High Valley Transit for the Proposed Transit Center
Exhibit I: Public Input Received by the Planning Department since the March 16, 2023, Public Hearing and Listening Session

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Wade R. Budge, P.C.
wbudge@swlaw.com

January 31, 2022

RECEIVED
FEB 08 2022
Park City Municipal Corp.

VIA EMAIL AND US MAIL

Matt Dias
City Manager
Park City Municipal Corporation
445 Marsac Avenue
Park City, UT 84060

Re: Right of Way Vacation Petition - Revised Vacation Descriptions

Dear: Mr. Dias

On behalf of the Deer Valley Resort Company, LLC and Alterra Mountain Company Real Estate Development Inc., the property owners of parcels - PC-745-11, PC-900-4, and PC-900-3,we would like to submit the attached revised legal descriptions to supplement the petition for vacation we submitted to Park City on September 30, 2021. That petition was made pursuant to Utah Code Ann. §10-9a-609.5 and Park City's Land Management Code § 15-7-7, as adopted.

As you recall, we are seeking to vacate portions of Deer Valley Dr. in an effort to redirect traffic patterns to streamline transit access and improve traffic circulation in the Lower Deer Valley neighborhood. In order to accomplish these goals, we are seeking to dedicate public right of way along Deer Valley Drive and Doe Pass Rd, where there currently is no public right of way. The granting of this vacation petition and accepting the dedications we seek to make via the Snow Park Village Plat. We are excited to work with the City through this process in order to start reducing modal conflicts, increasing efficiency for all transportation types, and emphasizing the transit-focused desire of the City.

To supplement the information previously provided and required in Utah Code Ann. §10-9a-609.5, we have included the following as attachments to this letter:

1. Revised maps of the rights-of-ways to be vacated.
2. Revised legal descriptions of the rights-of-ways to be vacated.

There were minor edits to the areas that needed to be vacated as we have worked on the Deer Valley Plat. To ensure the appropriate portions of right-of-way are vacated, we are

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requesting to move forward with the vacation of the attached legal descriptions, as opposed to those that were submitted in September.

We are pleased to have for the opportunity to work with the City through the vacation and platting process. As stated previously, we welcome the opportunity to go before City Council in a work meeting in order discuss some of the details, before holding the public hearing.

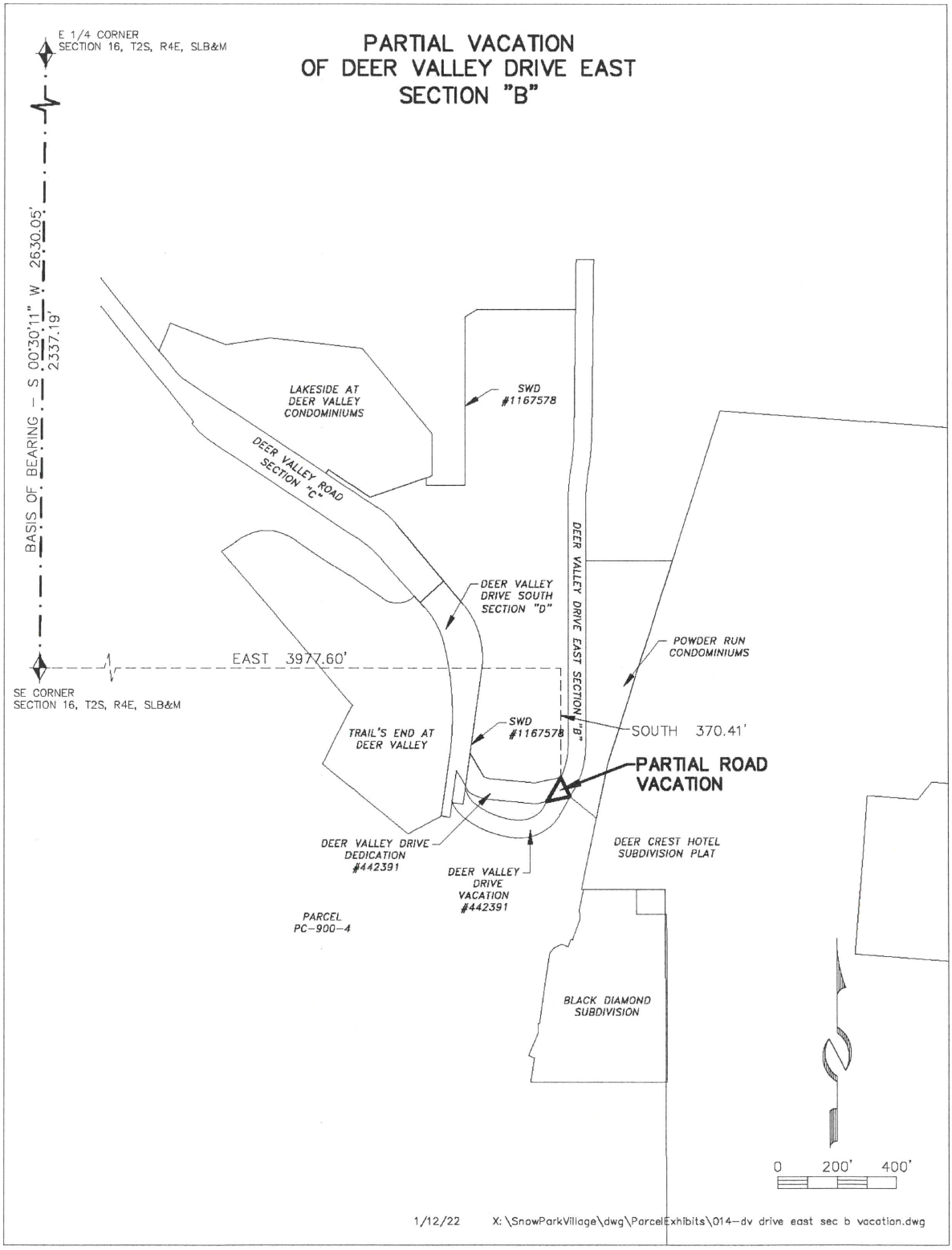
If you have any questions or concerns, please feel free to reach out to us.

Very truly yours,

Wade R. Budge, P.C.

cc: Deer Valley Resort
Mark Harrington, Esq. (via email)

Specific area maps and legal descriptions


PARTIAL VACATION
OF DEER VALLEY DRIVE EAST
SECTION "B"
E 1/4 CORNER
SECTION 16, T2S, R4E, SLB&M
BASIS OF BEARING - S 00°30'11" W 2630.05'
2337.19'
EAST 3977.60'
SE CORNER
SECTION 16, T2S, R4E, SLB&M
LAKESIDE AT
DEER VALLEY
CONDOMINIUMS
SWD
#1167578
DEER VALLEY ROAD
SECTION "C"
DEER VALLEY DRIVE EAST SECTION "B"
DEER VALLEY
DRIVE SOUTH
SECTION "D"
POWDER RUN
CONDOMINIUMS
TRAIL'S END AT
DEER VALLEY
SWD
#1167578
SOUTH 370.41'
PARTIAL ROAD
VACATION
DEER VALLEY DRIVE
DEDICATION
#442391
DEER VALLEY
DRIVE
VACATION
#442391
DEER CREST HOTEL
SUBDIVISION PLAT
PARCEL
PC-900-4
BLACK DIAMOND
SUBDIVISION
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SNOW PARK VILLAGE

PARTIAL VACATION
OF DEER VALLEY DRIVE EAST
SECTION "B"

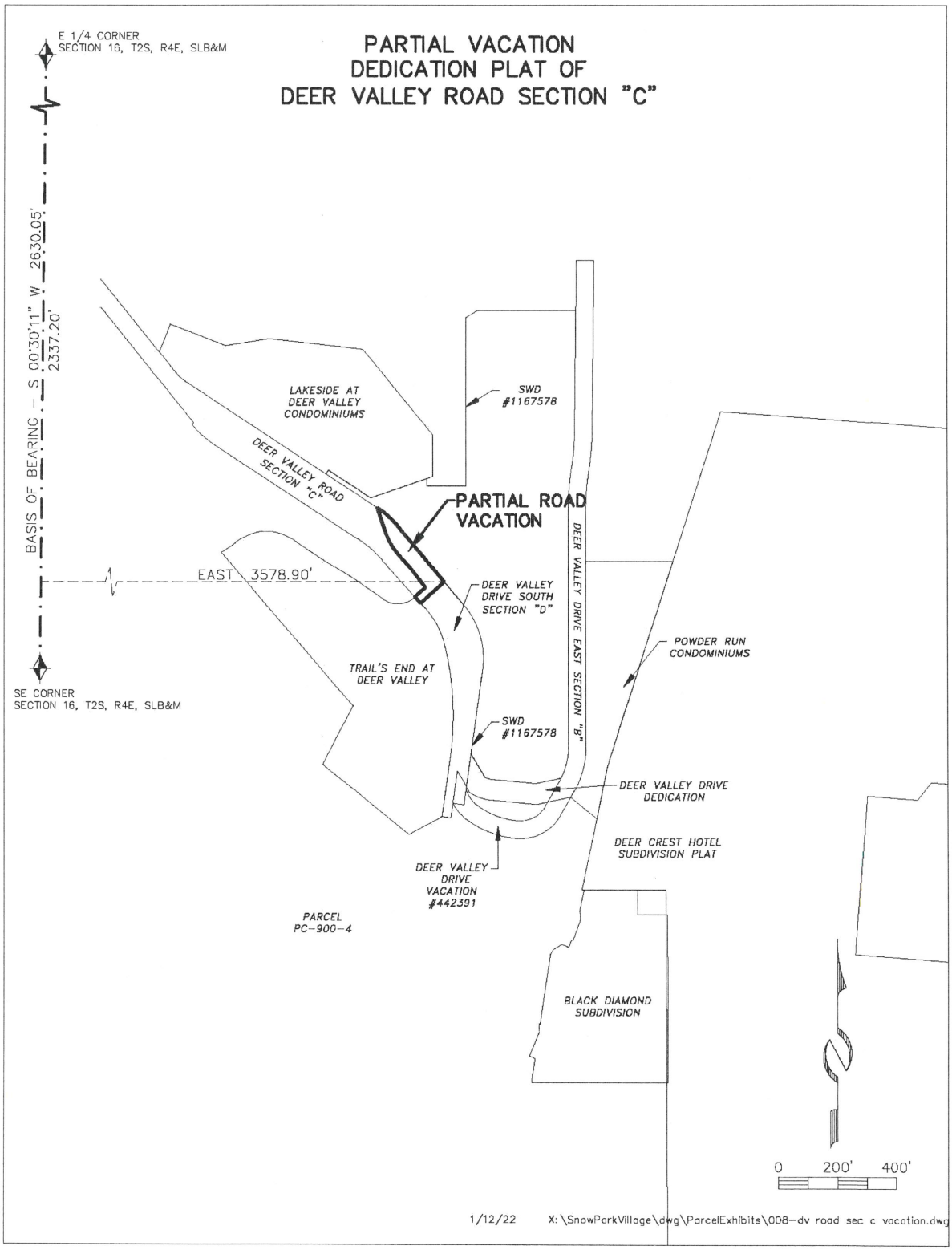
January 13, 2022

A parcel of land located in the northeast quarter of Section 22, Township 2 South, Range 4 East, Salt Lake Base and Meridian, said parcel being described as follows:

Beginning at a point that is East 3977.60 feet and South 370.41 feet from the southeast corner of Section 16, Township 2 South, Range 4 East, Salt Lake Base and Meridian, said point being on the westerly right-of-way of Deer Valley Drive East Section "B", recorded March 1, 1982, as Entry No. 188988 in the Office of the Recorder, Summit County, Utah, and also being the northeasterly corner of the Dedication Parcel in Exhibit C of Ordinance No. 95-59, recorded November 15, 1995, as Entry No. 442391 in the Office of the Recorder, Summit County, Utah; and running thence South 26°45'21" East 72.35 feet to the northeasterly corner of the Vacation Parcel in Exhibit B of Ordinance No. 95-59, recorded November 15, 1995, as Entry No. 442391 in the Office of the Recorder, Summit County, Utah; thence coincident with the northerly boundary of said Vacation Parcel South 78°09'28" West 80.54 feet to the southwesterly corner of the aforementioned Dedication parcel; thence coincident with said Dedication parcel the following two (2) courses: 1) North 30°00'00" East 77.39 feet to a point on a curve to the left having a radius of 249.90 feet, of which the radius point bears North 60°00'00" West; thence 2) along the arc of said curve 16.01 feet through a central angle of 03°40'14" to the point of beginning.

The Basis of Bearing for the above description is South 00°30'11" West 2630.05 feet between the east quarter corner and the southeast corner of Section 16, Township 2 South, Range 4 East, Salt Lake Base and Meridian.

Description contains 0.064 acres.


PARTIAL VACATION
DEDICATION PLAT OF
DEER VALLEY ROAD SECTION "C"
E 1/4 CORNER
SECTION 16, T2S, R4E, SLB&M
BASIS OF BEARING - S 00°30'11" W 2630.05'
2337.20'
EAST 3578.90'
SE CORNER
SECTION 16, T2S, R4E, SLB&M
LAKESIDE AT
DEER VALLEY
CONDOMINIUMS
SWD
#1167578
DEER VALLEY ROAD
SECTION "C"
PARTIAL ROAD
VACATION
DEER VALLEY
DRIVE SOUTH
SECTION "D"
DEER VALLEY DRIVE EAST SECTION "B"
POWDER RUN
CONDOMINIUMS
TRAIL'S END AT
DEER VALLEY
SWD
#1167578
DEER VALLEY DRIVE
DEDICATION
DEER CREST HOTEL
SUBDIVISION PLAT
DEER VALLEY
DRIVE
VACATION
#442391
PARCEL
PC-900-4
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SNOW PARK VILLAGE

PARTIAL VACATION OF
DEDICATION PLAT OF
DEER VALLEY ROAD SECTION "C"

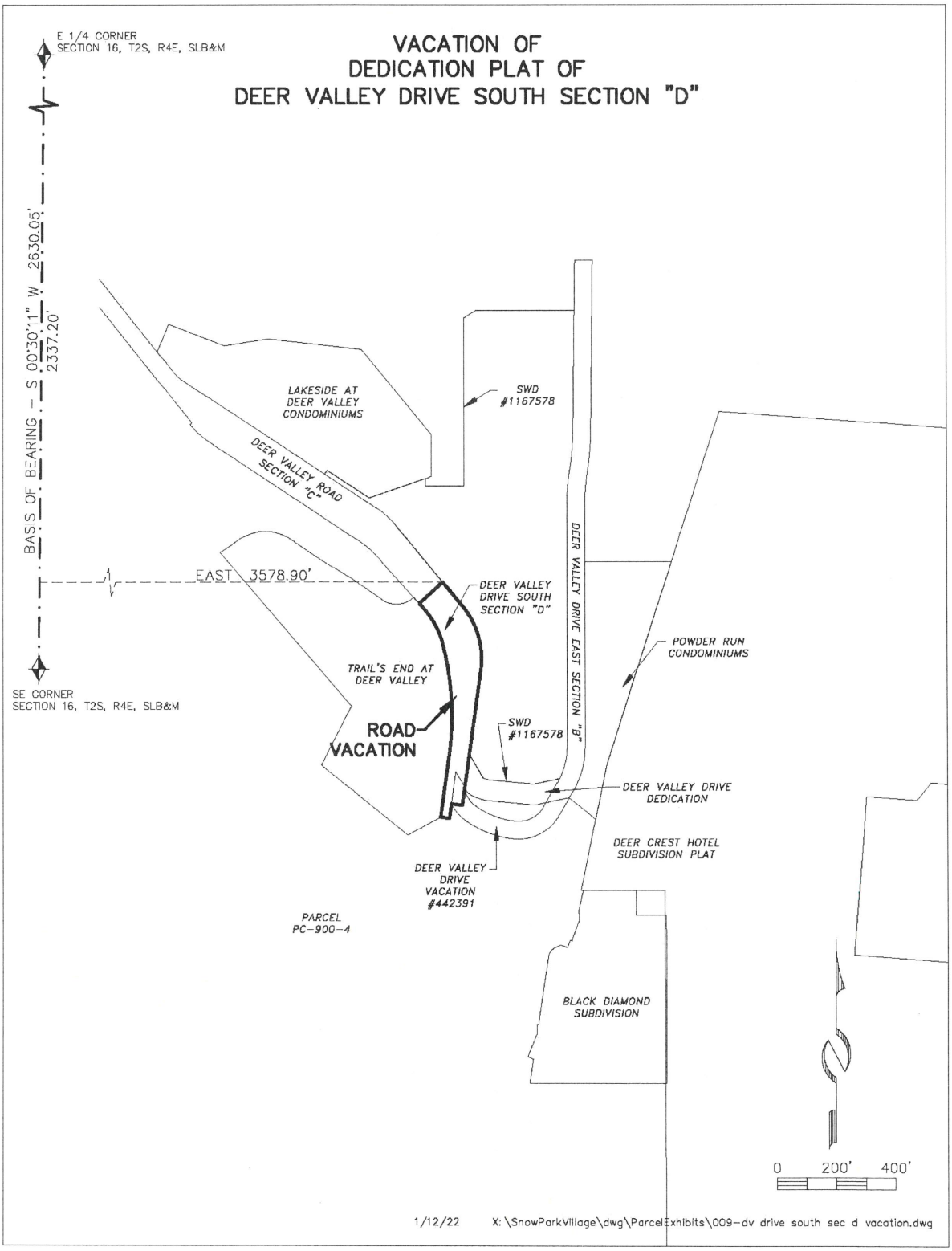
January 18, 2022

A parcel of land located in the southeast quarter of Section 15, Township 2 South, Range 4 East, Salt Lake Base and Meridian, said parcel being described as follows:

Beginning at a point that is South 00°30'11" West 2337.20 feet and East 3578.90 feet from the east quarter corner of Section 16, Township 2 South, Range 4 East, Salt Lake Base and Meridian, said point being the easternmost corner of the Dedication Plat of Deer Valley Road Section "C", recorded April 16, 1980, as Entry No. 165811 in the Office of the Recorder, Summit County, Utah; and running thence coincident with the southeasterly end of Deer Valley Road Section "C" South 47°53'34" West 107.67 feet to the southernmost point of said Deer Valley Road Section "C", said point also being on the easterly boundary of Trail's End at Deer Valley, recorded March 18, 2009, as Entry No. 867530 in the Office of the Recorder, Summit County, Utah; thence coincident with the easterly boundary of Trail's End at Deer Valley North 42°06'26" West 29.08 feet; thence North 47°53'34" East 47.72 feet; thence North 37°30'27" West 67.84 feet; thence North 41°44'02" West 70.59 feet to a point on a curve to the right having a radius of 247.00 feet, of which the radius point bears North 48°15'58" East; thence along the arc of said curve 100.21 feet through a central angle of 23°14'46"; thence North 18°29'16" West 81.14 feet to the northerly right-of-way of said Deer Valley Road Section "C"; thence coincident with the northerly right-of-way of Deer Valley Road Section "C" the following three (3) courses: 1) South 56°25'40" East 2.56 feet to a point on a curve to the right having a radius of 308.53 feet, of which the radius point bears South 33°34'20" West; thence 2) along the arc of said curve 88.46 feet through a central angle of 16°25'40"; thence 3) South 40°00'00" East 249.01 feet to the point of beginning.

The Basis of Bearing for the above description is South 00°30'11" West 2630.05 feet between the east quarter corner and the southeast corner of Section 16, Township 2 South, Range 4 East, Salt Lake Base and Meridian.

Description contains 0.42 acres.

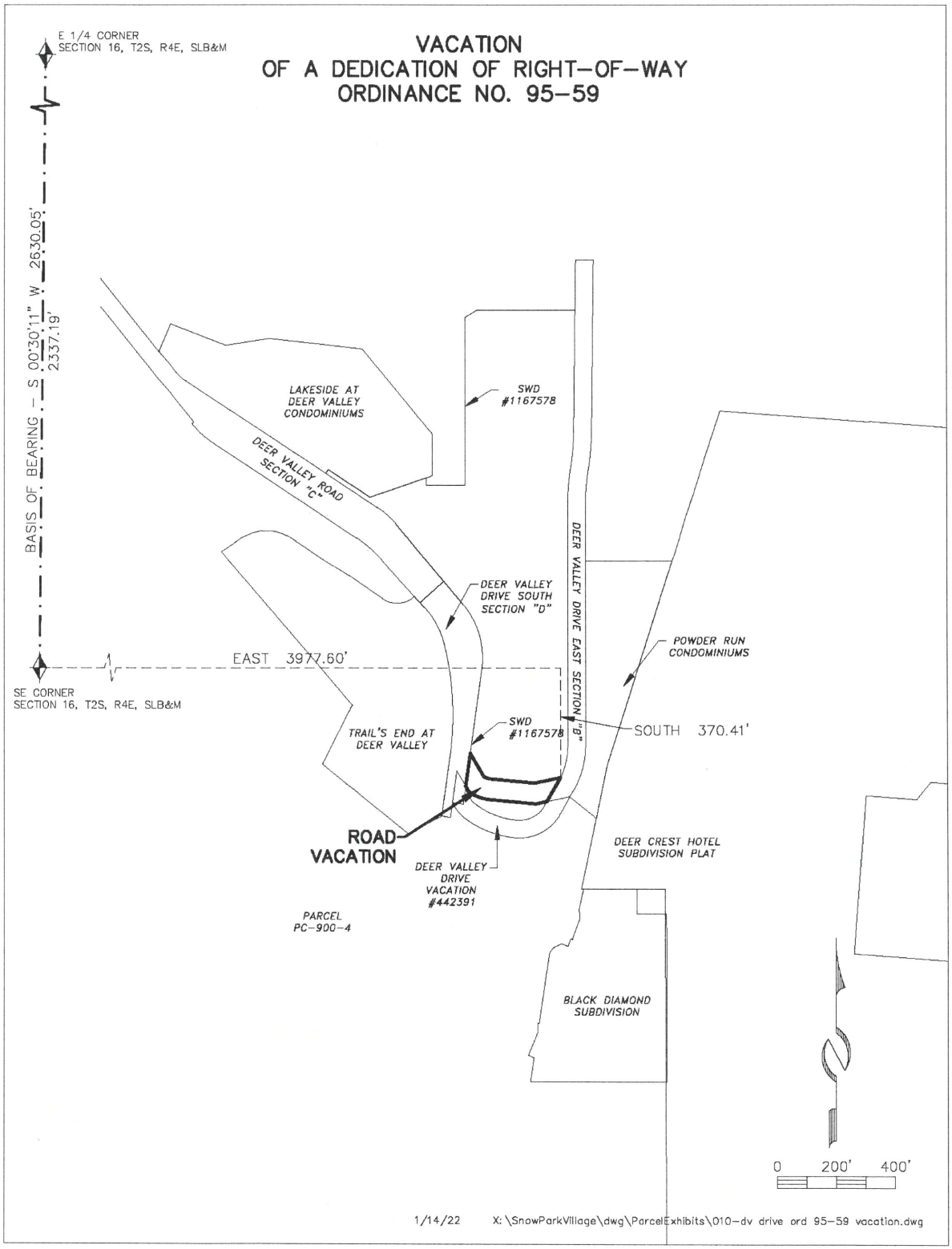

VACATION OF
DEDICATION PLAT OF
DEER VALLEY DRIVE SOUTH SECTION "D"
E 1/4 CORNER
SECTION 16, T2S, R4E, SLB&M
BASIS OF BEARING - S 00°30'11" W 2630.05'
2337.20'
EAST 3578.90'
SE CORNER
SECTION 16, T2S, R4E, SLB&M
LAKESIDE AT
DEER VALLEY
CONDOMINIUMS
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SNOW PARK VILLAGE

VACATION OF
DEDICATION PLAT OF
DEER VALLEY DRIVE SOUTH SECTION "D"

January 12, 2022

Dedication Plat of Deer Valley Drive South Section "D", located in the south half of Section 15 and the north half of Section 22, Township 2 South, Range 4 East, Salt Lake Base and Meridian, recorded March 1, 1982, as Entry No. 188987 in the Office of the Recorder, Summit County, Utah.


VACATION
OF A DEDICATION OF RIGHT-OF-WAY
ORDINANCE NO. 95-59
E 1/4 CORNER
SECTION 16, T2S, R4E, SLB&M
BASIS OF BEARING - S 00°30'11" W 2630.05'
2337.19'
EAST 3977.60'
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SUBDIVISION PLAT
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200'
400'
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SNOW PARK VILLAGE

VACATION OF
A DEDICATION OF RIGHT-OF-WAY
ORDINANCE NO. 95-59

January 14, 2022

Beginning at a point on the westerly right-of-way of Deer Valley Drive East Section 'B', said point being South 1248.12 feet and East 4008.65 feet from the east 1/4 corner of Section 16, Township 2 South, Range 4 East, Salt Lake Base and Meridian (Basis of Bearing being S00°30'11"E from the east quarter corner of said Section 16 to the southeast corner of said Section 16); thence along said right-of-way, as described on Section 'B' of Deer Valley Drive East plat as recorded in the Summit County Recorder's Office, Entry Number 188988, the following four courses: (1) S00°40'00"W 579.06 feet to a point on an 878.16 foot radius curve to the right (center bears N89°20'00"W); thence (2) along the arc of said curve 127.48 feet through a central angle of 08°19'03" to a point of a reverse curve to the left (center bears S81°00'57"E); thence (3) along the arc of said curve 136.50 feet through a central angle of 08°59'03"; thence (4) South 800.00 feet to a point on a 249.90 foot radius curve to the right (center bears West); thence along the arc of said curve and the western right-of-way of Deer Valley Drive East, 114.84 feet through a central angle of 26°19'46" to the true point of beginning; thence departing from said right-of-way S78°14'07"W 89.60 feet; thence N84°36'26"W 145.24 feet to a point on an 80.00 foot radius curve to the right (center bears N05°23'34"E); thence along the arc of said curve 28.08 feet through a central angle of 20°06'46"; thence N30°26'41"W 92.28 feet to a point on the east right-of-way of Deer Valley Drive South Section 'D' as recorded in the Summit County Recorder's Office, Entry Number 188987; thence along said right-of-way S08°00'00"W 112.58 feet; thence departing said right-of-way S30°26'41"E 21.97 feet to a point on an non-tangent 150.00 foot radius curve to the left (center bears N34°51'45"E); thence along the arc of said curve 77.15 feet through a central angle of 29°28'11"; thence S84°36'26"E 155.80 feet; thence N78°14'07"E 38.33 feet to a point on the westerly right-of-way of said Deer Valley Drive East; thence along said right-of-way the following two courses: (1) N30°00'00"E 77.39 feet to a point on a 249.90 foot radius curve to the left (center bears N60°00'00" W); thence (2) along the arc of said curve 16.01 feet through a central angle of 03°40'14" to the true point of beginning.

Contains 0.52 acres, more or less.

Snow Park Village

Transportation Analysis – Shared Mobility Lane Alternative

Prepared for:
Deer Valley

April 2023

UT20-2245

FEHR PEERS

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1. Executive Summary

This Traffic Impact Study includes the results of a comprehensive traffic operations analysis for the Snow Park Village project at Deer Valley Resort in Park City, Utah. Snow Park Village is a mixed-use development that will serve as an updated base area village for Deer Valley, and includes hotel, residential, commercial, and event center uses. This report includes the full buildout of the Snow Park base that includes the parking and development both north and south of Doe Pass Road.

The scope of this study analyzes the traffic operations and impacts under the following scenarios:

- Existing (2020) Conditions
- Existing (2020) Plus Project Conditions
- Opening Year (2024) Background Conditions
- Opening Year (2024) Plus Project Conditions
- Future (2040) Background Conditions
- Future (2040) Plus Project Conditions

Existing conditions were based on the traffic counts, which were collected originally in 2020. As this process has continued, Park City Staff have accepted that 2020 counts continue to serve as the foundation for this report with adjustments made for assumed marginal increases in traffic on an annual basis. Traffic operations for these scenarios were analyzed at nine study intersections:

1. Doe Pass Road / Deer Valley Drive East
2. Doe Pass Road / Deer Valley Drive West
3. Deer Valley Drive East / Queen Esther Drive
4. Deer Valley Drive East / Solamere Drive
5. Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West
6. Deer Valley Drive / Marsac Avenue
7. Deer Valley Drive / Bonanza Drive
8. Deer Valley Drive / Park Avenue / Empire Avenue
9. Bonanza Drive / Monitor Drive / SR-248

This circulation plan includes a seasonal one-way Shared Mobility Lane (SML) inbound from the "Y" intersection along Deer Valley Drive West, turn onto Doe Pass Road, and directly access the proposed mobility hub. Outbound transit traffic will have the SML that has transit priority at the mobility hub, then parallels general purpose traffic around the loop to the "Y" intersection, at which point transit traffic would merge with general traffic, generally operating in a counterclockwise direction. After ski season during the

summer months, the SML will be open to bicycle traffic. Management, maintenance, and enforcement will be a City responsibility.

Study intersections 5 and 8 currently operate at Levels of Service (LOS) that do not meet Part City standards, which is LOS D. However, these intersections were analyzed as part of this study to identify Deer Valley's contributions to traffic at key intersections within Park City in support of Park City Municipal Corporation's (PCMC) goals of reducing peak-hour traffic volumes by 20% citywide.

The Plus Project traffic operations analyses include trips generated by the Snow Park Village project. The parking analysis accounts for both physical (structured) and behavioral impacts of the identified resort uses, as well as parking pricing. To present conservative, and thereby overestimated, results in this report, reductions in trip generation and parking demand stemming from proposed enhancements to local transit service, operated by Park City Transit and/or High Valley Transit, or Deer Valley's existing Transportation Demand Management (TDM) program are not included.

1.1 Study Results

In Plus project Conditions, seven of nine study intersections, with recommended mitigations in place, meet the Park City LOS standards. Under existing conditions, the intersection of Deer Valley Drive / Park Avenue / Empire Avenue operates at a LOS of E/F. Given the City's longstanding position on additional mitigations at this intersection, none are recommended. Deer Valley Drive in this area is also SR-224, and therefore managed by the Utah Department of Transportation (UDOT). This includes intersection operations. The deficiencies at the Deer Valley Drive / Bonanza Drive intersection are caused by the queue spillbacks from the upstream intersection at Deer Valley Drive / Park Avenue / Empire Avenue. Therefore, no mitigations are recommended.

Furthermore, the most impacted intersection under current conditions, the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection, which operates today at a LOS below Park City standards, achieves a LOS of D or better under 2040 Plus Project conditions by reconfiguring the intersection and adding signalized traffic control, establishing a new access pattern for visitors while providing safety for pedestrians and bicyclists. The Solamere Drive / Deer Valley Drive East and Queen Esther Drive / Deer Valley Drive East intersections operate at a LOS B with full build-out in 2040 with some lane configuration mitigations.

Parking provided as part of the Snow Park Village Proposal will be provided at full amount as required by code. Reduced parking demand however, will be achieved through the implementation of a paid parking system, and continued operation and refinement of Deer Valley's Transportation Demand Management

program by supporting non-single-occupancy vehicle trips while also actively discouraging driving alone, and through time-of-day sharing of parking for different and complementary uses.

In alignment with Park City's *Transit First* strategy, construction of Snow Park Village will prioritize active transportation and transit as modes for travel to, from, and within the village. To that end, Deer Valley will construct an on-site mobility hub with space for six buses which will be connected to the broader Park City and High Valley Transit networks. One new traffic signal is recommended, at the intersection of Doe Pass Road / Deer Valley Drive East as a mitigation which will include transit signal preemption capabilities to expedite transit service into and out of proposed the mobility hub. Additionally, off-street multi-use paths will be constructed to connect Snow Park to Park City's existing active transportation network.

1.2 LOS Summary

Table 1 reports LOS at the study intersections. For signalized intersections and roundabouts, average vehicular delay and LOS are reported. For unsignalized intersections, the worst movement delay and LOS are reported. Detailed descriptions of the intersection operations can be found in the subsequent chapters. Due to the land use program proposed for Snow Park Village, the net total trips generated by the AM peak hour is 261 trips and the PM peak hour is 322 trips.

Table 1: Snow Park Village Saturday AM and PM Peak Hour Level of Service Summary

Intersection			Ex BG	Ex+P	Ex+P Mitigated[2]	2024 BG	2024+P	2024+P Mitigated[2]	2040 BG	2040+P	2040+P Mitigated[2]
ID	Location	Period	LOS & Sec/Veh[1]	LOS & Sec/Veh[1]	LOS & Sec/Veh[1]	LOS & Sec/Veh[1]	LOS & Sec/Veh[1]	LOS & Sec/Veh[1]	LOS & Sec/Veh[1]	LOS & Sec/Veh[1]	LOS & Sec/Veh[1]
1	Doe Pass Rd / Deer Valley Dr East	AM	-	6 / A	4 / A	-	7 / A	5 / A	-	6 / A	5 / A
		PM	-	7 / A	7 / A	-	7 / A	7 / A	-	**65 / E**	8 / A
2	Doe Pass Rd / Deer Valley Dr West	AM	-	8 / A	12 / B	-	15 / B	10 / B	-	21 / C	13 / B
		PM	-	16 / C	19 / C	-	24 / C	18 / C	-	32 / D	20 / C
3	Queen Esther Dr / Deer Valley Dr East	AM	6 / A	8 / A	5 / A	6 / A	8 / A	5 / A	7 / A	7 / A	6 / A
		PM	9 / A	11 / B	11 / B	8 / A	20 / C	10 / B	9 / A	**>300 / F**	11 / B
4	Deer Valley Dr East / Solamere Dr	AM	7 / A	8 / A	6 / A	6 / A	8 / A	6 / A	8 / A	10 / B	7 / A
		PM	11 / B	13 / B	9 / A	11 / B	**78 / F**	11 / B	15 / C	**>300 / F**	12 / B
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	15 / C	26 / D	9 / A	14 / B	20 / C	9 / A	17 / C	29 / D	11 / B
		PM	**39 / E**	**128 / F**	21 / C	**41 / E**	**126 / F**	22 / C	**112 /F**	**201 / F**	44 / D
6	Deer Valley Drive / Marsac Avenue	AM	11 / B	15 / B	15 / B	11 / B	16 / C	16 / C	16 / C	26 / D	26 / D
		PM	11 / B	15 / B	15 / B	11 / B	16 / C	16 / C	11 / B	20 / C	20 / C
7	Deer Valley Dr / Bonanza Dr	AM	11 / B	11 / B	12 / B	11 / B	12 / B	12 / B	18 / B	21 / C	14 / B
		PM	21 / C	29 / C	38 / D	20 / C	**67 / E**	**76 / E**	**59 / E**	**99 / F**	**117 / F**
8	Deer Valley Dr / Park Ave / Empire Ave	AM	**77 / E**	**75 / E**	**76 / E**	**82 / F**	**80 / F**	**78 / E**	**83 / F**	**91 / F**	**84 / F**
		PM	**84 / F**	**83 / F**	**84 / F**	**85 / F**	**88 / F**	**88 / F**	**90 / F**	**90 / F**	**89 / F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	12 / B	13 / B	13 / B	13 / B	14 / B	14 / B	16 / B	16 / B	15 / B
		PM	20 / C	20 / C	20 / C	20 / C	22 / C	22 / C	28 / C	32 / C	31 / C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. Intersection average LOS and delay for signalized intersections and roundabouts, worst movement LOS and delay for unsignalized intersections.
2. Deer Valley Drive East / Deer Valley Drive West intersection analyzed as a reconfigured signalized intersection, and turn lanes/receiving lanes added to Solamere Drive and Queen Esther Drive intersections as a mitigation.
3. Solamere Drive performs at LOS D as a SSSC. Further analysis shows this intersection operates at LOS A as a signalized intersection, when warranted.

Source: Fehr & Peers.

1.3 Proposed Mitigations

The traffic operations analyses conducted as part of the report indicate that five study intersections will operate at unacceptable LOS in comparison with Park City's standards under 2040 plus project conditions without mitigations. Community input gathered through stakeholder engagement resulted in the community-supported mitigations for identified deficiencies stemming from Snow Park Village-generated traffic shown in **Table 2**.

Table 2: Proposed Mitigations for Snow Park Village-Generated Traffic Impacts

ID	Location	Control	Deficiency[1]	Proposed Mitigations
1	Doe Pass Rd / Deer Valley Dr East	SSSC[2]	N/A	Signal with transit preemption
2	Doe Pass Rd / Deer Valley Dr West	SSSC	N/A	N/A
3	Queen Esther Dr / Deer Valley Dr East	SSSC	LOS F	Southbound-to-eastbound left turn-pocket
4	Deer Valley Dr East / Solamere Dr	SSSC	LOS F	Eastbound-to-northbound left turn-pocket
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	SSSC	LOS F	Signal
6	Deer Valley Drive / Marsac Avenue	Roundabout	N/A	N/A
7	Deer Valley Dr / Bonanza Dr	Signal	LOS F	N/A
8	Deer Valley Dr / Park Ave / Empire Ave	Signal	LOS F	N/A
9	Bonanza Dr / Monitor Dr / SR-248	Signal	N/A	N/A

Notes:
1. LOS for 2040 plus project without mitigations.
2. SSSC = Side Street Stop Control

Source: Fehr & Peers.

1.4 Conclusion / Recommendations

With proposed mitigations in place, all study intersections at which mitigations are feasible operate at acceptable levels of service under all Plus Project analysis scenarios. Through dedicated transit infrastructure, improved active transportation connections between the Project and Park City's existing active transportation network, a fully reworked parking system, extensive wayfinding and monitoring, and management of ongoing TDM offerings in addition to new measures, the Snow Park Village proposal aligns with the City's *Transit First* policy by encouraging travel by means other than driving alone.

Implementing a new traffic signal with transit preemption at the intersection of Doe Pass Road / Deer Valley Drive East will improve traffic operations and support transit. A new traffic signal at the reconfigured Y intersection of Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive west facilitates safer and more efficient movement for all modes. If, and when signal warrants at study unsignalized intersections in this report are met (Solamere), as defined by the Federal Highway Administration's *Manual on Uniform Traffic Control* Devices, the implementation of new traffic signals should be considered for improved traffic circulation for all modes. Deer Valley is committed to a being a partner of the subsequent studies, and if warranted, implementation.

Implementing an off-street, multi-use path around the Deer Valley Drive loop will improve pedestrian and cyclist connectivity adjacent to the project site. Ongoing monitoring of TDM program effectiveness will maintain City-Deer Valley cooperation in pursuit of shared goals.

The traffic volumes used for this overall analysis are conservative and likely represent worst case on the worst day. For example, the assumed background growth rate is from a county-wide travel model that assumes some degree of ambient growth in and around Deer Valley beyond the proposed Snow Park project. Given that the Deer Valley loop area is essentially one big cul-de-sac and generally built out, this background growth is quite conservative.

Other measures that support the conservative nature of the analysis is the Mayflower development interconnecting with Deer Valley. An agreement is under development that will provide parking, lift access and full base amenities to skiers going to Deer Valley at Mayflower base, along US-40. This potential agreement will also provide for employee parking with a shuttle program between Mayflower and Snow Park. The analysis does not account for any trip reductions to Snow Park, which will inevitably occur to due significant travel time reductions from both the Wasatch Front and the Heber Valley.

Last, Deer Valley is committed to supporting other regional traffic mitigation efforts. This includes considerations such as contributing to transit, and robust travel demand reduction program, and paid parking at Snow Park once the project is built. The proposed transit amenities include the mobility hub, a

dedicated Shared Mobility Lane, state-of-the-art wayfinding, and a monitoring program all combine to support the City's transportation goals.

2. Introduction

This study documents the potential transportation-related impacts on local traffic from the proposed Snow Park Village project. The project location is shown in **Figure 1**.

This report is largely unchanged from what was presented in the most recent submittal (November 2022), save for some minor but impactful updates:

1. Analyzed traffic conditions with no reduction in parking supply, providing full parking required by the Park City Land Management Code (LMC). The trip generation was increased from the November 2022 submittal to reflect added peak hour traffic.
2. Traffic distribution assumptions at the Deer Valley Drive East / Deer Valley Drive West intersection were updated to follow traffic patterns similar to current conditions for analysis.
3. Assumptions in the VISSIM simulation model were modified to account for more accurate pick-up/drop-off dwell times, and calibrated vehicle travel times.

Table 3 below shows the in/out traffic for existing and plus project with the proposed development.

Table 3: Snow Park Traffic

	Daily			AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Existing Traffic	5,221	5,329	10,550	770	249	1,019	333	903	1,236
New Trips	1,808	1,808	3,616	176	85	261	115	207	322
Total Trips	7,029	7,137	14,166	946	334	1,280	448	1,110	1,558

The scope of this study analyzes the traffic operations and impacts under the following scenarios:

- Existing (2020) Conditions
- Existing (2020) Plus Project Conditions
- Opening Year (2024) Background Conditions
- Opening Year (2024) Plus Project Conditions
- Future (2040) Background Conditions
- Future (2040) Plus Project Conditions

Traffic operations at key intersections, described below in the Scope section, were analyzed under the six scenarios listed above during Saturday AM and PM peak-hour travel periods. Given the nature of ski areas operating as recreational destinations, Saturdays consistently experience the highest traffic volumes, and

focusing on Saturdays for traffic analyses in this report present the most conservative results. The Plus Project analyses include trips generated by the proposed project.

The project team knows that it is important to work with the community to help them better understand the complexity of building out the remaining entitled density at Snow Park and its relation to traffic, and ensuring that the Deer Valley community can contribute to the planning process. Throughout the project's planning process, and with renewed emphasis since the beginning of 2022, Deer Valley has engaged with most of the lower Deer Valley neighborhoods and that communication continues today. Early outreach was done with the Trails End neighborhood in relation to the right of way vacation to gain their support. After the community voiced their opinion in March 2022, the project team opted to hold individual meetings with various homeowner's associations (HOAs) to address concerns and gather feedback. The community's main concerns were the then-proposed bus-only lanes, removal of on-street bike paths, the proposed routing of most traffic on Deer Valley Drive East, construction of new traffic signals, and pedestrian circulation. Coordination meetings with the community continued with nearly one dozen meetings in summer and fall 2022, with more scheduled. This revised traffic circulation plan as submitted is based on the community's input and support, augmented by City staff requests.

2.1 Scope

This study analyzes the traffic impacts of the project in conjunction with nearby intersections. Impacts are specifically addressed at the following study intersections:

1. Doe Pass Road / Deer Valley Drive East (side-street stop-controlled)
2. Doe Pass Road / Deer Valley Drive West (side-street stop-controlled)
3. Deer Valley Drive East / Queen Esther Drive (side-street stop-controlled)
4. Deer Valley Drive East / Solamere Drive (side-street stop-controlled)
5. Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West (side-street stop-controlled)
6. Deer Valley Drive / Marsac Avenue (roundabout)
7. Deer Valley Drive / Bonanza Drive (signalized)
8. Deer Valley Drive / Park Avenue / Empire Avenue (signalized)
9. Bonanza Drive / Monitor Drive / SR-248 (signalized)

For the purposes of consistency, this report refers to two key roadways as Deer Valley Drive East (sometimes called Deer Valley Drive North) and Deer Valley Drive West (sometimes called Deer Valley Drive South). Given that Doe Pass Road carries minimal traffic in its existing configuration, study intersections 1 and 2 are only analyzed under Plus Project scenarios.

Study intersections are shown in **Figure 2**.



Figure 1
Project Location

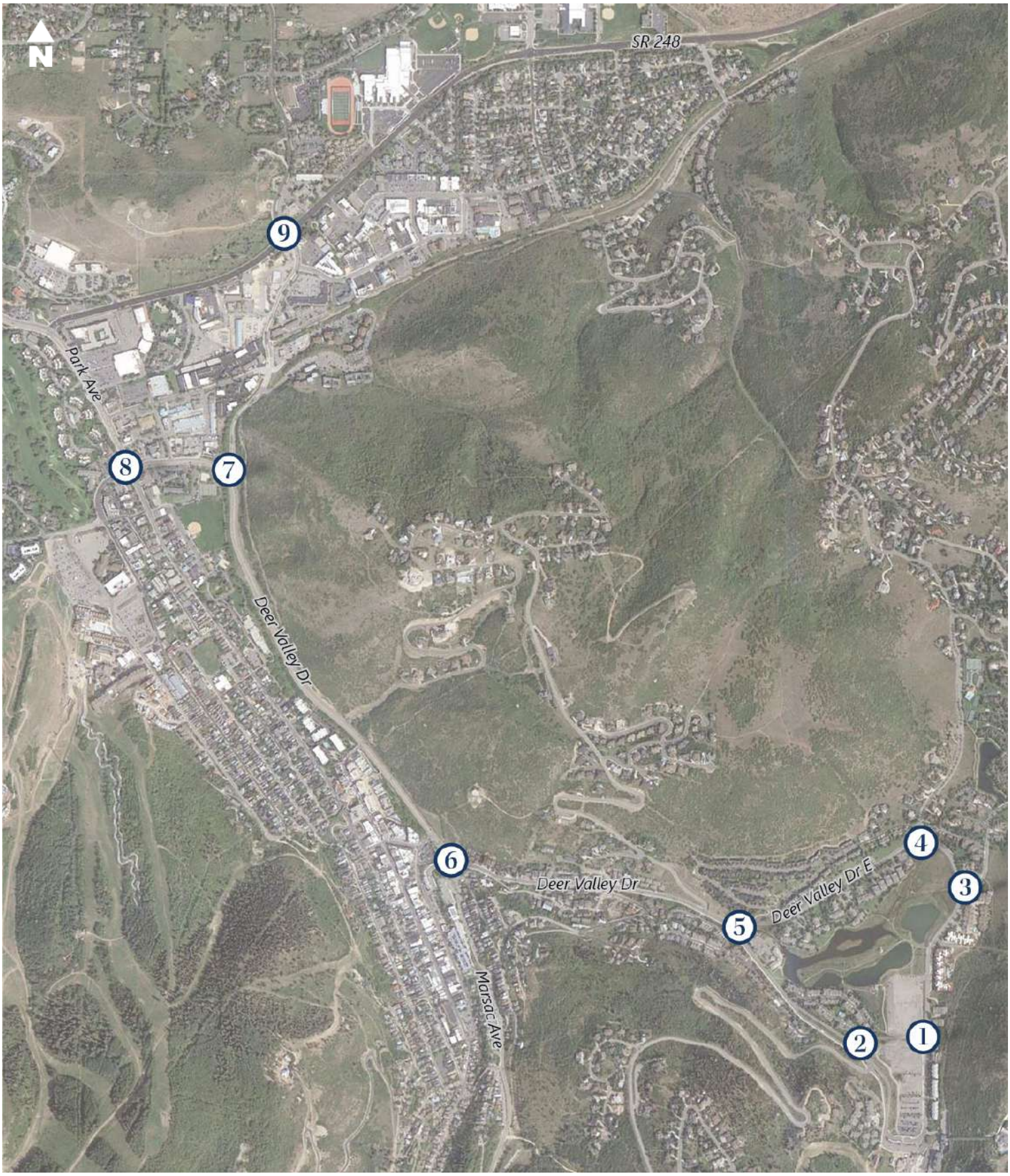


Figure 2
Study Intersections

2.2 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 4** provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections. Traffic operations were modeled in SimTraffic, a microsimulation traffic analysis software. SimTraffic results were evaluated under the Highway Capacity Manual 6th Edition (HCM 2016) methodology in this study to remain consistent with "state of the practice" professional standards, and with earlier iterations of this report. Since this study began, a new edition of the Highway Capacity Manual has been published, though application to analyses conducted as part of this study would not change results. For study intersection 4, Deer Valley Drive / Marsac Avenue, the SIDRA analysis software was used as it is accepted as state-of-the-practice for roundabout operations analysis. For signalized intersections and roundabouts, the LOS is provided for the overall intersection (weighted average of all approach delays). Park City Municipal Corporation has an established threshold of acceptable traffic operations as LOS of D for all intersections under its control.

Table 4: Level of Service Descriptions

LOS	Description	Signalized Intersections	Unsignalized Intersections	Roundabouts
		Avg. Delay (sec/veh)[1]	Avg. Delay (sec/veh)[2]	Avg. Delay (sec/veh)[3]
A	*Free Flow / Insignificant Delay* Extremely favorable progression. Individual users are virtually unaffected by others in the traffic stream.	< 10.0	< 10.0	< 10.0
B	*Stable Operations / Minimum Delays* Good progression. The presence of other users in the traffic stream becomes noticeable.	> 10.0 to 20.0	> 10.0 to 15.0	> 10.0 to 15.0
C	*Stable Operations / Acceptable Delays* Fair progression. The operation of individual users is affected by interactions with others in the traffic stream	> 20.0 to 35.0	> 15.0 to 25.0	> 15.0 to 25.0
D	*Approaching Unstable Flows / Tolerable Delays* Marginal progression. Operating conditions are noticeably more constrained.	> 35.0 to 55.0	> 25.0 to 35.0	> 25.0 to 35.0
E	*Unstable Operations / Significant Delays Can Occur* Poor progression. Operating conditions are at or near capacity.	> 55.0 to 80.0	> 35.0 to 50.0	> 35.0 to 50.0
F	*Forced, Unpredictable Flows / Excessive Delays* Unacceptable progression with forced or breakdown of operating conditions.	> 80.0	> 50.0	> 50.0

1. Overall intersection LOS and average delay (seconds/vehicle) for all approaches.
2. Worst approach LOS and delay (seconds/vehicle) only.
3. Overall intersection LOS and average delay (seconds/vehicle) for all approaches.

Source: Fehr & Peers descriptions, based on *Highway Capacity Manual, 6th Edition*.

3. Existing (2020) Background Conditions

The Existing (2020) Background Conditions analysis examines the study intersections and roadways during the AM and PM peak-hours existing traffic and geometric conditions. The existing conditions analyses were performed using traffic data collected in 2020. Subsequent rounds of analysis have used adjusted counts to assume marginal increases in traffic, with growth factors taken from a regional travel model. Through this analysis, existing traffic operational deficiencies can be identified, and potential mitigation measures recommended.

3.1 Roadway System

The primary roadways that will provide access to the project, and their existing configurations, are described below.

- **Deer Valley Drive (SR-224)** is a state-owned and managed facility and is classified as a principal arterial road and has a posted speed limit of 35 mph from Park Avenue to about halfway between Bonanza Drive and Marsac Avenue, and 40 mph to the Marsac Avenue roundabout. SR-224 has a five-lane cross section with two travel lanes in each direction with a two-way left-turn lane north of the Marsac Avenue roundabout.
- **Marsac Avenue (SR-224)** is also a state-owned facility and is classified as a principal arterial road and has a posted speed limit of 25 mph. Marsac Avenue has a two-lane cross section with one travel lane in each direction near the project area.
- **Deer Valley Drive West** is classified as a major collector road and has a posted speed limit of 25 mph. Deer Valley Drive West has a two-lane cross section with one travel lane in each direction near the project area.
- **Deer Valley Drive East** this loop section of Deer Valley Drive is classified as a collector road and has a posted speed limit of 25 mph. Deer Valley Drive East has a two-lane cross section with one travel lane in each direction near the project area.
- **Queen Esther Drive** is classified as a collector road and has a posted speed limit of 25 mph. Queen Esther Drive has a two-lane cross section with one unstriped travel lane in each direction near the project area.
- **Solamere Drive** is classified as a collector road and has a posted speed limit of 25 mph. Solamere Drive has a two-lane cross section, with one travel lane in each direction and a landscaped median near the project area.

- **Doe Pass Road** is classified as a collector road and has a posted speed limit of 25 mph. Doe Pass Road has a two-lane cross section with one unstriped travel lane in each direction near the project area.

3.2 Traffic Volumes

Intersection turning movement counts were collected at the following study intersections to establish a baseline of existing conditions and operations for this study's original scope of work:

- Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West
- Deer Valley Drive / Marsac Avenue
- Deer Valley Drive / Bonanza Drive

Intersection turning movement counts were collected at the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection on Saturday, February 15, 2020 (President's Day weekend) and Saturday, February 29, 2020 for the Saturday AM peak period (7:45 AM – 9:45 AM) and the Saturday PM peak period (3:30 PM – 5:30 PM). Counts collected on February 29, 2020 showed higher peak-hour traffic volumes, and were therefore used as existing traffic volumes for the analysis presented in this study. While it is highly unusual to analyze operations during absolute peak conditions, due to the risk of over-building infrastructure and exaggerating typical issues, this was the request of the City.

Intersection turning movement counts were collected at the Deer Valley Drive / Marsac Avenue roundabout and the Bonanza Drive / Deer Valley Drive intersection on December 19, 2020 for the Saturday AM and PM peak periods.

The original, City-approved scope for this study included study intersections 5, 6, and 7. As a result of requests from the City and their reviewers for expanded traffic operations analysis beyond that included in the original study. As a result, counts were sourced from other, existing work and adjusted to present conservative results.

Roadway vehicle counts are provided by the Utah Department of Transportation (UDOT) Continuous Count Stations (CCS). Data from the past five years as collected at two CCSs in the vicinity of the project site (one on SR-224 just south of Kimball Junction and one on SR-248 just west of Quinn's Junction) were reviewed to determine when during the ski season peak traffic volumes occur. It was observed from the data that the month of January experienced the highest Average Daily Traffic (ADT) volumes of any month of the year. This is likely due to increases in traffic caused by events in the area including the Sundance Film Festival. While January is likely the busiest month for traffic on the outskirts of Park City, traffic volumes in February are nearly as high, and Presidents' Day Weekend is among the busiest weekend of the year for skier traffic.

To account for this, the intersection volumes collected in December were adjusted by a factor of 1.05 (5% higher) to replicate February conditions.

For study intersections 8 and 9, which were not included in this study's original scope, intersection counts were sourced from previous studies with adjustment factors. For the intersection of Deer Valley Drive / Park Avenue / Empire Avenue, counts were sourced from the *Park City Mountain Resort Traffic Impact Study* (August, 2019). Counts for this study were collected on February 18, 2017 and were adjusted by a factor of 1.14 (14% higher) to account for a peak winter day, as described in the August 2019 study. These adjusted counts were used for this study. For the intersection of Bonanza Drive / Monitor Drive / SR-248, no Saturday counts were available. To overcome this challenge, weekday counts collected on February 6, 2018 as part of the *Park City Arts District Traffic Analysis* (September 2019) were used as a foundation. Through reviewing two years of CCS data, weekday-to-weekend adjustment factors of 0.63 (37% lower) for the AM peak hour, and 0.85 (15% lower) for the PM peak hour were applied for this study.

To address comments from City Staff and community members, turning movement counts were collected at study intersections 3 and 4 to better understand how project-generated traffic might affect local intersections not included in the original study scope. The turning movement counts were collected on Thursday-Saturday, March 3-5, 2022, for the AM and PM peak periods. The highest turning movement counts among the three days at each location were used for conservative results.

Given that they were not included in the original scope of this study, and the substantial changes proposed along Doe Pass Road, no counts for the intersections of Deer Valley Drive East / Doe Pass Road and Deer Valley Drive West / Doe Pass Road were available, and these intersections were only evaluated in the Plus Project conditions.

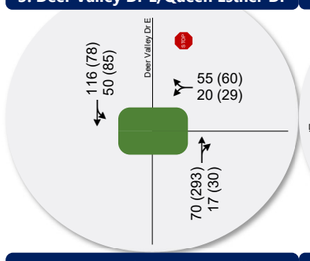
The existing 2020 background Saturday AM and PM peak hour volumes are shown in **Figure 3**.

Fehr & Peers also collected Saturday daily roadway counts on February 15, 2020 (President's Day weekend) on the internal Deer Valley Drive roadways at the following locations:

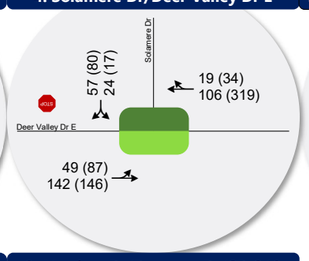
- Deer Valley Drive West – between Royal Street and drop-off/pick-up area
- Deer Valley Drive West – south of the Deer Valley Drive East / Deer Valley Drive West intersection
- Deer Valley Drive East – between Queen Esther Drive and parking lot
- Deer Valley Drive East – east of the Deer Valley Drive East / Deer Valley Drive West intersection



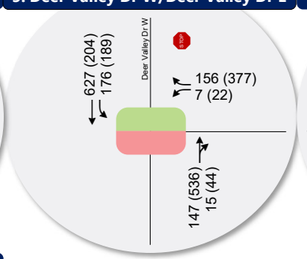
3. Deer Valley Dr E/Queen Esther Dr



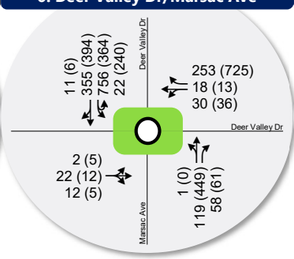
4. Solamere Dr/Deer Valley Dr E



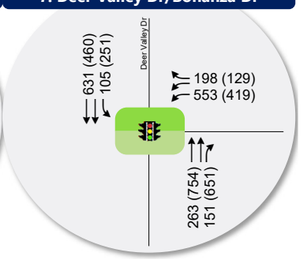
5. Deer Valley Dr W/Deer Valley Dr E



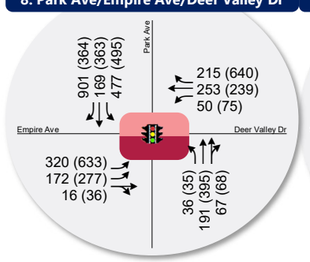
6. Deer Valley Dr/Marsac Ave



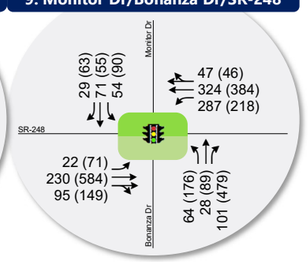
7. Deer Valley Dr/Bonanza Dr



8. Park Ave/Empire Ave/Deer Valley Dr



9. Monitor Dr/Bonanza Dr/SR-248



LEGEND

Stop Sign *Signalized* *Roundabout*

Lane Configuration — AM (PM) / AM (PM) / AM (PM) — *Peak Hour Traffic Volume per lane*

Intersection Level of Service (LOS):

AM / PM — A B C D E F

Figure 3

Existing 2020 Background Saturday AM & PM Peak Hour Traffic Conditions

3.3 Level of Service Analysis

Using SimTraffic simulation software (for signalized and unsignalized intersections) and SIDRA software (for the roundabout) and the HCM 6 delay thresholds provided in the Introduction, the existing background Saturday AM and PM peak hour LOS were computed for each study intersection. The results of this analysis for the Saturday AM and PM peak hours are reported in **Table 5** (see Appendix for the detailed LOS report). These results serve as a base for the analysis of the impacts of the proposed Snow Park Village development.

Table 5: Existing 2020 Background Conditions Saturday AM & PM Peak Hour Level of Service

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / Deer Valley Dr East	AM	SSSC[4]	-	**-**	**-**	-	-
		PM		-	**-**	**-**	-	-
2	Doe Pass Rd / Deer Valley Dr West	AM	SSSC	-	-	-	-	-
		PM		-	-	-	-	-
3	Queen Esther Dr / Deer Valley Dr East	AM	SSSC	WB Left	6	A	-	-
		PM		WB Left	9	A	-	-
4	Deer Valley Dr East / Solamere Dr	AM	SSSC	SB Left	7	A	-	-
		PM		SB Left	11	B	-	-
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	SSSC	WB Left	15	C	-	-
		PM		WB Left	**39**	**E**	-	-
6	Deer Valley Drive / Marsac Avenue	AM	Roundabout	-	-	-	11	B
		PM		-	-	-	11	B
7	Deer Valley Dr / Bonanza Dr	AM	Signal	-	-	-	11	B
		PM		-	-	-	21	C
8	Deer Valley Dr / Park Ave / Empire Ave	AM	Signal	-	-	-	**77**	**E**
		PM		-	-	-	**84**	**F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	Signal	-	-	-	12	B
		PM		-	-	-	20	C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.

1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle) and is only reported for signalized intersections and roundabouts.
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound
4. Side-street stop control.

Source: Fehr & Peers.

As shown in **Table 5**, all study intersections operated within acceptable LOS (LOS D or better), with the exception of the following locations:

- Deer Valley Drive East / Deer Valley Drive West: LOS E in the PM peak hour
    - This is caused by the high volumes of vehicles exiting the Deer Valley Resort area making a westbound right turn onto Deer Valley Drive West. The westbound approach is stop-controlled, making it difficult for vehicles to find a gap and turn onto Deer Valley Drive West.
- Deer Valley Drive / Park Avenue / Empire Avenue: LOS E in the AM peak hour, LOS F in the PM peak hour
    - This is caused by congestion at the signal due to high volumes accessing various ski resorts and downtown Park City.

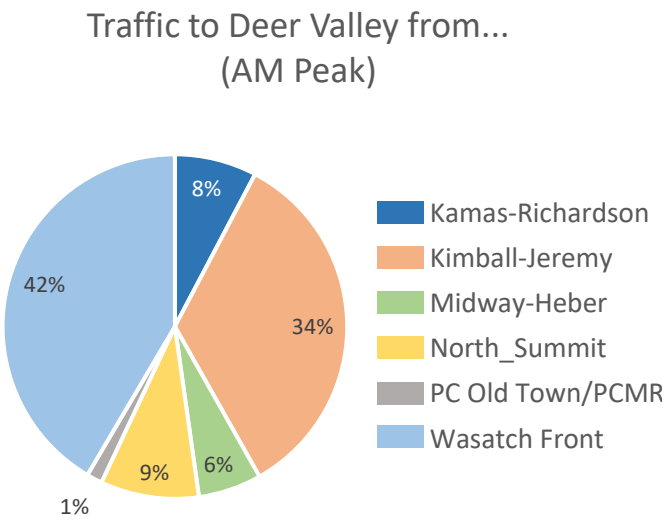
It should be noted that while the Bonanza Drive / Deer Valley Drive intersection operates within acceptable LOS, it is often impacted by vehicle queues spilling back to this intersection from the upstream intersection at Deer Valley Drive / Park Avenue / Empire Avenue in the PM peak hour.

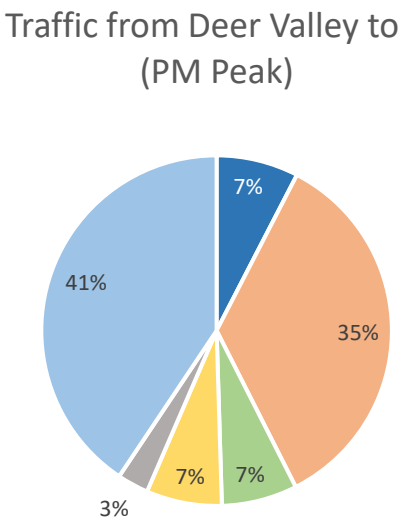
3.4 Mitigation Measures

The concept master plan for Snow Park Village shows reconfiguration and signalization of the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection, which will alter the westbound LOS at this intersection. Therefore, Fehr & Peers does not recommend any mitigation measures for existing background conditions.

3.5 Origin-Destination Data

To understand the distribution of origins from which travelers access Deer Valley, Fehr & Peers employed origin-destination data provided by StreetLight Data. StreetLight Data collects samples of trips using anonymized mobile phone data (location-based services, or LBS) and aggregates it to provide estimates of travel between origin-destination pairs. In this study, trips to and from surrounding areas (Kamas-Richardson, Kimball-Jeremy, Midway-Heber, North Summit County, Wasatch Front, and Park City Old Town/Mountain Resort) were examined. The data sample used in this study was based on 2019 and 2020 observed travel patterns on weekend days during morning and afternoon peak periods (8:00am-10:00am and 3:00pm-5:00pm, respectively) in January and February (peak ski months). The figure below displays the distributions of origins for visitors of the Deer Valley Resort, as also shown in **Figure 4**.





The Wasatch Front contributes the majority of visitors to and from Deer Valley Resort with 42% and 41% in the AM peak and PM peak, respectively. The Kimball-Jeremy area contributes the second-greatest percentage of visitors with 34% and 35% in the AM peak and PM peak, respectively. The vehicular traffic to and from the Kimball-Jeremy area are good candidates to encourage shifting to transit or other modes, especially if improved transit service accessing Deer Valley Resort is provided.

This data represents existing travel patterns and do not account for potential changes in travel following the construction of Snow Park Village; trip distributon and assignment as shown in section 4.4 of this report primarily focuses on new project trips. Furthermore, StreetLight Data can not ditinguish between single-occupancy vehicles and high-occupancy/transit vehicles, and therefor does not account for current carpooling or transit usage.

3.6 Vehicle Occupancy Data

In addition to traffic counts and StreetLight Data, Fehr & Peers collected vehicle occupancy counts for AM peak-period, inbound traffic for the Deer Valley Resort. Vehicle occupancy counts were collected for the following three days:

- Saturday, February 13, 2021
- Tuesday, February 23, 2021
- Saturday, February 27, 2021

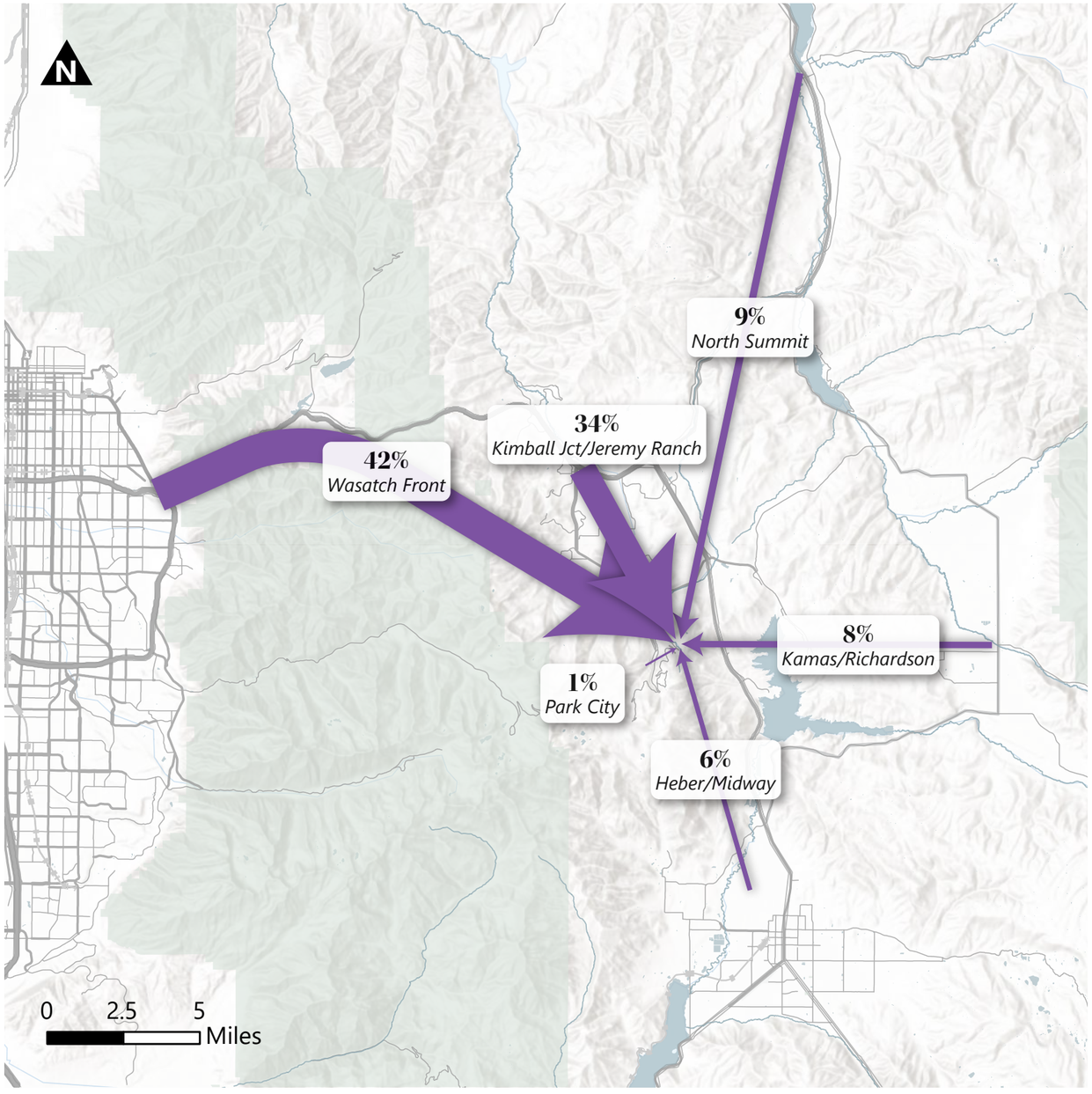
Table 6 presents a summary of vehicle occupancy data, calculated from data collected during the three days listed above. It should be noted that the vehicle occupancy counts were collected during the global COVID-19 pandemic, and the data shown in **Table 6** could be skewed because people are less likely to carpool with individuals outside of their immediate home due to risks presented by Covid-19.

In summary, the average vehicle occupancy for Snow Park Village was observed to be 2.02 occupants/vehicle on Saturday (weighted average of the two sample Saturdays), and 1.90 occupants/vehicle on a weekday (from a single weekday). Also, the percent of single-occupant vehicles was observed to be about 36% on Saturday (weighted average of the two sample Saturdays), and about 38% on a weekday (from a single weekday). Vehicle occupancy is a useful metric to have available for baseline conditions, as it can be used in evaluating how future implementation of potential transportation demand management (TDM) strategies and broader transit network improvements could impact travel behavior. It should be noted that, due to the global Covid-19 pandemic, carpooling may be lower than pre-pandemic levels. However, a return to higher rates of carpooling is expected to be achievable in the near future.

Table 6: Snow Park Village Vehicle Occupancy Summary

Time Period	Total Vehicle Count	Average Occupancy	Single Occupant Vehicles	Percent Single Occupant Vehicles
Saturday, February 13, 2021				
7:45 – 8:00	45	1.76	19	42%
8:00 – 8:15	58	1.84	23	40%
8:15 – 8:30	59	2.12	17	29%
8:30 – 8:45	68	2.09	19	28%
8:45 – 9:00	74	2.04	26	35%
9:00 – 9:15	26	2.12	12	46%
9:15 – 9:30	22	1.95	10	45%
9:30 – 9:45	20	1.95	7	35%
Sum	**372**	-	**133**	-
Weighted Average	-	**1.99**	-	**36%**
Tuesday, February 23, 2021				
7:45 – 8:00	15	1.60	6	40%
8:00 – 8:15	32	1.50	22	69%
8:15 – 8:30	48	1.65	24	50%
8:30 – 8:45	56	1.91	17	30%
8:45 – 9:00	63	2.00	23	37%
9:00 – 9:15	48	1.92	16	33%
9:15 – 9:30	43	2.23	11	26%
9:30 – 9:45	24	2.17	5	21%
Sum	**329**	-	**124**	-
Weighted Average	-	**1.90**	-	**38%**
Saturday, February 27, 2021				
7:45 – 8:00	41	1.66	20	49%
8:00 – 8:15	77	2.04	24	31%
8:15 – 8:30	100	1.91	38	38%
8:30 – 8:45	93	2.11	28	30%
8:45 – 9:00	120	2.28	40	33%
9:00 – 9:15	133	1.98	61	46%
9:15 – 9:30	129	1.97	39	30%
9:30 – 9:45	38	2.13	10	26%
Sum	**731**	-	**260**	-
Weighted Average	-	**2.03**	-	**36%**

Source: Fehr & Peers.



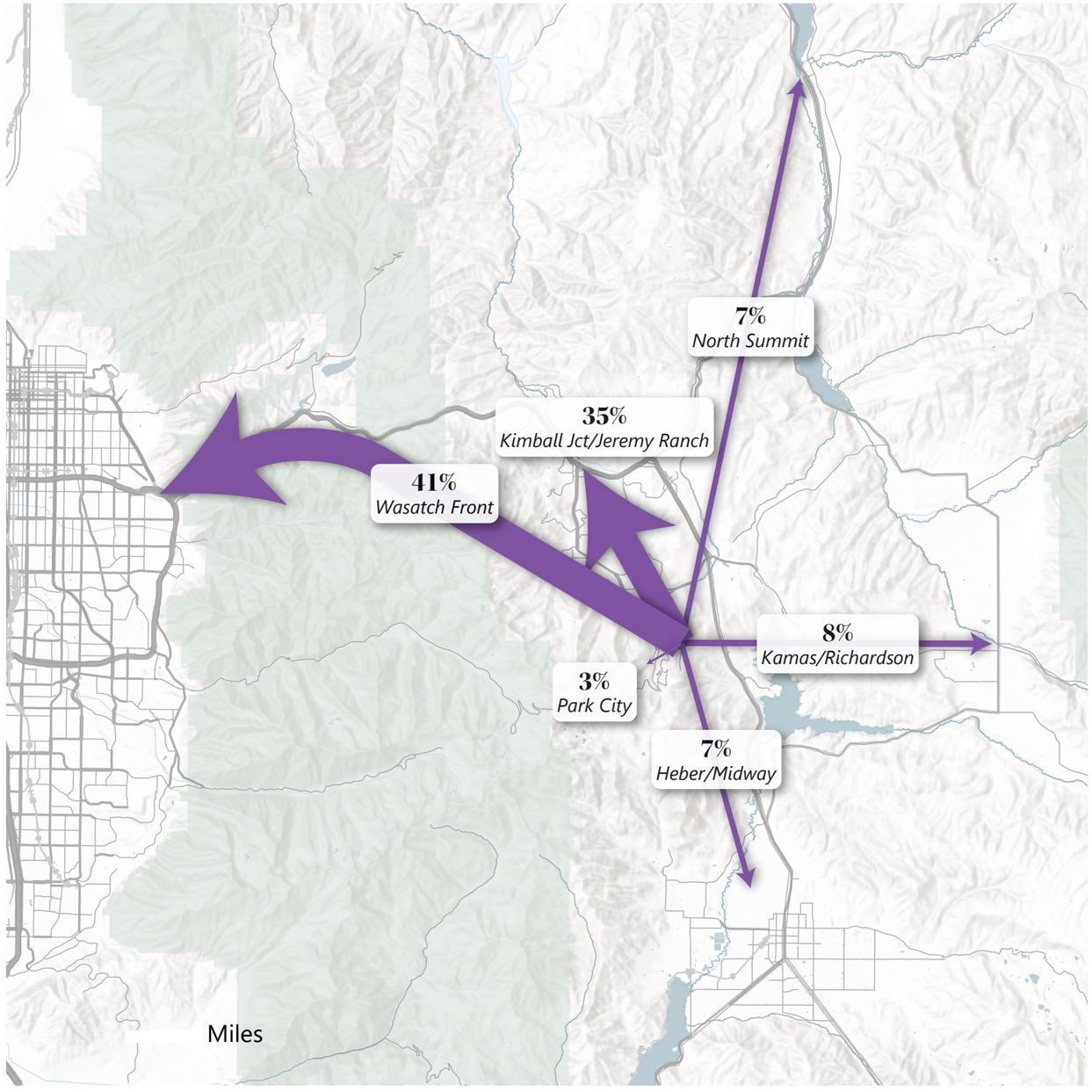


Figure 4

Deer Valley Origin-Destination AM Incoming - PM Outgoing Trends

4. Project Conditions

The Project conditions analysis evaluates the type and intensity of proposed development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in the Introduction. Additionally, Snow Park includes many proposed updates to the roadway network immediately adjacent to the site.

4.1 Project Description

The first phase of the proposed Snow Park Village development will be located at the south parcel of the Deer Valley Resort. The parcel is currently surface parking lots for Deer Valley. Deer Valley resort is in a cul-de-sac type of location, and all trips will access the development through the Deer Valley Drive / Deer Valley Drive East/ Deer Valley Drive West intersections. As a reminder, this traffic report accounts for all future development of the current surface parking lots.

4.1.1 Site Access and Circulation

The Snow Park Village proposal includes mitigations at key intersections to provide better transit access, especially at the transit hub, and improve the traffic flow for visitors traveling by all modes. This circulation plan includes a seasonal one-way Shared Mobility Lane (SML), which prioritizes transit. It will function in a counterclockwise manner. After ski season, the SML will be open to bicycle traffic. Management and enforcement, year-round, will be a City responsibility.

Deer Valley Drive West will be largely left as it is today. The main entrance for day skiers is the western access off Doe Pass Road into the P2 level. The northbound approach at the Doe Pass Road / Deer Valley Drive West intersection will be stop-controlled. To improve pedestrian and bicycle connections, a continuous multiuse path will be constructed along the west curb to connect Snow Park Village to multimodal facilities along Deer Valley Drive and the broader Park City active transportation network. Adjacent to the Snow Park Village site, Deer Valley Drive West will be gated to control access to the Trails End development and to discourage use of the southern terminus of Deer Valley Drive West as a skier drop off area.

Doe Pass Road will be reconfigured to provide access to the parking structure and mobility hub entrances. Doe Pass Road will include two-way general traffic lanes to allow for the movement of public and private vehicles. A continuous sidewalk will be provided on the south side of Doe Pass Road, which will be connected to the multiuse path along the west curb of Deer Valley Drive West by controlled crossings. Two parking accesses, to levels P1 and P2, will be provided on Doe Pass Road. The parking structure will have

internal ramping to allow access between P2 and P3. Both driveways will be controlled with parking management technology, and Deer Valley staff as needed.

Deer Valley Drive East Two general traffic lanes and one transit flex lane will be provided on Deer Valley Drive East. A continuous multiuse path will be provided along the west side, which connects to other similar facilities around the Deer valley Drive loop. Deer Valley Drive East will act as the primary route by which day-skiers depart Snow Park Village, which will be supported by the reconfiguration of the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection and through intuitive, real-time wayfinding. South of its intersection with Doe Pass Road, Deer Valley Drive East will provide access to P2, P3 and P4 parking levels which will primarily serve day skiers. Driveways to these parking levels will be similarly managed through parking technology and Deer Valley staff during periods of peak demand. At its southern terminus, Deer Valley Drive East will be reconfigured into a turnaround drop-off area for day-skier traffic. This drop-off area will be heavily managed, particularly at peak drop-off and pick-up periods with Deer Valley staff directing traffic to ensure smooth operations and safe conditions for users.

A conceptual site plan, showing driveway locations and conceptual roadway configurations is shown in **Figure 5**.



Figure 5
Conceptual Site Plan

4.2 Trip Generation

Much research and case studies have been performed to better understand the transportation benefits of mixed-use development and transit-oriented development (TOD) over the past decade. "D" factors affect the way mixed-use developments generate trips. The "D" factors include:

- Density *(dwellings, jobs per acre)*
- Diversity *(mix of housing, jobs, retail)*
- Design *(connectivity, walkability)*
- Destinations *(regional accessibility)*
- Distance to Transit *(rail and bus proximity)*
- Development Scale *(population, jobs)*
- Demographics *(household size, income)*

Because of the "D" factors, mixed-use developments and TOD have a much higher distribution of mode split (split between walk, bike, transit, and vehicle) and generally result in lower single-occupant vehicle trips and parking demand. Research has shown that mixed-use developments and TOD generate one-third to two-thirds fewer trips than typical state-of-the-practice trip generation methodologies.

Trip generation for the proposed Snow Park Village was obtained from the *Institute of Transportation Engineers – 10th Edition Trip Generation Manual* (ITE Manual) and Fehr & Peers' mixed-use development (MXD+) methodology via MainStreet, a Fehr & Peers web application that captures the traffic benefits of developments by looking at interactions among the mixture of land uses and patron usage of alternative modes (i.e. transit, bicycling, and/or walking). Since the beginning of this effort, a new edition of the *Trip Generation Manual* has been published, however, analyses presented in this report rely on 10th Edition trip generation rates. This is to be consistent with previous drafts, and rates presented in the updated *Trip Generation Manual* would likely lead to marginal ("noise") reductions in trip generation estimates. MXD+ outputs are included in the appendix of this report.

The MXD+ trip generation methodology more accurately captures the trip-reducing benefits of mixed-use development projects and is used throughout the United States to help developers, agencies, and the public to quantify these trip reductions. The MXD+ trip generation model is promoted by the United States Environmental Protection Agency (EPA) and has been adopted by the American Society of Civil Engineers (ASCE), American Planning Association (APA), and many others as a recommended resource for trip generation of smart-growth developments. The MXD+ model uses ITE trip generation rates and applies additional variables to those trip generation rates. Some of the additional variables include:

- Employment

- (Population + Employment) per square mile
- Land area
- Total jobs / population diversity
- Number of intersections per square mile
- Employment within a mile; within
- Employment within a 30-minute trip by transit
- Average household size
- Vehicles owned per capita

Trip generation for the project was computed using trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition, 2017, with trip reductions based on Fehr & Peers' MXD+ methodology to account for the project's many complementary land uses and availability of transit. These reductions were further informed by inputs from the Summit County Travel Demand Model to better tailor results to local travel behavior. Snow Park Village is proposed to include following land uses (taken from the land use program dated October 2021):

- 30,900 square feet of ballroom/event center space
- 143 multifamily housing units
- 193 hotel rooms
- 25,900 square feet of commercial/retail space

The development is proposed to support the current Deer Valley Resort and other land uses in adjacent to the resort. It should be noted that the land uses supporting the ski resort will not be substantial traffic generators; rather, the ski resort will be the primary generator of traffic, and the support land uses serve as accessories to the resort. The current traffic accessing the ski resort were assumed to cover the trip generation for the ski resort and the support land uses independent of the Snow Park Village proposal. **Table 7** presents the Saturday daily, AM peak-hour, and PM peak-hour trip generation estimates for the entirety of the proposed Snow Park Village Project on both parcels north and south of Doe Pass Road, not only the proposed first phase (Village) south of Doe Pass Road.

4.2.1.1 Resort Hotel Trip Generation Rates

Trip Generation estimates for the hotel uses included in the Snow Park Village proposal are based on observed trip generation rates recorded during the development of the 2018 Canyons Village Transportation Master Plan. While there are a handful of key factors that might result in trip generation rates closer to those in the original Snow Park Village Traffic Impact Study, including proximity to the interstate and other complementary land uses, estimates in this memorandum used the local rates recorded at the Canyons.

4.2.1.2 Assumed Mode Shift

To avoid double-counting potential reductions, the trip generation estimates in this memorandum rely solely on mode shift derived from the MXD methodology and underlying assumptions from the regional travel demand model. These reductions, which are shown in the columns titled "% Walk/Bike" and "% Transit," are applied to all proposed land uses. Snow Park Village is proposing to provide full parking supply required by the Park City LMC with no reductions. To account for the availability of parking and potential added incentive to drive rather than use other modes, the reductions for shift to other modes were minimized, assuming half of what was presented in the November 2022 submittal.

4.2.1.3 Reduction in Vehicle Trips due to Implementation of Paid Parking

Charging for parking is a reliable method by which to influence mode choice, and Deer Valley intends to implement paid parking as part of the Snow Park Village proposal. Reductions in trip generation due to the implementation of paid parking at Deer Valley have been scaled back to present a more conservative estimate of how parking pricing will affect trip generation. While many Deer Valley clientele may be much less sensitive to additional costs associated with a day's skiing than the general population, almost 45% of existing trips to and from Deer Valley start and end at points along the Wasatch Front, residents of which are more likely to alter their behavior based on willingness to pay. Lastly, reductions in trip generation due to the implementation of parking pricing are applied only to the resort hotel-, shopping center-, and event center-generated trips, since proposed residential uses at the site are unlikely to require that residents pay for parking on a daily basis.

4.2.1.4 Trip Internalization Derived from MXD

A fundamental element of the Snow Park Village proposal is to provide amenities, services, and entertainment options that complement each other and the ski resort itself. This means that peak-hour trips that might occur without complementary land uses are either delayed (so that they do not occur during the peak hours) or do not require a vehicle trip due to proximity of different uses. Trip internalization rates, presented in **Table 7** under the column heading "% Internal Capture" are applied only to the residential-, resort hotel-, and recreational community center-generated trips, and present a more conservative rate of internalization than presented in the original Snow Park Village traffic impact study.

4.2.1.5 Trip Internalization Derived from Squaw Valley (Palisades Tahoe)

While the residential, hotel, and community center uses are expected to be destinations unto themselves that will generate a measurable number of peak-hour vehicle trips, the food service and retail uses (shown

in **Table 7** as "Shopping Center") are expected to almost exclusively serve guests already at Deer Valley rather than guests traveling to Deer Valley explicitly for those services.

To support this assumption, trip generation estimates for the shopping center uses in this memorandum rely on trip internalization estimates derived from an origin-destination survey conducted at the Squaw Valley, California resort in 2011. Surveys conducted showed that 95-97% of customers at dining and retail uses in a similar context (ski resort base village) were already at the village for other purposes, and did not travel solely for the dining/retail use. Reductions based on the data from Squaw Valley are presented under the column heading "% Resort Int. Capt." And are applied only to the shopping center uses. We assume that employees for these uses will almost exclusively arrive and depart during off-peak periods, resulting in lower reductions for daily trips generated by the shopping center uses.

Trip generation for Snow Park Village is covered in greater detail in **Attachment A**. Detailed MXD+ outputs are also included in the appendix.

Table 7: Snow Park Village Trip Generation

Land Use[1]	Number of Units	Unit Type	Rate[2]	Daily Trip Generation[3]	% Entering[4]	% Exiting[4]	% Walk/ Bike[5]	% Transit[5]	% Paid Parking[7]	% Internal Capture[6]	% Resort Int. Capt.[9]	Trips Entering	Trips Exiting	**New Daily Trips**
(220) - Multifamily Housing Low-Rise	143	Dwelling Unit	8.14	1,164	50%	50%	2.3%	1.5%	-	1.9%	-	549	549	**1,098**
(330) - Resort Hotel	193	Rooms	6.27	1,210	50%	50%	2.3%	1.5%	7.5%	1.9%	-	526	526	**1,052**
(820) - Shopping Center	25.9	1,000 Sq. Ft	46.12	1,195	50%	50%	2.3%	1.5%	7.5%	-	90.0%	53	53	**106**
(495) Recreational Community Center	30.9	1,000 Sq. Ft	9.10	281	50%	50%	2.3%	1.5%	7.5%	1.9%	-	123	123	**246**
Day Skiers[10]	150	Stalls	7.42	1,113	50%	50%	-	-	-	-	-	557	557	**1,114**
Net Weekday Trips				**4,963**								**1,808**	**1,808**	**3,616**
Land Use[1]	Number of Units	Unit Type	Rate[2]	AM Peak Hour Trip Generation[3]	% Entering[4]	% Exiting[4]	% Walk/ Bike[5]	% Transit[5]	% Paid Parking[7]	% Internal Capture[6]	% Resort Int. Capt.[8]	Trips Entering	Trips Exiting	**New AM Peak Hour Trips**
(220) - Multifamily Housing Low-Rise	143	Dwelling Unit	0.46	66	23%	77%	2.8%	1.0%	-	3.7%	-	15	47	**62**
(330) - Resort Hotel	193	Rooms	0.41	79	72%	28%	2.8%	1.0%	7.5%	3.7%	-	49	19	**68**
(820) - Shopping Center	25.9	1,000 Sq. Ft	0.94	24	62%	38%	2.8%	1.0%	7.5%	-	96.2%	1	1	**2**
(495) Recreational Community Center	30.9	1,000 Sq. Ft	1.76	54	62%	38%	2.8%	1.0%	7.5%	3.7%	-	29	18	**47**
Day Skiers[10]	150	Stalls	0.54	82	100%	0%	-	-	-	-	-	82	0	**82**
Net Saturday AM Peak Hour Trips				**306**								**176**	**85**	**261**
Land Use[1]	Number of Units	Unit Type	Rate[2]	PM Peak Hour Trip Generation[3]	% Entering[4]	% Exiting[4]	% Walk/ Bike[5]	% Transit[5]	% Paid Parking[7]	% Internal Capture[6]	% Resort Int. Capt.[8]	Trips Entering	Trips Exiting	**New PM Peak Hour Trips**
(220) - Multifamily Housing Low-Rise	143	Dwelling Unit	0.70	100	60%	40%	1.7%	1.5%	-	10.6%	-	52	35	**87**
(330) - Resort Hotel	193	Rooms	0.70	135	43%	57%	1.7%	1.5%	7.5%	10.6%	-	46	61	**107**
(820) - Shopping Center	25.9	1,000 Sq. Ft	4.50	117	52%	48%	1.7%	1.5%	7.5%	-	96.2%	3	2	**5**
(495) Recreational Community Center	30.9	1,000 Sq. Ft	1.07	33	52%	48%	1.7%	1.5%	7.5%	10.6%	-	14	13	**27**
Day Skiers[10]	150	Stalls	0.64	96	0%	100%	-	-	-	-	-	0	96	**96**
Net Saturday PM Peak Hour Trips				**481**								**115**	**207**	**322**

1. (XXX) Indicates ITE Land Use Code. Land Use Code from the Institute of Transportation Engineers - 10th Edition Trip Generation Manual (ITE Manual)

2. ITE Trip Generation Rates. Hotel rates derived from data collected on Saturday, February 17, 2018, for the Canyons Village Management Association Transportation Master Plan. Day skier rates calculated from existing vehicles/stalls.

3. Traffic Generated by the development according to trip generation rates provided in the ITE Manual (custom rates for Hotel).

4. Percentage of trips Entering and Exiting the development according to the ITE Manual.

5. Percentage of trips that shift to active transportation or transit modes based on data collected by U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

6. Percentage of trips that are captured internally to the site based on rates published in ITE Manual.

7. Percentage of trips that shift to transit due to parking costs based on Fehr & Peers's Parking Cost Tool. The tool estimates close to 20%; 7.5% assumed for conservative results.

8. Percentage of trips that are captured internally to the site for retail/restaurant based on Squaw Valley winter overnight visitor survey conducted in 2011, for weekend AM and PM peak hours.

9. Daily retail/restaurant internal capture percentage was assumed to be lower than AM and PM peak hours due to employees, which daily travel patterns are not as affected as much as peak hours.

10. Day skiers not included in ITE. The rates for day skiers were derived by calculating the number of existing vehicles with the available 1350 existing stalls.

Source: Fehr & Peers

4.3 Trip Distribution and Assignment

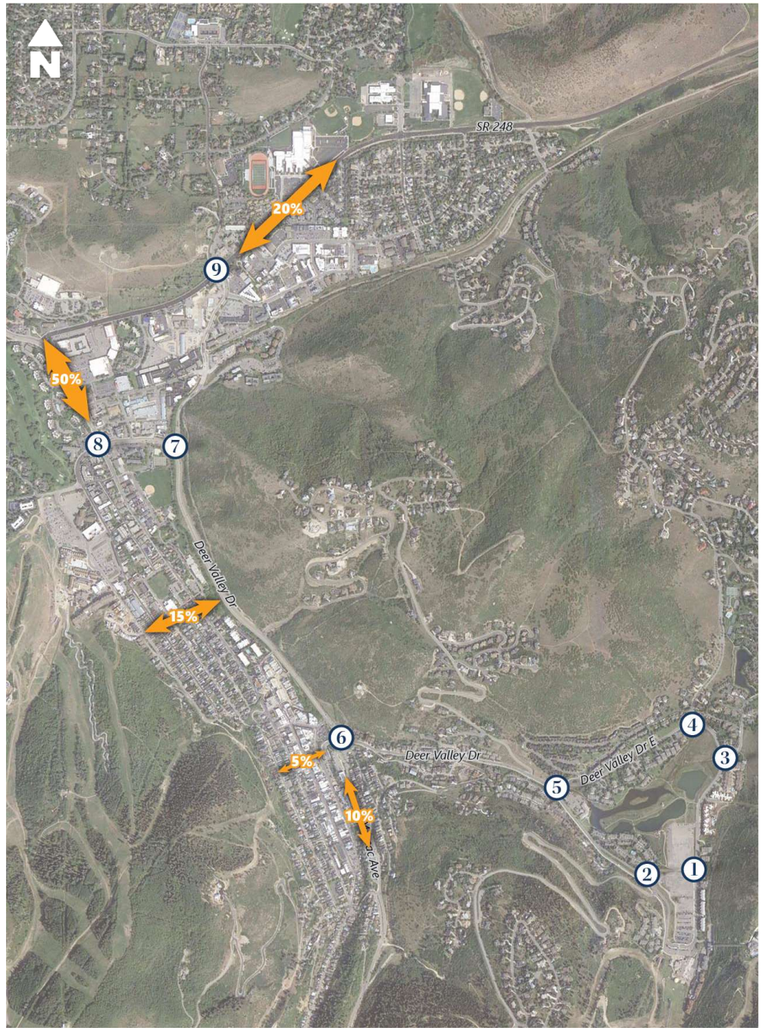
Project traffic was assigned to the roadway network based on the proximity to major streets and freeways, population densities, and local and regional attractions. Existing travel patterns revealed in the Streetlight data, Continuous Count Station (CCS) data collection from UDOT, and observed during data collection also provided helpful guidance to establish these distribution percentages, especially close to the site.

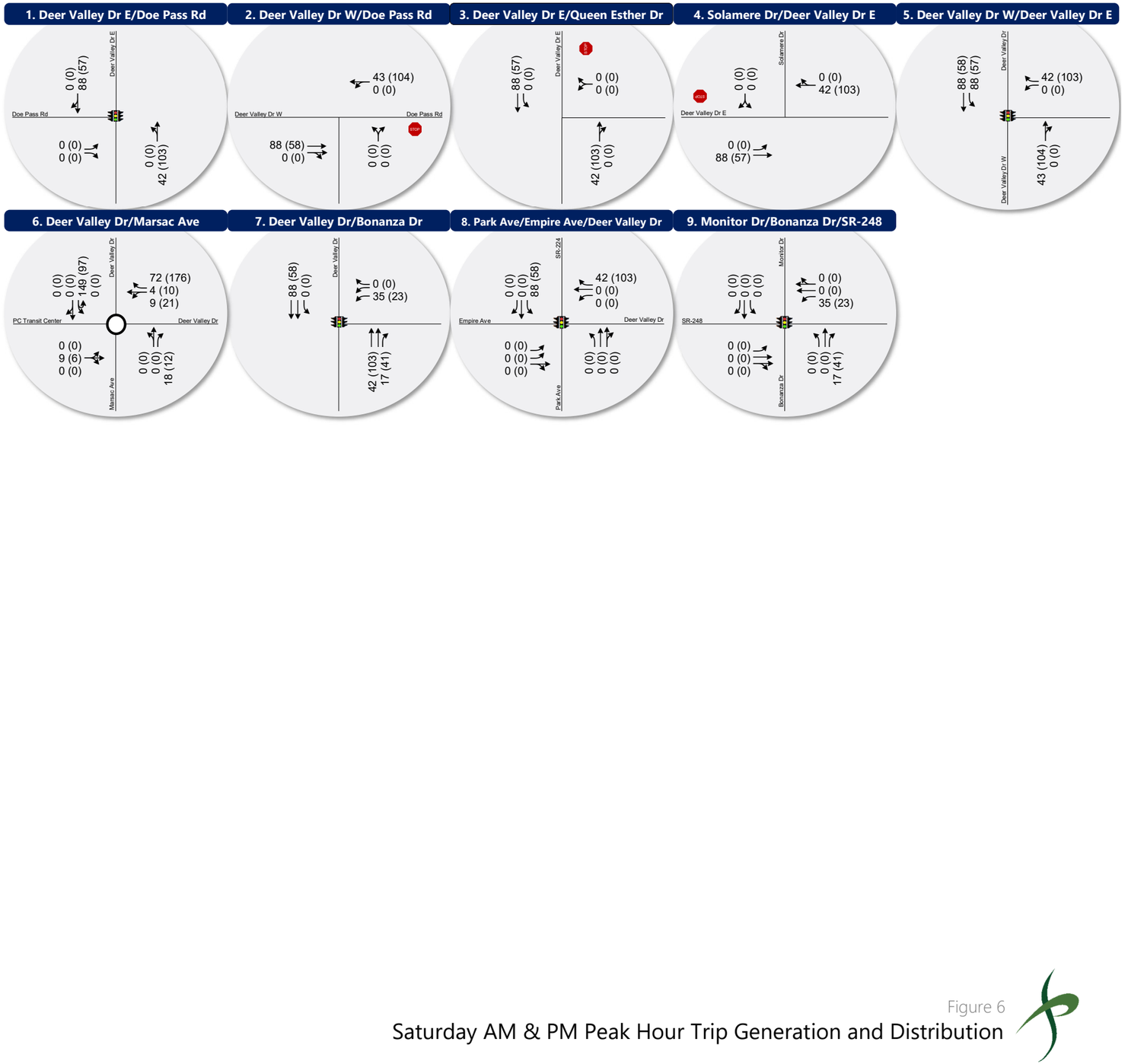
The CCS data from UDOT informed the distribution of trips arriving via SR-224 and SR-248. Closer to the project site, Streetlight data informed the distribution of trips arriving via Marsac Avenue and Deer Valley Drive. Overall, the project-generated trips were distributed to and from these directions in the Existing analysis, in the corresponding percentages:

- 50% North (using SR-224)
- 20% East (using SR-248 via Bonanza Drive)
- 15% West (using any of the accesses along Deer Valley Drive between Bonanza and Marsac)
- 5% West (using the Transit Hub access at the Marsac Roundabout)
- 10% South (using Marsac Avenue)

This trip distribution does not fully align with the origin-destination data presented in **Figure 4** due to the expected differences in trip purpose stemming from the change in land use at Snow Park. The distribution and assignment of new, project-generated trips reflects the assumption that residents and guests of Snow Park Village's hotel and residential uses are more likely to and from Old Town for dining, shopping, or entertainment purposes.

These trip distribution assumptions were used to distribute project-generated traffic to the study area intersections and are shown in **Figure 6**.





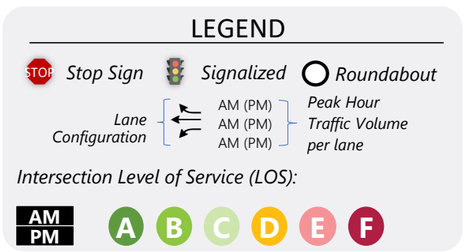


Figure 6

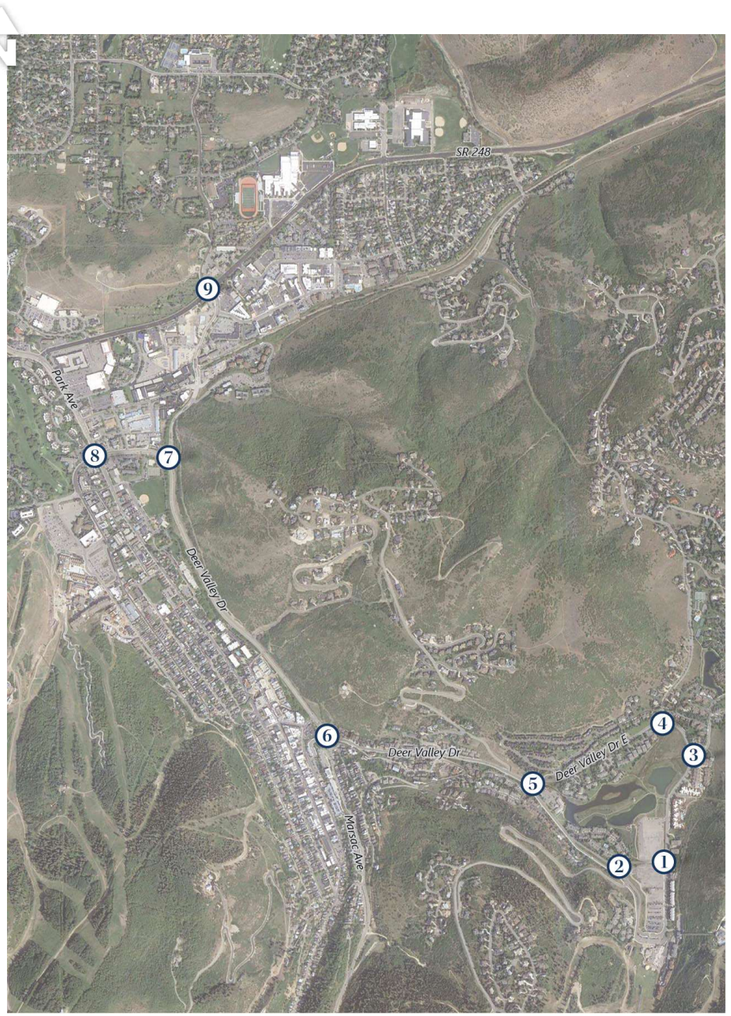
Saturday AM & PM Peak Hour Trip Generation and Distribution

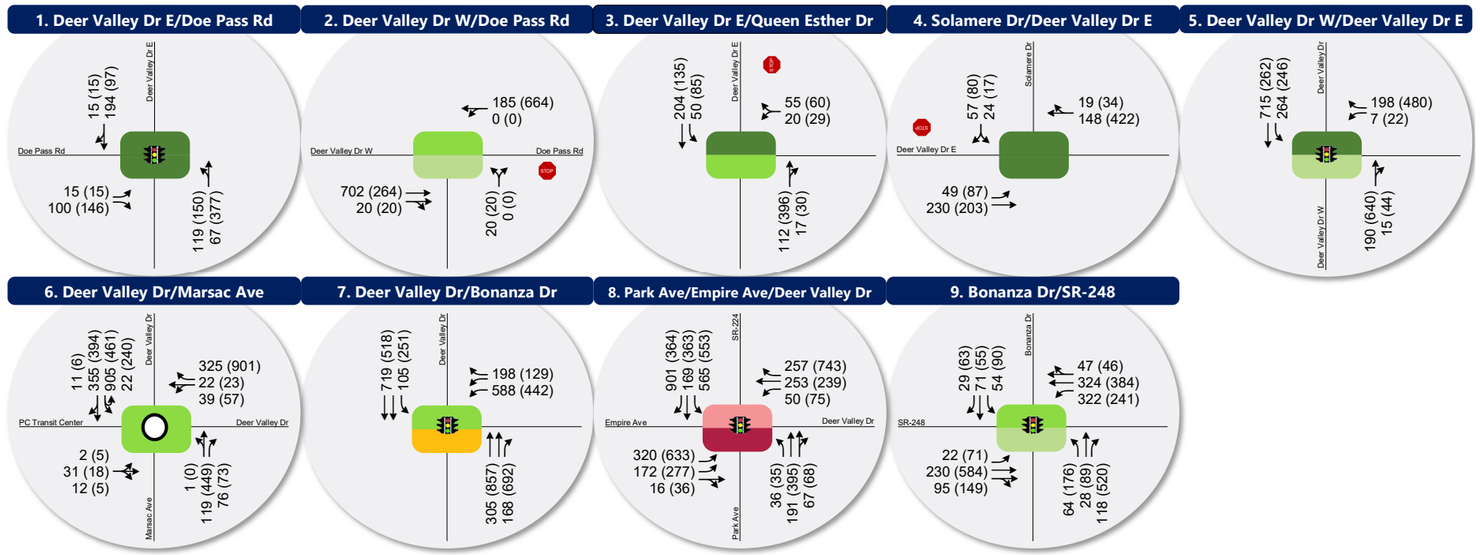
5. Existing 2020 plus Project Conditions

The Existing (2020) Plus Project conditions analysis evaluates the impact of the proposed development-generated traffic on the surrounding roadway network under existing conditions. To analyze this impact, the Saturday peak-hour background traffic volumes were combined with volumes generated by the proposed Project during its Saturday peak hours. Intersection LOS analyses were then performed and compared to the results of the background traffic volumes. This comparison shows the impact of the proposed project.

5.1 Traffic Volumes

Vehicle trips in and out of the existing Deer Valley resort are assumed to be for the ski resort users and were not subtracted out from the background volumes. Project-generated traffic for the additional land uses and development was added to the background volumes to yield Existing (2020) Plus Project peak-hour volumes. The Saturday AM and PM peak-hour traffic volumes at the study intersections are shown in **Figure 7**.





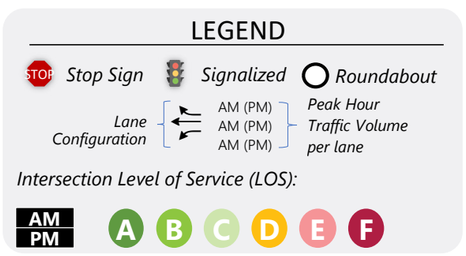


Figure 7
Existing 2020 Plus Project Saturday AM & PM Peak Hour Traffic Conditions

5.2 Level of Service Analysis

Using SimTraffic simulation software (for signalized and unsignalized intersections) and SIDRA software (for the roundabout) and the HCM 6 delay thresholds provided in the Introduction, the existing 2020 plus project Saturday AM and PM peak hour LOS were computed for each study intersection. The results of the analysis are reported in **Table 8** (see Appendix for the detailed LOS report).

Table 8: Existing 2020 plus Project Conditions Saturday AM & PM Peak Hour Level of Service

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / Deer Valley Dr East	AM	Signal	-	-	-	6	A
		PM		-	-	-	7	A
2	Doe Pass Rd / Deer Valley Dr West	AM	SSSC[4]	NB Left	8	A	-	-
		PM		NB Left	16	C	-	-
3	Queen Esther Dr / Deer Valley Dr East	AM	SSSC	WB Left	8	A	-	-
		PM		WB Left	11	B	-	-
4	Deer Valley Dr East / Solamere Dr	AM	SSSC	SB Left	8	A	-	-
		PM		SB Left	13	B	-	-
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	SSSC	WB Left	26	D	-	-
		PM		WB Left	**128**	**F**	-	-
6	Deer Valley Drive / Marsac Avenue	AM	Roundabout	-	-	-	15	B
		PM		-	-	-	15	B
7	Deer Valley Dr / Bonanza Dr	AM	Signal	-	-	-	11	B
		PM		-	-	-	29	C
8	Deer Valley Dr / Park Ave / Empire Ave	AM	Signal	-	-	-	**75**	**E**
		PM		-	-	-	**83**	**F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	Signal	-	-	-	13	B
		PM		-	-	-	20	C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle).
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound
4. Side-street stop control.

Source: Fehr & Peers.

As shown in **Table 8**, all study intersections operated within acceptable LOS (LOS D or better), with the exception of the following locations:

- Deer Valley Drive East / Deer Valley Drive West: LOS F in the PM peak hour
    - This is caused by the high traffic volumes exiting the Deer Valley Resort on the westbound approach onto Deer Valley Drive. The westbound approach is stop-controlled, making it difficult for vehicles to find a gap and turn onto Deer Valley Drive West.
- Deer Valley Drive / Park Avenue / Empire Avenue: LOS E in the AM peak hour, LOS F in the PM peak hour
    - This is caused by high congestion at the signal due to high volumes accessing various ski resorts and downtown Park City.

It should be noted that the proposed Snow Park Village development introduces various support land uses intended to attract resort users to stay on-site after the ski resort peak hour. This will help distribute the peaking of traffic, reducing delays at the study intersections and roadways. Therefore, the results shown in **Table 8** are likely overstated.

5.3 Mitigation Measures

The Snow Park Village site plan includes realignment of the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection. The intersection is currently a "T"-intersection with free-flow movement north/south along Deer Valley Drive West / Deer Valley Drive, and a stop-control on the approach of Deer Valley Drive East. The proposed plan adds a signal at the intersection, as shown in **Figure 8**. Deer Valley Drive West will serve as a primary transit and auto route to access the proposed transit hub and the main P2 parking level entrance on Doe Pass Road and serve private vehicles accessing Royal Street and the Trail's End community. Deer Valley Drive East will serve as the secondary vehicular route to access the Snow Park drop-off/pick-up area and parking structure accesses that includes day skier spaces, hotel, and residences.

To evaluate how the study intersections would operate if driving behaviors do not change despite development, the traffic distribution of the background traffic at the Deer Valley Drive East / Deer Valley Drive West intersection was not modified, and project traffic was added. This was assumed to account for the historical use patterns and direct routes to the parking garages. This resulted in traffic splits similar to existing conditions at the Deer Valley Drive East / Deer Valley Drive West intersection with roughly 25% using Deer Valley Drive East and roughly 75% using Deer Valley Drive West inbound in the AM peak hour, and roughly 40% using Deer Valley Drive East and roughly 60% using Deer Valley Drive West outbound in the PM peak hour.

Park City has a longstanding position of not mitigating certain deficient intersections within its boundaries due to the impacts of road widening and other potential mitigations to the community. As a result, potential mitigations at the intersections of Deer Valley Drive / Park Avenue / Empire Avenue, Bonanza Drive / Monitor Drive / SR-248 were not analyzed as part of this study, and are therefore not included as recommendations. Further, deficiencies shown at the intersection of Deer Valley Drive / Bonanza Drive are not a result of project-generated trips or operations of the intersection itself; instead they stem from vehicle queues from the intersection of Deer Valley Drive / Park Avenue / Empire Avenue. As a result, mitigations at the intersection of Deer Valley Drive / Bonanza Drive are not recommended as part of this study. As stated earlier, Deer Valley Drive between the roundabout and SR-224 intersection is a UDOT facility. Any efforts to improve traffic will be led by UDOT.

The analysis results with the reconfigured Deer Valley Drive East / Deer Valley Drive West intersection are shown in **Table 9** (see Appendix for the detailed LOS report). As shown in **Table 9**, the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection operates at LOS A and LOS C in the AM and PM peak hours, respectively.

With increased traffic due to the development, the Deer Valley Drive East / Solamere Drive and Deer Valley Drive East / Queen Esther Drive intersections experience increased delays. As a mitigation, the Snow Park Village site plan includes new left-turn pockets at both the Deer Valley Drive East / Solamere Drive and Deer Valley Drive East / Queen Esther Drive intersections to improve traffic operations during peak periods and better facilitate inbound left turns, as well as a receiving lane to allow for two-stage left turns out of Solamere Drive and Queen Esther Drive.



Source: Alliance Engineering Inc

Figure 8

Proposed Reconfiguration of Deer Valley Drive East / Deer Valley Drive West Intersection - Transit Priority Alternative

Table 9: Existing 2020 plus Project Mitigated Conditions Saturday AM & PM Peak Hour Level of Service

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / Deer Valley Dr East	AM	Signal	-	-	-	4	A
		PM		-	-	-	7	A
2	Doe Pass Rd / Deer Valley Dr West	AM	SSSC[4]	NB Left	12	B	-	-
		PM		NB Left	19	C	-	-
3	Queen Esther Dr / Deer Valley Dr East	AM	SSSC	WB Left	5	A	-	-
		PM		WB Left	11	B	-	-
4	Deer Valley Dr East / Solamere Dr	AM	SSSC	SB Left	6	A	-	-
		PM		SB Left	9	A	-	-
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	Signal	-	-	-	9	A
		PM		-	-	-	21	C
6	Deer Valley Drive / Marsac Avenue	AM	Roundabout	-	-	-	15	B
		PM		-	-	-	15	B
7	Deer Valley Dr / Bonanza Dr	AM	Signal	-	-	-	12	B
		PM		-	-	-	38	D
8	Deer Valley Dr / Park Ave / Empire Ave	AM	Signal	-	-	-	**76**	**E**
		PM		-	-	-	**84**	**F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	Signal	-	-	-	13	B
		PM		-	-	-	20	C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle).
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound.
4. Side-street stop control.

Source: Fehr & Peers.

6. Opening Year (2024) Background Conditions

The purpose of the Opening Year (2024) Background conditions analysis is to evaluate the study intersections during the peak travel periods of the day under projected 2024 traffic volumes, when the development is projected to open. This analysis provides a baseline condition for the year 2024, which can be used to determine future Project impacts.

6.1 Traffic Volumes

Traffic volumes for 2024 were estimated using traffic counts and forecasted volumes from the Summit/Wasatch Travel Demand Model (September 2020 version) for 2024. This is a regional forecasting model developed with UDOT support to help plan for major infrastructure in the Wasatch Back region. The Summit/Wasatch Travel Demand Model shows a lower annual growth rate in the future by accounting for a higher mode split for non-drive alone modes of transportation – higher usage of transit, walking, and biking than previous versions of travel demand models. The following annual growth rates were used on the following roadways to project 2024 background weekday volumes as shown in **Figure 9**.

- 0.5% on Deer Valley Drive (SR-224) north of Bonanza Drive
- 0.5% on Deer Valley Drive (SR-224) south of Bonanza Drive
- 0.5% on Deer Valley Drive (SR-224) north of Marsac Avenue
- 0.6% on Deer Valley Drive (SR-224) east of Marsac Avenue
- 0.6% on Deer Valley Drive (SR-224) north of Deer Valley Drive West
- 0.4% on Deer Valley Drive (SR-224) south of Deer Valley Drive West
- 1.7% on Bonanza Drive
- 0.3% on Marsac Avenue

6.2 Level of Service Analysis

Using SimTraffic simulation software (for signalized and unsignalized intersections) and SIDRA software (for the roundabout) and the HCM 6 delay thresholds provided in the Introduction, opening year 2024 background weekday peak hour LOS was computed for each study intersection. The results of this analysis for the Saturday AM and PM peak hour are reported in **Table 10** (see Appendix for the detailed LOS report).

Table 10: Opening Year 2024 Background Conditions Saturday AM & PM Peak Hour Level of Service

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / Deer Valley Dr East	AM	SSSC[4]	-	**-**	**-**	-	-
		PM		-	**-**	**-**	-	-
2	Doe Pass Rd / Deer Valley Dr West	AM	SSSC	-	-	-	-	-
		PM		-	-	-	-	-
3	Queen Esther Dr / Deer Valley Dr East	AM	SSSC	WB Left	6	A	-	-
		PM		WB Left	8	A	-	-
4	Deer Valley Dr East / Solamere Dr	AM	SSSC	SB Left	6	A	-	-
		PM		SB Left	11	B	-	-
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	SSSC	WB Left	14	B	-	-
		PM		WB Left	**41**	**E**	-	-
6	Deer Valley Drive / Marsac Avenue	AM	Roundabout	-	-	-	11	B
		PM		-	-	-	11	B
7	Deer Valley Dr / Bonanza Dr	AM	Signal	-	-	-	11	B
		PM		-	-	-	20	C
8	Deer Valley Dr / Park Ave / Empire Ave	AM	Signal	-	-	-	**82**	**F**
		PM		-	-	-	**85**	**F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	Signal	-	-	-	13	B
		PM		-	-	-	20	C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle) and is only reported for signalized intersections and roundabouts.
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound
4. Side-street stop control.

Source: Fehr & Peers.

As shown in **Table 10**, all study intersections operated within acceptable LOS (LOS D or better), with the exception of the following locations:

- Deer Valley Drive East / Deer Valley Drive West: LOS E in the PM peak hour
    - This is caused by the high volumes of vehicles exiting the Deer Valley Resort area making a westbound right turn onto Deer Valley Drive West. The westbound approach is stop-controlled, making it difficult for vehicles to find a gap and turn onto Deer Valley Drive West.

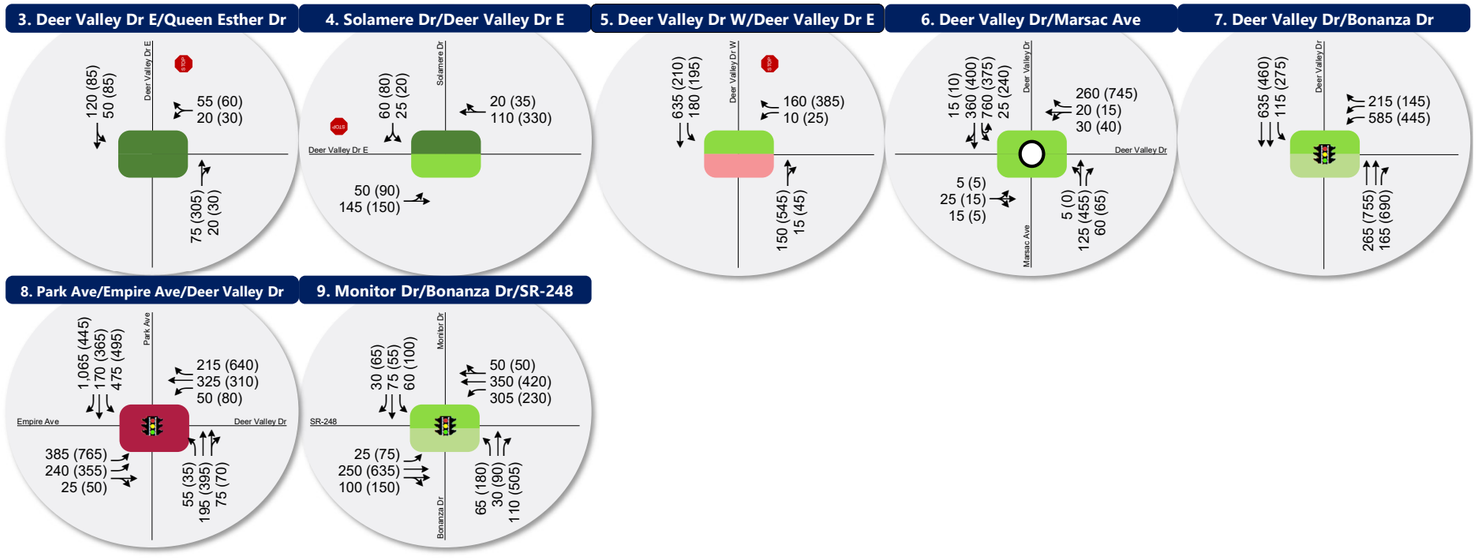
- Deer Valley Drive / Park Avenue / Empire Avenue: LOS F in both AM and PM peak hours
    - This is caused by high congestion at the signal due to high volumes accessing various ski resorts and downtown Park City.

It should be noted that while the Bonanza Drive / Deer Valley Drive intersection operates within acceptable LOS, it is often impacted by vehicle queues spilling back to this intersection from the upstream intersection at Deer Valley Drive / Park Avenue / Empire Avenue in the PM peak hour.

6.3 Mitigation Measures

The concept master plan for Snow Park Village shows re-alignment and signalization of the Deer Valley Drive East / Deer Valley Drive West intersection, which will alter the westbound LOS at this intersection. Therefore, Fehr & Peers does not recommend any mitigation measures for opening year background conditions.





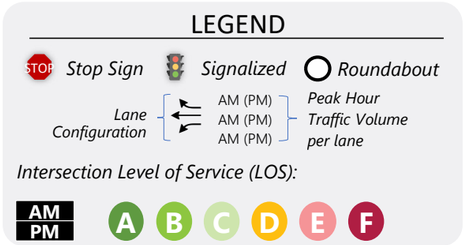


Figure 9

Opening Year 2024 Background Saturday AM & PM Peak Hour Traffic Conditions

7. Opening Year (2024) Plus Project Conditions

The purpose of the opening year 2024 plus project conditions analysis is to evaluate the impact of the proposed development traffic on the surrounding roadway network in the year 2024, the proposed opening year of the development. To analyze this impact, the projected 2024 Saturday AM and PM peak hour background traffic volumes were combined with volumes generated by the development for the Saturday AM and PM peak hours. Intersection LOS analyses were then performed and compared to the results of the background traffic volumes. This comparison shows the impact of the proposed project in opening year 2024.

7.1 Traffic Volumes

Project-generated traffic (**Figure 6**) was added to the opening year 2024 background volumes (**Figure 9**) to yield Opening Year (2024) Plus Project Saturday AM and PM peak-hour traffic volumes at the study intersections as shown in **Figure 10**.

7.2 Level of Service Analysis

Using SimTraffic simulation software (for signalized and unsignalized intersections) and SIDRA software (for the roundabout) and the HCM 6 delay thresholds provided in the Introduction, opening year 2024 plus project Saturday AM and PM peak hour LOS were computed for each study intersection. The results of the analysis are reported in **Table 11** (see Appendix for the detailed LOS report).

Table 11: Opening Year 2024 plus Project Conditions Saturday AM & PM Peak Hour Level of Service

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / Deer Valley Dr East	AM	Signal	-	-	-	7	A
		PM		-	-	-	7	A
2	Doe Pass Rd / Deer Valley Dr West	AM	SSSC[4]	NB Left	15	B	-	-
		PM		NB Left	24	C	-	-
3	Queen Esther Dr / Deer Valley Dr East	AM	SSSC	WB Left	8	A	-	-
		PM		WB Right	20	C	-	-
4	Deer Valley Dr East / Solamere Dr	AM	SSSC	SB Left	8	A	-	-
		PM		SB Right	**78**	**F**	-	-
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	SSSC	WB Left	20	C	-	-
		PM		WB Right	**126**	**F**	-	-
6	Deer Valley Drive / Marsac Avenue	AM	Roundabout	-	-	-	16	C
		PM		-	-	-	16	C
7	Deer Valley Dr / Bonanza Dr	AM	Signal	-	-	-	12	B
		PM		-	-	-	**67**	**E**
8	Deer Valley Dr / Park Ave / Empire Ave	AM	Signal	-	-	-	**80**	**F**
		PM		-	-	-	**88**	**F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	Signal	-	-	-	14	B
		PM		-	-	-	22	C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle).
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound
4. Side-street stop control.

Source: Fehr & Peers.

As shown in **Table 11**, all study intersections operated within acceptable LOS (LOS D or better), with the exception of the following locations:

- Deer Valley Drive East / Solamere Drive: LOS F in the PM peak hour
    - This is caused by the queues at the stop-controlled westbound approach at the Deer Valley Drive East / Deer Valley Drive West intersection extending past Solamere Drive, making it difficult for the southbound vehicles to turn onto Deer Valley Drive East.
- Deer Valley Drive East / Deer Valley Drive West: LOS F in the PM peak hour

- This is caused by the high traffic volumes exiting the Deer Valley Resort area making a westbound right turn onto Deer Valley Drive. The westbound approach is stop-controlled, making it difficult for vehicles to find a gap and turn onto Deer Valley Drive West.

- Deer Valley Drive / Bonanza Drive: LOS E in the PM peak hour
  - This is caused by vehicle queues spilling back to this intersection from the upstream intersection at Deer Valley Drive / Park Avenue / Empire Avenue.
- Deer Valley Drive / Park Avenue / Empire Avenue: LOS F in both AM and PM peak hours
  - This is caused by high congestion at the signal due to high volumes accessing various ski resorts and downtown Park City

It should be noted that the proposed Snow Park Village development introduces various support land uses intended to attract resort users to stay on-site after the ski resort peak hour. This will help distribute the peaking of traffic, reducing delays at the study intersections and roadways. Therefore, the results shown in **Table 11** are likely overstated.

7.3 Mitigation Measures

The Snow Park Village site plan includes realignment of the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection. The intersection is currently a "T"-intersection with free-flow movement north/south along Deer Valley Drive West / Deer Valley Drive, and a stop-control on the approach of Deer Valley Drive East. The proposed plan adds a signal at the intersection as shown in **Figure 8.** Deer Valley Drive West will serve as a primary transit and auto route to access the proposed transit hub and the main P2 parking level entrance on Doe Pass Road, and serve private vehicles accessing Royal Street and the Trail's End community. Deer Valley Drive East will serve as the secondary vehicular route to access the Snow Park drop-off/pick-up area and parking structure accesses that includes day skier spaces, hotel, and residences.

To evaluate how the study intersections would operate if driving behaviors do not change despite development, the traffic distribution of the background traffic at the Deer Valley Drive East / Deer Valley Drive West intersection was not modified, and project traffic was added. This was assumed to account for the historical use patterns and direct routes to the parking garages. This resulted in traffic splits similar to existing conditions at the Deer Valley Drive East / Deer Valley Drive West intersection with roughly 25% using Deer Valley Drive East and roughly 75% using Deer Valley Drive West inbound in the AM peak hour, and roughly 40% using Deer Valley Drive East and roughly 60% using Deer Valley Drive West outbound in the PM peak hour.

Park City has a longstanding position of not mitigating certain deficient intersections within its boundaries due to the impacts of road widening and other potential mitigations to the community. As a result, potential mitigations at the intersections of Deer Valley Drive / Park Avenue / Empire Avenue, Bonanza Drive / Monitor Drive / SR-248 were not analyzed as part of this study, and are therefore not included as recommendations. Further, deficiencies shown at the intersection of Deer Valley Drive / Bonanza Drive are not a result of project-generated trips or operations of the intersection itself; instead they stem from vehicle queues from the intersection of Deer Valley Drive / Park Avenue / Empire Avenue. As a result, mitigations at the intersection of Deer Valley Drive / Bonanza Drive are not recommended as part of this study. As stated earlier, Deer Valley Drive between the roundabout and SR-224 intersection is a UDOT facility. Any efforts to improve traffic will be led by UDOT.

The analysis results with the reconfigured Deer Valley Drive East / Deer Valley Drive West intersection are shown in **Table 12** (see Appendix for the detailed LOS report). As shown in **Table 12**, the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection operates at LOS A and LOS C in the AM and PM peak hour, respectively.

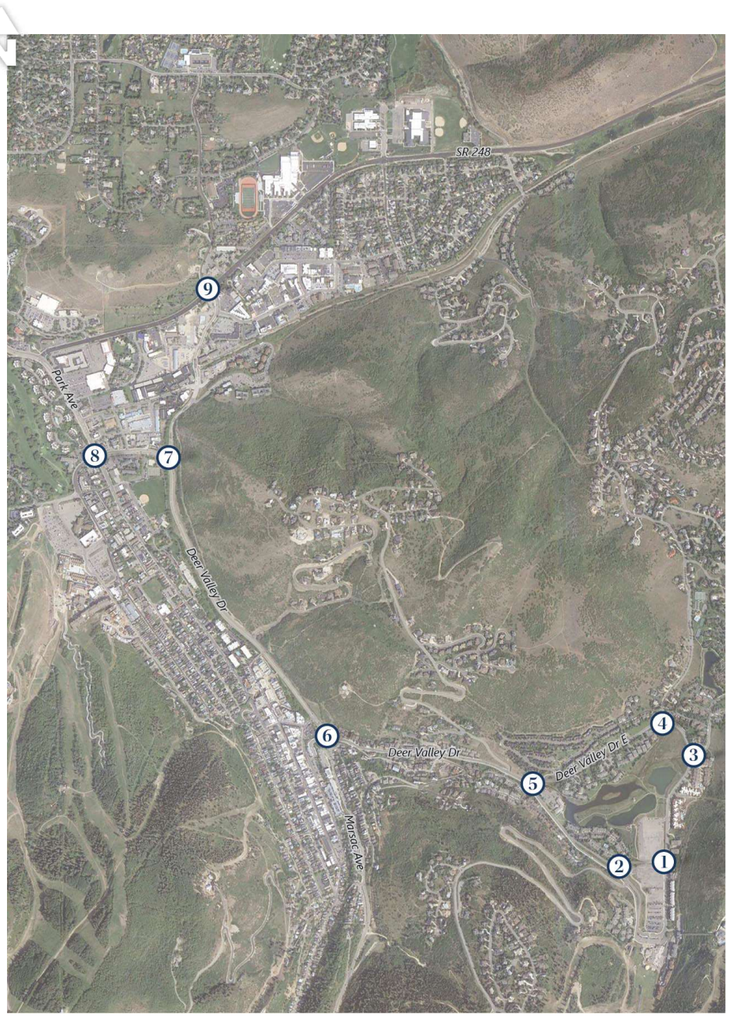
With increased traffic due to the development, the Deer Valley Drive East / Solamere Drive and Deer Valley Drive East / Queen Esther Drive intersections experience increased delays. As a mitigation, the Snow Park Village site plan includes new left-turn pockets at both the Deer Valley Drive East / Solamere Drive and Deer Valley Drive East / Queen Esther Drive intersections to improve traffic operations during peak periods and better facilitate inbound left turns, as well as a receiving lane to allow for two-stage left turns out of Solamere Drive and Queen Esther Drive.

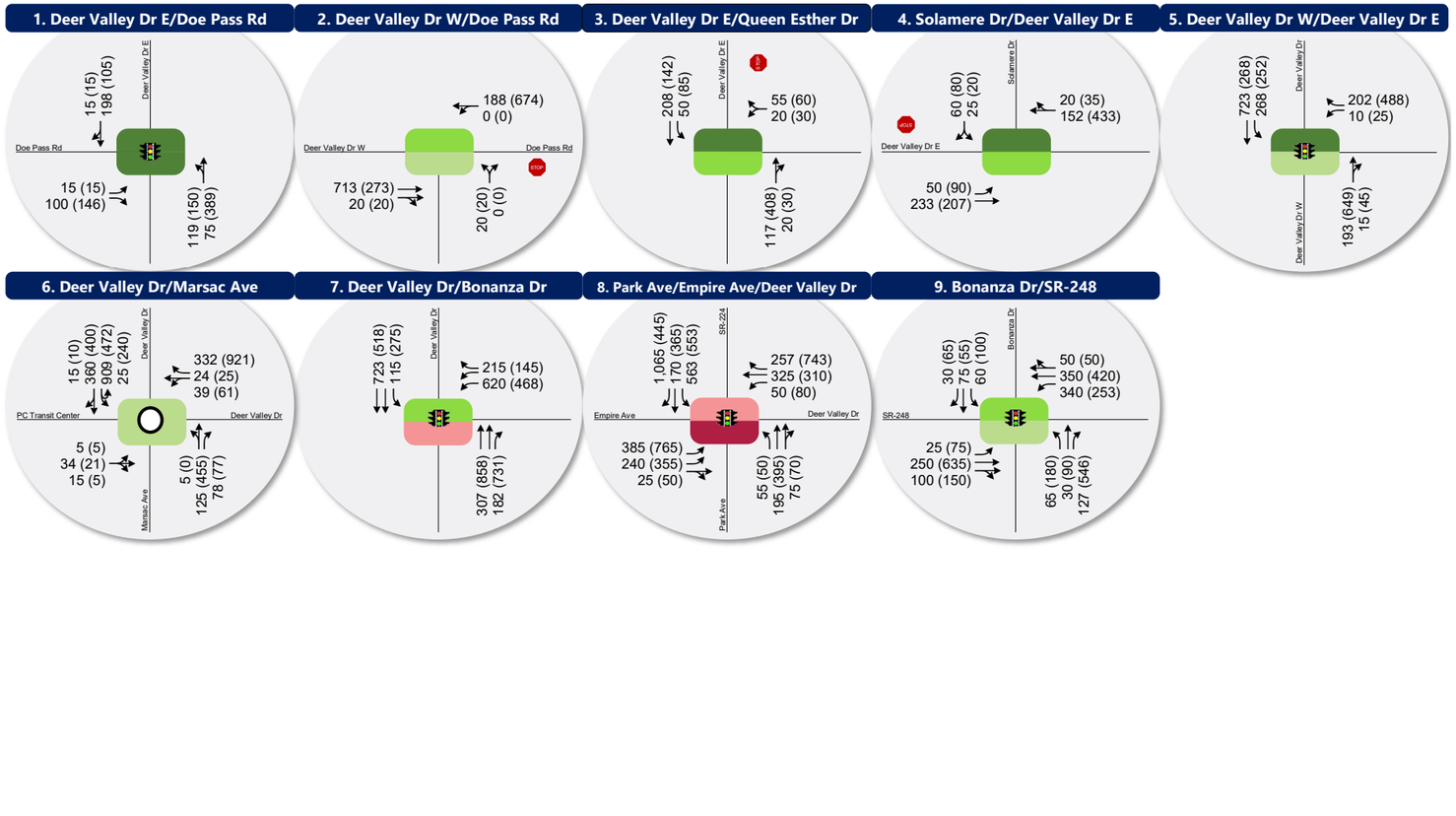
Table 12: Opening Year 2024 plus Project Mitigated Conditions Saturday AM & PM Peak Hour Level of Service

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / Deer Valley Dr East	AM	Signal	-	-	-	5	A
		PM		-	-	-	7	A
2	Doe Pass Rd / Deer Valley Dr West	AM	SSSC[4]	NB Left	10	B	-	-
		PM		NB Left	18	C	-	-
3	Queen Esther Dr / Deer Valley Dr East	AM	SSSC	WB Right	5	A	-	-
		PM		WB Left	10	B	-	-
4	Deer Valley Dr East / Solamere Dr	AM	SSSC	SB Left	6	A	-	-
		PM		SB Left	11	B	-	-
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	Signal	-	-	-	9	A
		PM		-	-	-	22	C
6	Deer Valley Drive / Marsac Avenue	AM	Roundabout	-	-	-	16	C
		PM		-	-	-	16	C
7	Deer Valley Dr / Bonanza Dr	AM	Signal	-	-	-	12	B
		PM		-	-	-	**76**	**E**
8	Deer Valley Dr / Park Ave / Empire Ave	AM	Signal	-	-	-	**78**	**E**
		PM		-	-	-	**88**	**F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	Signal	-	-	-	14	B
		PM		-	-	-	22	C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle).
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound.
4. Side-street stop control.

Source: Fehr & Peers.





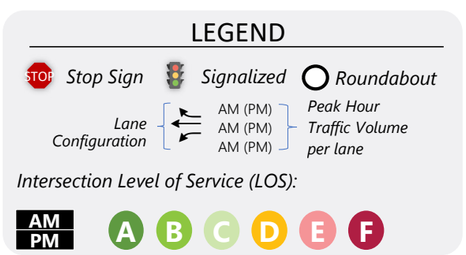


Figure 10
Opening Year 2024 Plus Project Saturday AM & PM Peak Hour Traffic Conditions

8. Future 2040 Background Conditions

The purpose of the future 2040 background conditions analysis is to evaluate the study intersections during peak travel periods under projected 2040 traffic volumes. This analysis provides a baseline condition for the year 2040, which can be used to determine future project impacts.

8.1 Traffic Volumes

Traffic volumes for 2040 were estimated using traffic counts and forecasted volumes from the Summit/Wasatch Travel Demand Model (September 2020 version) for 2040. The Summit/Wasatch Travel Demand Model shows a lower annual growth rate in the future by accounting for a higher mode split of transportation – higher usage of transit, walking, and biking than previous versions of travel demand models. The following annual growth rates used on the following roadways to project 2040 background weekday volumes as shown in **Figure 11**.

- 0.3% on Deer Valley Drive (SR-224) north of Bonanza Drive
- 0.7% on Deer Valley Drive (SR-224) south of Bonanza Drive
- 0.6% on Deer Valley Drive (SR-224) north of Marsac Avenue
- 0.9% on Deer Valley Drive (SR-224) east of Marsac Avenue
- 1.0% on Deer Valley Drive (SR-224) north of Deer Valley Drive West
- 0.8% on Deer Valley Drive (SR-224) south of Deer Valley Drive West
- 1.2% on Bonanza Drive
- 0.4% on Marsac Avenue

Based on the understanding that much of the lower Deer Valley is effectively built out, traffic volumes on Solamere Drive and Queen Esther Drive were not increased for future scenarios.

8.2 Level of Service Analysis

Using SimTraffic simulation software (for signalized and unsignalized intersections) and SIDRA software (for the roundabout) and the HCM 6 delay thresholds provided in the Introduction, future 2040 background weekday peak hour LOS was computed for each study intersection. The results of this analysis for the AM & PM peak hour are reported in **Table 13** (see Appendix for the detailed LOS report).

Table 13: Future 2040 Background Conditions Saturday AM & PM Peak Hour Level of Service

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / Deer Valley Dr East	AM	SSSC[4]	-	**-**	**-**	-	-
		PM		-	**-**	**-**	-	-
2	Doe Pass Rd / Deer Valley Dr West	AM	SSSC	-	-	-	-	-
		PM		-	-	-	-	-
3	Queen Esther Dr / Deer Valley Dr East	AM	SSSC	WB Left	7	A	-	-
		PM		WB Left	9	A	-	-
4	Deer Valley Dr East / Solamere Dr	AM	SSSC	SB Left	8	A	-	-
		PM		SB Left	15	C	-	-
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	SSSC	WB Left	17	C	-	-
		PM		WB Right	**112**	**F**	-	-
6	Deer Valley Drive / Marsac Avenue	AM	Roundabout	-	-	-	16	C
		PM		-	-	-	11	B
7	Deer Valley Dr / Bonanza Dr	AM	Signal	-	-	-	18	B
		PM		-	-	-	**59**	**E**
8	Deer Valley Dr / Park Ave / Empire Ave	AM	Signal	-	-	-	**83**	**F**
		PM		-	-	-	**90**	**F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	Signal	-	-	-	16	B
		PM		-	-	-	28	C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle) and is only reported for signalized intersections and roundabouts.
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound
4. Side-street stop control.

Source: Fehr & Peers.

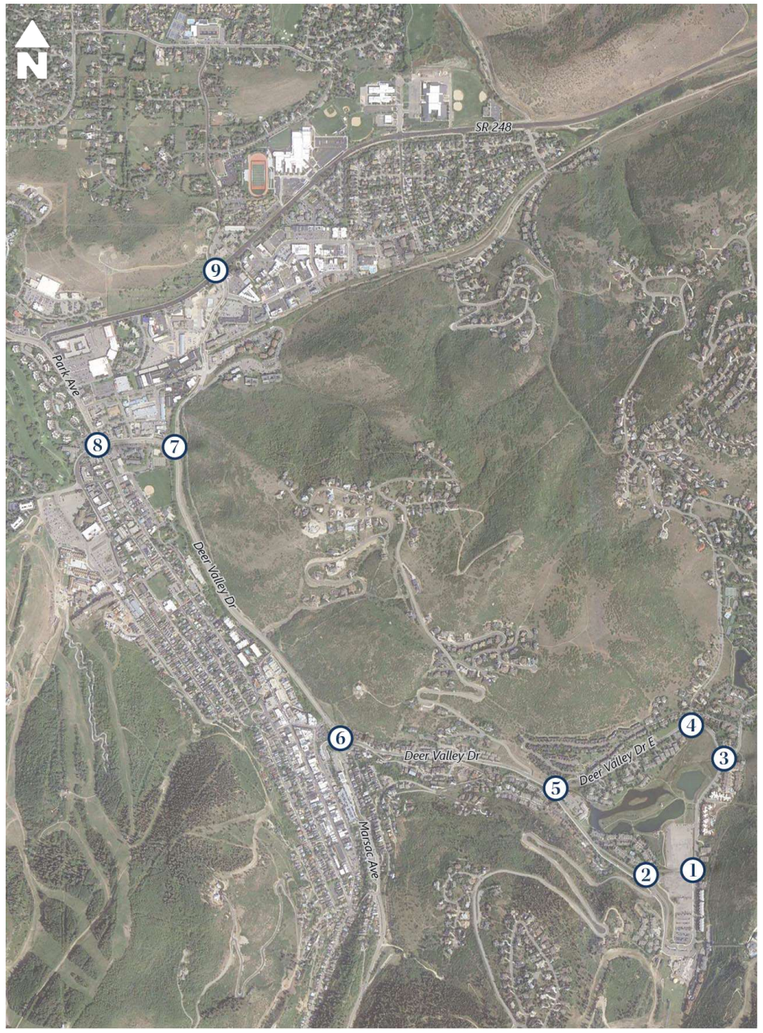
As shown in **Table 13**, all study intersections operated within acceptable LOS (LOS D or better), with the exception of the following locations:

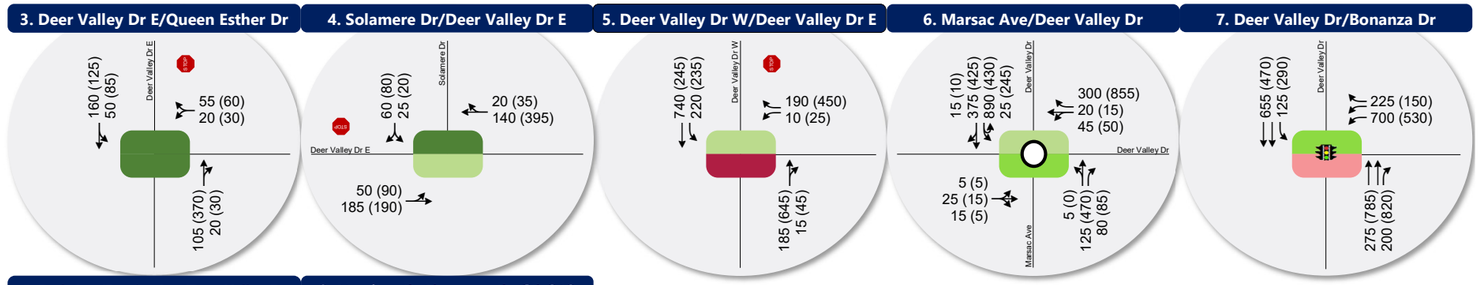
- Deer Valley Drive East / Deer Valley Drive West: LOS F in the PM peak hour
    - This is caused by the high volumes of vehicles exiting the Deer Valley Resort area making a westbound right turn onto Deer Valley Drive West. The westbound approach is stop-controlled, making it difficult for vehicles to find a gap and turn onto Deer Valley Drive West.

- Deer Valley Drive / Bonanza Drive: LOS E in the PM peak hour
    - This is caused by vehicle queues spilling back to this intersection from the upstream intersection at Deer Valley Drive / Park Avenue / Empire Avenue.
- Deer Valley Drive / Park Avenue / Empire Avenue: LOS F in both AM and PM peak hours
    - This is caused by high congestion at the signal due to high volumes accessing various ski resorts and downtown Park City.

8.3 Mitigation Measures

The site plan for the concept master plan for Snow Park Village shows re-alignment and signalization of the Deer Valley Drive East / Deer Valley Drive West intersection, which will alter the westbound LOS at this intersection. Therefore, Fehr & Peers does not recommend any mitigation measures for future 2040 background conditions.





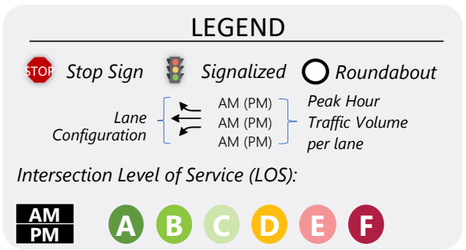


Figure 11
Future 2040 Background Saturday AM & PM Peak hour Traffic Conditions

9. Future 2040 plus Project Conditions

9.1 Purpose

The purpose of the future 2040 plus project conditions analysis is to evaluate the impact of the proposed development traffic on the surrounding roadway network in the year 2040. To analyze this impact, the projected 2040 Saturday AM and PM peak hour background traffic volumes were combined with volumes generated by the conceptual development for the Saturday AM and PM peak hours. Intersection LOS analyses were then performed and compared to the results of the background traffic volumes. This comparison shows the impact of the conceptual project in 2040.

9.2 Traffic Volumes

Project-generated traffic (**Figure 7**) was added to the future 2040 background volumes (**Figure 11**) to yield "future 2040 plus project" Saturday AM and PM peak hour traffic volumes at the study intersections as shown in **Figure 12**.

9.3 Level of Service Analysis

Using SimTraffic simulation software (for signalized and unsignalized intersections) and SIDRA software (for the roundabout) and the HCM 6 delay thresholds provided in the Introduction, future 2040 plus project Saturday AM and PM peak hour LOS were computed for each study intersection for the conceptual site development. The results of the analysis are reported in **Table 14** (see Appendix for the detailed LOS report).

Table 14: Future 2040 plus Project Conditions Saturday AM & PM Peak Hour Level of Service

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / Deer Valley Dr East	AM	Signal	-	-	-	6	A
		PM		-	-	-	**65**	**E**
2	Doe Pass Rd / Deer Valley Dr West	AM	SSSC[4]	NB Left	21	C	-	-
		PM		NB Left	32	D	-	-
3	Queen Esther Dr / Deer Valley Dr East	AM	SSSC	WB Left	7	A	-	-
		PM		WB Right	**>300**	**F**	-	-
4	Deer Valley Dr East / Solamere Dr	AM	SSSC	SB Left	10	B	-	-
		PM		SB Right	**>300**	**F**	-	-
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	SSSC	WB Left	29	D	-	-
		PM		WB Left	**201**	**F**	-	-
6	Deer Valley Drive / Marsac Avenue	AM	Roundabout	-	-	-	26	D
		PM		-	-	-	20	C
7	Deer Valley Dr / Bonanza Dr	AM	Signal	-	-	-	21	C
		PM		-	-	-	**99**	**F**
8	Deer Valley Dr / Park Ave / Empire Ave	AM	Signal	-	-	-	**91**	**F**
		PM		-	-	-	**90**	**F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	Signal	-	-	-	16	B
		PM		-	-	-	32	C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle).
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound
4. Side-street stop control.

Source: Fehr & Peers.

As shown in **Table 14**, all study intersections operated within acceptable LOS (LOS D or better), with the exception of the following locations:

- Doe Pass Road / Deer Valley Drive East: LOS E in the PM peak hour
    - The delays at this intersection stem from the queues extending from the Deer Valley Drive East / Deer Valley Drive West, causing northbound delays at this signal.
- Queen Esther Drive / Deer Valley Drive East: LOS F in the PM peak hour

- This is caused by the queues at the stop-controlled westbound approach at the Deer Valley Drive East / Deer Valley Drive West intersection extending past Queen Esther Drive, making it difficult for the southbound vehicles to turn onto Deer Valley Drive East.

- Deer Valley Drive East / Solamere Drive: LOS F in the PM peak hour
  - This is caused by the queues at the stop-controlled westbound approach at the Deer Valley Drive East / Deer Valley Drive West intersection extending past Solamere Drive, making it difficult for the southbound vehicles to turn onto Deer Valley Drive East.

- Deer Valley Drive East / Deer Valley Drive West: LOS F in the PM peak hour
  - This is caused by the high volumes of vehicles exiting the Deer Valley Resort area making a westbound right turn onto Deer Valley Drive West. The westbound approach is stop-controlled, making it difficult for vehicles to find a gap and turn onto Deer Valley Drive West.

- Deer Valley Drive / Bonanza Drive: LOS F in the PM peak hour
  - This is caused by vehicle queues spilling back to this intersection from the upstream intersection at Deer Valley Drive / Park Avenue / Empire Avenue.

- Deer Valley Drive / Park Avenue / Empire Avenue: LOS F in both AM and PM peak hours
  - This is caused by congestion at the signal due to high volumes accessing various ski resorts and downtown Park City.

It should be noted that the proposed Snow Park Village development introduces various support land uses intended to attract resort users to stay on-site after the ski resort peak hour. This will help distribute the peaking of traffic, reducing delays at the study intersections and roadways. Therefore, the results shown in **Table 14** are likely overstated.

9.4 Mitigation Measures

The Snow Park Village site plan includes realignment of the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection. The intersection is currently a "T"-intersection with free-flow movement north/south along Deer Valley Drive West / Deer Valley Drive, and a stop-control on the approach of Deer Valley Drive East. The proposed plan adds a signal at the intersection, as shown in **Figure 8**. Deer Valley Drive West will serve as a primary transit and auto route to access the proposed transit hub and the main P2 parking level entrance on Doe Pass Road and serve private vehicles accessing Royal Street and the Trail's End community. Deer Valley Drive East will serve as the secondary vehicular route to access the Snow Park drop-off/pick-up area and parking structure accesses that includes day skier spaces, hotel, and residences.

To evaluate how the study intersections would operate if driving behaviors do not change despite development, the traffic distribution of the background traffic at the Deer Valley Drive East / Deer Valley Drive West intersection was not modified, and project traffic was added. This was assumed to account for the historical use patterns and direct routes to the parking garages. This resulted in traffic splits similar to existing conditions at the Deer Valley Drive East / Deer Valley Drive West intersection with roughly 25% using Deer Valley Drive East and roughly 75% using Deer Valley Drive West inbound in the AM peak hour, and roughly 40% using Deer Valley Drive East and roughly 60% using Deer Valley Drive West outbound in the PM peak hour.

Park City has a longstanding position of not mitigating certain deficient intersections within its boundaries due to the impacts of road widening and other potential mitigations to the community. As a result, potential mitigations at the intersections of Deer Valley Drive / Park Avenue / Empire Avenue, Bonanza Drive / Monitor Drive / SR-248 were not analyzed as part of this study and are therefore not included as recommendations. Further, deficiencies shown at the intersection of Deer Valley Drive / Bonanza Drive are not a result of project-generated trips or operations of the intersection itself; instead they stem from vehicle queues from the intersection of Deer Valley Drive / Park Avenue / Empire Avenue. As a result, mitigations at the intersection of Deer Valley Drive / Bonanza Drive are not recommended as part of this study. As stated earlier, Deer Valley Drive between the roundabout and SR-224 intersection is a UDOT facility. Any efforts to improve traffic will be led by UDOT.

The analysis results with the reconfigured Deer Valley Drive East / Deer Valley Drive West intersection are shown in **Table 15** (see Appendix for the detailed LOS report). As shown in **Table 15**, the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection operates at LOS B and LOS D in the AM and PM peak hour, respectively.

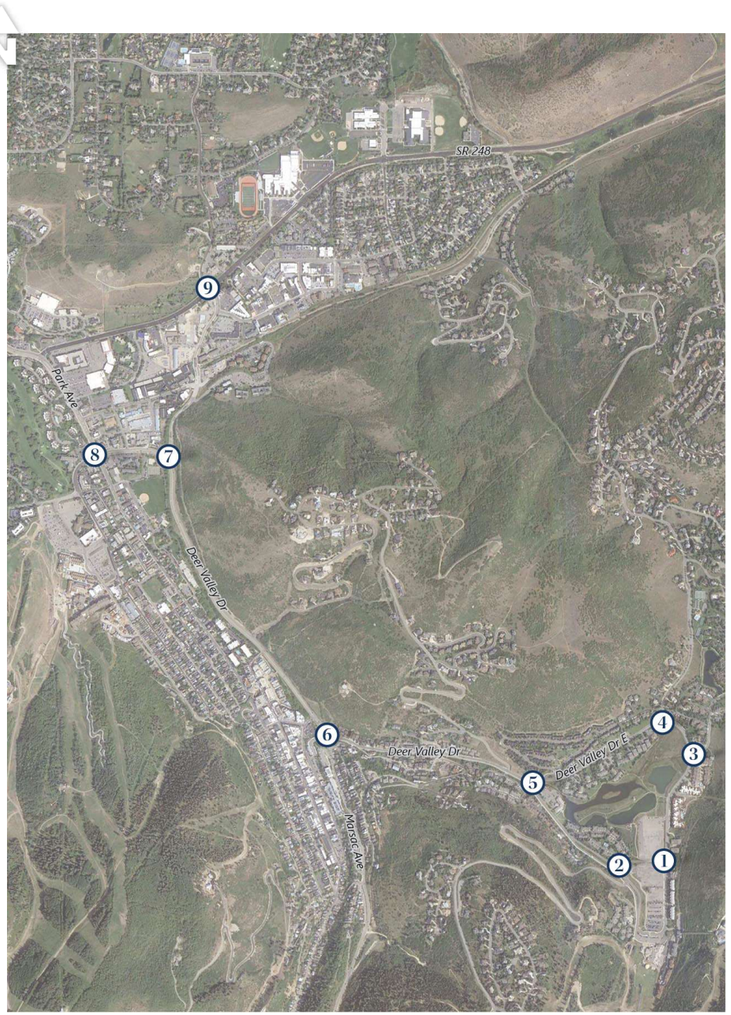
With increased traffic due to the development, the Deer Valley Drive East / Solamere Drive and Deer Valley Drive East / Queen Esther Drive intersections experience increased delays. As a mitigation, the Snow Park Village site plan includes new left-turn pockets at both the Deer Valley Drive East / Solamere Drive and Deer Valley Drive East / Queen Esther Drive intersections to improve traffic operations during peak periods and better facilitate inbound left turns, as well as a receiving lane to allow for two-stage left turns out of Solamere Drive and Queen Esther Drive.

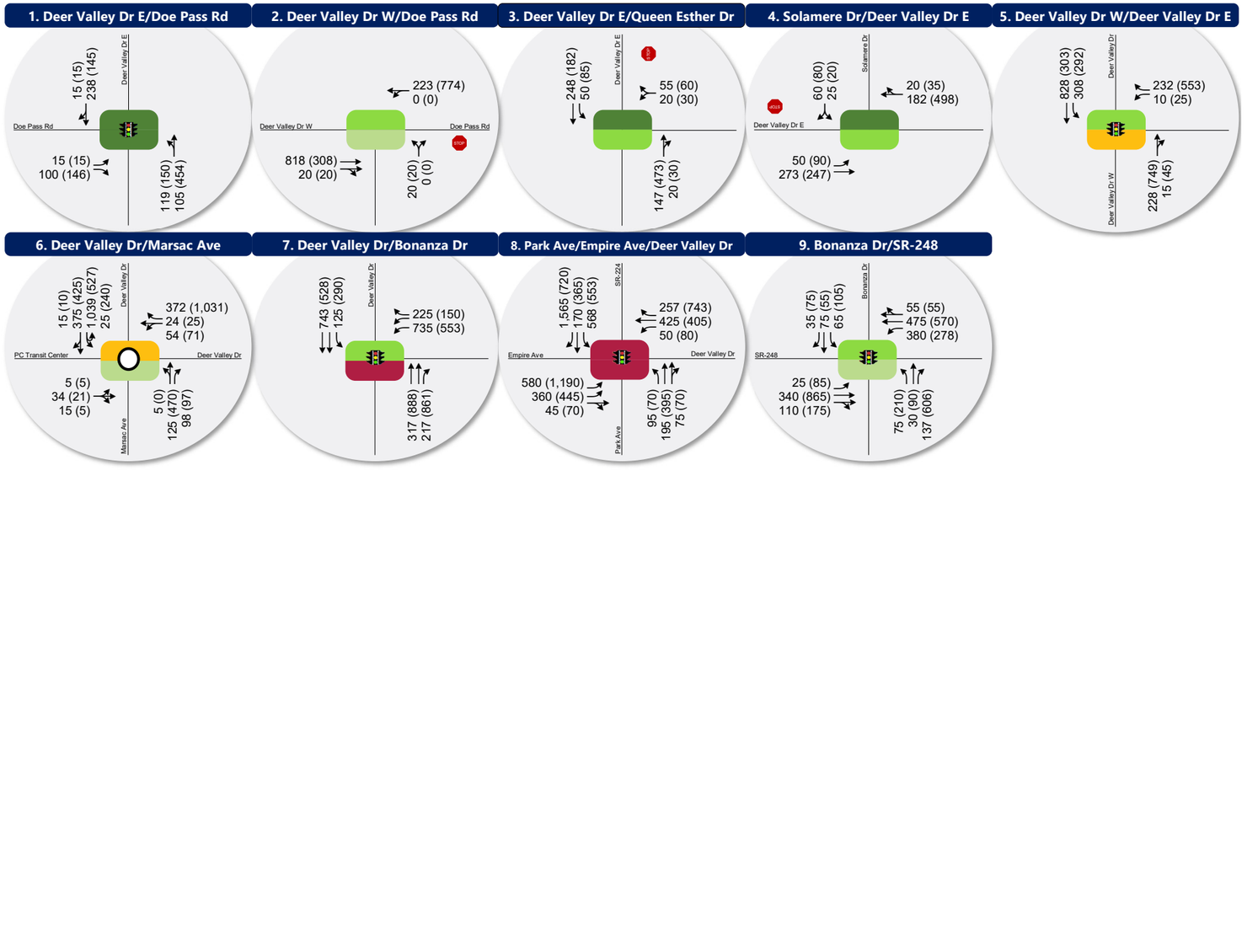
Table 15: Future 2040 plus Project Mitigated Conditions Saturday AM & PM Peak Hour Level of Service

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / Deer Valley Dr East	AM	Signal	-	-	-	5	A
		PM		-	-	-	8	A
2	Doe Pass Rd / Deer Valley Dr West	AM	SSSC[4]	NB Left	13	B	-	-
		PM		NB Left	20	C	-	-
3	Queen Esther Dr / Deer Valley Dr East	AM	SSSC	WB Left	6	A	-	-
		PM		WB Left	11	B	-	-
4	Deer Valley Dr East / Solamere Dr	AM	SSSC	SB Left	7	A	-	-
		PM		SB Left	12	B	-	-
5	Deer Valley Dr / Deer Valley Dr East / Deer Valley Dr West	AM	Signal	-	-	-	11	B
		PM		-	-	-	44	D
6	Deer Valley Drive / Marsac Avenue	AM	Roundabout	-	-	-	26	D
		PM		-	-	-	20	C
7	Deer Valley Dr / Bonanza Dr	AM	Signal	-	-	-	14	B
		PM		-	-	-	**117**	**F**
8	Deer Valley Dr / Park Ave / Empire Ave	AM	Signal	-	-	-	**84**	**F**
		PM		-	-	-	**89**	**F**
9	Bonanza Dr / Monitor Dr / SR-248	AM	Signal	-	-	-	15	B
		PM		-	-	-	31	C

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle).
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound
4. Side-street stop control.

Source: Fehr & Peers.





LEGEND

STOP *Stop Sign* *Signalized* *Roundabout*

Lane Configuration AM (PM) / AM (PM) / AM (PM) *Peak Hour Traffic Volume per lane*

Intersection Level of Service (LOS):

AM / PM — A B C D E F

Figure 12

Future 2040 Plus Project Saturday AM & PM Peak Hour Traffic Conditions

10. Roadway Analysis

The purpose of the roadway analysis is to document the Saturday peak hour roadway volumes to determine the LOS of the internal project roadways.

10.1 Analysis Results

The roadway LOS was calculated based on planning level generalized peak hour two-way volumes for roadway capacities, as shown in **Table 16**. These volumes are published by the Florida Department of Transportation (FDOT) based on planning applications of the HCM and are widely used for planning level evaluation of roadway capacity. **Table 16** shows the peak hour two-way capacity estimates for a 2-lane roadway in areas over 5,000 population not in urbanized areas.

Table 16: Roadway Level of Service Peak Hour Two-Way Traffic Thresholds

Level of Service	Peak Hour Traffic Capacity Estimates
	2 Lanes
LOS B or better	≤ 820
LOS C	821 – 1,550
LOS D	1,551 – 2,190
LOS E or worse	> 2,190

Source: Fehr & Peers, based on FDOT Generalized Peak Hour Two-Way Volumes for areas over 5,000 not in urbanized areas.

The same assumption used for previous analyses (similar traffic splits at the Deer Valley Drive East / Deer Valley Drive West intersection as current conditions) were applied for the roadway volumes.

Table 17 shows the peak hour roadway LOS analysis for each scenario. As shown in **Table 17**, all internal roadways are expected to operate at LOS C or better with the current 2-lane configuration for all scenarios.

Table 17: Snow Park Village Roadway LOS Analysis Summary

Scenario	Saturday Peak Hour	Deer Valley Dr W (South of Y-Intersection)		Deer Valley Dr E (East of Y-Intersection)	
		Two-Way Volume[1]	LOS	Two-Way Volume[1]	LOS
Existing	AM	650	A/B	400	A/B
	PM	800	A/B	620	A/B
Existing plus Project	AM	930	C	490	A/B
	PM	970	C	800	A/B
Opening Year 2024 plus Project	AM	950	C	500	A/B
	PM	990	C	810	A/B
Future 2040 plus Project	AM	1,090	C	570	A/B
	PM	1,130	C	920	C

1. Rounded up to the nearest 10.
Source: Fehr & Peers.

Existing roadway count sheets are included in the Appendix.

11. Site Circulation Analysis

The January 2022 Transportation Analysis reported conditions at external intersections, as well as the two proposed intersections on Doe Pass Road at Deer Valley Drive East and Deer Valley Drive West, which were analyzed in SimTraffic simulation software and SIDRA software. Furthermore, microsimulation analysis was conducted to evaluate on-site circulation as part of the proposed Snow Park Village. Due to the limitations of SimTraffic software in evaluating multimodal conditions and garage access operations, VISSIM microsimulation software was used for on-site circulation analysis.

11.1.1 Conditions and Assumptions

The parameters described below were used for analysis as assumptions in the VISSIM model:

11.1.1.1 Volumes

The following high-level assumptions were used to assign volumes to individual driveways and approach routing:

- 2040 Peak-hour volumes as presented in Section 9 of this study
- Trip generation as presented in Section 4 of this study
- Assumed roughly 75%/25% split of traffic using Deer Valley Drive West versus Deer Valley Drive East inbound in the AM peak hour (current patterns)
- Assumed roughly 60%/40% split of traffic using Deer Valley Drive West versus Deer Valley Drive East outbound in the PM peak hour (current patterns)
- Proportion of parking supply by garage level

The assumed intersection and driveway volumes are shown in **Figure 13**. Note that the lane configurations shown on the figure reflect proposed conditions, except for at the P2 and P3 garage accesses, which are proposed to have flex lanes that can be ingress or egress, depending on the peak hour and volume demand.

11.1.1.2 Parking Garage Gate Transaction

Based on input received from WGI, the parking garage design and operations consultant, the following parking garage gate transaction times were assumed in the model:

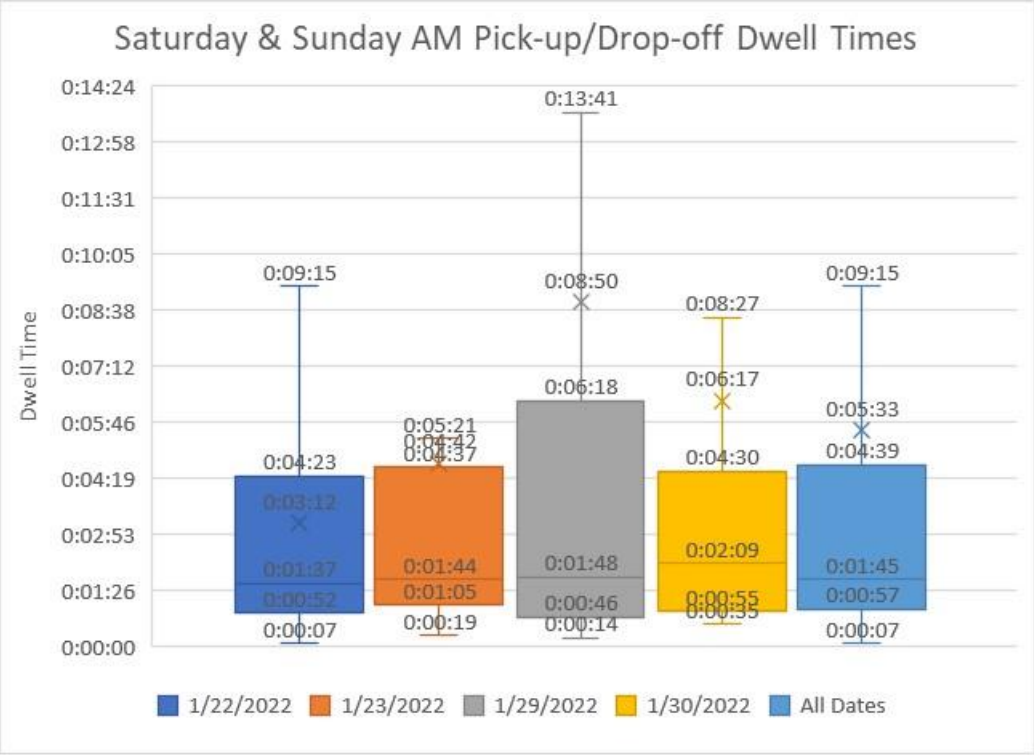
- Average of 4 seconds/vehicle for entry (this was assumed for conservative results, as the development is aiming for a system that would allow free-flow entry)
- Average of 10 seconds/vehicle for exit

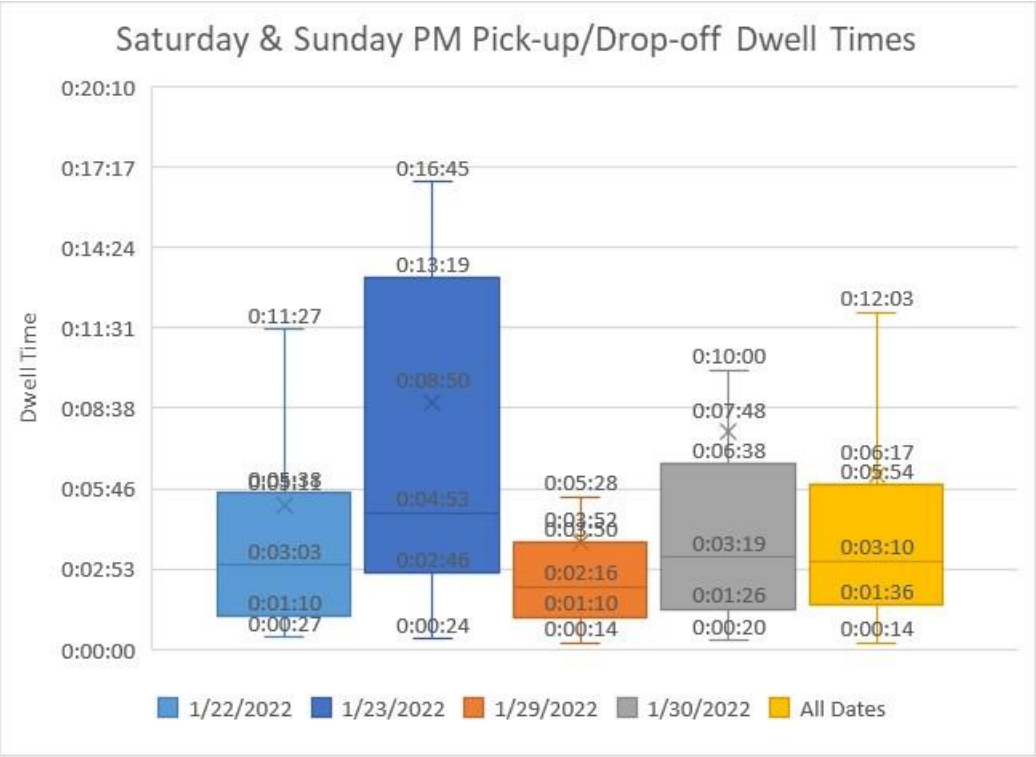
11.1.1.3 Pick-up/Drop-off

The following assumptions were made for the model regarding the proposed new pick-up/drop-off loop in front of Snow Park Lodge at the southern terminus of Deer Valley Drive East:

- 200 vehicles were allocated to use the pick-up/drop-off in both AM and PM peak hours
  - 100 vehicles as pick-up/drop-off
  - 50 vehicles as Transportation Network Company (TNC) users
  - 50 vehicles as Valet users

Video observations were recorded at the current Snow Park Lodge pick-up/drop-off as part of data collection for curbside and pedestrian activity in January 2022. These videos were used to observe a sample of dwell times for the pick-up/drop-off users to assist with the simulation modeling. The charts below show the dwell times for a sample of 100 vehicles and 95 vehicles in the weekend AM and PM peak hour, respectively. The AM peak hour dwell times ranged from 7 seconds to 1 hour 26 minutes 11 seconds, with a median of 1 minute 45 seconds. The PM peak hour dwell times ranged from 14 seconds to 1 hour 1 minute 9 seconds, with a median of 3 minutes 10 seconds. The VISSIM model was modified to reflect the dwell times from these samples at the proposed new pick-up/drop-off zone.





11.1.1.4 Other Considerations

To evaluate conditions under the most conservative analysis scenario, 2040 weekend AM and PM peak hours were analyzed.

11.1.2 Analysis Results

Intersection delay, Level of Service (LOS), and queueing results were evaluated in the VISSIM model at the following locations, as shown in **Figure 13**.

1. Doe Pass Road / P2 Parking Garage Access
2. Doe Pass Road / P1 Parking Garage Access
3. Doe Pass Road / Mobility Hub Entrance
4. Doe Pass Road / Mobility Hub Exit
5. P2 Parking Garage Access / Deer Valley Drive East
6. P3 Parking Garage Access / Deer Valley Drive East
7. P4 Parking Garage Access / Deer Valley Drive East
8. Snow Park Lodge Pick-up/Drop-off

The same analysis methodology (as described in the previous sections) was used for this analysis.

Table 18 below (see Appendix for the detailed LOS reports) shows the intersection delay and LOS results from the VISSIM simulation model. As shown in **Table 18**, all study intersections operate at acceptable LOS with the exception of the following locations:

- Doe Pass Road / Mobility Hub Exit: LOS E in the PM peak hour
    - This is caused by the stop control for the buses exiting the mobility hub onto Doe Pass Road.
- Snow Park Lodge Pick-up/Drop-off: LOS E in both AM and PM peak hours
    - This is caused by delays at the pick-up/drop-off zone that the VISSIM simulation has limitations in simulating efficient operations. This can likely be mitigated by efficient operations assisted by Deer Valley staff.

Table 18: Future 2040 Plus Project Conditions Saturday AM & PM Peak Hour Level of Service Site Circulation Results

Intersection				Worst Movement[1]			Overall Intersection[2]	
ID	Location	Period	Control	Movement[3]	Delay Sec/Veh	LOS	Avg. Delay Sec/Veh	LOS
1	Doe Pass Rd / P2 Parking	AM	SSSC	EB Right	12	B	-	-
		PM		NB Left	11	B	-	-
2	Doe Pass Rd / P1 Parking	AM	SSSC	NB Left	9	A	-	-
		PM		NB Left	10	B	-	-
3	Doe Pass Rd / Mobility Hub Entrance	AM	SSSC	WB Left	2	A	-	-
		PM		EB Right	3	A	-	-
4	Doe Pass Rd / Mobility Hub Exit	AM	SSSC	NB Right	33	D	-	-
		PM		NB Left	**37**	**E**	-	-
5	P2 Parking / Deer Valley Dr East	AM	SSSC	EB Left	9	A	-	-
		PM		EB Left	6	A	-	-
6	P3 Parking / Deer Valley Dr East	AM	SSSC	SB Through	5	A	-	-
		PM		EB Left	9	A	-	-
7	P4 Parking / Deer Valley Dr East	AM	SSSC	SB Through	17	C	-	-
		PM		EB Right	23	C	-	-
8	Snow Park Lodge Pick-up/Drop-off	AM	-	SB Through	**44**	**E**	-	-
		PM		SB Through	**44**	**E**	-	-

Notes:
Bold text indicates intersections operating below Park City's acceptable LOS threshold.
1. This represents the worst approach LOS and delay (seconds/vehicle) and is only reported for side-street stop controlled intersections.
2. This represents the overall intersection LOS and delay (seconds/vehicle) and is only reported for signalized intersections and all-way stop controlled intersections.
3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound
4. Side-street stop control.

Source: Fehr & Peers.

11.1.2.1 Sensitivity Analysis

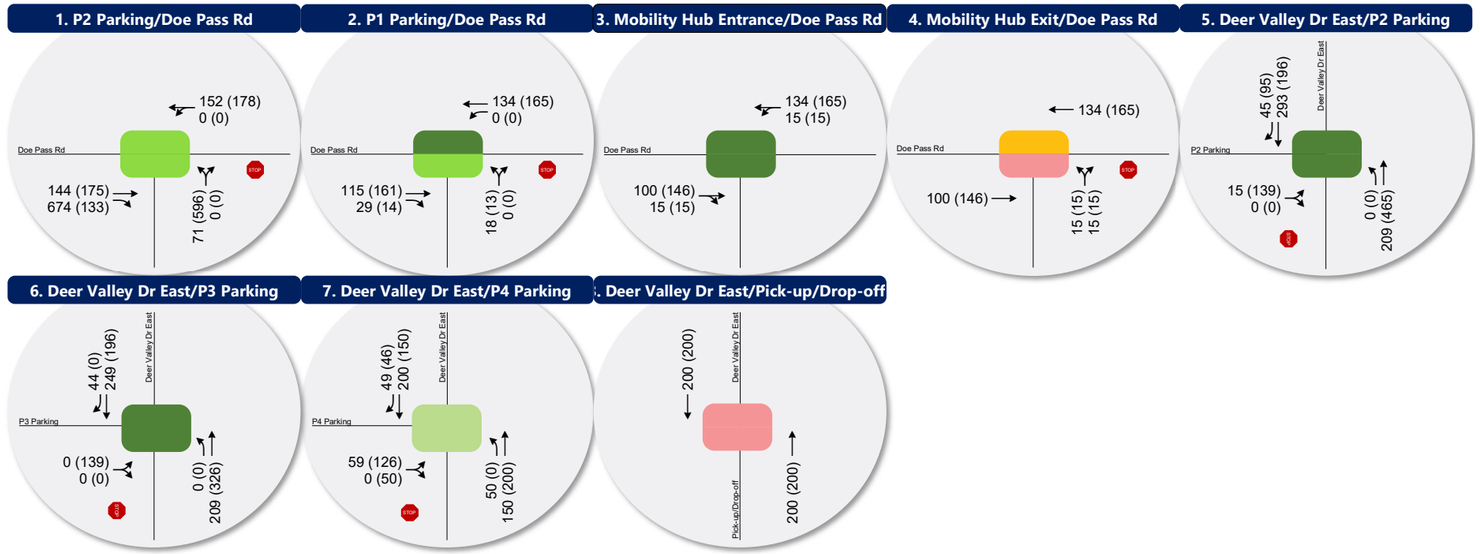
As described throughout this report, assumptions of traffic distribution at the Deer Valley Drive East / Deer Valley Drive West were made based on patterns similar to current conditions. It is likely that based on driver behavior and expectation, the actual traffic distributions will be different at the time of opening and in subsequent weeks, months, and years as preferences are established and transportation options evolve.

A sensitivity analysis shows that in the AM peak hour, the P2 access on Doe Pass Road becomes a constraint that potentially causes congestion, with inbound queues backing up onto Deer Valley Drive West under traffic conditions similar to the existing conditions (roughly 80% entering via Deer Valley Drive West).

Operations at this key driveway also depend on the transaction time for entry (assumed to be 4 seconds for the purpose of microsimulation analysis in this report, which was validated by a national parking operations consultant). As this entry transaction time is reduced due to improved technology or adjustments to when and how parking is paid for and validated, traffic distributions at the "Y" intersection have less effect on traffic operations.

To provide efficient and safe traffic circulation on-site and on the Deer Valley Drive Loop, Deer Valley and Snow Park Village will be committed to provide extensive wayfinding and traffic monitoring, especially to improve inbound operations where visitors will be informed whether to travel on Deer Valley Drive West or Deer Valley Drive East.





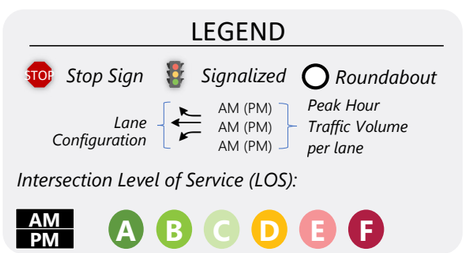


Figure 13
2040 Site Circulation Analysis Intersection LOS Results

Table 19 (see Appendix for the detailed queue report) below shows the average maximum queue for each approach at the study intersections. The following lists locations that the average maximum queue is expected to exceed the storage length in the AM peak hour:

- Doe Pass Road / P2 Parking
    - Eastbound queues occasionally extend past the Doe Pass Road / Deer Valley Drive West intersection. This queue is caused by queue spillback beginning at the gate to enter the P2 Parking Garage Access and the high inbound volumes in the AM peak hour.
- Doe Pass Road / Mobility Hub Entrance
    - Westbound queues occasionally extend past the mobility hub exit. The average queue, however, is 1 feet, and the queue spillback is not expected to be a common occurrence.
- Doe Pass Road / Mobility Hub Exit
    - Westbound queues occasionally extend past the Doe Pass Road / Deer Valley Drive East intersection. The average queue, however, is 2 feet, and the queue spillback is not expected to be a common occurrence.

The following lists locations that the average maximum queue is expected to exceed the storage length in the PM peak hour:

- Doe Pass Road / Deer Valley Drive East
    - Eastbound queues occasionally extend past the Mobility Hub Exit. The average queue, however, is 2 feet, and the queue spillback is not expected to be a common occurrence.
- Doe Pass Road / Mobility Hub Entrance
    - Westbound queues occasionally extend past the mobility hub exit. The average queue, however, is less than 1 feet, and the queue spillback is not expected to be a common occurrence.
- Doe Pass Road / Mobility Hub Exit
    - Westbound queues occasionally extend past the Doe Pass Road / Deer Valley Drive East intersection. The average queue, however, is 2 feet, and the queue spillback is not expected to be a common occurrence.
- Deer Valley Drive East / Deer Valley Drive West

- The simulation shows average maximum queues of over 500 feet for the westbound approach at the new signal. This queue however is not expected to reach the Solamere Drive intersection, especially with signal operations to assist in flushing out the heavy outbound movement via Deer Valley Drive East.

Table 19: Future 2040 Plus Project Conditions Saturday AM & PM Peak Hour Queues Site Circulation Analysis

Intersection				Average Maximum Queues (feet)[2]
ID	Location	Period	Approach[1]	
1	Doe Pass Rd / Deer Valley Dr East	AM	NB	75
			SB	175
			EB	100
		PM	NB	250
			SB	125
			EB	125
2	Doe Pass Rd / Deer Valley Dr West	AM	NB	50
			EB	375
			WB	25
		PM	NB	50
			EB	25
			WB	75
3	Queen Esther Dr / Deer Valley Dr East	AM	NB	0
			SB	25
			WB	100
		PM	NB	0
			SB	25
			WB	100
4	Deer Valley Dr East / Solamere Dr	AM	SB	50
			EB	0
			WB	50
		PM	SB	50
			EB	0
			WB	50
5	Deer Valley Dr East / Deer Valley Dr West	AM	NB	275
			SB	300
			WB	125
		PM	NB	525
			SB	175
			WB	350
6	Doe Pass Rd / P2 Parking	AM	NB	125
			EB	250
			WB	0

Intersection				Average Maximum Queues (feet)[2]
ID	Location	Period	Approach[1]	
		PM	NB	125
			EB	75
			WB	0
7	Doe Pass Rd / P1 Parking	AM	NB	100
			EB	0
			WB	0
		PM	NB	100
			EB	0
			WB	0
8	Doe Pass Rd / Mobility Hub Entrance	AM	EB	0
			WB	125
		PM	EB	25
			WB	125
9	Doe Pass Rd / Mobility Hub Exit	AM	NB	150
			EB	25
			WB	125
		PM	NB	150
			EB	25
			WB	125
10	P2 Parking / Deer Valley Dr East	AM	NB	0
			SB	25
			EB	75
		PM	NB	25
			SB	0
			EB	125
11	P3 Parking / Deer Valley Dr East	AM	NB	50
			SB	75
			EB	0
		PM	NB	75
			SB	50
			EB	125
12	P4 Parking / Deer Valley Dr East	AM	NB	0
			SB	25
			EB	100
		PM	NB	125

Intersection				Average Maximum Queues (feet)[2]
ID	Location	Period	Approach[1]	
			SB	0
			EB	150
13	Snow Park Lodge Pick-up/Drop-off	AM	NB	25
			SB	100
		PM	NB	225
			SB	100

Notes:
1. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound
2. Rounded up to nearest 25'.

Source: Fehr & Peers.

It should be noted that the LOS results and queue results shown in **Table 18** and **Table 19** capture the delays and queues at the side-streets for vehicles turning onto the major road. However, it does not capture the delays and queues for vehicles experienced at the parking gate due to the assumed transaction time. The VISSIM simulation indicates that with the assumed gate transaction times, vehicles are expected to experience over 100 seconds of delay per vehicle to exit the garage in the PM peak hour, with potentially long internal queues.



Figure 14

2040 Site Circulation Analysis Queue Results

12. Parking Analysis

A fundamental aspect of the Snow Park Village proposal is the implementation of a constrained, structured parking supply that will require parkers to pay a daily fee. This strategy is seen as a key disincentive to traveling in Park City by single-occupant vehicle, and aligns with the City's broader mobility goals. However, Snow Park Village proposes no reductions to the parking supply and will build to the Park City LMC requirements.

12.1 Analysis Method

For the shared parking analysis of the updated land use plan, the development is proposed to include 11 buildings which include the following land uses (taken from the land use program dated October 26, 2021):

- 30,900 square feet of ballroom/event center space
- 143 multifamily housing units
- 193 hotel rooms with 4,500 square feet of hotel support uses.
- 25,900 square feet of commercial/retail space

The development is also proposed to include the Deer Valley Ski resort and other land uses in support of the resort. It should be noted that the land uses supporting the ski resort will not be parking generators; rather, the ski resort will be the parking generator, and the support land uses serve as accessories to the resort.

In The most recent submittal (November 2022), Fehr & Peers applied reductions to the recommended parking due to paid parking and shared parking. However, Snow Park Village now proposes to build the full parking supply required by the Park City LMC. From the proposed land uses that generate parking demand as listed above, and the recommended rates from the Park City zoning code, the minimum required parking supply was calculated to be 2,236 stalls.

Table 20 outlines the number of recommended stalls with recommended rates from the Park City zoning code, and the number of stalls proposed by Snow Park Village. Parking calculations are attached in the Appendix. As shown in **Table 20**, the proposed parking supply is sufficient for the proposed land use program. It should be noted that phasing and ongoing refinement of the land use program may adjust the base parking rates and recommendations.

Table 20: Snow Park Village Parking Analysis Summary

Base Recommended Stalls	Proposed Stalls
2,236	**2,262**

Source: Fehr & Peers

12.2 Parking Management

An effective and efficient parking management system is essential to maintain both a high-quality user experience and to minimize traffic impacts on adjacent roadways. An essential element to improve the efficiency of structured parking is to provide real time information regarding parking availability. In addition to implementing payment technology that expedites vehicle ingress at all driveways, Deer Valley will work with relevant partners to ensure more complete information is available to parkers.

The Snow Park Parking Management Plan is included in **Attachment B.**

13. Transit Evaluation

This section includes an evaluation of existing transit service and infrastructure, proposed transit improvements, and description of how the Snow Park Village proposal aligns with Park City's *Transit First* policy.

13.1.1 Existing Transit Service

In addition to a multitude of private shuttles and buses, there are two public transit operators providing transit service to and from Deer Valley: Park City Transit and High-Valley Transit. High Valley Transit operates one route that services Deer Valley:

- 101 – Spiro / 224 Local that services Deer Valley.

Park City Transit operates six routes the service Deer Valley:

- 1 Red: Prospector Square – Deer Valley
- 2 Green: Park Meadows/Thaynes Canyon – Deer Valley
- 3 Blue: Thaynes Canyon/Park Meadows – Deer Valley
- 5 Yellow: Prospector Square – Deer Valley
- 40 Bronze: Main Street – Royal Street – Silver Lake Lodge
- 50 Teal: Prospector Square – Deer Valley

Park City Transit Park City Transit is undergoing a short-range service plan update, with potential changes in transit service to and from Deer Valley expected in the coming year.

Local bus stops are provided along both sides of Deer Valley Drive East and Deer Valley Drive West, allowing transit riders to board buses that are Deer Valley- or Old Town-bound. At the southern end of the Deer Valley Drive loop closest to the existing Snow Park base area, there are bi-directional bus stops that can accommodate up to four buses at once. Aside from the existing bi-directional stops at Snow Park, bus stops do not include shelters. Buses providing service to Deer Valley travel in mixed traffic.

13.2 Proposed Transit Improvements

A proposed six bus-bay mobility hub at the northeast corner of Snow Park Village will provide a comfortable and appealing transit facility on-site that provides direct access to the project and relocated ski lift bases. The mobility hub will also include accommodations for cyclists and allow for electric bus charging

infrastructure. This mobility hub will allow for increased frequency of transit service which will be essential to incentivizing transit service.

To further support transit service as part of the Snow Park Village proposal, a new traffic signal with transit preemption capabilities is proposed at the Doe Pass Road / Deer Valley Drive East intersection. This will help ensure that transit vehicles accessing and exiting the proposed mobility hub with limited conflicting traffic.

Furthermore, this circulation plan includes a proposed seasonal one-way Shared Mobility Lane (SML) inbound from the Deer Valley Drive East / Deer Valley Drive West intersection along Deer Valley Drive West, accessing the mobility hub. Outbound transit traffic will have the SML which parallels general purpose traffic around the loop on Deer Valley Drive East to the Deer Valley Drive East / Deer Valley Drive West intersection. After ski season during the summer months, the SML will be open to bicycle traffic. Management, maintenance, and enforcement, year-round, will be a City responsibility.

The VISSIM simulation presented previously in chapter 11 simulates the SML and captures the impacts of the design. The simulation shows traffic circulation with minimal delays with the proposed configuration in peak ski season conditions. Because of the lack of congestion, the buses simulated in this analysis travel in near free-flow conditions. This was due to the models being calibrated to typical travel times. Bus and vehicle travel time measurements were provided by Deer Valley and Park City, which showed several outlier days with excessive travel times. However, the calibrated VISSIM model travel times were closer to the median travel times observed from the data. The Shared Mobility Lane proposed in this alternative will likely improve bus travel times in more congested conditions, such as special events, snow conditions, etc.

14. Transportation Demand Management

Park City, through its ongoing Transportation Master Plan update, has identified the laudable and ambitious goal of reducing vehicle trips by 20% throughout Park City. The City is tackling this challenge through a variety of strategies, including but not limited to the following:

- Updates to the local and regional transit system
- Coordination with partner agencies to implement greater park-and-ride capacity
- Expansion of high-quality active transportation facilities throughout Park City
- Partnerships with private developments to implement and operate comprehensive Transportation Demand Management (TDM) programs

Furthering the City's broader trip reduction goal, Deer Valley will continue to operate its TDM program, and expand on current offerings, to better align with the adopted PCMC TDM Plan (2016). A high-level summary of the Deer Valley TDM Plan is shown below in **Table 21**.

Table 21: Deer Valley TDM Measures

Measure	Status	Description
Transit pass subsidy	Existing Program	Subsidized UTA transit passes for Deer Valley employees living in Salt Lake Valley and Utah Valley
Bicycle Amenities and Perks	New Program	Bicycle repair tools and dedicated bicycle parking at key locations
Education and Promotion	Existing Program	Educational and promotional events to encourage travelers to use by modes other than driving alone.
Parking Management	New Program	Efficient, constrained, and priced parking to discourage drive-alone trips
Employee Transit	Existing Program	Operate designated employee transit to facilitate efficient employee commutes through an appealing alternative until such time as Park City Transit and/or High Valley Transit meets this need
Real-Time Messaging	New Program	Communicate traffic conditions in real time to travelers
Appoint a TDM Coordinator	New Program	Identify a staff member to oversee the TDM program

Source: Fehr & Peers.

14.1 TDM Monitoring

As the transportation landscape in Park City and Summit County changes, monitoring the use and effectiveness of Deer Valley's TDM program will be crucial to its success. In alignment with requests from Park City staff, Deer Valley will implement an annual monitoring program consisting of the following elements:

- One nine day period of vehicle counts at all Snow Park Village driveways, to be analyzed and summarized by a third-party consultant. This data will be analyzed and summarized by a third-party consultant;
- Average vehicle occupancy collected on one weekday and one weekend day, collected by a third-party vendor, to be analyzed and summarized by a third-party consultant;
- A permanent traffic count station implemented at the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection, installed and maintained by Deer Valley for year-round monitoring of traffic conditions;
- Ski season transit ridership, summarized at the stop and daily levels and provided by transit operators, to be analyzed and summarized by a third-party consultant;
- Available data regarding program utilization from the *Ride On Park City* platform, to be analyzed and summarized by a third-party consultant.

Analysis of this data will be submitted in an annual monitoring memorandum for City staff review and will be supported by semiannual coordination meetings with City staff and other major employers in Park City. This monitoring program will be used to enhance program offerings and avoid redundancy of service where public and private options overlap.

14.2 Regional Considerations

Park City Municipal Corporation has a stated goal of reducing traffic volumes by 20% from existing traffic volumes (the specific, reference time period is to-be-defined). Deer Valley has operated an effective and comprehensive TDM program for years in support of this goal, and the proposed opening of an additional portal to Deer Valley via Mayflower Resort will improve access to Deer Valley to any skiers visiting from the Wasatch Front or Back and not require a trip through Park City. While this change will not solve all of Park City's traffic challenges, it will likely divert a substantial portion of traffic destined for Deer Valley.

The Deer Valley TDM Plan is presented in full in **Attachment C**.

15. Conclusion/Recommendations

With proposed mitigations in place, all study intersections at which mitigations are feasible and supported by the community operate at acceptable levels of service under all Plus Project analysis scenarios. Through dedicated transit infrastructure, improved active transportation connections between the Project and Park City's existing active transportation network, a fully reworked parking system, and management of ongoing TDM offerings in addition to new measures, the Snow Park Village proposal aligns with the City's *Transit First* policy by encouraging travel by means other than driving alone.

Implementing a new traffic signal with transit preemption at the intersection of Doe Pass Road / Deer Valley Drive East will improve traffic operations and support transit. A new traffic signal at the reconfigured Y intersection of Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West facilitates safer and more efficient movement for all modes. Implementing an off-street, multi-use path around the Deer Valley Drive loop will improve pedestrian and cyclist connectivity adjacent to the project site. Ongoing monitoring of TDM program effectiveness will maintain City-Deer Valley cooperation in pursuit of shared goals.

Appendix

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Study: FEHR0119
Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D1
Site Code : Day 1
Start Date : 2/15/2020
Page No : 1

Groups Printed- General Traffic

	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	**Thru**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Hard Left**	**Peds**	**App. Total**	**Hard Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
07:45 AM	71	123	0	194	19	4	0	23	2	18	0	20	237
Total	71	123	0	194	19	4	0	23	2	18	0	20	237
08:00 AM	110	101	0	211	34	2	0	36	5	21	1	27	274
08:15 AM	124	70	0	194	29	2	0	31	5	26	0	31	256
08:30 AM	117	55	0	172	53	10	0	63	4	29	0	33	268
08:45 AM	125	46	0	171	48	7	0	55	6	32	4	42	268
Total	476	272	0	748	164	21	0	185	20	108	5	133	1066
09:00 AM	111	35	0	146	54	7	0	61	2	31	0	33	240
09:15 AM	94	27	0	121	51	6	0	57	4	31	0	35	213
09:30 AM	77	42	0	119	55	13	0	68	4	43	0	47	234

Total	282	104	0	386	160	26	0	186	10	105	0	115	687

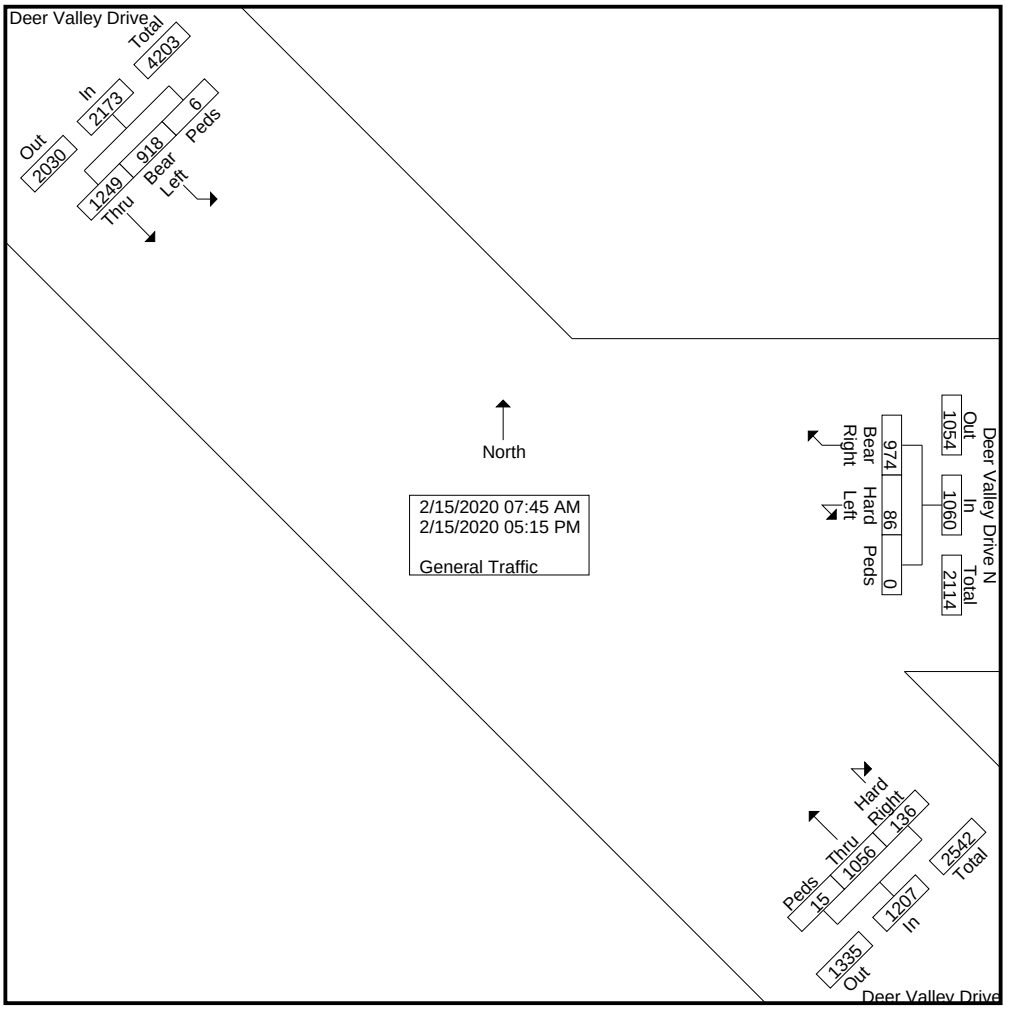
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03:45 PM	55	50	0	105	81	7	0	88	16	98	3	117	310
Total	136	97	0	233	148	11	0	159	29	167	3	199	591
04:00 PM	66	41	0	107	83	8	0	91	11	130	0	141	339
04:15 PM	46	49	6	101	73	3	0	76	18	155	0	173	350
04:30 PM	46	68	0	114	104	2	0	106	13	109	1	123	343
04:45 PM	54	58	0	112	71	5	0	76	13	91	2	106	294
Total	212	216	6	434	331	18	0	349	55	485	3	543	1326
05:00 PM	42	51	0	93	89	2	0	91	11	95	4	110	294
05:15 PM	30	55	0	85	63	4	0	67	9	78	0	87	239
Grand Total	1249	918	6	2173	974	86	0	1060	136	1056	15	1207	4440
Apprch %	57.5	42.2	0.3		91.9	8.1	0		11.3	87.5	1.2		
Total %	28.1	20.7	0.1	48.9	21.9	1.9	0	23.9	3.1	23.8	0.3	27.2	

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File Name : Deer Valley Dr & Deer Valley Dr N - D1
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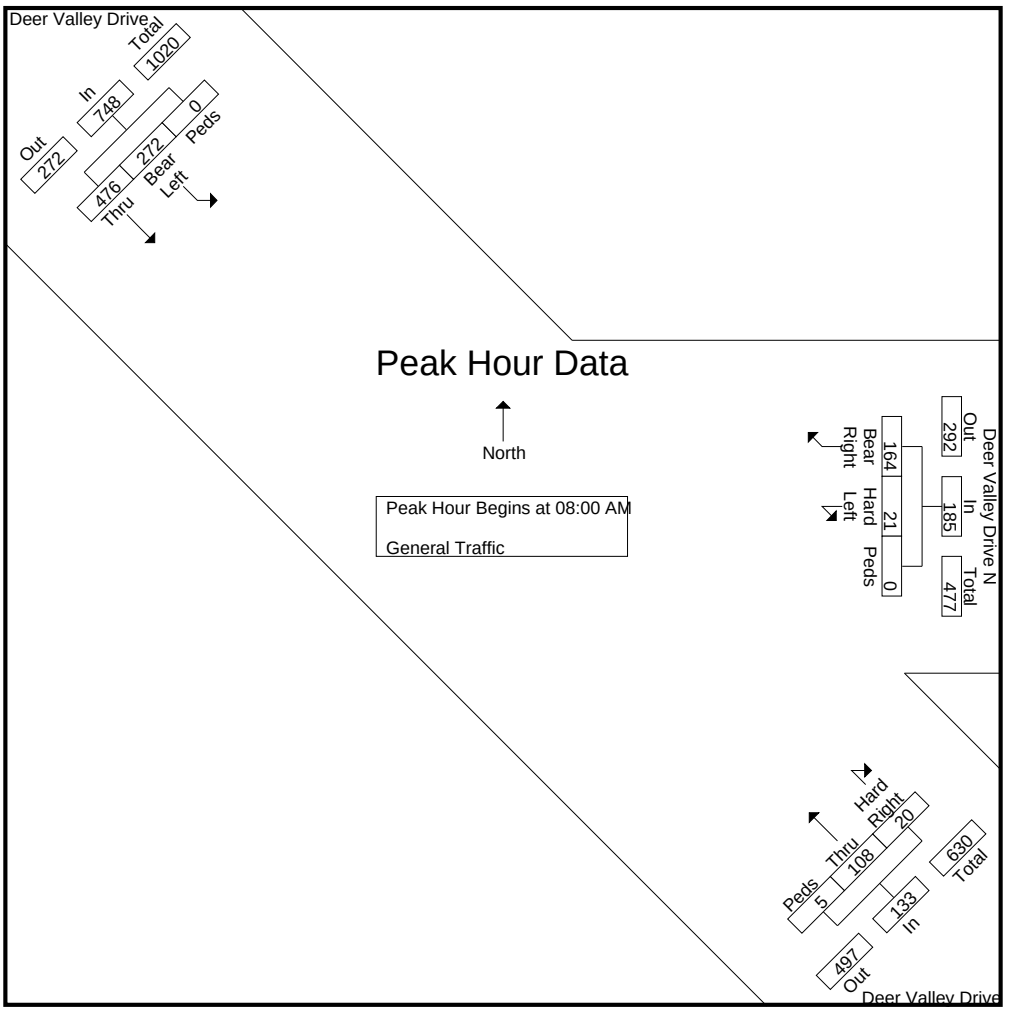
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File Name : Deer Valley Dr & Deer Valley Dr N - D1
Site Code : Day 1
Start Date : 2/15/2020
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	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	**Thru**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Hard Left**	**Peds**	**App. Total**	**Hard Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 07:45 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	110	**101**	0	**211**	34	2	0	36	5	21	1	27	**274**
08:15 AM	124	70	0	194	29	2	0	31	5	26	0	31	256
08:30 AM	117	55	0	172	**53**	**10**	0	**63**	4	29	0	33	268
08:45 AM	**125**	46	0	171	48	7	0	55	**6**	**32**	**4**	**42**	268
Total Volume	476	272	0	748	164	21	0	185	20	108	5	133	1066
% App. Total	63.6	36.4	0		88.6	11.4	0		15	81.2	3.8		
PHF	.952	.673	.000	.886	.774	.525	.000	.734	.833	.844	.313	.792	.973



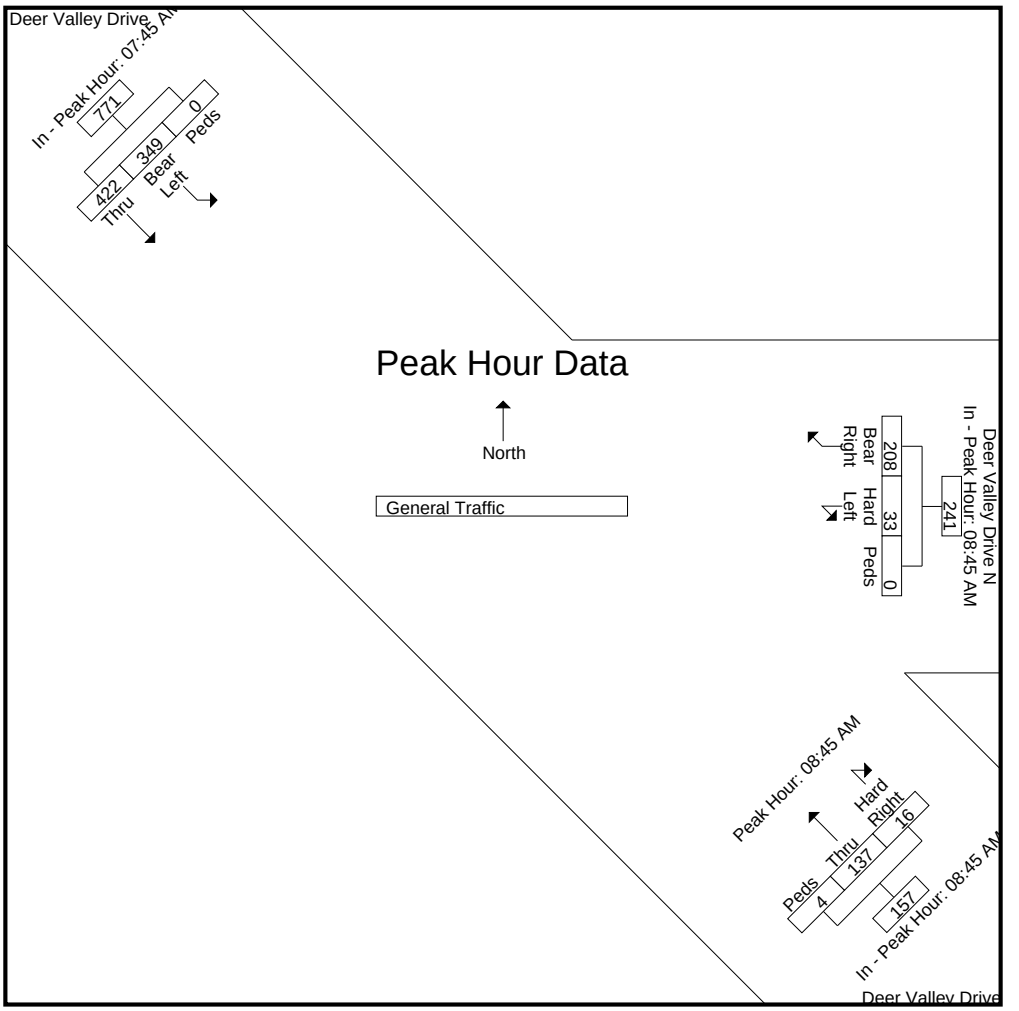
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Study: FEHR0119
Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D1
Site Code : Day 1
Start Date : 2/15/2020
Page No : 4

	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	**Thru**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Hard Left**	**Peds**	**App. Total**	**Hard Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 07:45 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:45 AM				08:45 AM				08:45 AM				
+0 mins.	71	**123**	0	194	48	7	0	55	**6**	32	**4**	42	
+15 mins.	110	101	0	**211**	54	7	0	61	2	31	0	33	
+30 mins.	**124**	70	0	194	51	6	0	57	4	31	0	35	
+45 mins.	117	55	0	172	**55**	**13**	0	**68**	4	**43**	0	**47**	
Total Volume	422	349	0	771	208	33	0	241	16	137	4	157	
% App. Total	54.7	45.3	0		86.3	13.7	0		10.2	87.3	2.5		
PHF	.851	.709	.000	.914	.945	.635	.000	.886	.667	.797	.250	.835	



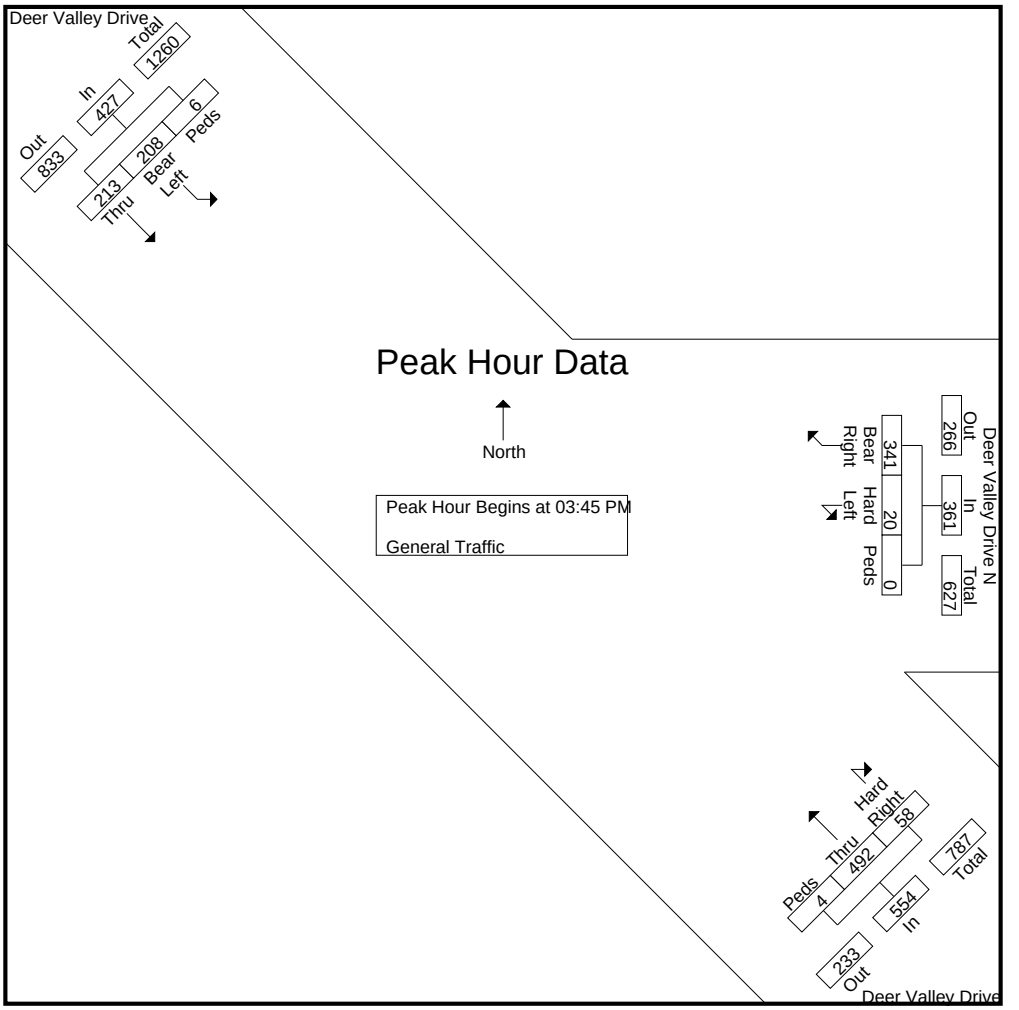
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Site Code : Day 1
Start Date : 2/15/2020
Page No : 5

	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	**Thru**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Hard Left**	**Peds**	**App. Total**	**Hard Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 12:00 PM to 05:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:45 PM													
03:45 PM	55	50	0	105	81	7	0	88	16	98	**3**	117	310
04:00 PM	**66**	41	0	107	83	**8**	0	91	11	130	0	141	339
04:15 PM	46	49	**6**	101	73	3	0	76	**18**	**155**	0	**173**	**350**
04:30 PM	46	**68**	0	**114**	**104**	2	0	**106**	13	109	1	123	343
Total Volume	213	208	6	427	341	20	0	361	58	492	4	554	1342
% App. Total	49.9	48.7	1.4		94.5	5.5	0		10.5	88.8	0.7		
PHF	.807	.765	.250	.936	.820	.625	.000	.851	.806	.794	.333	.801	.959



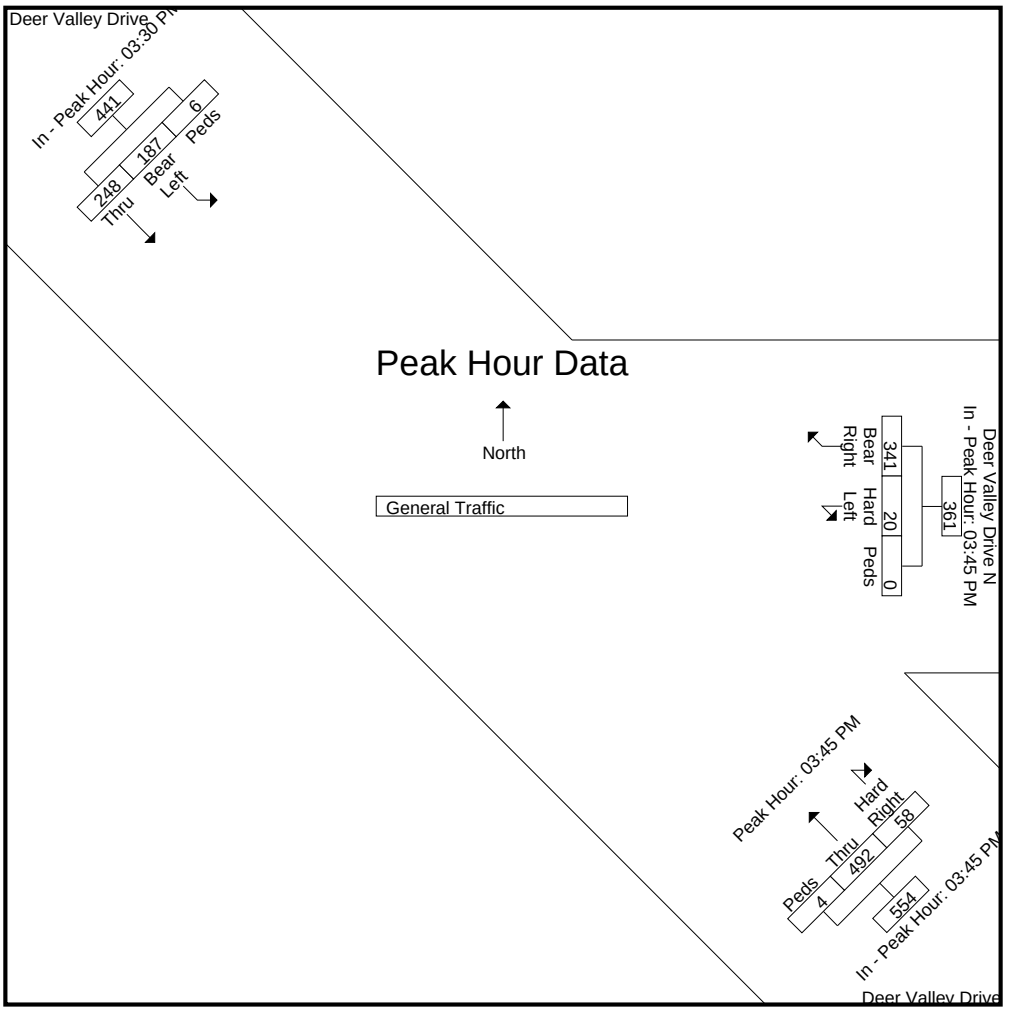
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Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D1
Site Code : Day 1
Start Date : 2/15/2020
Page No : 6

	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	Thru	Bear Left	Peds	App. Total	Bear Right	Hard Left	Peds	App. Total	Hard Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:15 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	03:30 PM				03:45 PM				03:45 PM				
+0 mins.	**81**	47	0	**128**	81	7	0	88	16	98	**3**	117	
+15 mins.	55	**50**	0	105	83	**8**	0	91	11	130	0	141	
+30 mins.	66	41	0	107	73	3	0	76	**18**	**155**	0	**173**	
+45 mins.	46	49	**6**	101	**104**	2	0	**106**	13	109	1	123	
Total Volume	248	187	6	441	341	20	0	361	58	492	4	554	
% App. Total	56.2	42.4	1.4		94.5	5.5	0		10.5	88.8	0.7		
PHF	.765	.935	.250	.861	.820	.625	.000	.851	.806	.794	.333	.801	



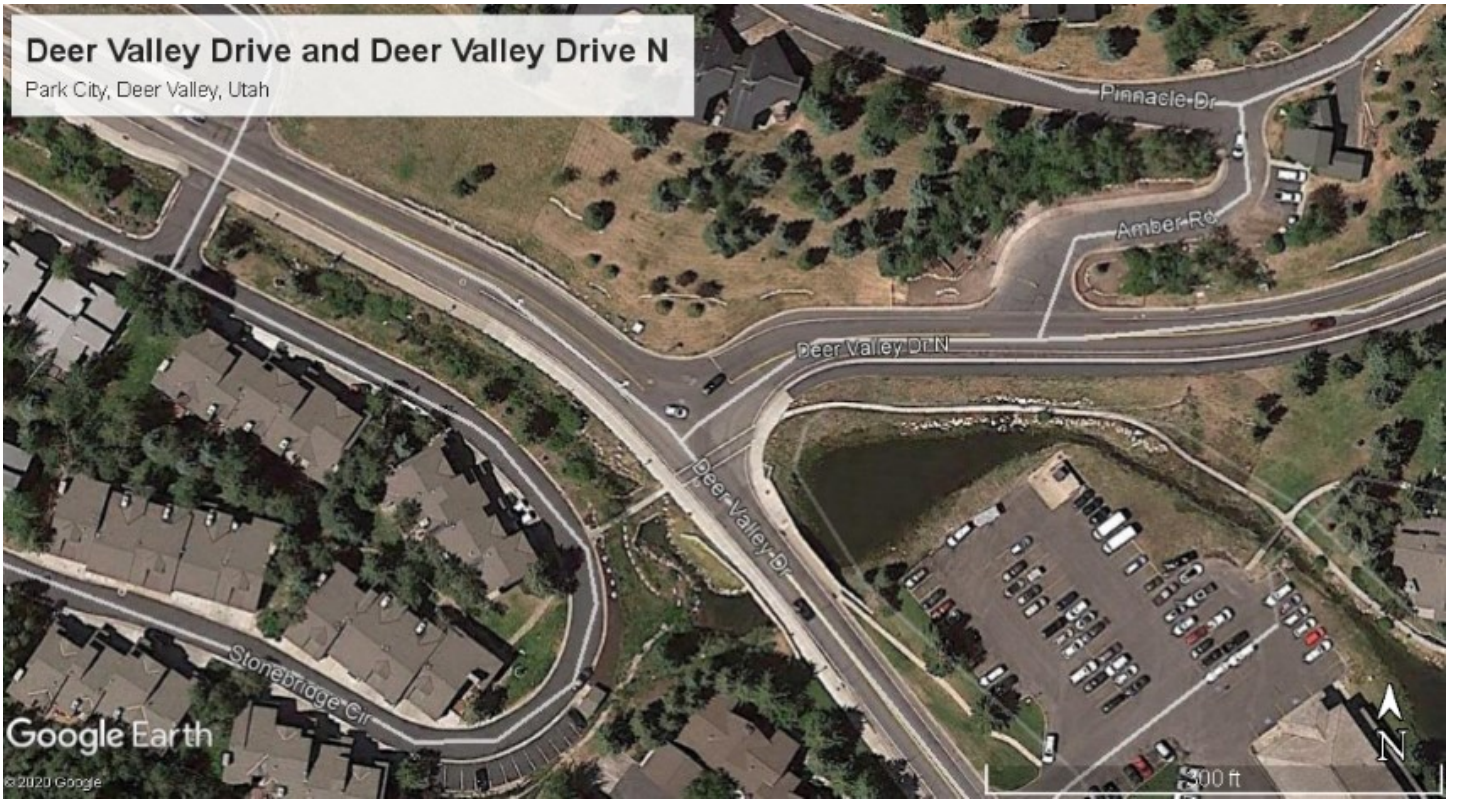
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Control: Stop Sign

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Site Code : Day 1
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Image 1



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Study: FEHR0119
Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D2
Site Code : Day 2
Start Date : 2/29/2020
Page No : 1

Groups Printed- General Traffic

	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	**Thru**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Hard Left**	**Peds**	**App. Total**	**Hard Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
07:45 AM	53	73	0	126	21	1	0	22	2	21	0	23	171
Total	53	73	0	126	21	1	0	22	2	21	0	23	171
08:00 AM	104	59	0	163	38	0	0	38	2	19	0	21	222
08:15 AM	150	70	0	220	32	1	0	33	3	19	0	22	275
08:30 AM	160	35	0	195	36	5	0	41	5	33	0	38	274
08:45 AM	173	39	0	212	38	1	0	39	2	48	0	50	301
Total	587	203	0	790	144	7	0	151	12	119	0	131	1072
09:00 AM	144	32	0	176	50	0	0	50	5	47	1	53	279
09:15 AM	128	36	0	164	53	4	0	57	2	42	0	44	265
09:30 AM	149	35	0	184	43	5	0	48	2	31	1	34	266

Total	421	103	0	524	146	9	0	155	9	120	2	131	810

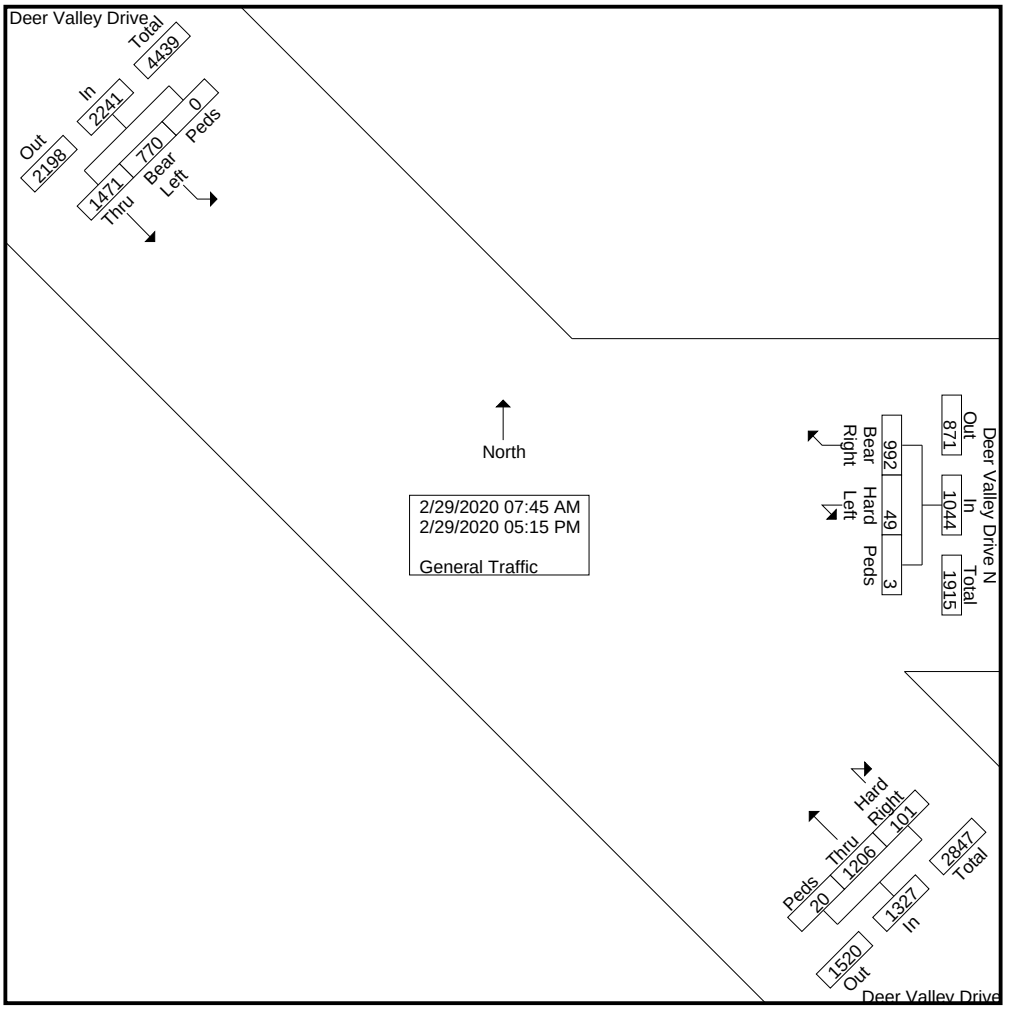
03:30 PM	66	48	0	114	103	3	1	107	10	111	0	121	342
03:45 PM	51	54	0	105	95	4	0	99	10	116	1	127	331
Total	117	102	0	219	198	7	1	206	20	227	1	248	673
04:00 PM	43	45	0	88	102	8	0	110	12	159	1	172	370
04:15 PM	63	52	0	115	76	8	2	86	9	140	0	149	350
04:30 PM	47	38	0	85	104	2	0	106	13	121	1	135	326
04:45 PM	57	61	0	118	66	2	0	68	6	97	4	107	293
Total	210	196	0	406	348	20	2	370	40	517	6	563	1339
05:00 PM	52	44	0	96	80	4	0	84	11	113	2	126	306
05:15 PM	31	49	0	80	55	1	0	56	7	89	9	105	241
Grand Total	1471	770	0	2241	992	49	3	1044	101	1206	20	1327	4612
Apprch %	65.6	34.4	0		95	4.7	0.3		7.6	90.9	1.5		
Total %	31.9	16.7	0	48.6	21.5	1.1	0.1	22.6	2.2	26.1	0.4	28.8	

L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0119
Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D2
Site Code : Day 2
Start Date : 2/29/2020
Page No : 2



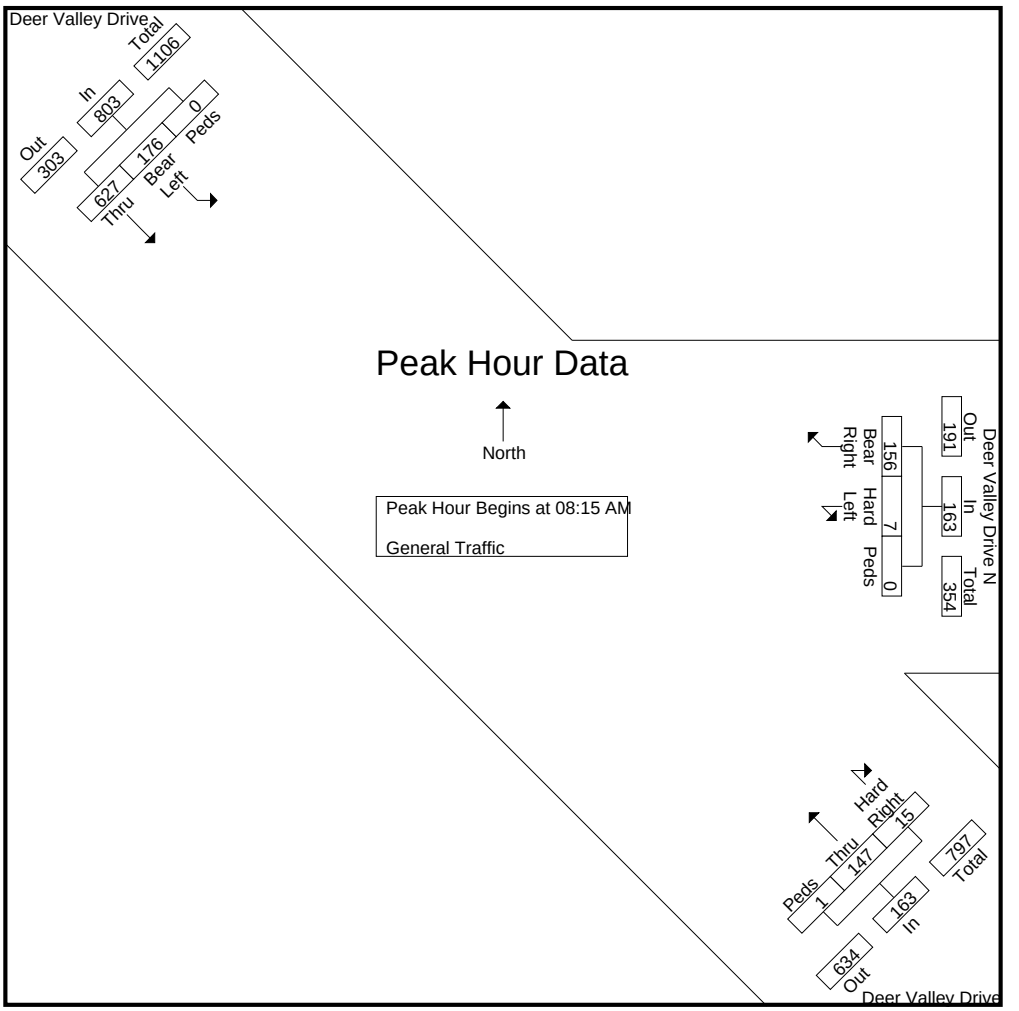
L2 Data Collection

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Study: FEHR0119
Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D2
Site Code : Day 2
Start Date : 2/29/2020
Page No : 3

	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	**Thru**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Hard Left**	**Peds**	**App. Total**	**Hard Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 07:45 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:15 AM													
08:15 AM	150	**70**	0	**220**	32	1	0	33	3	19	0	22	275
08:30 AM	160	35	0	195	36	**5**	0	41	**5**	33	0	38	274
08:45 AM	**173**	39	0	212	38	1	0	39	2	**48**	0	50	**301**
09:00 AM	144	32	0	176	**50**	0	0	**50**	5	47	**1**	**53**	279
Total Volume	627	176	0	803	156	7	0	163	15	147	1	163	1129
% App. Total	78.1	21.9	0		95.7	4.3	0		9.2	90.2	0.6		
PHF	.906	.629	.000	.913	.780	.350	.000	.815	.750	.766	.250	.769	.938



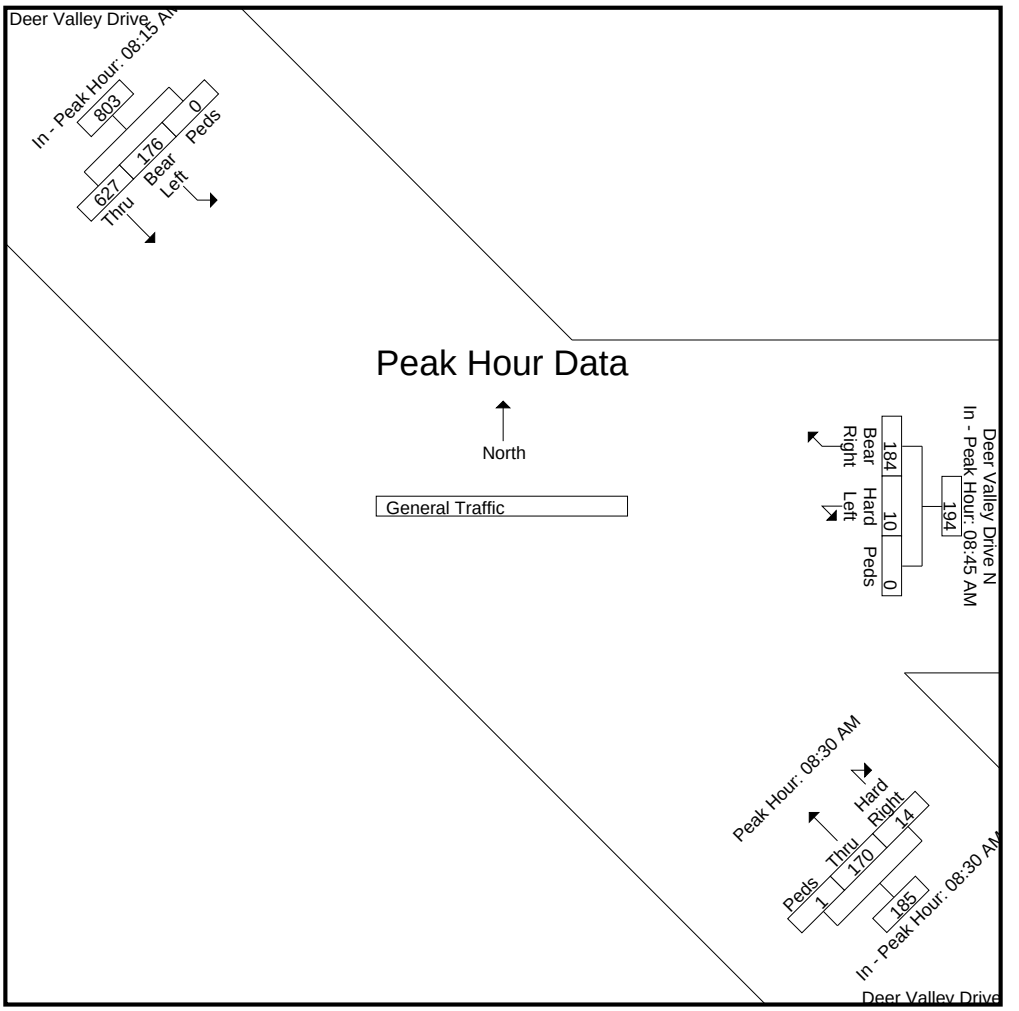
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Study: FEHR0119
Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D2
Site Code : Day 2
Start Date : 2/29/2020
Page No : 4

	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	**Thru**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Hard Left**	**Peds**	**App. Total**	**Hard Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 07:45 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	08:15 AM				08:45 AM				08:30 AM				
+0 mins.	150	**70**	0	**220**	38	1	0	39	**5**	33	0	38	
+15 mins.	160	35	0	195	50	0	0	50	2	**48**	0	50	
+30 mins.	**173**	39	0	212	**53**	4	0	**57**	5	47	**1**	**53**	
+45 mins.	144	32	0	176	43	**5**	0	48	2	42	0	44	
Total Volume	627	176	0	803	184	10	0	194	14	170	1	185	
% App. Total	78.1	21.9	0		94.8	5.2	0		7.6	91.9	0.5		
PHF	.906	.629	.000	.913	.868	.500	.000	.851	.700	.885	.250	.873	



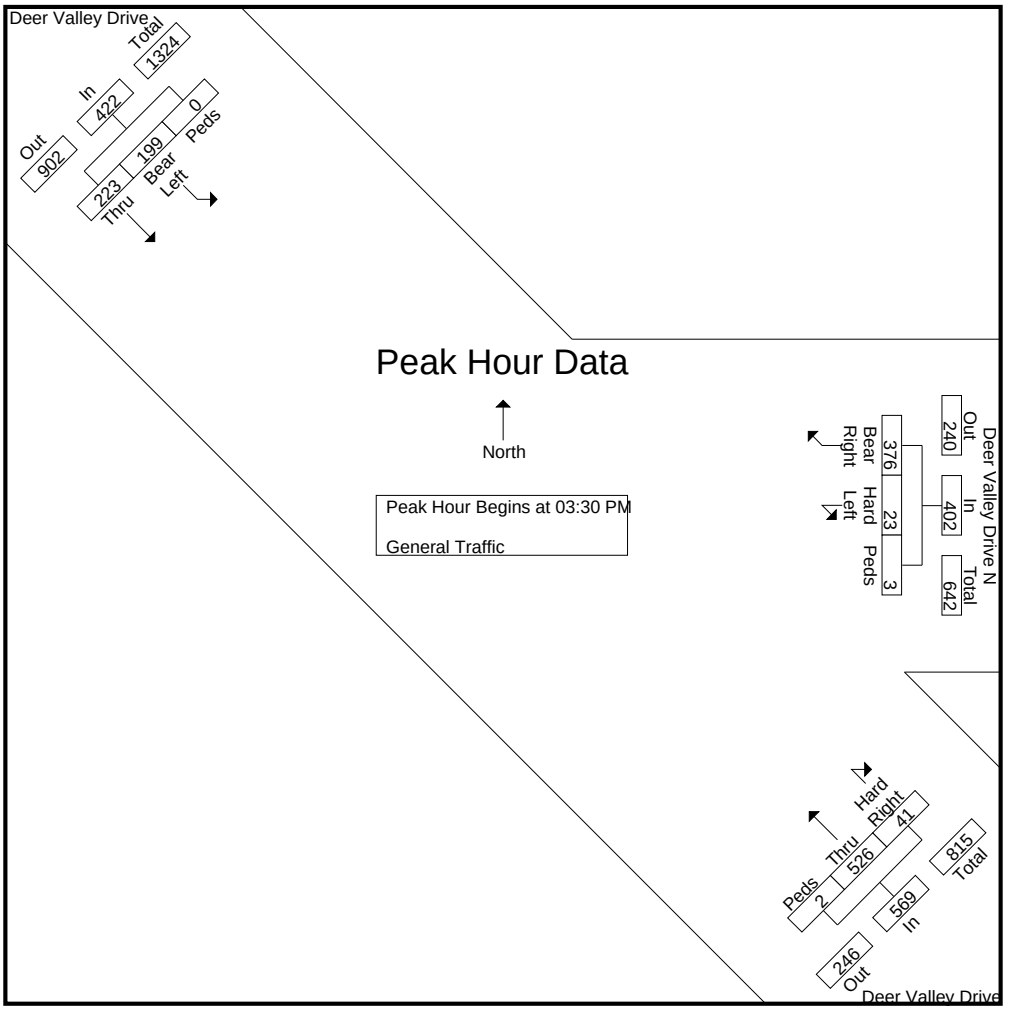
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Study: FEHR0119
Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D2
Site Code : Day 2
Start Date : 2/29/2020
Page No : 5

	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	**Thru**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Hard Left**	**Peds**	**App. Total**	**Hard Right**	**Thru**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 12:00 PM to 05:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:30 PM													
03:30 PM	**66**	48	0	114	**103**	3	1	107	10	111	0	121	342
03:45 PM	51	**54**	0	105	95	4	0	99	10	116	**1**	127	331
04:00 PM	43	45	0	88	102	**8**	0	**110**	**12**	**159**	1	**172**	**370**
04:15 PM	63	52	0	**115**	76	8	**2**	86	9	140	0	149	350
Total Volume	223	199	0	422	376	23	3	402	41	526	2	569	1393
% App. Total	52.8	47.2	0		93.5	5.7	0.7		7.2	92.4	0.4		
PHF	.845	.921	.000	.917	.913	.719	.375	.914	.854	.827	.500	.827	.941



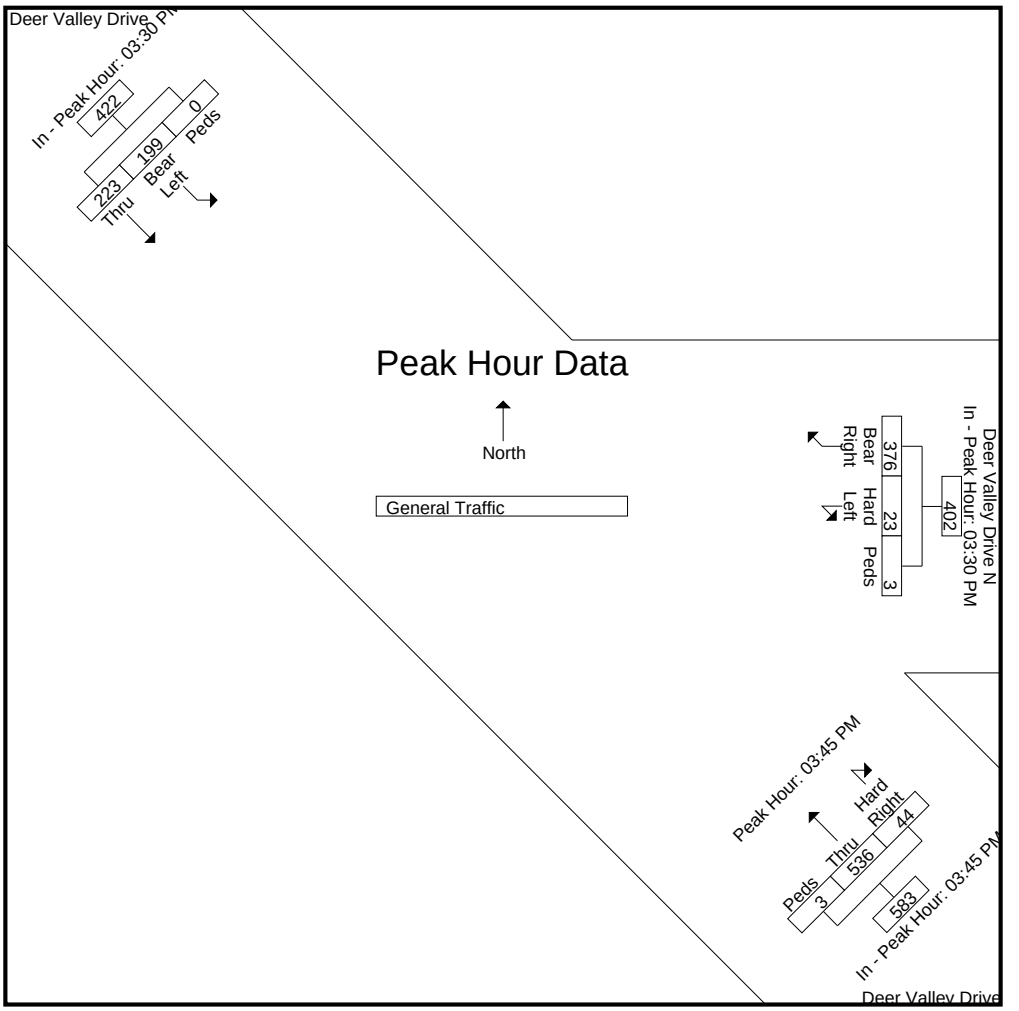
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0119
Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D2
Site Code : Day 2
Start Date : 2/29/2020
Page No : 6

	Deer Valley Drive From Northwest				Deer Valley Drive N From East				Deer Valley Drive From Southeast				
Start Time	Thru	Bear Left	Peds	App. Total	Bear Right	Hard Left	Peds	App. Total	Hard Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:15 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	03:30 PM				03:30 PM				03:45 PM				
+0 mins.	**66**	48	0	114	**103**	3	1	107	10	116	**1**	127	
+15 mins.	51	**54**	0	105	95	4	0	99	12	**159**	1	**172**	
+30 mins.	43	45	0	88	102	**8**	0	**110**	9	140	0	149	
+45 mins.	63	52	0	**115**	76	8	**2**	86	**13**	121	1	135	
Total Volume	223	199	0	422	376	23	3	402	44	536	3	583	
% App. Total	52.8	47.2	0		93.5	5.7	0.7		7.5	91.9	0.5		
PHF	.845	.921	.000	.917	.913	.719	.375	.914	.846	.843	.750	.847	



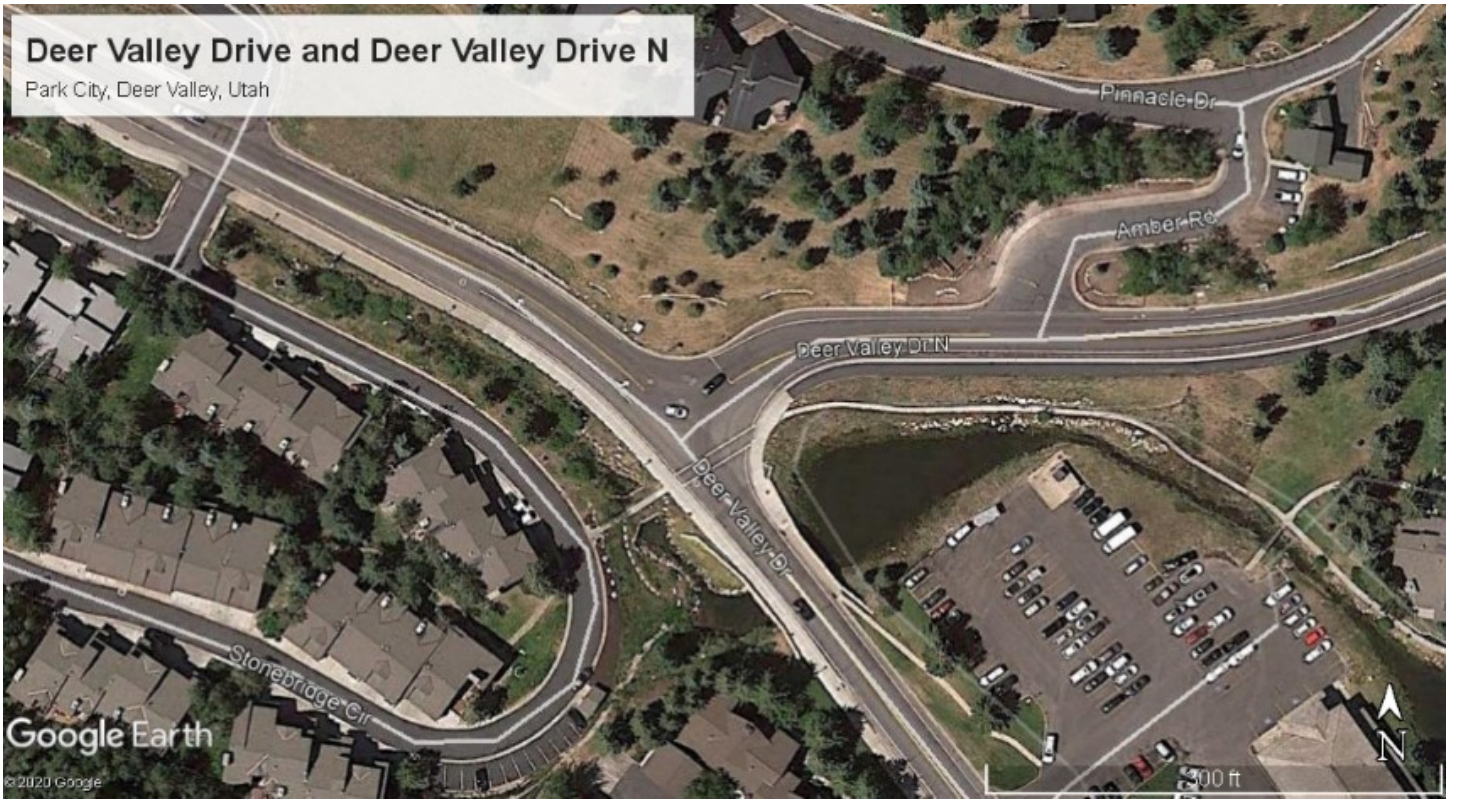
L2 Data Collection

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Study: FEHR0119
Intersection:Deer Valley/ Deer Valley N
City, State: Deer Valley, Utah
Control: Stop Sign

File Name : Deer Valley Dr & Deer Valley Dr N - D2
Site Code : Day 2
Start Date : 2/29/2020
Page No : 7

Image 1



L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0124
Intersection: Deer Valley Dr / Marsac Av
City, State: Park City, Utah
Control: Yields

File Name : Deer Valley Dr & Marsac Ave RDBT
Site Code : Saturday
Start Date : 12/19/2020
Page No : 1

Groups Printed- General Traffic - Turns

	Deer Valley Drive From North					Deer Valley Drive From East					Marsac Avenue From South					To Swede Alley (Buses Only) From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:45 AM	1	105	141	0	247	37	2	5	0	44	3	19	0	1	23	1	3	1	0	5	319
Total	1	105	141	0	247	37	2	5	0	44	3	19	0	1	23	1	3	1	0	5	319
08:00 AM	2	59	173	0	234	30	2	1	0	33	12	23	0	1	36	1	3	0	1	5	308
08:15 AM	3	78	171	0	252	46	3	4	0	53	12	22	0	1	35	0	3	0	2	5	345
08:30 AM	1	79	171	0	251	39	4	11	0	54	13	22	0	2	37	3	7	0	1	11	353
08:45 AM	2	74	178	0	254	55	4	6	2	67	16	26	1	3	46	3	6	1	4	14	381
Total	8	290	693	0	991	170	13	22	2	207	53	93	1	7	154	7	19	1	8	35	1387
09:00 AM	3	70	140	0	213	74	4	4	2	84	8	31	0	8	47	4	3	1	6	14	358
09:15 AM	1	74	114	3	192	63	2	6	2	73	9	31	0	1	41	0	4	0	1	5	311
09:30 AM	1	66	116	0	183	75	0	2	2	79	7	35	0	0	42	0	3	1	1	5	309

Total	5	210	370	3	588	212	6	12	6	236	24	97	0	9	130	4	10	2	8	24	978

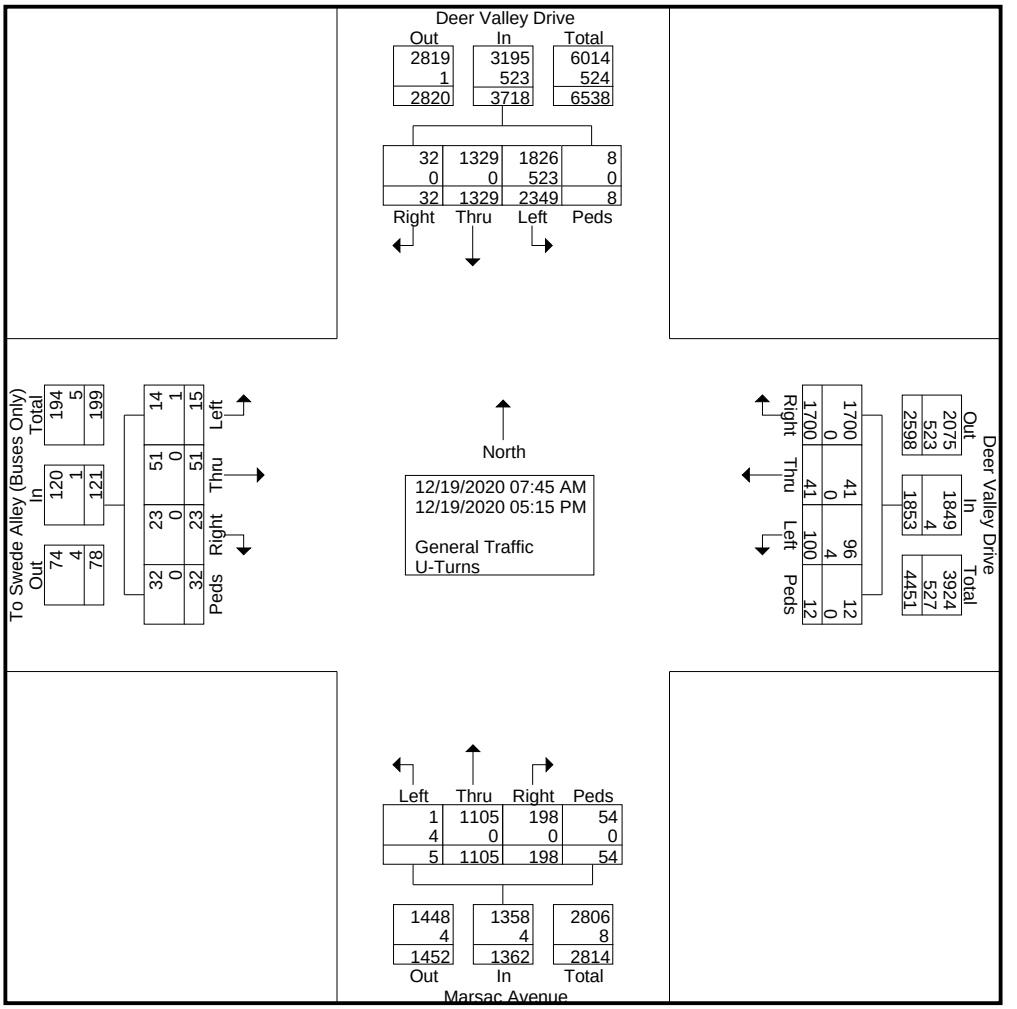
03:30 PM	5	97	155	0	257	155	2	7	0	164	18	97	0	5	120	4	0	3	0	7	548
03:45 PM	2	90	162	0	254	157	4	9	0	170	17	116	0	7	140	2	4	1	4	11	575
Total	7	187	317	0	511	312	6	16	0	334	35	213	0	12	260	6	4	4	4	18	1123
04:00 PM	1	101	141	0	243	177	1	12	0	190	9	106	1	7	123	1	2	0	3	6	562
04:15 PM	1	93	129	5	228	180	3	9	1	193	16	106	1	2	125	0	3	0	2	5	551
04:30 PM	2	91	144	0	237	176	4	5	0	185	16	100	0	7	123	2	2	4	1	9	554
04:45 PM	3	83	145	0	231	139	3	10	0	152	16	135	1	3	155	0	4	1	0	5	543
Total	7	368	559	5	939	672	11	36	1	720	57	447	3	19	526	3	11	5	6	25	2210
05:00 PM	1	74	135	0	210	129	3	5	1	138	11	104	0	3	118	1	2	1	2	6	472
05:15 PM	3	95	134	0	232	168	0	4	2	174	15	132	1	3	151	1	2	1	4	8	565
Grand Total	32	1329	2349	8	3718	1700	41	100	12	1853	198	1105	5	54	1362	23	51	15	32	121	7054
Apprch %	0.9	35.7	63.2	0.2		91.7	2.2	5.4	0.6		14.5	81.1	0.4	4		19	42.1	12.4	26.4		
Total %	0.5	18.8	33.3	0.1	52.7	24.1	0.6	1.4	0.2	26.3	2.8	15.7	0.1	0.8	19.3	0.3	0.7	0.2	0.5	1.7	
General Traffic	32	1329	1826	8	3195	1700	41	96	12	1849	198	1105	1	54	1358	23	51	14	32	120	6522
% General Traffic	100	100	77.7	100	85.9	100	100	96	100	99.8	100	100	20	100	99.7	100	100	93.3	100	99.2	92.5
U-Turns	0	0	523	0	523	0	0	4	0	4	0	0	4	0	4	0	0	1	0	1	532
% U-Turns	0	0	22.3	0	14.1	0	0	4	0	0.2	0	0	80	0	0.3	0	0	6.7	0	0.8	7.5

L2 Data Collection

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Study: FEHR0124
Intersection: Deer Valley Dr / Marsac Av
City, State: Park City, Utah
Control: Yields

File Name : Deer Valley Dr & Marsac Ave RDBT
Site Code : Saturday
Start Date : 12/19/2020
Page No : 2



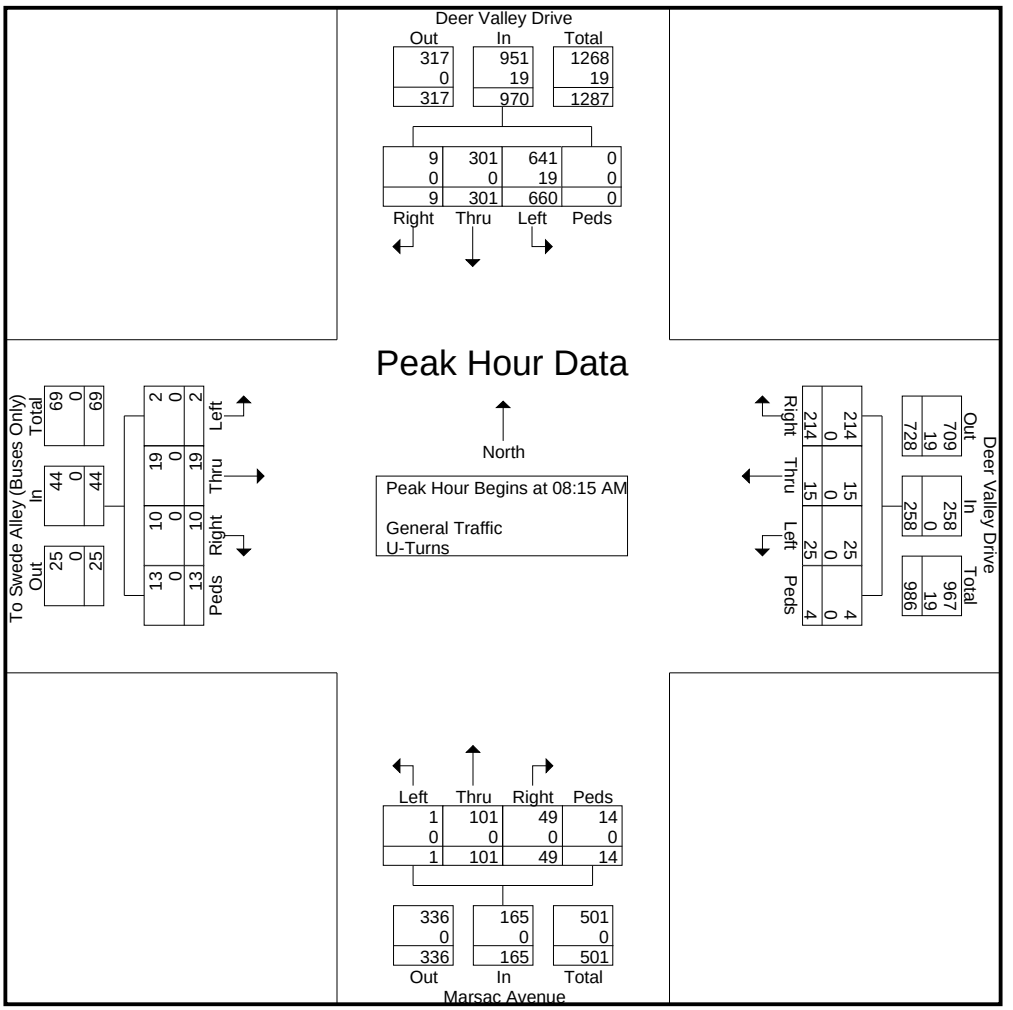
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0124
Intersection: Deer Valley Dr / Marsac Av
City, State: Park City, Utah
Control: Yields

File Name : Deer Valley Dr & Marsac Ave RDBT
Site Code : Saturday
Start Date : 12/19/2020
Page No : 3

	Deer Valley Drive From North					Deer Valley Drive From East					Marsac Avenue From South					To Swede Alley (Buses Only) From West					
Start Time	**Right**	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**Left**	**Peds**	**App. Total**	**Right**	**Thru**	**Left**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 07:45 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	**3**	78	171	0	252	46	3	4	0	53	12	22	0	1	35	0	3	0	2	5	345
08:30 AM	1	**79**	171	0	251	39	**4**	**11**	0	54	13	22	0	2	37	3	**7**	0	1	11	353
08:45 AM	2	74	**178**	0	**254**	55	4	6	**2**	67	**16**	26	**1**	3	46	3	6	**1**	4	**14**	**381**
09:00 AM	3	70	140	0	213	**74**	4	4	2	**84**	8	**31**	0	**8**	**47**	**4**	3	1	**6**	14	358
Total Volume	9	301	660	0	970	214	15	25	4	258	49	101	1	14	165	10	19	2	13	44	1437
% App. Total	0.9	31	68	0		82.9	5.8	9.7	1.6		29.7	61.2	0.6	8.5		22.7	43.2	4.5	29.5		
PHF	.750	.953	.927	.000	.955	.723	.938	.568	.500	.768	.766	.815	.250	.438	.878	.625	.679	.500	.542	.786	.943
General Traffic	9	301	641	0	951	214	15	25	4	258	49	101	1	14	165	10	19	2	13	44	1418
% General Traffic	100	100	97.1	0	98.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98.7
U-Turns	0	0	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
% U-Turns	0	0	2.9	0	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3



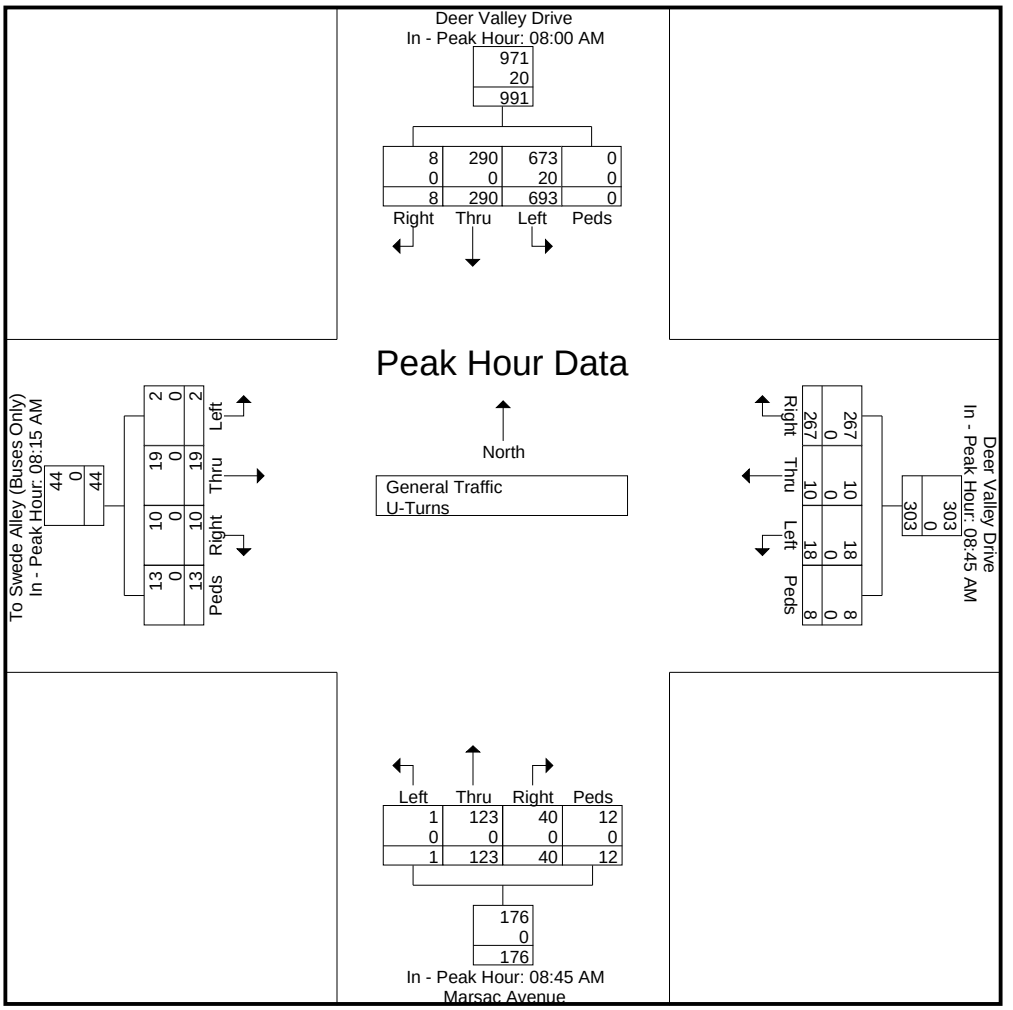
L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0124
Intersection: Deer Valley Dr / Marsac Av
City, State: Park City, Utah
Control: Yields

File Name : Deer Valley Dr & Marsac Ave RDBT
Site Code : Saturday
Start Date : 12/19/2020
Page No : 4

	Deer Valley Drive From North					Deer Valley Drive From East					Marsac Avenue From South					To Swede Alley (Buses Only) From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	08:00 AM					08:45 AM					08:45 AM					08:15 AM					
+0 mins.	2	59	173	0	234	55	**4**	**6**	**2**	67	**16**	26	**1**	3	46	0	3	0	2	5	
+15 mins.	**3**	78	171	0	252	74	4	4	2	**84**	8	31	0	**8**	**47**	3	**7**	0	1	11	
+30 mins.	1	**79**	171	0	251	63	2	6	2	73	9	31	0	1	41	3	6	**1**	4	**14**	
+45 mins.	2	74	**178**	0	**254**	**75**	0	2	2	79	7	**35**	0	0	42	**4**	3	1	**6**	14	
Total Volume	8	290	693	0	991	267	10	18	8	303	40	123	1	12	176	10	19	2	13	44	
% App. Total	0.8	29.3	69.9	0		88.1	3.3	5.9	2.6		22.7	69.9	0.6	6.8		22.7	43.2	4.5	29.5		
PHF	.667	.918	.973	.000	.975	.890	.625	.750	1.000	.902	.625	.879	.250	.375	.936	.625	.679	.500	.542	.786	
General Traffic	8	290	673	0	971	267	10	18	8	303	40	123	1	12	176	10	19	2	13	44	
% General Traffic	100	100	97.1	0	98	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
U-Turns	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% U-Turns	0	0	2.9	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



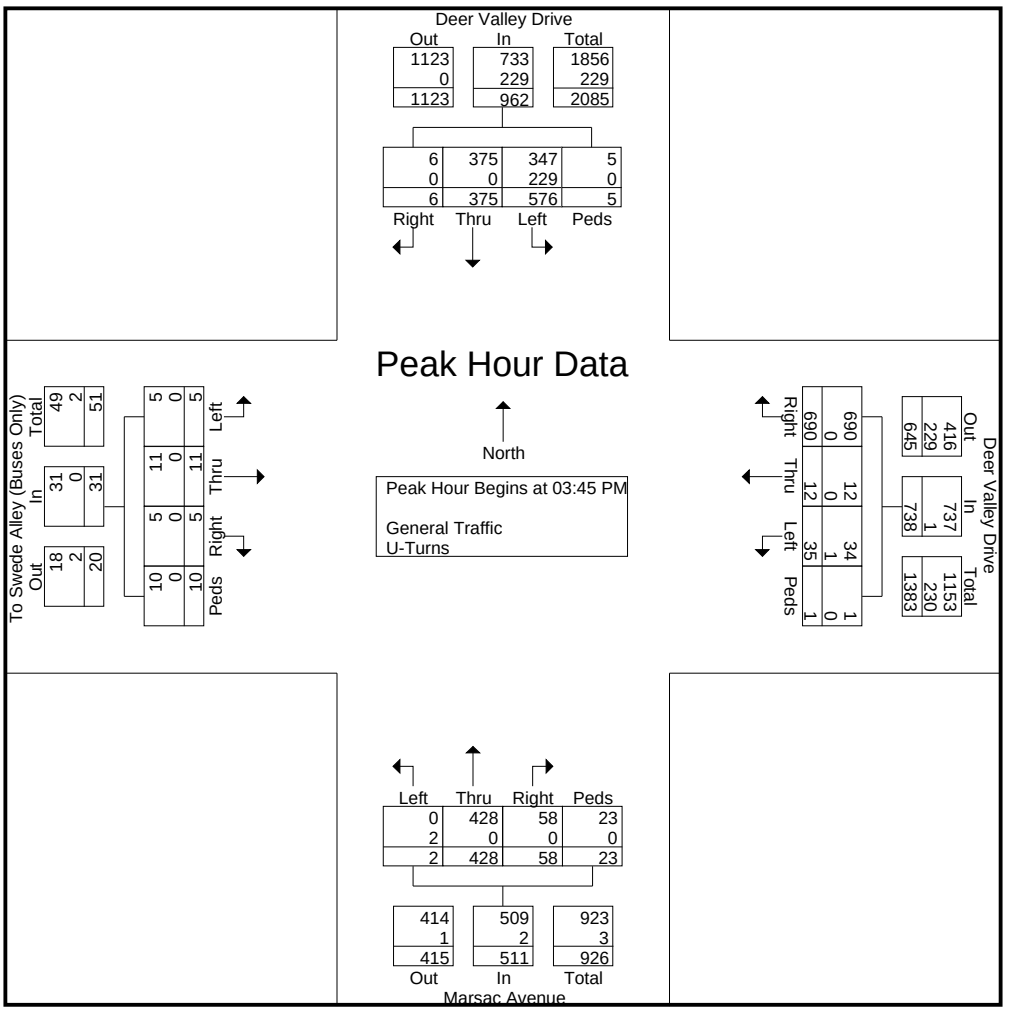
L2 Data Collection

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Study: FEHR0124
Intersection: Deer Valley Dr / Marsac Av
City, State: Park City, Utah
Control: Yields

File Name : Deer Valley Dr & Marsac Ave RDBT
Site Code : Saturday
Start Date : 12/19/2020
Page No : 5

	Deer Valley Drive From North					Deer Valley Drive From East					Marsac Avenue From South					To Swede Alley (Buses Only) From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	**2**	90	**162**	0	**254**	157	**4**	9	0	170	**17**	**116**	0	**7**	**140**	**2**	**4**	1	**4**	**11**	**575**
04:00 PM	1	**101**	141	0	243	177	1	**12**	0	190	9	106	**1**	7	123	1	2	0	3	6	562
04:15 PM	1	93	129	**5**	228	**180**	3	9	**1**	**193**	16	106	1	2	125	0	3	0	2	5	551
04:30 PM	2	91	144	0	237	176	4	5	0	185	16	100	0	7	123	2	2	**4**	1	9	554
Total Volume	6	375	576	5	962	690	12	35	1	738	58	428	2	23	511	5	11	5	10	31	2242
% App. Total	0.6	39	59.9	0.5		93.5	1.6	4.7	0.1		11.4	83.8	0.4	4.5		16.1	35.5	16.1	32.3		
PHF	.750	.928	.889	.250	.947	.958	.750	.729	.250	.956	.853	.922	.500	.821	.913	.625	.688	.313	.625	.705	.975
General Traffic	6	375	347	5	733	690	12	34	1	737	58	428	0	23	509	5	11	5	10	31	2010
% General Traffic	100	100	60.2	100	76.2	100	100	97.1	100	99.9	100	100	0	100	99.6	100	100	100	100	100	89.7
U-Turns	0	0	229	0	229	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	232
% U-Turns	0	0	39.8	0	23.8	0	0	2.9	0	0.1	0	0	100	0	0.4	0	0	0	0	0	10.3



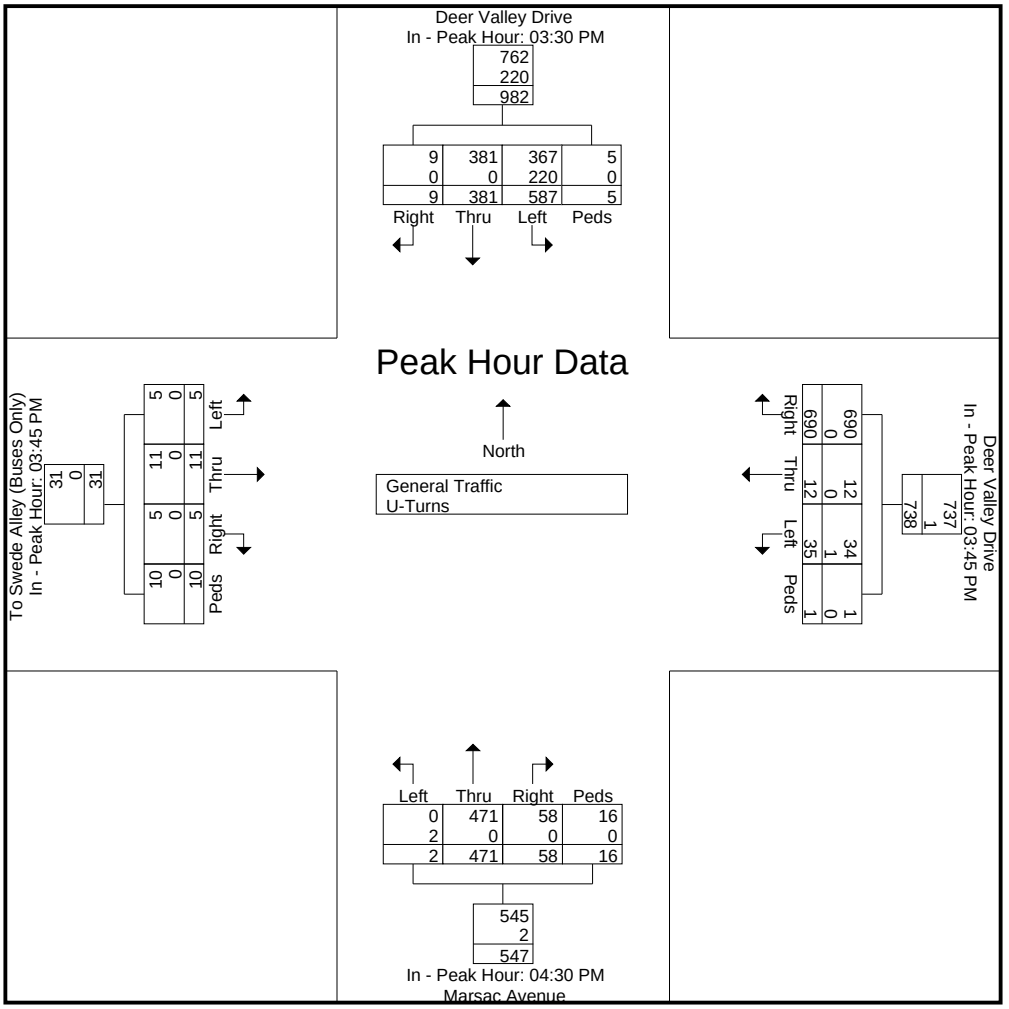
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0124
Intersection: Deer Valley Dr / Marsac Av
City, State: Park City, Utah
Control: Yields

File Name : Deer Valley Dr & Marsac Ave RDBT
Site Code : Saturday
Start Date : 12/19/2020
Page No : 6

	Deer Valley Drive From North					Deer Valley Drive From East					Marsac Avenue From South					To Swede Alley (Buses Only) From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:15 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	03:30 PM					03:45 PM					04:30 PM					03:45 PM					
+0 mins.	**5**	97	155	0	**257**	157	**4**	9	0	170	**16**	100	0	**7**	123	**2**	**4**	1	**4**	**11**	
+15 mins.	2	90	**162**	0	254	177	1	**12**	0	190	16	**135**	**1**	3	**155**	1	2	0	3	6	
+30 mins.	1	**101**	141	0	243	**180**	3	9	**1**	**193**	11	104	0	3	118	0	3	0	2	5	
+45 mins.	1	93	129	**5**	228	176	4	5	0	185	15	132	1	3	151	2	2	**4**	1	9	
Total Volume	9	381	587	5	982	690	12	35	1	738	58	471	2	16	547	5	11	5	10	31	
% App. Total	0.9	38.8	59.8	0.5		93.5	1.6	4.7	0.1		10.6	86.1	0.4	2.9		16.1	35.5	16.1	32.3		
PHF	.450	.943	.906	.250	.955	.958	.750	.729	.250	.956	.906	.872	.500	.571	.882	.625	.688	.313	.625	.705	
General Traffic	9	381	367	5	762	690	12	34	1	737	58	471	0	16	545	5	11	5	10	31	
% General Traffic	100	100	62.5	100	77.6	100	100	97.1	100	99.9	100	100	0	100	99.6	100	100	100	100	100	
U-Turns	0	0	220	0	220	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	
% U-Turns	0	0	37.5	0	22.4	0	0	2.9	0	0.1	0	0	100	0	0.4	0	0	0	0	0	



L2 Data Collection

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Study: FEHR0124
Intersection: Deer Valley Dr / Marsac Av
City, State: Park City, Utah
Control: Yields

File Name : Deer Valley Dr & Marsac Ave RDBT
Site Code : Saturday
Start Date : 12/19/2020
Page No : 7

Image 1



L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0124
Intersection: Deer Valley Dr / Bonanza
City, State: Park City, Utah
Control: Signalized

File Name : Deer Valley Dr & Bonanza Dr
Site Code : Saturday
Start Date : 12/19/2020
Page No : 1

Groups Printed- General Traffic

	Bonanza Drive From Northeast				Deer Valley Drive From South				Deer Valley Drive From West				
Start Time	**Bear Right**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Left**	**Peds**	**App. Total**	**Right**	**Bear Left**	**Peds**	**App. Total**	**Int. Total**
07:45 AM	34	138	0	172	21	37	0	58	137	13	0	150	380
Total	34	138	0	172	21	37	0	58	137	13	0	150	380
08:00 AM	26	111	0	137	30	42	0	72	147	8	0	155	364
08:15 AM	49	115	0	164	24	60	0	84	141	14	0	155	403
08:30 AM	51	113	0	164	23	48	0	71	137	23	0	160	395
08:45 AM	40	130	0	170	32	58	0	90	137	23	0	160	420
Total	166	469	0	635	109	208	0	317	562	68	0	630	1582
09:00 AM	28	111	0	139	49	57	0	106	120	29	0	149	394
09:15 AM	22	85	0	107	27	70	0	97	112	34	0	146	350
09:30 AM	26	90	0	116	38	54	0	92	121	30	0	151	359

Total	76	286	0	362	114	181	0	295	353	93	0	446	1103

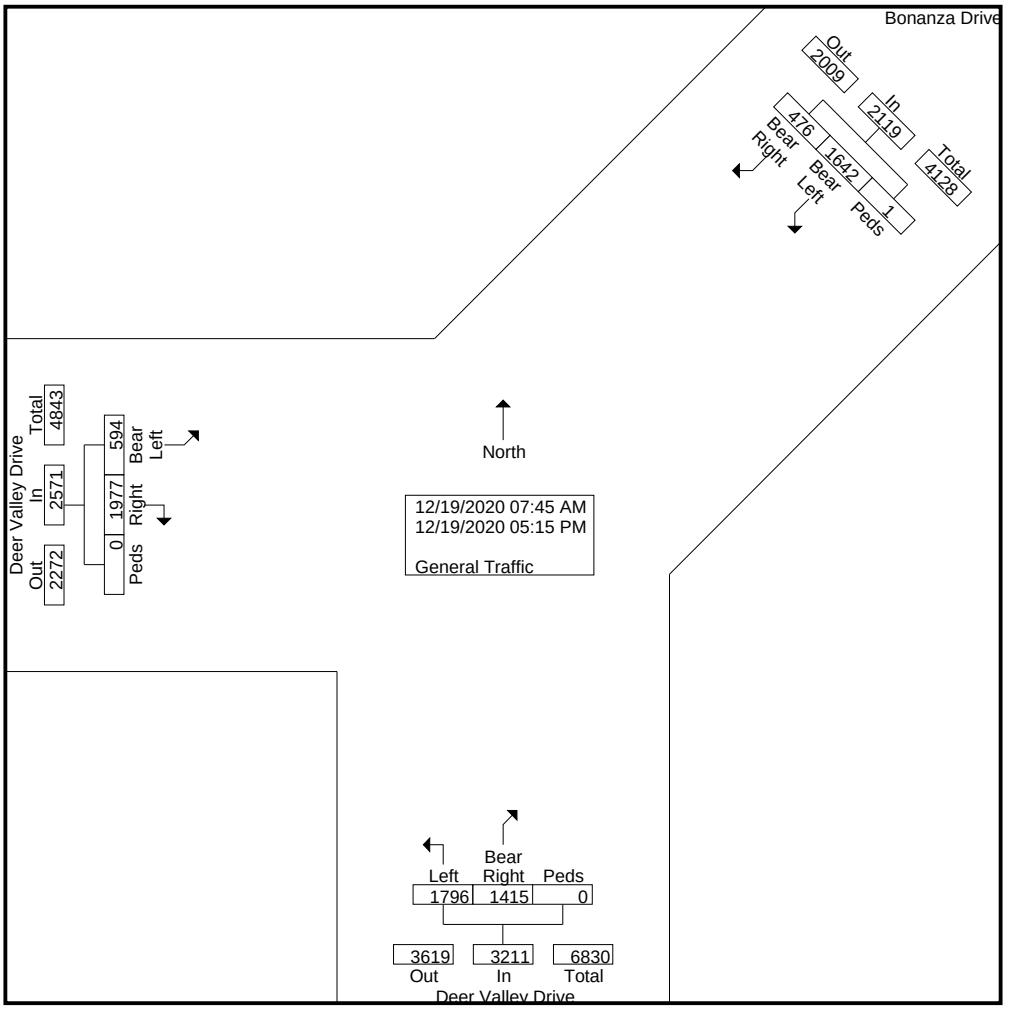
03:30 PM	23	90	0	113	146	174	0	320	120	58	0	178	611
03:45 PM	41	110	1	152	147	184	0	331	110	67	0	177	660
Total	64	200	1	265	293	358	0	651	230	125	0	355	1271
04:00 PM	25	92	0	117	155	175	0	330	119	59	0	178	625
04:15 PM	26	103	0	129	142	177	0	319	110	63	0	173	621
04:30 PM	31	94	0	125	176	182	0	358	99	50	0	149	632
04:45 PM	17	86	0	103	130	166	0	296	121	44	0	165	564
Total	99	375	0	474	603	700	0	1303	449	216	0	665	2442
05:00 PM	21	81	0	102	136	171	0	307	110	41	0	151	560
05:15 PM	16	93	0	109	139	141	0	280	136	38	0	174	563
Grand Total	476	1642	1	2119	1415	1796	0	3211	1977	594	0	2571	7901
Apprch %	22.5	77.5	0		44.1	55.9	0		76.9	23.1	0		
Total %	6	20.8	0	26.8	17.9	22.7	0	40.6	25	7.5	0	32.5	

L2 Data Collection

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Study: FEHR0124
Intersection: Deer Valley Dr / Bonanza
City, State: Park City, Utah
Control: Signalized

File Name : Deer Valley Dr & Bonanza Dr
Site Code : Saturday
Start Date : 12/19/2020
Page No : 2



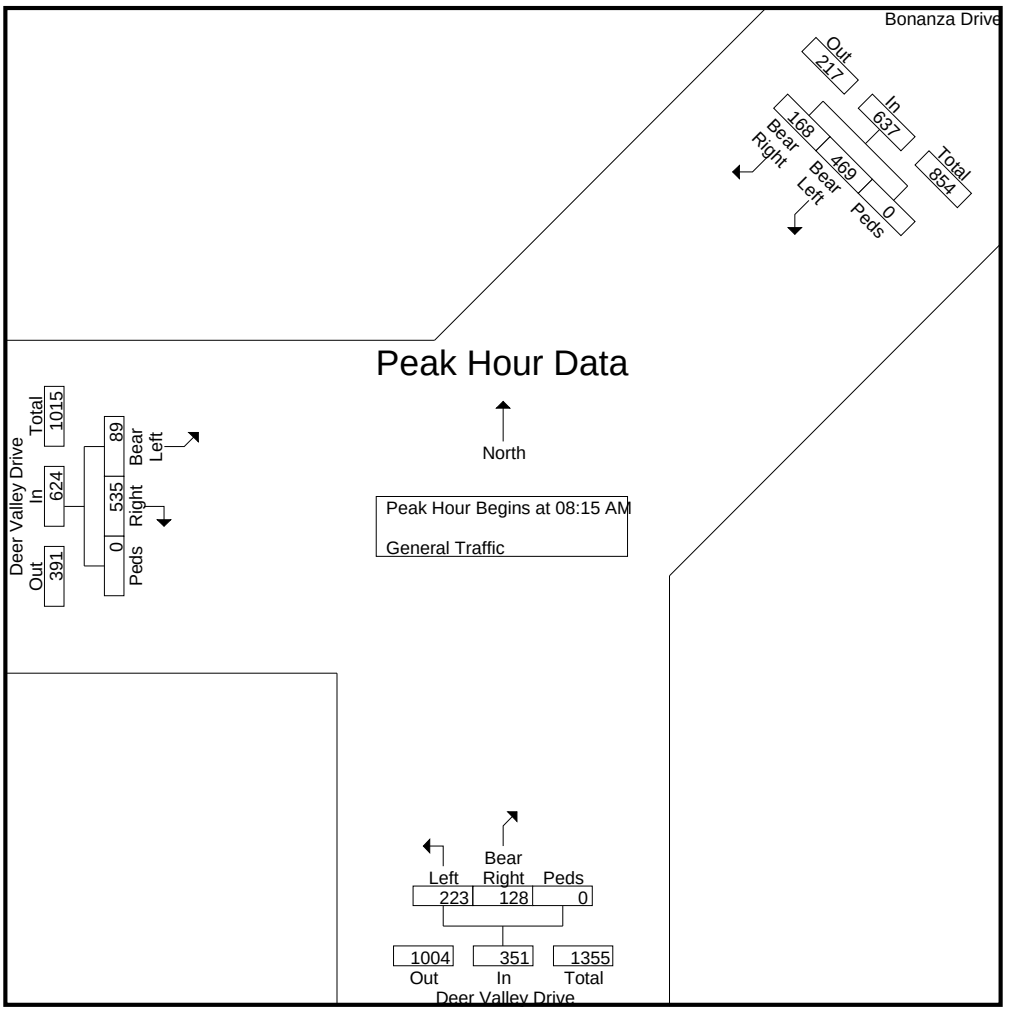
L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0124
Intersection: Deer Valley Dr / Bonanza
City, State: Park City, Utah
Control: Signalized

File Name : Deer Valley Dr & Bonanza Dr
Site Code : Saturday
Start Date : 12/19/2020
Page No : 3

	Bonanza Drive From Northeast				Deer Valley Drive From South				Deer Valley Drive From West				
Start Time	**Bear Right**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Left**	**Peds**	**App. Total**	**Right**	**Bear Left**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 07:45 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:15 AM													
08:15 AM	49	115	0	164	24	**60**	0	84	**141**	14	0	155	403
08:30 AM	**51**	113	0	164	23	48	0	71	137	23	0	**160**	395
08:45 AM	40	**130**	0	**170**	32	58	0	90	137	23	0	160	**420**
09:00 AM	28	111	0	139	**49**	57	0	**106**	120	**29**	0	149	394
Total Volume	168	469	0	637	128	223	0	351	535	89	0	624	1612
% App. Total	26.4	73.6	0		36.5	63.5	0		85.7	14.3	0		
PHF	.824	.902	.000	.937	.653	.929	.000	.828	.949	.767	.000	.975	.960



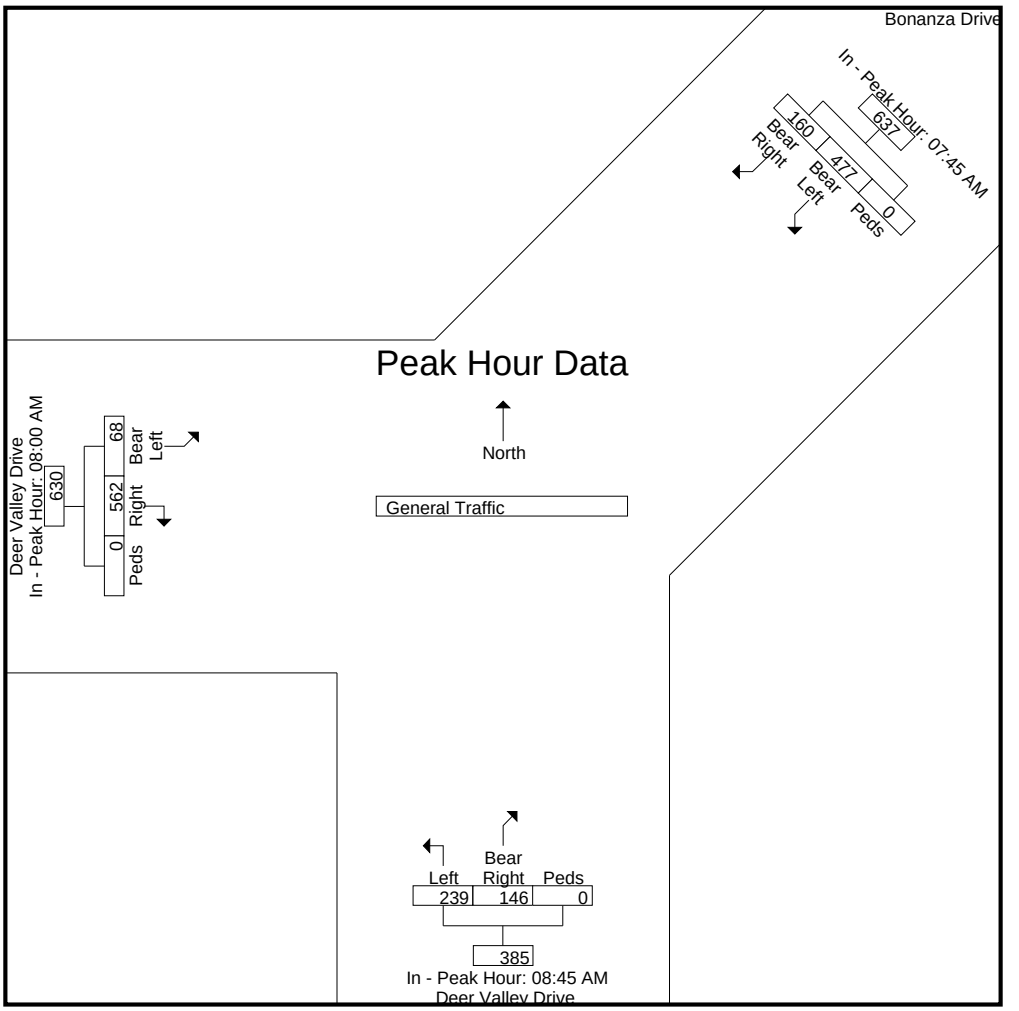
L2 Data Collection

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Study: FEHR0124
Intersection: Deer Valley Dr / Bonanza
City, State: Park City, Utah
Control: Signalized

File Name : Deer Valley Dr & Bonanza Dr
Site Code : Saturday
Start Date : 12/19/2020
Page No : 4

	Bonanza Drive From Northeast				Deer Valley Drive From South				Deer Valley Drive From West				
Start Time	**Bear Right**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Left**	**Peds**	**App. Total**	**Right**	**Bear Left**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 07:45 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:45 AM				08:45 AM				08:00 AM				
+0 mins.	34	**138**	0	**172**	32	58	0	90	**147**	8	0	155	
+15 mins.	26	111	0	137	**49**	57	0	**106**	141	14	0	155	
+30 mins.	49	115	0	164	27	**70**	0	97	137	**23**	0	**160**	
+45 mins.	**51**	113	0	164	38	54	0	92	137	23	0	160	
Total Volume	160	477	0	637	146	239	0	385	562	68	0	630	
% App. Total	25.1	74.9	0		37.9	62.1	0		89.2	10.8	0		
PHF	.784	.864	.000	.926	.745	.854	.000	.908	.956	.739	.000	.984	



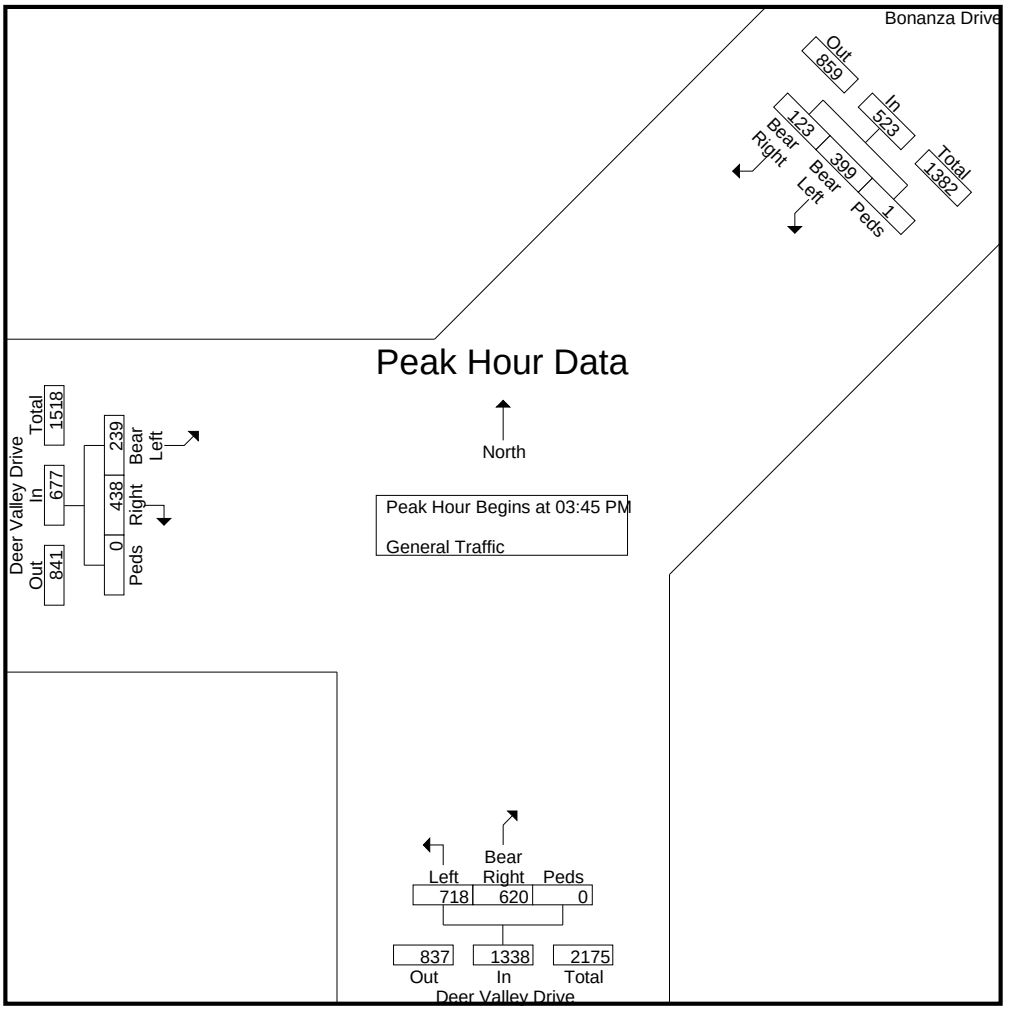
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Study: FEHR0124
Intersection: Deer Valley Dr / Bonanza
City, State: Park City, Utah
Control: Signalized

File Name : Deer Valley Dr & Bonanza Dr
Site Code : Saturday
Start Date : 12/19/2020
Page No : 5

	Bonanza Drive From Northeast				Deer Valley Drive From South				Deer Valley Drive From West				
Start Time	**Bear Right**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Left**	**Peds**	**App. Total**	**Right**	**Bear Left**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 12:00 PM to 05:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:45 PM													
03:45 PM	**41**	**110**	**1**	**152**	147	**184**	0	331	110	**67**	0	177	**660**
04:00 PM	25	92	0	117	155	175	0	330	**119**	59	0	**178**	625
04:15 PM	26	103	0	129	142	177	0	319	110	63	0	173	621
04:30 PM	31	94	0	125	**176**	182	0	**358**	99	50	0	149	632
Total Volume	123	399	1	523	620	718	0	1338	438	239	0	677	2538
% App. Total	23.5	76.3	0.2		46.3	53.7	0		64.7	35.3	0		
PHF	.750	.907	.250	.860	.881	.976	.000	.934	.920	.892	.000	.951	.961



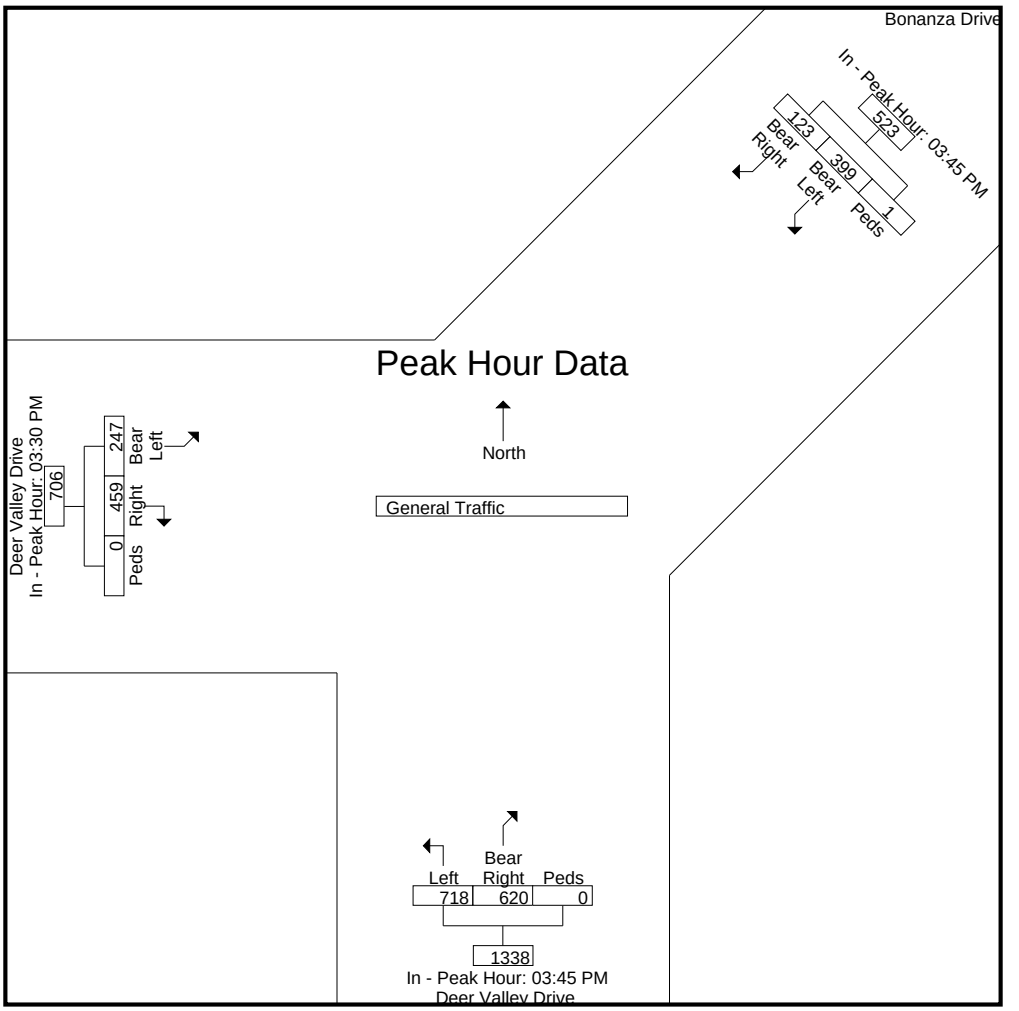
L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0124
Intersection: Deer Valley Dr / Bonanza
City, State: Park City, Utah
Control: Signalized

File Name : Deer Valley Dr & Bonanza Dr
Site Code : Saturday
Start Date : 12/19/2020
Page No : 6

	Bonanza Drive From Northeast				Deer Valley Drive From South				Deer Valley Drive From West				
Start Time	**Bear Right**	**Bear Left**	**Peds**	**App. Total**	**Bear Right**	**Left**	**Peds**	**App. Total**	**Right**	**Bear Left**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 12:00 PM to 05:15 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	03:45 PM				03:45 PM				03:30 PM				
+0 mins.	**41**	**110**	**1**	**152**	147	**184**	0	331	**120**	58	0	**178**	
+15 mins.	25	92	0	117	155	175	0	330	110	**67**	0	177	
+30 mins.	26	103	0	129	142	177	0	319	119	59	0	178	
+45 mins.	31	94	0	125	**176**	182	0	**358**	110	63	0	173	
Total Volume	123	399	1	523	620	718	0	1338	459	247	0	706	
% App. Total	23.5	76.3	0.2		46.3	53.7	0		65	35	0		
PHF	.750	.907	.250	.860	.881	.976	.000	.934	.956	.922	.000	.992	



L2 Data Collection

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Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0124
Intersection: Deer Valley Dr / Bonanza
City, State: Park City, Utah
Control: Signalized

File Name : Deer Valley Dr & Bonanza Dr
Site Code : Saturday
Start Date : 12/19/2020
Page No : 7

Image 1



FEHR PEERS

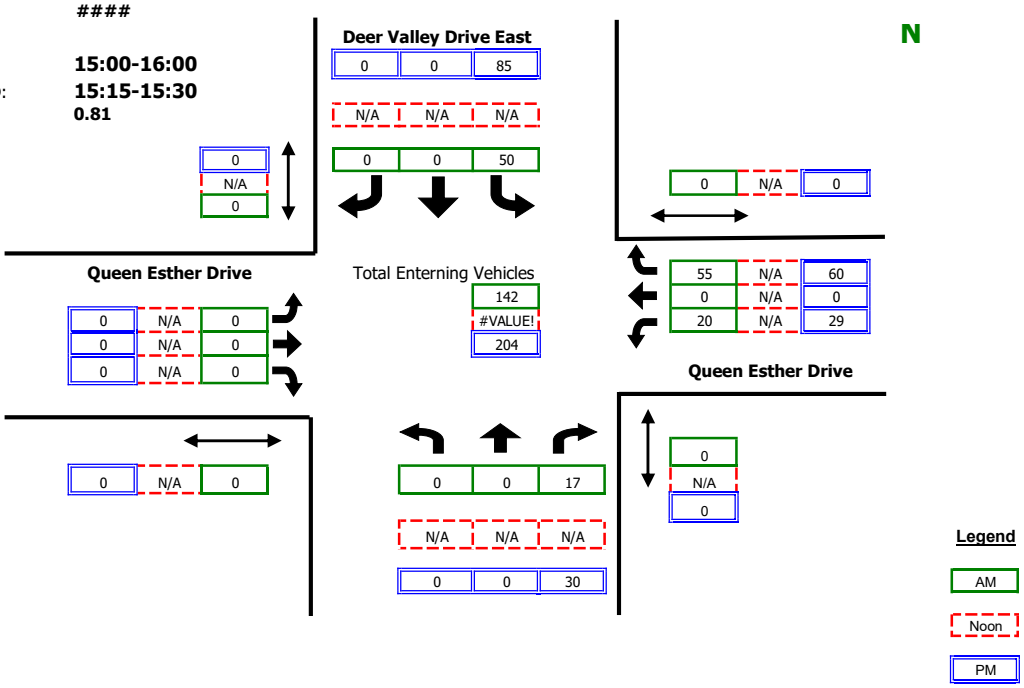
Intersection Turning Movement Summary

Intersection:	**Deer Valley Drive East/Queen Esther Drive**	**Date:**	**3-3-22, Thu**
	North/South: Deer Valley Drive East	**Day of Week Adjustment:**	**100.0%**
	East/West: Queen Esther Drive	**Month of Year Adjustment:**	**100.0%**
Jurisdiction:	**Park City**	**Adjustment Station #:**	
Project Title:	**Snow Park Development**	**Growth Rate:**	**0.0%**
Project No:	**UT20-2245**	**Number of Years:**	**0**
Weather:			

AM PEAK HOUR PERIOD: **9:00-10:00**
AM PEAK 15 MINUTE PERIOD: **9:15-9:30**
AM PHF: **0.99**

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

PM PEAK HOUR PERIOD: **15:00-16:00**
PM PEAK 15 MINUTE PERIOD: **15:15-15:30**
PM PHF: **0.81**



RAW COUNT SUMMARIES	Deer Valley Drive East Northbound				Deer Valley Drive East Southbound				Queen Esther Drive Eastbound				Queen Esther Drive 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**
8:00-8:15	0	0	0	0	4	0	0	0	0	0	0	0	5	0	4	0	13
8:15-8:30	0	0	8	0	7	0	0	0	0	0	0	0	9	0	13	0	37
8:30-8:45	0	0	6	0	6	0	0	0	0	0	0	0	5	0	11	0	28
8:45-9:00	0	0	2	0	11	0	0	0	0	0	0	0	10	0	9	0	32
9:00-9:15	0	0	5	0	9	0	0	0	0	0	0	0	7	0	14	0	35
9:15-9:30	0	0	5	0	17	0	0	0	0	0	0	0	4	0	10	0	36
9:30-9:45	0	0	2	0	10	0	0	0	0	0	0	0	6	0	18	0	36
9:45-10:00	0	0	5	0	14	0	0	0	0	0	0	0	3	0	13	0	35
NOON PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
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
15:45-14:00	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**
14:30-14:45	0	0	9	0	9	0	0	0	0	0	0	0	5	0	14	0	37
14:45-15:00	0	0	5	0	21	0	0	0	0	0	0	0	3	0	17	0	46
15:00-15:15	0	0	5	0	23	0	0	0	0	0	0	0	3	0	18	0	49
15:15-15:30	0	0	9	0	26	0	0	0	0	0	0	0	11	0	17	0	63
15:30-15:45	0	0	6	0	19	0	0	0	0	0	0	0	8	0	9	0	42
15:45-16:00	0	0	10	0	17	0	0	0	0	0	0	0	7	0	16	0	50
16:00-16:15	0	0	5	0	18	0	0	0	0	0	0	0	4	0	13	0	40
16:15-16:30	0	0	7	0	25	0	0	0	0	0	0	0	4	0	8	0	44

FEHR PEERS

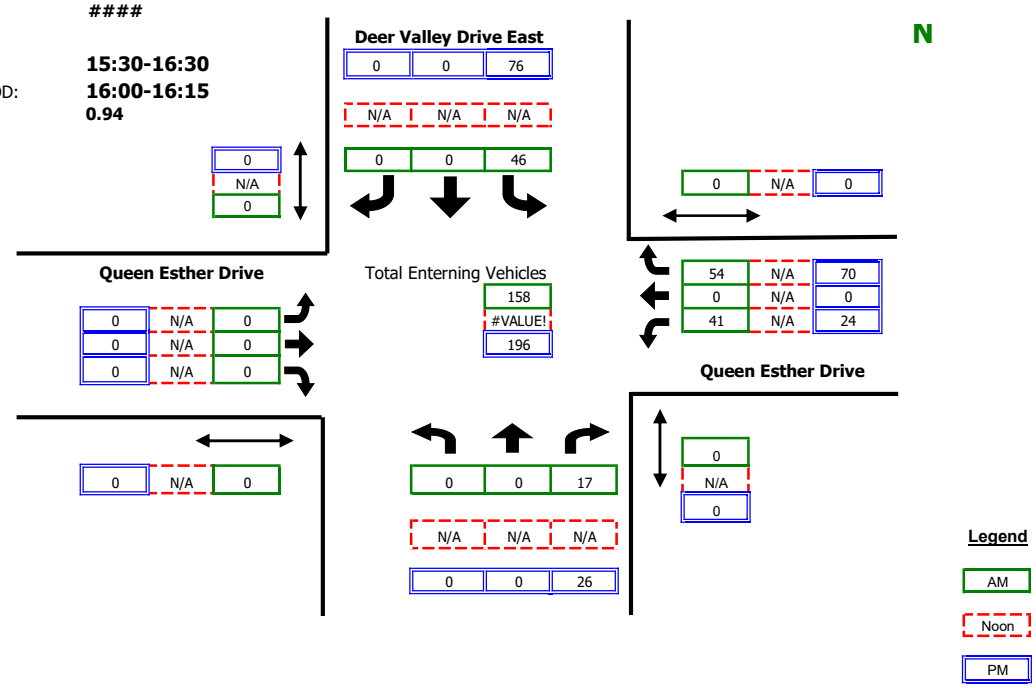
Intersection Turning Movement Summary

Intersection:	**Deer Valley Drive East/Queen Esther Drive**	**Date:**	**3-4-22, Fri**
	North/South: Deer Valley Drive East	**Day of Week Adjustment:**	**100.0%**
	East/West: Queen Esther Drive	**Month of Year Adjustment:**	**100.0%**
Jurisdiction:	**Park City**	**Adjustment Station #:**	
Project Title:	**Snow Park Development**	**Growth Rate:**	**0.0%**
Project No:	**UT20-2245**	**Number of Years:**	**0**
Weather:			

AM PEAK HOUR PERIOD: **8:45-9:45**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.77**

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

PM PEAK HOUR PERIOD: **15:30-16:30**
PM PEAK 15 MINUTE PERIOD: **16:00-16:15**
PM PHF: **0.94**



RAW COUNT SUMMARIES	Deer Valley Drive East Northbound Left	Thru	Right	Peds	Deer Valley Drive East Southbound Left	Thru	Right	Peds	Queen Esther Drive Eastbound Left	Thru	Right	Peds	Queen Esther Drive Westbound 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
8:00-8:15	0	0	4	0	12	0	0	0	0	0	0	0	3	0	18	0	37
8:15-8:30	0	0	3	0	11	0	0	0	0	0	0	0	10	0	9	0	33
8:30-8:45	0	0	5	0	11	0	0	0	0	0	0	0	6	0	10	0	32
8:45-9:00	0	0	2	0	16	0	0	0	0	0	0	0	13	0	20	0	51
9:00-9:15	0	0	5	0	5	0	0	0	0	0	0	0	7	0	9	0	26
9:15-9:30	0	0	6	0	10	0	0	0	0	0	0	0	5	0	10	0	31
9:30-9:45	0	0	4	0	15	0	0	0	0	0	0	0	16	0	15	0	50
9:45-10:00	0	0	10	0	10	0	0	0	0	0	0	0	7	0	15	0	42

NOON PERIOD COUNTS

Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
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
15:45-14:00	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
14:30-14:45	0	0	6	0	14	0	0	0	0	0	0	0	5	0	9	0	34
14:45-15:00	0	0	8	0	19	0	0	0	0	0	0	0	6	0	23	0	56
15:00-15:15	0	0	8	0	11	0	0	0	0	0	0	0	8	0	18	0	45
15:15-15:30	0	0	8	0	16	0	0	0	0	0	0	0	7	0	15	0	46
15:30-15:45	0	0	2	0	10	0	0	0	0	0	0	0	8	0	21	0	41
15:45-16:00	0	0	7	0	26	0	0	0	0	0	0	0	3	0	15	0	51
16:00-16:15	0	0	7	0	18	0	0	0	0	0	0	0	7	0	20	0	52
16:15-16:30	0	0	10	0	22	0	0	0	0	0	0	0	6	0	14	0	52

FEHR PEERS

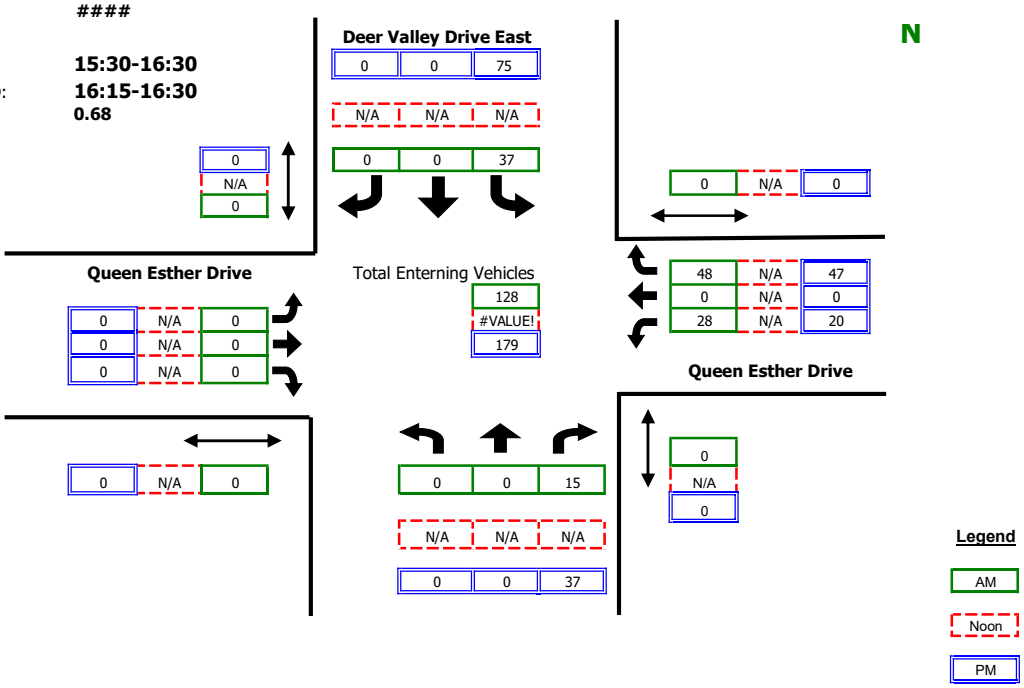
Intersection Turning Movement Summary

Intersection:	**Deer Valley Drive East/Queen Esther Drive**	**Date:**	**3-5-22, Sat**
	North/South: Deer Valley Drive East	**Day of Week Adjustment:**	**100.0%**
	East/West: Queen Esther Drive	**Month of Year Adjustment:**	**100.0%**
Jurisdiction:	**Park City**	**Adjustment Station #:**	
Project Title:	**Snow Park Development**	**Growth Rate:**	**0.0%**
Project No:	**UT20-2245**	**Number of Years:**	**0**
Weather:			

AM PEAK HOUR PERIOD: **8:45-9:45**
AM PEAK 15 MINUTE PERIOD: **8:45-9:00**
AM PHF: **0.86**

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

PM PEAK HOUR PERIOD: **15:30-16:30**
PM PEAK 15 MINUTE PERIOD: **16:15-16:30**
PM PHF: **0.68**



RAW COUNT SUMMARIES	Deer Valley Drive East Northbound				Deer Valley Drive East Southbound				Queen Esther Drive Eastbound				Queen Esther Drive 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**
8:00-8:15	0	0	6	0	10	0	0	0	0	0	0	0	4	0	4	0	24
8:15-8:30	0	0	1	0	7	0	0	0	0	0	0	0	10	0	4	0	22
8:30-8:45	0	0	7	0	6	0	0	0	0	0	0	0	10	0	10	0	33
8:45-9:00	0	0	5	0	12	0	0	0	0	0	0	0	10	0	10	0	37
9:00-9:15	0	0	4	0	9	0	0	0	0	0	0	0	6	0	10	0	29
9:15-9:30	0	0	3	0	10	0	0	0	0	0	0	0	4	0	9	0	26
9:30-9:45	0	0	3	0	6	0	0	0	0	0	0	0	8	0	19	0	36
9:45-10:00	0	0	4	0	10	0	0	0	0	0	0	0	7	0	9	0	30
NOON PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
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
15:45-14:00	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**
14:30-14:45	0	0	7	0	23	0	0	0	0	0	0	0	4	0	10	0	44
14:45-15:00	0	0	4	0	16	0	0	0	0	0	0	0	7	0	15	0	42
15:00-15:15	0	0	2	0	9	0	0	0	0	0	0	0	6	0	7	0	24
15:15-15:30	0	0	4	0	12	0	0	0	0	0	0	0	2	0	11	0	29
15:30-15:45	0	0	6	0	14	0	0	0	0	0	0	0	7	0	9	0	36
15:45-16:00	0	0	5	0	14	0	0	0	0	0	0	0	4	0	11	0	34
16:00-16:15	0	0	11	0	16	0	0	0	0	0	0	0	6	0	10	0	43
16:15-16:30	0	0	15	0	31	0	0	0	0	0	0	0	3	0	17	0	66

FEHR PEERS

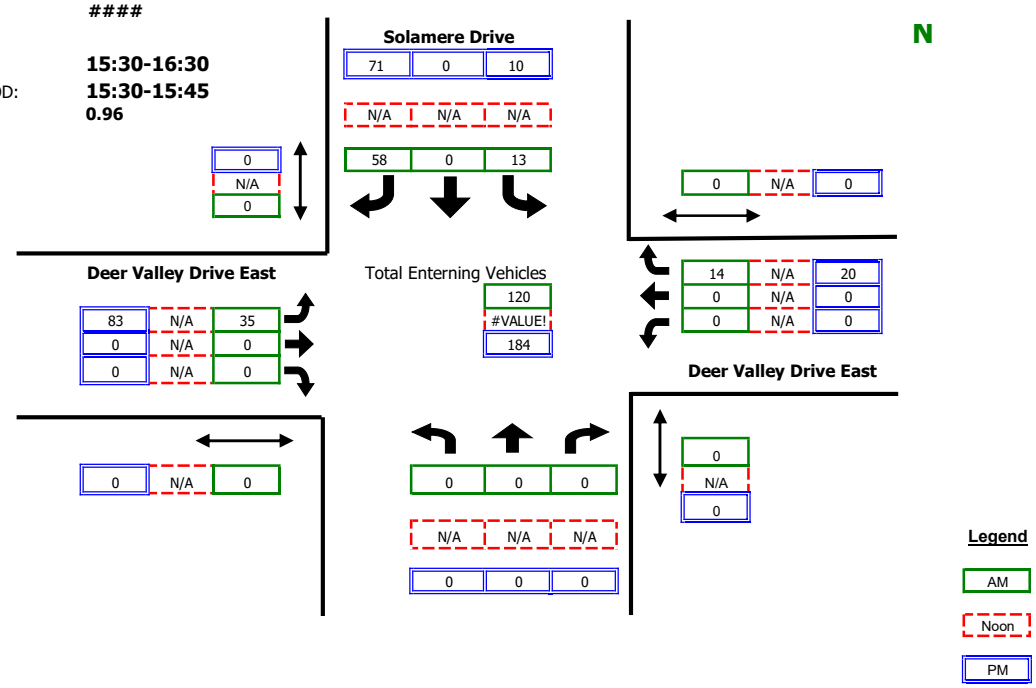
Intersection Turning Movement Summary

Intersection:	**Solamere Drive/Deer Valley Drive East**	**Date:**	**3-3-22, Thu**
	North/South: Solamere Drive	**Day of Week Adjustment:**	**100.0%**
	East/West: Deer Valley Drive East	**Month of Year Adjustment:**	**100.0%**
Jurisdiction:	**Park City**	**Adjustment Station #:**	
Project Title:	**Snow Park Development**	**Growth Rate:**	**0.0%**
Project No:	**UT20-2245**	**Number of Years:**	**0**
Weather:			

AM PEAK HOUR PERIOD: **8:30-9:30**
AM PEAK 15 MINUTE PERIOD: **8:30-8:45**
AM PHF: **0.83**

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

PM PEAK HOUR PERIOD: **15:30-16:30**
PM PEAK 15 MINUTE PERIOD: **15:30-15:45**
PM PHF: **0.96**



RAW COUNT SUMMARIES	Solamere Drive Northbound				Solamere Drive Southbound				Deer Valley Drive East Eastbound				Deer Valley Drive East 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**
8:00-8:15	0	0	0	0	4	0	7	0	11	0	0	0	0	0	0	0	22
8:15-8:30	0	0	0	0	2	0	10	0	10	0	0	0	0	0	1	0	23
8:30-8:45	0	0	0	0	2	0	24	0	7	0	0	0	0	0	3	0	36
8:45-9:00	0	0	0	0	4	0	12	0	9	0	0	0	0	0	3	0	28
9:00-9:15	0	0	0	0	3	0	12	0	7	0	0	0	0	0	5	0	27
9:15-9:30	0	0	0	0	4	0	10	0	12	0	0	0	0	0	3	0	29
9:30-9:45	0	0	0	0	1	0	10	0	17	0	0	0	0	0	3	0	31
9:45-10:00	0	0	0	0	4	0	8	0	9	0	0	0	0	0	4	0	25
NOON PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
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
15:45-14:00	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**
14:30-14:45	0	0	0	0	3	0	23	0	16	0	0	0	0	0	6	0	48
14:45-15:00	0	0	0	0	2	0	17	0	16	0	0	0	0	0	4	0	39
15:00-15:15	0	0	0	0	1	0	20	0	19	0	0	0	0	0	3	0	43
15:15-15:30	0	0	0	0	5	0	17	0	18	0	0	0	0	0	7	0	47
15:30-15:45	0	0	0	0	3	0	24	0	14	0	0	0	0	0	7	0	48
15:45-16:00	0	0	0	0	2	0	15	0	25	0	0	0	0	0	2	0	44
16:00-16:15	0	0	0	0	5	0	15	0	20	0	0	0	0	0	4	0	44
16:15-16:30	0	0	0	0	0	0	17	0	24	0	0	0	0	0	7	0	48

FEHR PEERS

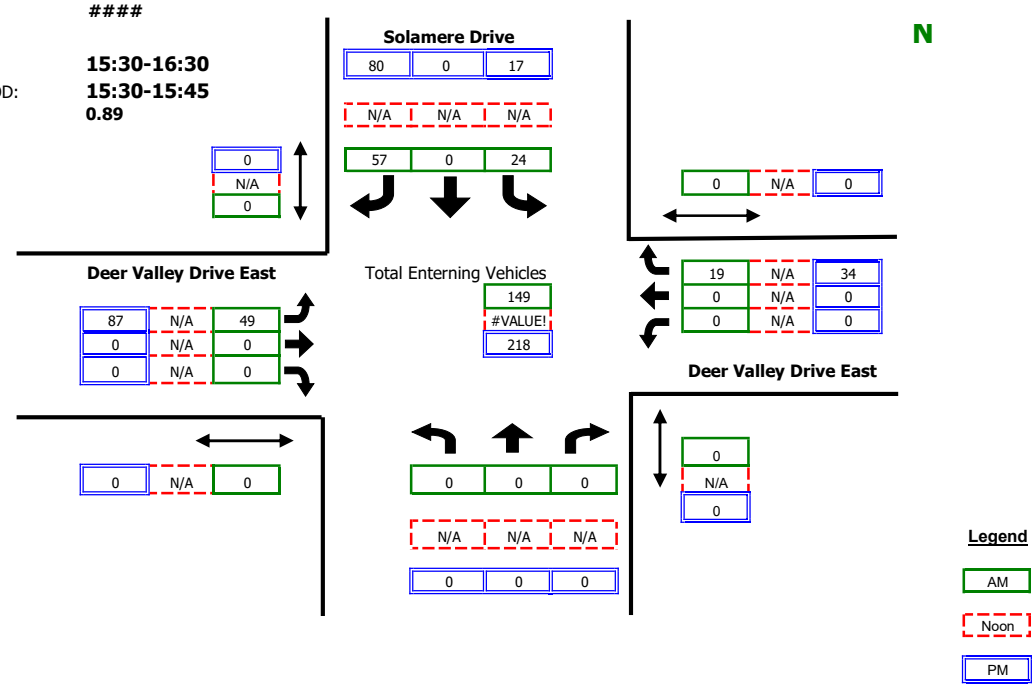
Intersection Turning Movement Summary

Intersection:	**Solamere Drive/Deer Valley Drive East**	**Date:**	**3-4-22, Fri**
	North/South: Solamere Drive	**Day of Week Adjustment:**	**100.0%**
	East/West: Deer Valley Drive East	**Month of Year Adjustment:**	**100.0%**
Jurisdiction:	**Park City**	**Adjustment Station #:**	
Project Title:	**Snow Park Development**	**Growth Rate:**	**0.0%**
Project No:	**UT20-2245**	**Number of Years:**	**0**
Weather:			

AM PEAK HOUR PERIOD: **8:45-9:45**
AM PEAK 15 MINUTE PERIOD: **9:15-9:30**
AM PHF: **0.93**

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

PM PEAK HOUR PERIOD: **15:30-16:30**
PM PEAK 15 MINUTE PERIOD: **15:30-15:45**
PM PHF: **0.89**



RAW COUNT SUMMARIES	Solamere Drive Northbound				Solamere Drive Southbound				Deer Valley Drive East Eastbound				Deer Valley Drive East 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
8:00-8:15	0	0	0	0	2	0	6	0	6	0	0	0	0	0	1	0	15
8:15-8:30	0	0	0	0	5	0	13	0	9	0	0	0	0	0	2	0	29
8:30-8:45	0	0	0	0	7	0	8	0	9	0	0	0	0	0	2	0	26
8:45-9:00	0	0	0	0	8	0	11	0	11	0	0	0	0	0	7	0	37
9:00-9:15	0	0	0	0	6	0	13	0	11	0	0	0	0	0	3	0	33
9:15-9:30	0	0	0	0	4	0	17	0	16	0	0	0	0	0	3	0	40
9:30-9:45	0	0	0	0	6	0	16	0	11	0	0	0	0	0	6	0	39
9:45-10:00	0	0	0	0	4	0	19	0	10	0	0	0	0	0	2	0	35

NOON PERIOD COUNTS

Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
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
15:45-14:00	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
14:30-14:45	0	0	0	0	0	0	21	0	15	0	0	0	0	0	1	0	37
14:45-15:00	0	0	0	0	6	0	11	0	20	0	0	0	0	0	1	0	38
15:00-15:15	0	0	0	0	2	0	16	0	17	0	0	0	0	0	7	0	42
15:15-15:30	0	0	0	0	4	0	15	0	19	0	0	0	0	0	1	0	39
15:30-15:45	0	0	0	0	5	0	24	0	20	0	0	0	0	0	12	0	61
15:45-16:00	0	0	0	0	3	0	16	0	17	0	0	0	0	0	5	0	41
16:00-16:15	0	0	0	0	4	0	21	0	21	0	0	0	0	0	8	0	54
16:15-16:30	0	0	0	0	5	0	19	0	29	0	0	0	0	0	9	0	62

FEHR PEERS

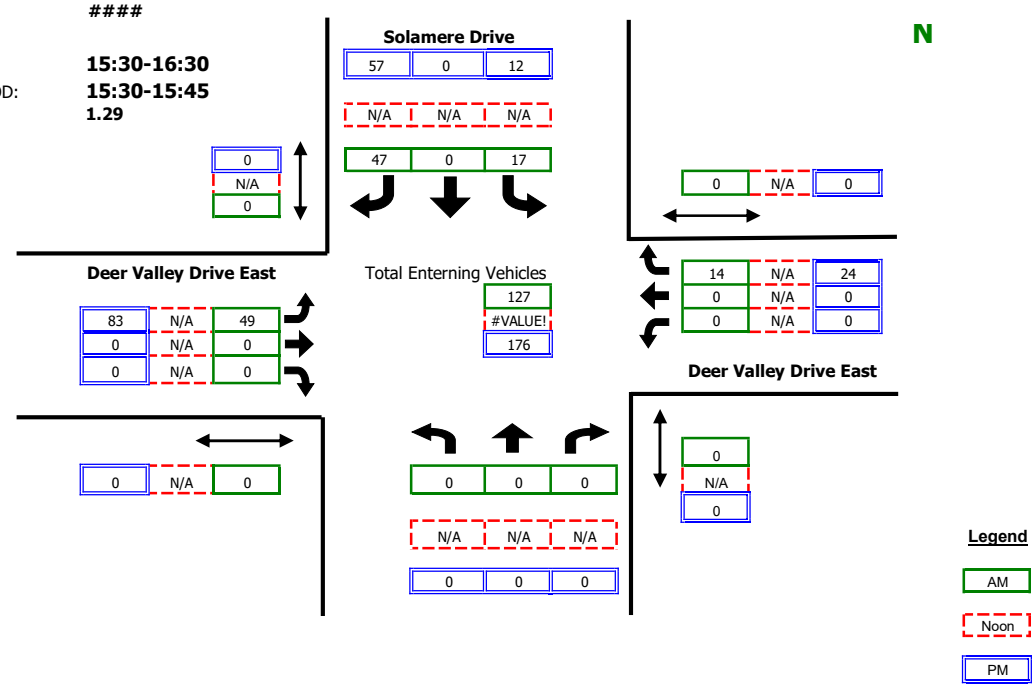
Intersection Turning Movement Summary

Intersection:	**Solamere Drive/Deer Valley Drive East**	**Date:**	**3-5-22, Sat**
	North/South: Solamere Drive	**Day of Week Adjustment:**	**100.0%**
	East/West: Deer Valley Drive East	**Month of Year Adjustment:**	**100.0%**
Jurisdiction:	**Park City**	**Adjustment Station #:**	
Project Title:	**Snow Park Development**	**Growth Rate:**	**0.0%**
Project No:	**UT20-2245**	**Number of Years:**	**0**
Weather:			

AM PEAK HOUR PERIOD: **9:00-10:00**
AM PEAK 15 MINUTE PERIOD: **9:45-10:00**
AM PHF: **0.76**

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

PM PEAK HOUR PERIOD: **15:30-16:30**
PM PEAK 15 MINUTE PERIOD: **15:30-15:45**
PM PHF: **1.29**



RAW COUNT SUMMARIES	Solamere Drive Northbound				Solamere Drive Southbound				Deer Valley Drive East Eastbound				Deer Valley Drive East 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
8:00-8:15	0	0	0	0	2	0	12	0	4	0	0	0	0	0	2	0	20
8:15-8:30	0	0	0	0	5	0	6	0	5	0	0	0	0	0	1	0	17
8:30-8:45	0	0	0	0	9	0	15	0	8	0	0	0	0	0	0	0	32
8:45-9:00	0	0	0	0	6	0	15	0	4	0	0	0	0	0	6	0	31
9:00-9:15	0	0	0	0	5	0	4	0	8	0	0	0	0	0	2	0	19
9:15-9:30	0	0	0	0	1	0	12	0	13	0	0	0	0	0	5	0	31
9:30-9:45	0	0	0	0	8	0	9	0	14	0	0	0	0	0	4	0	35
9:45-10:00	0	0	0	0	3	0	22	0	14	0	0	0	0	0	3	0	42

NOON PERIOD COUNTS

Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
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
15:45-14:00	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
14:30-14:45	0	0	0	0	4	0	9	0	17	0	0	0	0	0	6	0	36
14:45-15:00	0	0	0	0	3	0	12	0	2	0	0	0	0	0	2	0	19
15:00-15:15	0	0	0	0	3	0	8	0	7	0	0	0	0	0	7	0	25
15:15-15:30	0	0	0	0	2	0	11	0	16	0	0	0	0	0	1	0	30
15:30-15:45	0	0	0	0	2	0	11	0	17	0	0	0	0	0	4	0	34
15:45-16:00	0	0	0	0	5	0	13	0	20	0	0	0	0	0	10	0	48
16:00-16:15	0	0	0	0	3	0	15	0	25	0	0	0	0	0	9	0	52
16:15-16:30	0	0	0	0	2	0	18	0	21	0	0	0	0	0	1	0	42

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0119
Type: Volume / Direction
Tech: Judd / Mosdell / Anderson
Count: Axle Hits / 2

Date Start: 15-Feb-20
Date End: 15-Feb-20
Deer Valley Dr E of the DV Dr Split Intersect VOL D1
DV Dr east of the DV Dr Split Intersect
Deer Valley, Idaho
Site Code: Day 1

Start Time	15-Feb-20 Sat	WB	EB							Total
12:00 AM		*	*							*
12:15		10	8							18
12:30		6	6							12
12:45		6	7							13
01:00		4	2							6
01:15		0	1							1
01:30		3	4							7
01:45		3	6							9
02:00		1	4							5
02:15		0	2							2
02:30		0	0							0
02:45		0	0							0
03:00		0	1							1
03:15		1	0							1
03:30		2	0							2
03:45		0	0							0
04:00		0	0							0
04:15		1	1							2
04:30		1	0							1
04:45		1	0							1
05:00		0	0							0
05:15		1	2							3
05:30		3	0							3
05:45		1	3							4
06:00		0	8							8
06:15		3	1							4
06:30		3	16							19
06:45		9	30							39
07:00		14	38							52
07:15		15	60							75
07:30		22	**94**							**116**
07:45		22	**127**							**149**
08:00		32	**106**							**138**
08:15		29	**64**							**93**
08:30		54	62							116
08:45		48	52							100
09:00		56	32							88
09:15		**51**	26							77
09:30		**65**	46							111
09:45		**68**	36							104
10:00		**66**	29							95
10:15		42	29							71
10:30		61	46							107
10:45		56	36							92
11:00		52	38							90
11:15		54	38							92
11:30		60	34							94
11:45		55	33							88
Total		981	1128							2109
Percent		46.5%	53.5%							
Peak	-	09:15	07:30	-	-	-	-	-	-	07:30
Vol.	-	250	391	-	-	-	-	-	-	496
P.H.F.		0.919	0.770							0.832

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0119
Type: Volume / Direction
Tech: Judd / Mosdell / Anderson
Count: Axle Hits / 2

Date Start: 15-Feb-20
Date End: 15-Feb-20
Deer Valley Dr E of the DV Dr Split Intersect VOL D1
DV Dr east of the DV Dr Split Intersect
Deer Valley, Idaho
Site Code: Day 1

Start Time	15-Feb-20 Sat	WB	EB							Total
12:00 PM		90	44							134
12:15		53	30							83
12:30		58	36							94
12:45		84	34							118
01:00		50	50							100
01:15		66	38							104
01:30		48	45							93
01:45		62	40							102
02:00		75	36							111
02:15		66	42							108
02:30		64	37							101
02:45		49	46							95
03:00		61	58							119
03:15		80	48							128
03:30		80	58							138
03:45		**92**	55							**147**
04:00		**100**	52							**152**
04:15		**78**	**64**							**142**
04:30		**109**	**70**							**179**
04:45		72	**62**							134
05:00		84	**59**							143
05:15		64	56							120
05:30		84	58							142
05:45		72	58							130
06:00		73	38							111
06:15		58	59							117
06:30		61	61							122
06:45		51	48							99
07:00		45	53							98
07:15		34	43							77
07:30		42	41							83
07:45		45	36							81
08:00		40	36							76
08:15		32	35							67
08:30		45	40							85
08:45		34	34							68
09:00		36	30							66
09:15		27	30							57
09:30		24	24							48
09:45		34	32							66
10:00		23	24							47
10:15		16	26							42
10:30		20	13							33
10:45		9	10							19
11:00		10	7							17
11:15		*	*							*
11:30		*	*							*
11:45		*	*							*
Total		2500	1896							4396
Percent		56.9%	43.1%							
Peak	-	15:45	16:15	-	-	-	-	-	-	15:45
Vol.	-	379	255	-	-	-	-	-	-	620
P.H.F.		0.869	0.911							0.866
Grand Total		3481	3024							6505
Percent		53.5%	46.5%							

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0119
Type: Volume / Direction
Tech: Judd / Mosdell / Anderson
Count: Axle Hits / 2

Date Start: 15-Feb-20
Date End: 15-Feb-20
Deer Valley Dr N of Parking & S of Queen Esther VOL D1
DV Dr N 0f Parking & S of Queen Esther
Deer Valley, Utah
Site Code: Day 1

Start Time	15-Feb-20 Sat	SB	NB							Total
12:00 AM		*	*							*
12:15		*	*							*
12:30		3	2							5
12:45		1	2							3
01:00		0	1							1
01:15		0	1							1
01:30		3	2							5
01:45		1	0							1
02:00		1	0							1
02:15		2	0							2
02:30		0	0							0
02:45		0	0							0
03:00		0	0							0
03:15		0	0							0
03:30		0	2							2
03:45		0	0							0
04:00		0	0							0
04:15		1	3							4
04:30		0	0							0
04:45		0	0							0
05:00		2	0							2
05:15		1	1							2
05:30		0	1							1
05:45		1	0							1
06:00		6	0							6
06:15		1	1							2
06:30		9	2							11
06:45		23	4							27
07:00		31	5							36
07:15		61	8							69
07:30		**81**	13							94
07:45		**106**	10							**116**
08:00		**122**	26							**148**
08:15		**73**	25							**98**
08:30		72	48							**120**
08:45		47	44							91
09:00		40	**48**							88
09:15		38	**44**							82
09:30		36	**50**							86
09:45		27	**46**							73
10:00		21	45							66
10:15		20	33							53
10:30		28	38							66
10:45		21	29							50
11:00		22	34							56
11:15		19	23							42
11:30		21	34							55
11:45		19	24							43
Total		960	649							1609
Percent		59.7%	40.3%							
Peak	-	07:30	09:00	-	-	-	-	-	-	07:45
Vol.	-	382	188	-	-	-	-	-	-	482
P.H.F.		0.783	0.940							0.814

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0119
Type: Volume / Direction
Tech: Judd / Mosdell / Anderson
Count: Axle Hits / 2

Date Start: 15-Feb-20
Date End: 15-Feb-20
Deer Valley Dr N of Parking & S of Queen Esther VOL D1
DV Dr N 0f Parking & S of Queen Esther
Deer Valley, Utah
Site Code: Day 1

Start Time	15-Feb-20 Sat	SB	NB							Total
12:00 PM		22	40							62
12:15		19	28							47
12:30		27	36							63
12:45		19	32							51
01:00		25	26							51
01:15		13	37							50
01:30		20	31							51
01:45		16	41							57
02:00		15	46							61
02:15		21	38							59
02:30		24	44							68
02:45		27	36							63
03:00		28	51							79
03:15		26	56							82
03:30		**47**	62							109
03:45		**44**	**72**							**116**
04:00		**29**	**80**							**109**
04:15		**36**	**82**							**118**
04:30		40	**86**							**126**
04:45		34	52							86
05:00		24	48							72
05:15		22	34							56
05:30		28	62							90
05:45		22	40							62
06:00		14	36							50
06:15		16	33							49
06:30		14	20							34
06:45		16	16							32
07:00		20	23							43
07:15		12	12							24
07:30		8	15							23
07:45		10	16							26
08:00		11	13							24
08:15		8	18							26
08:30		12	15							27
08:45		7	12							19
09:00		15	24							39
09:15		10	13							23
09:30		5	16							21
09:45		5	16							21
10:00		8	17							25
10:15		8	9							17
10:30		4	11							15
10:45		4	8							12
11:00		*	*							*
11:15		*	*							*
11:30		*	*							*
11:45		*	*							*
Total		835	1503							2338
Percent		35.7%	64.3%							
Peak	-	15:30	15:45	-	-	-	-	-	-	15:45
Vol.	-	156	320	-	-	-	-	-	-	469
P.H.F.		0.830	0.930							0.931
Grand Total		1795	2152							3947
Percent		45.5%	54.5%							

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0119
Type: Volume / Direction
Tech: Judd / Mosdell / Anderson
Count: Axle Hits / 2

Date Start: 15-Feb-20
Date End: 15-Feb-20
Deer Valley Dr S of the DV Dr Split Intersect VOL D1
DV Dr south of the DV Dr Split Intersect
Deer Valley, Utah
Site Code: Day 1

Start Time	15-Feb-20 Sat	SB	NB							Total
12:00 AM		6	10							16
12:15		3	6							9
12:30		2	9							11
12:45		4	2							6
01:00		4	3							7
01:15		3	2							5
01:30		0	2							2
01:45		2	1							3
02:00		4	4							8
02:15		0	3							3
02:30		0	0							0
02:45		1	0							1
03:00		1	1							2
03:15		4	1							5
03:30		1	1							2
03:45		1	0							1
04:00		1	3							4
04:15		0	1							1
04:30		0	0							0
04:45		0	1							1
05:00		4	1							5
05:15		2	3							5
05:30		1	0							1
05:45		1	0							1
06:00		4	4							8
06:15		4	2							6
06:30		21	6							27
06:45		28	10							38
07:00		32	10							42
07:15		36	13							49
07:30		62	26							88
07:45		70	22							92
08:00		**114**	28							142
08:15		**127**	30							**157**
08:30		**129**	38							**167**
08:45		**134**	41							**175**
09:00		113	34							**147**
09:15		98	34							132
09:30		90	**48**							138
09:45		98	**44**							142
10:00		75	**42**							117
10:15		62	**46**							108
10:30		48	43							91
10:45		48	40							88
11:00		54	50							104
11:15		48	40							88
11:30		42	31							73
11:45		66	40							106
Total		1648	776							2424
Percent		68.0%	32.0%							
Peak	-	08:00	09:30	-	-	-	-	-	-	08:15
Vol.	-	504	180	-	-	-	-	-	-	646
P.H.F.		0.940	0.938							0.923

L2 Data Collection

L2DataCollection.com
Idaho (208) 860-7554 Utah (801) 413-2993

Study: FEHR0119
Type: Volume / Direction
Tech: Judd / Mosdell / Anderson
Count: Axle Hits / 2

Date Start: 15-Feb-20
Date End: 15-Feb-20
Deer Valley Dr S of the DV Dr Split Intersect VOL D1
DV Dr south of the DV Dr Split Intersect
Deer Valley, Utah
Site Code: Day 1

Start Time	15-Feb-20 Sat	SB	NB							Total
12:00 PM		44	47							91
12:15		46	34							80
12:30		54	25							79
12:45		43	43							86
01:00		46	36							82
01:15		51	39							90
01:30		45	53							98
01:45		42	40							82
02:00		57	54							111
02:15		54	70							124
02:30		53	78							131
02:45		62	66							128
03:00		63	71							134
03:15		**77**	74							151
03:30		**82**	86							168
03:45		**64**	**112**							**176**
04:00		**77**	**146**							**223**
04:15		53	**170**							**223**
04:30		53	**122**							**175**
04:45		60	106							166
05:00		46	108							154
05:15		34	90							124
05:30		52	116							168
05:45		38	116							154
06:00		48	56							104
06:15		38	48							86
06:30		38	34							72
06:45		40	26							66
07:00		30	24							54
07:15		22	38							60
07:30		34	25							59
07:45		40	30							70
08:00		26	22							48
08:15		31	22							53
08:30		11	18							29
08:45		27	22							49
09:00		18	28							46
09:15		16	21							37
09:30		12	12							24
09:45		16	23							39
10:00		10	19							29
10:15		16	24							40
10:30		9	7							16
10:45		*	*							*
11:00		*	*							*
11:15		*	*							*
11:30		*	*							*
11:45		*	*							*
Total		1778	2401							4179
Percent		42.5%	57.5%							
Peak	-	15:15	15:45	-	-	-	-	-	-	15:45
Vol.	-	300	550	-	-	-	-	-	-	797
P.H.F.		0.915	0.809							0.893
Grand Total		3426	3177							6603
Percent		51.9%	48.1%							

MXD+ Vehicle Trip Generation Reduction Percent			
	Daily	AM Peak Hour	PM Peak Hour
Internal Capture	1.9%	3.7%	10.6%
Shift to Transit	3%	1.9%	2.9%
Shift to Walk/Bike	4.6%	5.6%	3.4%

Advanced MXD+ Results

Predicted Probabilities	Daily			AM			PM		
Productions	HBW	HBO	NHB	HBW	HBO	NHB	HBW	HBO	NHB
Internal Capture	4.35%	1.53%	1.45%	5.00%	2.88%	1.52%	21.06%	7.42%	7.04%
Walking External	2.59%	6.40%	0.30%	3.11%	8.32%	0.30%	2.59%	6.40%	0.30%
Transit External	0.25%	3.38%	4.43%	0.35%	3.72%	4.43%	0.35%	3.38%	4.43%
Attractions	HBW	HBO	NHB	HBW	HBO	NHB	HBW	HBO	NHB
Internal Capture	4.28%	1.51%	1.45%	5.00%	2.88%	1.52%	21.06%	7.42%	7.04%
Walking External	2.56%	6.38%	0.30%	3.07%	7.66%	0.30%	2.56%	6.38%	0.30%
Transit External	0.25%	3.35%	4.44%	0.34%	4.69%	6.21%	0.34%	3.35%	4.44%

Number of Trips	Daily			AM			PM		
Productions	HBW	HBO	NHB	HBW	HBO	NHB	HBW	HBO	NHB
Internal Capture	7	9	2	1	1	0	4	5	2
Walking External	5	35	0	1	2	0	0	2	0
Transit External	0	18	6	0	1	0	0	1	1
Attractions	HBW	HBO	NHB	HBW	HBO	NHB	HBW	HBO	NHB
Internal Capture	7	9	2	1	1	0	4	5	2
Walking External	2	43	1	0	3	0	0	5	0
Transit External	0	23	9	0	1	0	0	3	1

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	70	74	105.4%	0.3	0.2	A
	Right Turn	17	19	112.4%	0.3	0.6	A
	Subtotal	87	93	106.8%	0.3	0.2	A
SB	Left Turn	50	50	99.4%	4.1	0.3	A
	Through	116	116	99.6%	0.9	0.3	A
	Right Turn						
	Subtotal	166	165	99.5%	1.8	0.4	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	20	18	91.0%	5.8	1.2	A
	Through						
	Right Turn	55	56	101.6%	5.2	0.6	A
	Subtotal	75	74	98.8%	5.4	0.5	A
Total		328	332	101.3%	2.3	0.3	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	24	23	95.4%	6.8	2.3	A
	Through						
	Right Turn	57	60	104.6%	5.8	0.4	A
	Subtotal	81	83	101.9%	5.9	0.4	A
EB	Left Turn	49	49	100.0%	4.2	0.8	A
	Through	142	144	101.1%	1.3	0.4	A
	Right Turn						
	Subtotal	191	193	100.8%	2.0	0.5	A
WB	Left Turn						
	Through	106	108	101.7%	1.1	0.2	A
	Right Turn	19	21	110.0%	1.3	0.6	A
	Subtotal	125	129	103.0%	1.1	0.2	A
Total		397	404	101.7%	2.6	0.2	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	147	148	100.6%	1.1	0.6	A
	Right Turn	15	15	98.7%	1.0	1.7	A
	Subtotal	162	163	100.4%	1.1	0.5	A
SB	Left Turn	176	176	100.2%	5.3	0.9	A
	Through	627	645	102.9%	3.7	0.6	A
	Right Turn						
	Subtotal	803	822	102.3%	4.0	0.6	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	7	7	97.1%	15.3	8.3	C
	Through						
	Right Turn	156	161	103.2%	4.2	0.9	A
	Subtotal	163	168	102.9%	4.9	0.8	A
Total		1,128	1,152	102.1%	3.8	0.5	A

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	263	266	101.2%	13.0	2.4	B
	Right Turn	151	158	104.8%	3.7	0.8	A
	Subtotal	414	424	102.5%	9.5	1.7	A
SB	Left Turn	105	101	96.4%	12.9	1.8	B
	Through	631	635	100.7%	8.9	1.2	A
	Right Turn						
	Subtotal	736	737	100.1%	9.4	1.1	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	553	558	101.0%	15.8	1.5	B
	Through						
	Right Turn	198	196	98.7%	5.4	1.5	A
	Subtotal	751	754	100.4%	13.0	1.5	B
Total		1,901	1,915	100.7%	10.8	1.0	B

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	36	35	96.1%	32.0	10.4	C
	Through	191	196	102.4%	52.3	3.8	D
	Right Turn	67	74	110.0%	17.5	6.3	B
	Subtotal	294	304	103.3%	42.7	4.9	D
SB	Left Turn	477	429	90.0%	206.7	15.7	F
	Through	169	154	90.8%	173.8	18.6	F
	Right Turn	901	853	94.6%	62.6	9.2	E
	Subtotal	1,547	1,436	92.8%	117.7	10.8	F
EB	Left Turn	320	316	98.7%	40.5	6.2	D
	Through	172	175	101.7%	26.9	8.7	C
	Right Turn	16	17	104.4%	19.7	18.3	B
	Subtotal	508	508	99.9%	35.2	5.4	D
WB	Left Turn	50	49	98.2%	53.8	9.2	D
	Through	253	281	110.9%	42.0	6.4	D
	Right Turn	215	215	99.9%	8.4	1.3	A
	Subtotal	518	545	105.1%	29.9	4.1	C
Total		2,867	2,791	97.4%	77.1	4.5	E

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	64	64	99.8%	22.0	4.6	C
	Through	28	30	106.4%	23.3	7.8	C
	Right Turn	101	100	98.9%	3.2	0.9	A
	Subtotal	193	194	100.3%	12.7	2.6	B
SB	Left Turn	54	54	100.6%	16.7	4.9	B
	Through	71	71	99.4%	26.4	5.1	C
	Right Turn	29	30	101.7%	4.3	1.0	A
	Subtotal	154	154	100.3%	18.4	3.0	B
EB	Left Turn	22	20	92.7%	12.9	3.6	B
	Through	230	234	101.6%	16.4	2.4	B
	Right Turn	95	98	103.2%	8.2	2.5	A
	Subtotal	347	352	101.5%	13.9	2.2	B
WB	Left Turn	287	284	98.9%	13.8	1.7	B
	Through	324	323	99.7%	7.7	1.7	A
	Right Turn	47	47	100.2%	3.7	1.9	A
	Subtotal	658	654	99.4%	10.0	1.3	B
Total		1,352	1,354	100.1%	12.4	1.5	B

MOVEMENT SUMMARY

Site: 101 [Existing AM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	1	100.0	0.157	13.4	LOS B	0.6	14.5	0.63	0.63	0.63	33.7
8	T1	127	3.0	0.157	7.8	LOS A	0.6	14.5	0.63	0.63	0.63	34.3
18b	R3	62	3.0	0.157	7.8	LOS A	0.6	14.5	0.63	0.63	0.63	32.5
Approach		189	3.5	0.157	7.9	LOS A	0.6	14.5	0.63	0.63	0.63	33.7
SouthEast: RoadName												
3bx	L3	32	3.0	0.142	4.3	LOS A	0.5	14.7	0.29	0.17	0.29	35.9
3ax	L1	19	100.0	0.142	7.1	LOS A	0.5	14.7	0.29	0.17	0.29	34.5
18ax	R1	269	3.0	0.142	4.3	LOS A	0.6	15.2	0.29	0.17	0.29	35.6
Approach		320	8.8	0.142	4.4	LOS A	0.6	15.2	0.29	0.17	0.29	35.5
North: Deer Valley Drive												
7u	U	23	3.0	0.748	14.3	LOS B	8.6	221.4	0.52	0.26	0.52	30.4
7a	L1	804	3.0	0.748	14.3	LOS B	8.6	221.4	0.52	0.26	0.52	29.5
4	T1	378	3.0	0.748	8.1	LOS A	8.6	221.4	0.32	0.15	0.32	33.5
14	R2	12	100.0	0.204	7.2	LOS A	0.9	23.5	0.20	0.09	0.20	34.5
Approach		1217	3.9	0.748	12.3	LOS B	8.6	221.4	0.45	0.23	0.45	30.7
West: Transit Center												
5	L2	2	100.0	0.159	18.6	LOS C	0.3	11.7	0.68	0.68	0.68	29.6
12a	R1	23	100.0	0.159	18.6	LOS C	0.3	11.7	0.68	0.68	0.68	29.2
12	R2	13	100.0	0.159	18.6	LOS C	0.3	11.7	0.68	0.68	0.68	28.6
Approach		38	100.0	0.159	18.6	LOS C	0.3	11.7	0.68	0.68	0.68	29.0
All Vehicles		1765	6.9	0.748	10.5	LOS B	8.6	221.4	0.45	0.27	0.45	31.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	293	298	101.6%	1.0	0.3	A
	Right Turn	30	33	111.3%	0.8	0.6	A
	Subtotal	323	331	102.5%	1.0	0.3	A
SB	Left Turn	85	81	95.4%	4.6	0.7	A
	Through	78	78	99.9%	1.2	0.4	A
	Right Turn						
	Subtotal	163	159	97.5%	2.9	0.5	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	29	29	100.7%	8.5	4.0	A
	Through						
	Right Turn	60	60	100.7%	6.0	0.9	A
	Subtotal	89	90	100.7%	6.6	1.4	A
Total		575	580	100.8%	2.4	0.3	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	17	19	112.4%	10.6	4.9	B
	Through						
	Right Turn	80	87	108.6%	7.1	2.1	A
	Subtotal	97	106	109.3%	7.7	2.2	A
EB	Left Turn	87	84	96.4%	5.3	0.9	A
	Through	146	138	94.7%	1.9	0.8	A
	Right Turn						
	Subtotal	233	222	95.3%	3.3	0.9	A
WB	Left Turn						
	Through	319	324	101.6%	1.2	0.2	A
	Right Turn	34	35	102.1%	1.0	0.5	A
	Subtotal	353	359	101.6%	1.2	0.2	A
Total		683	687	100.6%	3.0	0.6	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	536	536	100.0%	3.4	0.3	A
	Right Turn	44	45	102.3%	3.2	1.3	A
	Subtotal	580	581	100.2%	3.4	0.3	A
SB	Left Turn	189	178	94.2%	8.5	2.0	A
	Through	204	205	100.6%	2.0	0.5	A
	Right Turn						
	Subtotal	393	383	97.5%	5.0	1.2	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	22	25	113.6%	39.3	37.1	E
	Through						
	Right Turn	377	382	101.2%	31.9	17.5	D
	Subtotal	399	407	101.9%	32.3	18.3	D
Total		1,372	1,371	99.9%	12.2	5.4	B

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	754	744	98.6%	29.8	7.7	C
	Right Turn	651	660	101.4%	20.8	8.4	C
	Subtotal	1,405	1,404	99.9%	25.6	7.8	C
SB	Left Turn	251	205	81.6%	19.8	1.7	B
	Through	460	431	93.6%	7.8	1.0	A
	Right Turn						
	Subtotal	711	635	89.4%	11.5	1.5	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	419	415	99.0%	23.4	4.0	C
	Through						
	Right Turn	129	129	99.8%	13.3	8.1	B
	Subtotal	548	544	99.2%	20.8	5.1	C
Total		2,664	2,583	96.9%	21.2	5.2	C

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	35	34	96.3%	26.9	5.4	C
	Through	395	387	98.1%	48.2	4.5	D
	Right Turn	68	74	108.1%	26.7	8.6	C
	Subtotal	498	495	99.3%	44.0	4.2	D
SB	Left Turn	495	389	78.7%	208.5	18.4	F
	Through	363	286	78.8%	164.0	18.2	F
	Right Turn	364	294	80.9%	44.7	5.1	D
	Subtotal	1,222	970	79.4%	147.7	13.7	F
EB	Left Turn	633	526	83.1%	87.2	7.4	F
	Through	277	240	86.5%	70.2	16.8	E
	Right Turn	36	30	83.6%	65.0	22.4	E
	Subtotal	946	796	84.1%	81.4	10.3	F
WB	Left Turn	75	74	98.9%	73.7	14.1	E
	Through	239	285	119.4%	56.1	8.1	E
	Right Turn	640	624	97.6%	40.2	5.9	D
	Subtotal	954	984	103.1%	47.7	3.3	D
Total		3,620	3,244	89.6%	84.3	3.4	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	176	166	94.4%	34.5	8.0	C
	Through	89	93	104.5%	29.9	6.0	C
	Right Turn	479	455	95.0%	11.2	2.4	B
	Subtotal	744	714	96.0%	19.4	2.8	B
SB	Left Turn	90	88	98.2%	30.0	5.6	C
	Through	55	50	91.5%	34.5	7.9	C
	Right Turn	63	59	92.9%	5.5	1.2	A
	Subtotal	208	197	94.8%	23.9	3.5	C
EB	Left Turn	71	68	96.3%	15.8	3.5	B
	Through	584	589	100.9%	26.4	3.4	C
	Right Turn	149	148	99.3%	21.2	4.8	C
	Subtotal	804	805	100.2%	24.6	3.1	C
WB	Left Turn	218	216	99.1%	17.7	3.0	B
	Through	384	386	100.5%	11.3	2.2	B
	Right Turn	46	49	106.3%	6.8	4.2	A
	Subtotal	648	651	100.4%	13.1	1.7	B
Total		2,404	2,367	98.5%	19.7	1.9	B

MOVEMENT SUMMARY

Site: 101 [Existing PM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	1	100.0	0.344	13.5	LOS B	1.5	38.8	0.64	0.65	0.68	32.9
8	T1	454	3.0	0.344	9.0	LOS A	1.5	38.8	0.64	0.65	0.68	33.8
18b	R3	62	3.0	0.344	9.0	LOS A	1.5	38.8	0.64	0.65	0.68	32.1
Approach		516	3.2	0.344	9.0	LOS A	1.5	38.8	0.64	0.65	0.68	33.6
SouthEast: RoadName												
3bx	L3	36	3.0	0.559	14.3	LOS B	3.7	97.6	0.74	0.91	1.23	31.7
3ax	L1	13	100.0	0.559	19.1	LOS C	3.7	97.6	0.74	0.91	1.23	30.4
18ax	R1	732	3.0	0.559	14.2	LOS B	3.8	98.4	0.75	0.91	1.23	31.0
Approach		782	4.6	0.559	14.3	LOS B	3.8	98.4	0.75	0.91	1.23	31.0
North: Deer Valley Drive												
7u	U	242	3.0	0.617	10.2	LOS B	5.3	134.5	0.36	0.17	0.36	31.9
7a	L1	368	3.0	0.617	10.2	LOS B	5.3	134.5	0.36	0.17	0.36	31.0
4	T1	398	3.0	0.617	7.1	LOS A	5.3	134.5	0.27	0.12	0.27	33.7
14	R2	6	100.0	0.169	6.8	LOS A	0.7	18.8	0.18	0.08	0.18	34.6
Approach		1014	3.6	0.617	9.0	LOS A	5.3	134.5	0.32	0.15	0.32	32.2
West: Transit Center												
5	L2	5	100.0	0.078	14.1	LOS B	0.1	5.8	0.61	0.61	0.61	31.0
12a	R1	12	100.0	0.078	14.1	LOS B	0.1	5.8	0.61	0.61	0.61	30.5
12	R2	5	100.0	0.078	14.1	LOS B	0.1	5.8	0.61	0.61	0.61	29.9
Approach		22	100.0	0.078	14.1	LOS B	0.1	5.8	0.61	0.61	0.61	30.5
All Vehicles		2334	4.8	0.617	10.8	LOS B	5.3	134.5	0.54	0.52	0.71	32.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	119	119	99.7%	7.2	2.3	A
	Through	67	69	103.6%	4.7	1.1	A
	Right Turn						
	Subtotal	186	188	101.1%	6.2	1.7	A
SB	Left Turn						
	Through	194	200	103.2%	5.3	1.6	A
	Right Turn	15	16	105.3%	1.9	1.0	A
	Subtotal	209	216	103.4%	5.1	1.4	A
EB	Left Turn	15	15	100.0%	10.7	4.6	B
	Through						
	Right Turn	100	99	99.0%	5.4	1.1	A
	Subtotal	115	114	99.1%	6.3	1.6	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		510	518	101.6%	5.7	1.2	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	20	101.5%	7.9	2.2	A
	Through						
	Right Turn						
	Subtotal	20	20	101.5%	7.9	2.2	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	702	711	101.3%	3.7	0.6	A
	Right Turn	20	21	104.0%	2.2	1.2	A
	Subtotal	722	732	101.4%	3.7	0.6	A
WB	Left Turn						
	Through	185	183	98.9%	0.3	0.1	A
	Right Turn						
	Subtotal	185	183	98.9%	0.3	0.1	A
Total		927	935	100.9%	3.2	0.5	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	112	114	102.1%	0.9	0.2	A
	Right Turn	17	21	125.3%	1.0	0.6	A
	Subtotal	129	136	105.1%	0.9	0.1	A
SB	Left Turn	50	49	97.0%	4.0	0.3	A
	Through	204	213	104.4%	1.2	0.3	A
	Right Turn						
	Subtotal	254	261	102.9%	1.7	0.2	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	20	22	108.0%	7.5	2.8	A
	Through						
	Right Turn	55	52	94.0%	5.3	0.3	A
	Subtotal	75	73	97.7%	5.9	0.8	A
Total		458	470	102.7%	2.1	0.3	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	24	24	97.9%	8.2	2.6	A
	Through						
	Right Turn	57	56	97.5%	5.7	0.7	A
	Subtotal	81	79	97.7%	6.5	1.1	A
EB	Left Turn	49	49	99.8%	4.4	0.6	A
	Through	230	236	102.8%	1.7	0.5	A
	Right Turn						
	Subtotal	279	285	102.3%	2.2	0.3	A
WB	Left Turn						
	Through	148	145	97.7%	1.0	0.3	A
	Right Turn	19	20	103.7%	0.8	0.4	A
	Subtotal	167	164	98.4%	0.9	0.2	A
Total		527	529	100.3%	2.5	0.3	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	190	190	100.0%	1.4	0.4	A
	Right Turn	15	14	96.0%	1.4	1.3	A
	Subtotal	205	204	99.7%	1.4	0.3	A
SB	Left Turn	264	271	102.7%	7.1	0.6	A
	Through	715	721	100.8%	4.3	0.3	A
	Right Turn						
	Subtotal	979	992	101.3%	5.0	0.3	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	7	7	97.1%	26.3	26.8	D
	Through						
	Right Turn	198	194	97.7%	5.6	1.2	A
	Subtotal	205	200	97.7%	6.4	1.4	A
Total		1,389	1,396	100.5%	4.7	0.4	A

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	305	299	98.1%	13.3	2.0	B
	Right Turn	168	161	96.0%	3.1	0.9	A
	Subtotal	473	461	97.4%	9.6	1.4	A
SB	Left Turn	105	90	85.6%	13.2	1.9	B
	Through	719	660	91.8%	9.8	1.2	A
	Right Turn						
	Subtotal	824	750	91.0%	10.2	1.2	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	588	589	100.2%	16.0	2.1	B
	Through						
	Right Turn	198	196	99.0%	5.7	1.1	A
	Subtotal	786	785	99.9%	13.3	1.7	B
Total		2,083	1,996	95.8%	11.3	1.0	B

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	36	38	104.4%	31.1	6.3	C
	Through	191	194	101.7%	49.3	4.9	D
	Right Turn	67	68	102.1%	15.3	5.9	B
	Subtotal	294	300	102.1%	39.3	5.1	D
SB	Left Turn	565	435	77.0%	215.8	13.6	F
	Through	169	139	82.0%	174.7	19.3	F
	Right Turn	901	715	79.3%	55.4	10.9	E
	Subtotal	1,635	1,289	78.8%	119.7	6.7	F
EB	Left Turn	320	314	98.2%	39.3	4.6	D
	Through	172	177	102.7%	31.2	6.4	C
	Right Turn	16	16	99.4%	21.7	12.3	C
	Subtotal	508	507	99.7%	36.0	4.9	D
WB	Left Turn	50	47	93.4%	59.7	16.5	E
	Through	253	281	111.1%	43.7	6.9	D
	Right Turn	257	248	96.6%	9.1	3.1	A
	Subtotal	560	576	102.9%	31.0	3.8	C
Total		2,997	2,672	89.1%	75.1	3.9	E

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	64	57	89.5%	21.3	4.2	C
	Through	28	27	97.9%	22.2	7.6	C
	Right Turn	118	109	92.5%	2.7	0.6	A
	Subtotal	210	194	92.3%	11.0	2.2	B
SB	Left Turn	54	52	96.5%	19.2	3.9	B
	Through	71	72	102.0%	24.5	5.0	C
	Right Turn	29	29	99.3%	4.0	0.9	A
	Subtotal	154	153	99.5%	18.6	2.2	B
EB	Left Turn	22	21	96.4%	10.8	3.3	B
	Through	230	226	98.3%	18.6	2.7	B
	Right Turn	95	97	102.4%	8.8	2.6	A
	Subtotal	347	345	99.3%	15.3	2.2	B
WB	Left Turn	322	319	98.9%	13.8	2.6	B
	Through	324	324	100.0%	8.7	1.4	A
	Right Turn	47	46	98.7%	4.6	2.1	A
	Subtotal	693	689	99.4%	10.8	1.5	B
Total		1,404	1,381	98.3%	12.8	1.1	B

MOVEMENT SUMMARY

Site: 101 [Existing Plus Project AM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	1	100.0	0.204	16.4	LOS C	0.7	18.5	0.68	0.68	0.68	32.7
8	T1	127	3.0	0.204	9.8	LOS A	0.7	18.5	0.68	0.68	0.68	33.3
18b	R3	81	3.0	0.204	9.8	LOS A	0.7	18.5	0.68	0.68	0.68	31.6
Approach		209	3.5	0.204	9.9	LOS A	0.7	18.5	0.68	0.68	0.68	32.6
SouthEast: RoadName												
3bx	L3	41	3.0	0.181	4.7	LOS A	0.7	19.5	0.30	0.18	0.30	35.8
3ax	L1	23	100.0	0.181	7.5	LOS A	0.7	19.5	0.30	0.18	0.30	34.3
18ax	R1	346	3.0	0.181	4.6	LOS A	0.8	20.1	0.30	0.18	0.30	35.4
Approach		411	8.5	0.181	4.8	LOS A	0.8	20.1	0.30	0.18	0.30	35.3
North: Deer Valley Drive												
7u	U	23	3.0	0.858	21.2	LOS C	13.6	349.0	0.81	0.45	0.81	27.8
7a	L1	963	3.0	0.858	21.2	LOS C	13.6	349.0	0.81	0.45	0.81	27.1
4	T1	378	3.0	0.858	9.3	LOS A	13.6	349.0	0.39	0.21	0.39	33.1
14	R2	12	100.0	0.235	7.6	LOS A	1.1	27.7	0.24	0.12	0.24	34.3
Approach		1376	3.8	0.858	17.8	LOS C	13.6	349.0	0.69	0.38	0.69	28.5
West: Transit Center												
5	L2	2	100.0	0.231	23.6	LOS C	0.4	16.9	0.73	0.74	0.75	27.8
12a	R1	33	100.0	0.231	23.6	LOS C	0.4	16.9	0.73	0.74	0.75	27.4
12	R2	13	100.0	0.231	23.6	LOS C	0.4	16.9	0.73	0.74	0.75	26.9
Approach		48	100.0	0.231	23.6	LOS C	0.4	16.9	0.73	0.74	0.75	27.3
All Vehicles		2043	7.0	0.858	14.5	LOS B	13.6	349.0	0.61	0.38	0.61	30.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	150	147	97.9%	10.0	3.6	B
	Through	377	376	99.8%	7.5	2.7	A
	Right Turn						
	Subtotal	527	523	99.2%	8.2	2.9	A
SB	Left Turn						
	Through	97	92	94.6%	4.3	1.5	A
	Right Turn	15	20	130.0%	2.3	0.8	A
	Subtotal	112	111	99.4%	3.9	1.2	A
EB	Left Turn	15	15	101.3%	17.9	10.4	B
	Through						
	Right Turn	146	143	97.9%	6.6	3.0	A
	Subtotal	161	158	98.3%	7.7	3.9	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		800	792	99.1%	7.4	2.6	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	17	85.5%	15.5	8.6	C
	Through						
	Right Turn						
	Subtotal	20	17	85.5%	15.5	8.6	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	264	260	98.6%	1.7	0.6	A
	Right Turn	20	19	93.5%	0.6	0.6	A
	Subtotal	284	279	98.2%	1.7	0.5	A
WB	Left Turn						
	Through	664	673	101.3%	2.2	0.1	A
	Right Turn						
	Subtotal	664	673	101.3%	2.2	0.1	A
Total		968	969	100.1%	2.2	0.3	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	396	400	101.0%	1.4	0.2	A
	Right Turn	30	29	95.0%	1.6	0.7	A
	Subtotal	426	429	100.6%	1.4	0.2	A
SB	Left Turn	85	84	98.5%	4.9	0.5	A
	Through	135	137	101.6%	1.5	0.4	A
	Right Turn						
	Subtotal	220	221	100.4%	2.7	0.3	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	29	24	84.1%	10.8	2.7	B
	Through						
	Right Turn	60	61	101.5%	7.7	2.1	A
	Subtotal	89	85	95.8%	8.5	1.8	A
Total		735	735	99.9%	2.6	0.3	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	17	17	99.4%	13.4	12.8	B
	Through						
	Right Turn	80	74	92.8%	9.6	6.8	A
	Subtotal	97	91	93.9%	10.2	7.1	B
EB	Left Turn	87	89	102.8%	5.4	0.7	A
	Through	203	202	99.7%	2.2	0.6	A
	Right Turn						
	Subtotal	290	292	100.6%	3.1	0.6	A
WB	Left Turn						
	Through	422	424	100.4%	2.6	2.8	A
	Right Turn	34	35	101.5%	3.0	4.5	A
	Subtotal	456	458	100.4%	2.6	2.9	A
Total		843	841	99.7%	3.7	2.3	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	640	651	101.7%	3.0	0.2	A
	Right Turn	44	44	100.9%	2.5	0.8	A
	Subtotal	684	695	101.7%	3.0	0.2	A
SB	Left Turn	246	247	100.6%	9.5	1.7	A
	Through	262	257	98.2%	2.1	0.4	A
	Right Turn						
	Subtotal	508	505	99.3%	5.8	0.9	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	22	19	85.9%	128.3	30.8	F
	Through						
	Right Turn	480	436	90.9%	125.0	18.2	F
	Subtotal	502	455	90.7%	125.3	17.9	F
Total		1,694	1,655	97.7%	39.3	4.3	E

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	857	840	98.0%	44.8	24.2	D
	Right Turn	692	697	100.8%	38.1	29.4	D
	Subtotal	1,549	1,537	99.3%	41.7	26.5	D
SB	Left Turn	251	212	84.5%	18.3	3.1	B
	Through	518	473	91.3%	6.7	1.0	A
	Right Turn						
	Subtotal	769	685	89.1%	10.4	1.4	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	442	428	96.9%	20.9	2.7	C
	Through						
	Right Turn	129	132	101.9%	9.9	2.5	A
	Subtotal	571	560	98.0%	18.4	2.7	B
Total		2,889	2,782	96.3%	29.1	14.3	C

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	35	33	93.1%	39.3	9.0	D
	Through	395	397	100.6%	64.0	7.4	E
	Right Turn	68	65	94.9%	44.0	12.8	D
	Subtotal	498	494	99.3%	59.2	7.4	E
SB	Left Turn	553	492	88.9%	163.8	11.4	F
	Through	363	323	89.0%	129.2	4.7	F
	Right Turn	364	319	87.6%	41.9	4.3	D
	Subtotal	1,280	1,134	88.6%	120.6	8.2	F
EB	Left Turn	633	469	74.1%	105.2	6.6	F
	Through	277	199	71.9%	75.3	13.8	E
	Right Turn	36	25	69.7%	64.9	24.0	E
	Subtotal	946	693	73.3%	94.7	7.7	F
WB	Left Turn	75	75	99.3%	97.3	18.6	F
	Through	239	295	123.6%	66.7	18.8	E
	Right Turn	743	719	96.8%	35.3	4.7	D
	Subtotal	1,057	1,089	103.0%	48.2	6.5	D
Total		3,781	3,410	90.2%	82.8	3.4	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	176	173	98.2%	36.7	3.8	D
	Through	89	94	105.7%	27.4	6.6	C
	Right Turn	520	499	95.9%	12.1	2.8	B
	Subtotal	785	765	97.5%	19.7	3.1	B
SB	Left Turn	90	88	97.4%	32.6	7.3	C
	Through	55	51	93.5%	39.1	10.0	D
	Right Turn	63	65	102.5%	5.4	0.9	A
	Subtotal	208	204	97.9%	25.3	4.8	C
EB	Left Turn	71	74	104.5%	14.2	3.2	B
	Through	584	583	99.8%	26.2	3.6	C
	Right Turn	149	144	96.9%	21.8	3.1	C
	Subtotal	804	801	99.7%	24.3	3.4	C
WB	Left Turn	241	239	99.0%	19.0	1.5	B
	Through	384	387	100.8%	10.7	1.6	B
	Right Turn	46	46	100.9%	8.3	2.9	A
	Subtotal	671	672	100.2%	13.6	1.3	B
Total		2,468	2,443	99.0%	20.1	2.0	C

MOVEMENT SUMMARY

Site: 101 [Existing Plus Project PM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	1	100.0	0.390	15.6	LOS C	1.9	48.1	0.68	0.74	0.86	32.2
8	T1	454	3.0	0.390	10.6	LOS B	1.9	48.1	0.68	0.74	0.86	33.0
18b	R3	74	3.0	0.390	10.6	LOS B	1.9	48.1	0.68	0.74	0.86	31.4
Approach		528	3.2	0.390	10.6	LOS B	1.9	48.1	0.68	0.74	0.86	32.8
SouthEast: RoadName												
3bx	L3	58	3.0	0.713	20.7	LOS C	6.6	175.2	0.82	1.13	1.74	29.1
3ax	L1	23	100.0	0.713	25.4	LOS D	6.6	175.2	0.82	1.13	1.74	27.9
18ax	R1	910	3.0	0.713	20.4	LOS C	6.9	176.8	0.83	1.13	1.73	28.5
Approach		991	5.3	0.713	20.5	LOS C	6.9	176.8	0.83	1.13	1.73	28.6
North: Deer Valley Drive												
7u	U	242	3.0	0.702	12.9	LOS B	6.8	174.2	0.54	0.32	0.54	30.8
7a	L1	466	3.0	0.702	12.9	LOS B	6.8	174.2	0.54	0.32	0.54	29.9
4	T1	398	3.0	0.702	8.1	LOS A	6.8	174.2	0.37	0.21	0.37	33.3
14	R2	6	100.0	0.192	7.3	LOS A	0.8	21.7	0.25	0.13	0.25	34.4
Approach		1112	3.5	0.702	11.1	LOS B	6.8	174.2	0.48	0.28	0.48	31.2
West: Transit Center												
5	L2	5	100.0	0.110	16.3	LOS C	0.2	8.1	0.65	0.65	0.65	30.2
12a	R1	18	100.0	0.110	16.3	LOS C	0.2	8.1	0.65	0.65	0.65	29.8
12	R2	5	100.0	0.110	16.3	LOS C	0.2	8.1	0.65	0.65	0.65	29.2
Approach		28	100.0	0.110	16.3	LOS C	0.2	8.1	0.65	0.65	0.65	29.8
All Vehicles		2660	5.1	0.713	14.6	LOS B	6.9	176.8	0.65	0.69	1.02	30.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	119	108	91.0%	5.5	2.3	A
	Through	67	93	138.2%	3.9	2.4	A
	Right Turn						
	Subtotal	186	201	108.0%	4.6	1.6	A
SB	Left Turn						
	Through	194	211	108.6%	2.9	1.3	A
	Right Turn	15	15	101.3%	1.4	2.4	A
	Subtotal	209	226	108.0%	2.8	1.3	A
EB	Left Turn	15	14	94.0%	7.2	0.9	A
	Through						
	Right Turn	100	90	89.6%	5.5	2.1	A
	Subtotal	115	104	90.2%	6.3	0.7	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		510	530	104.0%	4.2	1.1	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	20	100.5%	11.5	2.6	B
	Through						
	Right Turn						
	Subtotal	20	20	100.5%	11.5	2.6	B
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	702	709	101.0%	1.2	0.2	A
	Right Turn	20	21	107.0%	1.3	0.4	A
	Subtotal	722	731	101.2%	1.2	0.2	A
WB	Left Turn						
	Through	185	172	92.9%	0.7	0.1	A
	Right Turn						
	Subtotal	185	172	92.9%	0.7	0.1	A
Total		927	923	99.5%	1.3	0.2	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	112	135	120.9%	0.1	0.1	A
	Right Turn	17	17	101.2%	0.1	0.1	A
	Subtotal	129	153	118.3%	0.1	0.1	A
SB	Left Turn	50	49	98.2%	3.5	0.4	A
	Through	204	226	110.9%	0.4	0.1	A
	Right Turn						
	Subtotal	254	275	108.4%	1.0	0.1	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	20	19	97.0%	5.4	0.9	A
	Through						
	Right Turn	55	53	96.5%	5.1	0.4	A
	Subtotal	75	73	96.7%	5.2	0.5	A
Total		458	500	109.3%	1.4	0.1	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	24	23	97.1%	5.9	1.1	A
	Through						
	Right Turn	57	59	104.0%	5.7	0.8	A
	Subtotal	81	83	102.0%	5.8	0.5	A
EB	Left Turn	49	52	106.1%	4.6	0.7	A
	Through	230	249	108.3%	1.8	0.4	A
	Right Turn						
	Subtotal	279	301	108.0%	2.2	0.4	A
WB	Left Turn						
	Through	148	168	113.4%	0.2	0.1	A
	Right Turn	19	20	105.3%	0.0	0.1	A
	Subtotal	167	188	112.5%	0.1	0.1	A
Total		527	572	108.5%	2.1	0.4	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	190	178	93.6%	13.6	4.2	B
	Right Turn	15	16	103.3%	7.6	4.4	A
	Subtotal	205	193	94.3%	12.8	3.4	B
SB	Left Turn	264	284	107.7%	10.6	1.5	B
	Through	715	719	100.6%	8.1	0.9	A
	Right Turn						
	Subtotal	979	1,004	102.5%	8.8	0.8	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	7	7	94.3%	12.5	13.1	B
	Through						
	Right Turn	198	218	109.9%	4.3	1.0	A
	Subtotal	205	224	109.4%	4.7	0.9	A
Total		1,389	1,421	102.3%	8.6	0.8	A

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	305	308	101.1%	14.6	1.7	B
	Right Turn	168	167	99.3%	3.3	0.6	A
	Subtotal	473	475	100.4%	10.7	1.3	B
SB	Left Turn	105	92	87.5%	13.3	2.4	B
	Through	719	639	88.9%	9.9	1.2	A
	Right Turn						
	Subtotal	824	731	88.7%	10.3	1.1	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	588	606	103.0%	16.6	2.1	B
	Through						
	Right Turn	198	208	105.1%	5.8	1.2	A
	Subtotal	786	814	103.5%	13.9	1.9	B
Total		2,083	2,020	97.0%	11.8	1.0	B

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	36	45	125.6%	32.0	6.1	C
	Through	191	194	101.8%	49.3	5.7	D
	Right Turn	67	70	104.2%	17.7	8.0	B
	Subtotal	294	309	105.2%	39.3	3.9	D
SB	Left Turn	565	422	74.7%	203.8	44.0	F
	Through	169	129	76.4%	167.4	39.9	F
	Right Turn	901	732	81.3%	57.5	23.3	E
	Subtotal	1,635	1,284	78.5%	119.1	7.6	F
EB	Left Turn	320	338	105.8%	40.5	11.7	D
	Through	172	190	110.3%	27.5	7.5	C
	Right Turn	16	19	116.3%	21.1	8.6	C
	Subtotal	508	547	107.6%	35.2	9.0	D
WB	Left Turn	50	47	94.6%	64.6	12.7	E
	Through	253	303	119.7%	49.8	16.5	D
	Right Turn	257	261	101.4%	10.3	2.3	B
	Subtotal	560	611	109.1%	34.2	12.1	C
Total		2,997	2,751	91.8%	76.3	2.1	E

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	64	57	88.4%	21.8	5.7	C
	Through	28	28	100.0%	24.9	6.2	C
	Right Turn	118	112	94.9%	3.5	0.9	A
	Subtotal	210	197	93.6%	12.0	2.4	B
SB	Left Turn	54	57	106.3%	21.2	5.8	C
	Through	71	75	105.5%	24.3	4.0	C
	Right Turn	29	31	107.9%	4.4	1.2	A
	Subtotal	154	164	106.2%	19.5	2.1	B
EB	Left Turn	22	22	100.9%	13.4	6.2	B
	Through	230	245	106.7%	18.2	3.2	B
	Right Turn	95	98	103.5%	10.8	3.7	B
	Subtotal	347	366	105.4%	16.1	3.3	B
WB	Left Turn	322	335	104.0%	14.4	2.3	B
	Through	324	340	105.0%	7.9	1.7	A
	Right Turn	47	49	104.7%	4.7	1.5	A
	Subtotal	693	724	104.5%	10.6	1.4	B
Total		1,404	1,450	103.3%	13.2	1.6	B

Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	150	148	98.7%	7.6	1.7	A
	Through	377	382	101.4%	7.7	1.1	A
	Right Turn						
	Subtotal	527	530	100.6%	7.7	1.2	A
SB	Left Turn						
	Through	97	93	95.4%	4.6	1.8	A
	Right Turn	15	16	107.3%	1.6	1.9	A
	Subtotal	112	109	97.0%	4.3	1.7	A
EB	Left Turn	15	15	97.3%	12.5	6.4	B
	Through						
	Right Turn	146	154	105.2%	5.2	1.5	A
	Subtotal	161	168	104.5%	5.9	2.3	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		800	807	100.9%	6.9	1.1	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	20	98.5%	19.0	10.0	C
	Through						
	Right Turn						
	Subtotal	20	20	98.5%	19.0	10.0	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	264	271	102.6%	0.3	0.1	A
	Right Turn	20	25	123.5%	0.4	0.3	A
	Subtotal	284	296	104.1%	0.3	0.1	A
WB	Left Turn						
	Through	664	656	98.8%	2.1	0.1	A
	Right Turn						
	Subtotal	664	656	98.8%	2.1	0.1	A
Total		968	971	100.3%	2.0	0.3	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	396	405	102.3%	0.4	0.1	A
	Right Turn	30	31	101.7%	0.4	0.1	A
	Subtotal	426	436	102.3%	0.4	0.1	A
SB	Left Turn	85	83	97.2%	5.0	1.4	A
	Through	135	139	103.1%	0.2	0.1	A
	Right Turn						
	Subtotal	220	222	100.8%	2.1	0.5	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	29	25	86.6%	11.0	4.3	B
	Through						
	Right Turn	60	61	100.8%	7.1	0.9	A
	Subtotal	89	86	96.2%	8.1	1.2	A
Total		735	743	101.1%	1.9	0.2	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	17	18	105.3%	8.5	2.0	A
	Through						
	Right Turn	80	81	100.9%	8.2	1.3	A
	Subtotal	97	99	101.6%	8.4	1.1	A
EB	Left Turn	87	88	101.6%	6.1	1.1	A
	Through	203	203	99.8%	1.6	0.4	A
	Right Turn						
	Subtotal	290	291	100.3%	3.0	0.3	A
WB	Left Turn						
	Through	422	430	101.8%	0.6	0.1	A
	Right Turn	34	35	103.5%	0.4	0.2	A
	Subtotal	456	465	101.9%	0.5	0.1	A
Total		843	854	101.3%	2.3	0.2	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	640	634	99.1%	21.8	4.0	C
	Right Turn	44	44	99.1%	19.2	4.0	B
	Subtotal	684	678	99.1%	21.6	4.0	C
SB	Left Turn	246	247	100.4%	20.6	4.1	C
	Through	262	272	104.0%	3.8	1.1	A
	Right Turn						
	Subtotal	508	519	102.2%	12.1	2.7	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	22	22	98.2%	42.2	10.1	D
	Through						
	Right Turn	480	481	100.1%	27.2	8.3	C
	Subtotal	502	502	100.1%	27.7	8.1	C
Total		1,694	1,700	100.3%	20.5	3.6	C

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	857	850	99.2%	59.5	28.4	E
	Right Turn	692	683	98.6%	56.0	40.0	E
	Subtotal	1,549	1,533	99.0%	58.0	33.5	E
SB	Left Turn	251	215	85.5%	19.5	2.5	B
	Through	518	475	91.6%	7.1	0.9	A
	Right Turn						
	Subtotal	769	689	89.6%	11.1	1.3	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	442	440	99.6%	19.6	2.1	B
	Through						
	Right Turn	129	136	105.0%	8.3	1.3	A
	Subtotal	571	576	100.8%	16.8	1.8	B
Total		2,889	2,798	96.8%	38.4	18.8	D

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	35	35	100.3%	34.3	9.1	C
	Through	395	403	102.0%	63.1	10.1	E
	Right Turn	68	64	94.7%	44.2	14.6	D
	Subtotal	498	503	100.9%	58.9	10.4	E
SB	Left Turn	553	488	88.2%	169.2	8.9	F
	Through	363	322	88.6%	132.8	8.7	F
	Right Turn	364	335	92.0%	42.6	5.1	D
	Subtotal	1,280	1,144	89.4%	123.1	6.8	F
EB	Left Turn	633	470	74.3%	104.1	4.8	F
	Through	277	204	73.5%	74.9	7.4	E
	Right Turn	36	27	74.2%	64.1	14.8	E
	Subtotal	946	701	74.1%	93.6	3.3	F
WB	Left Turn	75	78	103.9%	104.7	38.2	F
	Through	239	286	119.5%	51.8	12.5	D
	Right Turn	743	724	97.4%	38.5	3.8	D
	Subtotal	1,057	1,087	102.8%	47.2	5.4	D
Total		3,781	3,434	90.8%	83.7	2.1	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	176	172	97.7%	37.0	10.5	D
	Through	89	88	98.8%	39.8	9.2	D
	Right Turn	520	502	96.6%	11.0	3.0	B
	Subtotal	785	762	97.1%	20.3	4.2	C
SB	Left Turn	90	86	95.0%	29.7	5.5	C
	Through	55	53	96.4%	42.1	11.1	D
	Right Turn	63	64	101.6%	5.0	1.1	A
	Subtotal	208	203	97.4%	25.6	6.3	C
EB	Left Turn	71	67	94.8%	14.6	3.4	B
	Through	584	593	101.5%	26.2	2.1	C
	Right Turn	149	153	102.8%	19.9	3.4	B
	Subtotal	804	813	101.1%	24.2	1.7	C
WB	Left Turn	241	240	99.7%	18.8	3.0	B
	Through	384	395	102.9%	10.8	1.8	B
	Right Turn	46	47	101.5%	6.4	3.1	A
	Subtotal	671	682	101.7%	13.4	1.6	B
Total		2,468	2,460	99.7%	20.2	2.4	C

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	75	75	99.6%	0.2	0.2	A
	Right Turn	20	18	90.0%	0.5	1.0	A
	Subtotal	95	93	97.6%	0.2	0.3	A
SB	Left Turn	50	50	99.8%	4.0	0.4	A
	Through	120	126	105.3%	1.0	0.2	A
	Right Turn						
	Subtotal	170	176	103.7%	1.9	0.3	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	20	22	111.0%	5.9	1.1	A
	Through						
	Right Turn	55	55	100.2%	5.1	0.3	A
	Subtotal	75	77	103.1%	5.3	0.5	A
Total		340	346	101.9%	2.2	0.2	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	25	24	94.8%	6.2	1.6	A
	Through						
	Right Turn	60	62	104.0%	5.8	0.8	A
	Subtotal	85	86	101.3%	5.9	0.9	A
EB	Left Turn	50	51	101.0%	4.3	0.6	A
	Through	145	153	105.4%	1.5	0.5	A
	Right Turn						
	Subtotal	195	203	104.3%	2.3	0.5	A
WB	Left Turn						
	Through	110	109	99.2%	1.0	0.3	A
	Right Turn	20	21	104.0%	0.8	0.6	A
	Subtotal	130	130	99.9%	1.0	0.2	A
Total		410	419	102.3%	2.6	0.4	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	150	151	100.9%	1.2	0.3	A
	Right Turn	15	15	101.3%	0.7	0.8	A
	Subtotal	165	167	100.9%	1.2	0.3	A
SB	Left Turn	180	186	103.6%	5.7	0.5	A
	Through	635	636	100.2%	3.6	0.4	A
	Right Turn						
	Subtotal	815	823	100.9%	4.1	0.2	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	10	9	90.0%	14.2	10.1	B
	Through						
	Right Turn	160	162	101.2%	4.5	0.6	A
	Subtotal	170	171	100.5%	5.0	1.0	A
Total		1,150	1,160	100.9%	3.8	0.2	A

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	265	263	99.3%	12.8	2.3	B
	Right Turn	165	170	102.7%	2.7	0.9	A
	Subtotal	430	433	100.6%	9.1	1.6	A
SB	Left Turn	115	102	89.0%	11.7	2.9	B
	Through	635	620	97.6%	9.7	1.8	A
	Right Turn						
	Subtotal	750	722	96.3%	10.0	1.9	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	585	591	101.0%	15.6	0.8	B
	Through						
	Right Turn	215	222	103.4%	5.4	1.3	A
	Subtotal	800	813	101.6%	12.8	0.9	B
Total		1,980	1,968	99.4%	11.0	1.1	B

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	55	51	93.5%	34.8	3.8	C
	Through	195	198	101.3%	51.8	5.3	D
	Right Turn	75	73	96.9%	19.4	5.8	B
	Subtotal	325	322	99.0%	41.9	4.6	D
SB	Left Turn	475	404	85.1%	212.0	13.3	F
	Through	170	146	85.7%	173.4	18.6	F
	Right Turn	1,065	917	86.1%	72.5	16.1	E
	Subtotal	1,710	1,467	85.8%	121.5	7.1	F
EB	Left Turn	385	392	101.7%	44.4	7.5	D
	Through	240	238	99.0%	28.5	5.7	C
	Right Turn	25	28	111.6%	28.3	14.5	C
	Subtotal	650	657	101.1%	38.2	7.0	D
WB	Left Turn	50	48	96.2%	75.9	14.9	E
	Through	325	355	109.3%	68.7	15.7	E
	Right Turn	215	218	101.2%	10.0	1.9	B
	Subtotal	590	621	105.2%	49.4	9.8	D
Total		3,275	3,067	93.6%	81.9	6.0	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	65	58	89.4%	22.8	5.7	C
	Through	30	30	99.0%	23.4	6.9	C
	Right Turn	110	106	96.5%	3.1	0.7	A
	Subtotal	205	194	94.6%	12.2	2.4	B
SB	Left Turn	60	56	93.2%	18.4	7.3	B
	Through	75	75	99.9%	25.4	4.2	C
	Right Turn	30	31	103.0%	4.8	1.0	A
	Subtotal	165	162	98.0%	18.9	3.0	B
EB	Left Turn	25	24	95.6%	14.8	1.9	B
	Through	250	247	98.9%	18.6	2.4	B
	Right Turn	100	99	98.6%	8.5	2.4	A
	Subtotal	375	370	98.6%	15.8	2.2	B
WB	Left Turn	305	309	101.3%	14.0	2.3	B
	Through	350	344	98.4%	8.6	1.3	A
	Right Turn	50	49	98.8%	4.8	2.0	A
	Subtotal	705	703	99.7%	10.7	1.3	B
Total		1,450	1,428	98.5%	13.1	1.2	B

MOVEMENT SUMMARY

Site: 101 [2024 BG AM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	5	100.0	0.174	14.0	LOS B	0.6	15.9	0.63	0.63	0.63	33.7
8	T1	133	3.0	0.174	8.2	LOS A	0.6	16.1	0.63	0.63	0.63	33.9
18b	R3	64	3.0	0.174	8.2	LOS A	0.6	16.1	0.64	0.64	0.64	32.4
Approach		202	5.6	0.174	8.4	LOS A	0.6	16.1	0.63	0.63	0.63	33.4
SouthEast: RoadName												
3bx	L3	32	3.0	0.150	4.5	LOS A	0.5	15.5	0.32	0.19	0.32	35.8
3ax	L1	21	100.0	0.150	7.4	LOS A	0.5	15.5	0.32	0.19	0.32	34.4
18ax	R1	277	3.0	0.150	4.4	LOS A	0.6	16.1	0.32	0.20	0.32	35.5
Approach		330	9.3	0.150	4.6	LOS A	0.6	16.1	0.32	0.20	0.32	35.4
North: Deer Valley Drive												
7u	U	27	3.0	0.769	15.4	LOS C	9.2	236.0	0.59	0.32	0.59	30.0
7a	L1	809	3.0	0.769	15.4	LOS C	9.2	236.0	0.59	0.32	0.59	29.1
4	T1	383	3.0	0.769	8.7	LOS A	9.2	236.0	0.36	0.19	0.36	33.1
14	R2	16	100.0	0.210	7.3	LOS A	0.9	24.1	0.22	0.11	0.22	34.4
Approach		1234	4.3	0.769	13.2	LOS B	9.2	236.0	0.51	0.27	0.51	30.3
West: Transit Center												
5	L2	5	100.0	0.201	19.9	LOS C	0.3	14.9	0.69	0.69	0.69	28.9
12a	R1	27	100.0	0.201	19.9	LOS C	0.3	14.9	0.69	0.69	0.69	28.6
12	R2	16	100.0	0.201	19.9	LOS C	0.3	14.9	0.69	0.69	0.69	28.0
Approach		48	100.0	0.201	19.9	LOS C	0.3	14.9	0.69	0.69	0.69	28.4
All Vehicles		1814	7.8	0.769	11.3	LOS B	9.2	236.0	0.50	0.31	0.50	31.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	305	317	103.8%	1.0	0.2	A
	Right Turn	30	32	108.0%	0.9	0.7	A
	Subtotal	335	349	104.1%	1.0	0.2	A
SB	Left Turn	85	86	100.8%	5.1	0.7	A
	Through	85	84	99.3%	1.8	0.9	A
	Right Turn						
	Subtotal	170	170	100.1%	3.3	0.7	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	30	25	83.7%	8.2	2.8	A
	Through						
	Right Turn	60	61	102.3%	5.8	0.5	A
	Subtotal	90	87	96.1%	6.5	0.9	A
Total		595	606	101.8%	2.4	0.3	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	20	19	93.0%	11.2	4.5	B
	Through						
	Right Turn	80	80	99.9%	6.5	0.7	A
	Subtotal	100	99	98.5%	7.3	1.1	A
EB	Left Turn	90	89	99.1%	5.8	1.1	A
	Through	150	149	99.3%	1.8	0.6	A
	Right Turn						
	Subtotal	240	238	99.3%	3.3	0.8	A
WB	Left Turn						
	Through	330	339	102.6%	1.1	0.1	A
	Right Turn	35	38	108.6%	1.4	0.5	A
	Subtotal	365	377	103.2%	1.1	0.1	A
Total		705	713	101.2%	2.7	0.3	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	545	547	100.3%	3.6	0.4	A
	Right Turn	45	45	100.9%	1.8	0.7	A
	Subtotal	590	592	100.3%	3.5	0.3	A
SB	Left Turn	195	191	98.1%	8.7	2.1	A
	Through	210	209	99.6%	1.7	0.4	A
	Right Turn						
	Subtotal	405	401	98.9%	5.1	1.3	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	25	27	108.0%	41.3	27.9	E
	Through						
	Right Turn	385	390	101.3%	36.6	16.7	E
	Subtotal	410	417	101.7%	36.7	16.9	E
Total		1,405	1,410	100.3%	13.6	5.5	B

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	755	743	98.4%	27.5	2.6	C
	Right Turn	690	696	100.9%	17.7	1.5	B
	Subtotal	1,445	1,440	99.6%	22.9	1.9	C
SB	Left Turn	275	204	74.3%	20.6	3.6	C
	Through	460	376	81.8%	7.6	1.8	A
	Right Turn						
	Subtotal	735	581	79.0%	12.2	1.6	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	445	444	99.7%	25.4	4.0	C
	Through						
	Right Turn	145	148	101.7%	10.0	2.0	A
	Subtotal	590	591	100.2%	21.6	3.2	C
Total		2,770	2,611	94.3%	20.1	1.3	C

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	35	34	97.1%	33.2	6.1	C
	Through	395	399	101.0%	50.8	4.0	D
	Right Turn	70	77	110.6%	29.5	7.9	C
	Subtotal	500	510	102.0%	46.6	3.9	D
SB	Left Turn	495	370	74.7%	223.0	17.6	F
	Through	365	274	75.2%	174.9	13.5	F
	Right Turn	445	334	75.0%	47.8	7.2	D
	Subtotal	1,305	978	75.0%	151.2	13.7	F
EB	Left Turn	765	500	65.3%	84.9	4.7	F
	Through	355	231	65.1%	62.3	12.7	E
	Right Turn	50	37	73.6%	54.3	17.3	D
	Subtotal	1,170	768	65.6%	77.0	6.3	E
WB	Left Turn	80	76	94.8%	81.2	17.1	F
	Through	310	357	115.0%	63.5	15.9	E
	Right Turn	640	630	98.4%	37.7	7.7	D
	Subtotal	1,030	1,062	103.1%	49.3	9.0	D
Total		4,005	3,318	82.8%	84.7	2.6	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	180	175	97.0%	32.9	5.9	C
	Through	90	93	103.3%	31.5	5.6	C
	Right Turn	505	468	92.6%	12.2	2.4	B
	Subtotal	775	735	94.9%	19.7	2.1	B
SB	Left Turn	100	99	99.4%	34.1	6.9	C
	Through	55	58	105.6%	39.6	4.9	D
	Right Turn	65	66	101.5%	6.1	1.7	A
	Subtotal	220	224	101.6%	28.0	3.2	C
EB	Left Turn	75	76	101.2%	16.2	3.3	B
	Through	635	642	101.0%	25.9	2.6	C
	Right Turn	150	147	97.9%	20.9	3.6	C
	Subtotal	860	864	100.5%	24.3	2.2	C
WB	Left Turn	230	223	97.0%	19.6	3.8	B
	Through	420	430	102.4%	11.5	2.2	B
	Right Turn	50	51	102.8%	8.4	3.4	A
	Subtotal	700	705	100.7%	13.8	1.9	B
Total		2,555	2,528	98.9%	20.4	1.5	C

MOVEMENT SUMMARY

Site: 101 [2024 BG PM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	1	100.0	0.356	13.9	LOS B	1.6	41.4	0.65	0.67	0.73	32.8
8	T1	460	3.0	0.356	9.3	LOS A	1.6	41.5	0.65	0.67	0.73	33.6
18b	R3	66	3.0	0.356	9.3	LOS A	1.6	41.5	0.65	0.67	0.73	32.0
Approach		526	3.2	0.356	9.3	LOS A	1.6	41.5	0.65	0.67	0.73	33.4
SouthEast: RoadName												
3bx	L3	40	3.0	0.582	15.1	LOS C	4.0	106.0	0.75	0.94	1.29	31.4
3ax	L1	15	100.0	0.582	19.9	LOS C	4.0	106.0	0.75	0.94	1.29	30.0
18ax	R1	753	3.0	0.582	15.0	LOS B	4.2	107.0	0.76	0.94	1.29	30.7
Approach		808	4.8	0.582	15.1	LOS C	4.2	107.0	0.76	0.94	1.29	30.7
North: Deer Valley Drive												
7u	U	242	3.0	0.636	10.7	LOS B	5.6	143.3	0.40	0.20	0.40	31.7
7a	L1	379	3.0	0.636	10.7	LOS B	5.6	143.3	0.40	0.20	0.40	30.8
4	T1	404	3.0	0.636	7.5	LOS A	5.6	143.3	0.30	0.14	0.30	33.4
14	R2	10	100.0	0.174	6.9	LOS A	0.7	19.3	0.20	0.09	0.20	34.6
Approach		1035	3.9	0.636	9.4	LOS A	5.6	143.3	0.35	0.17	0.35	32.0
West: Transit Center												
5	L2	5	100.0	0.090	14.6	LOS B	0.1	6.7	0.62	0.62	0.62	30.9
12a	R1	15	100.0	0.090	14.6	LOS B	0.1	6.7	0.62	0.62	0.62	30.4
12	R2	5	100.0	0.090	14.6	LOS B	0.1	6.7	0.62	0.62	0.62	29.8
Approach		25	100.0	0.090	14.6	LOS B	0.1	6.7	0.62	0.62	0.62	30.4
All Vehicles		2395	5.1	0.636	11.4	LOS B	5.6	143.3	0.56	0.55	0.75	31.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	119	114	96.0%	9.0	2.4	A
	Through	75	76	100.9%	6.8	2.8	A
	Right Turn						
	Subtotal	194	190	97.9%	8.1	1.7	A
SB	Left Turn						
	Through	198	193	97.4%	5.7	2.0	A
	Right Turn	15	15	102.0%	2.9	2.1	A
	Subtotal	213	208	97.7%	5.5	1.8	A
EB	Left Turn	15	15	98.7%	12.9	6.8	B
	Through						
	Right Turn	100	100	100.2%	5.5	0.4	A
	Subtotal	115	115	100.0%	6.6	1.1	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		522	513	98.3%	6.7	1.1	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	21	106.5%	14.8	10.0	B
	Through						
	Right Turn						
	Subtotal	20	21	106.5%	14.8	10.0	B
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	713	709	99.4%	3.7	0.3	A
	Right Turn	20	20	100.5%	2.6	1.4	A
	Subtotal	733	729	99.4%	3.6	0.4	A
WB	Left Turn						
	Through	188	186	99.0%	0.3	0.1	A
	Right Turn						
	Subtotal	188	186	99.0%	0.3	0.1	A
Total		941	936	99.5%	3.2	0.3	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	117	113	96.8%	1.1	0.2	A
	Right Turn	20	23	115.5%	1.0	0.7	A
	Subtotal	137	136	99.5%	1.1	0.2	A
SB	Left Turn	50	45	90.8%	4.3	0.9	A
	Through	208	211	101.4%	1.1	0.2	A
	Right Turn						
	Subtotal	258	256	99.4%	1.7	0.2	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	20	17	86.5%	7.7	2.8	A
	Through						
	Right Turn	55	58	105.6%	5.3	0.7	A
	Subtotal	75	75	100.5%	5.8	0.4	A
Total		470	468	99.6%	2.2	0.2	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	25	26	102.4%	7.6	3.0	A
	Through						
	Right Turn	60	57	94.2%	5.5	0.4	A
	Subtotal	85	82	96.6%	6.1	0.9	A
EB	Left Turn	50	54	107.4%	4.8	0.9	A
	Through	233	230	98.8%	1.7	0.4	A
	Right Turn						
	Subtotal	283	284	100.3%	2.3	0.5	A
WB	Left Turn						
	Through	152	151	99.1%	1.0	0.2	A
	Right Turn	20	19	95.5%	0.8	0.4	A
	Subtotal	172	170	98.7%	0.9	0.2	A
Total		540	536	99.2%	2.5	0.3	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	193	191	99.0%	1.6	0.3	A
	Right Turn	15	17	113.3%	1.4	1.6	A
	Subtotal	208	208	100.0%	1.6	0.3	A
SB	Left Turn	268	265	98.9%	7.1	0.7	A
	Through	723	717	99.2%	4.1	0.4	A
	Right Turn						
	Subtotal	991	982	99.1%	4.9	0.5	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	10	9	89.0%	20.4	20.2	C
	Through						
	Right Turn	202	197	97.5%	4.9	0.8	A
	Subtotal	212	206	97.1%	5.7	1.3	A
Total		1,411	1,396	98.9%	4.5	0.5	A

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	307	309	100.5%	14.2	1.8	B
	Right Turn	182	181	99.3%	3.5	0.8	A
	Subtotal	489	489	100.1%	10.2	1.2	B
SB	Left Turn	115	97	84.2%	13.4	2.5	B
	Through	723	643	89.0%	10.0	1.8	B
	Right Turn						
	Subtotal	838	740	88.3%	10.5	1.7	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	620	620	100.0%	16.8	3.4	B
	Through						
	Right Turn	215	219	102.0%	6.0	1.4	A
	Subtotal	835	839	100.5%	14.1	3.1	B
Total		2,162	2,069	95.7%	11.9	1.7	B

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	55	50	91.6%	35.2	8.4	D
	Through	195	202	103.5%	55.5	5.9	E
	Right Turn	75	76	101.6%	25.5	7.0	C
	Subtotal	325	329	101.1%	44.9	5.2	D
SB	Left Turn	563	409	72.6%	223.7	17.0	F
	Through	170	125	73.4%	194.1	10.7	F
	Right Turn	1,065	815	76.5%	62.0	7.1	E
	Subtotal	1,798	1,348	75.0%	126.3	5.7	F
EB	Left Turn	385	388	100.9%	43.5	3.6	D
	Through	240	240	99.9%	28.2	3.9	C
	Right Turn	25	25	98.4%	21.2	10.3	C
	Subtotal	650	653	100.4%	37.2	3.3	D
WB	Left Turn	50	52	103.8%	85.1	18.4	F
	Through	325	366	112.6%	64.2	13.7	E
	Right Turn	257	255	99.1%	9.1	1.3	A
	Subtotal	632	673	106.4%	45.9	9.9	D
Total		3,405	3,002	88.2%	80.0	2.7	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	65	61	93.4%	23.7	4.2	C
	Through	30	30	101.3%	28.1	5.7	C
	Right Turn	127	116	91.5%	3.7	1.1	A
	Subtotal	222	207	93.4%	13.1	1.2	B
SB	Left Turn	60	60	99.5%	21.2	7.2	C
	Through	75	74	98.9%	24.2	3.7	C
	Right Turn	30	30	101.0%	4.4	0.9	A
	Subtotal	165	164	99.5%	19.7	4.2	B
EB	Left Turn	25	24	94.0%	13.5	4.4	B
	Through	250	258	103.2%	20.1	2.5	C
	Right Turn	100	102	102.4%	12.0	2.5	B
	Subtotal	375	384	102.4%	17.7	2.2	B
WB	Left Turn	340	340	100.1%	14.4	1.8	B
	Through	350	351	100.4%	8.5	1.0	A
	Right Turn	50	53	106.6%	6.4	2.5	A
	Subtotal	740	745	100.6%	11.1	1.5	B
Total		1,502	1,500	99.9%	14.0	1.4	B

MOVEMENT SUMMARY

Site: 101 [Opening Year Plus Project AM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	5	100.0	0.225	17.2	LOS C	0.8	20.2	0.69	0.69	0.69	32.6
8	T1	133	3.0	0.225	10.4	LOS B	0.8	20.5	0.69	0.69	0.69	32.9
18b	R3	83	3.0	0.225	10.3	LOS B	0.8	20.5	0.69	0.69	0.69	31.4
Approach		221	5.3	0.225	10.5	LOS B	0.8	20.5	0.69	0.69	0.69	32.3
SouthEast: RoadName												
3bx	L3	41	3.0	0.190	4.9	LOS A	0.7	20.4	0.33	0.21	0.33	35.6
3ax	L1	26	100.0	0.190	7.8	LOS A	0.7	20.4	0.33	0.21	0.33	34.2
18ax	R1	353	3.0	0.190	4.8	LOS A	0.8	21.2	0.33	0.21	0.33	35.3
Approach		420	8.9	0.190	5.0	LOS A	0.8	21.2	0.33	0.21	0.33	35.2
North: Deer Valley Drive												
7u	U	27	3.0	0.881	23.6	LOS C	15.0	384.2	0.92	0.54	0.92	27.1
7a	L1	967	3.0	0.881	23.6	LOS C	15.0	384.2	0.92	0.54	0.92	26.3
4	T1	383	3.0	0.881	10.4	LOS B	15.0	384.2	0.45	0.25	0.45	32.5
14	R2	16	100.0	0.241	7.7	LOS A	1.1	28.4	0.26	0.13	0.26	34.2
Approach		1393	4.1	0.881	19.8	LOS C	15.0	384.2	0.78	0.46	0.79	27.9
West: Transit Center												
5	L2	5	100.0	0.280	25.6	LOS D	0.5	22.1	0.74	0.82	0.96	27.0
12a	R1	36	100.0	0.280	25.6	LOS D	0.5	22.1	0.74	0.82	0.96	26.7
12	R2	16	100.0	0.280	25.6	LOS D	0.5	22.1	0.74	0.82	0.96	26.2
Approach		57	100.0	0.280	25.6	LOS D	0.5	22.1	0.74	0.82	0.96	26.6
All Vehicles		2091	7.8	0.881	16.0	LOS C	15.0	384.2	0.68	0.44	0.69	29.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	150	151	100.4%	8.5	2.7	A
	Through	389	384	98.7%	8.3	3.0	A
	Right Turn						
	Subtotal	539	535	99.2%	8.3	2.8	A
SB	Left Turn						
	Through	105	101	96.0%	5.0	1.2	A
	Right Turn	15	16	104.0%	1.6	1.5	A
	Subtotal	120	116	97.0%	4.6	1.1	A
EB	Left Turn	15	15	100.7%	15.1	8.4	B
	Through						
	Right Turn	146	142	96.9%	5.2	0.8	A
	Subtotal	161	157	97.3%	6.0	1.0	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		820	808	98.5%	7.3	2.0	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	21	104.5%	24.3	18.6	C
	Through						
	Right Turn						
	Subtotal	20	21	104.5%	24.3	18.6	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	273	267	97.9%	1.6	0.4	A
	Right Turn	20	20	99.0%	1.7	0.8	A
	Subtotal	293	287	98.0%	1.6	0.3	A
WB	Left Turn						
	Through	674	669	99.2%	2.2	0.1	A
	Right Turn						
	Subtotal	674	669	99.2%	2.2	0.1	A
Total		987	977	99.0%	2.5	0.4	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	408	405	99.3%	5.0	9.1	A
	Right Turn	30	31	102.0%	3.7	5.2	A
	Subtotal	438	436	99.5%	5.0	9.0	A
SB	Left Turn	85	84	98.2%	5.1	1.0	A
	Through	142	140	98.5%	1.3	0.5	A
	Right Turn						
	Subtotal	227	223	98.4%	2.7	0.7	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	30	29	97.3%	18.4	18.9	C
	Through						
	Right Turn	60	59	98.3%	18.9	33.4	C
	Subtotal	90	88	98.0%	19.1	29.1	C
Total		755	747	99.0%	6.1	8.9	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	20	19	94.5%	72.8	90.9	F
	Through						
	Right Turn	80	80	100.3%	78.0	92.7	F
	Subtotal	100	99	99.1%	77.5	92.4	F
EB	Left Turn	90	93	103.0%	5.5	1.1	A
	Through	207	201	97.3%	1.8	0.6	A
	Right Turn						
	Subtotal	297	294	99.0%	3.0	0.7	A
WB	Left Turn						
	Through	433	424	97.8%	36.3	53.5	E
	Right Turn	35	33	95.1%	42.0	58.8	E
	Subtotal	468	457	97.6%	36.5	53.6	E
Total		865	850	98.3%	28.4	37.4	D

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	649	649	100.0%	2.9	0.5	A
	Right Turn	45	44	97.6%	2.4	1.4	A
	Subtotal	694	693	99.8%	2.8	0.4	A
SB	Left Turn	252	250	99.3%	9.9	2.1	A
	Through	268	263	98.1%	2.0	0.4	A
	Right Turn						
	Subtotal	520	513	98.7%	5.9	1.1	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	25	22	89.6%	120.8	28.5	F
	Through						
	Right Turn	488	435	89.2%	126.2	7.6	F
	Subtotal	513	458	89.2%	126.2	7.2	F
Total		1,727	1,664	96.3%	39.9	2.3	E

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	858	851	99.2%	96.3	49.4	F
	Right Turn	731	736	100.6%	110.7	64.0	F
	Subtotal	1,589	1,587	99.9%	102.4	55.3	F
SB	Left Turn	275	198	71.9%	22.5	4.8	C
	Through	518	415	80.1%	8.0	1.8	A
	Right Turn						
	Subtotal	793	613	77.2%	12.6	2.6	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	468	464	99.2%	29.7	8.0	C
	Through						
	Right Turn	145	139	96.1%	16.5	4.7	B
	Subtotal	613	603	98.4%	26.5	6.7	C
Total		2,995	2,803	93.6%	66.9	31.3	E

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	50	50	99.4%	31.3	7.8	C
	Through	395	396	100.2%	50.4	5.8	D
	Right Turn	70	72	102.7%	25.6	9.0	C
	Subtotal	515	517	100.4%	44.5	5.0	D
SB	Left Turn	553	380	68.7%	227.2	13.8	F
	Through	365	252	69.1%	179.2	12.4	F
	Right Turn	445	307	69.0%	51.7	11.6	D
	Subtotal	1,363	939	68.9%	155.6	7.3	F
EB	Left Turn	765	523	68.3%	87.2	8.2	F
	Through	355	236	66.4%	61.6	13.0	E
	Right Turn	50	34	67.6%	52.9	15.7	D
	Subtotal	1,170	792	67.7%	78.5	8.8	E
WB	Left Turn	80	75	93.3%	85.6	13.9	F
	Through	310	340	109.6%	60.0	8.1	E
	Right Turn	743	660	88.8%	52.4	3.1	D
	Subtotal	1,133	1,075	94.8%	57.1	3.9	E
Total		4,181	3,323	79.5%	88.1	2.8	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	180	166	92.4%	41.4	8.0	D
	Through	90	94	104.1%	33.6	6.4	C
	Right Turn	546	504	92.4%	12.8	1.9	B
	Subtotal	816	764	93.7%	21.8	2.8	C
SB	Left Turn	100	99	99.1%	34.3	5.6	C
	Through	55	55	100.4%	44.7	11.5	D
	Right Turn	65	69	105.8%	5.3	0.9	A
	Subtotal	220	223	101.4%	27.1	3.8	C
EB	Left Turn	75	75	100.3%	14.9	2.7	B
	Through	635	632	99.5%	29.3	3.4	C
	Right Turn	150	152	101.1%	26.1	4.0	C
	Subtotal	860	859	99.9%	27.4	3.1	C
WB	Left Turn	253	250	98.6%	20.8	2.4	C
	Through	420	415	98.9%	12.0	0.8	B
	Right Turn	50	55	110.2%	7.7	2.8	A
	Subtotal	723	720	99.6%	14.8	0.9	B
Total		2,619	2,566	98.0%	22.1	1.9	C

MOVEMENT SUMMARY

Site: 101 [Opening Year Plus Project PM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	1	100.0	0.403	16.1	LOS C	2.0	50.8	0.69	0.76	0.90	32.0
8	T1	460	3.0	0.403	11.0	LOS B	2.0	50.9	0.69	0.76	0.90	32.8
18b	R3	78	3.0	0.403	11.0	LOS B	2.0	50.9	0.69	0.76	0.90	31.2
Approach		538	3.2	0.403	11.0	LOS B	2.0	50.9	0.69	0.76	0.90	32.6
SouthEast: RoadName												
3bx	L3	62	3.0	0.737	22.2	LOS C	7.2	191.5	0.84	1.18	1.85	28.5
3ax	L1	25	100.0	0.737	27.0	LOS D	7.2	191.5	0.84	1.18	1.85	27.4
18ax	R1	930	3.0	0.737	21.9	LOS C	7.5	193.2	0.85	1.18	1.84	28.0
Approach		1017	5.4	0.737	22.0	LOS C	7.5	193.2	0.85	1.18	1.84	28.0
North: Deer Valley Drive												
7u	U	242	3.0	0.723	13.7	LOS B	7.3	185.9	0.59	0.35	0.59	30.5
7a	L1	477	3.0	0.723	13.7	LOS B	7.3	185.9	0.59	0.35	0.59	29.6
4	T1	404	3.0	0.723	8.6	LOS A	7.3	185.9	0.40	0.23	0.40	33.0
14	R2	10	100.0	0.198	7.4	LOS A	0.8	22.3	0.26	0.14	0.26	34.4
Approach		1133	3.9	0.723	11.8	LOS B	7.3	185.9	0.52	0.31	0.52	30.9
West: Transit Center												
5	L2	5	100.0	0.124	17.0	LOS C	0.2	9.2	0.66	0.66	0.66	30.0
12a	R1	21	100.0	0.124	17.0	LOS C	0.2	9.2	0.66	0.66	0.66	29.6
12	R2	5	100.0	0.124	17.0	LOS C	0.2	9.2	0.66	0.66	0.66	29.0
Approach		31	100.0	0.124	17.0	LOS C	0.2	9.2	0.66	0.66	0.66	29.6
All Vehicles		2720	5.4	0.737	15.5	LOS C	7.5	193.2	0.68	0.73	1.09	30.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	119	118	99.2%	6.4	2.3	A
	Through	75	78	103.7%	3.9	1.9	A
	Right Turn						
	Subtotal	194	196	101.0%	5.4	2.0	A
SB	Left Turn						
	Through	198	197	99.7%	4.1	2.4	A
	Right Turn	15	15	101.3%	1.3	1.6	A
	Subtotal	213	213	99.8%	3.9	2.3	A
EB	Left Turn	15	14	90.0%	11.7	5.7	B
	Through						
	Right Turn	100	99	98.8%	5.6	0.6	A
	Subtotal	115	112	97.7%	6.4	0.9	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		522	521	99.8%	5.0	1.8	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	18	88.0%	9.9	2.5	A
	Through						
	Right Turn						
	Subtotal	20	18	88.0%	9.9	2.5	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	713	715	100.3%	1.2	0.1	A
	Right Turn	20	19	94.0%	1.3	0.6	A
	Subtotal	733	734	100.1%	1.2	0.1	A
WB	Left Turn						
	Through	188	186	98.9%	0.7	0.1	A
	Right Turn						
	Subtotal	188	186	98.9%	0.7	0.1	A
Total		941	937	99.6%	1.3	0.1	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	117	118	100.6%	0.1	0.1	A
	Right Turn	20	20	100.5%	0.0	0.0	A
	Subtotal	137	138	100.6%	0.1	0.0	A
SB	Left Turn	50	46	92.2%	3.5	0.4	A
	Through	208	213	102.5%	0.3	0.1	A
	Right Turn						
	Subtotal	258	259	100.5%	0.9	0.2	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	20	18	92.0%	4.9	2.0	A
	Through						
	Right Turn	55	58	105.1%	5.1	0.3	A
	Subtotal	75	76	101.6%	5.3	0.5	A
Total		470	473	100.7%	1.4	0.1	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	25	27	109.6%	6.3	1.3	A
	Through						
	Right Turn	60	58	96.2%	6.0	0.8	A
	Subtotal	85	85	100.1%	6.1	0.9	A
EB	Left Turn	50	48	95.8%	4.2	0.9	A
	Through	233	232	99.6%	1.6	0.3	A
	Right Turn						
	Subtotal	283	280	98.9%	2.0	0.3	A
WB	Left Turn						
	Through	152	153	100.9%	0.2	0.1	A
	Right Turn	20	21	102.5%	0.1	0.1	A
	Subtotal	172	174	101.1%	0.2	0.1	A
Total		540	539	99.8%	2.2	0.4	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	193	191	98.8%	12.3	2.7	B
	Right Turn	15	14	94.7%	5.3	4.6	A
	Subtotal	208	205	98.5%	12.0	2.7	B
SB	Left Turn	268	265	98.8%	9.9	1.9	A
	Through	723	722	99.9%	8.1	1.5	A
	Right Turn						
	Subtotal	991	987	99.6%	8.6	1.5	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	10	8	82.0%	10.6	9.2	B
	Through						
	Right Turn	202	201	99.3%	4.5	1.1	A
	Subtotal	212	209	98.5%	4.9	1.2	A
Total		1,411	1,400	99.2%	8.6	1.2	A

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	307	312	101.7%	13.3	1.5	B
	Right Turn	182	179	98.6%	3.4	0.8	A
	Subtotal	489	492	100.5%	9.6	1.0	A
SB	Left Turn	115	94	81.6%	13.8	2.2	B
	Through	723	660	91.3%	9.4	1.5	A
	Right Turn						
	Subtotal	838	754	90.0%	9.9	1.5	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	620	628	101.3%	17.1	1.9	B
	Through						
	Right Turn	215	210	97.5%	6.5	1.2	A
	Subtotal	835	838	100.3%	14.4	1.8	B
Total		2,162	2,083	96.4%	11.7	1.1	B

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	55	56	101.8%	32.3	4.9	C
	Through	195	190	97.4%	50.6	3.7	D
	Right Turn	75	75	100.5%	24.6	6.9	C
	Subtotal	325	321	98.9%	42.0	4.4	D
SB	Left Turn	563	415	73.8%	231.3	16.7	F
	Through	170	118	69.2%	190.7	19.7	F
	Right Turn	1,065	789	74.1%	58.5	10.7	E
	Subtotal	1,798	1,322	73.5%	127.2	11.5	F
EB	Left Turn	385	382	99.1%	49.5	13.2	D
	Through	240	245	102.1%	32.3	11.8	C
	Right Turn	25	25	99.2%	20.7	9.2	C
	Subtotal	650	651	100.2%	41.8	12.4	D
WB	Left Turn	50	49	97.0%	81.4	21.0	F
	Through	325	355	109.1%	54.0	8.8	D
	Right Turn	257	253	98.3%	11.1	1.7	B
	Subtotal	632	656	103.8%	39.9	5.8	D
Total		3,405	2,951	86.7%	77.5	4.6	E

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	65	61	93.4%	21.5	4.2	C
	Through	30	29	95.7%	21.4	9.2	C
	Right Turn	127	115	90.2%	3.5	0.5	A
	Subtotal	222	204	91.9%	11.2	1.5	B
SB	Left Turn	60	56	93.0%	20.0	3.0	B
	Through	75	73	97.2%	24.5	4.8	C
	Right Turn	30	32	107.7%	4.5	0.6	A
	Subtotal	165	161	97.6%	18.9	2.5	B
EB	Left Turn	25	24	94.0%	14.4	3.9	B
	Through	250	258	103.2%	20.2	3.8	C
	Right Turn	100	104	104.2%	11.5	3.5	B
	Subtotal	375	386	102.8%	17.5	3.5	B
WB	Left Turn	340	336	98.7%	14.4	2.1	B
	Through	350	345	98.6%	9.0	1.2	A
	Right Turn	50	49	98.6%	4.8	2.6	A
	Subtotal	740	730	98.6%	11.3	1.4	B
Total		1,502	1,481	98.6%	13.8	1.8	B

Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	150	152	101.4%	8.6	4.0	A
	Through	389	393	100.9%	7.4	2.4	A
	Right Turn						
	Subtotal	539	545	101.0%	7.8	2.8	A
SB	Left Turn						
	Through	105	110	104.4%	4.1	1.7	A
	Right Turn	15	14	96.0%	1.8	1.5	A
	Subtotal	120	124	103.3%	3.9	1.6	A
EB	Left Turn	15	13	88.7%	12.4	7.1	B
	Through						
	Right Turn	146	140	95.8%	5.6	2.3	A
	Subtotal	161	153	95.2%	6.6	3.1	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		820	822	100.2%	6.9	2.3	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	19	95.5%	17.9	10.6	C
	Through						
	Right Turn						
	Subtotal	20	19	95.5%	17.9	10.6	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	273	263	96.4%	0.4	0.1	A
	Right Turn	20	21	103.0%	0.3	0.2	A
	Subtotal	293	284	96.8%	0.4	0.1	A
WB	Left Turn						
	Through	674	680	100.9%	2.2	0.1	A
	Right Turn						
	Subtotal	674	680	100.9%	2.2	0.1	A
Total		987	983	99.6%	2.0	0.2	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	408	411	100.6%	0.4	0.1	A
	Right Turn	30	32	107.3%	0.3	0.1	A
	Subtotal	438	443	101.1%	0.4	0.1	A
SB	Left Turn	85	87	102.4%	5.1	0.8	A
	Through	142	149	104.6%	0.3	0.1	A
	Right Turn						
	Subtotal	227	236	103.8%	2.2	0.6	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	30	31	102.3%	10.4	2.7	B
	Through						
	Right Turn	60	65	109.0%	7.1	1.1	A
	Subtotal	90	96	106.8%	8.3	1.3	A
Total		755	775	102.6%	1.9	0.3	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	20	20	102.0%	10.5	2.2	B
	Through						
	Right Turn	80	82	102.9%	7.8	1.4	A
	Subtotal	100	103	102.7%	8.2	1.3	A
EB	Left Turn	90	89	99.2%	6.9	1.3	A
	Through	207	212	102.5%	1.7	0.4	A
	Right Turn						
	Subtotal	297	301	101.5%	3.2	0.6	A
WB	Left Turn						
	Through	433	443	102.2%	0.5	0.1	A
	Right Turn	35	33	92.9%	0.4	0.2	A
	Subtotal	468	475	101.5%	0.5	0.1	A
Total		865	879	101.6%	2.4	0.4	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	649	655	100.8%	22.5	4.1	C
	Right Turn	45	51	112.4%	18.6	5.7	B
	Subtotal	694	705	101.6%	22.2	4.1	C
SB	Left Turn	252	250	99.3%	22.0	6.3	C
	Through	268	258	96.4%	3.1	1.0	A
	Right Turn						
	Subtotal	520	509	97.8%	12.4	3.8	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	25	24	95.2%	47.1	12.8	D
	Through						
	Right Turn	488	501	102.7%	31.7	8.6	C
	Subtotal	513	525	102.3%	32.3	8.5	C
Total		1,727	1,739	100.7%	22.4	4.4	C

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	858	845	98.5%	102.5	55.6	F
	Right Turn	731	701	95.9%	128.6	93.0	F
	Subtotal	1,589	1,546	97.3%	115.0	72.3	F
SB	Left Turn	275	208	75.5%	25.4	5.2	C
	Through	518	397	76.7%	7.3	1.1	A
	Right Turn						
	Subtotal	793	605	76.3%	13.6	2.3	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	468	474	101.2%	34.0	10.8	C
	Through						
	Right Turn	145	144	99.2%	18.3	4.6	B
	Subtotal	613	617	100.7%	30.7	8.9	C
Total		2,995	2,768	92.4%	75.5	41.0	E

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	50	47	93.8%	33.2	7.0	C
	Through	395	398	100.7%	50.8	4.1	D
	Right Turn	70	69	98.0%	28.5	7.8	C
	Subtotal	515	513	99.7%	46.2	3.4	D
SB	Left Turn	553	381	68.9%	221.5	12.2	F
	Through	365	255	69.9%	178.2	15.1	F
	Right Turn	445	317	71.1%	49.3	7.2	D
	Subtotal	1,363	953	69.9%	152.9	10.5	F
EB	Left Turn	765	514	67.1%	89.6	7.8	F
	Through	355	237	66.7%	66.7	13.6	E
	Right Turn	50	37	73.8%	49.2	16.4	D
	Subtotal	1,170	787	67.3%	81.3	9.6	F
WB	Left Turn	80	73	91.0%	72.2	20.5	E
	Through	310	325	104.9%	60.1	12.4	E
	Right Turn	743	665	89.5%	51.8	3.0	D
	Subtotal	1,133	1,063	93.8%	56.0	4.5	E
Total		4,181	3,317	79.3%	87.5	2.9	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	180	163	90.4%	37.4	10.1	D
	Through	90	89	98.3%	33.2	8.6	C
	Right Turn	546	491	90.0%	13.4	3.3	B
	Subtotal	816	743	91.0%	21.5	5.0	C
SB	Left Turn	100	99	98.9%	29.5	6.1	C
	Through	55	58	105.6%	43.4	8.4	D
	Right Turn	65	69	106.0%	5.5	1.1	A
	Subtotal	220	226	102.7%	25.6	4.3	C
EB	Left Turn	75	76	101.3%	16.3	2.5	B
	Through	635	640	100.7%	28.2	4.4	C
	Right Turn	150	154	102.3%	23.3	4.4	C
	Subtotal	860	869	101.0%	26.2	4.1	C
WB	Left Turn	253	250	98.8%	20.8	2.7	C
	Through	420	433	103.2%	12.3	1.5	B
	Right Turn	50	48	96.2%	7.4	2.0	A
	Subtotal	723	732	101.2%	14.9	1.5	B
Total		2,619	2,569	98.1%	21.5	2.8	C

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	105	110	104.8%	0.3	0.2	A
	Right Turn	20	20	100.0%	0.1	0.2	A
	Subtotal	125	130	104.0%	0.3	0.2	A
SB	Left Turn	50	49	97.6%	3.9	0.6	A
	Through	160	169	105.3%	1.2	0.4	A
	Right Turn						
	Subtotal	210	217	103.5%	1.8	0.3	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	20	21	104.0%	6.9	2.0	A
	Through						
	Right Turn	55	56	100.9%	5.1	0.4	A
	Subtotal	75	76	101.7%	5.5	0.5	A
Total		410	424	103.3%	2.1	0.3	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	25	23	92.0%	7.5	2.2	A
	Through						
	Right Turn	60	64	106.5%	5.6	0.7	A
	Subtotal	85	87	102.2%	6.1	0.7	A
EB	Left Turn	50	49	97.8%	4.5	0.9	A
	Through	185	195	105.6%	1.5	0.4	A
	Right Turn						
	Subtotal	235	244	103.9%	2.2	0.4	A
WB	Left Turn						
	Through	140	145	103.7%	0.9	0.2	A
	Right Turn	20	19	97.0%	1.3	0.6	A
	Subtotal	160	165	102.9%	1.0	0.2	A
Total		480	496	103.3%	2.5	0.3	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	185	188	101.4%	1.6	0.5	A
	Right Turn	15	17	110.7%	1.2	0.8	A
	Subtotal	200	204	102.1%	1.5	0.4	A
SB	Left Turn	220	227	103.3%	6.6	0.8	A
	Through	740	735	99.4%	4.3	0.4	A
	Right Turn						
	Subtotal	960	963	100.3%	4.8	0.4	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	10	11	106.0%	17.3	16.7	C
	Through						
	Right Turn	190	195	102.7%	4.8	0.4	A
	Subtotal	200	206	102.9%	5.5	0.9	A
Total		1,360	1,373	100.9%	4.4	0.3	A

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	275	273	99.4%	28.7	16.6	C
	Right Turn	200	195	97.7%	3.4	1.0	A
	Subtotal	475	469	98.7%	18.4	9.9	B
SB	Left Turn	125	102	81.6%	14.8	3.6	B
	Through	655	546	83.3%	10.3	1.2	B
	Right Turn						
	Subtotal	780	648	83.0%	11.0	1.2	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	700	707	101.0%	24.9	7.6	C
	Through						
	Right Turn	225	220	97.7%	14.7	9.5	B
	Subtotal	925	927	100.2%	22.5	7.9	C
Total		2,180	2,043	93.7%	18.0	5.9	B

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	95	98	102.8%	31.5	5.0	C
	Through	195	194	99.3%	52.6	5.4	D
	Right Turn	70	69	98.9%	24.0	9.8	C
	Subtotal	360	361	100.1%	41.3	4.6	D
SB	Left Turn	480	305	63.5%	80.6	11.6	F
	Through	170	111	65.1%	76.7	11.0	E
	Right Turn	1,565	1,004	64.1%	122.1	2.4	F
	Subtotal	2,215	1,419	64.1%	109.3	3.2	F
EB	Left Turn	580	545	94.0%	73.7	6.0	E
	Through	360	335	93.0%	50.4	7.6	D
	Right Turn	45	43	95.8%	39.4	8.5	D
	Subtotal	985	923	93.7%	63.6	6.0	E
WB	Left Turn	50	44	88.6%	105.3	10.8	F
	Through	425	412	96.8%	99.5	8.2	F
	Right Turn	215	192	89.3%	14.7	4.5	B
	Subtotal	690	648	93.9%	74.9	6.9	E
Total		4,250	3,350	78.8%	83.0	2.5	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	75	67	89.3%	29.5	5.9	C
	Through	30	31	102.0%	25.6	4.5	C
	Right Turn	120	111	92.2%	4.7	1.3	A
	Subtotal	225	208	92.5%	15.7	2.7	B
SB	Left Turn	65	65	99.4%	27.1	7.1	C
	Through	75	74	98.0%	29.9	3.3	C
	Right Turn	35	36	102.0%	4.8	1.3	A
	Subtotal	175	174	99.3%	23.6	3.9	C
EB	Left Turn	25	25	98.4%	13.1	4.4	B
	Through	340	342	100.6%	21.6	2.7	C
	Right Turn	110	112	101.4%	12.9	3.8	B
	Subtotal	475	478	100.7%	19.0	2.7	B
WB	Left Turn	345	352	102.1%	17.2	2.1	B
	Through	475	473	99.6%	9.5	1.4	A
	Right Turn	55	57	103.5%	5.9	2.7	A
	Subtotal	875	883	100.9%	12.2	1.7	B
Total		1,750	1,743	99.6%	15.7	1.7	B

MOVEMENT SUMMARY

Site: 101 [2040 BG AM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	5	100.0	0.219	16.5	LOS C	0.7	19.8	0.67	0.67	0.67	32.8
8	T1	133	3.0	0.219	10.0	LOS A	0.8	20.0	0.67	0.67	0.67	33.1
18b	R3	85	3.0	0.219	9.9	LOS A	0.8	20.0	0.68	0.68	0.68	31.5
Approach		223	5.3	0.219	10.1	LOS B	0.8	20.0	0.67	0.67	0.67	32.5
SouthEast: RoadName												
3bx	L3	48	3.0	0.175	4.7	LOS A	0.7	18.6	0.32	0.20	0.32	35.6
3ax	L1	21	100.0	0.175	7.6	LOS A	0.7	18.6	0.32	0.20	0.32	34.1
18ax	R1	319	3.0	0.175	4.6	LOS A	0.8	19.2	0.33	0.20	0.33	35.3
Approach		388	8.3	0.175	4.8	LOS A	0.8	19.2	0.33	0.20	0.33	35.3
North: Deer Valley Drive												
7u	U	27	3.0	0.877	23.2	LOS C	14.5	370.9	0.90	0.53	0.90	27.2
7a	L1	947	3.0	0.877	23.2	LOS C	14.5	370.9	0.90	0.53	0.90	26.5
4	T1	399	3.0	0.877	10.9	LOS B	14.5	370.9	0.46	0.26	0.46	32.3
14	R2	16	100.0	0.240	7.7	LOS A	1.1	28.2	0.25	0.13	0.25	34.2
Approach		1388	4.1	0.877	19.4	LOS C	14.5	370.9	0.77	0.44	0.77	28.0
West: Transit Center												
5	L2	5	100.0	0.234	24.0	LOS C	0.4	17.2	0.74	0.75	0.77	27.5
12a	R1	27	100.0	0.234	24.0	LOS C	0.4	17.2	0.74	0.75	0.77	27.2
12	R2	16	100.0	0.234	24.0	LOS C	0.4	17.2	0.74	0.75	0.77	26.6
Approach		48	100.0	0.234	24.0	LOS C	0.4	17.2	0.74	0.75	0.77	27.0
All Vehicles		2048	7.3	0.877	15.8	LOS C	14.5	370.9	0.67	0.43	0.67	29.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	370	385	104.1%	1.2	0.2	A
	Right Turn	30	32	107.7%	0.6	0.5	A
	Subtotal	400	418	104.4%	1.2	0.2	A
SB	Left Turn	85	88	103.6%	5.2	0.6	A
	Through	125	121	97.0%	1.8	0.5	A
	Right Turn						
	Subtotal	210	209	99.7%	3.2	0.4	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	30	30	98.3%	9.1	3.8	A
	Through						
	Right Turn	60	63	104.8%	7.3	2.1	A
	Subtotal	90	92	102.7%	8.1	2.2	A
Total		700	719	102.8%	2.6	0.5	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	20	21	104.5%	15.0	6.1	B
	Through						
	Right Turn	80	79	98.1%	8.5	1.7	A
	Subtotal	100	99	99.4%	10.1	3.0	B
EB	Left Turn	90	94	104.8%	6.4	1.0	A
	Through	190	186	97.7%	2.1	0.5	A
	Right Turn						
	Subtotal	280	280	100.0%	3.6	0.6	A
WB	Left Turn						
	Through	395	412	104.4%	1.3	0.2	A
	Right Turn	35	37	105.1%	1.4	0.3	A
	Subtotal	430	449	104.4%	1.3	0.2	A
Total		810	828	102.3%	3.0	0.4	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	645	641	99.4%	4.0	0.7	A
	Right Turn	45	48	107.6%	2.9	0.7	A
	Subtotal	690	690	100.0%	3.9	0.7	A
SB	Left Turn	235	232	98.6%	9.3	1.6	A
	Through	245	246	100.2%	1.8	0.4	A
	Right Turn						
	Subtotal	480	477	99.4%	5.4	1.0	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	25	27	106.4%	107.4	23.1	F
	Through						
	Right Turn	450	447	99.4%	111.6	22.5	F
	Subtotal	475	474	99.7%	111.5	22.3	F
Total		1,645	1,641	99.7%	35.5	4.8	E

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	785	771	98.2%	78.6	50.6	E
	Right Turn	820	786	95.9%	92.1	74.1	F
	Subtotal	1,605	1,558	97.0%	85.7	62.8	F
SB	Left Turn	290	189	65.2%	20.6	2.6	C
	Through	470	335	71.2%	8.6	2.2	A
	Right Turn						
	Subtotal	760	524	68.9%	12.8	2.1	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	530	526	99.2%	37.2	15.3	D
	Through						
	Right Turn	150	144	95.8%	20.4	8.7	C
	Subtotal	680	670	98.5%	33.5	14.1	C
Total		3,045	2,751	90.3%	59.2	37.7	E

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	70	71	101.3%	35.7	8.6	D
	Through	395	396	100.4%	54.8	5.5	D
	Right Turn	70	74	105.0%	41.2	9.5	D
	Subtotal	535	541	101.1%	50.6	5.6	D
SB	Left Turn	495	355	71.8%	216.3	16.0	F
	Through	365	259	71.1%	177.6	10.4	F
	Right Turn	720	524	72.7%	55.9	7.5	E
	Subtotal	1,580	1,138	72.0%	135.6	10.3	F
EB	Left Turn	1,190	527	44.3%	96.1	7.7	F
	Through	445	201	45.2%	75.2	18.2	E
	Right Turn	70	32	45.9%	64.1	23.0	E
	Subtotal	1,705	761	44.6%	89.7	9.7	F
WB	Left Turn	75	64	85.7%	122.1	17.2	F
	Through	405	396	97.7%	88.9	5.2	F
	Right Turn	640	546	85.3%	37.1	5.8	D
	Subtotal	1,120	1,006	89.8%	63.6	3.7	E
Total		4,940	3,445	69.7%	90.0	3.0	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	210	181	86.3%	51.9	15.5	D
	Through	90	85	94.4%	43.4	12.4	D
	Right Turn	565	508	89.8%	18.1	4.9	B
	Subtotal	865	774	89.5%	29.4	7.6	C
SB	Left Turn	105	103	97.7%	35.5	11.6	D
	Through	55	56	101.3%	47.5	6.9	D
	Right Turn	75	76	101.9%	6.4	1.6	A
	Subtotal	235	235	99.9%	28.6	4.7	C
EB	Left Turn	85	90	105.8%	18.2	2.9	B
	Through	865	882	101.9%	37.7	7.4	D
	Right Turn	175	172	98.2%	34.7	9.8	C
	Subtotal	1,125	1,144	101.6%	35.8	7.3	D
WB	Left Turn	255	252	98.6%	25.9	2.6	C
	Through	570	561	98.4%	12.7	1.8	B
	Right Turn	55	54	98.9%	8.3	2.7	A
	Subtotal	880	867	98.5%	16.4	1.3	B
Total		3,105	3,019	97.2%	28.1	3.0	C

MOVEMENT SUMMARY

Site: 101 [2040 BG PM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	1	100.0	0.402	15.4	LOS C	2.0	51.3	0.68	0.74	0.87	32.2
8	T1	475	3.0	0.402	10.6	LOS B	2.0	51.3	0.68	0.74	0.87	33.0
18b	R3	86	3.0	0.402	10.6	LOS B	2.0	51.3	0.68	0.74	0.87	31.4
Approach		562	3.2	0.402	10.6	LOS B	2.0	51.3	0.68	0.74	0.87	32.8
SouthEast: RoadName												
3bx	L3	51	3.0	0.681	19.2	LOS C	5.8	151.3	0.81	1.08	1.61	29.7
3ax	L1	15	100.0	0.681	24.1	LOS C	5.8	151.3	0.81	1.08	1.61	28.4
18ax	R1	864	3.0	0.681	19.1	LOS C	6.0	152.4	0.82	1.08	1.61	29.1
Approach		929	4.6	0.681	19.2	LOS C	6.0	152.4	0.82	1.08	1.61	29.1
North: Deer Valley Drive												
7u	U	247	3.0	0.695	12.5	LOS B	6.9	176.1	0.48	0.26	0.48	31.0
7a	L1	434	3.0	0.695	12.5	LOS B	6.9	176.1	0.48	0.26	0.48	30.1
4	T1	429	3.0	0.695	8.3	LOS A	6.9	176.1	0.34	0.17	0.34	33.1
14	R2	10	100.0	0.190	7.1	LOS A	0.8	21.5	0.22	0.10	0.22	34.5
Approach		1121	3.9	0.695	10.8	LOS B	6.9	176.1	0.43	0.22	0.43	31.4
West: Transit Center												
5	L2	5	100.0	0.098	16.0	LOS C	0.2	7.2	0.65	0.65	0.65	30.3
12a	R1	15	100.0	0.098	16.0	LOS C	0.2	7.2	0.65	0.65	0.65	29.9
12	R2	5	100.0	0.098	16.0	LOS C	0.2	7.2	0.65	0.65	0.65	29.2
Approach		25	100.0	0.098	16.0	LOS C	0.2	7.2	0.65	0.65	0.65	29.8
All Vehicles		2637	4.9	0.695	13.8	LOS B	6.9	176.1	0.62	0.64	0.94	30.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	119	119	100.3%	7.7	2.5	A
	Through	105	104	98.7%	6.0	2.9	A
	Right Turn						
	Subtotal	224	223	99.6%	6.8	2.4	A
SB	Left Turn						
	Through	238	236	99.2%	4.6	2.5	A
	Right Turn	15	17	114.0%	2.1	1.1	A
	Subtotal	253	253	100.0%	4.4	2.3	A
EB	Left Turn	15	15	100.0%	12.5	7.8	B
	Through						
	Right Turn	100	105	105.0%	5.9	1.6	A
	Subtotal	115	120	104.3%	6.8	2.4	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		592	596	100.7%	5.8	2.1	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	18	87.5%	21.2	23.2	C
	Through						
	Right Turn						
	Subtotal	20	18	87.5%	21.2	23.2	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	818	832	101.7%	4.4	0.4	A
	Right Turn	20	18	91.5%	3.2	0.7	A
	Subtotal	838	850	101.4%	4.3	0.4	A
WB	Left Turn						
	Through	223	225	100.9%	0.3	0.1	A
	Right Turn						
	Subtotal	223	225	100.9%	0.3	0.1	A
Total		1,081	1,092	101.1%	3.7	0.4	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	147	148	100.7%	1.1	0.2	A
	Right Turn	20	22	107.5%	0.5	0.4	A
	Subtotal	167	170	101.6%	1.0	0.2	A
SB	Left Turn	50	45	90.6%	3.9	0.7	A
	Through	248	257	103.4%	1.2	0.2	A
	Right Turn						
	Subtotal	298	302	101.3%	1.6	0.3	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	20	18	89.0%	6.6	1.9	A
	Through						
	Right Turn	55	55	100.0%	5.2	0.6	A
	Subtotal	75	73	97.1%	5.6	0.7	A
Total		540	544	100.8%	2.0	0.2	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	25	23	93.6%	9.6	2.6	A
	Through						
	Right Turn	60	63	105.0%	5.8	0.9	A
	Subtotal	85	86	101.6%	6.6	0.9	A
EB	Left Turn	50	51	101.4%	4.9	0.9	A
	Through	273	275	100.7%	1.9	0.4	A
	Right Turn						
	Subtotal	323	326	100.8%	2.4	0.4	A
WB	Left Turn						
	Through	182	184	101.0%	0.8	0.2	A
	Right Turn	20	19	97.0%	0.9	0.4	A
	Subtotal	202	203	100.6%	0.8	0.1	A
Total		610	615	100.9%	2.5	0.3	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	228	228	99.9%	1.7	0.2	A
	Right Turn	15	16	106.7%	0.8	1.2	A
	Subtotal	243	244	100.3%	1.7	0.2	A
SB	Left Turn	308	307	99.7%	7.8	0.8	A
	Through	828	841	101.6%	5.2	0.5	A
	Right Turn						
	Subtotal	1,136	1,148	101.1%	5.9	0.5	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	10	9	93.0%	29.1	15.8	D
	Through						
	Right Turn	232	236	101.9%	6.2	1.0	A
	Subtotal	242	246	101.5%	7.1	1.3	A
Total		1,621	1,637	101.0%	5.5	0.3	A

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	317	306	96.4%	30.5	26.4	C
	Right Turn	217	218	100.5%	4.3	0.9	A
	Subtotal	534	524	98.1%	19.7	16.9	B
SB	Left Turn	125	89	71.2%	14.7	1.9	B
	Through	743	556	74.8%	11.0	2.2	B
	Right Turn						
	Subtotal	868	645	74.3%	11.5	2.0	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	735	720	97.9%	29.2	8.2	C
	Through						
	Right Turn	225	215	95.6%	21.4	23.4	C
	Subtotal	960	935	97.4%	27.4	11.3	C
Total		2,362	2,103	89.0%	20.5	8.9	C

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	95	94	98.6%	32.2	5.8	C
	Through	195	198	101.4%	52.8	4.2	D
	Right Turn	75	75	99.9%	20.1	9.3	C
	Subtotal	365	366	100.4%	40.6	4.0	D
SB	Left Turn	568	377	66.3%	125.6	50.9	F
	Through	170	112	65.9%	99.0	33.1	F
	Right Turn	1,565	1,011	64.6%	115.3	5.8	F
	Subtotal	2,303	1,500	65.1%	117.2	12.8	F
EB	Left Turn	580	372	64.1%	89.2	7.2	F
	Through	360	232	64.5%	70.5	14.6	E
	Right Turn	45	31	68.2%	75.1	28.9	E
	Subtotal	985	635	64.4%	81.5	9.6	F
WB	Left Turn	50	47	93.8%	114.6	15.3	F
	Through	425	404	95.0%	93.8	8.4	F
	Right Turn	257	230	89.4%	14.9	4.1	B
	Subtotal	732	680	93.0%	69.3	4.9	E
Total		4,385	3,182	72.6%	90.7	6.5	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	75	64	85.6%	26.0	5.9	C
	Through	30	28	94.7%	27.1	7.7	C
	Right Turn	137	126	91.6%	3.3	0.8	A
	Subtotal	242	218	90.1%	13.5	2.5	B
SB	Left Turn	65	60	91.8%	26.8	6.1	C
	Through	75	73	97.9%	29.0	4.6	C
	Right Turn	35	35	99.4%	4.3	0.6	A
	Subtotal	175	168	95.9%	22.8	2.5	C
EB	Left Turn	25	25	98.4%	14.5	3.8	B
	Through	340	327	96.2%	22.6	2.1	C
	Right Turn	110	108	98.5%	11.5	2.6	B
	Subtotal	475	460	96.9%	19.6	1.5	B
WB	Left Turn	380	384	101.1%	19.1	2.3	B
	Through	475	466	98.1%	10.1	1.0	B
	Right Turn	55	53	96.5%	4.4	1.4	A
	Subtotal	910	904	99.3%	13.5	1.2	B
Total		1,802	1,750	97.1%	16.1	1.3	B

MOVEMENT SUMMARY

Site: 101 [2040 Plus Project AM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	5	100.0	0.280	20.5	LOS C	1.0	26.0	0.74	0.77	0.83	31.6
8	T1	133	3.0	0.280	12.8	LOS B	1.0	26.2	0.74	0.77	0.83	31.8
18b	R3	104	3.0	0.280	12.7	LOS B	1.0	26.2	0.74	0.77	0.83	30.3
Approach		243	5.1	0.280	12.9	LOS B	1.0	26.2	0.74	0.77	0.83	31.1
SouthEast: RoadName												
3bx	L3	57	3.0	0.216	5.1	LOS A	0.9	23.7	0.33	0.21	0.33	35.4
3ax	L1	26	100.0	0.216	8.0	LOS A	0.9	23.7	0.33	0.21	0.33	33.9
18ax	R1	396	3.0	0.216	5.0	LOS A	1.0	24.6	0.34	0.22	0.34	35.1
Approach		479	8.2	0.216	5.2	LOS A	1.0	24.6	0.34	0.22	0.34	35.1
North: Deer Valley Drive												
7u	U	27	3.0	0.993	42.4	LOS E	72.5	1855.3	1.00	1.23	2.16	22.2
7a	L1	1105	3.0	0.993	42.4	LOS E	72.5	1855.3	1.00	1.23	2.16	21.7
4	T1	399	3.0	0.993	14.2	LOS B	72.5	1855.3	0.45	0.41	0.73	31.0
14	R2	16	100.0	0.272	8.1	LOS A	1.2	32.9	0.29	0.16	0.29	34.0
Approach		1547	4.0	0.993	34.8	LOS D	72.5	1855.3	0.85	1.01	1.77	23.6
West: Transit Center												
5	L2	5	100.0	0.325	31.5	LOS D	0.6	26.4	0.78	0.92	1.19	25.3
12a	R1	36	100.0	0.325	31.5	LOS D	0.6	26.4	0.78	0.92	1.19	25.0
12	R2	16	100.0	0.325	31.5	LOS D	0.6	26.4	0.78	0.92	1.19	24.5
Approach		57	100.0	0.325	31.5	LOS D	0.6	26.4	0.78	0.92	1.19	24.9
All Vehicles		2326	7.3	0.993	26.3	LOS D	72.5	1855.3	0.73	0.82	1.36	26.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	150	142	94.6%	103.5	74.0	F
	Through	454	428	94.2%	109.5	82.3	F
	Right Turn						
	Subtotal	604	569	94.3%	108.3	80.5	F
SB	Left Turn						
	Through	145	143	98.8%	4.1	0.9	A
	Right Turn	15	14	94.7%	0.8	0.8	A
	Subtotal	160	158	98.4%	3.9	0.8	A
EB	Left Turn	15	15	96.7%	63.4	75.9	E
	Through						
	Right Turn	146	145	99.0%	18.1	18.7	B
	Subtotal	161	159	98.8%	21.9	21.4	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		925	886	95.8%	65.1	43.8	E

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	20	99.5%	32.4	14.7	D
	Through						
	Right Turn						
	Subtotal	20	20	99.5%	32.4	14.7	D
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	308	308	99.8%	1.7	0.4	A
	Right Turn	20	22	108.0%	2.2	1.5	A
	Subtotal	328	329	100.3%	1.8	0.4	A
WB	Left Turn						
	Through	774	773	99.9%	2.4	0.1	A
	Right Turn						
	Subtotal	774	773	99.9%	2.4	0.1	A
Total		1,122	1,122	100.0%	2.8	0.2	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	473	393	83.0%	246.9	41.6	F
	Right Turn	30	27	88.7%	262.9	63.4	F
	Subtotal	503	419	83.4%	247.7	42.1	F
SB	Left Turn	85	88	103.3%	4.4	0.6	A
	Through	182	185	101.5%	1.1	0.3	A
	Right Turn						
	Subtotal	267	273	102.1%	2.1	0.3	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	30	25	82.0%	330.2	150.8	F
	Through						
	Right Turn	60	47	78.8%	386.0	200.5	F
	Subtotal	90	72	79.9%	307.2	174.7	F
Total		860	764	88.8%	158.3	24.8	F

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	20	14	70.0%	414.6	262.7	F
	Through						
	Right Turn	80	58	72.4%	453.7	255.0	F
	Subtotal	100	72	71.9%	352.9	232.3	F
EB	Left Turn	90	87	96.3%	4.8	0.4	A
	Through	247	254	102.7%	1.9	0.5	A
	Right Turn						
	Subtotal	337	340	101.0%	2.6	0.6	A
WB	Left Turn						
	Through	498	389	78.2%	167.8	24.9	F
	Right Turn	35	27	76.6%	174.9	70.4	F
	Subtotal	533	416	78.1%	167.9	25.8	F
Total		970	828	85.4%	109.9	20.4	F

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	749	751	100.3%	3.4	0.4	A
	Right Turn	45	48	106.2%	3.1	1.0	A
	Subtotal	794	799	100.6%	3.3	0.4	A
SB	Left Turn	292	292	99.9%	17.6	6.7	C
	Through	303	309	101.9%	2.4	0.7	A
	Right Turn						
	Subtotal	595	600	100.9%	9.8	3.5	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	25	19	74.4%	200.9	106.5	F
	Through						
	Right Turn	553	385	69.7%	153.4	13.7	F
	Subtotal	578	404	69.9%	155.8	16.1	F
Total		1,967	1,803	91.7%	39.6	1.6	E

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	888	856	96.4%	141.2	68.7	F
	Right Turn	861	825	95.8%	166.7	81.5	F
	Subtotal	1,749	1,681	96.1%	153.7	74.4	F
SB	Left Turn	290	176	60.8%	22.9	4.6	C
	Through	528	358	67.8%	8.1	1.6	A
	Right Turn						
	Subtotal	818	534	65.3%	12.8	2.0	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	553	560	101.2%	36.3	9.3	D
	Through						
	Right Turn	150	149	99.5%	20.8	7.2	C
	Subtotal	703	709	100.9%	33.2	8.9	C
Total		3,270	2,925	89.4%	99.1	42.4	F

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	70	68	97.6%	31.6	5.8	C
	Through	395	399	101.0%	49.6	6.1	D
	Right Turn	70	70	100.3%	32.0	9.8	C
	Subtotal	535	537	100.4%	44.9	5.6	D
SB	Left Turn	553	358	64.7%	229.7	14.2	F
	Through	365	232	63.7%	188.3	19.1	F
	Right Turn	720	468	65.0%	53.4	6.9	D
	Subtotal	1,638	1,058	64.6%	146.3	9.3	F
EB	Left Turn	1,190	520	43.7%	86.8	7.6	F
	Through	445	198	44.5%	59.8	13.7	E
	Right Turn	70	30	43.1%	62.9	34.4	E
	Subtotal	1,705	748	43.9%	78.6	9.6	E
WB	Left Turn	80	66	82.6%	122.9	19.6	F
	Through	405	395	97.4%	94.8	4.5	F
	Right Turn	743	610	82.1%	44.3	4.4	D
	Subtotal	1,228	1,071	87.2%	67.5	2.6	E
Total		5,106	3,415	66.9%	90.1	2.7	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	210	179	85.0%	67.1	20.4	E
	Through	90	87	97.0%	50.2	13.4	D
	Right Turn	606	526	86.8%	25.1	10.8	C
	Subtotal	906	792	87.4%	37.9	13.3	D
SB	Left Turn	105	105	99.9%	42.0	9.0	D
	Through	55	54	97.6%	42.9	5.4	D
	Right Turn	75	78	103.3%	6.6	2.1	A
	Subtotal	235	236	100.5%	30.5	5.6	C
EB	Left Turn	85	85	100.0%	22.0	10.0	C
	Through	865	865	100.0%	42.5	15.4	D
	Right Turn	175	181	103.3%	42.0	19.3	D
	Subtotal	1,125	1,131	100.5%	40.9	15.7	D
WB	Left Turn	278	278	100.1%	26.4	3.3	C
	Through	570	580	101.7%	13.0	1.6	B
	Right Turn	55	53	96.2%	8.2	2.8	A
	Subtotal	903	911	100.9%	16.8	1.6	B
Total		3,169	3,069	96.9%	32.4	8.0	C

MOVEMENT SUMMARY

Site: 101 [2040 Plus Project PM]

Deer Valley Drive / Marsac Avenue Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Marsac Avenue												
3	L2	1	100.0	0.452	17.9	LOS C	2.4	61.0	0.72	0.82	1.03	31.3
8	T1	475	3.0	0.452	12.5	LOS B	2.4	61.1	0.72	0.82	1.03	32.1
18b	R3	98	3.0	0.452	12.5	LOS B	2.4	61.1	0.72	0.82	1.03	30.6
Approach		574	3.2	0.452	12.5	LOS B	2.4	61.1	0.72	0.82	1.03	31.8
SouthEast: RoadName												
3bx	L3	72	3.0	0.834	30.5	LOS D	10.8	286.1	0.90	1.42	2.46	25.8
3ax	L1	25	100.0	0.834	35.4	LOS E	10.8	286.1	0.90	1.42	2.46	24.9
18ax	R1	1041	3.0	0.834	30.1	LOS D	11.3	288.0	0.91	1.42	2.44	25.5
Approach		1138	5.2	0.834	30.3	LOS D	11.3	288.0	0.91	1.42	2.44	25.5
North: Deer Valley Drive												
7u	U	242	3.0	0.782	16.4	LOS C	8.9	228.5	0.70	0.44	0.70	29.4
7a	L1	532	3.0	0.782	16.4	LOS C	8.9	228.5	0.70	0.44	0.70	28.6
4	T1	429	3.0	0.782	9.8	LOS A	8.9	228.5	0.46	0.28	0.46	32.4
14	R2	10	100.0	0.214	7.6	LOS A	0.9	24.4	0.28	0.15	0.28	34.3
Approach		1214	3.8	0.782	14.0	LOS B	8.9	228.5	0.61	0.38	0.61	30.1
West: Transit Center												
5	L2	5	100.0	0.135	18.6	LOS C	0.2	9.8	0.69	0.69	0.69	29.4
12a	R1	21	100.0	0.135	18.6	LOS C	0.2	9.8	0.69	0.69	0.69	29.0
12	R2	5	100.0	0.135	18.6	LOS C	0.2	9.8	0.69	0.69	0.69	28.4
Approach		31	100.0	0.135	18.6	LOS C	0.2	9.8	0.69	0.69	0.69	29.0
All Vehicles		2958	5.2	0.834	20.0	LOS C	11.3	288.0	0.75	0.87	1.40	28.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	119	123	103.4%	6.2	1.9	A
	Through	105	106	100.8%	3.6	1.5	A
	Right Turn						
	Subtotal	224	229	102.1%	5.2	1.3	A
SB	Left Turn						
	Through	238	231	97.1%	3.6	1.4	A
	Right Turn	15	18	119.3%	2.2	2.2	A
	Subtotal	253	249	98.4%	3.5	1.4	A
EB	Left Turn	15	16	108.0%	12.2	4.2	B
	Through						
	Right Turn	100	102	101.6%	5.7	0.5	A
	Subtotal	115	118	102.4%	6.7	0.8	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		592	596	100.6%	4.8	1.1	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	18	90.5%	12.6	2.8	B
	Through						
	Right Turn						
	Subtotal	20	18	90.5%	12.6	2.8	B
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	818	827	101.1%	1.3	0.2	A
	Right Turn	20	23	114.0%	1.8	0.8	A
	Subtotal	838	850	101.4%	1.3	0.2	A
WB	Left Turn						
	Through	223	226	101.2%	1.0	0.2	A
	Right Turn						
	Subtotal	223	226	101.2%	1.0	0.2	A
Total		1,081	1,093	101.1%	1.4	0.2	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	147	147	99.8%	0.1	0.1	A
	Right Turn	20	22	111.0%	0.1	0.1	A
	Subtotal	167	169	101.1%	0.1	0.0	A
SB	Left Turn	50	45	89.8%	3.2	0.6	A
	Through	248	251	101.1%	0.3	0.1	A
	Right Turn						
	Subtotal	298	296	99.2%	0.9	0.2	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	20	18	90.0%	5.9	1.7	A
	Through						
	Right Turn	55	57	103.5%	5.2	0.4	A
	Subtotal	75	75	99.9%	5.3	0.3	A
Total		540	539	99.9%	1.3	0.1	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	25	25	101.6%	6.6	0.9	A
	Through						
	Right Turn	60	61	101.0%	5.8	0.8	A
	Subtotal	85	86	101.2%	6.0	0.7	A
EB	Left Turn	50	52	103.2%	4.7	1.1	A
	Through	273	269	98.7%	1.6	0.4	A
	Right Turn						
	Subtotal	323	321	99.4%	2.1	0.5	A
WB	Left Turn						
	Through	182	185	101.8%	0.2	0.0	A
	Right Turn	20	20	99.0%	0.0	0.1	A
	Subtotal	202	205	101.5%	0.2	0.0	A
Total		610	612	100.3%	2.0	0.4	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	228	225	98.8%	10.0	2.4	A
	Right Turn	15	16	104.0%	6.0	3.0	A
	Subtotal	243	241	99.1%	9.7	2.4	A
SB	Left Turn	308	306	99.4%	14.4	2.5	B
	Through	828	833	100.6%	11.1	1.8	B
	Right Turn						
	Subtotal	1,136	1,139	100.3%	12.0	1.7	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	10	11	107.0%	15.4	5.8	B
	Through						
	Right Turn	232	233	100.2%	5.7	1.7	A
	Subtotal	242	243	100.5%	6.2	1.6	A
Total		1,621	1,623	100.1%	10.8	1.2	B

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	317	313	98.6%	17.2	5.4	B
	Right Turn	217	217	100.1%	3.2	0.4	A
	Subtotal	534	530	99.2%	11.6	3.8	B
SB	Left Turn	125	94	75.5%	14.4	2.3	B
	Through	743	623	83.8%	10.1	1.0	B
	Right Turn						
	Subtotal	868	717	82.6%	10.6	0.9	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	735	726	98.8%	20.8	2.7	C
	Through						
	Right Turn	225	218	96.7%	9.5	4.0	A
	Subtotal	960	944	98.3%	18.2	3.1	B
Total		2,362	2,191	92.8%	14.1	2.1	B

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	95	89	93.6%	32.3	5.3	C
	Through	195	188	96.6%	50.7	3.4	D
	Right Turn	70	71	100.9%	31.2	9.3	C
	Subtotal	360	348	96.6%	42.9	2.2	D
SB	Left Turn	568	370	65.1%	94.9	24.4	F
	Through	170	108	63.4%	74.3	13.9	E
	Right Turn	1,565	1,007	64.4%	119.7	2.8	F
	Subtotal	2,303	1,484	64.5%	110.4	6.2	F
EB	Left Turn	580	531	91.6%	76.1	5.0	E
	Through	360	327	90.7%	49.9	6.3	D
	Right Turn	45	41	90.0%	38.3	10.8	D
	Subtotal	985	898	91.2%	65.0	5.0	E
WB	Left Turn	50	45	89.8%	112.6	22.3	F
	Through	425	411	96.7%	98.7	9.1	F
	Right Turn	257	230	89.6%	16.2	3.7	B
	Subtotal	732	686	93.7%	72.1	5.8	E
Total		4,380	3,417	78.0%	83.8	3.4	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	75	65	87.1%	23.3	7.3	C
	Through	30	29	96.3%	23.9	5.9	C
	Right Turn	137	128	93.6%	3.8	0.7	A
	Subtotal	242	223	91.9%	12.0	3.0	B
SB	Left Turn	65	66	100.9%	23.6	5.3	C
	Through	75	77	103.1%	24.8	2.2	C
	Right Turn	35	33	95.4%	5.9	1.6	A
	Subtotal	175	176	100.7%	21.1	2.7	C
EB	Left Turn	25	24	95.2%	12.8	3.0	B
	Through	340	341	100.4%	20.1	2.6	C
	Right Turn	110	107	96.9%	14.0	2.2	B
	Subtotal	475	472	99.3%	18.4	2.3	B
WB	Left Turn	380	376	98.9%	15.7	3.0	B
	Through	475	476	100.2%	9.3	1.6	A
	Right Turn	55	58	104.7%	5.6	1.3	A
	Subtotal	910	910	99.9%	11.8	1.7	B
Total		1,802	1,780	98.8%	14.5	1.8	B

Intersection 1 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	150	147	97.9%	10.5	5.9	B
	Through	454	461	101.5%	8.9	4.3	A
	Right Turn						
	Subtotal	604	608	100.6%	9.2	4.6	A
SB	Left Turn						
	Through	145	137	94.4%	4.3	2.3	A
	Right Turn	15	17	110.7%	2.6	1.9	A
	Subtotal	160	154	95.9%	4.1	2.0	A
EB	Left Turn	15	14	92.7%	16.2	16.8	B
	Through						
	Right Turn	146	140	95.9%	5.4	1.0	A
	Subtotal	161	154	95.6%	6.6	2.4	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		925	915	98.9%	7.8	3.3	A

Intersection 2 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	20	21	103.5%	19.8	5.3	C
	Through						
	Right Turn						
	Subtotal	20	21	103.5%	19.8	5.3	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	308	299	96.9%	0.3	0.1	A
	Right Turn	20	21	103.0%	0.5	0.4	A
	Subtotal	328	319	97.3%	0.3	0.1	A
WB	Left Turn						
	Through	774	776	100.3%	2.3	0.1	A
	Right Turn						
	Subtotal	774	776	100.3%	2.3	0.1	A
Total		1,122	1,116	99.5%	2.2	0.2	A

Intersection 3 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	473	482	101.9%	0.4	0.1	A
	Right Turn	30	33	108.7%	0.3	0.2	A
	Subtotal	503	514	102.3%	0.4	0.1	A
SB	Left Turn	85	84	98.8%	5.7	1.2	A
	Through	182	179	98.6%	0.4	0.1	A
	Right Turn						
	Subtotal	267	263	98.7%	2.0	0.4	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	30	29	98.0%	11.1	4.7	B
	Through						
	Right Turn	60	62	102.5%	8.0	1.1	A
	Subtotal	90	91	101.0%	8.9	2.2	A
Total		860	869	101.0%	1.8	0.3	A

Intersection 4 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	20	19	93.5%	12.2	4.1	B
	Through						
	Right Turn	80	82	103.0%	8.5	1.6	A
	Subtotal	100	101	101.1%	9.3	2.0	A
EB	Left Turn	90	92	101.8%	7.6	1.0	A
	Through	247	242	97.9%	2.0	0.4	A
	Right Turn						
	Subtotal	337	333	98.9%	3.7	0.6	A
WB	Left Turn						
	Through	498	509	102.1%	0.7	0.1	A
	Right Turn	35	35	99.7%	0.4	0.2	A
	Subtotal	533	543	102.0%	0.6	0.1	A
Total		970	978	100.8%	2.6	0.4	A

Intersection 5 **Deer Valley Drive West/Deer Valley Drive East** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	749	753	100.5%	35.6	21.9	D
	Right Turn	45	45	98.9%	31.7	20.5	C
	Subtotal	794	797	100.4%	35.3	21.8	D
SB	Left Turn	292	288	98.6%	27.6	5.1	C
	Through	303	294	97.0%	3.9	1.4	A
	Right Turn						
	Subtotal	595	582	97.8%	14.9	3.1	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	25	25	99.6%	99.7	33.8	F
	Through						
	Right Turn	553	546	98.7%	83.2	26.3	F
	Subtotal	578	571	98.8%	83.9	26.4	F
Total		1,967	1,950	99.1%	43.5	14.6	D

Intersection 7 **Deer Valley Drive/Bonanza Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	888	857	96.5%	173.4	65.6	F
	Right Turn	861	784	91.0%	217.3	89.3	F
	Subtotal	1,749	1,641	93.8%	193.6	75.6	F
SB	Left Turn	290	183	63.1%	23.4	3.1	C
	Through	528	358	67.7%	7.5	2.4	A
	Right Turn						
	Subtotal	818	541	66.1%	12.6	2.4	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	553	557	100.8%	39.2	6.3	D
	Through						
	Right Turn	150	151	100.6%	24.9	6.9	C
	Subtotal	703	708	100.7%	36.2	6.4	D
Total		3,270	2,890	88.4%	116.7	38.4	F

Intersection 8 **SR-224-Park Avenue/Empire Avenue-Deer Valley Drive** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	70	73	103.7%	33.5	7.8	C
	Through	395	392	99.1%	54.1	5.5	D
	Right Turn	70	71	100.7%	33.1	8.9	C
	Subtotal	535	535	99.9%	48.7	4.6	D
SB	Left Turn	553	366	66.1%	225.6	17.6	F
	Through	365	232	63.4%	181.8	18.5	F
	Right Turn	720	478	66.4%	57.0	10.1	E
	Subtotal	1,638	1,076	65.7%	141.5	14.3	F
EB	Left Turn	1,190	524	44.1%	87.2	6.3	F
	Through	445	197	44.2%	65.3	13.2	E
	Right Turn	70	32	46.1%	47.1	17.8	D
	Subtotal	1,705	753	44.2%	79.9	8.1	E
WB	Left Turn	75	67	89.5%	106.6	23.0	F
	Through	405	386	95.4%	90.3	12.2	F
	Right Turn	743	624	84.0%	46.2	7.2	D
	Subtotal	1,223	1,078	88.1%	65.8	4.6	E
Total		5,101	3,441	67.5%	89.4	3.9	F

Intersection 9 **Monitor Drive-Bonanza Drive/SR-248** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	210	173	82.2%	55.8	16.2	E
	Through	90	85	94.0%	40.8	10.5	D
	Right Turn	606	523	86.3%	20.9	4.4	C
	Subtotal	906	780	86.1%	30.8	6.0	C
SB	Left Turn	105	107	101.7%	38.9	3.5	D
	Through	55	58	105.5%	52.5	8.2	D
	Right Turn	75	73	97.9%	6.6	1.2	A
	Subtotal	235	238	101.4%	31.0	2.5	C
EB	Left Turn	85	83	98.1%	19.9	4.8	B
	Through	865	860	99.4%	42.9	11.9	D
	Right Turn	175	180	102.6%	39.0	13.7	D
	Subtotal	1,125	1,123	99.8%	40.6	11.5	D
WB	Left Turn	278	277	99.7%	26.7	3.5	C
	Through	570	569	99.9%	13.1	2.3	B
	Right Turn	55	55	99.5%	10.9	3.0	B
	Subtotal	903	901	99.8%	17.1	2.2	B
Total		3,169	3,043	96.0%	30.6	5.4	C

Intersection 1 **P2 Parking/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	71	70	98.5%	11.1	1.0	B
	Through						
	Right Turn						
	Subtotal	71	70	98.5%	11.1	1.0	B
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	144	127	88.2%	0.7	0.4	A
	Right Turn	674	608	90.2%	12.3	4.1	B
	Subtotal	818	735	89.8%	10.4	3.5	B
WB	Left Turn						
	Through	152	125	81.9%	0.4	0.1	A
	Right Turn						
	Subtotal	152	125	81.9%	0.4	0.1	A
Total		1,041	929	89.3%	9.2	2.9	A

Intersection 2 **P1 Parking/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	18	15	82.8%	8.5	0.8	A
	Through						
	Right Turn						
	Subtotal	18	15	82.8%	8.5	0.8	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	115	101	87.7%	0.1	0.1	A
	Right Turn	29	26	89.7%	0.6	0.2	A
	Subtotal	144	127	88.1%	0.2	0.1	A
WB	Left Turn						
	Through	134	109	81.6%	0.1	0.0	A
	Right Turn						
	Subtotal	134	109	81.6%	0.1	0.0	A
Total		296	251	84.8%	0.5	0.1	A

Intersection 3 **Mobility Hub Entrance/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	Total Delay (sec/veh) LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	100	86	85.8%	0.1	0.1	A
	Right Turn	15	13	86.7%	0.3	0.0	A
	Subtotal	115	99	85.9%	0.1	0.1	A
WB	Left Turn	15	15	100.0%	1.5	1.2	A
	Through	119	109	91.7%	0.2	0.1	A
	Right Turn						
	Subtotal	134	124	92.6%	0.4	0.3	A
Total		249	223	89.5%	0.3	0.2	A

Intersection 4 **Mobility Hub Exit/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	Total Delay (sec/veh) LOS
NB	Left Turn	15	16	105.3%	30.7	4.9	D
	Through						
	Right Turn	15	15	101.3%	33.4	14.6	D
	Subtotal	30	31	103.3%	31.6	6.1	D
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	100	86	85.9%	0.6	0.3	A
	Right Turn						
	Subtotal	100	86	85.9%	0.6	0.3	A
WB	Left Turn						
	Through	134	109	81.6%	0.1	0.0	A
	Right Turn						
	Subtotal	134	109	81.6%	0.1	0.0	A
Total		264	226	85.7%	5.8	1.2	A

Intersection 5 **Deer Valley Drive East/P2 Parking** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	209	176	84.0%	0.7	0.1	A
	Right Turn						
	Subtotal	209	176	84.0%	0.7	0.1	A
SB	Left Turn						
	Through	293	257	87.6%	1.4	0.2	A
	Right Turn	45	47	103.6%	0.5	0.1	A
	Subtotal	338	303	89.8%	1.2	0.2	A
EB	Left Turn	15	13	85.3%	8.6	3.5	A
	Through						
	Right Turn						
	Subtotal	15	13	85.3%	8.6	3.5	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		562	492	87.5%	1.2	0.1	A

Intersection 6 **Deer Valley Drive East/P3 Parking** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	209	176	84.1%	1.1	0.4	A
	Right Turn						
	Subtotal	209	176	84.1%	1.1	0.4	A
SB	Left Turn						
	Through	249	220	88.3%	5.4	7.9	A
	Right Turn	44	37	84.1%	1.0	1.1	A
	Subtotal	293	257	87.6%	4.8	6.8	A
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		502	433	86.2%	3.2	3.8	A

Intersection 7 **Deer Valley Drive East/P4 Parking** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	50	41	81.8%	1.5	1.9	A
	Through	150	119	79.0%	1.6	0.8	A
	Right Turn						
	Subtotal	200	159	79.7%	1.6	0.6	A
SB	Left Turn						
	Through	200	176	88.2%	17.3	18.4	C
	Right Turn	49	44	89.4%	3.5	7.1	A
	Subtotal	249	220	88.4%	14.3	16.2	B
EB	Left Turn	59	57	97.1%	3.4	0.9	A
	Through						
	Right Turn						
	Subtotal	59	57	97.1%	3.4	0.9	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		508	437	86.0%	8.0	8.0	A

Intersection 8 **Deer Valley Drive East/Pick-up/Drop-off** **Uncontrolled**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	200	160	79.8%	1.0	0.3	A
	Right Turn						
	Subtotal	200	160	79.8%	1.0	0.3	A
SB	Left Turn						
	Through	200	177	88.3%	43.8	18.9	E
	Right Turn						
	Subtotal	200	177	88.3%	43.8	18.9	E
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		400	336	84.0%	22.9	9.5	C

Intersection 101 **Deer Valley Drive West/Deer Valley Drive East** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through	500	66	5	60	75	268	24	229	309	NO
	Right Turn	500	69	5	63	78	272	24	233	313	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	7	2	4	12	112	21	85	161	MAX
	Through	500	18	4	13	24	297	64	203	413	NO
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	500	3	1	1	6	29	11	15	43	NO
	Through										
	Right Turn	100	6	1	4	8	125	18	91	143	MAX
	Second Right										

Intersection 102 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn	500	1	0	1	1	30	2	28	35	NO
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through	500	63	81	4	273	274	176	107	721	NO
	Right Turn	500	89	99	10	338	353	178	189	803	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	100	0	0	0	0	19	22	0	55	NO
	Right Turn										
	Second Right										

Intersection 103 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn										
	Through	300	6	1	5	8	74	10	63	95	NO
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through	150	13	3	9	19	169	34	131	239	MAX
	Right Turn	150	13	3	10	20	172	34	135	243	MAX
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	75	1	0	1	2	86	20	47	117	MAX
	Through										
	Right Turn	75	2	0	1	2	86	20	47	116	MAX
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										

Intersection 104 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	0	28	8	18	44	NO
	Through										
	Right Turn	500	0	0	0	0	28	8	18	44	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	0	0	0	0	0	NO
	Through	500	0	0	0	0	0	0	0	0	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	500	0	0	0	0	0	0	0	0	NO
	Right Turn	500	1	0	1	2	31	0	31	32	NO
	Second Right										

Intersection 105 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through	500	0	0	0	0	0	0	0	0	NO
	Right Turn	500	0	0	0	0	0	0	0	0	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	0	4	5	0	14	NO
	Through	500	1	1	0	2	0	0	0	0	NO
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	0	27	6	19	32	NO
	Through										
	Right Turn	500	4	0	4	5	78	4	72	81	NO
	Second Right										

Intersection 1 **P2 Parking/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn Second Left Left Turn Through Right Turn Second Right	150	10	1	8	11	119	1	117	120	NO
SB	U Turn Second Left Left Turn Through Right Turn Second Right										
EB	U Turn Second Left Left Turn Through Right Turn Second Right	125 125	52 42	22 20	24 17	94 80	229 208	6 6	217 197	235 215	MAX MAX
WB	U Turn Second Left Left Turn Through Right Turn Second Right	75	0	0	0	0	0	0	0	0	NO

Intersection 2 **P1 Parking/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn Second Left Left Turn Through Right Turn Second Right	150	5	0	4	5	78	2	76	82	NO
SB	U Turn Second Left Left Turn Through Right Turn Second Right										
EB	U Turn Second Left Left Turn Through Right Turn Second Right	125 125	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	NO NO
WB	U Turn Second Left Left Turn Through Right Turn Second Right	75	0	0	0	0	0	0	0	0	NO

Intersection 3 **Mobility Hub Entrance/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through	75	0	0	0	0	0	0	0	0	NO
	Right Turn	75	0	0	0	0	0	0	0	0	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	15	13	0	35	NO
	Through	100	1	0	1	1	105	0	105	105	MAX
	Right Turn										
	Second Right										

Intersection 4 **Mobility Hub Exit/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn	100	14	5	10	28	146	20	120	180	MAX
	Through										
	Right Turn	100	14	5	9	28	146	20	119	179	MAX
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through	100	0	0	0	0	4	6	0	18	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	75	2	1	2	3	108	10	94	127	MAX
	Right Turn										
	Second Right										

Intersection 5 **Deer Valley Drive East/P2 Parking** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn										
	Through	160	0	0	0	0	0	0	0	0	NO
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through	300	0	0	0	1	4	13	0	42	NO
	Right Turn	50	0	0	0	0	0	0	0	0	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	1	0	1	2	72	12	55	90	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Deer Valley Drive East/P3 Parking** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through	200	1	0	0	2	38	18	23	81	NO
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through	160	2	3	0	10	54	33	13	131	NO
	Right Turn	50	0	0	0	0	0	0	0	0	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										

Intersection 7 **Deer Valley Drive East/P4 Parking** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	0	0	0	0	0	NO
	Through	100	0	0	0	0	0	0	0	0	NO
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through	75	1	2	0	6	14	18	0	39	NO
	Right Turn	75	1	2	0	6	14	18	0	39	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	2	0	1	3	82	1	80	84	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										

Intersection 8 **Deer Valley Drive East/Pick-up/Drop-off** **Uncontrolled**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn Second Left Left Turn Through Right Turn Second Right	150	0	0	0	0	5	7	0	21	NO
SB	U Turn Second Left Left Turn Through Right Turn Second Right	150	13	9	0	31	92	42	21	162	NO
EB	U Turn Second Left Left Turn Through Right Turn Second Right										
WB	U Turn Second Left Left Turn Through Right Turn Second Right										

Intersection 1 **P2 Parking/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	596	226	37.8%	11.2	0.7	B
	Through						
	Right Turn						
	Subtotal	596	226	37.8%	11.2	0.7	B
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	175	155	88.8%	2.5	0.8	A
	Right Turn	133	122	91.7%	0.5	0.1	A
	Subtotal	308	277	90.1%	1.6	0.5	A
WB	Left Turn						
	Through	178	143	80.1%	1.6	0.3	A
	Right Turn						
	Subtotal	178	143	80.1%	1.6	0.3	A
Total		1,082	645	59.6%	5.0	0.5	A

Intersection 2 **P1 Parking/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	13	12	91.5%	9.8	1.9	A
	Through						
	Right Turn						
	Subtotal	13	12	91.5%	9.8	1.9	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	161	142	88.4%	0.2	0.1	A
	Right Turn	14	13	92.1%	0.6	0.3	A
	Subtotal	175	155	88.7%	0.2	0.1	A
WB	Left Turn						
	Through	165	131	79.3%	0.6	0.1	A
	Right Turn						
	Subtotal	165	131	79.3%	0.6	0.1	A
Total		353	298	84.4%	0.8	0.1	A

Intersection 3 **Mobility Hub Entrance/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	146	127	87.0%	0.6	1.4	A
	Right Turn	15	13	86.7%	2.5	7.0	A
	Subtotal	161	140	87.0%	0.8	1.9	A
WB	Left Turn	15	15	96.7%	1.2	1.1	A
	Through	150	131	87.3%	0.6	0.3	A
	Right Turn						
	Subtotal	165	145	88.1%	0.7	0.5	A
Total		326	285	87.5%	0.7	0.9	A

Intersection 4 **Mobility Hub Exit/Doe Pass Road** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	15	15	102.0%	36.6	12.8	E
	Through						
	Right Turn	15	15	100.0%	22.7	7.8	C
	Subtotal	30	30	101.0%	30.6	8.6	D
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	161	127	78.8%	1.3	0.9	A
	Right Turn						
	Subtotal	161	127	78.8%	1.3	0.9	A
WB	Left Turn						
	Through	165	131	79.4%	0.8	0.3	A
	Right Turn						
	Subtotal	165	131	79.4%	0.8	0.3	A
Total		356	288	81.0%	5.1	1.6	A

Intersection 5 **Deer Valley Drive East/P2 Parking** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	465	418	89.9%	0.8	0.3	A
	Right Turn						
	Subtotal	465	418	89.9%	0.8	0.3	A
SB	Left Turn						
	Through	196	167	85.4%	1.0	0.2	A
	Right Turn	95	88	92.4%	0.7	0.2	A
	Subtotal	291	255	87.7%	0.9	0.1	A
EB	Left Turn	139	137	98.8%	5.9	0.8	A
	Through						
	Right Turn						
	Subtotal	139	137	98.8%	5.9	0.8	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		895	810	90.5%	1.7	0.3	A

Intersection 6 **Deer Valley Drive East/P3 Parking** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	326	280	85.8%	1.0	0.3	A
	Right Turn						
	Subtotal	326	280	85.8%	1.0	0.3	A
SB	Left Turn						
	Through	196	167	85.4%	1.2	0.6	A
	Right Turn						
	Subtotal	196	167	85.4%	1.2	0.6	A
EB	Left Turn	139	138	99.5%	8.6	1.0	A
	Through						
	Right Turn						
	Subtotal	139	138	99.5%	8.6	1.0	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		661	585	88.5%	2.9	0.3	A

Intersection 7 **Deer Valley Drive East/P4 Parking** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	200	157	78.7%	2.8	1.0	A
	Right Turn						
	Subtotal	200	157	78.7%	2.8	1.0	A
SB	Left Turn						
	Through	150	128	85.1%	16.2	15.7	C
	Right Turn	46	39	84.3%	0.6	0.6	A
	Subtotal	196	167	84.9%	12.4	11.7	B
EB	Left Turn	126	122	97.1%	11.4	12.2	B
	Through						
	Right Turn	50	48	96.8%	23.3	26.6	C
	Subtotal	176	171	97.0%	14.3	15.4	B
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		572	495	86.5%	10.0	8.9	B

Intersection 8 **Deer Valley Drive East/Pick-up/Drop-off** **Uncontrolled**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	200	157	78.7%	2.7	0.8	A
	Right Turn						
	Subtotal	200	157	78.7%	2.7	0.8	A
SB	Left Turn						
	Through	200	174	87.1%	44.2	35.6	E
	Right Turn						
	Subtotal	200	174	87.1%	44.2	35.6	E
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		400	332	82.9%	24.7	18.8	C

Intersection 101 **Deer Valley Drive West/Deer Valley Drive East** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn										
	Through	500	214	31	154	264	519	49	397	581	MAX
	Right Turn	500	218	31	158	268	523	49	401	586	MAX
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	100	22	4	18	29	168	16	140	186	MAX
	Through	500	6	1	5	8	125	22	105	169	NO
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	500	8	1	5	10	52	9	38	66	NO
	Through										
	Right Turn	100	33	3	29	39	326	48	240	405	MAX
	Second Right										

Intersection 102 **Deer Valley Drive West/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn	150	1	0	0	1	30	2	28	34	NO
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through	500	0	0	0	0	0	0	0	0	NO
	Right Turn	500	0	0	0	0	3	5	0	13	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	100	0	0	0	0	54	28	27	103	NO
	Right Turn										
	Second Right										

Intersection 103 **Deer Valley Drive East/Doe Pass Road** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn	300	29	2	25	34	249	29	210	297	NO
	Through	300	28	2	25	33	248	29	209	296	NO
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through	150	7	1	5	9	117	26	69	153	NO
	Right Turn	150	7	1	6	10	120	26	73	156	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	75	2	0	1	3	109	9	90	115	MAX
	Through										
	Right Turn	75	2	0	2	3	109	9	90	115	MAX
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										

Intersection 104 **Solamere Drive/Deer Valley Drive East** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	1	34	5	27	44	NO
	Through										
	Right Turn	500	0	0	0	1	34	5	27	44	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	0	0	0	0	0	NO
	Through	500	0	0	0	0	0	0	0	0	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	500	0	0	0	0	1	4	0	12	NO
	Right Turn	500	1	0	1	1	31	0	31	31	NO
	Second Right										

Intersection 105 **Deer Valley Drive East/Queen Esther Drive** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn										
	Through	500	0	0	0	0	0	0	0	0	NO
	Right Turn	500	0	0	0	0	0	0	0	0	NO
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	0	19	12	0	42	NO
	Through	500	0	0	0	1	0	0	0	0	NO
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	500	0	0	0	1	27	6	20	38	NO
	Through										
	Right Turn	500	6	0	5	7	78	4	72	86	NO
	Second Right										

Intersection 1 **P2 Parking/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn Second Left Left Turn Through Right Turn Second Right	150	68	0	68	69	121	1	119	122	NO
SB	U Turn Second Left Left Turn Through Right Turn Second Right										
EB	U Turn Second Left Left Turn Through Right Turn Second Right	125 125	1 0	0 0	1 0	1 1	59 38	13 12	34 14	73 52	NO NO
WB	U Turn Second Left Left Turn Through Right Turn Second Right	75	0	0	0	0	0	0	0	0	NO

Intersection 2 **P1 Parking/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn Second Left Left Turn Through Right Turn Second Right	150	4	0	4	4	78	2	76	82	NO
SB	U Turn Second Left Left Turn Through Right Turn Second Right										
EB	U Turn Second Left Left Turn Through Right Turn Second Right	125 125	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	NO NO
WB	U Turn Second Left Left Turn Through Right Turn Second Right	75	0	0	0	0	0	0	0	0	NO

Intersection 3 **Mobility Hub Entrance/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through	75	0	0	0	2	4	13	0	43	NO
	Right Turn	75	0	0	0	2	4	13	0	43	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn	100	0	0	0	1	16	17	0	39	NO
	Through	100	1	0	0	1	102	11	70	106	MAX
	Right Turn										
	Second Right										

Intersection 4 **Mobility Hub Exit/Doe Pass Road** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn	100	18	8	8	36	141	15	119	160	MAX
	Through										
	Right Turn	100	18	8	8	36	140	15	119	160	MAX
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through	100	0	0	0	0	14	12	0	36	NO
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through	75	1	0	0	2	103	17	59	116	MAX
	Right Turn										
	Second Right										

Intersection 5 **Deer Valley Drive East/P2 Parking** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft) Average	Std. Dev.	Minimum	Maximum	Maximum Queue (ft) Average	Std. Dev.	Minimum	Maximum	Exceeds Storage?
NB	U Turn										
	Second Left										
	Left Turn										
	Through	160	0	0	0	0	1	2	0	7	NO
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through	300	0	0	0	0	0	0	0	0	NO
	Right Turn	50	0	0	0	0	0	0	0	0	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	37	1	36	39	117	1	116	118	NO
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										

Intersection 6 **Deer Valley Drive East/P3 Parking** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn Second Left Left Turn Through Right Turn Second Right	200	1	0	1	2	68	23	29	105	NO
SB	U Turn Second Left Left Turn Through Right Turn Second Right	160	0	0	0	1	28	11	12	53	NO
EB	U Turn Second Left Left Turn Through Right Turn Second Right	150	35	1	33	37	101	1	101	103	NO
WB	U Turn Second Left Left Turn Through Right Turn Second Right										

Intersection 7 **Deer Valley Drive East/P4 Parking** **Side-street Stop**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn										
	Through	100	3	1	2	5	116	14	82	139	MAX
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through	75	0	1	0	2	0	0	0	0	NO
	Right Turn	75	0	1	0	2	0	0	0	0	NO
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn	150	19	17	6	66	126	26	84	181	NO
	Through										
	Right Turn	150	22	15	8	63	146	18	111	170	NO
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										

Intersection 8 **Deer Valley Drive East/Pick-up/Drop-off** **Uncontrolled**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn Second Left Left Turn Through Right Turn Second Right	150	39	38	4	124	201	49	99	270	MAX
SB	U Turn Second Left Left Turn Through Right Turn Second Right	150	10	10	1	36	90	36	52	170	NO
EB	U Turn Second Left Left Turn Through Right Turn Second Right										
WB	U Turn Second Left Left Turn Through Right Turn Second Right										

Intersection 0 **//** **Signal**

Direction	Movement	Storage (ft)	Average Queue (ft)				Maximum Queue (ft)				Exceeds Storage?
			Average	Std. Dev.	Minimum	Maximum	Average	Std. Dev.	Minimum	Maximum	
NB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
SE	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
EB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										
WB	U Turn										
	Second Left										
	Left Turn										
	Through										
	Right Turn										
	Second Right										

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Project: UT20-2245
Description: Snow Park Transportation Study

Park City Minimum Parking Rates Based *Nonshared* Parking Demand Summary

Land Use	Project Data		Weekday					Weekend					Weekday			Weekend		
	Quantity	Unit	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj 6 AM	Peak Mo Adj December	Estimated Parking Demand	Peak Hr Adj 6 AM	Peak Mo Adj December	Estimated Parking Demand
Retail																		
Retail (<400 ksf)	25,866	sf GLA	3.22	100%	100%	3.22	ksf GLA	3.20	100%	100%	3.20	ksf GLA	100%	100%	84	100%	100%	83
Employee			0.78	100%	100%	0.78		0.80	100%	100%	0.80		100%	100%	21	100%	100%	21
Food and Beverage																		
Entertainment and Institutions																		
Convention Center	30,879	sf GLA	5.73	100%	100%	5.73	ksf GLA	5.73	100%	100%	5.73	ksf GLA	100%	100%	177	100%	100%	177
Employee			0.52	100%	100%	0.52		0.52	100%	100%	0.52		100%	100%	17	100%	100%	17
Hotel and Residential																		
Hotel-Business		keys	0.87	100%	100%	0.87	key	0.87	100%	100%	0.87	key	100%	100%	-	100%	100%	-
Hotel-Leisure	193	keys	0.87	100%	100%	0.87	key	0.87	100%	100%	0.87	key	100%	100%	168	100%	100%	168
Hotel Employees	193	keys	0.13	100%	100%	0.13	key	0.13	100%	100%	0.13	key	100%	100%	25	100%	100%	25
Restaurant/Lounge	5,451	sf GLA	4.24	100%	100%	4.24	ksf GLA	4.26	100%	100%	4.26	ksf GLA	100%	100%	24	100%	100%	24
Meeting/Banquet (0 to 20 sq ft/key)		sf GLA	0.00	100%	100%	0.00	ksf GLA	0.00	100%	100%	0.00	ksf GLA	100%	100%	-	100%	100%	-
Meeting/Banquet (20 to 50 sq ft/key)		sf GLA	0.00	100%	100%	0.00	ksf GLA	0.00	100%	100%	0.00	ksf GLA	100%	100%	-	100%	100%	-
Meeting/Banquet (50 to 100 sq ft/key)		sf GLA	0.00	100%	100%	0.00	ksf GLA	0.00	100%	100%	0.00	ksf GLA	100%	100%	-	100%	100%	-
Convention (100 to 200 sq ft/key)		sf GLA	0.00	100%	100%	0.00	ksf GLA	5.50	100%	100%	5.50	ksf GLA	100%	100%	-	100%	100%	-
Convention (> 200 sq ft/key)		sf GLA	4.58	100%	100%	4.58	ksf GLA	4.58	100%	100%	4.58	ksf GLA	100%	100%	-	100%	100%	-
Restaurant/Meeting Employees	5,451	sf GLA	0.76	100%	100%	0.76	ksf GLA	0.74	100%	100%	0.74	ksf GLA	100%	100%	5	100%	100%	5
Residential, Urban																0%		
Studio Efficiency		units	0.00	100%	100%	0.00	unit	0.00	100%	100%	0.00	unit	100%	100%	-	100%	100%	-
1 Bedroom	11	units	0.00	100%	100%	0.00	unit	0.00	100%	100%	0.00	unit	100%	100%	-	100%	100%	-
2 Bedrooms		units	0.00	100%	100%	0.00	unit	0.00	100%	100%	0.00	unit	100%	100%	-	100%	100%	-
3+ Bedrooms	132	units	0.00	100%	100%	0.00	unit	0.00	100%	100%	0.00	unit	100%	100%	-	100%	100%	-
Reserved	100%	res spaces	1.44	100%	100%	1.44	unit	1.41	100%	100%	1.41	unit	100%	100%	206	100%	100%	201
Visitor	143	units	0.06	100%	100%	0.06	unit	0.08	100%	100%	0.08	unit	100%	100%	9	100%	100%	13
Office																		
Additional Land Uses																		
Ski Resort (as observed during data collection)	1	count	1,500	100%	100%	1,500	count	1,500	100%	100%	1,500	count	100%	100%	1,500	100%	100%	1,500
Employee			0.00	100%	100%	0.00		0.00	100%	100%	0.00		100%	100%	-	100%	100%	-
													Customer/Visitor		1,962	Customer		1,965
													Employee/Resident		68	Employee/Resident		68
													Reserved		206	Reserved		201
													Total		2,236	Total		2,234

Attachment A:

Trip Generation Memorandum

FEHR PEERS

MEMORANDUM

Date: January 21, 2022

To: Alexandra Ananth, Park City Planning

From: Fehr & Peers

Subject: Revised Trip Generation Estimates for the Snow Park Village Traffic Impact Study

UT20-2245

This memorandum presents revised trip generation estimates for the proposed Snow Park Village project at Deer Valley Resort. The original trip generation estimates included in the Traffic Impact Study (April 2021) were reviewed by Park City staff and Wall Consulting Group (WCG), a third-party reviewer retained by the City. Park City staff, through WCG, requested revisions to the trip generation estimates with supporting documentation and/or rationale. Revisions presented in this memorandum are based on an updated land use plan, a local precedent study, comparable trip resort analysis, published trip generation rates from the Institute of Transportation Engineers, and mode shift assumptions derived from the Summit County travel demand model. This memorandum is an intermediate deliverable while additional details regarding site access and circulation are being resolved.

In summary, revised trip generation estimates for the Snow Park Village project show 2,276 daily trips, 162 trips in the Saturday AM peak-hour, and 204 trips in the Saturday PM peak hour. When compared with estimates included in the April 2021 traffic impact study, this results in an 60 percent increase in estimated daily trips, 80 percent increase in the Saturday AM peak-hour trips, and a 148 percent increase in the Saturday PM peak-hour trips.

Trip Generation Estimates

Trip generation estimates focus on Saturday AM and PM peak-hour operations due to the nature of how a ski resort operates: skier traffic is consistently highest on Saturdays. Updated trip generation estimates for Snow Park Village are presented below in **Table 1**.

Key Revisions

Trip generation estimates in this memorandum incorporate several key revisions, including:

- Updated resort hotel trip generation rates taken from the 2018 Canyons Village Transportation Master Plan
- Assumed mode shift away from private car taken from MXD, the Environmental Protection Agency's approved trip generation method, and the Summit County travel demand model for all proposed land uses
- Reductions in trip generation rates due to the implementation of paid parking for day skiers and most proposed land uses
- Reliance on trip internalization derived from MXD and the Summit County travel demand model for most proposed land uses
- The rate of internal capture assumed due to complementary land uses derived from analysis at a peer resort (Palisades at Tahoe, formerly known as Squaw Valley)

This combination of updates represents a much more conservative foundation for subsequent traffic analysis. Each of these changes and justification for each are described in greater detail below.

Resort Hotel Trip Generation Rates

The third-party reviewers (WCG) noted that the resort hotel trip generation rates appeared unreasonably low based on observed trip generation rates recorded during the development of the 2018 Canyons Village Transportation Master Plan. While there are a handful of key factors that might result in trip generation rates closer to those in the original Snow Park Village Traffic Impact Study, including proximity to the interstate and other complementary land uses, estimates in this memorandum used the local rates recorded at the Canyons.

Assumed Mode Shift

To avoid double-counting potential reductions, as was the case in the original Snow Park Village traffic impact study, the trip generation estimates in this memorandum rely solely on mode shift derived from the MXD methodology and underlying assumptions from the regional travel demand model. These reductions, which are shown in the columns titled "% Walk/Bike" and "% Transit," are applied to all proposed land uses. This results in a more conservative and defensible analysis,

however, it does not account for the planned changes to transit service in Park City and the world-class transit facility proposed as part of the Snow Park Village project. Potential mode shift to transit for those traveling to and from Deer Valley may be higher following such improvements.

Reduction in Vehicle Trips due to Implementation of Paid Parking

Charging for parking is a reliable method by which to influence mode choice, and Deer Valley intends to implement paid parking as part of the Snow Park Village proposal. The original Snow Park Village traffic study assumed a reduction in vehicle trips of nearly 18% and applied it to all land uses. This reduction was developed based on approximately 50 studies on the effects of paid parking from across the United States. WCG noted this reduction seemed high based on assumptions about typical Deer Valley clientele and their assumed willingness to pay for fees in addition to lift tickets, meal, lessons, and/or equipment rentals.

Reductions in trip generation due to the implementation of paid parking at Deer Valley have been scaled back to present a more conservative estimate of how parking pricing will affect trip generation. While we agree that some Deer Valley clientele may be much less sensitive to additional costs associated with a day's skiing as presented in the traffic study, almost 45% of existing trips to and from Deer Valley start and end at points along the Wasatch Front, residents of which are more likely to alter their behavior based on willingness to pay (note the massive increase in peripheral on-street parking at a greater distance to ski lifts at Deer Valley's IKON pass-sharing resort, Solitude). Lastly, reductions in trip generation due to the implementation of parking pricing are applied only to the resort hotel-, shopping center-, and recreational community center-generated trips, as proposed residential uses at the site are unlikely to require that residents pay for parking on a daily basis.

Trip Internalization Derived from MXD

A fundamental element of the Snow Park Village proposal is to provide amenities, services, and entertainment options that complement each other and the ski resort itself. This means that peak-hour trips that might occur without complementary land uses are either delayed (so that they do not occur during the peak hours) or do not require a vehicle trip due to proximity of different uses. Trip internalization rates, presented in **Table 1** under the column heading "% Internal Capture" are applied only to the residential-, resort hotel-, and recreational community center-generated trips, and present a more conservative rate of internalization than presented in the original Snow Park Village traffic impact study.

Trip Internalization Derived from Squaw Valley

While the residential, hotel, and community center uses are expected to be destinations unto themselves that will generate a measurable number of peak-hour vehicle trips, the food service and retail uses (shown in **Table 1** as "Shopping enter") are expected to almost exclusively serve guests already at Deer Valley rather than guests traveling to Deer Valley explicitly for those services.

To support this assumption, trip generation estimates for the shopping center uses in this memorandum rely on trip internalization estimates derived from an origin-destination survey conducted at the Squaw Valley, California resort in 2011. Surveys conducted showed that 95-97% of customers at dining and retail uses in a similar context (ski resort base village) were already at the village for other purposes, and did not travel solely for the dining/retail use. Reductions based on the data from Squaw Valley are presented under the column heading "% Resort Int. Capt." And are applied only to the shopping center uses. We assume that employees for these uses will almost exclusively arrive and depart during off-peak periods, resulting in lower reductions for daily trips generated by the shopping center uses.

Conclusion

Trip generation estimates prepared for the original Snow Park Village traffic impact study were based on an older land use plan, double-counted some reductions in vehicle trips, applied others to incorrect land uses, and over-emphasized the potential reductions in vehicle trips derived from paid parking. However, this memorandum relies on several assumptions that are fundamental to the Snow Park Village proposal:

- Complementary land uses will reduce peak-hour vehicle trips by providing alternatives to driving
- Employees will typically arrive and depart during off-peak periods
- Charging for parking is one of the most powerful tools available for influencing mode choice, relying on an appropriate pricing structure being implemented

The trip generation estimates presented in this memorandum represent a conservative set of analyses that will inform a fully revised traffic impact study for the Snow Park Village Project.

Attachment B:
Snow Park Village Parking Management Plan

FEHR PEERS

MEMORANDUM

Date: January 21, 2022

To: Rich Wagner, Deer Valley

From: Fehr & Peers

Subject: Snow Park Village MPD Parking Response

UT20-2245

The current parking experience at Deer Valley follows a well-established surface parking scenario, typical of ski resorts. There are five large surface lots that hold approximately 1,340 cars. There is also a long-standing agreement with Park City to allow for overflow parking on parts of Deer Valley Drive on peak visitation days.

Parking Layout

The proposed redevelopment of the base area (Snow Park) will change the parking experience in three significant ways:

- Parking will be in structures;
- There will be a paid parking program, with variable pricing based on season and demand;
- There will be a robust parking management program that includes parking and availability information to visitors as they approach the development, parking garages, and once within, and will rely heavily on Deer Valley's high-quality customer service provided by trained staff.

For phase 1, the proposed parking garages will be on four levels. Each level will have a prescribed function as outlined below. Parking loading will be managed level by level, utilizing guest services staff and electronic messaging. To help ensure that the majority of traffic coming to Snow Park does not conflict with transit on Doe Pass Road, signing, striping, and prominent wayfinding will direct the majority of personal vehicles to use Deer Valley Drive East to enter the garages, while transit and shuttle vehicles will be directed to Deer Valley Drive West and/or Doe Pass Road. The primary entrances to the garages, for levels P2, P3, and P4, will be from Deer Valley Drive East. There are no internal garage connections between levels allowing each level of the garage to serve

as an independent programmable parking resource. The layout and uses are shown in the attached *Parking Allocation* figure.

P1 Parking – this level will be divided between two user groups with a total of 406 stalls. Hotel/condo uses will have 202 stalls. The other 204 stalls may be utilized by valet parking and/or credentialed access users. Access to this area is from Doe Pass near the intersection Deer Valley Drive west. Due to its restricted uses, demand for spaces on P1 is expected to be relatively low, with hotel patrons parking vehicles for multiple days at once. In addition, it is unlikely that all hotel patrons will need to park at times that coincide with peak day skier arrival, further reducing the expected number of vehicles on Doe Pass Road during peak hours.

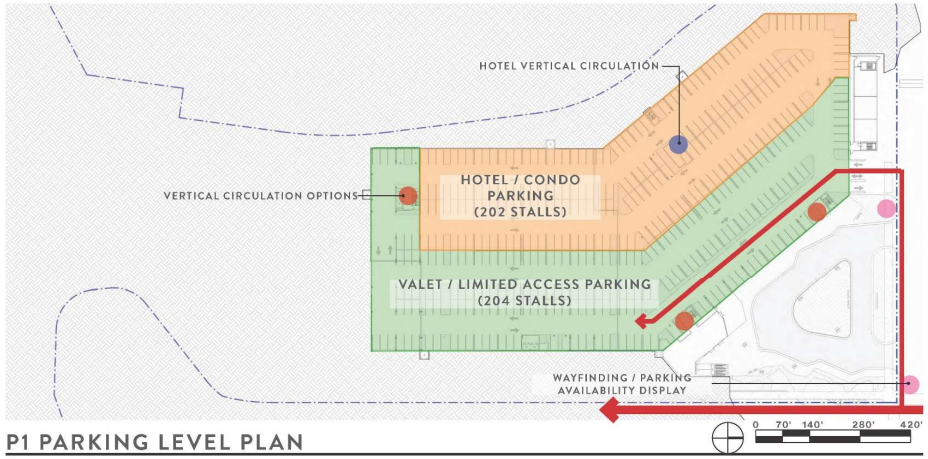
P2 Parking – this level will have 368 stalls. It will primarily be used for winter day skiers and summer resort guests during those seasons, transient parking and special event parking during event periods. Access is provided on Deer Valley Drive East, however an auxiliary exit is provided accessing Doe Pass to add flexibility in managing egress and minimize potential congestion during periods of peak parking demand and special events.

P3 Parking – the primary users for this level will be similar to P2; day users, transient parking, special event parking as well as space dedicated to ski school drop-off/pick-up. There are 375 stalls for these uses. There are an additional 80 stalls for hotel/condo use, for a total of 455 stalls. Access is primarily to/from Deer Valley Drive, however an auxiliary entrance/exit is provided accessing Deer Valley Drive West/Royal Street intersection, which will be dedicated to hotel and condominium uses.

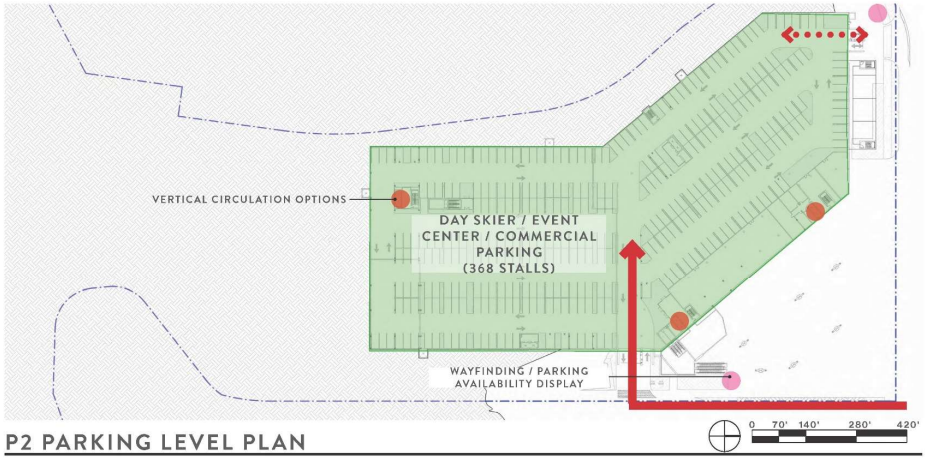
P4 Parking – there are 90 stalls for ski school, valet, and short-term parking on this level. "Short-term" means for visitor parking less than 30 minutes for such purposes as pick-up/drop-off, kiss 'n' ride, and so on. The balance of the parking on this level is 41 for hotel/condo uses.

North Parcel – The north parcel will consist of an additional 450 stalls. These will initially remain surface parking. This area will eventually consist of two levels, NP1 and NP2, and the total parking stalls will remain at 450. The north parcel will have the same level of parking management, including paid parking, and parking management technology, communications via multiple platforms, and high-touch customer service.

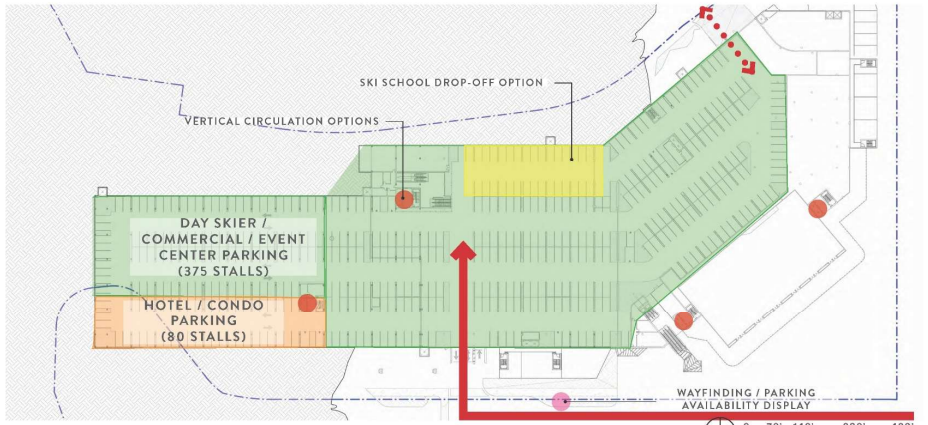
Structured parking layouts ae shown below in **Figure 1**.



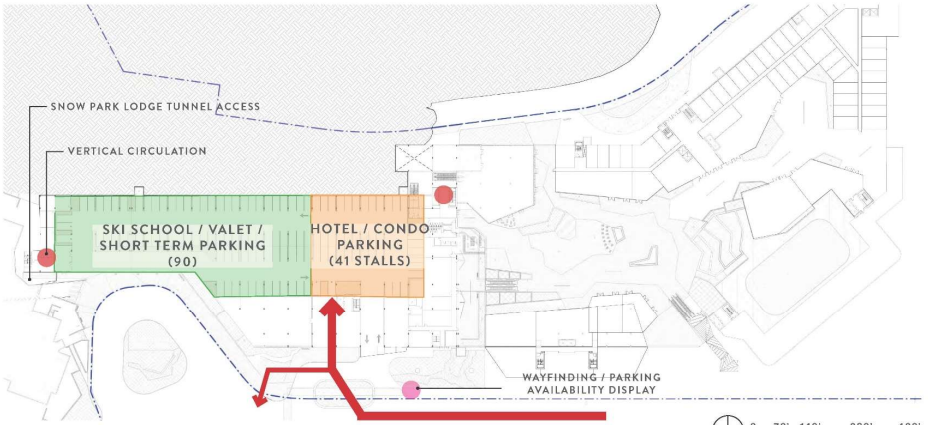
P1 PARKING LEVEL PLAN



P2 PARKING LEVEL PLAN



P3 PARKING LEVEL PLAN



P4 PARKING LEVEL PLAN

Source: IBI Group

Figure 1

Parking Level Layouts

Paid Parking

A paid parking scheme will be implemented in a manner that ensures transactions for inbound traffic do not cause delays which could impact adjacent streets. The price will vary by season and is an important tool to encourage all visitors to travel by modes other than driving alone. Signs and parking processes will be designed to maximize efficiency and minimize congestion.

Recognizing that the much of the typical clientele of Deer Valley are less price-sensitive than many potential parkers, pricing may be adjusted following initial implementation to ensure that the preferred reductions in peak parking demand are achieved.

Communications

To achieve the smoothest parking operations possible, parking information will be made available on Deer Valley's website and integrated into any platforms through which ski passes might be purchased. Additionally, hotel and condominium uses will be expected to incentivize arrival options that do not require parking on-site.

Parking availability by level will be integrated into the design of Snow Park. Parking information will be part of the dynamic wayfinding program included in the development. This information will be available to the visitor via electronic messaging at key decision points along Deer Valley Drive East, including at the newly-configured "Y" intersection of Deer Valley Drives East and West, and as the driver approaches the garage entrances. Parking communication may also be integrated into various phone and web apps operated by the resort, city, county, etc.

Once inside the parking levels, parking availability and general internal wayfinding will be incorporated into the design to improve access rates, guiding visitors to available spaces. The exact technologies and vendors have not been determined at this point, but it will employ the most appropriate and technologically advanced parking and transportation systems to ensure an efficient and user-friendly parking experience with minimal impact on adjacent streets.

Attachment C:
Snow Park Village Transportation Demand Management Plan

Snow Park Village

TDM Plan

Prepared for:
Deer Valley

October 2022

UT20-2245

FEHR PEERS

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1. Project Description and TDM Approach

This Transportation Demand Management (TDM) Plan describes the proposed approach to reduce the total number of vehicle trips at the Snow Park Village project at Deer Valley Resort in Park City, Utah. The Park City Municipal Corporation (PCMC), through its planning department review of the project application, has requested that a standalone TDM Plan be developed for the project. In addition, the City adopted a TDM Plan in 2016 that specifies how the City seeks to reduce vehicle trips through TDM strategies. A reduction in vehicle trips will reduce local pollution, greenhouse gas emissions and improve the quality of life for all who live and work in Park City by reducing vehicle traffic.

This document describes how Deer Valley intends to reduce the number of single-occupancy vehicle (SOV) trips to Snow Park Village using a variety of TDM options. This plan is based heavily on PCMC's existing TDM plan and strategies therein, adopted in August 2016.

Additionally, this plan formalizes TDM offerings that are already provided by Deer Valley to guests and employees for some time. In addition to describing existing offerings, this plan includes new TDM measures to help reduce SOV trips and monitor program effectiveness through ongoing collaboration with PCMC staff and other major destinations in Park City.

1.1 Project Description

Snow Park Village proposes to repurpose the existing surface parking lots of the Snow Park base area at Deer Valley Resort for a mixed-use development including hotel, residential, retail and events center uses. Snow Park Village is approximately 1.5 miles from downtown Park City and approximately 2.5 miles from the Pak City Mountain Resort base area. Snow Park Village's location in Park City is shown in **Figure 1**.

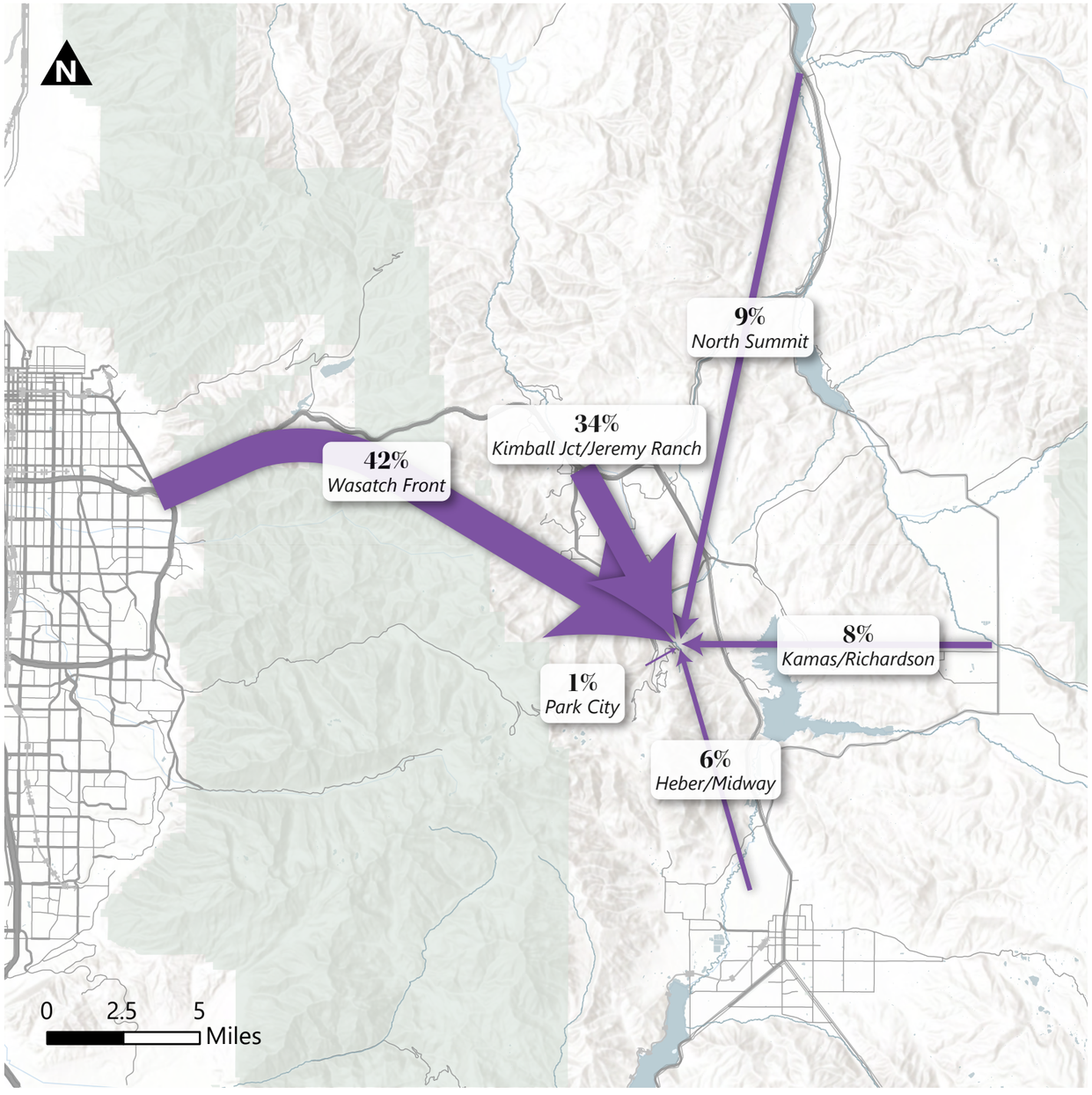
The bulk of activity at the Snow Park Village is expected to take place during normal business hours. Parking at the site will be priced and include standard and ADA-compliant spaces. Central to the success of the project, a multimodal mobility hub is proposed on Deer Valley Drive, will facilitate non-automobile connections to key destinations in Park City, elsewhere in Summit County, and the Salt Lake Valley. Full build-out of Snow Park Village will include a network of dedicated pedestrian paths within the project, as well as connections to area cycling and pedestrian facilities.



Project Location

1.2 TDM Approach

The success of a TDM program relies on creating a system to manage travel demand that shifts the behavior of those traveling to and from Snow Park from using single occupant vehicles to options other than driving alone. The following sections describe the menu of transportation choices that will make it easier and more convenient to use modes other than driving alone. Through an evaluation of anonymized mobile phone data, provided by a third-party vendor, this Plan has been assembled with the knowledge that a substantial portion of those traveling to and from Deer Valley do so from points around the region. The origins and destinations of Deer Valley's guests and employees are dispersed throughout northern Utah, with the largest share traveling to and from points along the Wasatch Front, as shown in **Figure 2.** This variety of travel patters requires a robust and diverse program to reduce drive alone trips. A diverse and flexible TDM program will allow Deer Valley to match the transportation services to the travel needs of all traveling to and from Snow Park Village. The TDM Plan described in the following sections supports the project's commitment to managing vehicle traffic to and from Snow Park Village while maintaining flexibility in response to changing travel behavior and regional transportation investments.



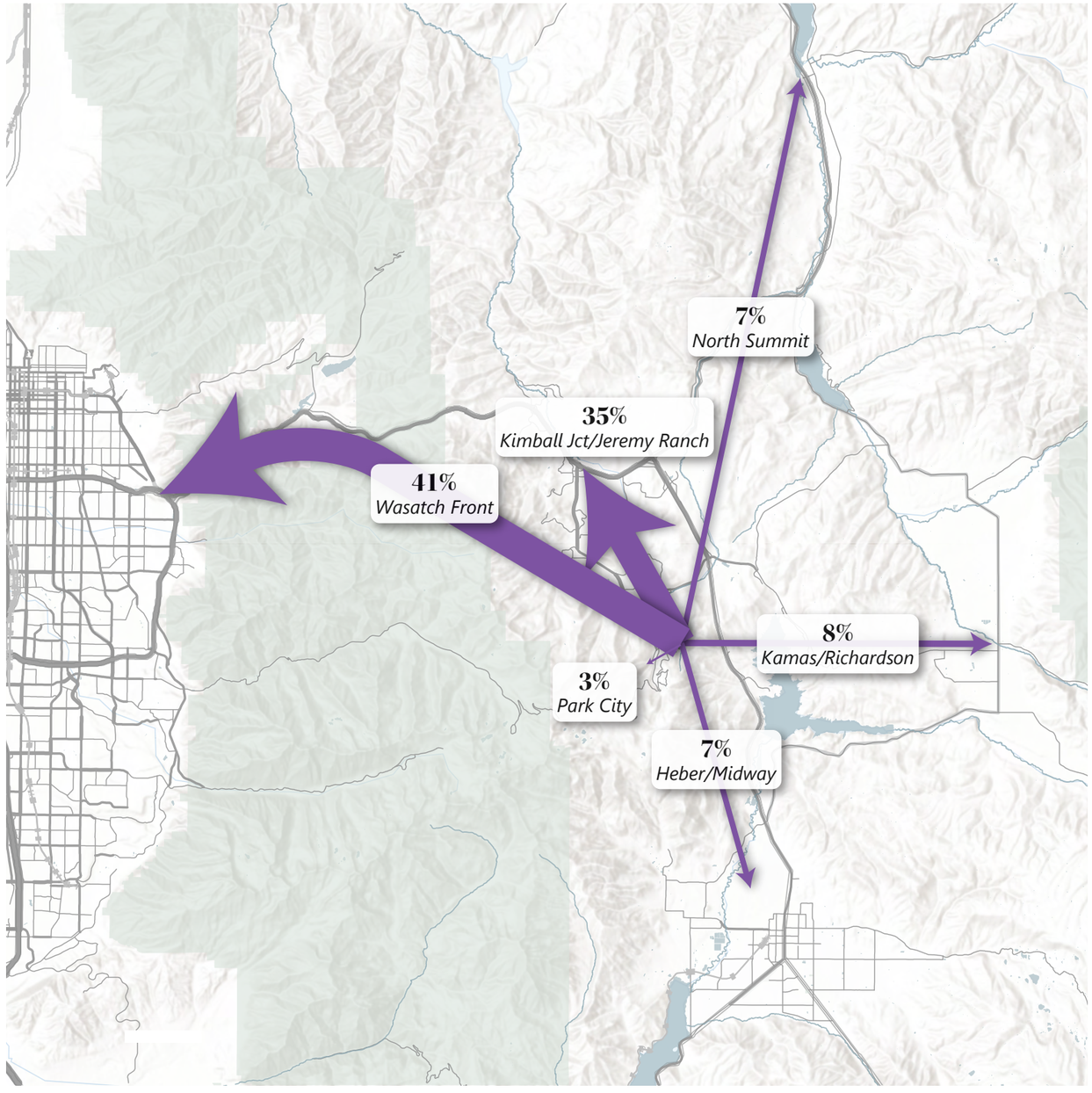


Figure 2

Deer Valley Origin-Destination AM Incoming – PM Outgoing Trends

2. Snow Park Village TDM Program

2.1 Primary TDM measures

Deer Valley will provide a variety of opportunities for those traveling to and from Snow Park to choose travel modes that are not driving alone. These are categorized as incentivizing using transit, riding a bicycle, sharing a car, or some combination thereof. A summary of the Primary TDM measures can be found in **Table 1**.

Table 1: Primary TDM Measures

Measure	Status	Description
Transit pass subsidy	Existing Program	Subsidized UTA transit passes for Deer Valley employees living in Salt Lake Valley and Utah Valley
Bicycle Amenities and Perks	New Program	Bicycle repair tools and dedicated bicycle parking at key locations
Education and Promotion	Existing Program	Educational and promotional events to encourage travelers to use by modes other than driving alone.
Parking Management	New Program	Efficient, constrained, and priced parking to discourage drive-alone trips
Employee Transit	Existing Program	Operate designated employee transit to facilitate efficient employee commutes through an appealing alternative
Real-Time Messaging	New Program	Communicate traffic conditions in real time to travelers
Appoint a TDM Coordinator	New Program	Identify a staff member to oversee the TDM program

Source: Deer Valley

More detailed descriptions of the Primary TDM Measures can be found below.

To incentivize traveling by bicycle, Deer Valley plans to implement the bicycling-based TDM strategies listed in **Table 2**.

Table 2: Bicycling and Walking TDM Strategies

Biking/Walking Strategies	Status	Target User Groups	Description
Implement Bicycle Parking at Key Destinations and Transit Stops	New Program	Day Guests Commuters Employees	Snow Park Village's site plan includes the provision of safe and convenient locations to park bicycles, encouraging their use and removing barriers such as frustration in finding secure parking and bicycle theft. This includes the proposed mobility hub on Deer Valley Drive, a key connecting point for trips to and from Snow Park.
Expand e-Bike Share	New Program	Day Guests Commuters Employees	Snow Park Village will include a relocated PCMC e-bike-share station with direct access to the mobility hub. This will expand coverage of the existing e-bike share service in Park City and enable more non-automobile trips for people traveling to and from Snow Park Village.
Install Bicycle Repair Stand	New Program	Day Guests Commuters Employees	Deer Valley will install two do-it-yourself bicycle repair stands: one at the proposed mobility hub on Deer Valley Drive, and another seasonal stand at the Silver Lake Express base. The repair stands may include an air pump and basic tools to make minor bicycle repairs. Additional repair options include full-service bike shop(s) during the summer season and on-mountain assistance from Bike Patrol.

Source: Deer Valley

To incentivize traveling by modes other than driving alone, Deer Valley plans to implement the parking-based TDM strategies listed in **Table 3.**

Table 3: Demand Management TDM Strategies

Demand Management Strategies	Status	Target User Groups	Description
Implement Real-Time Information Messaging	New Program	Day Skiers Employees	Deer Valley plans to work with the City, UDOT, and Summit County to deploy VMS boards and other messaging systems at key locations, including approach roads, parking areas, and ski lift bases, to inform those traveling to and from Snow Park Village of current traffic and parking conditions. Additionally, Deer Valley will use its website, social media platforms, and mobile application to notify guests in real time. This will enable

			visitors to make more informed transportation choices allowing for better demand management.
Provide Additional Evening Recreation Opportunities/Amenities:	New Program	Day Skiers Employees Overnight Guests	Providing additional activities, food and beverage options, and/or entertainment for visitors after the ski day has ended is an essential element of the Snow Park Village proposal. Providing opportunities for day skiers to linger at the base area longer will better distribute peak-hour outbound vehicle trips.

Source: Deer Valley

To incentivize traveling by modes other than driving alone, Deer Valley plans to implement the parking-based TDM strategies listed in **Table 4.**

Table 4: Policy-Based TDM Strategies

Policy Strategies	Status	Target User Groups	Description
Provide Employee Housing	Existing Program	Employees	Deer Valley has and will continue to provide subsidized housing for its employees in and around Park City. The locations of this housing allow for shorter commutes with access to public transit or shuttles, and increases the likelihood of ridesharing among employees. Any active, full-time staff member is eligible for employee housing. Employee housing is distributed throughout Park City and Heber City in areas that are served by public and employee transit.
Provide Employee Amenities	Existing Program	Employees	Deer Valley employees are able use various on-site amenities that will be provided at Snow Park Village, including employee dining rooms that offer discounted meals, and employee locker rooms that allow for storage of personal items to reduce the need for trips off-site during shift changes and during mealtimes.
Childcare	Existing Program	Day Skiers Employees Overnight Guests	Parents managing childcare are among those who are most attached to private vehicles for personal travel, and providing on-site childcare in the form of both nursery/day care programs, and on-mountain options for active childcare will reduce the need for parents to make multiple local trips and enable their use of non-SOV modes by collocating services. Deer Valley employees are eligible for discounted childcare programs.

Source: Deer Valley

To incentivize traveling by modes other than driving alone, Deer Valley plans to implement the parking-based TDM strategies listed in **Table 5.**

Table 5: Parking TDM Strategies

Parking Strategies	Status	Target User Groups	Description
Implementation of Efficient Parking Schemes	Existing Program	Day Skiers Employees	Deer Valley will continue to assess the need for remote or satellite parking areas for days on which parking demand requires additional capacity beyond that which is provided at the base area itself. The only designated off-site parking location that has been used by Deer Valley is Treasure Mountain Middle School, and is used solely on days of particularly high demand.
Implement Parking Demand Management	New Program	Day Skiers Employees	A fundamental aspect of Snow Park Village's proposed parking system is to charge for parking, a direct incentive to those traveling to Deer Valley to more efficiently utilize vehicle capacity, specifically for day skiers. The cost of parking at Snow Park Village will be set at a level that will incentivize higher-occupancy vehicles when traveling to and from Snow Park, a direct disincentive to drive alone. While many Deer Valley patrons are likely less price sensitive to additional charges such as paid parking, available data suggests that a substantial portion of day traffic originates from points along the Wasatch Front, from where patrons are expected to be more price sensitive to parking fees, increasing their likelihood of mode shift.

Source: Deer Valley

To incentivize traveling by modes other than driving alone, Deer Valley plans to implement the programmatic TDM strategies listed in **Table 6.**

Table 6: Program-Based TDM Strategies

Programmatic Strategies	Status	Target User Groups	Description
Establish a TDM Coordinator	New Program	Employees Day Skiers Overnight Guests	Deer Valley will identify an existing staff member to act as the TDM coordinator, a central source for TDM program information. The TDM coordinator may fill many roles, but may be responsible for: real-time messaging of traffic conditions to travelers, distribute information on new or adapted TDM program offerings, and evaluate the effectiveness and use of TDM program elements. The TDM coordinator will also continue to explore new TDM options that best serve Deer Valley guests and/or employees. The TDM coordinator will be the main point of contact with the City and will facilitate communication in connection with the proposed monitoring program. This coordinator will meet with Park City staff on a regular basis to discuss on-going adjustments to the TDM measures.
Provide Tailored Information and Promotions	Existing Program	Employees Day Skiers Overnight Guests	Deer Valley will develop and distribute targeted messaging and promotions to ensure that different user groups are aware of the TDM measures most relevant to their needs. These promotions may include gamification to further incentivize non-drive alone trips. Deer Valley supports a mobile app used by employees that allows them to organize rides sharing, and identify transit, bike and walking options for their commute. The application also offers incentives to Deer Valley employees for not driving alone to work. Deer Valley will encourage all ski area-serving businesses (namely hotels and other lodging) to further emphasize their transportation offerings that allow guests to rely less on private vehicles and more on shared mobility.

Source: Deer Valley

To incentivize traveling to and from Snow Park by transit, Deer Valley plans to implement the transit-based TDM strategies listed in **Table 7.**

Table 7: Transit TDM Strategies

Transit Strategies	Status	Target User Groups	Description
Provide Employee Transit	Existing Program	Employees	To complement public transit service and supplement in certain areas where public transit may not yet exist, Deer Valley will continue to provide private employee transit to and from Snow Park to allow Deer Valley employees to travel longer distances (such as from Heber City) on employee shuttles. Deer Valley contracts through Le Bus to operate full-sized coach buses for their employees. In a typical (non-Covid) year, Deer Valley provides three AM peak-period and two PM peak-period shuttle runs to serve their employees living in River's Edge and Heber City.
Subsidize Transit Passes for Inter-City Commuters	Existing Program	Employees	Deer Valley provides subsidized Utah Transit Authority passes to employees commuting to Deer Valley from Utah and Salt Lake Valleys.

Source: Deer Valley

3. Program Monitoring and Adaptation

Deer Valley has a strong interest in making trips to and from Snow Park Village as efficient and enjoyable as possible. Doing so is not only a way to improve the overall experience for all who visit Snow Park, but it also allows Deer Valley to contribute to shared goals for reducing traffic impacts within Park City and Summit County.

3.1 Monitoring Program

Deer Valley will conduct internal monitoring to best understand how various user groups are getting to Snow Park, how best to improve their experiences, and how to optimize their experience while minimizing their impact on area traffic and the environment. Elements of the TDM program may be adapted, added, or eliminated over time as Deer Valley strives to achieve maximum effectiveness with its TDM program. The Snow Park TDM program will change over time as travel behaviors change and the transportation context around Snow Park evolves.

Ongoing, real-time traffic monitoring will be enabled by a Deer Valley-funded and managed monitoring traffic monitoring station at the Deer Valley Drive / Deer Valley Drive East / Deer Valley Drive West intersection. This will allow for ongoing traffic counts, recording of queueing via still imagery, and year-over-year comparison at a crucial intersection in Park City.

The TDM coordinator will be responsible for ongoing collaboration and coordination with PCMC staff to ensure that goals are shared and TDM measures managed by Deer Valley are complementing those enacted by the City. To that end, semiannual meetings will take place among Deer Valley, PCMC staff, and other TDM coordinators:

- Prior to each ski season, relevant parties will gather to share relevant updates for the upcoming season, and identify potential opportunities for collaboration, share expectations for the coming months, and discuss performance metrics to be tracked
- Following each ski season, the same parties will meet to share lessons learned and review program performance as recorded by agreed-upon performance metrics, and establish potential action items during the off-season

With ongoing updates to local transit service operated by both Park City Transit and High Valley Transit, Deer Valley will strive to avoid duplication of transit service offerings. Deer Valley's TDM program is intended to support the use of public transit among the public rather than act as an alternative to public

transit service. As public transit coverage expands, Deer Valley will adapt its program to support local transit agencies.

3.1.1 Annual Monitoring Report

To evaluate the effectiveness of Deer Valley's TDM program, and inform potential adjustments to the program, Deer Valley will develop an annual monitoring report to be submitted to Park City staff for review. Submittal of this report will fall between semi-annual meeting with Park City staff and other TDM program mangers in Park City.

To the greatest extent possible, data collected for this monitoring effort will rely on existing or to-be-implemented sources. This will improve consistency across monitoring periods and allow for flexibility around weather or other events if needed.

Deer Valley will collect the following types of data for their TDM monitoring effort:

- Seven-day vehicle counts at all Snow Park Village driveways, to be analyzed and summarized by a third-party consultant. This data will be analyzed and summarized by a third-party consultant
- Average vehicle occupancy collected on one weekday and one weekend day, collected by a third-party vendor or Deer Valley staff, to be analyzed and summarized by a third-party consultant
- Ski season transit ridership, summarized at the stop and daily levels and provided by transit operators, to be analyzed and summarized by a third-party consultant
- Available data regarding program utilization from the *Ride On Park City* platform, to be analyzed and summarized by a third-party consultant

If additional or revised analyses are requested by the City, those requests can be reviewed and possibly scoped in advance of the first monitoring report.

WALL CONSULTANT GROUP
2139 South 1260 West, Salt Lake City, UT 84119-1464

TECHNICAL MEMORANDUM

Date: Wednesday, May 3rd, 2023

To: John Robertson, City Engineer

Cc: Alexandra Ananth, Senior Planner

From: Jeremy Searle, PE, PTOE and Gary Horton, SE

Subject: Snow Park Village Transportation Analysis Independent 3rd Party Review

Purpose & Background

WCG has been involved as the independent 3rd party review for the Snow Park Village project by Deer Valley since September 2021 and has provided multiple reviews of submitted materials and coordinated with City staff and the Deer Valley team. Through these reviews, meetings, and coordination, the proposed project has become more defined, better aligned with the goals of Park City, and more in tune with the feelings of the surrounding community.

Most recently, WCG was asked to review the updated Transportation Analysis – Shared Mobility Lane Alternative, dated April 2023 for the proposed Snow Park Village Redevelopment project at Deer Valley and provide comments. This memorandum outlines how previous comments on this analysis were addressed. No new concerns were identified in the review.

Summary

Generally, WCG finds **that the applicant's transportation analysis is sound**, and the previous traffic related concerns identified were addressed. **WCG supports the Shared Managed Lane (SML) Plan** proposed by the applicant, noting that this plan provides the best use of public right of way by providing improvements for transit balanced with bike lanes, while also improving transportation for all modes of travel in a safe manner. The proposed transit priority traffic signals provide Park City the flexibility needed to improve traffic operations while prioritizing transit when needed. There are a few comments related to driveway design/layout (comments #10, 11, 12) that are not critical to preliminary approvals, and will be addressed during final design review and approval. All addressed comments are marked with a green check mark. ✓

Previous Comments

Previously, the Applicant had requested a 20 percent parking reduction for the development. Recently, they have changed their application to provide the full amount of required parking, which results in a total of 2,262 required parking stalls. The increase in the number of parking also results in an expected increase in trips generated. Previously, the Applicant had submitted a PowerPoint in February 2023 outlining their proposed changes to the trip generation calculations and assumptions. WCG had previously reviewed this submittal and provided the following comments. Underneath each comment is an explanation of how each was addressed in the latest transportation analysis:

1. Why did the assumed transit reduction percentage increase with the removal of the parking reduction request? It would seem likely that transit ridership would decrease with the availability of more parking stalls.

This was addressed by decreasing the transit reduction from 3% to 1.5% daily and during the PM peak hour, and 1% during the AM peak hour. This change in calculating the trip generation is in line with what is expected with the increase in parking. Therefore, this comment has been addressed.

2. The diagram on slide 7 shows existing incoming and outgoing trips during the AM and PM peak hours. It also indicates that a 5% reduction on these counts was assumed to account for background traffic to Solamere and Queen Esther. However, the diagram shows the counts on DVD East being collected beyond Solamere and Queen Esther. If the diagram is accurate, a 5% reduction would not be needed for these counts. Please clarify these numbers and assumption.

This was addressed by removing the 5% reduction that was previously assumed. Therefore, the diagram, percent reduction, and overall comment are not relevant anymore.

3. Why was a daily trip generation total not calculated with the revised assumptions? Please provide a daily trip generation total for the development assuming no parking reduction.

This comment was addressed by providing an updated trip generation table in the new transportation analysis report, including a daily trip generation total. The projected number of daily trips from the development is 3,616 trips, with 261 during the AM peak hour and 322 during the PM peak hour.

4. Please provide a more detailed parking program for the planned stalls. How many will be reserved for residents, for the hotel, day skiers, etc? The parking program will greatly influence the trip generation for the project.

This comment was addressed with the Snow Park Village Parking Management Plan included as Attachment B in the transportation analysis report. This report provides details on the number of parking for each use, how each parking level is programmed, circulation, paid parking, etc.

5. Once the trip generation numbers are finalized, an updated traffic analysis is recommended to determine the impact of the additional trips.

This comment was addressed with the new transportation analysis report, which is dated April 2023. The new report includes updating trip generation, analyses, parking information, pick-up / drop-off loop analyses, etc.

6. Park City Municipal Corporation (PCMC) has a stated goal of reducing peak-hour traffic volumes by 20% citywide. The applicant's project will add peak hour traffic in the most congested areas of the City.

a. It is recommended that PCMC staff and the Applicant identify specific goals that can be measured and achievable. The Deer Valley team has outlined a detailed TDM plan and a monitoring system. The next step is to finalize the plan and identify the objectives that should be met with the annual data monitoring program.

This comment has been partially addressed through the Applicants detailed TDM plan, which outlines extensive efforts to reduce peak hour traffic. The final step is to continue to work with City Staff to identify specific metrics and objectives that can be monitored over time and be flexible in making adjustments as needed.

7. The Applicant's trip distribution assumptions between Deer Valley Drive East and West should be further justified and supported. If the distribution assumed in the TIS is different in reality, additional queuing will result on Deer Valley Drive East and West, as well as Doe Pass Road.
   a. The most recent plan submitted by the Applicant includes a signal at the "Y-intersection", which alleviates much of the concern regarding the distribution and potential queuing at that intersection. The signal timing can be adjusted, and transit priority can be added to provide flexibility for different distributions and transit needs.
   b. It is recommended that ingress into the parking garages be carefully monitored to ensure that queues do not develop and back up onto City streets. If the Applicant's distribution assumptions are not correct this could further exacerbate this concern.
   c. Similarly, the drop-off and pick-up area east of Snow Park Lodge should be monitored to ensure queues do not develop and back up onto City streets.

This comment was addressed in the most recent transportation analysis report (April 2023). The distribution was adjusted to more closely match existing travel patterns, and a sensitivity analysis was completed to show the impacts of changes to the distribution percentages. In addition, clarification on parking ingress and egress times were confirmed through WGI, a parking garage design and operations consultant, providing additional confidence in the parking garage assumptions. Finally, a detailed analysis of the drop-off and pick-up area east of Snow Park Lodge was completed. This included data on the average dwell time for vehicles in the pick-up / drop-off area collected in January 2022. This analysis provides a much clearer understanding of how the pick-up / drop-off area will operate. It shows that during peak times it is anticipated to operate at LOS E, with an average of 44 sec/veh of delay, however it does not impact adjacent intersections. The report suggests that added efficiencies with on-site staff will help improve operations as needed.

8. The additional VISSIM transportation analysis does not consider actual travel conditions, downstream impacts, or other common causes of delay in the Deer Valley Loop during peak traffic hours or weather/special events. PCMC has provided actual travel times of buses traveling these roads during ski season. Utilization of this data to calibrate the model could provide a more accurate view of the benefits of the SML to transit during peak congestion times.

a. It is recommended that the Applicant refine and calibrate the VISSIM model to better represent actual conditions and provide a better representation of the proposed project conditions.

This comment was addressed by the Applicant further refining the VISSIM model, including collecting additional dwell time data for the pick-up/drop-off loop. Park City also provided transit travel time data to further refine the model.

Additional explanation was provided in the report, "The simulation shows traffic circulation with minimal delays with the proposed configuration in peak ski season conditions. Because of the lack of congestion, the buses simulated in this analysis travel in near free-flow conditions. This was due to the models being calibrated to typical travel times. Bus and vehicle travel time measurements were provided by Deer Valley and Park City, which showed several outlier days with excessive travel times. However, the calibrated VISSIM model travel times were closer to the median travel times observed from the data."

9. The applicant does not provide enough detail about the assumptions for the pick/up drop off loop of 100 pick/up drop/off vehicles, 50 Transportation Network Company (TNC) vehicles, and 50 Valet vehicles were developed.
    a. WCG has requested additional detail outlining what data was collected to support these assumptions and what happens to the internal circulation if these numbers are low.

This comment was addressed with a detailed analysis for the drop-off and pick-up area in the latest transportation analysis report (April 2023). This included data on the average dwell time for vehicles in the pick-up / drop-off area collected in January 2022. This analysis provides a much clearer understanding of how the pick-up / drop-off area will operate. It shows that during peak times it is anticipated to operate at LOS E, with an average of 44 sec/veh of delay, however it does not impact adjacent intersections. The report suggests that added efficiencies with on-site staff will help improve operations as needed.

10. Some driveway widths do not appear to meet LMC § 15-3-4(C) requirements but may facilitate efficient garage ingress.

As conditions of final approval, these modifications need to be addressed with the final design.

11. The intersection of Royal Street and a proposed new driveway across the street do not appear to meet LMC § 15-3-3(H) requirements.
    a. It is recommended that the Applicant coordinate with City Staff on adjustments to the proposed driveway to meet City code.

As conditions of final approval, these modifications need to be addressed with the final design.

12. The driveway spacing of some driveways on Doe Pass Road does not appear to meet LMC § 15-3-3(H) requirements
    a. It is recommended that the Application coordinate with City Staff on adjustments to driveway spacing on Doe Pass Road to meet City code.

As conditions of final approval, these modifications need to be addressed with the final design.

13. A review of the bus auto-turn templates show that buses can make the required turning movements.
    a. It is recommended that another review be completed in the final design phases.

As noted above, the current design does meet bus turning requirements. Additional review is required with any design changes.

Applicant Proposed Mitigation Measures

The Applicant proposed to implement the following mitigation measures to improve traffic operations, safety, active transportation, and transit operations:

1. Reconfiguring the "Y-intersection" and adding signalized traffic control, which helps to establish a new access pattern for visitors while providing safety for pedestrians and bicyclists, as well as transit pre-emption.
2. A new left-turn deceleration and acceleration lane at Solamere Drive and Queen Esther Drive.
3. Reducing parking demand by implementing paid parking and shared parking for the development.
4. Improving the active transportation network with new or improved trails, safer crossings, and multi-use paths.
5. A new on-site mobility hub with space for six buses and additional amenities.
6. A new traffic signal at the intersection of Doe Pass Road / Deer Valley Drive East with transit signal pre-emption capabilities to expedite transit service into and out of the proposed mobility hub.
7. Either dedicated bike lanes or bike lanes during the summer and dedicated transit lanes during the peak winter season, depending on which transportation alternative is chosen.
8. A detailed transportation demand management plan that outlines a lot of measures the applicant is both currently doing and new measures that they plan to implement to reduce travel demand (see Snow Park Village TDM Plan for details).

Park City Fire District
736 W Bitner Drive
Park City UT 84098

Monday, March 6, 2023

RE: Snow Park Vehicle Control Gate and the Associated Right of Way

The Park City Fire District has worked with the Planning Department and the developer to resolve our concerns regarding the vacation of the right of way on Deer Valley Drive. Park City Fire District understands that the developer will be installing a gate that will restrict access to the south end of Deer Valley Drive.

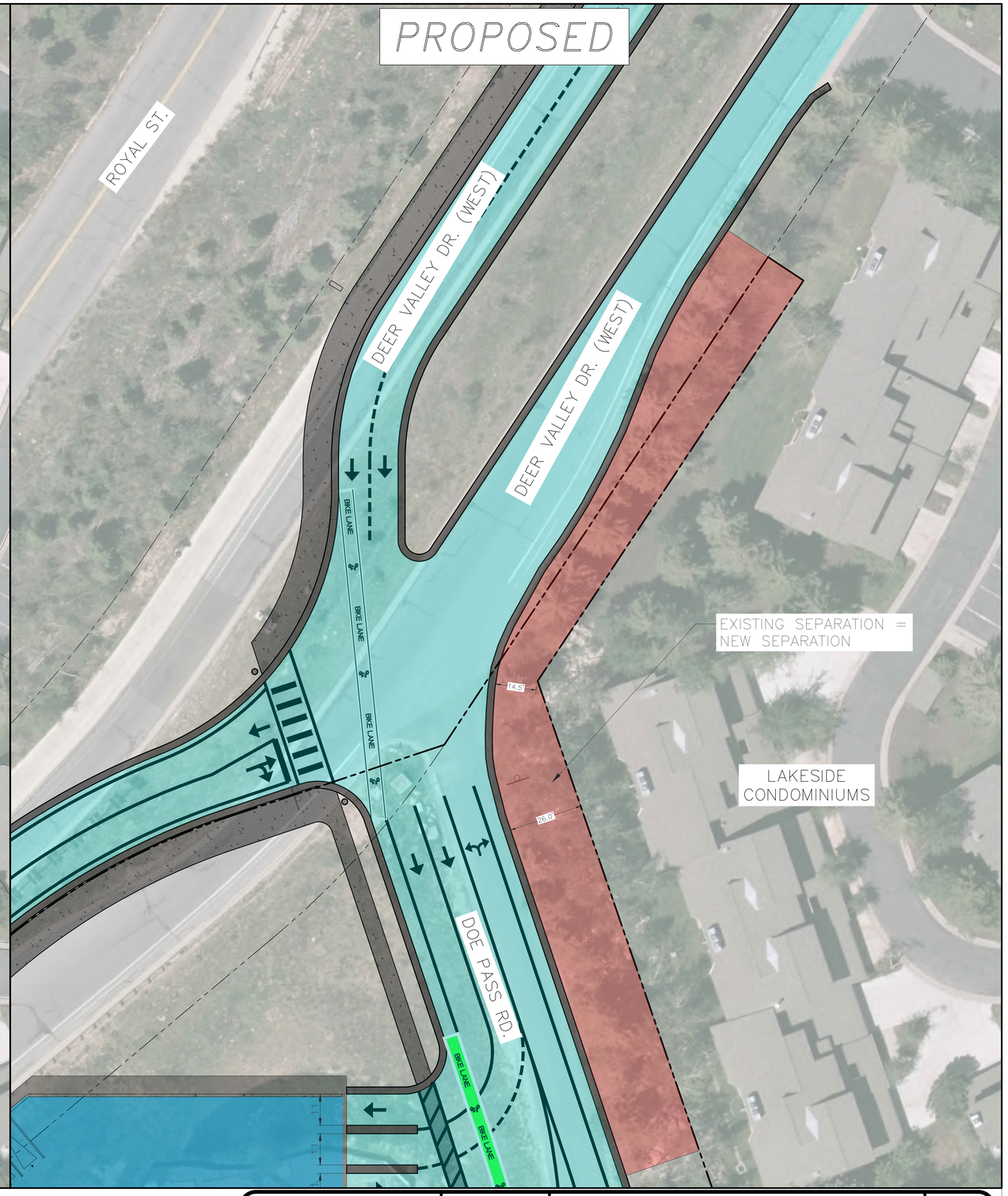
As part of the right-of-way vacation and the parking structure project, the developer will be providing pull-through access for emergency vehicles along the south side of the project. That will provide a pathway between the roads on the east and west sides of the parking structures.

PCFD accepts the overall project as designed with the following comments:

1. Access across the south end of the project must be designed to support vehicles of no less than 75,000 lbs.
2. Any access control through the area identified as "Emergency Vehicle Access Path" on the "Snow Storage Plan" dated February 15, 2023, must be approved by PCFD.
3. The final design and layout of the emergency path mentioned in item number 2 must be approved by PCFD. This includes turning radius specifications and pathway width.
4. The bus-only lane may be used by PCFD vehicles.
5. All gates across any fire vehicle access road must be approved by PCFD.
6. All gates across any fire vehicle access road must have KnoxBox brand key switches and siren operated sensors installed.

Battalion Chief Mike Owens
District Fire Marshal
(435) 940-2520
mowens@pcfd.org





20' 0 20' 40'

(435) 649-9467
Alliance Engineering Inc
CONSULTING ENGINEERS LAND PLANNERS SURVEYORS
323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

STAFF:
MICHAEL DEMKOWICZ
CONNOR DINSMORE
ZACHARY ALHAMRA

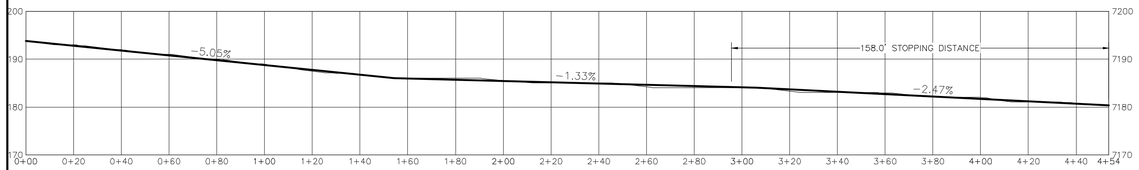
DATE: 04/10/2023

LAKESIDE & DOE PASS DR. EXHIBIT
SHARED MOBILITY LANE PRIORITY OPTION

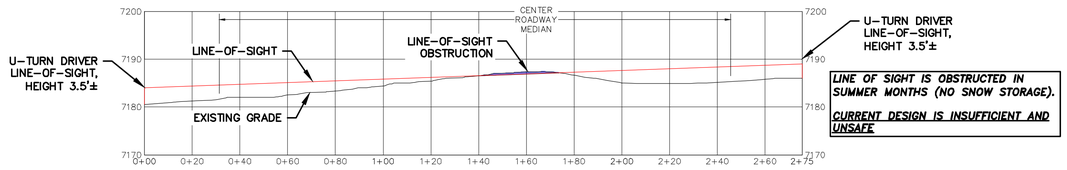
FOR: DEER VALLEY
JOB NO.: 11-1-19
FILE: X:\SnowParkVillage\dwg\Snow Park Development\exhibits\Access Exhibit\23.04.10\Exhibit for La

SHEET 1

EXISTING ROAD PROFILE



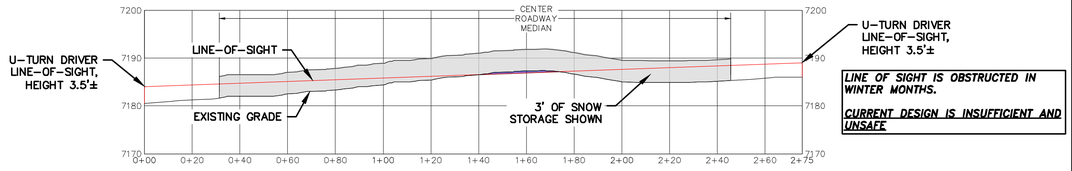
EXISTING ROAD SIGHT PROFILE – NO SNOW STORAGE



LINE OF SIGHT IS OBSTRUCTED IN SUMMER MONTHS (NO SNOW STORAGE).

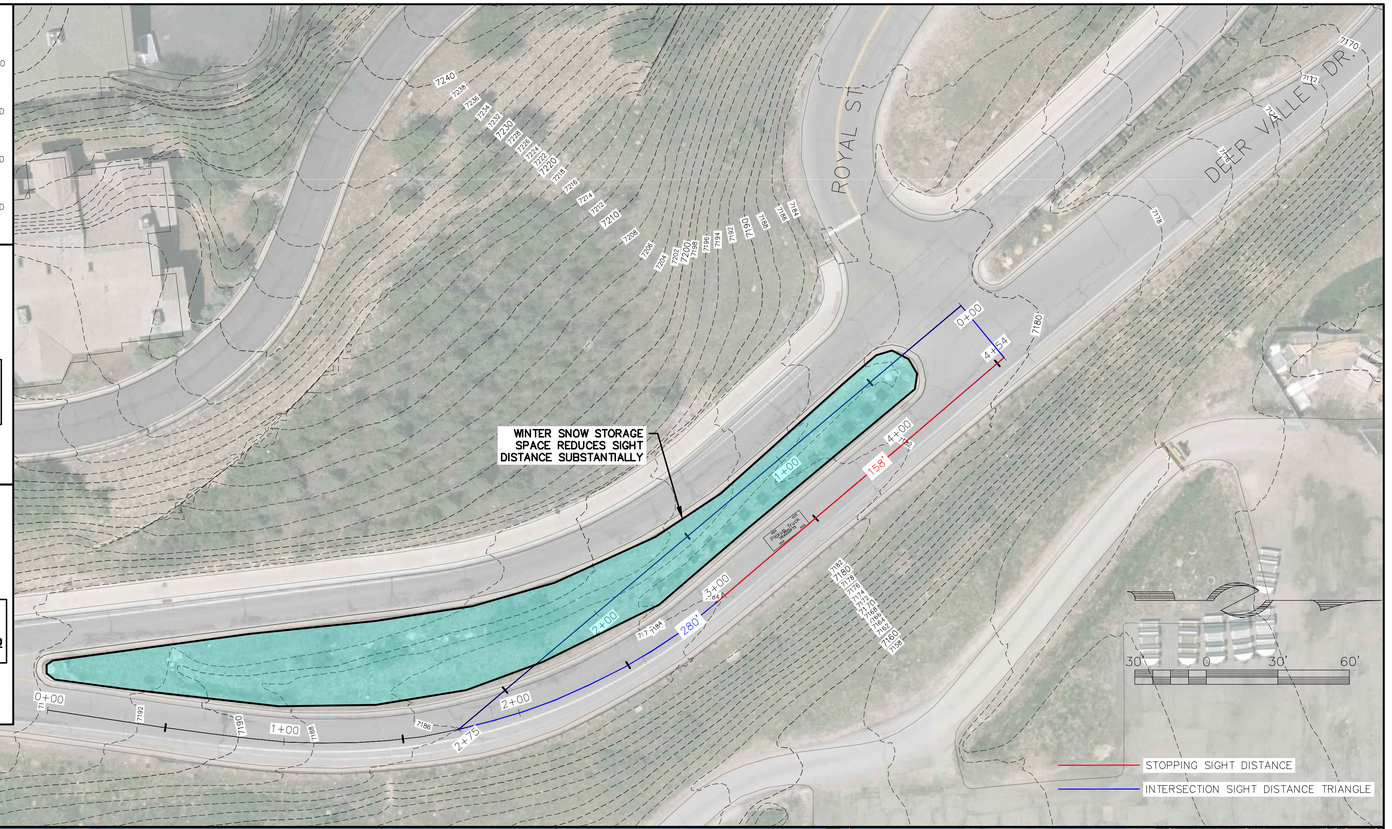
CURRENT DESIGN IS INSUFFICIENT AND UNSAFE

EXISTING ROAD SIGHT PROFILE – 3' SNOW STORAGE SHOWN



LINE OF SIGHT IS OBSTRUCTED IN WINTER MONTHS.

CURRENT DESIGN IS INSUFFICIENT AND UNSAFE



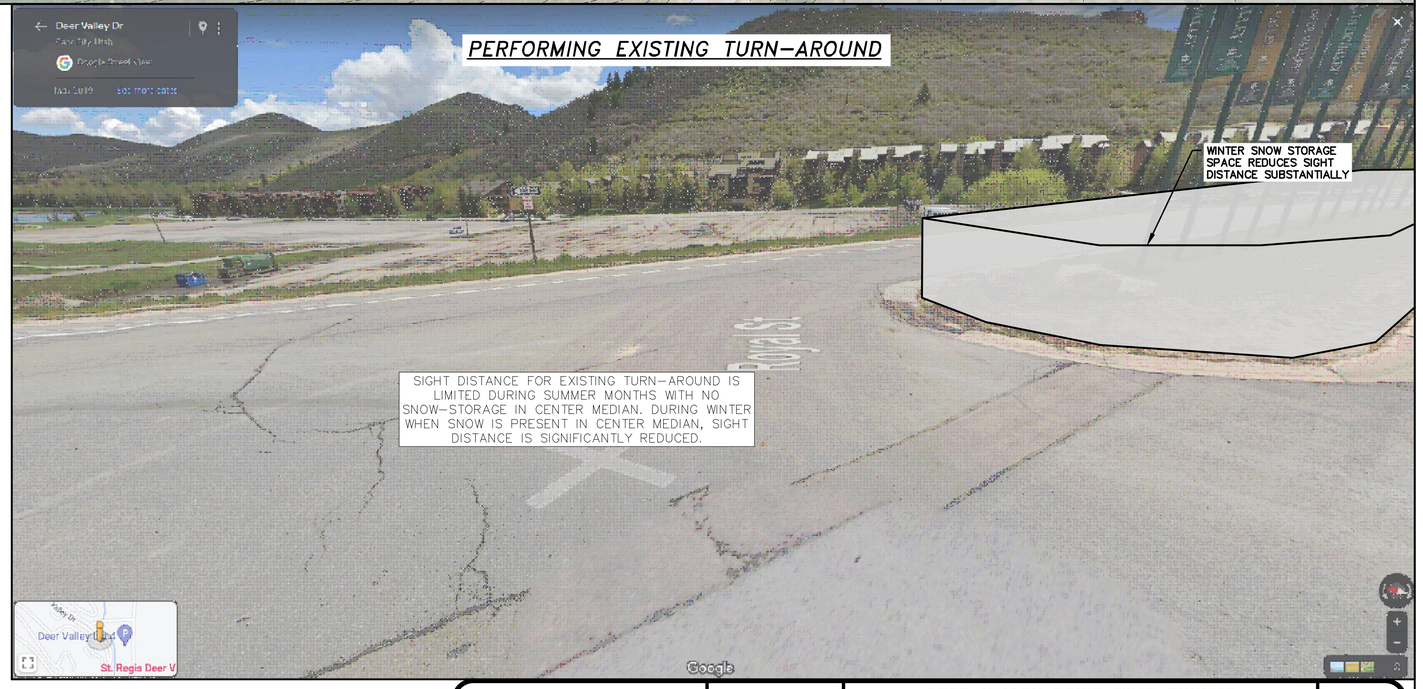
AASHTO TABLE 3-2 STOPPING SIGHT DISTANCE ON GRADES

EXISTING DESIGN SPEED: *25 MPH*
DOWNGRADE: *3% (APPROXIMATED FROM EXISTING PROFILE)*
STOPPING SIGHT DISTANCE: *158 LF*

NARRATIVE:

THE TURN-AROUND AT THE ROYAL STREET INTERSECTION DOES NOT MEET AASHTO STANDARDS. AS ILLUSTRATED IN THIS EXHIBIT, AASHTO STANDARDS SPECIFY THAT A CLEAR SIGHT DISTANCE, INDICATED AS THE HYPOTENUSE OF A RIGHT TRIANGLE OF LEG 280' IN LENGTH, SHALL EXIST FOR SUFFICIENT SAFETY OF THE TURNING MOVEMENT. THE CENTER MEDIAN OF THE ROADWAY OBSTRUCTS THIS SIGHT DISTANCE IN THE SUMMER MONTHS AND THIS SIGHT DISTANCE IS SUBSTANTIALLY REDUCED DURING WINTER MONTHS WHEN THE MEDIAN IS USED FOR SNOW STORAGE. A STOPPING SIGHT DISTANCE OF 158 LF IS REQUIRED PER AASHTO TABLE 3-2 FOR A 25 MPH ROADWAY OF SLOPE APPROXIMATELY 3%. THIS STOPPING SIGHT DISTANCE IS NOT MET DUE TO OBSTRUCTIONS, RENDERING THIS TURNING MOVEMENT VULNERABLE TO TRAFFIC COLLISIONS.

PERFORMING EXISTING TURN-AROUND



(435) 649-9467
Alliance Engineering Inc
CONSULTING ENGINEERS LAND PLANNERS SURVEYORS
323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

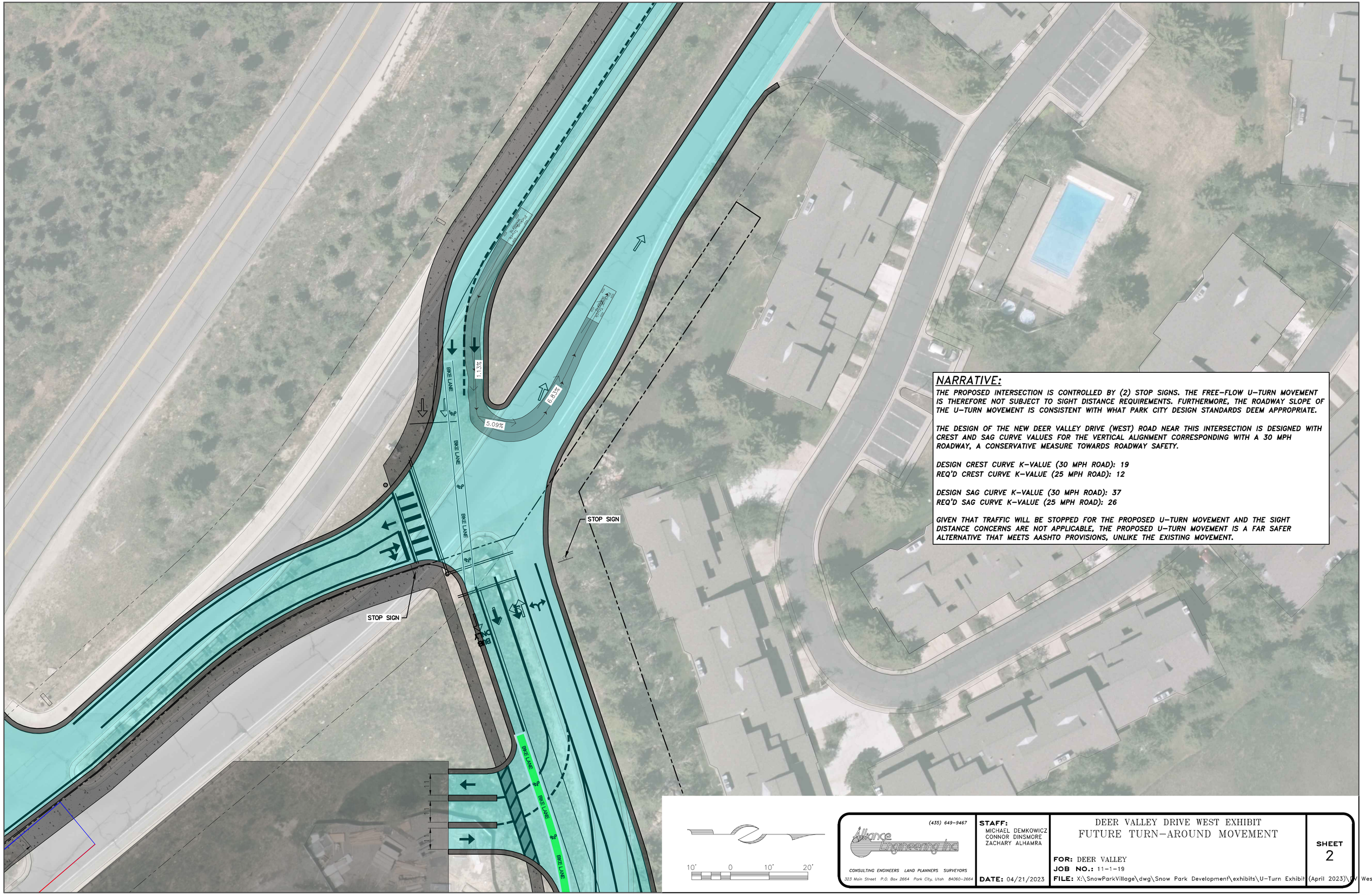
STAFF: MICHAEL DEMKOWICZ, CONNOR DINSMORE, ZACHARY ALHAMRA

DATE: 04/21/2023

DEER VALLEY DRIVE WEST EXHIBIT
EXISTING TURN-AROUND SIGHT DISTANCE

FOR: DEER VALLEY
JOB NO.: 11-1-19
FILE: X:\SnowParkVillage\dwg\Snow Park Development\exhibits\U-Turn Exhibit (April 2023)\DV West

SHEET 1



NARRATIVE:

THE PROPOSED INTERSECTION IS CONTROLLED BY (2) STOP SIGNS. THE FREE-FLOW U-TURN MOVEMENT IS THEREFORE NOT SUBJECT TO SIGHT DISTANCE REQUIREMENTS. FURTHERMORE, THE ROADWAY SLOPE OF THE U-TURN MOVEMENT IS CONSISTENT WITH WHAT PARK CITY DESIGN STANDARDS DEEM APPROPRIATE.

THE DESIGN OF THE NEW DEER VALLEY DRIVE (WEST) ROAD NEAR THIS INTERSECTION IS DESIGNED WITH CREST AND SAG CURVE VALUES FOR THE VERTICAL ALIGNMENT CORRESPONDING WITH A 30 MPH ROADWAY, A CONSERVATIVE MEASURE TOWARDS ROADWAY SAFETY.

DESIGN CREST CURVE K-VALUE (30 MPH ROAD): 19
REQ'D CREST CURVE K-VALUE (25 MPH ROAD): 12

DESIGN SAG CURVE K-VALUE (30 MPH ROAD): 37
REQ'D SAG CURVE K-VALUE (25 MPH ROAD): 26

GIVEN THAT TRAFFIC WILL BE STOPPED FOR THE PROPOSED U-TURN MOVEMENT AND THE SIGHT DISTANCE CONCERNS ARE NOT APPLICABLE, THE PROPOSED U-TURN MOVEMENT IS A FAR SAFER ALTERNATIVE THAT MEETS AASHTO PROVISIONS, UNLIKE THE EXISTING MOVEMENT.

(435) 649-9467
Alliance Engineering Inc
CONSULTING ENGINEERS LAND PLANNERS SURVEYORS
323 Main Street P.O. Box 2664 Park City, Utah 84060-2664

STAFF:
MICHAEL DEMKOWICZ
CONNOR DINSMORE
ZACHARY ALHAMRA

DATE: 04/21/2023

DEER VALLEY DRIVE WEST EXHIBIT
FUTURE TURN-AROUND MOVEMENT

FOR: DEER VALLEY
JOB NO.: 11-1-19
FILE: X:\SnowParkVillage\dwg\Snow Park Development\exhibits\U-Turn Exhibit (April 2023)\DV West

SHEET 2

February 22, 2022

To Whom It May Concern:

I am writing on behalf of the Trails End Condominium community in support of the Deer Valley Resort's proposed right-of-way vacation and dedication as a part of the Snow Park Village redevelopment. As you may know, Trails End Condominiums directly abuts Deer Valley Resort's existing Carpenter Express and Silver Lake Express lifts and drop-off area.

Deer Valley Resort has been an excellent partner over the past few years as they have developed their proposed plan for the Snow Park Village redevelopment. They have worked very closely with our community and been very transparent as their plan has evolved and impacts to our development have changed.

We are generally supportive of the proposed right-of-way vacation and dedication, expanded ski beach, and overall village concept as we believe they will enhance the Lower Deer Valley experience for residents and guests. As a direct abutter to the proposed Snow Park Village, we believe the proposed right-of-way dedication/vacation and vehicle control gate will greatly mitigate the impacts to the neighboring residential community. We believe the proposed plan will improve the overall traffic and transportation flow for the base area as well as provide amenities that currently do not exist for the neighborhood.

We are eager to experience the proposed Snow Park Village as it is developed and look forward to continuing to work with Deer Valley Resort and Park City throughout the process.

Sincerely,

R. Finleyson

Rich Finleyson
President TRAILS END LODGE
909 630 - 3676

High Valley
TRANSIT

February 23, 2023

Victoria Schlaepfer
Deer Valley Event, Sponsorship and Sustainability Manger
P.O. Box 1525
2250 Deer Valley Drive South
Park City, UT 84060

Via email

Dear Ms. Schlaepfer,

I am happy to represent High Valley Transit in our support of Deer Valley's dedicated Transit Hub in the proposed Snow Park Plan. The concept supports High Valley Transit's goal to improve transit access, walkability, and passenger safety and comfort. We appreciate that the plan includes signal prioritization to quickly move buses through traffic and that the hub's location and design accommodates a steady flow of buses with a layout that can be structured for various operational scenarios.

High Valley Transit is incredibly appreciative of our partnership with Deer Valley Resort which allowed our fare-free, public transit service to see just shy of 66,000 passenger trips at the existing Snow Park bus stop in only our first full year of service. Projects like the Snow Park Transit Hub are critical to our organization as we look to promote regional mobility for employees, residents, and visitors through public transportation.

Thank you for the opportunity to provide our endorsement of this plan.

Very truly yours,

Caroline Rodriguez

Caroline Rodriguez
Executive Director

From: Elise Erler
To: Alexandra Ananth
Subject: [External] Deer Valley Dr South - road vacation
Date: Thursday, March 16, 2023 1:36:36 PM

[CAUTION] This is an external email.

Alexandra,
Thank you for the post card, which arrived today. I looked at the staff report on the P/C website and note that the proposed road vacation does not affect SITLA's property east of the Silver Baron Lodge. Therefore, I won't offer a comment at the public hearing.
Sincerely,
Elise Erler
SITLA - Development
801-538-5179
eliseerler@utah.gov

From: Peter Tomai
To: Alexandra Ananth
Subject: [External] DV Tonight
Date: Thursday, March 16, 2023 11:05:15 AM

[CAUTION] This is an external email.

Alex:

First off, good luck tonight! I suspect it will be an interesting meeting.

In reviewing the plans, I wanted to share my perspective on the issue of the ROW. While I am fully in support of DV's redevelopment plans, I struggle with the proposed ROW vacation.

I see merit in the proposed circulation plan focused upon Doe Pass Road and believe the extension of the "Ski Beach" further north toward the parking lots is critical to making an attractive and walkable village atmosphere. However, I do not believe these improvements must come at the expense of retaining the loop of Deer Valley Drive. Both can be accommodated by simply depressing that portion of Deer Valley Drive that would pass beneath the ski beach and plaza, much like the existing shuttle turnaround and parking access is currently located underneath Deer Valley Drive. Clearly, vacating the loop would reduce the development cost by saving the expense of bridging the roadway, but I fear that the lack of the loop connection will ultimately impede access, limit traffic options, and create potential hazards associated with dead end roads.

From my perspective, in an ideal world, DV would depress the DV Drive roadway to retain the loop connection in return for PC granting them the air rights to develop over the newly covered roadway.

Thanks for the work you do,

PT

PETER A. TOMAI
SPECIFIC PERFORMANCE, INC.
ADVANCING SUSTAINABILITY THROUGH EFFICIENCY AND INNOVATION
OFFICE: 435.655.7500 | CELL: 435.602.2737
PTOMAI@SPERFORMANCE.COM

From: planning
To: Alexandra Ananth; Gretchen Milliken
Subject: FW: [External] Protect The Loop Follow Up to March 16th Council Presentation
Date: Monday, March 27, 2023 8:44:09 AM

From: Angela Moschetta <angela@noseitall.com>
Sent: Friday, March 24, 2023 10:36 AM
To: Council_Mail <Council_Mail@parkcity.org>; planning <planning@parkcity.org>
Cc: Allison Keenan <allisondkeenan@aol.com>; Allison Kitching <allison_kitching@mac.com>; Private User <christina@shiebler.com>
Subject: [External] Protect The Loop Follow Up to March 16th Council Presentation

[CAUTION] This is an external email.

Good morning, City Council & Planning Commission.

Pursuant to a meeting at City Hall earlier this week, Allison Keenan and I are following up with a written version (including supporting documents, hyperlinked citations, and screenshot exhibits back of document) of the coordinated PTL presentation delivered to City Council on March 16th. I kicked it off, Allison Keenan closed, and 8 other speakers were dotted in between. We believe it makes clear the significant gaps in Alterra's proposed circulation plan, failed assumptions regarding transit and safety, and, most importantly, the process around and requirements for granting a ROW vacation as advised by City resolution and mandated by State code. The ROW vacation cannot be granted based on current Alterra plans and submissions.

Through this Dropbox link, you will find a Word document containing the summary presentation, the PTL survey (which it seems some still have not read), the Hales study contracted by American Flag, the 2007 Bob Wells plan approved by the Sterns, some items from the 3.16 packet and a little bit more.

https://www.dropbox.com/sh/fbf0nquhg05cnsk/AAAEBpinCZ4Kp_Ywliw8gn6_a?dl=0

As always, please don't hesitate with any questions. And on behalf of PTL, thank you. We remain grateful for the opportunity to provide qualified input in a public forum and through email. And we look forward to more in the way of good and transparent process around this significant application and these significant decisions.

Sincerely,
Angela Moschetta

Angela Moschetta
Chief Strategy Picker
Nose It All
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t: +1 857 753 7542
e: angela@noseitall.com
w: www.noseitall.com
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Angela Moschetta
Chief Strategy Picker
Nose It All
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t: +1 857 753 7542
e: angela@noseitall.com
w: www.noseitall.com

From: planning
To: Alexandra Ananth; Gretchen Milliken; Jennifer McGrath
Subject: FW: [External] Re: Stop the Deer Valley Traffic Changes
Date: Wednesday, March 15, 2023 10:01:46 AM

From: Maureen Murtaugh <maureen.murtaugh@gmail.com>
Sent: Tuesday, March 14, 2023 9:05 PM
To: Ryan Dickey <ryan.dickey@parkcity.org>; Nann Worel <nann.worel@parkcity.org>; Max Doilney <max.doilney@parkcity.org>; Jeremy Rubell <jeremy.rubell@parkcity.org>; Becca Gerber <becca.gerber@parkcity.org>; Tana Toly <tana.toly@parkcity.org>; planning <planning@parkcity.org>
Subject: [External] Re: Stop the Deer Valley Traffic Changes

[CAUTION] This is an external email.

March 14, 2023

Dear City Council Members,
I would have loved to attend the meeting on thursday, but my career prevents me from attending. Therefore, I ask that this would be part of the public record as I am unable to attend the meeting in person.

On March 3, 2022, I wrote to you regarding the Alterra request that the city vacates a significant portion of Deer Valley Drive for their project. In my email of March 3, 2022 (appended below), I outlined the following significant concerns: 1)Lack of transparency and following the prescribed process; 2)Traffic impacts along Deer Valley Drive North and East; 3) increase in carbon pollution; 4) handicap access 5) remaining unknowns and most importantly; 6) safety. Few, of my concerns have been mitigated by the process of the past year.

In weighing the material good vs. harm of the project I ask that the city council weigh the already bad traffic and the promise of making traffic in lower deer valley and Park City worse within the current Park City infrastructure. The points underlying this material harm are:

1) **public safety risks** that the traffic introduces (eg reduced access for emergency vehicles).

2) h**ealth risks** from the pollution from cars emitted when it takes lower Deer Valley Residents an hour to get to Prospector, a 2.7 mile drive that takes 7 minutes without afternoon ski traffic. The material harms associated with air pollution include a reduction in birthweight and increased prevalence of preterm birth (https://pubmed.ncbi.nlm.nih.gov/35001469/), adverse effects on neurodevelopment (https://pubmed.ncbi.nlm.nih.gov/36915692/). Further information is evident in the 3,333 peer-reviewed papers that appear to the search "air pollution and health effects (https://pubmed.ncbi.nlm.nih.gov/?term=air%20pollution%20and%20health%20effects&sort=date&page=2). In this body of literature, it is su**ggested that even transient increases in exposure to ozone result in significant adverse health effects.**

3) the movement of the Queen Ester and Solamere drive intersections towards **worse traffic ratings**

4) There is no apparent plan to compensate Park City for vacating the land

Alterra has an already highly successful business that I wish will continue. One could argue that their business is already so successful, that they will need to manage visitors by requiring reservations for IKON pass holders next year. One can't ignore the **potential material positive** of the development is increased tax revenue. This increased revenue might be used to mitigate the already horrendous traffic. However, any positive is tempered by the approved increase in the number of parking spots under the existing approval and the routing of nearly all traffic in one direction. This routing unfairly increases the traffic burden on the neighborhoods around Deer Valley Dr. North promising to make traffic worse for Deer Valley neighbors. Additionally, Alterra has not provided any evidence to support that the development cannot be successfully completed under the current agreement and still provide the material positive of increased tax revenue.

I propose that the city council **reject the ROW vacation**. Alterra then has several options. They can then move forward within the confines of the existing agreement or proceed in a transparent process with plans to mitigate traffic in alternative plans that have been requested and alluded to but not produced for public comment.

Sincerely, Maureen Murtaugh

text of the email from March 3, 2022 follows.

March 3, 2022

Dear Planning Commission and City Council Members,

I am writing to express my concerns regarding the Alterra request to vacate a significant portion of Deer Valley Drive for their project and reroute traffic. I would like my comments to part of the public record.

My overall concern is that it is in violation of Municipal Code 15-6-1 (Amended by Ord 10/01/2020)
PROTECT "RESIDENTIAL USES" AND RESIDENTIAL NEIGHBORHOODS
FROM IMPACTS OF "NON-RESIDENTIAL USES" USING BEST PRACTICES
METHODS AND DILIGENT CODE ENFORCEMENT

All of the benefits of this project (as presented) go to Alterra Corp. Alterra Corp. will gain extremely valuable real estate at the base of the resort.

My further concerns and comments are organized below as 1) lack of transparency and following prescribed process; 2) traffic impacts along Deer Valley Drive North and East; 3) increase in carbon pollution; 4) handicap access; 5) remaining unknowns and most importantly 6) safety.

Lack of transparency and following the prescribed process
Deer Valley Resort was issued a permit in 1977 for a Master Planned Development (MPD) which included developing the Snow Park Village parking lots. The MPD has been amended 12 times, 45 years have passed, and Alterra Mountain Company now owns the resort. Alterra is requesting to begin this project with "no variances" in terms of density and building heights. *Asking the City to vacate a portion of the road is a major variance. It has not been approved as part of the plans.* It has not been a part of the Altera or city messaging about the project. This seems like a bait and switch and is not the action of a good neighbor or business.

Traffic impacts along Deer Valley Drive North and East
All neighborhoods along Deer Valley Drive North and East will have significant traffic impacts. By closing the loop, Alterra would direct 70% of the traffic onto Deer Valley Drive East. With the additional development, the Fehr Peers report projects 650 additional cars in the morning on DV Drive East and 720 additional cars in the afternoon on a Saturday during ski season. That more than doubles the current amount of traffic.

It is 0.5 miles from the "Y" (near the grocery store) to Snow Park Lodge with 8 curb cuts (ingress/egress). It is 1.2 miles to Snow Park Lodge on Deer Valley Drive East, more than double the distance with 18 curb cuts, affecting more the 1000 residents in the neighborhoods. By closing the loop and changing the traffic flow, Alterra's proposal adversely affects many residents and they have not proposed any viable means to mitigate the impact to the residents.

The cars and vans going to Snow Park from Amber Rd, Solamere Drive, Queen Esther Drive, the Lodges at Deer Valley and Silver Baron Lodge will all need to make a left-hand turn over two lanes of traffic to get into the lane going to Snow Park, with over double the cars in the morning. Returning from Snow Park, these cars and vans will be making a right-hand turn from the center lane and across the bus lane in order to get into their streets/communities. *This is not safe and may not be legal.*

Upper Deer Valley/Royal Street residents will now need to travel approximately 1.6 miles to get to Snow Park Lodge from Deer Valley Drive West. Today that is .2 miles.
The current drop-off area directly at the base of Snow Park works extremely well. There is plenty of room for skier drop off and pick up as well as for the shuttles from the surrounding communities and hotels. Shuttles reduce traffic. Currently, the drop-off area is wide enough for 6 lanes of traffic and there is an additional area for thru traffic next to the bus stop. If part of the road is vacated, Alterra's proposed drop-off area would only be 3 lanes wide. If the road is vacated, cars would take Deer Valley Drive East to drop people off and then must turn around and will have to cross the drop-off traffic with a left-hand turn to enter the garages.

A traffic light at Deer Valley Drive East and Doe Pass Road to prioritize buses leaving the transit center will slow the traffic trying to get into the parking garages, making it worse than today.

The current bus system works well and many residents and visitors rely on it. If most buses start using the dedicated bus lane, then some riders will need to cross three lanes of traffic to access the bus stops with more frequent buses and may have a longer ride to get to their destination. This does not encourage the use of public transit.

Carbon pollution
By changing the traffic flow as above, the "Carbon Pollution" in the area will more than double. Air pollution is known to increase mortality and hospitalizations. Iincreased rates of stroke, heart attack, and premature births are observed during times of high pollution.

Handicap Access
If the road is vacated per Alterra's plans, there would no longer be space for handicapped parking at the Snow Park base where it is currently located. Disabled skiers would need to park in the garages in the designated handicapped spaces by the elevators.

Remaining Unknowns
If the City "Abandons" a part of Deer Valley Drive West, what compensation do the Taxpayers receive?

Parking lot #5 has not been defined as to its "future". We must know this plan before any approvals are given.

What will the 20,000 square foot "Event Center" be used for and how will it contribute to traffic and safety issues?

What is the time specific plan for workforce housing with transit for the workers. With the new plan, it will need approximately 500-700 more workers.

What is the time specific" plan for "Fire Mitigation" for the area?

Safety
Pedestrians will now need to cross three lanes of traffic to get to some bus stops. Alterra mentioned that there may be express buses that do not stop. This is a big safety issue.

Currently, emergency vehicles park at the top of the Deer Valley loop right in front of Snow Park to easily access injured skiers in the winter and injured bikers in the summer. Alterra's new plan creates two dead-end roads with an emergency access across the ski beach and plaza. This seems to mean that emergency vehicles will need to cross a pedestrian area. This does not seem safe.

Marsac is sometimes closed in the winter. Cars will need to be diverted
to Royal Street. The cars would no longer be able to turn right and drive around the loop under the Alterra plan. Instead, these cars would end up in the middle of all the buses turning into the transit station on Doe Pass Road.

Sidewalks will now become "walk/bike" paths. Many residents and visitors prefer to have dedicated walking and/or cycling paths. Individuals pushing baby strollers and older residents use the sidewalks around the loop. Bike paths on the roads will be eliminated which seems to be against Park City's desire to promote alternative forms of transportation. This is clearly a safety issue.
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The neighborhood is changing in Lower Deer Valley with young children in the neighborhoods and a number of School Buses moving through in the morning and afternoons. We need to address the obvious safety issues closely.

I am enthusiastic about many aspects of the proposed development including restaurants that will be within walking distance from my home. Alterra has other options for this project including a bridge over the current loading-unloading area.
Please do not approve the vacation of the portion of Deer Valley Drive to Alterra.

Sincerely,

Maureen Murtaugh

On Thu, Mar 3, 2022 at 6:32 PM Maureen Murtaugh <maureen.murtaugh@gmail.com> wrote:

> March 3, 2022
>
> Dear Planning Commission and City Council Members,
>
> I am writing to express my concerns regarding the Alterra request to vacate a significant portion of Deer Valley Drive for their project and reroute traffic. I would like my comments to part of the public record.
>
> My overall concern is that it is in violation of Municipal Code 15-6-1 (Amended by Ord 10/01/2020)
> PROTECT "RESIDENTIAL USES" AND RESIDENTIAL NEIGHBORHOODS
> FROM IMPACTS OF "NON-RESIDENTIAL USES" USING BEST PRACTICES
> METHODS AND DILIGENT CODE ENFORCEMENT
>
> All of the benefits of this project (as presented) go to Alterra Corp. Alterra Corp. will gain extremely valuable real estate at the base of the resort.
>
> My further concerns and comments are organized below as 1) lack of transparency and following prescribed process; 2) traffic impacts along Deer Valley Drive North and East; 3) increase in carbon pollution; 4) handicap access; 5) remaining unknowns and most importantly 6) safety.
>
> **Lack of transparency and following the prescribed process**

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Sincerely,

Maureen Murtaugh
Maureen.Murtaugh@gmail.com
2434 Deer Lake Dr.
Park City, UT 84060

ReplyForward

From:	planning
To:	Alexandra Ananth
Subject:	FW:
Date:	Friday, March 17, 2023 8:32:43 AM
Attachments:	image001.png text_1.txt

Levi Jensen
He/Him
Planning - Executive Office Administrator
435.615.5060

From: 6092401333@mms.att.net <6092401333@mms.att.net>
Sent: Thursday, March 16, 2023 6:25 PM
To: planning <planning@parkcity.org>
Subject:

[CAUTION] This is an external email.



Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Executive
Item Type: Information
Agenda Section: WORK SESSION

Subject:
5:15 p.m. - Break

Suggested Action:

Attachments:

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Library
Item Type: Staff Report
Agenda Section: APPOINTMENTS

Subject:
Appointment of Greg Hembrock and Reappointment of Seth Beal to Serve on the Library Board for Three-Year Terms Beginning July 2023

Suggested Action:

Attachments:
FY24 Library Board Appointments Staff Report
Exhibit A: Library Board Appointments Recommendation Letter

City Council
Manager's Report

Subject: FY24 Library Board Appointments
Author: Adriane Herrick Juarez
Department: Library
Date: June 23, 2022

Summary Recommendations:
Appointment of Greg Hembrock and reappointment of Seth Beal to serve on the Library Board for three-year terms beginning July 2023.

Background:
Park City Municipal Code and Utah State Code require municipal Library Board appointments to be made effective July 1. The Library Board must have between five and nine members. Park City residents must fill all vacancies.

The Library Board conducts interviews for Library Board appointments, and recommendations are made to the Mayor and City Council for appointments.

The Park City Library Board has nine board members with two open seats. According to Library Board Bylaws, Seth Beal reapplied for his seat and is eligible to serve an additional term. The Library Board is recommending the reappointment of Seth Beal for an additional term and the appointment of Greg Hembrock, a newly applying board member, to serve beginning July 1. This will provide a total of nine board members.

In accordance with City policy, the Library Board vacancies were publicly posted, and applications for Board positions were available on the City and Library websites.

Analysis:
There were four new applications and one renewal application received prior to the application deadline of April 30. A Library Board subcommittee comprised of the Library Board Chair, the Library Board Vice-Chair, and the Library Director interviewed the new candidates. Based on the review of the applicants by the subcommittee, the full Park City Library Board agreed in their May 17th meeting to recommend the Mayor and Council appoint Seth Beal for an additional term, and newly appoint Greg Hembrock.

The attached letter (Exhibit A) from the Library Board Chair, Bill Humbert, describes the qualifications of the recommended candidates. Approval of the two recommended candidates will provide nine voting board members, as allowed in Library Board Bylaws.

Department Review:
Executive & Legal Departments

Recommendation:
Appointment of Greg Hembrock and reappointment of Seth Beal to serve on the Library Board for three-year terms beginning July 2023.

Exhibit A

May 24, 2023

Mayor Nann Worel and Park City Council
Park City Municipal Corporation
PO Box 1480
Park City, UT 84060

Honorable Mayor and City Council,

After conducting interviews with the new candidates who applied, the Park City Library Board recommends the addition of Greg Hembrock and the reappointment of Seth Beal, for 3-year terms.

Greg Hembrock applied to the Library Board for a second time this year, which shows dedication after not being selected last year. He has lived in Park City for more than 19 years and has worked with several nonprofits including the Christian Center of Park City. He was involved in two Blue Ribbon Commissions, one to evaluate the compensation of Park City Employees in 2022 and another to evaluate the compensation of our City Council Members and Mayor in 2023. He has been influenced by education all his life and his parents worked with publishers selling their products to school districts, both served on library boards with his mother finishing her last library board tenure at the age of 94. He is dedicated to libraries and the positive impact they have on communities. As a senior executive in healthcare, he is involved in all aspects of business and is happy to share his experience with nonprofits and the library board.

Seth Beal has lived in Park City for 5 years. He volunteers in the Park City schools where he most recently served on a committee reviewing the appropriateness of certain parts of the curriculum. He is the Vice-President of his local homeowner's association and has volunteered on projects sponsored by the Christian Center of Park City and the Peace House. He also works with the youth in his local church congregation. He has served on the Park City Library Board for 3 years and believes that libraries should be at the heart of the community to provide a place for learning, and exploration, as well as be a gathering place for people of all ages. In his view libraries serve as a source of inspiration for a community.

The Library Board appreciates your consideration of these applicants to the Park City Library Board.

Sincerely,

Bill Humbert
FY23 Library Board, Chair

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Transportation Planning
Item Type: Staff Report
Agenda Section: COMMUNICATIONS AND DISCLOSURES FROM COUNCIL AND STAFF

Subject:
Emerging Disruptors Update

Suggested Action:

Attachments:
Emerging Disruptors Staff Report

City Council
Staff Communications Report

Subject:	**Emerging Disruptors Study Update**
Author:	**Hannah Pack, Transportation Planner**
Department:	**Transportation Planning**
Date:	**June 1, 2023**
Type:	**Informational**

Summary

The Emerging Disruptors study will examine several transportation concepts and technologies that have the potential to help Park City achieve its transportation-related goals and improve mobility. This study will collect big, bold, and potentially transformative transportation ideas often discussed in the community and provide each an opportunity to be examined. A resident stakeholder committee will determine which ideas should be pursued or further studied to help keep Park City moving forward and remain nimble to changes in the transportation industry.

Background

At the March 31, 2022, Council meeting, Transportation Planning presented a "disruptive ideas list" that could transform how we travel to and around Park City. This study is being funded by a grant of $80,000 that Park City received from the Utah Department of Transportation (UDOT) to study emerging technologies and disruptive ideas.

Professional staff and a consultancy, Kimley-Horn, kicked off in May 2023 with a stakeholder committee comprised of Park City residents and businesses. The stakeholder committee is tasked with reviewing a comprehensive list of disruptive ideas and will provide the project team with their priorities.

Ideas under consideration include new transportation modes (gondolas and passenger rail), emerging technologies (intelligent transportation systems, dynamic parking pricing, Mobility on Demand), roadway changes (one-way loops and flex lanes), policy decisions, and more. Rankings will be based on the potential ability of each idea to help mitigate our transportation challenges or plan for future challenges and opportunities. Top disruptors will be identified and explored during dedicated project workshops scheduled this summer.

Emerging Disruptors Next Steps

Over the summer, we will host a series of workshops to explore each disruptive idea in greater detail. Kimley-Horn has a national network of subject experts who will help support workshops, and relevant staff and other stakeholders will be invited to participate. The outcome of the workshops will identify the highest potential to improve mobility to and around Park City. The project team will share the list of project workshops with the Council this summer, and initial recommendations from the workshops will be presented in the fall.

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Executive
Item Type: Staff Report
Agenda Section: CONSIDERATION OF MINUTES

Subject:
Consideration to Approve the City Council Meeting Minutes from May 11, 2023

Suggested Action:

Attachments:
May 11, 2023 Minutes

PARK CITY COUNCIL MEETING MINUTES - DRAFT
445 MARSAC AVENUE
PARK CITY, SUMMIT COUNTY, UTAH 84060

May 11, 2023

The Council of Park City, Summit County, Utah, met in open meeting on May 11, 2023, at 2:00 p.m. in the City Council Chambers.

Council Member Dickey moved to close the meeting to discuss property at 2:00 p.m. Council Member Toly seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

CLOSED SESSION

Council Member Toly moved to adjourn from Closed Meeting at 3:45 p.m. Council Member Rubell seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

STUDY SESSION

Childcare Discussion:
Kristen Shultz, Early Childhood Alliance Director, Joel Zarrow, Community Foundation CEO, and Tony Tyler, Solutions Group Member and PC Tots Board Vice President, presented this item. Zarrow reviewed he had spent many years improving early childhood through high school education. He thought that without a united effort, the low income families would be squeezed out of the community. He noted Vail committed funds to childcare and Deer Valley was considering a similar investment. He thought the private, social and government sectors should be engaged as well. He stated mountain towns had contributed to childcare and Park City was out of the norm. The City invested in seniors and recreation and now it needed to invest in its children. Their proposal had been developed over months and totaled $2.1 million. It would help children and it would leverage all funds for the community by supporting one of the local childcare providers.

Shultz stated last September, Jeff Jones, Jonathan Weidenhamer, and Shultz began working on a childcare needs assessment. They presented to the Council in November and then they created a solution group to look at the data collected and what other cities were doing. A childcare needs assessment survey was distributed in December and January and the responses shown today were from responses in 84060. In February, the summary of benefits of early childhood education (ECE) and the funding proposal was submitted to the City.

Shultz stated the private market worked well for wealthy families. There would be the loss of federal funds for childcare. They had a wholistic approach to address affordability, including to fill a gap for families in need, stabilize the ECE providers by providing funding, leverage federal childcare subsidies for low-income families, and increase capacity for children under two years old and home-based providers.

Shultz stated the bulk of the funding would be for subsidized tuition and the subsidy would be tied to the Area Median Income (AMI). A stipend would be given to families earning up to 140% AMI who lived in Park City. Workforce who lived outside the City would not be eligible for the stipend. She also indicated it was important for families to access the federal funds that were available. Only 10% of families were connected to federal subsidies. Shultz stated the group also wanted to ensure more capacity for infant care.

Tyler indicated PC Tots announced a 53% tuition increase. This created a sustainable economic model so it could be viable long-term. It also adversely impacted the middle class. The rates remained low for those under 80% AMI, but those earning higher, the tuition increased substantially. He stated the cost of inflation and salaries dramatically increased during COVID. In 2022, 29% of their revenue came from COVID funds, 42% from tuition and 29% from community donations. They made the decision to increase the tuition across the board. The 53% increase still left a $343,000 funding gap. This directly impacted families in PC Tots. Those who could afford to pay had a lot of options, but PC Tots was the only childcare that tiered the cost based on income. Access to childcare was the biggest issue and was the reason for this proposal. The funding gap just for PC Tots equaled an additional $285 per child per month. PC Tots only served 100 children and there were 180 children on the waitlist. If the proposal was funded, it would incentivize the other childcare providers in the community to open their doors to low income families and it would lower the burden for PC Tots.

Tyler provided demographic information on the families using PC Tots and indicated 43% of families earned under 100% AMI. Of those families, 56% were under 50% AMI. He noted 22% of residents using PC Tots earned under 100% AMI and they all worked in the City limits. They also had 76% of the non-resident workforce who earned under 100% AMI. He asked Council to identify what demographic should be supported, and stated without help, the City would lose childcare facilities.

Mayor Worel referred to the Department of Workforce Services (DWS) subsidy, and asked how it was calculated. Shultz stated DWS administered them. Families earning 50%-63% AMI would qualify for funding. Mayor Worel asked if a child could be qualified if they weren't in the system, to which Shultz explained the process. Tyler stated not all providers accepted the DWS subsidy. Mayor Worel asked of the 180 children on the PC Tots waitlist, how many would qualify for the subsidy and how long was the wait. Tyler stated 60 would qualify for the subsidy and the wait time for an infant was 18 months. They tried to get parents to apply for DWS. Shultz noted the DWS subsidy was for children up to 13 years old. All the preschools were eligible to accept the DWS subsidy as well as aftercare programs. Council Member Gerber asked if the PC MARC summer camps could accept the DWS subsidy to which Shultz affirmed. Mayor Worel asked how long it would take for families to be qualified, to which it was indicated one to two months minimum.

Council Member Dickey asked how the proposal would incentivize parents to apply for DWS. Shultz stated PC Tots would give credit for families applying to DWS and money to staff who help parents apply. Mayor Worel stated in-home providers could be part of the solution. She asked what the plan would be for bringing those into the regulatory system. Shultz stated DWS had a Family Friend and Neighbor Childcare Provider program. The client would tell the neighbor to get approved by DWS so they could receive the stipend. Shultz hoped they would take advantage of this because they would also have access to free professional development.

Council Member Rubell asked if the federal funding would stop in January 2024. Shultz stated funding would be reduced in October. Council Member Rubell asked if it was a higher amount for first nine months, to which Shultz affirmed. In October, the federal funding would be reduced to $100 per month per child and in April, it would be further reduced to $60 per month per child and then terminated in June. Council Member Rubell asked in terms of the percentage of income, what the number should be. Shultz stated in Aspen, their parent contribution was 10%-20% of income and then capped. She indicated the federal recommendation was 7% of income for childcare, but if families had two children, that would be 14%. Tyler indicated PC Tots figured tuition at 9%-11% of family income. They offered a multi-child discount but it was very small. Even at the higher tuition range, they were still short of their entire annual revenue.

Council Member Rubell asked how this complemented what the school district was doing with universal childcare. Shultz thought the school district was a leader in early childcare education. When the building was finished, the five-year-old program would include before-care and after-care and it would be affordable. Council Member Rubell asked what other people and groups were doing in the community, such as the Chamber and broader business community having discussions to fill the gaps. Shultz stated they were trying to talk with everyone. The Chamber was part of the solution group. Tyler stated the government had a responsibility, but so did the businesses and

parents. Council Member Rubell asked if the proposal reflected the other contributions, to which Tyler affirmed.

Council Member Dickey asked if the $2.1 million that was requested was the total need or just the need from Park City. Tyler stated it represented the residents and workforce of 84060. Council Member Gerber asked what other childcare providers would do if they weren't a nonprofit. Shultz stated they would cut costs and raise tuition. Council Member Gerber asked why the 7% income subsidy was based on the child or multiple children instead of based on the family's income. Shultz stated the subsidy was huge for second and third children in the family.

Council Member Dickey asked what changed from 2019 when there wasn't a subsidy. Tyler stated PC Tots used all its funding to operate. In 2020, staff turnover reached 60% so wages had to increase. Shultz added it was difficult to recruit staff because wages were low and there were no benefits. Council Member Dickey asked what the reaction was to the tuition increases, and he proposed charging more for market rate to have a bigger subsidy. Tyler stated there was pushback, especially for those impacted the most. If a market rate family left and a subsidized family was next on the waitlist, that would mean more money was needed. If PC Tots went more to market rate families, that would defeat the mission of the program, which was to help those in need. Council Member Dickey asked if stipends would be targeted to nonprofit and for-profit providers. Shultz indicated to be eligible to be a qualified provider, a provider would have to be eligible for Summit County. Council Member Dickey indicated he looked at other programs and stipends could only be used for nonprofits. He asked if there was a concern for raising the for-profit tuition by providing subsidies. Shultz stated for-profit providers had a set tuition. The stipend would allow families access to childcare who could not afford the market rate tuition. She noted the for-profits also had waitlists. This program would provide more choices for low-income families. Council Member Dickey asked if the City should encourage multiple nonprofit providers in the City or if they should expand opportunities within PC Tots. Shultz stated for-profit providers were good, and the proposal was about increasing access through stipends.

Council Member Toly asked how many providers were in Summit County. Shultz didn't know. Council Member Toly asked if Vail would be willing to provide childcare for their staff. Tyler stated they provided childcare for their workforce and guests. Council Member Toly asked if Vail and Deer Valley employees used the employer daycare. Tyler stated the childcare was only offered during the ski season, and the workforce needed year-round care. Council Member Toly asked if PC Tots had a list of where the families worked within the City. Shultz stated they had data for the commuters coming into work but not by employer. Tyler stated there was no tracking for families who did not need the subsidy. Council Member Toly asked what the biggest funding need was if the City could only fund part of the request. Shultz stated the subsidy would be limited to 60% AMI. Tyler indicated he would increase the number to 80% AMI. He noted 38% of the 43% of families at PC Tots were below 80% AMI. Zarrow stated this proposal would stabilize a

sector that was shaky. The proposal was for what was realistic, not what was best. Mayor Worel asked to schedule another work session as soon as possible.

REGULAR MEETING

I. ROLL CALL

Attendee Name	Status
Mayor Nann Worel Council Member Ryan Dickey Council Member Becca Gerber Council Member Jeremy Rubell Council Member Tana Toly Matt Dias, City Manager Margaret Plane, City Attorney Michelle Kellogg, City Recorder	**Present**
Council Member Max Doilney	**Excused**

II. RECOGNITION

1. Consideration to Adopt Resolution 07-2023, a Resolution Adopting May as Wildfire Awareness Month:

Mike McComb, Emergency Manager, presented this item and stated wildfires had increased and most were manmade. Council Member Rubell asked if having a heavy snow year would lessen the wildfire risk. McComb stated the excess snow would create a good fuel supply that would be dry by late summer and susceptible to fire.

Mayor Worel opened the public input for this item. No comments were given. Mayor Worel closed the public input period.

Council Member Rubell moved to adopt Resolution 07-2023, a resolution adopting May as Wildfire Awareness Month. Council Member Gerber seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

2. Consideration to Adopt Resolution 08-2023, a Resolution Proclaiming June 2023 as Pride Month in Park City:

Browne Sebright and Andy Stevenson, liaisons to the LGBTQ+ Taskforce, presented this item. Sebright stated this would be the fourth year Park City recognized Pride Month. The resolution would authorize Pride activities in the community during June. Stevenson stated the taskforce would like to raise the Pride flag on City flagpoles and

have a flag raising ceremony, as well as put "Ride with Pride" banners on a Transit vehicle. Council Member Rubell asked what vehicle the taskforce wanted the banner to be on, to which Stevenson stated they wanted it on a regular bus.

Mayor Worel opened the public input for this item.

Charlotte O'Connell, Lower Deer Valley, asked where the flags would be raised. Stevenson noted the five locations.

Joe Urankar stated initiatives like this mattered to communities like this. It was important to some to feel included and recognized.

Virginia Solomon indicated they felt welcomed in this community and the resolution was a nice gesture by the City.

Diego Zegarra stated symbols like this were meaningful to groups who had felt marginalized.

Chris Campbell hoped the City would continue to support the message that all were welcome in the community.

Ed Parigian was happy the City recognized Pride Month.

Mayor Worel closed the public input period.

Council Member Gerber moved to adopt Resolution 08-2023, a resolution proclaiming June 2023 as Pride Month in Park City. Council Member Rubell seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

III. COMMUNICATIONS AND DISCLOSURES FROM COUNCIL AND STAFF

Council Questions and Comments:
Council Member Gerber asked if a childcare discussion could happen before the final budget was approved. Matt Dias, City Manager, stated there were some Council dates that could be considered, or the budget could be amended at any time. Council Member Rubell recognized Michelle Kellogg, City Recorder, for all her regular work and election work. Council Member Toly indicated it was quieter in town and people could enjoy the weather and outdoors. She attended the Spring Projects Open House and she noted there was a good turnout. Mayor Worel stated the Mexican Consul visited Park City and wanted to work closely with the community.

Staff Communications Reports:

1. Safe Routes to School Program:

2. Park City Bike and Pedestrian Plan Update:

3. Summer 2023 Special Event Parking Rates:

IV. PUBLIC INPUT (ANY MATTER OF CITY BUSINESS NOT SCHEDULED ON THE AGENDA)

Mayor Worel opened the meeting for any who wished to speak or submit comments on items not on the agenda.

Katrina Kmak 84060 supported affordable childcare, and suggested Park City Municipal have childcare for employees. She also requested additional staff at the library.

Devery Harper 84060 stated childcare was important. PC Tots raised the tuition by 85%. Childcare was important on many levels including for adult mental health.

Cheryl Serpico Hansen 84060 was a library board member and saw firsthand how hardworking the library staff was. She requested another full-time librarian.

John Burdick 84060 was glad Council was discussing childcare. He couldn't do his job if he didn't have affordable childcare. If the tuition was raised, he wouldn't be able to work. He thought it would be difficult to find workforce in the community without childcare.

Tatiana Prince, Park Record owner, 84060 stated she had childcare in her home, but she supported childcare funding. This was an opportunity to show leadership in this nationwide crisis. She felt there was no higher use of public funds.

Lara Carlton and Karie Belczyk represented Central Park Condos, 84060, wanted to ask for accountability for structural issues of the building, review an amendment of deed restriction appreciation caps, and allow the inclusion of HOA dues and building maintenance costs to their resale value as capital expenditures. Affordable housing dues for other projects were now capped after City staff learned from this project, but they were not capped when this affordable housing project was completed. She could sell her affordable unit but it was not valued correctly because of inflation. The numbers didn't add up. There were mistakes that were being borne on the backs of the homeowners and she asked for these changes. They brought the issues to the City staff but they received no help. Mayor Worel asked Matt Dias, City Manager, to see if other cities counted HOA fees as part of resale value.

Mackenzie Genecov supported childcare in Park City.

Megan McKenna, Housing Advocate for Mountainlands Community Housing Trust, thanked Mayor Worel and Council Member Toly regarding the seasonal workforce taskforce. She looked forward to starting the next season as a result of these efforts. She also stated housing solutions included childcare, climate, and traffic solutions.

Deb Stafsholdt, 84060, asked Council to continue to support Lucky Ones Coffee Shop. Her daughter worked there and she was very grateful.

Sean Parker, 84060, distributed a handout showing a picture of Main Street. There was an Upper Main Street project that was focused on efficiency and the only difference was a wider sidewalk, but he felt it should be a reimagined neighborhood project. He would rather walk by trees than concrete. This project was all concrete. He thought the project was worth the work and it could bruise some egos. He asked that the project go back to the design stage.

Betsy Wallace, 84060 agreed with Parker and indicated she was a resident of Upper Main Street. The neighbors were in favor of controlling traffic and the project was embraced for that reason. The consideration for widening the sidewalks was supported by the residents, but they wanted it beautified with planters, etc.

Charlotte O'Connell supported Parker's and Wallace's comments. She thought this project would make the intersection better. She also commented on childcare and stated New Jersey connected childcare for three-year-olds and up with the public school system.

Mayor Worel encouraged commenters to engage with the Neighborhoods First program on their comments and suggestions.

John Greenfield agreed with the other comments on childcare and thought the Council was on the right track. He discussed the meeting with Mayor Worel and Council Member Dickey and Transit service was discussed. He also gave examples of Council and staff working together. He indicated there were rumors that Gordo would be a parking structure and he didn't want Park City to be full of concrete. He asserted other options should be looked at.

Sam Mueller stated she and her husband worked in 84060 and she agreed with all the comments made in support of early childcare. If young families didn't feel supported by the community, they would leave and the workforce would be lost.

Tuck Lowe, Eric Myers, Mike Lutz, Greg Basrak, Ramon Gomez Jr., Rick Hyman, Brian Wayling, and Justin Hibbard eComment: "I am one of the 50+ members of the Park City Curling Club (PCCC) and I support additional covered outdoor ice! Our primary interest would not be to curl outdoors (not ideal conditions), but it would free up more indoor ice time so we could meet more than once/week and increase membership, schedule more

Learn-To-Curl revenue events (we get 30-50 requests/year at $3K-6K/event, but can only do 5-10), and introduce PC's school system to curling. The indoor arena is typically booked from 6AM until 10PM every day."

Caitlin Streams eComment: "By now you have heard all of the facts about why supporting this measure good idea: how crucial early childhood education is to long term success for the child, the return on investment for the economy, how childcare support allows our workforce to stay strong in our community…the list goes on. You've also been informed of how unaffordable childcare has become and how such a high cost early on in a family's existence will affect both short term and long term financial stability for families in our community. I won't continue to belabor these extremely important and powerful points. What I will do, however, is remind you how we are all on the same team here, a team working to ensure our community stays a strong, diverse, beautiful, respectful and supportive place for our locals to live. You were voted to city council by the locals in the community with trust that you would do everything in your power to ensure the community isn't swallowed up by the second homeowners and major corporations. That you would help keep the community affordable and diverse, and consider how future generations are impacted by the decisions you make today. The Park City Cares About Kids proposal is a perfect opportunity to show the people of Park City that we elected the right folks for the job of protecting our community and our future. By investing in childcare, you are not only helping the people in our community who need it the most now, but you are ensuring success for the entire town long term by investing in economic growth for our local businesses and restaurants. Don't let future leaders in our town ask the question 'what could we have done differently' when looking back on the legacy of our leaders today. Thank you for the consideration of this proposal and I hope you so the right thing. P.S. Since I know we pride ourselves on living in a world class destination, are we really going to let ski destinations like Aspen and Breckenridge do better for their local kids than us?"

Mayor Worel closed the public input portion of the meeting.

V. OLD BUSINESS

1. Public Hearing on the Proposed Water Rate Structure Modifications:
Clint McAffee, Public Utilities Director, asked for Council direction regarding the rates.

Mayor Worel opened the public hearing. No comments were given. Mayor Worel closed the public hearing.

Mayor Worel commended the Water Department for the outreach done regarding the water rates. Council Member Rubell noted there were outlier operations that relied heavily on water use for their businesses and asked if any exceptions or a rebate program on a commercial water rate had been explored. McAffee stated that had not been considered. Council Member Rubell asked staff to explore that. Council Member

Dickey had concerns on outlier commercial uses and irrigation uses and was interested in discussing that as well. Council Member Toly asked if McAffee had met with the largest stakeholder groups. McAffee indicated he reached out to the higher water users and set up meetings with the Restaurant Association, the Historic Park City Alliance (HPCA), the Lodging Association, and other organizations. His team took calls and sent emails to 4,000 water users letting them know about the meetings and the rate changes.

Council Member Gerber stated in addition to looking at rebates, businesses could look at economic development grants for sustainability measures. Matt Dias clarified there was a separate request to tie in the economic development grant with rebates.

Mayor Worel asked if Council preferred a flat 10% water increase or the proposed tiered rate structure. Council Member Dickey favored the 10% increase. Council Member Rubell asked if the 10% increase would be for all users, to which McAffee affirmed. Council Member Rubell asked what the other option was. McAffee stated the tiered structure presented to Council in February was the other option. Council Members Rubell and Toly favored the tiered rate structure. Council Member Gerber asked if the City could raise rates beginning January 1, 2024. McAffee stated they could do that but they would still recommend a 10% increase until end of this year. Council Member Gerber favored the tiered rate structure, but asked for leniency for a couple months in case people were not aware. Council Member Rubell suggested continuing with the messaging and have water users call to find programs to help them lower their water use. McAffee stated they would perform the same level of service. Mayor Worel summarized the majority of Council favored the tiered water rates.

VI. NEW BUSINESS

1. Consideration to Continue the Review of the Appeal of the Conditional Use Permit Denial for the Washington School House, Located at 543 Park Avenue, to Become a Minor Hotel:

Virgil Lund, Planner, presented this item and stated this would be continued to June 15th.

Mayor Worel opened the public hearing. No comments were given. Mayor Worel closed the public hearing.

Council Member Gerber moved to continue the review of the appeal of the Conditional Use Permit denial for the Washington School House, located at 543 Park Avenue, to become a minor hotel to June 15th. Council Member Toly seconded the motion.

RESULT: CONTINUED TO JUNE 15, 2023
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

2. Consideration to Approve Ordinance No. 2023-23, an Ordinance Adopting a Tentative Budget for Fiscal Year 2024 for Park City Municipal Corporation and Its Related Agencies and Authorizing the Computation of the Property Tax Rate at a No Tax Increase Rate, and Set Public Hearings to Consider Adoption of the Final Budget on June 22, 2023, at a Regular City Council Meeting:

Jed Briggs and Penny Frates, Budget Department, and Erik Daenitz, Economic Development Manager, presented this item. Briggs projected more revenue in the coming year. He noted sales tax revenue was increasing at a stable pace. Frates reviewed requests that were approved and ones that were cut from this year's budget.

Council Member Gerber asked where childcare funding could fit into the budget. She felt there was a critical component to childcare since federal funding was being eliminated. Briggs indicated the revenue projections could be more aggressive. If it was a one-time expenditure, money could be taken from the Capital Fund balance or General Fund balance. Another source would be to increase property taxes, which would be a secure way to build funds for an ongoing program. Council Member Gerber noted the budget could be reopened later if funding was not allocated for childcare in June.

Council Member Rubell asked if the personnel requests were being funded to the managers' satisfaction. Matt Dias stated it was a balancing act. Not everyone received everything they wanted, but they were getting their needs. He was confident in what was recommended.

Council Member Toly asked if the bollard program was going forward. Daenitz stated the budget was not taking funds away from Main Street projects. Mike McComb, Emergency Manager, stated the bollards project was a Main Street project that would be installed in two phases. This was to protect pedestrians during Main Street events as there were incidents of purposeful intent to harm pedestrians. Council Member Toly asked if the main reason was for Car-Free Sunday, to which McComb indicated it was not.

Briggs reviewed the senior center would be funded with $2.5 million from General Fund and the Rocky Mountain Power substation funding would remain in the budget. He explained the $25 million in the Housing Fund came from the 2019 Sales Tax Revenue Bond, and stated the money was federally restricted to housing projects or redevelopment projects. He noted they would use $15 million of the Housing Fund balance for the City Park building. They would also use $8-$10 million for the Park

Avenue Reconstruction project. He explained the affordable housing, senior center, power substation, and aquatics would be funded by the Capital Fund balance.

Council Member Rubell asked if the $16.9 million designated for public/private partnerships within the Housing Fund was already committed to projects. Daenitz explained previously the funds were designated to certain projects, but now they proposed restructuring the affordable housing projects and creating more general projects. This would allow more flexibility when new opportunities arose. Daenitz stated the Housing Fund was in cash and not from bond proceeds which had so many restrictions.

Briggs reviewed the capital requests for recreation, including the City Park building, aquatics, MARC expansion, pickleball facility, and outdoor ice sheet. He displayed scenarios where the City would fund the City Park building and aquatics. Scenario A would bond for the other three projects, Scenario B pickleball and ice, Scenario C MARC expansion and ice, Scenario D MARC expansion and pickleball, and Scenario E just pickleball. He showed sample property tax increases for the scenarios.

Council Member Rubell asked what the useful season for outdoor ice was. Amanda Angevine, Ice Arena Manager, stated it would be November through March since the ice would be refrigerated and covered. Council Member Toly asked if they talked to Black Rock Mountain Resort concerning the proposed ice arena there. Angevine stated they expected to be open next year.

Mayor Worel opened the public hearing.

Joe Plumin, President of Park City Pickleball Club, stated he participated in the Recreation Advisory Board (RAB) recreation strategic plan. The pickleball club was pleased with the plan and asked the Council to support the plan and specifically the sports complex.

Betsy Wallace stated there was a $2.1 million increase in sales tax revenue this year because it was a big snow year and Sundance was back. She asked that Council figure out why the sales tax revenue increased. She didn't know why the budget request for a senior police officer was rejected, and stated safety was a concern. She also was concerned about balancing the budget by reducing the contingency fund and she encouraged the Council not to give away the contingency.

Greg Leitzke stated there was a lot of discussion around a recreation bond. He asserted there wasn't a lot of investment in recreational amenities, and he supported this recreation plan proposal. He also supported childcare.

Bill Humbert 84060, Library Board Chair, thanked the Council for the proposed budget and requested two full-time staff for the library. He stated to attract workforce, childcare must be affordable. He asked that Council support childcare to attract employees.

Geri Manning 84060, stated she was a pickleball player and it was disappointing that she couldn't play pickleball during the winter. She was in favor of the sports complex.

Diana Turlato, 84060, supported the pickleball facility and recreation plan. She moved here and met many people through this activity.

Ed Parigian stated he served on the RAB. He supported the sports complex and hoped voters would vote for it.

Sean Parker, 84060, proposed hiring a City architect for City projects. He also spoke about having more security considering recent nationwide incidents.

Mayor Worel closed the public hearing.

Council Member Gerber preferred not to have a General Obligation (GO) bond, but favored a partnership with the Pickleball Club to construct a sports complex. She preferred delaying the MARC expansion and ice sheet.

Council Member Rubell asked if the concerns from the National Ability Center (NAC) had been addressed. Matt Dias indicated the Recreation Department was working with NAC and the architects were working on sound mitigation efforts. Council Member Rubell supported Scenario E or maybe B. He indicated the Council was asking taxpayers how to spend the money.

Council Member Dickey supported Scenario A. Council Member Toly asked if RAB unanimously supported Scenario A, to which Briggs affirmed. Council Member Toly supported Scenario A. Council Member Rubell stated he was uncomfortable taking out a $30 million bond. He was also concerned for the neighborhood surrounding the MARC because of potential traffic and noise impacts from construction. He noted he could support Scenario D. Council Member Dickey stated there was a real need for these facilities and he thought the bond would pass if projects were bundled.

Briggs stated the bond question didn't have to be decided tonight. The tentative budget did not include the GO bond. They would be coming back to Council and could bring back additional information.

Council Member Gerber stated the RAB was focused on recreation, but they didn't focus on the needs of the general community. She stated there were pickleball players from all over and they should contribute to the facility instead of it all being on the backs of Park City residents.

Council Member Toly stated the Recreation Department played a big role in childcare, with camps and sports programs. Council Member Gerber indicated the City already had amazing recreation, and she asserted there were other needs as well.

Mayor Worel stated it was important Council Member Doilney be part of the conversation and asked to delay a decision on the GO bond.

Council Member Rubell thanked the Budget team for making the budget clear and concise. Mayor Worel stated the new process this year was beneficial. Council Member Gerber asked that $1.5 million be added to the budget as an earmark for childcare. Council Member Dickey wanted to continue discussing it before allocating funds. Council Member Toly agreed and noted Council could still fund it at any point. Council Member Rubell stated there were a lot of variables and once there was a way forward, the Budget team could find money for it.

Council Member Dickey moved to approve Ordinance No. 2023-23, an ordinance adopting a tentative budget for Fiscal Year 2024 for Park City Municipal Corporation and its related agencies and authorizing the computation of the property tax rate at a no tax increase rate, and set public hearings to consider adoption of the final budget on June 22, 2023, at a regular City Council Meeting. Council Member Toly seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Rubell, and Toly
NAY: Council Member Gerber
EXCUSED: Council Member Doilney

3. Consideration to Approve the 2023 Level Four Special Event Permit for the Park Silly Sunday Market (PSSM) Supplemental Plan:

Jenny Diersen, Special Events Manager, and Kate McChesney, PSSM Executive Director, presented this item. McChesney reviewed the changes for this year included 11 Sunday markets concluding September 24th. There would be non-amplified music until 1:00 p.m. and amplified music until 5:00 p.m. Nothing would be programmed along 5th Street. They would monitor Heber and Main to make sure it was secure for pedestrian crossings, and the vendors would not include importers.

Diersen stated there would no longer be a Car-Free Sunday so the trolley would return to Main Street. Existing signage would be enforced. Ninth Street through12th Street was for residents only. There would be no parking in several areas. Transit would run at 15-minute frequencies from the high school and at 40-minute frequencies from Richardson Flat. She asked about police presence in certain areas and pedestrian management.

Council Member Toly asked if the in-place mitigation could be reduced from three locations to a lower number, to which Diersen affirmed. Council Member Dickey asked

about the need to run the trolley. Diersen stated that was important to HPCA. The Transit Department supported it beginning again.

Mayor Worel opened the public hearing.

Ryann Satz stated consumers brought food and trash to the Marriott Plaza and she requested that trash cans be placed by the ramp and to keep all food in the PSSM area.

John Greenfield supported PSSM and noted there was a lot of traffic parked up Marsac and there were people wandering the neighborhood. He hoped officers were strategically placed. He stated PSSM was very flexible, especially because they agreed not to host the event on the July 4th weekend.

Mayor Worel closed the public hearing.

Council Member Toly asked if the police would monitor China Bridge to which Diersen stated no. She noted if Swede Alley was open, the police couldn't control the traffic. Council Member Toly asked why an officer should be at the box of rocks. Diersen stated there were a lot of complaints from residents that cars were going up Park Avenue. Patrol officers would also patrol the neighborhoods, but they wouldn't stop each car. Council Member Toly clarified where the Resident Only parking would be, and asked if the Main Street workers would be able to park there. Diersen stated Main Street employees would be discouraged from parking in those areas.

Council Member Dickey asked if pedestrian management at Heber and Swede was just to help pedestrians cross the street. Diersen stated a security guard would help people cross and deter traffic. Some of these options had been available during Car-Free Sunday. Council Member Dickey stated if the methods were tried and were good, he would want them to continue. Diersen indicated staff would like to be proactive and she asked for the measures. Council Member Rubell indicated he would follow the recommendation if it was important.

Council Member Gerber thought the biggest crowds were in July and the extra security was only needed then. Diersen stated a lot changed from previous years. She would rather be proactive. Council Member Gerber didn't think a box of rocks officer was needed. She didn't think the extra measures would be needed in September either. Council Member Toly thought there would be a lot of people coming in June and she felt it would be better to start with more security up front and taper if needed. The Council supported all the security proposals. Mayor Worel asked who would pay for it. Council Member Gerber stated the City should pay for it. The Council members agreed to have the City fund it.

Council Member Gerber moved to approve the 2023 Level Four Special Event Permit for the Park Silly Sunday Market Supplemental Plan with the additional mitigation efforts paid by the City. Council Member Dickey seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

4. Consideration to Approve a Level One Event for a Park City Pride Picnic to be Held on Sunday, June 25, 2023:

Jenny Diersen, Special Events Manager, and Joe Urankar and Virginia Solomon, LGBTQ+ Taskforce members, presented this item. Diersen explained events could not be added during peak times unless it was a community identifying event. Urankar stated the purpose of this event was to get together with likeminded folks. There would be a food truck and music. Solomon stated this event would attract about 100 people spread out over four hours and would be very low key. Diersen stated the group met the criteria and staff recommended approval.

Council Member Gerber asked if they were applying for any RAP tax grants, to which Urankar stated they were not applying for grants. Council Member Gerber stated the trend was events started small and then grew over the years and she cautioned them to grow small. There were grants that required advertising to bring more people to the community, and she didn't want that. Urankar confirmed they were scaling back the event this year.

Council Member Toly asked if there would be amplified music, to which Urankar stated yes, up to 80 decibels.

Mayor Worel opened the public hearing.

John Greenfield 84060 supported the event with music above 55 decibels.

Mayor Worel closed the public hearing.

Council Member Gerber moved to approve a Level One event for a Park City Pride Picnic to be held on Sunday, June 25, 2023. Council Member Rubell seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

5. Consideration to Approve Ordinance 2023-24, an Ordinance Approving the 593 Park Avenue Plat Amendment, Located at 593 Park Avenue, Park City, Utah:
Olivia Cvetko, Planner, presented this item, and indicated there was an ordinance combining the lots in 2009, but it was not recorded with the County Recorder. This request was consistent with other lots in the neighborhood.

Mayor Worel asked if the Planning Commission was looking at lot combinations as an Land Management Code (LMC) amendment. Rebecca Ward, Interim Planning Director, stated there was a pending ordinance for combining more than two lots. This lot met the current two-lot combination.

Mayor Worel opened the public hearing.

Angela Moschetta 84060 stated the lot combinations were decimating the community because it gave some the ability to build bigger homes. A big home on that lot did not fit with the rest of the area. At the Planning Commission meeting, there were some commissioners who were frustrated with lot combinations. Even though there was a unanimous positive recommendation, this did not seem to be something they were in favor of.

Mayor Worel closed the public hearing.

Council Member Gerber was happy the Planning Commission was having a lot combination discussion.

Council Member Gerber moved to approve Ordinance 2023-24, an ordinance approving the 593 Park Avenue Plat Amendment, located at 593 Park Avenue, Park City, Utah. Council Member Dickey seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

6. Consideration to Approve a Professional Services Agreement for Land Management Code Consultant Services with Lisa Wise Consulting, Not to Exceed $258,915, in a Form Approved by the City Attorney:
Rebecca Ward, Interim Planning Director, explained the Planning Commission reviewed and prioritized LMC amendments. All the code amendments were in progress internally. In addition, the State Legislature made changes to land use and there would need to be code amendments.

Ward stated two important amendments were related to affordable housing. Transportation demand management was also prioritized. As a result of the Council's priorities, an RFP was issued for a consultant. There was only one response, but it was

a very strong response. She noted firms that specialized in technical code amendments were sparse. References were checked and they said the staff was very familiar with mountain towns and community outreach was important to them. They facilitated several code amendments with regard to affordable housing and transportation. Lisa Wise Consulting proposed subconsultants, one of which was Cascadia, which helped Park City implement a code audit report in 2019. They also subcontracted with Fehr and Peers, and due to potential conflicts, they enlisted the Denver office instead of the Salt Lake City office.

Mayor Worel asked if the proposal included verification that the code amendments were in line with the updated General Plan. Ward stated this would be in sync with the Moderate Income Housing Plan. Council Member Dickey asked if the parking requirements were removed from the proposal and shifted to internal review. Ward affirmed that would be internal and it was a clean up project. The consultants would focus on affordable housing and transportation demand management. Regarding conflict of interest, Council Member Rubell stated the different office didn't remove the conflict. He asked what mechanisms could be put in place to make sure codes weren't recommended that would benefit other developments. Ward stated staff could do an additional agreement regarding the contract. Matt Dias stated the City Attorney could build additional protections into the agreement.

Mayor Worel opened public input for this item.

Angela Moschetta 84060, understood that the consultant would help clean up planning, zoning, and parking, and she favored it. She recommended it begin with a development moratorium so the most efficient product could be delivered.

Mayor Worel closed the public input period.

Mayor Worel stated the Planning Commission didn't feel it had the tools it needed to make decisions and she thought this was an investment in the LMC. Council Member Toly asked when work would start. Ward stated work would begin after the contract was signed and the amendments would be completed by November 20th. Council Member Gerber asked if the consultant would be available until the Planning Commission gave its recommendations or if it was until the amendment was approved by Council. Ward stated it was until the initial work session. Council Member Dickey suggested putting the code amendments first on the Planning Commission agendas.

Council Member Rubell moved to approve a professional services agreement for Land Management Code consultant services with Lisa Wise Consulting, not to exceed $258,915, in a form approved by the City Attorney. Council Member Toly seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

7. Consideration to Approve Ordinance 2023-25, an Ordinance Amending Title 3, Ethics, Chapter 3, Campaign Disclosure, of the Park City Municipal Code:

Michelle Kellogg, City Recorder, reviewed that three campaign disclosure amendments were made in the City code to align with State code. These included an additional disclosure due 28 days prior to the General Municipal Election, a 24-hour grace period for late campaign disclosure submissions, and notifying candidates 35 days prior to the election of the disclosure due dates. She noted the additional disclosure 28 days prior to the General Election would be made public prior to ballots being mailed to voters.

Mayor Worel asked when campaign finance disclosures were due prior to the State code change, to which Kellogg indicated they were due seven days before the Primary and General Elections as well as 30 days after the General Election.

Mayor Worel opened the public hearing. No comments were given. Mayor Worel closed the public hearing.

Council Member Rubell thought the amendments were a great improvement for transparency.

Council Member Rubell moved to approve Ordinance 2023-25, an ordinance amending Title 3, Ethics, Chapter 3, Campaign Disclosure, of the Park City Municipal Code. Council Member Gerber seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

Council Member Toly moved to close the meeting to discuss property at 8:43 p.m. Council Member Gerber seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

CLOSED SESSION

Council Member Toly moved to adjourn from Closed Meeting at 9:30 p.m. Council Member Rubell seconded the motion.

RESULT: APPROVED
AYES: Council Members Dickey, Gerber, Rubell, and Toly
EXCUSED: Council Member Doilney

VII. ADJOURNMENT

With no further business, the meeting was adjourned.

_____
Michelle Kellogg, City Recorder

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Public Utilities
Item Type: Staff Report
Agenda Section: CONSENT AGENDA

Subject:
Request to Authorize the City Manager to Execute a Contract with Jacobs Engineering Group Inc. for a Water Quality Consultant for 3Kings Water Treatment Plant, Not to Exceed $145,340.00, in a Form Approved by the City Attorney

Suggested Action:

Attachments:
3Kings WTP Water Quality Consultant Staff Report
Exhibit A: 3Kings WTP Water Quality Consultant Scope of Work

City Council Staff Report

Subject: 3Kings Water Treatment Plant Water Quality Consultant Services Contract with Jacobs Engineering Group
Author: Michelle De Haan, Water Quality and Treatment Manager
Department: Public Utilities
Date: June 1, 2023
Type of Item: Administrative

Recommendation
Authorize the City Manager to execute a contract with Jacobs Engineering Group Inc. that does not exceed $145,340.00.

Background
Park City Public Utilities Department requires 3Kings Water Treatment Plant (WTP) water quality consultant services from Jacobs Engineering Group (Jacobs) including commissioning, operational start-up support, and as-needed on call services. This contract phase is typical upon completion of construction of complex water treatment plants. Jacobs was the designer, provided on-site engineering support during construction, and is best suited to provide these services based on their team's intimate knowledge of the design intent and operational requirements.

With continual support from City Councils and Mayors for nearly a decade, Public Utilities negotiated with the Utah Division of Water Quality (DWQ) an Amended Stipulated Compliance order and associated permits to treat Judge and Spiro Tunnel waters by January 1, 2024, which resulted in design and construction of the 3Kings WTP. 3Kings WTP is one of the more complex water treatment plants in the U.S. The design incorporates more treatment processes than most drinking water plants with removal of metals from the tunnel waters and includes surface water treatment pathogen removal that will achieve compliance with Utah Division of Drinking Water (DDW) regulatory requirements and DWQ permits. In 2015, Jacobs engineers and Park City water quality experts began collaborating on the 3Kings WTP with a desk-top analysis that identified possible treatment strategies followed by nine months of pilot testing and thereafter design of the selected process trains. Over the last three years spanning a pandemic and the longest winter in history, Alder Construction and many supporting subcontractors are nearing completion of construction. Our operators have been working side by side with them and the Jacobs team to ensure we are ready for start-up.

3Kings WTP has been designed and constructed to significantly improve Park City's drinking and stream water quality and provides additional capacity that secures the community's long-term water treatment capacity requirements. We are extremely proud that we have completed construction of this important community asset and are excited to be delivering high quality water this summer. Our team of highly qualified operators and scientists have been preparing for and are extremely excited about start-up. We

anticipate a heavy workload initially with continued support from Jacobs as we start-up and optimize operations. Thereafter, we are confident that our highly skilled operations team will be fully trained and able to operate the plant independently.

Following successful commissioning Jacobs is also well positioned to assist staff with additional regulatory support as follows.

- 3Kings WTP Demonstration of Performance (DOP) support: When construction is complete and initial water quality testing results meet regulatory requirements, DDW will issue a Conditional Operating Permit that will include their approval to begin delivery of drinking water to the water system. Thereafter, DDW is requiring that a DOP be performed following start-up to further validate protection of public health specifically as it relates to proving pathogen reduction can be accomplished with an alternative filter media that was selected for metals removal. DDW approved pilot testing results demonstrated performance with criteria known at that time; however, DDW staff are requiring additional information be provided at full-scale to further validate past approvals. Jacobs will review the associated DOP test plan that is being developed by a specialty water quality consultant, Water Quality and Treatment Solutions, Inc, and testing results performed by our scientists and operators, and assist in applying for a final Operating Permit.
- 3Kings WTP Capacity Increase Rerate: After start-up Jacobs will reevaluate the plant capacity based on final construction and assess the potential to increase the approved plant capacity above the original design rating of 7.2 Million Gallons per Day (MGD). If increased capacity can be realized Jacobs will support the City's application to DDW to increase the official capacity which would in turn provide the City with more resiliency to treat additional tunnel water during wet years.

Procurement Considerations

- Consistent with purchasing policies, staff advertised a Request for Statements of Qualifications for Water Quality Consultant Services including drinking water related services.
- An approved vendor list has been developed from SOQs received and individual Design Professional Service Agreements will be issued upon need for services.
- Jacobs is on the approved vendor list and their services are needed beginning in Summer 2023 after completion of 3Kings WTP construction.
- This contract is structured as as-needed time and material contracts, and actual expenditures on the contracts will depend on the level of effort required.
- The award for Jacobs Engineering Group, Inc. will be $145,340.00. If in the future additional funds are required to support start-up of 3Kings WTP or for other 3Kings WTP on-call support, change orders may be pursued consistent with the City purchasing policy.

Funding
This funding is out of the adopted water operations and CIP budgets funding.

Exhibits
Exhibit A Scope and Fee

EXHIBIT "A"
SCOPE OF SERVICES

3Kings Water Treatment Plant – Water Quality Consultant Services
Jacobs Engineering Group Inc., Scope of Services

3Kings Water Treatment Plant – Water Quality Consultant Services

This Scope of Services is to the PROFESSIONAL SERVICES AGREEMENT (AGREEMENT) between Park City Municipal Corporation ("City") and Jacobs Engineering Group Inc. ("Jacobs", or "ENGINEER"). This Scope of Services is for Water Quality Consultant Services for the 3Kings Water Treatment Plant ("3KWTP") Project.

Scope of Services

The services provided are categorized into the following tasks:

Task 1 – Demonstration of Performance Support
Task 2 – Plant Re-Rate and Other On-Call Activities
Task 3 – Post-Startup Optimization
Task 4 – Operational Support Services
Task 5 – Commissioning Services - Engineering Support
Task 6 – Project Management

Task 1 – Demonstration of Performance Support

The work for this task consists of water quality consultant services for the 3KWTP following the construction period in support of the City's Demonstration of Performance (DOP) for the Utah Division of Drinking Water (DDW).

To address DDW's mid-project revisit of the prior construction plan approval related to the 3KWTP process facilities, specifically pressure filters, provide water quality consultant services to include providing supporting documentation as the design engineer, meeting with DDW and the City, support for implementation of best management practices (BMP) measures, and support of approaches for Demonstration of Performance (DOP).

The DOP will be conducted after DDW's issuance of a 3KWTP Operating Permit with related consulting services being provided over the anticipated one-year DOP performance period. ENGINEER will review protocols prepared by the City, participate in meetings with the City and DDW (as required), review data, and review summary documentation prepared by the City.

Level of Effort Basis: It has been assumed that the ENGINEER will perform up to 80 hours of DOP support for this task.

Task 2 – Plant Re-Rate and Other On-Call Activities

The work for this task consists of Jacobs services for the 3KWTP following the construction period in support of the City's intent to request a re-rate of the plant's finished water delivery capability for review and approval by DDW. The work will include engineering calculations, computational fluid dynamics (CFD) model updates, and updating of Basis of Design Report information. The work for this effort assumes 120 hours of Jacobs' time.

The work for this task also includes 40 hours of Jacobs' time for other on-call activities that may not yet be identified but that will allow the City to investigate and resolve issues related to 3KWTP capacity, capabilities, and other needs in the interest of the City.

Task 3 – Post-Startup Optimization

This task was previously approved as part of Construction Engineering Services, but was then de-scoped from that Agreement to be included in Water Quality Consultant Services instead.

Following 3KWTP startup and potable water production, Jacobs will work with City on post-startup optimization of the treatment facilities. For this task, Jacobs will lead coordination efforts with City staff, as well as vendors of equipment systems as necessary, to optimize identified unit processes and equipment items. Jacobs, in close coordination with City staff, will develop an optimization task list with optimization goals and strategies for each item. A sampling of potential optimization opportunities includes:

- Reduction of the target pH (less than 8.2) through flocculation and sedimentation if production is mostly for potable water.
- Polymer selection, dose locations, and performance.
- Adsorber System Optimization
    - Bypass fraction to optimize bed life and meet metals removal levels.
    - pH setpoint and dechlorination – cost optimization based on actual chemical doses and bed life projections.
- Filter Press System Optimization
    - Cycling time, polymer dosing, and pre-coat to optimize dewaterability of solids, ease of operation, and truck traffic.
    - Filtrate recycling to gravity thickeners or to sewer discharge.

There are opportunities to conduct many of these optimization evaluations using Jacobs' Replica model. Optimizing costs associated with chemical usage or bypass fractionation around adsorbers to preserve the bed life of the titanium dioxide media are ideal examples.

Some of the optimization items listed above will require side-by-side jar testing or controlled full-scale trials. The City will conduct all jar testing or full-scale trials as part of this task.

Level of Effort Basis: It has been assumed that the ENGINEER will perform up to 40 hours of optimization modeling, support, and analysis for this task.

Task 4 – Operational Support Services

This task was previously approved as part of Construction Engineering Services, but was then de-scoped from that Agreement to be included in Water Quality Consultant Services instead.

The ENGINEER will provide operational support services to support the City over the first twelve months of full-scale 3KWTP operation, including treatment process and building related operations. This support will be in response to specific requests from the City's PM or Lead Operator.

Level of Effort Basis: It has been assumed that the ENGINEER will perform up to 160 hours of operational support services during the first twelve months of full-scale 3KWTP operation.

Task 5 – Commissioning Services – Engineering Support

This task was previously approved as part of Construction Engineering Services, but was then de-scoped from that Agreement to be included in Water Quality Consultant Services instead.

The ENGINEER will provide engineering support services to support the City upon request over the first twelve months after the end of Construction. These services include warranty support. ENGINEER will assist OWNER in consultations and discussions with CM/GC concerning correction of any such defects and make recommendations as to replacement or correction of defective Work, if any.

Level of Effort Basis: It has been assumed that the ENGINEER will perform up to 132 hours of engineering support services during the first twelve months of full-scale 3KWTP operation.

Task 6 – Project Management

The purpose of this task is to provide for the initiation and overall management of project activities. An overall work plan will be prepared and implemented so that work activities are completed in a properly integrated and timely manner. In addition, this task includes those elements necessary to manage, lead, and control the project execution, invoicing, report, and close-out.

Assumptions

The assumptions used in developing this Scope of Services and fee for Jacobs' services consist of the following assumptions:

- The City and/or Jacobs will give prompt notice whenever it is observed or becomes apparent that a development may affect the scope, cost, or timing of the Project. The City and Jacobs must mutually agree on adjustments to Jacobs' cost and schedule based on changes to the Scope of Services or the provision of additional services.
- Information and data provided by the City are accurate and reliable.
- City acknowledges and agrees that in the performance of the Services, Jacobs may utilize its proprietary data, concepts, methods, techniques, processes, protocols, ideas, inventions, know-how, trade secrets, algorithm, software, works of authorship, software and hardware architecture, databases, tools, other background technologies and standards of judgment that Jacobs developed or licensed from third parties prior to the Effective Date (the "Pre-Existing Technology"). Subject to the terms and conditions of the Agreement, Jacobs hereby grants to the City a non-exclusive, non-transferable, royalty-free license under Jacobs' Intellectual Property Rights to utilize the Pre-Existing Technology for the purpose of the City's Project. The City shall not, and shall not allow any third party to: (i) modify or otherwise create derivative works of the Pre-Existing Technology; (ii) use the Pre-Existing Technology for any other purpose, other than the City's Project; (iii) make, have made, use, reproduce, license, display, perform, distribute, sell, offer for sale, service, support, or import any product that incorporates, embodies and/or is based upon the Pre-Existing Technology; (iv) sublicense, distribute or otherwise transfer to a third party any of the Pre-Existing Technology by itself or as incorporated into software or hardware; or (v) reverse engineer, disassemble, decompile or attempt to derive the source code or underlying ideas or algorithms of the Pre-Existing

Technology. Any additional use of the Pre-Existing Technology shall require a separate written license agreement.

- The City will make its facilities accessible to ENGINEER, as required for ENGINEER's performance of its services.
- In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the Project, Jacobs has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate Project cost or schedule. Given the uncertainty with market conditions and other factors that affect cost, Jacobs makes no warranty that the City's actual costs will not vary from the cost estimates.
- If the schedule is extended, or if the assumptions listed herein do not hold, an additional Addendum would be required to extend the services commensurate with the schedule extension.

Schedule

The activities and deliverables associated with this Scope of Services will be completed in accordance with the following approximate schedule:

- All tasks described herein, completed – June 30, 2026

EXHIBIT "A" CONTINUED

3Kings Water Treatment Plant – Water Quality Consultant Services
Jacobs Engineering Group, Inc., Fee Schedule

Compensation

Compensation by the City to Service Provider will be as follows and as described in Table A-1.

Cost Reimbursable Per Diem (Time and Materials)

All items specifically included in this Additional Scope of Services shall be performed on a Time and Materials basis. All Time and Materials work shall be paid at the Per Diem Rates referenced in Table A-2, plus Direct Expenses.

Per Diem Rates

Per Diem Rates are those hourly rates that will be charged as described above on the Project by Service Provider's employees of the indicated classifications. The Per Diem Rates for this Project are listed in Table A-2. These rates are subject to revision for other projects and annual calendar year adjustments; include all allowances for salary, overheads and fees; but do not include allowances for Direct Expenses, subcontracts and outside services.

Direct Expenses

Direct Expenses are those necessary costs and charges incurred for the Project including, but not limited to: (1) the direct costs of transportation, meals and lodging, mail, and equipment and supplies; (2) Service Provider's current standard rate charges for direct use of Service Provider's vehicles, printing and reproduction services, and certain field equipment; and (3) Service Provider's standard project charges for computing systems, special health and safety requirements of OSHA, and telecommunications services.

EXHIBIT “A” Continued

TABLE A-1. Fee Estimate

Description	Fee
Task 1 – Demonstration of Performance Support	$19,877
Task 2 – Plant Re-Rate and Other On-Call Activities	$35,148
Task 3 – Post-Startup Optimization	$10,484
Task 4 – Operational Support Services	$34,926
Task 5 – Commissioning Services – Engineering Support	$30,664
Task 6 – Project Management	$14,241
TOTAL FEE	$145,340

EXHIBIT "A" Continued

TABLE A-2. Per Diem Rate Schedule and Direct Expenses

Jacobs Engineering Group Inc. will use the following rate schedule for the project for calendar year 2023. Services will be billed on a time and expense basis with labor at the specified hourly or daily Per Diem rates plus direct expenses incurred on the Project.

Functional Category	Representative Personnel	Hourly Rate
Senior Program Manager		$340
Program Manager		$330
Principal Project Manager/Technology Fellow	Paul Swaim	$320
Senior Principal Technologist		$295
Senior Project Manager	Joe Schlaepfer	$285
Principal Technologist	Joseph Zalla, Scott Morrison, Jay Hardison	$275
Senior Technologist	Manika Gupta, Lee Sears, Jeff DenBleyker	$260
Associate Project Manager/Project Engineer	Geoff Kirsten, Tyler Nading, Dennis Thomas, Michael Hwang	$220
Associate Engineer/Architect	Stephanie McGregor	$200
Intermediate Engineer/Architect	Sean Menk, Scott Hoffman, Jeff Pitts, Jennifer Liggett	$170
Junior Engineer/Architect	Erinn Kunik, Mitchell Rasmussen, Agnes Marszalik	$145
Entry Engineer/Architect	Naushita Sharma	$125
Senior/Specialist Technician		$145
Career Technician		$125
Entry/Intermediate Technician/High-Value Design Center Staff/CMMS Data Entry		$100
Specifications Processor/Project Controls	Ranae Decker	$130
Career/Senior Office Administration Support		$110
Entry/Intermediate Office Administration Support		$95

Per Diem rates include allowances for salary, payroll taxes, fringe benefits, overhead, and profit, but do not include allowances for Direct Expenses. These rates are effective through December 31, 2023, and are subject to annual calendar year adjustments thereafter. A premium of 25 percent shall be added to the above rates for Expert Witness and Testimony services

Standard Expenses

Expense Type	Rate
Health and Safety Assessment*	$1.75 / hour
Auto Mileage	Current IRS Rate
Auto Rental	Actual
Other Travel	Actual
Equipment Rental	Actual
Postage/Freight	Actual
Subcontractors and Outside Services	Actual + 10%

** Assessment applies to all Health and Safety trained individuals. Standard Expenses are charges directly incurred on the project as well as Jacobs' current standard rate charges for services such as photocopies, special health and safety requirements of OSHA, etc.*

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Public Works Administration
Item Type: Staff Report
Agenda Section: CONSENT AGENDA

Subject:
Request to Approve the 2023 Pavement Management Bids and Authorize the City Manager to Enter into Agreements in a Form Approved by the City Attorney's Office with: Morgan Pavement Maintenance for Type II Slurry Seals, Sealcoat of Trails, and Crack Sealing in the Amount of $247,066.49; and Morgan Asphalt, Inc. for Rotomilling, Pavement Overlays, and Utility Adjustments in the Amount of $1,174,764.88

Suggested Action:

Attachments:
2023 Pavement Management Program Staff Report
Exhibit A: 2023 Pavement Map
Exhibit B: 2023 Pavement Management RFP
Exhibit C: 2023 Pavement Management Bid Packet Submissions from Recommended Bidders
Exhibit D: 2023 Pavement Management Bid Result Matrix

City Council Staff Report

Subject: 2023 Pavement Management
Author: Troy Dayley
Casey Coleman
Department: Public Works
Date: June 1, 2023
Type of Item: Administrative

Summary Recommendation

Accept the 2023 Pavement Management bids and authorize the City Manager to enter into agreements in a form approved by the City Attorney's Office with:

1. Morgan Pavement Maintenance for Type II Slurry Seals, Sealcoat of Trails, and Crack Sealing in the amount of $247,066.49.
2. Morgan Asphalt, Inc. for Rotomilling, Pavement Overlays, and Utility Adjustments in the amount of $1,174,764.88

Executive Summary

Our typical annual pavement management program includes approximately 5,000 tons of Hot Mix Asphalt (HMA), 80,000 square yards of Slurry Seal, and 33 tons of Crack Seal. Based on the current conditions of our road network, staff has determined that an increase is necessary for the 2023 Pavement Program.

To focus on current road degradation from extensive freeze-thaw events in Winter 2022-23, this year's recommendation includes the addition of approximately 3,500 tons of HMA and 32,000 square yards of Slurry Seal.

These changes represent an overall increase of 50% in pavement treatments from our typical program.

Background

Pavement Management is a critical part of maintaining our transportation network including infrastructure integrity and quality of street surfaces. The purpose of the Pavement Management Program is to extend pavement life while reducing the overall lifecycle cost. To increase cost-effectiveness, sealing and overlay maintenance is applied when the pavement is still in fair condition, minimizing the need for costly road reconstruction.

Pavement is rated using a Remaining Service Life (RSL) scale ranging from 20-0 years of remaining life. Newly paved roads receive an RSL of 20 years and degrade each year thereafter. Pavements typically deteriorate exponentially after year 10. A roadway may lose as much as 1.25%-1.50% RSL depending on its classification annually. Our pavement management program calculates annual maintenance to maintain an average RSL of 10 years or higher.

Remaining Service Life (RSL) Scale

Years of RSL	Maintenance Category	Recommended Maintenance
5-18	Minimal	Crack sealing
12-15	Some	Minor patching, fog seals, slurry seals and crack sealing
8-11	Routine	Thin overlays or slurry seals and micro seals
4-7	Increasing	Thicker overlays or possible reconstruction
0-4	High	Surface or base reconstruction, possibly subgrade stabilization or total reconstruction

Internal pavement condition inspections occur annually to identify the overall condition of Park City's roadways. Additionally, every three (3) years an independent contractor is hired to complete a street condition assessment. Following this year's pavement program, a comprehensive review of our street network will be performed. The contractor will provide a recommendation to update the current condition ratings of each street. Currently, our average RSL of all Park City pavements is approximately 9.38 years, a projected decrease from last year.

During the 2022-23 winter Utah experienced one of the heaviest snowfalls on record. The above average moisture coupled with significant temperature swings facilitated widespread freeze-thaw events, resulting in a considerable amount of potholing throughout the city. Staff's recommendation includes an approximate increase of 50% in pavement treatments to address the consequences from the significant snowfall. Additionally, the remaining potholes will be addressed by internal staff throughout the summer.

Analysis

An Invitation for Bid procurement process was advertised in the following places: Park Record, Salt Lake Tribune, the City webpage, the Utah Public Procurement Place webpage, and the State Official Public Notices webpage; and posted at the Public Works Buildings, Marsac City Hall, Summit County Library, Summit County Courthouse, and Kamas Food Town, in accordance with State Class C Road Funding requirements.

Pavement Overlays, Rotomilling and Utility Adjustments

The pavement management program identified 8,507 tons of asphalt to be applied to our streets as part of the overall strategy. Adjustments must be made to lower manholes, water valves, gas valves, and monument markers prior to an overlay, due to the rotomilling process. Rotomilling in 2023 is projected to be approximately 582,624 square feet. Contractors will return utilities to the same grade as the new pavement surface after the process is complete. This year, approximately 31 water valves/survey monuments and 82 manholes have been identified for adjustment.

Slurry Seal

Applied to existing asphalt, once the street is cleaned, slurry and aggregate material are mixed together and then applied from the back of a large truck using a screed to create a thin layer of material. Slurry is made from emulsified asphalt (a mixture of oil and fine sand aggregate). This year, staff has identified 112,572 square yards of slurry seal.

Crack Seal
Crack seal is an excellent way to prolong pavement life by sealing the surface cracks to prevent water penetration on pavements which are in relatively good condition. This program will apply 15 tons of crack seal to various city streets and 3 tons of crack seal to bike paths.

Sealcoat Trails
Certain bike paths have been identified to receive a total of 9,880 square yards of Tuffcoat P+ Seal as part of the overall pavement management strategy.

Trail Pavement Overlays
Staff have identified specific bike paths within the city to receive a total of 238 tons of asphalt to be applied.

Bid Results
There were 3 bids received for slurry seals, 5 bids for sealcoating of trails, 5 bids for street overlays, and 4 bids for crack sealing.

Slurry Seals

Morgan Pavement Maintenance	**$159,289.38 (Recommended)**
Asphalt Preservation	$206,006.76
M&M Asphalt Services	$225,144.00

Seal Coat Trails

Morgan Pavement Maintenance	**$17,775.11 (Recommended)**
Staker & Parsons Companies	$18,278.00
Kilgore Companies	$21,143.20
Asphalt Preservation	$28,948.40
M&M Asphalt Services	$29,640.00

Asphalt Overlays

Morgan Asphalt, Inc.	**$1,174,764.88 (Recommended)**
Granite Construction Company	$1,192,470.42
Staker & Parsons Companies	$1,277,677.88
Black Forest Paving	$1,316,944.85
Kilgore Companies	$1,409,848.92

Crack Sealing

Morgan Pavement Maintenance	**$70,002.00 (Recommended)**
Asphalt Preservation	$74,160.00
M&M Asphalt Services	$90,000.00
Kilgore Contracting	$110,266.38

Department Review
Pavement program was reviewed by the Public Works, Legal, and Engineering Departments.

Funding Source

This program is funded by the Pavement Management CIP Fund. Each year, a small percentage of funding is held for emergency use (heavy snowfall, sink holes, crude oil price increases, etc.). As of July 1, 2023, the total fund balance is anticipated to be: $1,682,768.00.

Total cost to complete the 2023 Pavement Management Program: $1,421,831.37
Allocation sources are as follows:

$410,000.00 - Utah Class C Road Fund
$940,025.26 - General Fund
$ 71,806.11 - Walkability Maintenance

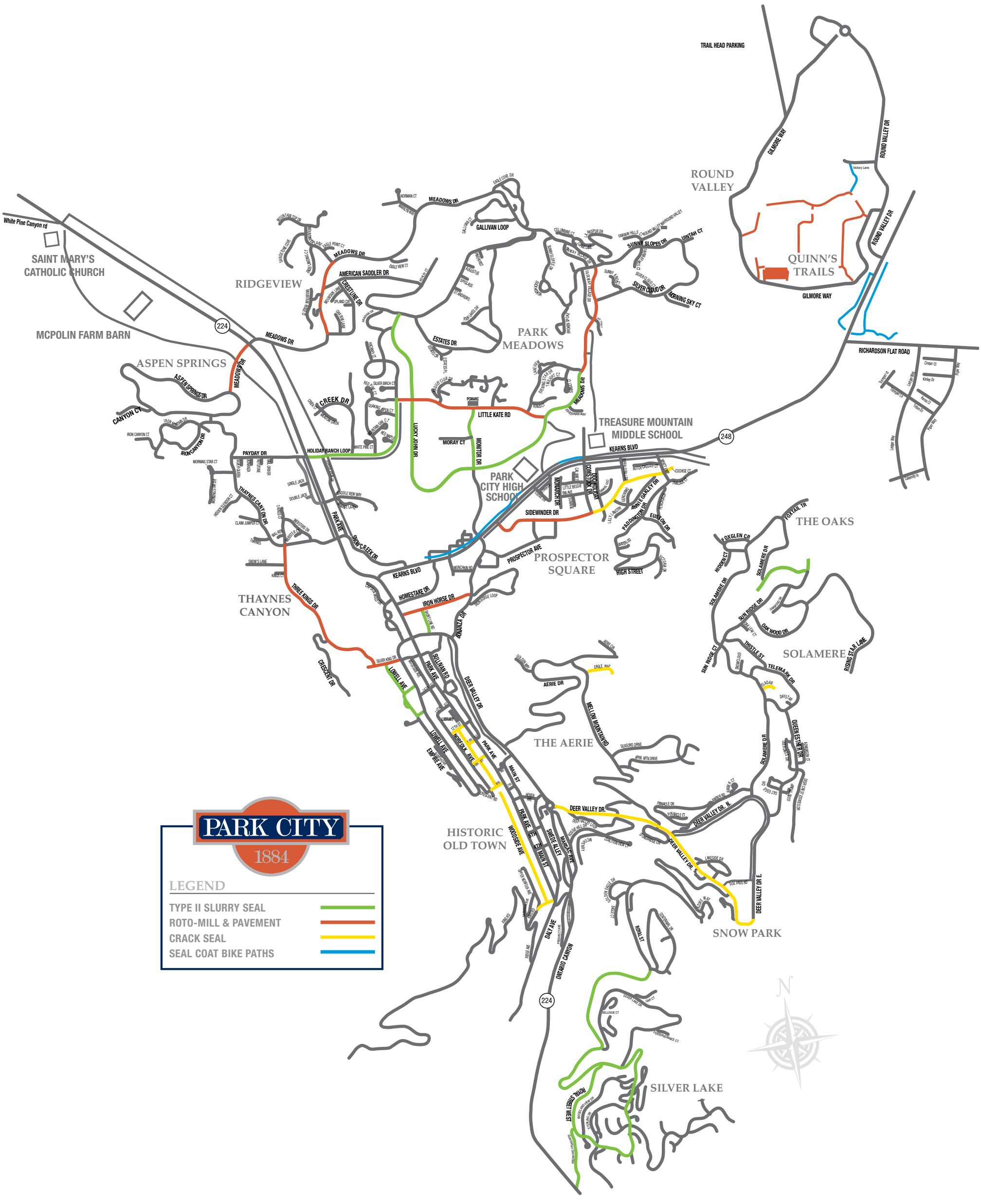
Exhibits

Exhibit A: 2023 Pavement Map
Exhibit B: 2023 Pavement Management RFP

- Includes:
  - Detailed list of street treatments
  - Professional Services Construction Agreement
  - Addendum 1: Submission of Bid Security

Exhibit C: 2023 Pavement Management Bid Packet Submissions from Recommended Bidders in Combined PDF
Exhibit D: 2023 Pavement Management Bid Results Matrix

2023 PAVEMENT MANAGEMENT PROGRAM



ADDENDUMS WILL BE POSTED ON THE WEBSITE.
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REGULARLY CHECK THE WEBSITE FOR ANY NEW ADDITIONS.

2023 PAVEMENT MANAGEMENT

PARK CITY, UTAH

SLURRY SEAL TYPE II,
SEALCOAT BIKE PATHS,
PAVEMENT OVERLAYS, ROTOMILLING, UTILITY ADJUSTMENTS,
AND CRACK SEALS
2023

OWNER
PARK CITY MUNICIPAL CORPORATION
1053 IRON HORSE DRIVE
PO BOX 1480
PARK CITY, UTAH 84060

Table of Contents

BIDDING DOCUMENTS

BID SCHEDULE A SLURRY SEALS TYPE II
B SEALCOAT BIKE PATHS
C PAVEMENT OVERLAYS, ROTOMILLING, AND UTILITY ADJUSTMENTS
D CRACK SEALS

APPENDIX A

BID PROPOSAL

SUBCONTRACTORS LIST

INVITATION TO BID

INSTRUCTIONS TO BIDDER

BID BOND

CONTRACTUAL DOCUMENTS

PARK CITY CONSTRUCTION AGREEMENT – Exhibit "A" attached hereto.

PERFORMANCE BOND

LABOR AND MATERIAL PAYMENT BOND

PROCEDURAL DOCUMENTS

NOTICE OF AWARD

NOTICE TO PROCEED

CERTIFICATE OF SUBSTANTIAL COMPLETION

PARK CITY MUNICIPAL CORPORATION
INVITATION TO BID
SLURRY SEALS TYPE II, SEALCOAT BIKE PATHS, ROTOMILLING, PAVEMENT OVERLAYS, UTILITY ADJUSTMENTS, AND CRACK SEALS
2023

PROPOSALS DUE AND PROPOSALS OPENING: **Bids must be submitted electronically through Utah Public Procurement Place (U3P) by 10:00 a.m. MST, on Tuesday, May 9, 2023. No proposals will be accepted through the system after 10:00 a.m. MST. Bids will then be publicly opened at 10:05 a.m. on Tuesday, May 9, 2023, at the Public Works East Building, 1053 Iron Horse Drive, Park City, UT 84060.**

PROJECT NAME: 2023 PAVEMENT MANAGEMENT
SLURRY SEAL, SEALCOAT BIKE PATHS, ROTOMILLING, PAVEMENT OVERLAYS, UTILITY ADJUSTMENTS, AND CRACK SEALS

PLANS AVAILABLE FOR CONTRACTORS: **On the Utah Public Procurement Place website by 12:00 p.m. MST, Wednesday, April 19, 2023. Event Number: PCMC202322105**

PRE-BID MEETING: At **11:00 a.m. MST, Wednesday, May 3, 2023,** at the Public Works East office, 1053 Iron Horse Drive, Park City, UT 84060. It is highly recommended for all Bidders to attend; however, it is **MANDATORY** for Contractors who have not provided services to Park City Municipal Corporation within the last three (3) years to attend.

PROJECT LOCATION: Park City, Utah 84060

PROJECT DESCRIPTION: Project includes four (4) bid schedules. The bidder may bid on one (1) or more of these schedules. Each schedule is to be bid as a complete project within the specifications attached herein. Project completion deadline for each bid schedule will vary as listed in Section 7 of the Construction Agreement.

Advertised April 19 – May 9, 2023 in the following locations:

1. Available on the Park City website at parkcity.org.
2. Available on the Utah Public Procurement Place website at https://bids.sciquest.com/apps/Router/PublicEvent?CustomerOrg=StateOfUtah.
3. Available on the State Official Public Notices website at https://www.utah.gov/pmn/.
4. Posted at Park City Municipal Corporation City Hall, 445 Marsac Ave, Park City, UT 84060
5. Posted at Summit County Library, 1885 W Ute Blvd, Park City, UT 84098
6. Posted at Park City Public Works East and West Buildings, 1053 Iron Horse Drive, Park City, UT 84060
7. Posted at Kamas Food Town, 145 W 200 S, Kamas, UT 84036
8. Posted at Summit County Courthouse, 60 N. Main Street, Coalville, UT 84017

Advertised in the Park Record on April 22, April 29, and May 6, 2023
Advertised in the Salt Lake Tribune on April 23, April 30, and May 7, 2023

Schedule	Description	
A	**Slurry Seals Type II approximately**	**112,572 sq. yd.**
B	**Sealcoat Bike Paths approximately**	**9,880 sq. yd.**
C	**Pavement Overlays**	
	Street Overlays approximately	**8,507 tons**
	Bike Path Overlays approximately	**238 tons**
	Street Rotomilling approximately	**582,624 sq. ft.**
	Utility Adjustments	
	Manholes	**82 ea.**
	Water valves/survey markers	**31 ea.**
D	**Crack Seal**	**18 tons**

OWNER'S OPINION OF PROBABLE CONSTRUCTION COST: 2023 - **$1,507,709.25**

(Includes slurry seal, sealcoat bike paths, pavement overlays, rotomilling, utility adjustments, crack seals)

OWNER:	Park City Municipal Corporation
PROJECT MANAGER/CONTACT:	Troy Dayley Public Works Director P.O. Box 1480 1053 Iron Horse Drive Park City, UT 84060 troy@parkcity.org
QUESTIONS:	**All questions regarding this RFP must be submitted in writing on the Utah Public Procurement Place (U3P) website by 10:00 a.m. MST, Friday, May 5, 2023. Please read the Questions Section available through U3P before submitting a question because your question may have already been addressed. Please do not submit the same question multiple times.**

A bid bond in the amount of five percent (5%) of the total bid is required at the time of bidding. Payment and Performance bonds in the amount of one hundred percent (100%) of the total bid will be required. Bid security must be delivered in a sealed envelope in person to Park City Public Works, Attn: Troy Dayley, Public Works East Building, 1053 Iron Horse Drive, Park City, Utah 84060 prior to 10:00 a.m. on Tuesday, May 9, 2023. A photocopy or facsimile transmission of bid security will not be accepted. Park City Municipal Corporation reserves the right to reject any and all proposals for any reason. Bids will remain valid for ninety (90) days after bid opening but cannot be withdrawn for forty-five (45) days. All submittals shall be public records in accordance with government records regulations ("GRAMA") unless otherwise designated by the applicant pursuant to UCA § 63G-2-309, as amended. Award of contract is subject to approval by City Council, which is anticipated to be prior to June 2, 2023. Proposals lacking required information will not be considered. Park City Municipal Corporation reserves the right to change any dates or deadlines related to the bid submittal process. Successful bidder will be required to enter into Park City's standard Construction Agreement in a form approved by the City Attorney, a copy of which is attached hereto as **Exhibit "A"** and incorporated herein.

In the event of difficulty submitting electronically, proposals can be dropped off to the City Recorder, located at 445 Marsac Avenue, Third Floor – Executive Department, Park City, UT 84060. Proposals submitted through the City Recorder should be received on a zip drive. No paper copies should be submitted.

IMPORTANT DATES:

Plans Available for Contractors (On U3P Website) –	**By 12:00 PM MST, Wednesday, April 19, 2023**
Pre-bid Meeting (In Person)–	**At 11:00 AM MST, Wednesday, May 3, 2023** **At Public Works East Building** **1053 Iron Horse Drive, Park City, UT 84060**
All questions due (On U3P Website) –	**By 10:00 AM MST, Friday, May 5, 2023**
Proposals Due (On U3P Website) –	**By 10:00 AM MST, Tuesday, May 9, 2023**
Bid Opening (In Person) –	**At 10:05 AM MST, Tuesday, May 9, 2023** **At Public Works East Building** **1053 Iron Horse Drive, Park City, UT 84060**

BID SCHEDULE A: <u>SLURRY SEALS TYPE II 2023</u>

In compliance with Park City Design Standards, Construction Specification and Standards Slurry Seal work shall consist of: Type II Slurry Seal coating, protecting crosswalks, meter lids, survey monuments etc. by covering prior to installation of slurry, and cleaning, drying, and sealing with material as outlined above.

ITEM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT COST	PRICE
1.	Slurry Sealing Streets Type II	**<u>112,572 sq. yd.</u>**	$_____	$_____

BID SCHEDULE – <u>A</u>

Note: See Appendix A for schedule of Slurry Seals.

1. All slurry seal areas with striping or crossings shall be marked for future striping to be completed by owner.

2. All water meter, survey, storm drain inlets, and manhole lids shall be protected from slurry prior to application. Protection covers shall be removed when slurry is dry.

3. All adjacent homeowners / businesses shall receive two (2) notices of work to be completed; a seven (7) day advanced notice followed by a twenty-four (24) hour notice. All notices must be approved by the City prior to distribution.

4. All traffic control is to be supplied by contractor such as signs and flaggers to be utilized in all locations work is being performed according to MUTCD standards.

5. All slurry seal coat will contain a minimum of three percent (3%) LMCQS-1H.

6. Bidder is responsible to obtain Right of Way permits. Permit fees will be waived by Park City.

By: _____ Date: _____

Print Name: _____ Title: _____

Company: _____

BID SCHEDULE B: SEALCOAT BIKE PATHS 2023

In compliance with Park City Design Standards, Construction Specification and Standards Seal Coating work shall consist of: Tuffcoat Sealcoat P+ Coating, protecting crosswalks, meter lids, survey monuments, manhole lids, etc. by covering prior to installation of slurry, and cleaning, drying and sealing with material.

ITEM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT COST	PRICE
1.	Sealcoat Bike Paths	**9,880 sq. yd.**	$_____	$_____

BID SCHEDULE – B **TOTAL$_____**

Note: See Appendix A for schedule of Tuffcoat Sealcoat P+ Coating.

1. All seal coating areas with striping or crossings shall be marked for future striping to be completed by owner.
2. All water, meter, survey, storm drain inlets, and manhole lids shall be protected from slurry prior to application. Protection covers shall be removed when Seal Coating is dry.
3. Contractor is responsible that application area is cleaned and free from all debris and vegetation.
4. All adjacent homeowners / businesses/ trail users shall receive two (2) notices of work to be completed; a seven (7) day advanced notice followed by a twenty-four (24) hour notice. All notices must be approved by the Project Manager prior to distribution.
5. All pedestrian traffic and vehicular traffic control is to be supplied by contractor such as signs and flaggers to be utilized in all locations work is being performed according to MUTCD standards.
6. Bidder is responsible to obtain Right of Way permits. Permit fees will be waived by Park City.
7. Application Rate: Two (2) separate application coats are required. First application = Approximately 48-52 square feet per gallon Second application = Approximately 48-52 square feet per gallon

By: _____ Date: _____

Print Name: _____ Title: _____

Company: _____

BID SCHEDULE C:
PAVEMENT OVERLAYS, ROTOMILLING AND UTILITY ADJUSTMENTS 2023

ITEM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT COST	PRICE
1.	Overlay streets to conform with *2007 APWA Specifications.* Reference APWA 2007. *32-12-03 PG 58-28, 32-12-05 Maximum of 15% RAP by weight 32-12-05 DM-1/2, Medium Traffic Classification 32-12-16 (Rice Method)*	**8,507 Tons**	$ _____	$ _____
2.	Rotomilling to conform with Specifications and depth required to deliver milling across roadway so that surface remaining has a consistent and continuous cross fall, longitudinally and transversely. Millings from pavement overlay work shall become property of the contractor at the time of milling.	**582,624 sq. ft.**	$ _____	$ _____
3.	Overlay bike paths to conform with *Same pavement specification as line item 1.*	**238 Tons**	$ _____	$ _____
	Lower and /or readjust manholes, monument markers, and water valves in compliance with Park City Design Standards, Construction Specifications and Standard Drawings Section 551, placement and adjustment of new and existing utility structures to finish grade per Snyderville Basin Water Reclamation District Construction Specification for manholes. (*See SBWRD revised detail MH-09*)			

ITEM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT COST	PRICE
4.	Lowering Utility			
	Manhole	**82**	$ _____	$ _____
	Water valve/monument	**31**	$ _____	$ _____
5.	Raising/adjusting			
	Manhole	**82**	$ _____	$ _____
	Water valve/monument	**31**	$ _____	$ _____

Total Utility Adjustments Price $ _____

BID SCHEDULE – C TOTAL $ _____

NOTE: See Appendix A for Street Overlays/Milling/Utility Adjustments

1 The quantities given are estimates for the purpose of comparing bids. Payment to the

contractor will be made only for actual quantities of work performed.

2 Estimated ten (10) working days to complete milling and overlay work. Work is scheduled to begin on July 5, 2023. Consideration will be given for weather delays.

3 The streets May be uneven and require more or less tonnage to achieve a quality, smooth, and compacted overlay.

4 Bidder is responsible for traffic control devices, signs, barricades, and flagger to be utilized in all locations work is being performed according to MUTCD standards.

5 **Edge Milling**: One to two-inches (1"-2") of existing asphalt feathered out to nothing seven feet (7') adjacent to each curb and across road intersections.

6 **Profile Milling**: The standard roadway cross slope is two percent (2%) down from crown to gutter line or edge of pavement. Cross slopes May be adjusted when it is necessary to provide a smooth transition a minimum of two percent (2%) and a maximum of four percent (4%).

7 Millings from pavement overlay work shall become the property of the contractor at the time of milling.

8 Prior to milling, verify alignment of all valve boxes and manholes. Submit list of needed repairs and related costs to realign and repair all valve boxes as needed.

9 Lowering of utilities in conjunction with Rotomilling must be completed by **July 8, 2023.** Readjustment is scheduled following completion of pavement overlay, estimated **August 31, 2023.**

10 All approved realignments or repairs shall be completed prior to paving. Only height adjustments are allowed after paving.

11 All grade rings and joints and housings are to be sealed.

12 Concrete cement fills to be used on adjustment.

13 All adjustments are to be set .50 inches below finish grade.

14 Grade ring shall be CRETEX MANHOLE RINGS furnished by contractor.

15 All manhole inverts, valves, and monuments shall be washed and vacuumed upon completion of each adjustment.

16 Bidder is responsible for traffic control devices, signs, barricades, and steel plates where necessary according to MUTCD standards.

17 Bidder is responsible to obtain Right of Way permits. Permit fees will be waived by Park City.

18 Bidder is responsible to make every attempt to minimize the tracking of tack oil and asphalt tar onto non-paved streets and crosswalks. Contractor will mitigate tracking problems promptly if they do occur.

* Park City Municipal reserves the right to add or delete quantities to meet budgeted amounts.

By: _____ Date: _____

Print Name: _____ Title: _____

Company: _____

BID SCHEDULE D: CRACK SEAL 2023

In compliance with Park City Design Standards, Construction Specification and Standards Drawings Section 551 and general guidelines to bidders, sealant must be **Craftco** or **Maxwell** or an approved equal and must meet or exceed Federal Standard ASTM D 3405. Crack seal work shall consist of routing, cleaning, and drying cracks and sealing them with material outlined in specification above.

ITEM NO.	DESCRIPTION OF WORK	TONS	UNIT COST	PRICE
1.	Crack Sealing streets/Paths	**18**	$ _____	$ _____

BID SCHEDULE – D **TOTAL $ _____**

Note: See Appendix A for schedule of Crack Seals.

1. All new cracks .125 inch or greater are to be routed a minimum of .50 inch wide and .75 inch deep prior to application of crack seal.

2. All traffic control is to be supplied by contractor, such as signs and flaggers, to be utilized in all locations work is being performed according to MUTCD standards.

3. Contractor is required to clean all debris generated from routing and crack seal installation upon completion of each street.

4. The smallest size application cup is required that will adequately fill the crack without overflowing material. Crack sealant material shall only be applied to cracks.

5. Cost of crack seal including routing, blowing, drying, sweeping, and cleaning bid per ton.

6. Bidder is responsible to obtain Right of Way permits. Permit fees will be waived by Park City.

*Park City Municipal reserves the right to add or delete quantities to meet budgeted amounts.

By: _____ Date: _____

Print Name: _____ Title: _____

Company: _____

APPENDIX A

BID SCHEDULE

A Slurry Seals Type II

B Sealcoat Bike Paths

C Pavement Overlays, Rotomilling, and Utility Adjustments

D Crack Seals

APPENDIX A
BID SCHEDULE A:
Slurry Seals Type II 2023

Section/ Street Name	Length	Width	Square Yards
Holiday Ranch Loop SR 224 to Little Kate Rd	3,321	32	11,707
Wheaton Way SR 224 to Royal Street West	1,678	25	4,661
Lowell Ave: Silver King to Shadow Ridge	959	25	2,665
Lowell Ave: Shadow Ridge to Manor Way	726	35	2,823
Lowell Ave: PCMR Bus Stop Pull Out	224	29	722
Shadow Ridge: Empire to Lowell Ave	376	24	1,004
Manor Way: Lowell Ave to Empire Ave	244	25	677
Sun Ridge Cove: Hidden Oaks to End of cul-de-sac	435	25	1,208
Hidden Oaks Lane: Sun Ridge Cove to Hidden Oaks Cove	1,210	25	3,362
Hidden Oaks Cove: Solamere Dr to End of Cul-de-sac	450	25	1,250
Short Line: Iron Horse to SR 224	698	24	1,863
Monitor Dr: Lucky John to Little Kate	1,435	30	4,785
Lucky John Dr: Monitor to Little Kate	3,703	25	10,285
Lucky John Dr: Little Kate to Evening Star Dr	1,583	30	5,276
Lucky John Dr: Monitor north west to Little Kate	2,317	24	6,180
Lucky John Dr; Little Kate to American Saddler	2,256	30	7,519
Royal Street West: Wheaton Way to Royal Street	1,913	30	6,375
Royal Street East: Royal Street West to Sterling	2,595	30	8,652
Royal Street East: Sterling to Wheatons Way	2,822	35	10,975
Royal Street: Royal Street West to Silver Lake Dr	2,603	31	8,965
Royal Street: Royal Street to Centennial Dr	3,500	30	11,620
		TOTAL	**112,572**

APPENDIX A
BID SCHEDULE B:
Sealcoat Bike Paths 2023

Tuffcoat Sealcoat P+	Length	Width	Square Yards
SR248 Northside Trail (Comstock Dr to Monitor Dr)	2,117	9	2,117
SR248 Northside Trail (Monitor Dr to Snow Creek Dr)	1,707	9	1,707
SR248 West Round Valley Drive to Richardson Flat Road	1,780	10	1,780
SR248 East Round Valley Drive to Richardson Flat Road	3,121	10	3,121
Quinn's Complex Northeast to USA Ski Team Building	611	9	611
		Total	**9,880**

APPENDIX A
BID SCHEDULE C:
Pavement Overlays, Rotomilling and Utility Adjustments 2023

Street Overlays 2023								
Section/ Street Name	**Length**	**Width**	**Mill ft2**	**Type of mill**	**Mill/pave depth**	**Manholes**	**Water/Survey**	**Tons**
Three Kings Drive: Silver King Drive to Thaynes Canyon Drive	4,153	27	103,819	Profile Mill	3	19	11	2,069
Silver King Drive: Empire Avenue to End (Glenwood Cemetery)	1,111	32	31,746	Profile Mill	2	2	2	437
Little Kate Drive: Lucky John Drive (East End) to Holiday Ranch Loop Road	3,844	30	107,567	Profile Mill	2	12	0	1,418
Iron Horse Drive: Bonanza Drive to Park Ave	1,670	28	41,760	Profile Mill	2	4	0	575
Meadow Drive: Evening Star to Sunny Slopes Drive	2,634	40	105,342	Profile Mill	2	5	4	1,296
Meadows Drive: Crestline to Mountain Top Lane	1,790	33	55,910	Profile Mill	2	10	5	727
Meadows Drive SR 224 to Aspen Springs Drive	1,318	27	32,952	Profile Mill	2	2	2	438
Sidewinder Drive: SR248 to Comstock	2,381	41	97,628	Profile Mill	2	13	2	1,201
Quinn's Park Lot: West of Restrooms	116	243	5,901	Edge Mill	2	0	0	347
Extra Utility Adjustments						15	5	
			582,624			**82**	**31**	**8,507**

Edge Milling: One to two inches (1"-2") of existing asphalt tapered over seven feet (7') adjacent to each curb and across Intersections.

Profile Milling: Standard roadway cross slope is two percent (2%) down from crown to gutter line or edge of pavement. Cross slopes May be adjusted when it is necessary to provide smooth transition minimum of two percent (2%) and a maximum of four percent (4%).

APPENDIX A
BID SCHEDULE C:
Pavement Overlays, Rotomilling and Utility Adjustments 2023

Overlays Bike Paths 2023	Length	Width	Thickness	Tons
Quinn's Sport Complex Bike Paths	2,864	9	2"	238
Total				**238**

APPENDIX A
BID SCHEDULE D:
Crack Seals 2023

Crack seal	Tons
Crack seal applied to various Streets	15
Crack seal applied to various Bike Paths	3
Total	**18**

BID PROPOSAL

To the Owner

The undersigned states and warrants that Contractor has carefully examined the plans, specifications, form of contract, form of bond, instructions and other contract papers relating to the construction for which this proposal is made, and that Contractor has examined the site of the work and has given attention to and carefully considered all of the matters which affect the nature and the cost of construction and its several parts.

If this proposal, as given on the attached Bid Schedule, is accepted, the undersigned will, within ten (10) days after notice thereof, in writing, by the owner, furnish a construction bond in accordance with the form of bond herewith attached, for the full amount of the total bid price, correctly computed from the unit prices bid, and executed in favor of the Owner by_____surety, whose address is:

_____

and will sign and execute the accompanying form of construction contract.

Name of Bidder, Construction Contractor: _____

Contractor State & License No.:_____

Signature of Representative: _____

Position of Representative: _____

Bidder's Mailing Address:_____

Bidder's Street Address: _____

City, State, & Zip Code: _____

Phone/Fax: _____

_____ Signature Acknowledging Receipt of:

Amendment No. 1._____
Amendment No. 2._____
Amendment No. 3._____

Date

_____

A bid may be considered invalid if the Bidder fails to completely fill out and sign both the Bid Proposal and proper Bid Schedule.

SUBCONTRACTORS

Item	Firm

INVITATION TO BID

Park City Municipal Corporation ("Owner") invites your bid to contract for performing work and furnishing materials for the construction of these projects.

RECEIPT OF PROPOSALS: Bids must be submitted electronically through Utah Public Procurement Place (U3P) by 10:00 a.m. MST, on Tuesday, May 9, 2023. No proposals will be accepted through the system after 10:00 a.m. MST.

Bid security must be delivered in a sealed envelope in person to Park City Public Works, Attn: Troy Dayley, Public Works East Building, 1053 Iron Horse Drive, Park City, Utah 84060 prior to 10:00 a.m. on Tuesday, May 9, 2023. A photocopy or facsimile transmission of bid security will not be accepted.

In the event of difficulty submitting electronically, proposals can be dropped off to the City Recorder, located at 445 Marsac Avenue, Third Floor – Executive Department, Park City, UT 84060. Proposals submitted through the City Recorder should be received on a zip drive. No paper copies should be submitted.

Park City assumes no responsibility for delayed or undelivered proposals/bids.

Bids will then be publicly opened at 10:05 a.m. on Tuesday, May 9 2023 at the Public Works East Building, 1053 Iron Horse Drive, Park City, UT 84060.

Bids shall be submitted on the "Bid Proposal" form, accompanying the specifications and shall be properly executed as indicated thereon.

OWNER'S RIGHTS RESERVED: Park City Municipal Corporation reserves the right to reject any and all proposals for any reason. Bids will remain valid for ninety (90) days after bid opening but cannot be withdrawn for forty-five (45) days. All submittals shall be public records in accordance with government records regulations ("GRAMA") unless otherwise designated by the applicant pursuant to UCA § 63G-2-309, as amended. Award of contract is subject to approval by City Council. Proposals lacking required information will not be considered. Park City Municipal Corporation reserves the right to change any dates or deadlines related to the bid submittal process.

BIDDERS REQUIREMENTS: Bidders are required to carefully examine the contract, plans, and specifications, and fully inform themselves as to all conditions and matters which can in any way affect the work or cost thereof. Should a Bidder find discrepancies in or omission from any plans or documents or have any questions pertaining thereto, Bidder should contact the Project Manager in writing for clarification prior to submitting any bid. All Bidders must be licensed to perform the work required. If there is a conflict between the written and numerical amount, the written amount shall supersede.

INSTRUCTIONS TO BIDDERS

PROPOSAL FORM: Each Proposal shall be made on the form prepared by the City and included as one of the Contract Documents. A Proposal may be disregarded by the Owner if the Bidder fails to complete or fill in all blanks on the Proposal Form.

MODIFICATIONS: Proposals shall not contain any recapitulations of the work to be done. Alternate proposals will not be considered unless called for. Oral proposals or modifications will not be considered. Proposals submitted with qualifying statements are subject to being rejected by the Owner.

DELIVERY OF PROPOSALS: Proposals shall be delivered by the time and to the place stated in the Invitation to Bid. It is the sole responsibility of the Bidder to see that Bidder's Proposal is timely received.

WITHDRAWAL: Any Bidder may withdraw Bidder's Proposal, either personally or by written request, at any time prior to the scheduled closing time for receipt of Proposals.

AWARD OR REJECTION: The Owner reserves the right to reject any or all Proposals for any reason. No Bidder may withdraw Bidder's proposal for a period of forty-five (45) days after the date of opening thereof. Subject to the above reservations, the Contract will be awarded to the lowest most qualified responsible Bidder complying with these instructions and with the Invitation to Bid and not necessarily the lowest Bidder. All submittals shall be public records in accordance with government records regulations ("GRAMA") unless otherwise designated by the applicant pursuant to UCA § 63G-2-309, as amended. Award of contract is subject to approval by City Council, which approval is anticipated prior to June 2, 2023. Park City Municipal Corporation reserves the right to change any dates or deadlines related to the bid submittal process.

EXAMINATION OF CONTRACT DOCUMENTS AND SITE VISIT: Before submitting a Proposal, Bidders shall carefully examine the Drawings, read the Specifications and all other Contract Documents, shall visit the site of work, and shall fully inform themselves as to all existing conditions and limitations, and shall include in the proposal a sum to cover the cost of all items included in the Contract Documents.

PRE- BID MEETING: A pre-bid meeting will be held **Wednesday, May 3, 2023, at 11:00 a.m.** It is highly recommended for all Bidders to attend; however, it is **MANDATORY for Contractors who have not provided services to Park City Municipal Corporation within the last three (3) years to attend.**

INTERPRETATION OF DOCUMENTS: If any person contemplating submitting a Proposal is in doubt as to the true meaning of any part of the Drawings, Specifications, or other Contract Documents, or finds discrepancies in or omissions from the Drawings or Specifications, he may submit to the Project Manager a written request for an interpretation or correction thereof.

The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the documents will be made only by Amendment duly issued on the Utah Public Procurement Place website, and a copy of the Amendment will be emailed to each person receiving a set of the Contract Documents. Neither the Owner nor the Project Manager will be responsible for any other explanations or interpretations of the Contract Documents.

AMENDMENT: Any Amendment issued prior to bid opening shall be included in the Proposal,

and shall be made a part of the Contract. Receipt of each amendment shall be acknowledged by the Bidder in the Proposal.

BID SCHEDULE: The Bidder may, at his/her discretion, bid on any combination of **Bid Schedules A, B, C, or D.**

Bidders interested in any combination of bid schedules should submit one completed proposal with all responses on Utah Public Procurement Place (U3P) website.

BIDDERS INTERESTED IN MORE THAN ONE PROPOSAL: No person, firm or corporation shall be allowed to make, file, or to be interested in more than one Proposal for the same work, unless alternate Proposals are called for. A person, firm, or corporation who has submitted a sub-proposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders.

CONSTRUCTION AGREEMENT: The successful bidder will be required to enter into Park City Municipal Corporation's Construction Agreement in its current form. A draft of the Agreement is attached to this Invitation to Bid as Exhibit "A" and incorporated herein.

ANY INQUIRIES RELATED TO INDEMNIFICATION OR INSURANCE PROVISIONS CONTAINED IN PARK CITY'S STANDARD AGREEMENT MUST BE SUBMITTED TO PARK CITY NO LATER THAN THE PROPOSAL/SUBMITTAL DEADLINE. PARK CITY MAY, IN ITS SOLE DISCRETION, CONSIDER SUCH INQUIRIES. ANY CHANGES TO PARK CITY'S STANDARD INSURANCE AND INDEMNIFICATION PROVISIONS SHALL BE APPROVED IN ITS SOLE DISCRETION.

PERFORMANCE MATERIAL AND LABOR PAYMENT BONDS: Unless otherwise specifically designated by the Owner, the successful Bidder, simultaneously with execution of the Agreement, will be required to furnish one hundred percent (100%) Performance and Material and Labor Payment Bonds. These bonds shall be secured from a surety company approved by the Owner. The form of bonds required to be executed by the successful Bidder is included in the Contract Documents.

WORKWEEK AND CONSTRUCTION SCHEDULE: The selected Contractor shall submit in writing to the Owner at the pre-construction conference the following: (a) the hours and days they propose to carry out the work; the maximum workweek that will be approved is 12 hours a day, Monday through Saturday; the Contractor's proposed hours of work shall include daily starting and stopping times (No construction shall commence prior **to 7:00 a.m. nor extend after 7:00 p.m.**); and (b) a construction schedule showing the order in which it proposes to carry out the work indicating the periods during which it will perform work on each item listed in the Bid Schedule.

Failure to submit the proposed workweek and construction schedule within the time specified may be cause for rejection of the bid.

EQUIPMENT AND LABOR LIST, BILLING SCHEDULE: The Contractor shall submit in writing to the Owner with its bid the following: (a) a list of the number and type of equipment it will use in the completion of the contract, and the number and type of employees it will use to do the work; and (b) an approximate schedule of progress payments that the Owner might expect from the Contractor.

Failure to submit the equipment and labor list and the billing schedule within the time specified may be cause for rejection of the bid.

BID BOND

Date Bond Executed_____ Principal_____ Surety _____
_____ Sum of Bond_____ Date of Bid_____

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the Owner herein known as the obligee, in the sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THE OBLIGATION IS SUCH, that whereas the principal has submitted the accompanying bid, dated as shown above, for:
NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the said principal shall execute a contract as specified and give construction bond to be approved by the obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the principal, then this obligation shall be null and void. However, if said principal shall fail to execute a contract as specified and give full construction bond, approved by the obligee, within ten (10) days of being notified of award of contract, then this bond shall be forfeited in full to obligee.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

_____
INDIVIDUAL OR PARTNERSHIP Corporate Principal
PRINCIPAL

_____
Business Address

_____
By

_____
Title

Note: If cash, certified or cashier's check is used in lieu of bid bond, a certificate from an approved surety company guaranteeing execution of a full performance bond must accompany bid.

_____
Business Address

_____
By Title
_____

_____
Attorney-in-Fact

STATE OF UTAH)
)
County of_____)

_____, being first duly sworn, on oath deposes and says that he is the Attorney-in-Fact of the above-named Surety Company, and that he is duly authorized to execute and deliver the foregoing obligations; that said company is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings, and obligations.

Subscribed and sworn to before me this___day of_____, 2023.

_____
Attorney-in-Fact

My Commission Expires_____

Notary Public_____

CONTRACTUAL DOCUMENTS

CONSTRUCTION AGREEMENT

PERFORMANCE BOND

LABOR AND MATERIAL PAYMENT BOND

EXHIBIT "A"

Template Updated 08-21

CONSTRUCTION AGREEMENT

THIS AGREEMENT is made and entered into as of this ____ day of _____, 20__, by and between **PARK CITY MUNICIPAL CORPORATION**, a Utah municipal corporation, P.O. Box 1480, Park City, UT 84060, , (hereinafter "City"), and _____, a _____ (Insert state of incorporation) _____ (insert either "corporation" or "limited liability company"), whose post office address is _____, (hereinafter "Contractor").

PURPOSE: For the project known as the (project name) (hereinafter "Project"), which consists of (brief description of work and address).

NOW, THEREFORE, in consideration of the mutual promises contained herein, the parties hereby agree as follows:

SECTION 1. SCOPE OF WORK. Contractor shall furnish all labor, materials and equipment to complete the Project, consisting of the work described in the Information for Bidders as the Basic Bid, and the following additive alternates: _____ _____, as specifically set out in the contract specifications, which is made a part hereof by reference, herein called the "Project."

The Project will be bound by the specifications referenced herein, according to the Advertisement for Bid, the Information for Bidders, the General Project Requirements and Specifications provided by City, the Bid of the Contractor, Bid Bond, Drawings, Notice of Award and Notice to Proceed, (collectively referred to as the "Contract Documents"), all of which are incorporated herein by reference and on file in the _____ Department. To the extent that this Construction Agreement (hereinafter "Contract" or "Agreement") conflicts in any way with a proposed form agreement which may have been submitted as part of the bid specifications, this Agreement shall control.

If any of the work performed by Contractor in any phase of the Project does not meet City standards as outlined in the bid documents and specifications, then Contractor shall immediately repair or correct the work at no additional cost to City.

A. SUBCONTRACTORS. No part of this Contract shall be subcontracted by the Contractor without prior written approval by City through the Project Manager/Engineer. The Contractor shall be fully responsible to the City for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by them as it is for the acts and omissions of persons directly employed by it.

If written approval is granted to subcontract a part of this Contract, the Contractor shall require each subcontractor that physically performs services within Utah to submit an affidavit to the Contractor stating that the subcontractor has used E-Verify, or an equivalent program, to verify the employment status of each new employee.

The Contractor shall, within ten (10) days of submittal of request for final payment, include an affidavit showing satisfactory evidence that all claims of subcontractors, laborers and material men who supplied services or materials to the Project have been fully paid, discharged, or waived. The Contractor shall submit lien waivers for each pay release.

If the City reasonably believes that Contractor has failed to pay Subcontractors, materialmen, or laborers for work on the Project within a reasonable time of when payment is due, then City may, after having notified the Contractor, either pay unpaid bills or withhold from the release of Contractor's payment bond for this Project, a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged and a ten percent (10%) fee for administering such claims.

B. STANDARDS OF WORKMANSHIP. Contractor shall demonstrate workmanship equal to or better than current industry standards for this Project. Where Park City specifications exist, (for example, asphalt, concrete, irrigation, sprinkling system and landscaping), they shall provide the benchmark for determination of acceptability.

C. INSPECTION AND TESTING. All materials and equipment used in the construction shall be subject to inspection by the Project Manager/Engineer. If laws, ordinances, rules or regulations of any public authority having jurisdiction require any work to specifically be inspected, tested, or approved by someone other than Project Manager/Engineer, the Contractor shall give the Project Manager/Engineer timely notice of readiness. Inspections, tests or approvals by the City or appropriate authorities will not relieve the Contractor from obligations to perform the work in accordance with the requirements of the Contract Documents and/or provisions. The Project Manager/Engineer and other designated persons will at all times have access to the work. All work shall ultimately be inspected for final acceptance by the Project Manager/Engineer within a reasonable time upon receipt of notice from the Contractor that work is complete and ready for final inspection.

During construction, the work will be inspected and observed by the Project Manager/Engineer or his designated representative. All work that is deficient or does not meet specifications shall be removed and replaced with proper material at Contractor's expense.

D. WARRANTY. Contractor warrants that all materials and supplies used in the construction of the Project shall be new, except as otherwise agreed to in writing by the City's Representative. All materials, equipment, parts and labor and any necessary corrections to the Project shall be guaranteed for a period of at least one (1) year following the date of substantial completion of the Project under the terms of the performance bond or as provided in the project specifications and construction documents, whichever is longer.

E. ADOPTED CODES. All work shall be completed at a minimum in accordance with all building, electric and energy codes adopted by Park City.

SECTION 2. PERFORMANCE AND PAYMENT BONDS. Contractor shall furnish to the City payment and performance bonds satisfactory to the City guaranteeing Contractor's payment and performance, in the amount, for each separately, of one hundred percent (100%) of the Contract amount.

SECTION 3. INSURANCE. Unless otherwise specified in the bid documents, the Contractor shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Contractor, their agents, representatives, employees, or subcontractors.

The Contractor shall provide Park City Municipal Corporation a Certificate of Insurance evidencing:

A. General Liability insurance written on an occurrence basis with limits no less than Two Million Dollars ($2,000,000) combined single limit per occurrence and Three Million Dollars ($3,000,000) aggregate for personal injury, bodily injury and property damage. Coverage shall include but not be limited to: blanket contractual; products/completed operations; explosion, collapse and underground (XCU) if specifically requested; and employer's practices.

The Contractor shall increase the limits of such insurance to at least the amount of the Limitation of Judgments described in Section 63G-7-604 of the Governmental Immunity Act of Utah, as calculated by the state risk manager every two years and stated in Utah Admin. Code R37-4-3.

B. Automobile Liability insurance with a combined single limit of not less than Two Million Dollars ($2,000,000) each accident for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of owned, hired, and non-owned motor vehicles. This policy must not contain any exclusion or limitation with respect to loading or unloading of a covered vehicle.

C. Workers Compensation and Employers Liability coverage with Workers Compensation limits complying with statutory requirements, and Employer's Liability Insurance limits of at least One Million Dollars ($1,000,000) each accident, One Million Dollars ($1,000,000) for bodily injury by accident, and One Million Dollars ($1,000,000) each employee for injury by disease.

The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Park City Municipal Corporation for all work performed by the Contractor, its employees, agents and subcontractors.

D. Builder's Risk Insurance (Course of Construction) (at City's discretion)

Before starting the Work, Contractor shall obtain and maintain in force, at its own expense, Builder's Risk (Course of Construction) insurance utilizing an "All Risk" (Special Perils) coverage

form, with limits equal to the completed value of the project and no coinsurance penalty provisions. Such coverage shall name Park City Municipal Corporation as an additional insured.

E. The general liability and auto liability insurance policies are to contain, or be endorsed to contain, the following provisions:

Park City Municipal Corporation, its officers, officials, employees, and volunteers are to be covered as additional insureds on the commercial general liability policy with respect to liability arising out of work or operations and completed operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations and automobiles owned, leased, hired, or borrowed by or on behalf of the Contractor.

F. Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions. The City reserves the right to request certified copies of any required policies.

G. The Contractor's insurance shall contain a clause stating that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

H. For any claims related to this Construction Agreement, the Contractor's insurance coverage shall be primary insurance coverage with respect to Park City Municipal Corporation, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by Park City Municipal Corporation, its officers, officials, employees, or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

SECTION 4. CONTRACT AMOUNT, ACCEPTANCE OF WHOLE, ADDITIONS. City shall pay Contractor a total sum not to exceed **(insert amount, *in words*) ($ numerically)** ("Contract Amount") for all work and materials expended to complete this Project, which shall include the cost of all bonds, insurance, and all charges, fees, permits (including water and sewer fees, unless waived), expenses or assessments of whatever kind or character that are or may be necessary to complete this Project, including any additive alternates listed within the scope of work described in Section 1.

SECTION 5. PERMITS AND FEES. As set out in Section 4 above, the Contract Amount includes the price of all normally applicable fees and permits. The City may, at its discretion, arrange for the waiver of certain fees, permits and expenses.

SECTION 6. TERMS OF PAYMENT. The City shall pay for services provided hereunder according to and in an aggregate amount not to exceed the Contract Amount or as detailed in an attached payment schedule **(**if attached, will be **Attachment A)** and only upon Contractor's request on forms approved by and submitted to the Project Manager. The City shall make payment within thirty (30) days thereafter. Requests for a more rapid payment may be considered if a discount is offered for early payment. At no time shall the aggregate amount of money paid to the Contractor in proportion to the Contract Amount be greater than the proportion of the work performed at that

point to the total Project work. No payment shall be made for any service rendered by the Contractor except for services set forth and identified in this Agreement. The City reserves the right to withhold payment in whole or part from the Contractor for non-compliance with the provisions of the Contract Documents.

A. RETAINAGE. The City may, in its sole discretion (1) retain five percent (5%) of the value of all work done and materials or equipment supplied as part security for the fulfillment of the Agreement by the Contractor; or (2) retain the final payment of up to five percent (5%) of the total Project amount. As work nears completion and solely at the City's discretion, the City may reduce the retainage to an amount more in line with the work remaining. The City reserves the right to retain all amounts previously withheld or due, including any liquidated damages, until all services specified herein are complete. Any money withheld pursuant to this section shall be placed in an interest bearing account and the interest shall also be payable to the Contractor upon final payment.

Before final payment is made, the Contractor must submit evidence satisfactory to the City that all payrolls, material bills, subcontracts and all outstanding indebtedness in connection with the Project have been paid for.

The City may withhold a reasonable amount of the payment bond sufficient to cover any outstanding indebtedness or monies owed or claimed by any person who supplied work or materials to the Project plus ten percent (10%) of such indebtedness as the City's cost of administering such claims until Contractor supplies a release satisfactory to the City, signed by all persons who have supplied labor or materials to the Project or, at the City's option if no claim is made, until one hundred five (105) days after the date on which any person performed the last of the labor or supplied the last of the material for the Project and upon written request from the Contractor.

The Contractor shall supply to the Project Manager/Engineer within a reasonable time after his/her request a signed statement verifying all the suppliers, subcontractors, and other persons who have supplied labor or materials to the Project.

B. FINAL PAYMENT. Acceptance by the Contractor of the final payment from the City shall release the City of all claims, demands and liability of the Contractor, its officers, agents, employees and subcontractors, whether communicated or not by the Contractor, except with respect to those matters referred to in writing delivered to the Contractor and approved in a signed writing by the Project Manager.

SECTION 7. COMPLETION TIME. The work on this Project shall commence within ten (10) days of receipt of the Notice to Proceed and shall be completed by **(determined by bid schedule).** Work stoppage due to inclement weather conditions and other factors must be approved in writing by the Project Manager. Inclement weather shall not otherwise constitute cause for delay. Unless otherwise agreed by the City by change order, no damages shall become due to Contractor for City caused delay. A change order for delay will generally be accepted for delay so excessive and unreasonable that it is beyond the scope of the Contract or delay attributed to direct, active or

willful interference by the City. The change order must be based upon actual damages sustained by the Contractor which are directly attributed to the delay.

In the event that Contractor fails to complete all of the work required herein within the time limit set out above, then for each partial or complete day during which the work remains uncompleted thereafter, the Contractor agrees to pay the City **One Hundred Dollars ($100.00)**, _____ **(Contractor Initials)** which the parties believe, due to the difficulty of actually assessing the damages the City will suffer in the event of such a delay, is a fair estimate of the loss the City will suffer. The parties agree that the daily liquidated damages provided for herein is reasonable and fair, and is not a penalty. **TIME IS OF THE ESSENCE IN THIS AGREEMENT.**

SECTION 8. ADDITIONAL WORK/CHANGE ORDERS. The City may enlarge or reduce the work to be performed by Contractor hereunder by written notification to Contractor, including changes to the plans and specifications. The City shall pay Contractor for any additional work so requested, and shall reduce the payment to the Contractor for any reduction in labor, materials, overhead and profit margin resulting from the reduction in the work. Except as the City shall so notify the Contractor in writing, it is understood and agreed by the parties hereto that no money will be paid to the Contractor for any new or additional labor or materials furnished unless a written modification is agreed to in a document signed by both parties.

The value of any work covered by a change order or of any claim for increase or decrease in the Contract price shall be determined by one (1) or more of the following methods in order of precedence listed below:

A. An agreed lump sum; or in the event the parties cannot agree; then

B. The unit rate for the work bid by the Contractor, if applicable, or in the event there was no such rate bid; then

C. The actual cost for: (1) labor; (2) materials; (3) supplies; (4) equipment; (5) direct overhead (not to exceed 5% of the sum total of items 1-4, unless approved by the City); and (6) other services necessary and approved by the City to complete the work. In the event of a net increase in the Contract Amount for a change order as a whole, the City shall allow a payment to the Contractor of an additional ten percent (10%) of the actual cost of the work, not including direct overhead or bond costs, to cover the cost of general overhead and profit. The Contractor may also charge the City for actual cost of the net increase in bond costs as a result of the overall change to the Contract Amount. The City specifically reserves the right to request documentation, including, but not limited to, payroll stubs, bond bills, and invoices, to validate the Contractor's calculations.

SECTION 9. DISPUTES. Except as otherwise provided in this Agreement, any disputes concerning a question of fact arising under this Agreement which are not disposed of by agreement shall be decided by the City. The decision of the City shall be final and conclusive unless, within thirty (30) days from the date of receipt of such decision, the Contractor shall mail or otherwise furnish the City a written signed appeal addressed to the Project Manager/Engineer. In connection

with any appeal proceeding under this clause, the Contractor will be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Contractor will proceed diligently with the performance of the Contract and in accordance with the City's decision. The decision of the City shall be final and conclusive, but shall not be arbitrary or unreasonable. Although this Contract has been drafted by the City, the Contractor expressly agrees that any ambiguity herein shall be resolved in favor of the City.

SECTION 10. DEFAULT, REMEDY AND TERMINATION. The City may terminate this Agreement upon the occurrence of one or more of the following events:

A. If Contractor or any subcontractor should substantially violate any of the provisions of this Agreement;

B. If Contractor substantially fails to perform any part of this Agreement;

C. If Contractor repeatedly fails or becomes unable to perform the services under this Agreement as required herein, or substantially fails to provide services under this Agreement for a period of seventy two (72) hours;

D. If Contractor (1) shall become insolvent in a bankruptcy case; (2) shall be generally not paying its debts as they become due, or within a reasonable time thereafter; (3) shall suffer, voluntarily or involuntarily, the entry of an order by any court or governmental authority authorizing the appointment of or appointing of a custodian (as that term is defined in 11 U.S.C. §101(11)), receiver, trustee, or other officer with similar powers with respect to it or any portion of its property which remains undismissed for a period of ninety (90) days; (4) shall suffer, voluntarily or involuntarily, with or without judicial or governmental authorization, any such custodian, receiver, trustee, or other officer with similar powers to take possession of any part of its property which third party remains in possession for an excess of ninety (90) days; (5) shall suffer, voluntarily or involuntarily, the filing of a petition respecting an assignment for the benefit of creditors which is not dismissed for a period of ninety (90) days; (6) shall be dissolved; (7) shall become the subject of any proceeding, suit, or action at law or in equity under or relating to any bankruptcy, reorganization or arrangement of debt, insolvency, readjustment of debt, receivership, liquidation, or dissolution law or statute or amendments thereto to be commenced by or against it or against any of its property which remains undismissed for a period of ninety (90) days; (8) shall voluntarily suspend substantially all of its business operations; (9) shall be merged with, acquired by, or otherwise absorbed by any individual, corporation, or other business entity or organization of any kind except for any individual corporation or other business
entity or organization which is controlled by, controlling, or under common control with the Contractor; or (10) shall take action for the purpose of any of the foregoing.

After serving ten (10) days written notice on the Contractor and its surety of its intention to terminate the services of Contractor, and if within ten (10) days after serving such notice, the violation is not corrected to City's reasonable satisfaction, the City then may take over the work and prosecute it to completion by contract or by any other method it may deem advisable at the

expense of the Contractor. The Contractor and the bonding company shall be liable to the City for any reasonable cost occasioned by the City in excess of the amount agreed to for the service herein.

The Contractor shall be entitled to a hearing before a City hearing officer upon the issue of termination if it submits a written request therefore within seven (7) days of the service of the notice of the City's intent to terminate. The Contractor shall be entitled to be heard at such hearing on the issue of termination. The Contractor shall not bring an action against the City, its officers, agents or employees arising out of or relating to the termination of this Agreement before the decision is issued by the City's hearing officer(s).
Waiver of any default shall not be deemed to be a waiver of any subsequent default. Waiver of any provision of this Agreement shall not be construed to be modification of the terms of this Agreement, unless stated to be such in writing, signed by the City's authorized representative.

The Contractor shall continue the performance of this Agreement to the extent not terminated under the provisions of this section.

The rights and remedies of the City provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

SECTION 11. HOLD HARMLESS INDEMNIFICATION. The Contractor clearly and unequivocally agrees to indemnify and to hold the City and its agents, employees, and officers, harmless from and shall process and defend at its own expense any and all claims, demands, suits, at law or equity, actions, penalties, losses, damages, or costs, of whatsoever kind or nature, brought against the City arising out of, in connection with, or incident to the execution of this Agreement and/or the Contractor's performance or failure to perform any aspect of this Agreement; provided, however, that if such claims are caused by or result from the concurrent negligence of the City, its agents, employees, and officers, this indemnity provision shall be valid and enforceable only to the extent of the negligence of the Contractor or others; and provided further, that nothing herein shall require the Contractor to hold harmless or defend the City, its agents, employees and/or officers from any claims arising from the sole negligence of the City, its agents, employees, and/or officers. The Contractor expressly agrees that the indemnification provided herein constitutes the contractor's waiver of immunity under Utah Code Section 34A-2-105 for the purposes of this Agreement. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement. No liability shall attach to the City by reason of entering into this Agreement except as expressly provided herein.

SECTION 12. CONTROLLING LAW AND ATTORNEY FEES AND COSTS. These general conditions shall be construed in accordance with and enforced under the laws of the State of Utah. Any action of law, suit in equity, or judicial proceeding for the enforcement of the Agreement, or any provisions thereof, shall be instituted and maintained only in any of the courts of competent jurisdiction in Summit County, Utah. If any legal proceeding is brought for the enforcement of this Agreement, or because of a dispute, breach, default, or misrepresentation in connection with any of the provisions of this Agreement, the prevailing party shall be entitled to recover from the other party, in addition to any other relief to which such party may be entitled, reasonable attorney's fees and other costs incurred in connection with that action or proceeding.

SECTION 13. ASSIGNMENT. The Contractor shall not assign nor transfer any interest in this Agreement without the prior written consent of the City, provided however, that claims for compensation due or to become due the Contractor from the City under this Agreement may be assigned to a bank, trust company, or other financial institution without such approval. Written notice of any such assignment shall be promptly furnished to City.

SECTION 14. SAFETY AND TRAFFIC CONTROL. Contractor shall take all reasonable precautions to protect the safety of pedestrians, school children, motorists, and others who may use or come near to the Project site, including, but not limited to, compliance with the Manual of Uniform Traffic Control Devices.

SECTION 15. SAFETY AND PROTECTION OF THE WORK. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Project work. Contractor shall provide reasonable protection to prevent damage, injury or loss to employees on the Project work and all other persons who may be affected thereby, materials and equipment, whether on or off the site, and other property at the work site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. In addition, the Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.

The Contractor shall erect and maintain, as required by the existing conditions and progress of the work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, setting safety regulations, and notifying owners and user of adjacent utilities.

The Contractor shall promptly remedy all damage or loss to any property referred to in this section caused in whole or in party by the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable and for which the Contractor is responsible, except for acts or omissions by the City or anyone directly or indirectly employed by it, or by anyone for whose acts it may be liable, and not attributable to the fault or negligence of the Contractor. Contractor shall remove from the site all cuttings, debris, equipment and unused material.

SECTION 16. UNENFORCEABLE CONTRACT, WAIVERS. In the event that any provision of this Agreement shall be ruled invalid and unenforceable, the remaining provisions shall be valid and binding upon the parties. One or more waivers by either party of any provision, term, or covenant shall not be construed by the other party as a waiver of a subsequent breach of the same provision by the other party.

SECTION 17. ENTIRE AGREEMENT. This Agreement represents the entire integrated agreement between City and Contractor and supersedes all prior negotiations, representations or

agreements, either written or oral. This Agreement may be amended only by written modification signed by both parties.

SECTION 18. COMMENCEMENT OF WORK. Contractor will commence work as required by the specifications within ten (10) calendar days after receiving the Notice To Proceed.

SECTION 19. UTILITIES. The right is reserved to the owners of public utilities and franchises to enter upon the street or work site for the purpose of making repairs or changes of their property that may become necessary by the work. The City shall also have the privilege of entering upon the street or work site for the purpose of repairing culverts, storm drains, water system repairs or adjustments, and any and all other necessary City work.

The Contractor takes the whole risk, responsibility and expense with respect to the location of utilities, and in working with utility owners about locating, moving, repairing, and modifying utilities. All utility locations shown on the plans and specifications are approximate and are marked on the plans, if at all, only for convenience. The City makes no representation about the location of any such utilities, and Contractor is encouraged to contact utility companies and owners about the location of all utilities that may be impacted by or impact the Project work.

SECTION 20. HOURS AND DAYS OF WORK. All work performed by the Contractor, its subcontractors, materialmen, agents and employees shall be performed during work hours of 7:00 a.m. to 9:00 p.m. Monday through Saturday unless otherwise specified in a Conditional Use Permit or Construction Mitigation Plan. In individual Construction Mitigation Plans, the Building Official may further reduce the hours or days of work for special events or as other circumstances may reasonably warrant. When work is prohibited, no exterior construction, excavation or delivery of supplies and concrete are allowed. Interior work, however, may be allowed Monday through Sunday, with no limitation on hours for the following types of construction:

A. Interior work on individual single-family home construction or addition projects not involving materials or supply deliveries.

B. Construction of decks, patios, landscape walls less than four feet (4') in height, and fences on individual single-family lots.

C. Non-mechanized exterior painting on individual single-family residences.

D. Non-mechanized landscaping on individual single-family residences.

E. Survey work not involving grading or use of power equipment to cut vegetation.

Extended Hours Special Permit. The Building Official may authorize extended hours for construction operations or procedures which, by their nature, require continuous operation, or modify or waive the hours of work on projects in generally isolated areas where the extended hours do not impact upon adjoining property occupants. In such cases, the Building Official shall issue a special permit identifying the extended hours. Contractor shall display the special permit on site.

Special Event Regulations. The Building Official and/or Police Chief may, at their discretion, restrict construction activity, including governmental or special improvement agencies, in order to assure the public safety during special events within the City. Special events shall include, but not be limited to, the Art Festival, Film Festival, ski events, and holiday events.

SECTION 21. CONSTRUCTION PLANS. Contractor shall submit a Construction Mitigation Plan to be approved by the City Engineer or his/her designee, for all building permits. The Community Development Department may waive this requirement for minor remodels, additions and interior construction where the impact on adjacent property is minimal. This plan shall be written and shall address, to the satisfaction of the City Engineer or his/her designee:

A. Hours and Days of Operation. The Construction Mitigation Plan shall specify the daily construction start and finish times. Construction activity occurring outside of the times specified in Section 11-14-6 of the Park City Municipal Code may only be allowed by special permit issued by the Building Official or the City Engineer.

B. Parking. The Construction Mitigation Plan shall include a parking plan. Construction vehicle parking may be restricted at construction sites so as to not block reasonable public and safety vehicle access along streets and sidewalks. Construction parking in paid or permit only parking areas require the Public Works Department to review and approve a parking plan. The plan shall also include anticipated temporary parking, e.g., delivery vehicles, and large equipment parking.

C. Deliveries. The Construction Mitigation Plan shall identify proposed delivery locations and routes. Deliveries of construction materials and supplies including concrete may be regulated as to time and routing if such deliveries will cause unreasonable noise, parking, or access issues. In order to reduce the number of delivery trips to construction sites, the stockpiling of materials on or near the site may be required. In the case of multiple construction sites in close proximity, a common materials storage and staging site may be required.

D. Construction Phasing. Due to the narrow streets, small lot configuration, topography, traffic circulation, weather, construction parking and material staging problems, projects in the Historic District and other areas of the City may be required to be phased if more than one project is under construction in close enough proximity to create public safety or nuisance problems. In cases where phasing is deemed necessary by the City Engineer or his/her designee**,** the first project to receive a building permit shall have priority, however, the Building Official shall have the authority to phase projects as necessary to assure efficient, timely and safe construction.

E. Trash Management and Recycling. Construction sites shall provide adequate storage and a program for trash removal**.**

F. Control of Dust and Mud on Streets. A program for the control of dust or other airborne debris shall be required. Provision must be made to eliminate the tracking of mud on streets and a program shall be required to remove any such mud daily.

G. Noise. Construction activity shall not exceed the noise standards as specified in Section 6-3-9 of the Park City Municipal Code.

H. Grading and Excavation. Because of the truck hauling involved in grading and excavation, restrictions on trucking routes as well as the hours of operation may be necessary to mitigate the adverse impacts from such operations. Destination and total cubic yards of excavated material shall be noted.

I. Construction Sign Requirements. A sign indicating the name of the party responsible for the Project shall be posted in a location where such sign is readable from the street or driveway to the construction site. The sign shall not exceed twelve (12) square feet in size, six (6') feet in height and shall not exceed a letter type of four inches (4"). Information on the sign shall include, at a minimum:

1. Name, address and phone number of Contractor;
2. Name, address, and phone number of person responsible for the project; and
3. Phone number of party to call in case of emergency.

No additional fee is required for this sign.

SECTION 22. TOILET FACILITIES AND CONTAINERIZED TRASH SERVICE REQUIRED.

A. The Contractor shall obtain and maintain on the site a container of suitable size and design to hold and confine trash, scraps, and other construction related refuse created or accumulated on the site. All such construction refuse shall be maintained in a closed container at all times, until transferred to the landfill. Containers may be placed in setback areas, provided that the placement of the container does not obstruct the view of motorists on adjoining streets and thereby create traffic hazards. Contractor shall not permit accumulated debris, litter, or trash on the construction site to blow or scatter onto adjoining properties, including the public street, or to accumulate on the site outside of the container, or in transit to the landfill or dump. The owner or Contractor shall service the container as frequently as needed to prevent trash from over-flowing.

B. The Project site shall have permanent toilets, or an approved temporary toilet facility positioned in a location approved by the Building Department, at the rate of one toilet per fifteen on-site employees (1-15 employees = one toilet, 16-30 employees= two toilets and so on).

SECTION 23. OBEY LAWS.

A. The Contractor shall obey all laws, ordinances and regulations of the United States, the State of Utah, and Park City in performing this Agreement.

B. The Contractor shall register and participate in E-Verify, or an equivalent program. The Contractor agrees to verify employment eligibility through E-Verify, or an equivalent program, for each new employee that is employed within Utah, unless exempted by Utah Code § 63G-12-302.

SECTION 24. NONDISCRIMINATION.

Any Contractor that enters into an agreement for goods or services with Park City Municipal Corporation or any of its boards, agencies, or departments shall:

A. Implement an employment nondiscrimination policy prohibiting discrimination in hiring, discharging, promoting or demoting, matters of compensation, or any other employment-related decision or benefit against a person otherwise qualified, because of actual or perceived race; color; sex; pregnancy, childbirth, or pregnancy-related conditions; age, if the individual is 40 years of age or older; religion; national origin; disability; sexual orientation; gender identity; genetic information; or military status.

B. In the performance of this Agreement, Contractor shall not discriminate on account of actual or perceived race; color; sex; pregnancy, childbirth, or pregnancy-related conditions; age, if the individual is 40 years of age or older; religion; national origin; disability; sexual orientation; gender identity; genetic information; or military status.

C. Incorporate the foregoing provisions in all subcontracts or assignments hereunder and take such actions as may be required to ensure full compliance with the provisions of this policy.

SECTION 25. THIRD PARTY RIGHTS. Nothing herein is intended to confer rights of any kind in any third party. No member, officer, or employee of the City shall have any interest, direct or indirect, in this Agreement or the proceeds thereof.

SECTION 26. PROJECT MANAGER/ENGINEER. The Project Manager/Engineer for this Project is _____, or such other person designated by the City Engineer or Public Works Director to the Contractor orally or in writing.

SECTION 27. PARTIES' REPRESENTATIVES. For purposes of notice required or desired by the parties or communication involving the services under this Agreement, such notice or communication shall be deemed to have been given when personally delivered or mailed certified mail, postage pre-paid, or sent by facsimile transmission, to the parties at the following addresses:

Contractor: _____, or such other person designated in writing by the Contractor's chief administrative officer, at the Contractor's address set out first above. Park City: Project Manager/Engineer, at the address set out first above for the City, or when given to such other person as either of the above representatives shall designate in writing. The designation of any address may be changed by notice given in the same manner as provided in this section.

SECTION 28. SEVERABILITY. Should any part of this Agreement for any reason be declared invalid, such decision shall not affect the validity of any remaining provisions, which remaining provisions shall remain in force and effect as if this Agreement had been executed with the invalid portion thereof eliminated, and it is hereby declared the intention of the parties that they would have executed the remaining portion of this Agreement without including any such part, parts, or portions which may, for any reason, be hereafter declared invalid. If any provision of this Agreement is held invalid or unenforceable with respect to particular circumstances, such provision shall nevertheless remain in full force and effect in all other circumstances.

SECTION 29. COUNTERPARTS. This Agreement may be executed in counterparts, each of which will be deemed an original and all of which together will constitute one and the same instrument.

SECTION 30. ELECTRONIC SIGNATURES. Each party agrees that the signatures of the parties included in this Agreement, whether affixed on an original document manually and later electronically transmitted or whether affixed by an electronic signature through an electronic signature system such as DocuSign, are intended to authenticate this writing and to create a legal and enforceable agreement between the parties hereto.

IN WITNESS WHEREOF, the parties have entered into this Agreement on the day and year set out at the top of this Agreement.

PARK CITY MUNICIPAL CORPORATION, a Utah municipal corporation

_____
Matt Dias, City Manager

ATTEST:

_____
City Recorder's Office

APPROVED AS TO FORM:

_____
City Attorney's Office

INSERT CONTRACTOR NAME
Address:
Address:
City, State, Zip:

_____
Utah Contractor License No.

Tax ID#: _____

_____
Signature

_____
Printed name

_____
Title

THE CITY REQUIRES THE CONTRACTOR TO COMPLETE EITHER THE NOTARY BLOCK OR THE UNSWORN DECLARATION, WHICH ARE BELOW.

STATE OF UTAH)
) ss.
COUNTY OF SUMMIT)

On this ____ day of _____, 20__, personally appeared before me _____, whose identity is personally known to me/or proved to me on the basis of satisfactory evidence and who by me duly sworn/affirmed, did say that he/she is the _____ (*title or office*) of _____, a _____ corporation (or limited liability company), by authority of its Bylaws/Resolution of the Board of Directors (if as to a corporation) or Operating Agreement/Member Resolution (if as to a limited liability company), and acknowledged that he/she signed it voluntarily for its stated purpose as _____ (title) for _____, a _____ corporation (or limited liability company).

_____
Notary Public

I declare under criminal penalty under the law of Utah that the foregoing is true and correct.
Signed on the ___ day of _____, 20___, at
_____ (insert State and County here).

Printed name _____

Signature: _____

PROCEDURAL DOCUMENTS

NOTICE OF AWARD

NOTICE TO PROCEED

CERTIFICATE OF SUBSTANTIAL COMPLETION

NOTICE OF AWARD

_____ _____
Contractors Name Date
_____ Address

_____ City, State & Zip Code

Project Description:

_____

Contractor:

Park City Municipal Corporation has reviewed and considered all proposals submitted at the bid opening held at 10:05 AM on Tuesday, May 9, 2023 at the Public Works East building 1053 Iron Horse Drive, Park City, UT 84060 for the construction of the above captioned project. It appears that your Proposal for performing the work outlined is fair, equitable and to the Owner's best interest, and your Proposal is hereby accepted at the unit bid price submitted in your bid.

In accordance with the terms of the Contract Documents, you are required to execute the formal Contract Agreement and furnish the required Performance and Labor and Material Payment Bonds within ten (10) calendar days from and including the date of this notice. Two (2) complete copies of the Contract Documents are transmitted herewith for your use, together with two (2) copies each of the Agreement and Bond forms. Please execute and return all copies to us. Upon execution by the Owner, a full set of executed Contract Documents will be returned for your file.

In addition, you are requested to return with the above documents two (2) copies of certificates of insurance as specified in the Contract Documents. Your certificates must be accompanied by a letter from your insurance company stating that the insurance certified meets the requirements of the entire Contract Documents.

Yours truly,

_____
Park City Municipal Corporation Owner

_____
By Title

ACCEPTANCE OF NOTICE OF AWARD

Receipt of the above NOTICE OF AWARD is hereby acknowledged

By_____this the _____ day of_____, 2023.

Title_____

NOTICE TO PROCEED

_____ _____
Contractors Name Date
_____ Address

_____ City, State & Zip Code

Project Description:

_____

Contractor:

You are hereby authorized to proceed on this date, or within ten (10) calendar days hereafter with the construction of the above-captioned project. The date of _____, 2023 (10 days from the date of this notice), is herewith designated as the date on which the Contract Time commences.

Yours truly,

_____
Park City Municipal Corporation Owner

_____
By Title

ACCEPTANCE OF NOTICE TO PROCEED

Receipt of the above NOTICE TO PROCEED is hereby acknowledged

By_____this the_____day of_____, 2023.

Title_____

CERTIFICATE OF SUBSTANTIAL COMPLETION

_____ _____
Contractors Name Date
_____ Address

_____ City, State & Zip Code

Project Description:

_____

Contractor:

The construction performed under this Contract has been inspected by authorized representatives of the Owner, the Engineer and your firm, and the Project is hereby declared to be substantially completed on the above date.

A tentative list of items to be completed or corrected is appended hereto. This list may not be exhaustive, and the failure to include an item on it does not alter the responsibility of the Contractor to complete all the work in accordance with the Contract Documents.

The date of substantial completion is the date upon which all guarantees, and warranties begin (unless otherwise specifically defined below).

Yours truly,

_____
Project Manager

_____
By Title

PROJECT NAME: SLURRY SEAL TYPE II, SEALCOAT BIKE PATHS, PAVEMENT OVERLAYS, ROTOMILLING, UTILITY ADJUSTMENTS, AND CRACK SEALS 2023

ADDENDUM NUMBER ONE
May 4, 2023

ITEM #1: Submission of Bid Security

Pages 4 and 18 of the bid documents reference the following:

> Bid security must be delivered in a sealed envelope in person to Park City Public Works, Attn: Troy Dayley, Public Works East Building, 1053 Iron Horse Drive, Park City, Utah 84060 prior to 10:00 a.m. on Tuesday, May 9, 2023. A photocopy or facsimile transmission of bid security will not be accepted.

As of May 4th, 2023, the statement shall be corrected as follows:

> Bid security must be delivered prior to 10:00 a.m. on Tuesday, May 9, 2023. Bidder may choose to deliver bid security in a sealed envelope in person to Park City Public Works, Attn: Troy Dayley, Public Works East Building, 1053 Iron Horse Drive, Park City, Utah 84060 or include a digital transmission with final bid submission on the Utah Public Procurement Place (U3P) under event number: PCMC202322105.

All potential bidders must sign and date below, acknowledging receipt of this addendum. A copy must be included with final bid submission on the Utah Public Procurement Place (U3P).

_____ _____
Authorized Signature Date

Print Name _____

Title _____

Company _____

MORGAN ASPHALT, INC. BID PACKET

BID SCHEDULE C:
PAVEMENT OVERLAYS, ROTOMILLING AND UTILITY ADJUSTMENTS 2023

ITEM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT COST	PRICE
1.	Overlay streets to conform with *2007 APWA Specifications.* Reference APWA 2007. *32-12-03 PG 58-28, 32-12-05 Maximum of 15% RAP by weight 32-12-05 DM-1/2, Medium Traffic Classification 32-12-16 (Rice Method)*	**8,507 Tons**	$ 91.00	$ 774,137.00
2.	Rotomilling to conform with Specifications and depth required to deliver milling across roadway so that surface remaining has a consistent and continuous cross fall, longitudinally and transversely. Millings from pavement overlay work shall become property of the contractor at the time of milling.	**582,624 sq. ft.**	$ 0.37	$ 215,570.88
3.	Overlay bike paths to conform with *Same pavement specification as line item 1.*	**238 Tons**	$ 178.00	$ 42,364.00
	Lower and /or readjust manholes, monument markers, and water valves in compliance with Park City Design Standards, Construction Specifications and Standard Drawings Section 551, placement and adjustment of new and existing utility structures to finish grade per Snyderville Basin Water Reclamation District Construction Specification for manholes. (*See SBWRD revised detail MH-09*)			

ITEM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT COST	PRICE
4.	Lowering Utility			
	Manhole	**82**	$ 467.50	$ 38,335.00
	Water valve/monument	**31**	$ 358.00	$ 11,098.00
5.	Raising/adjusting			
	Manhole	**82**	$ 927.50	$ 76,055.00
	Water valve/monument	**31**	$ 555.00	$ 17,205.00

Total Utility Adjustments Price $ 142,693.00

BID SCHEDULE – C **TOTAL $** 1,174,764.88

NOTE: See Appendix A for Street Overlays/Milling/Utility Adjustments

1 The quantities given are estimates for the purpose of comparing bids. Payment to the

contractor will be made only for actual quantities of work performed.

2 Estimated ten (10) working days to complete milling and overlay work. Work is scheduled to begin on July 5, 2023. Consideration will be given for weather delays.

3 The streets May be uneven and require more or less tonnage to achieve a quality, smooth, and compacted overlay.

4 Bidder is responsible for traffic control devices, signs, barricades, and flagger to be utilized in all locations work is being performed according to MUTCD standards.

5 **Edge Milling**: One to two-inches (1"-2") of existing asphalt feathered out to nothing seven feet (7') adjacent to each curb and across road intersections.

6 **Profile Milling**: The standard roadway cross slope is two percent (2%) down from crown to gutter line or edge of pavement. Cross slopes May be adjusted when it is necessary to provide a smooth transition a minimum of two percent (2%) and a maximum of four percent (4%).

7 Millings from pavement overlay work shall become the property of the contractor at the time of milling.

8 Prior to milling, verify alignment of all valve boxes and manholes. Submit list of needed repairs and related costs to realign and repair all valve boxes as needed.

9 Lowering of utilities in conjunction with Rotomilling must be completed by **July 8, 2023.** Readjustment is scheduled following completion of pavement overlay, estimated **August 31, 2023.**

10 All approved realignments or repairs shall be completed prior to paving. Only height adjustments are allowed after paving.

11 All grade rings and joints and housings are to be sealed.

12 Concrete cement fills to be used on adjustment.

13 All adjustments are to be set .50 inches below finish grade.

14 Grade ring shall be CRETEX MANHOLE RINGS furnished by contractor.

15 All manhole inverts, valves, and monuments shall be washed and vacuumed upon completion of each adjustment.

16 Bidder is responsible for traffic control devices, signs, barricades, and steel plates where necessary according to MUTCD standards.

17 Bidder is responsible to obtain Right of Way permits. Permit fees will be waived by Park City.

18 Bidder is responsible to make every attempt to minimize the tracking of tack oil and asphalt tar onto non-paved streets and crosswalks. Contractor will mitigate tracking problems promptly if they do occur.

* Park City Municipal reserves the right to add or delete quantities to meet budgeted amounts.

By: _____ Date: 5/9/2023

Print Name: Taylor Weaver Title: Senior Estimator

Company: Morgan Asphalt Inc.

BID PROPOSAL

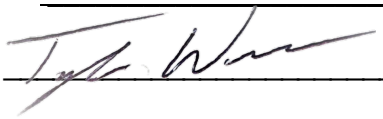
To the Owner

The undersigned states and warrants that Contractor has carefully examined the plans, specifications, form of contract, form of bond, instructions and other contract papers relating to the construction for which this proposal is made, and that Contractor has examined the site of the work and has given attention to and carefully considered all of the matters which affect the nature and the cost of construction and its several parts.

If this proposal, as given on the attached Bid Schedule, is accepted, the undersigned will, within ten (10) days after notice thereof, in writing, by the owner, furnish a construction bond in accordance with the form of bond herewith attached, for the full amount of the total bid price, correctly computed from the unit prices bid, and executed in favor of the Owner by Employers Mutual Casualty Co surety, whose address is:
PO BOX 712, Des Moines, IA 50306-0712
and will sign and execute the accompanying form of construction contract.

Name of Bidder, Construction Contractor: Morgan Asphalt Inc

Contractor State & License No.: Utah, 339339-5501

Signature of Representative: 

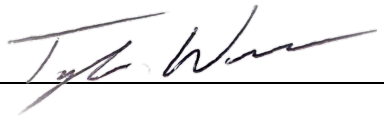
Position of Representative: Senior Estimator

Bidder's Mailing Address: 7620 West HWY 201, Magna, Utah 84044

Bidder's Street Address: 7620 West HWY 201

City, State, & Zip Code: Magna, Utah, 84044

Phone/Fax: 801-414-2882 / 801-595-0020

 Signature Acknowledging Receipt of:

Amendment No. 1. X
Amendment No. 2.
Amendment No. 3.

Date
5/9/2023

A bid may be considered invalid if the Bidder fails to completely fill out and sign both the Bid Proposal and proper Bid Schedule.

SUBCONTRACTORS

Item	Firm
Raise Lower Manholes Water Valves	Craighead Construction
Traffic Control	Utah Barricaide

BID BOND

Date Bond Executed May 5, 2023 Principal Morgan Asphalt, Inc. Surety Employers Mutual Casualty Company Sum of Bond Five Percent (5%) of Total Amount Bid Date of Bid May 9, 2023

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the Owner herein known as the obligee, in the sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THE OBLIGATION IS SUCH, that whereas the principal has submitted the accompanying bid, dated as shown above, for: 2023 Pavement Management
NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the said principal shall execute a contract as specified and give construction bond to be approved by the obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the principal, then this obligation shall be null and void. However, if said principal shall fail to execute a contract as specified and give full construction bond, approved by the obligee, within ten (10) days of being notified of award of contract, then this bond shall be forfeited in full to obligee.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Morgan Asphalt, Inc.
INDIVIDUAL OR PARTNERSHIP PRINCIPAL — Corporate Principal

7620 West Highway 201 , Magna, UT 84044
Business Address

By

Matt Morgan, President
Title

Note: If cash, certified or cashier's check is used in lieu of bid bond, a certificate from an approved surety company guaranteeing execution of a full performance bond must accompany bid.

Employers Mutual Casualty Company

PO Box 712, Des Moines, IA 50306-0712
Business Address

By _____ Attorney-in-Fact
Title

Joshua R. Loftis
Attorney-in-Fact

STATE OF ~~UTAH~~ WISCONSIN)
)
County of POLK)

Joshua R. Loftis, being first duly sworn, on oath deposes and says that he is the Attorney-in-Fact of the above-named Surety Company, and that he is duly authorized to execute and deliver the foregoing obligations; that said company is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings, and obligations.

Subscribed and sworn to before me this 5th, day of May, 2023.

_____
Attorney-in-Fact Joshua R. Loftis

My Commission Expires June 21, 2025

Notary Public _____
Rachel Thomas

RACHEL THOMAS
Notary Public, State of Wisconsin

EMC INSURANCE

P.O. Box 712 • Des Moines, Iowa 50306-0712

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

KNOW ALL MEN BY THESE PRESENTS, that:

1. **Employers Mutual Casualty Company, an Iowa Corporation**
2. **EMCASCO Insurance Company, an Iowa Corporation**
3. **Union Insurance Company of Providence, an Iowa Corporation**
4. **Illinois EMCASCO Insurance Company, an Iowa Corporation**
5. **Dakota Fire Insurance Company, a North Dakota Corporation**
6. **EMC Property & Casualty Company, an Iowa Corporation**

hereinafter referred to severally as "Company" and collectively as "Companies", each does, by these presents, make, constitute and appoint:

Colby D. White, Ted Jorgensen, Joshua R. Loftis, Brian J. Oestreich, Nathan Weaver, R. C. Bowman, Kurt C. Lundblad, Sandra M. Engstrum, Emily R. White, Rachel Thomas, Lin Ulven, Melinda C. Blodgett, Nicole Stillings

its true and lawful attorney-in-fact, with full power and authority conferred to sign, seal, and execute the Surety Bond:

Any and All Bonds

and to bind each Company thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of each such Company, and all of the acts of said attorney pursuant to the authority hereby given are hereby ratified and confirmed.

The authority hereby granted shall expire October 10th , 2025 , unless sooner revoked.

AUTHORITY FOR POWER OF ATTORNEY

This Power-of-Attorney is made and executed pursuant to and by the authority of the following resolution of the Boards of Directors of each of the Companies at the first regularly scheduled meeting of each company duly called and held in 1999:

RESOLVED: The President and Chief Executive Officer, any Vice President, the Treasurer and the Secretary of Employers Mutual Casualty Company shall have power and authority to (1) appoint attorneys-in-fact and authorize them to execute on behalf of each Company and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof; and (2) to remove any such attorney-in-fact at any time and revoke the power and authority given to him or her. Attorneys-in-fact shall have power and authority, subject to the terms and limitations of the power-of-attorney issued to them, to execute and deliver on behalf of the Company, and to attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and any such instrument executed by any such attorney-in-fact shall be fully and in all respects binding upon the Company. Certification as to the validity of any power-of-attorney authorized herein made by an officer of Employers Mutual Casualty Company shall be fully and in all respects binding upon this Company. The facsimile or mechanically reproduced signature of such officer, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power-of-attorney of the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS THEREOF, the Companies have caused these presents to be signed for each by their officers as shown, and the Corporate seals to be hereto affixed this 22nd day of September , 2022 .

Scott R. Jean, President & CEO
of Company 1; Chairman, President
& CEO of Companies 2, 3, 4, 5 & 6

Todd Strother, Executive Vice President
Chief Legal Officer & Secretary of
Companies 1, 2, 3, 4, 5 & 6

ILLINOIS EMCASCO INSURANCE COMPANY CORPORATE SEAL IOWA

UNION INSURANCE COMPANY OF PROVIDENCE INCORPORATED 1863 IOWA

EMC PROPERTY & CASUALTY CO. INCORPORATED 1953 IOWA

EMCASCO INSURANCE COMPANY CORPORATE SEAL IOWA

DAKOTA FIRE INSURANCE COMPANY CORPORATE SEAL NORTH DAKOTA

EMPLOYERS MUTUAL CASUALTY CO. CORPORATE SEAL DES MOINES, IOWA

KATHY LOVERIDGE
Commission Number 780769
My Commission Expires
October 10, 2025

On this 22nd day of September , 2022 before me a Notary Public in and for the State of Iowa, personally appeared Scott R. Jean and Todd Strother, who, being by me duly sworn, did say that they are, and are known to me to be the CEO, Chairman, President, Executive Vice President, Chief Legal Officer and/or Secretary, respectively, of each of the Companies above; that the seals affixed to this instrument are the seals of said corporations; that said instrument was signed and sealed on behalf of each of the Companies by authority of their respective Boards of Directors; and that the said Scott R. Jean and Todd Strother, as such officers, acknowledged the execution of said instrument to be their voluntary act and deed, and the voluntary act and deed of each of the Companies.

My Commission Expires October 10, 2025.

Kathy Loveridge
Notary Public in and for the State of Iowa

CERTIFICATE

I, Ryan J. Springer, Vice President of the Companies, do hereby certify that the foregoing resolution of the Boards of Directors by each of the Companies, and this Power of Attorney issued pursuant thereto on 22nd day of September , 2022 , are true and correct and are still in full force and effect.

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 5th day of May , 2023 .

Ryan J. Springer
Vice President

PROJECT NAME: SLURRY SEAL TYPE II, SEALCOAT BIKE PATHS, PAVEMENT OVERLAYS, ROTOMILLING, UTILITY ADJUSTMENTS, AND CRACK SEALS 2023

ADDENDUM NUMBER ONE
May 4, 2023

ITEM #1: Submission of Bid Security

Pages 4 and 18 of the bid documents reference the following:

> Bid security must be delivered in a sealed envelope in person to Park City Public Works, Attn: Troy Dayley, Public Works East Building, 1053 Iron Horse Drive, Park City, Utah 84060 prior to 10:00 a.m. on Tuesday, May 9, 2023. A photocopy or facsimile transmission of bid security will not be accepted.

As of May 4th, 2023, the statement shall be corrected as follows:

> Bid security must be delivered prior to 10:00 a.m. on Tuesday, May 9, 2023. Bidder may choose to deliver bid security in a sealed envelope in person to Park City Public Works, Attn: Troy Dayley, Public Works East Building, 1053 Iron Horse Drive, Park City, Utah 84060 or include a digital transmission with final bid submission on the Utah Public Procurement Place (U3P) under event number: PCMC202322105.

All potential bidders must sign and date below, acknowledging receipt of this addendum. A copy must be included with final bid submission on the Utah Public Procurement Place (U3P).

Authorized Signature _____ Date 5/9/2023

Print Name Taylor Weaver

Title Senior Estimator

Company Morgan Asphalt Inc

MORGAN PAVEMENT MAINTENANCE BID PACKET

ADDENDUMS WILL BE POSTED ON THE WEBSITE.
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REGULARLY CHECK THE WEBSITE FOR ANY NEW ADDITIONS.

2023 PAVEMENT MANAGEMENT

PARK CITY, UTAH

SLURRY SEAL TYPE II,
SEALCOAT BIKE PATHS,
PAVEMENT OVERLAYS, ROTOMILLING, UTILITY ADJUSTMENTS,
AND CRACK SEALS
2023

OWNER
PARK CITY MUNICIPAL CORPORATION
1053 IRON HORSE DRIVE
PO BOX 1480
PARK CITY, UTAH 84060

BID SCHEDULE A: SLURRY SEALS TYPE II 2023

In compliance with Park City Design Standards, Construction Specification and Standards Slurry Seal work shall consist of: Type II Slurry Seal coating, protecting crosswalks, meter lids, survey monuments etc. by covering prior to installation of slurry, and cleaning, drying, and sealing with material as outlined above.

ITEM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT COST	PRICE
1.	Slurry Sealing Streets Type II	**112,572 sq. yd.**	$ 1.415	$ 159,289.38

BID SCHEDULE – A

Note: See Appendix A for schedule of Slurry Seals.

1. All slurry seal areas with striping or crossings shall be marked for future striping to be completed by owner.
2. All water meter, survey, storm drain inlets, and manhole lids shall be protected from slurry prior to application. Protection covers shall be removed when slurry is dry.
3. All adjacent homeowners / businesses shall receive two (2) notices of work to be completed; a seven (7) day advanced notice followed by a twenty-four (24) hour notice. All notices must be approved by the City prior to distribution.
4. All traffic control is to be supplied by contractor such as signs and flaggers to be utilized in all locations work is being performed according to MUTCD standards.
5. All slurry seal coat will contain a minimum of three percent (3%) LMCQS-1H.
6. Bidder is responsible to obtain Right of Way permits. Permit fees will be waived by Park City.

By: _____ Date: 5/9/2023

Print Name: Josh Callister Title: Estimator / Project Manager

Company: Morgan Pavement Maintenance

BID SCHEDULE B: SEALCOAT BIKE PATHS 2023

In compliance with Park City Design Standards, Construction Specification and Standards Seal Coating work shall consist of: Tuffcoat Sealcoat P+ Coating, protecting crosswalks, meter lids, survey monuments, manhole lids, etc. by covering prior to installation of slurry, and cleaning, drying and sealing with material.

ITEM NO.	DESCRIPTION OF WORK	QUANTITY	UNIT COST	PRICE
1.	Sealcoat Bike Paths	**9,880 sq. yd.**	$ 1.7991	$ 17,775.11

BID SCHEDULE – B **TOTAL$** 17,775.11

Note: See Appendix A for schedule of Tuffcoat Sealcoat P+ Coating.

1. All seal coating areas with striping or crossings shall be marked for future striping to be completed by owner.
2. All water, meter, survey, storm drain inlets, and manhole lids shall be protected from slurry prior to application. Protection covers shall be removed when Seal Coating is dry.
3. Contractor is responsible that application area is cleaned and free from all debris and vegetation.
4. All adjacent homeowners / businesses/ trail users shall receive two (2) notices of work to be completed; a seven (7) day advanced notice followed by a twenty-four (24) hour notice. All notices must be approved by the Project Manager prior to distribution.
5. All pedestrian traffic and vehicular traffic control is to be supplied by contractor such as signs and flaggers to be utilized in all locations work is being performed according to MUTCD standards.
6. Bidder is responsible to obtain Right of Way permits. Permit fees will be waived by Park City.
7. Application Rate: Two (2) separate application coats are required. First application = Approximately 48-52 square feet per gallon Second application = Approximately 48-52 square feet per gallon

By: _____ Date: 5/9/2023

Print Name: Josh Callister Title: Estimator / Project Manager

Company: Morgan Pavement Maintenance

BID SCHEDULE D: CRACK SEAL 2023

In compliance with Park City Design Standards, Construction Specification and Standards Drawings Section 551 and general guidelines to bidders, sealant must be **Craftco** or **Maxwell** or an approved equal and must meet or exceed Federal Standard ASTM D 3405. Crack seal work shall consist of routing, cleaning, and drying cracks and sealing them with material outlined in specification above.

ITEM NO.	DESCRIPTION OF WORK	TONS	UNIT COST	PRICE
1.	Crack Sealing streets/Paths	18	$ 3,889.00	$ 70,002.00

BID SCHEDULE – D **TOTAL $** 70,002.00

Note: See Appendix A for schedule of Crack Seals.

1. All new cracks .125 inch or greater are to be routed a minimum of .50 inch wide and .75 inch deep prior to application of crack seal.
2. All traffic control is to be supplied by contractor, such as signs and flaggers, to be utilized in all locations work is being performed according to MUTCD standards.
3. Contractor is required to clean all debris generated from routing and crack seal installation upon completion of each street.
4. The smallest size application cup is required that will adequately fill the crack without overflowing material. Crack sealant material shall only be applied to cracks.
5. Cost of crack seal including routing, blowing, drying, sweeping, and cleaning bid per ton.
6. Bidder is responsible to obtain Right of Way permits. Permit fees will be waived by Park City.

*Park City Municipal reserves the right to add or delete quantities to meet budgeted amounts.

By: _____ Date: 5/9/2023

Print Name: Josh Callister Title: Estimator / Project Manager

Company: Morgan Pavement Maintenance

BID PROPOSAL

To the Owner

The undersigned states and warrants that Contractor has carefully examined the plans, specifications, form of contract, form of bond, instructions and other contract papers relating to the construction for which this proposal is made, and that Contractor has examined the site of the work and has given attention to and carefully considered all of the matters which affect the nature and the cost of construction and its several parts.

If this proposal, as given on the attached Bid Schedule, is accepted, the undersigned will, within ten (10) days after notice thereof, in writing, by the owner, furnish a construction bond in accordance with the form of bond herewith attached, for the full amount of the total bid price, correctly computed from the unit prices bid, and executed in favor of the Owner by Atlantic Specialty surety, whose address is:

605 Highway, 169 North, Suite 800 Plymouth MN 55441

and will sign and execute the accompanying form of construction contract.

Name of Bidder, Construction Contractor: Morgan Pavement Maintenance

Contractor State & License No.: 9798330-5501

Signature of Representative: [signature]

Position of Representative: Estimator / Project Manager

Bidder's Mailing Address: 625 S Main Clearfield UT 84015

Bidder's Street Address: 625 S Main

City, State, & Zip Code: Clearfield, UT 84015

Phone/Fax: O : 801-544-5947 F: 801-416-8061

[signature] Signature Acknowledging Receipt of:

Amendment No. 1. 1
Amendment No. 2.
Amendment No. 3.

Date
5/8/2023

A bid may be considered invalid if the Bidder fails to completely fill out and sign both the Bid Proposal and proper Bid Schedule.

SUBCONTRACTORS

Item	Firm
Morgan Pavement Plans to Perform All Work for Contract	

Crack Seal Equipment List 2022

Crack Seal	06 CHEVY PICKUP	10255
Crack Seal	11 FREIGHTLINER	10257
Crack Seal	11 FREIGHTLINER	10258
Crack Seal	12 CHEVY PICKUP (GIL)	11277
Crack Seal	12 CRAFCO ROUTER	12311
Crack Seal	13 CHEVY PICKUP (TIMONE)	12312
Crack Seal	06 FREIGHTLINER	13320
Crack Seal	13 BEARCAT CRACK KETTLE	13323
Crack Seal	13 DOOSAN COMPRESSOR	13333
Crack Seal	05 FREIGHTLINER	16403
Crack Seal	2016 BEARCAT CRACKSEALER	16407
Crack Seal	2018 PJ TRAILERS 18 FT EQ TRAILER	17439
Crack Seal	CRAFCO ROUTER	19536
Crack Seal	2019 DOOSAN COMPRESSOR(UEADF89)	19554
Crack Seal	2019 DOOSAN COMPRESSOR(495409UH)	19561
Crack Seal	2019 DOOSAN COMPRESSOR	20574
Crack Seal	BEARKAT KETTLE (2100413)	20578
Crack Seal	BEARCAT KETTLE FROM POST	20601
Crack Seal	SMALL EQUIPMENT CRACKSEAL	39999
Crack Seal	CRAFCO ROUTER	98003
Crack Seal	00 BEARCAT KETTLE	00040
Crack Seal	BEARCAT CRACK KETTLE	04082
Crack Seal	85 TRAIL KING TRLR	05122
Crack Seal	06 INGERSOLL RAND COMP	06165
Crack Seal	07 CHEVY PICKUP (TIMON)	07187
Crack Seal	IR COMPRESSOR	07208
Crack Seal	08 CHEVY PICKUP	08214
Crack Seal	08 CHEVY CREW CAB	08225
Crack Seal	BEARCAT CRACK KETTLE	08230
Crack Seal	Crack Seal Equipment	EQ003
Crack Seal	MT 4X8 TRAILER	FC247
Crack Seal	MT 5X10 TRAILER	FC248
Crack Seal	96 SEALCOAT TRLR	FC441
Crack Seal	LITTLE BLACK TRLR	FC442
Crack Seal	CRAFCO ROUTER	FC483
Crack Seal	SMALL EQUIPMENT (ONYX)	12999
Crack Seal	07 INTERNATIONAL(20-608 MOUNTED)	14352
Crack Seal	CROWN DISTRIBUTOR SYS (SEE 07-205)	15385

Crack Seal	1997 CHEVY SWEEPER	16417
Crack Seal	2016 CHEVY TRUCK (NIN)	16421
Crack Seal	2018 PJ TRAILERS 18FT EQ TRAILER	17438
Crack Seal	BLAST CRETE ONYX DIST (ON 09-235)	17445
Crack Seal	NEAL DA350 APPLICATOR	17505
Crack Seal	2019 PJ TRAILERS 22' TRLR	18510
Crack Seal	HURRICANE RIDE ON BLOWER	19556
Crack Seal	ONYX RETROFIT ON 07-205 UTAH	20588
Crack Seal	2020 TANK/SPRAYER MOUNTED ON 14-352	20608
Crack Seal	02 CHEVY PICKUP (NIN)	02074
Crack Seal	06 CHEVY TRUCK	06153
Crack Seal	08 PETERBILT TRUCK (WITH 20-588)	07205
Crack Seal	07 STERLING (W/ 17-445 ON BRD)	09235

EFFICIENCY WITH INTEGRITY

Equipment Listing - Slurry Seal

Slurry Seal	09 LEEBOY PNUEM ROLLER	10252
Slurry Seal	10 BERGKAMP SPREADER BOX	10254
Slurry Seal	MICRO BOX TRLR	11271
Slurry Seal	11 CHEVY PICKUP	11272
Slurry Seal	13 PETERBILT TRUCK	12292
Slurry Seal	12 CHEVY TRUCK	12299
Slurry Seal	12 WESTERN REC TRLR	12310
Slurry Seal	11 SDI SIDE DUMP TRLR	13331
Slurry Seal	09 PETERBILT	14344
Slurry Seal	09 PETERBILT	14345
Slurry Seal	14 WELLS CARGO TRLR	14350
Slurry Seal	15 CHEVY PICKUP	14353
Slurry Seal	15 CHEVY TRUCK (MARIO)	15374
Slurry Seal	15 CHEVY TRUCK (IVAN)	15376
Slurry Seal	2000 KENWORTH DUMP TRUCK	15378
Slurry Seal	2012 SDI SIDE DUMP TRAILER	15382
Slurry Seal	2001 HEIL TANKER TRAILER	15386
Slurry Seal	1999 TRAILMASTER TANKER TRAILER	15387
Slurry Seal	2001 HEIL 8400 GAL TANKER	15390
Slurry Seal	2006 FRGHTLNR W/ELGIN SWEEPER	16413
Slurry Seal	2012 TREMCAR TANKER	16432
Slurry Seal	2007 INTERNATIONAL SLURRY TRUCK	18506
Slurry Seal	2007 INTERNATIONAL SLURRY TRUCK	18507
Slurry Seal	CPM SPREADER BOX	18508
Slurry Seal	2018 CHEVY 3500 UTILITY	18512
Slurry Seal	2010 HEIL TANKER	18521
Slurry Seal	2006 INTERNATIONAL ELGIN SWEEPER	18523
Slurry Seal	2014 AUTOCAR/ELGIN SWEEPER	18524
Slurry Seal	2019 CHEVY 3500 (DAVID)	19542
Slurry Seal	CAT SKID LOADER(LTE04076)	19543
Slurry Seal	2007 PETERBUILT/BERGKAMP SLURRY TRK	19552
Slurry Seal	2019 CHEVY FLATBED (227409)	20577
Slurry Seal	8001 BERGKAMP SLURRY BOX	20612
Slurry Seal	AXLE NOBEL MICRO BOX#2	20614
Slurry Seal	2020 CHEVY -WELDER (284527)	20618
Slurry Seal	SMALL EQUIPMENT SLURRY	29999
Slurry Seal	98 UTILITY TRLR	98001

Slurry Seal	98 CAT LOADER	98002
Slurry Seal	TANK FOR SULPHER	00047
Slurry Seal	98 KENWORTH TRANSPORT	01053
Slurry Seal	01 SLURRY BOX	01059
Slurry Seal	BERGKAMP MICROBOX (FROM SLC)	02016
Slurry Seal	01 KENWORTH	05118
Slurry Seal	PJ TRAILER 7K	05120
Slurry Seal	05 TRAIL KING BOTTOM TRLR	06160
Slurry Seal	06 PETERBILT SLURRY TK	06161
Slurry Seal	06 SLURRY BOX TRLR	06166
Slurry Seal	06 BERGKAMP SLURRY BOX	06168
Slurry Seal	95 TRAIL MASTER TANKER	07194
Slurry Seal	97 FORD SLURRY TRUCK	07200
Slurry Seal	BERGKAMP SLURRY BOX	07204
Slurry Seal	05 KOMATSU LOADER	08210
Slurry Seal	08 PETERBILT TRUCK	08215
Slurry Seal	08 CHARMAC TRLR	08217
Slurry Seal	BERGKAMP MOBILE MIXPAVER	08221
Slurry Seal	07 PJ TRAILERS CONE TRLR	08223
Slurry Seal	08 CHEVY CREW	08224
Slurry Seal	ELGIN CROSSWIND SWEEP	08228
Slurry Seal	07 STERLING TRUCK	09236
Slurry Seal	09 ALLISON FAB BOX TRLR	09239
Slurry Seal	09 ALLISON FAB MICRO BOX	09240
Slurry Seal	SLURRY TRUCK (HOLBROOK)	FC127
Slurry Seal	98 BOX TRAILER	FC243
Slurry Seal	98 TWAMCO TRANPORT TRLR	FC249
Slurry Seal	ROADSAVER SLURRY BOX	FC278

MORGAN PAVEMENT MAINTENANCE, INC.
625 SOUTH MAIN STREET - P. O. BOX 190 - CLEARFIELD, UT 84015 - (801) 544-5947 - FAX (801) 416-8061 - www.morganpavement.com

Park City 2023 Pavement Maintenance

Employee List

Crack Seal – we will have 6 employees on this job, 4 crack seal crew members including one superintendent performing the blowing of cracks and the placement of the crack sealant. 2 laborers with a router each staying a couple days ahead of the crack seal crews routing cracks as per city specification.

Sealcoat Trails – 4 Laborers, including one foreman with ability to make decisions.

Slurry – 14 laborers including 1 superintendent and 1 Foreman, 3-4 CDL drivers and sweeping crew.

Anticipated schedule for progress payments. We typically will request a progress payment at the first of each month while project is actively being performed, or one – time if the project is completed with in a months time.

BID BOND

Date Bond Executed May 9, 2023 Principal Morgan Pavement Maintenance Surety Atlantic Specialty Insurance Company Sum of Bond 5% of Bid Date of Bid May 9, 2023

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the Owner herein known as the obligee, in the sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THE OBLIGATION IS SUCH, that whereas the principal has submitted the accompanying bid, dated as shown above, for:
NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the said principal shall execute a contract as specified and give construction bond to be approved by the obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the principal, then this obligation shall be null and void. However, if said principal shall fail to execute a contract as specified and give full construction bond, approved by the obligee, within ten (10) days of being notified of award of contract, then this bond shall be forfeited in full to obligee.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Morgan Pavement Maintenance
INDIVIDUAL OR PARTNERSHIP PRINCIPAL — Corporate Principal

625 South Main Street, Clearfield, UT 84015
Business Address

TRES SMITH
By

VP
Title

Note: If cash, certified or cashier's check is used in lieu of bid bond, a certificate from an approved surety company guaranteeing execution of a full performance bond must accompany bid.

PO Box 165194, SLC, UT 84116
Business Address

Keller Jensen — Attorney in Fact
By — Title

Atlantic Specialty Insurance Company

Keller Jensen
Attorney-in-Fact

STATE OF UTAH)
)
County of Davis)

Keller Jensen, being first duly sworn, on oath deposes and says that he is the Attorney-in-Fact of the above-named Surety Company, and that he is duly authorized to execute and deliver the foregoing obligations; that said company is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings, and obligations.

Subscribed and sworn to before me this 9 day of May, 2023.

Keller Jensen
Attorney-in-Fact

My Commission Expires JUNE 14, 2025

Notary Public Elysa Whitney Gailey

NOTARY PUBLIC
ELYSA WHITNEY GAILEY
718782
MY COMMISSION EXPIRES
JUNE 14, 2025
STATE OF UTAH

OneBeacon
INSURANCE GROUP

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Todd Chapman, Keller Jensen**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **unlimited** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-seventh day of April, 2020.

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

By _____
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA
HENNEPIN COUNTY

On this twenty-seventh day of April, 2020, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.

ALISON DWAN NASH-TROUT
NOTARY PUBLIC - MINNESOTA
My Commission Expires
January 31, 2025

_____
Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 9 day of May, 2023.

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

This Power of Attorney expires
January 31, 2025

_____
Kara Barrow, Secretary

PROJECT NAME: SLURRY SEAL TYPE II, SEALCOAT BIKE PATHS, PAVEMENT OVERLAYS, ROTOMILLING, UTILITY ADJUSTMENTS, AND CRACK SEALS 2023

ADDENDUM NUMBER ONE
May 4, 2023

ITEM #1: Submission of Bid Security

Pages 4 and 18 of the bid documents reference the following:

> Bid security must be delivered in a sealed envelope in person to Park City Public Works, Attn: Troy Dayley, Public Works East Building, 1053 Iron Horse Drive, Park City, Utah 84060 prior to 10:00 a.m. on Tuesday, May 9, 2023. A photocopy or facsimile transmission of bid security will not be accepted.

As of May 4th, 2023, the statement shall be corrected as follows:

> Bid security must be delivered prior to 10:00 a.m. on Tuesday, May 9, 2023. Bidder may choose to deliver bid security in a sealed envelope in person to Park City Public Works, Attn: Troy Dayley, Public Works East Building, 1053 Iron Horse Drive, Park City, Utah 84060 or include a digital transmission with final bid submission on the Utah Public Procurement Place (U3P) under event number: PCMC202322105.

All potential bidders must sign and date below, acknowledging receipt of this addendum. A copy must be included with final bid submission on the Utah Public Procurement Place (U3P).

Authorized Signature _____ Date 5/8/2023

Print Name Josh Callister

Title Estimator / Project Manager

Company Morgan Pavement Maintenance

BID OPENING – Tuesday, 5/03/2023, 10:05 AM FOR 2023 PAVEMENT MANAGEMENT

Company Name	Bid Bond Received?	Bid Proposal?	Addendum?	Schedule A Slurry Seals (Type II) Estimated Sq.Yd.: 112,572	Schedule B Sealcoat Trails Estimated Sq.Yd.: 9,880	Schedule C Street Overlays									Schedule D Crack Seals
						Street overlays (Per ton) Estimated Tons: 8,507	Bike Path overlays (Per ton) Estimated Tons: 238	Milling (Per Square Yard) Estimated Sq.Ft.: 582,624	Lower Man Hole Estimated Qty: 82	Lower Water valve and monument Estimated Qty: 31	Raise Man Hole Estimated Qty: 82	Raise Water Valve and Monument Estimated Qty: 31	Total Utility Adjustments	Schedule C Total	(Per ton) Estimated Tons: 18
Asphalt Preservation	X	X	X	Bid Unit Price Given: $1.83 Calculated Total: $206,006.76 Bid Price Given Total: $206,006.76	Bid Unit Price Given: $2.93 Calculated Total: $28,948.40 Bid Price Given Total: $28,948.40	NO BID									Bid Unit Price Given: $4,120.00 Calculated Total: $74,160.00 Bid Price Given Total: $74,160.00
Black Forest Paving	X	X	X	NO BID	NO BID	Bid Unit Price Given: $107.55 Calculated Total: $914,927.85 Bid Price Given: $914,927.85	Bid Unit Price Given: $140.00 Calculated Total: $33,320.00 Bid Price Given: $33,320.00	Bid Unit Price Given: $0.50 Calculated Total: $291,312.00 Bid Price Given: $291,312.00	Bid Unit Price Given: $275.00 Calculated Total: $22,550.00 Bid Price Given: $22,555.00	Bid Unit Price Given: $275.00 Calculated Total: $8,525.00 Bid Price Given: $8,525.00	Bid Unit Price Given: $440.00 Calculated Total: $36,080.00 Bid Price Given: $36,080.00	Bid Unit Price Given: $330.00 Calculated Total: $10,230.00 Bid Price Given: $10,230.00	Calculated Total of Utility Adjustments: $77,385.00 Bid Price Given for Utility Adjust. Subtotal: $68,867.00	Calculated Total According to Unit Price Given: $1,316,944.85 Bid Price Given Total: $1,316,944.85	NO BID
Granite Construction Company	X	X	X	NO BID	NO BID	Bid Unit Price Given: $92.50 Calculated Total: $786,897.50 Bid Price Given: $786,897.50	Bid Unit Price Given: $211.50 Calculated Total: $50,337.00 Bid Price Given: $50,337.00	Bid Unit Price Given: $0.33 Calculated Total: $192,265.92 Bid Price Given: $192,265.92	Bid Unit Price Given: $520.00 Calculated Total: $42,640.00 Bid Price Given: $42,640.00	Bid Unit Price Given: $500.00 Calculated Total: $15,500.00 Bid Price Given: $15,500.00	Bid Unit Price Given: $1,010.00 Calculated Total: $82,820.00 Bid Price Given: $88,820.00	Bid Unit Price Given: $710.00 Calculated Total: $22,010.00 Bid Price Given: $33,010.00	Calculated Total of Utility Adjustments: $162,970.00 Bid Price Given for Utility Adjust. Subtotal: $162,970.00	Calculated Total According to Unit Price Given: $1,192,470.42 Bid Price Given Total: $1,192,470.42	NO BID
Kilgore Contracting	X	X	X	NO BID	Bid Unit Price Given: $2.14 Calculated Total: $21,143.20 Bid Price Given Total: $21,143.20	Bid Unit Price Given: $119.00 Calculated Total: $1,012,333.00 Bid Price Given: $1,046,361.00	Bid Unit Price Given: $200.00 Calculated Total: $47,600.00 Bid Price Given: $47,600.00	Bid Unit Price Given: $0.33 Calculated Total: $192,265.92 Bid Price Given: $192,266.00	Bid Unit Price Given: $550.00 Calculated Total: $45,100.00 Bid Price Given: $45,100.00	Bid Unit Price Given: $450.00 Calculated Total: $13,950.00 Bid Price Given: $13,950.00	Bid Unit Price Given: $900.00 Calculated Total: $73,800.00 Bid Price Given: $73,800.00	Bid Unit Price Given: $800.00 Calculated Total: $24,800.00 Bid Price Given: $24,800.00	Calculated Total of Utility Adjustments: $157,650.00 Bid Price Given for Utility Adjust. Subtotal: $157,650.00	Calculated Total According to Unit Price Given: $1,409,848.92 Bid Price Given Total: $1,443,877.00	Bid Unit Price Given: $6,125.91 Calculated Total: $110,266.38 Bid Price Given Total: $110,266.38
M&M Asphalt Services	X	X	X	Bid Unit Price Given: $2.00 Calculated Total: $225,144.00 Bid Price Given Total: $225,144.00	Bid Unit Price Given: $3.00 Calculated Total: $29,640.00 Bid Price Given Total: $29,640.00	NO BID									Bid Unit Price Given: $5,000.00 Calculated Total: $90,000.00 Bid Price Given Total: $90,000.00
Morgan Asphalt, Inc.	X	X	X	NO BID	NO BID	Bid Unit Price Given: $91.00 Calculated Total: $774,137.00 Bid Price Given: $774,137.00	Bid Unit Price Given: $178.00 Calculated Total: $42,364.00 Bid Price Given: $42,364.00	Bid Unit Price Given: $0.37 Calculated Total: $215,570.88 Bid Price Given: $215,570.88	Bid Unit Price Given: $467.50 Calculated Total: $38,335.00 Bid Price Given: $38,335.00	Bid Unit Price Given: $358.00 Calculated Total: $11,098.00 Bid Price Given: $11,098.00	Bid Unit Price Given: $927.50 Calculated Total: $76,055.00 Bid Price Given: $76,055.00	Bid Unit Price Given: $555.00 Calculated Total: $17,205.00 Bid Price Given: $17,205.00	Calculated Total of Utility Adjustments: $142,693.00 Bid Price Given for Utility Adjust. Subtotal: $142,693.00	Calculated Total According to Unit Price Given: $1,174,764.88 Bid Price Given Total: $1,174,764.88	NO BID
Morgan Pavement Maintenance	X	X	X	Bid Unit Price Given: $1.42 Calculated Total: $159,289.38 Bid Price Given Total: $159,289.38	Bid Unit Price Given: $1.80 Calculated Total: $17,775.11 Bid Price Given Total: $17,775.11	NO BID									Bid Unit Price Given: $3,889.00 Calculated Total: $70,002.00 Bid Price Given Total: $70,002.00
Staker & Parson Companies	X	X	X	NO BID	Bid Unit Price Given: $1.85 Calculated Total: $18,278.00 Bid Price Given Total: $18,278.00	Bid Unit Price Given: $101.00 Calculated Total: $859,207.00 Bid Price Given: $859,207.00	Bid Unit Price Given: $210.00 Calculated Total: $49,980.00 Bid Price Given: $49,980.00	Bid Unit Price Given: $0.37 Calculated Total: $215,570.88 Bid Price Given: $215,570.88	Bid Unit Price Given: $565.00 Calculated Total: $46,330.00 Bid Price Given: $46,330.00	Bid Unit Price Given: $565.00 Calculated Total: $17,515.00 Bid Price Given: $17,515.00	Bid Unit Price Given: $850.00 Calculated Total: $69,700.00 Bid Price Given: $69,700.00	Bid Unit Price Given: $625.00 Calculated Total: $19,375.00 Bid Price Given: $19,375.00	Calculated Total of Utility Adjustments: $152,920.00 Bid Price Given for Utility Adjust. Subtotal: $152,920.00	Calculated Total According to Unit Price Given: $1,277,677.88 Bid Price Given Total: $1,277,677.88	NO BID

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Sustainability
Item Type: Ordinance
Agenda Section: NEW BUSINESS

Subject:
Consideration to Approve Ordinance 2023-27, an Ordinance Amending Title 11-15, Park City Landscaping and Maintenance of Soil Cover, of the Municipal Code of Park City
(A) Public Hearing (B) Action

Suggested Action:

Attachments:
Landscaping Soil Cover Amendments Staff Report
Exhibit A: Soil Cover Draft Code Amendments
Exhibit B: Ordinance No. 2023-27

City Council Staff Report

Subject: Amendments to Title 11-15 "Soil Cover Ordinance"
Author: Ryan Blair
Department: Sustainability
Date: June 1, 2023
Type of Item: Legislative

Recommendation

Review and consider approving clean-up proposed amendments to the Municipal Code of Park City, Title 11-15 "Landscaping and Maintenance of Soil Cover" (Soil Cover Ordinance). The amendments align City Code with State Regulations, focus on maintaining the clean topsoil cap, and clarify that excess soil generated within the boundary must meet applicable local, state, and federal regulations.

More comprehensive and substantive amendments are being considered for a future iteration and Council discussion.

Background

Park City's Landscaping and Maintenance of Soil Cover Ordinance was originally passed in 1988. The Ordinance outlines steps residents must take if they reside within the geographic boundary of the Ordinance. A map can be found here. The steps include a protective "cover" at least 6" in depth, dust and runoff controls, and assurance that excess soil is properly disposed of at an approved facility.

Over the years, the Ordinance was amended to reflect new boundary expansions as previously unidentified contaminated areas were discovered. It was also updated to reflect State and Federal regulatory guidelines.

The last substantial Ordinance update was undertaken in 2003. Since then, State environmental regulations that allow for other uses outside of the boundary for soil generated within the boundary changed. Specifically, the State Solid Waste rule R315-303-4 allows non-hazardous contaminated soil to be used as daily cover at approved landfill facilities. The proposed amendment will adhere to R315-303-4.

In addition, in early 2023, Mayor Worel convened the "Legacy Mine Soil Roundtable" to consider necessary modifications to the City's "Soil Cover Ordinance." A recommendation from the Roundtable was to thoughtfully explore changes to both the language and boundary provisions of the ordinance.

We proposed amendments that will:

- Clean up language around the use of soil generated within the boundary.
- Direct soil generators to follow all applicable State and Federal rules.
- Clarify enforcement mechanisms; and

- Clarify when soil testing is required.

Funding

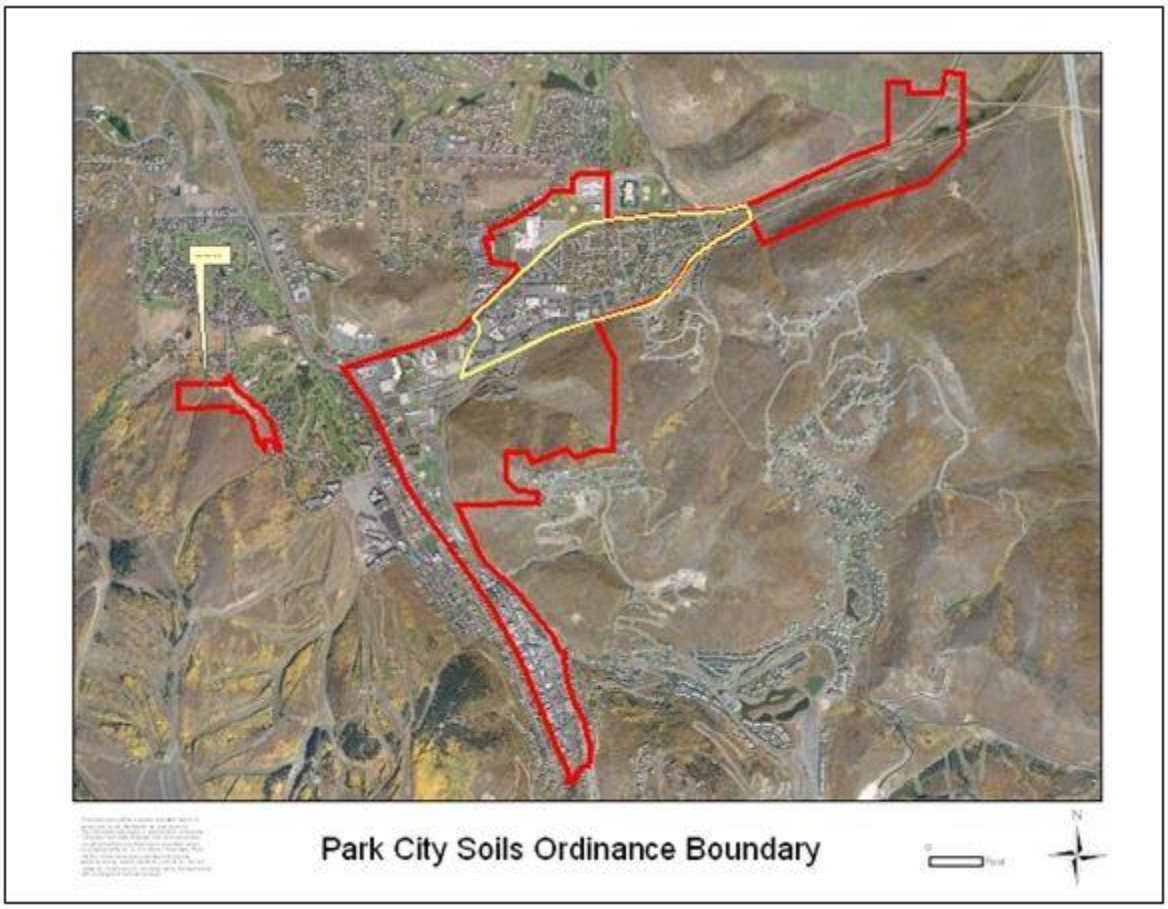
No funding requests are required.

Exhibits

A Landscaping and Maintenance of Soil Cover Draft Amendments
B Ordinance No. 2023-27 Recitals

11-15-1 Area

This Chapter shall be in full force and effect only in that area of Park City, Utah, which is depicted in the map below and accompanied legal description, hereinafter referred to as the Soils Ordinance Boundary.



MAP OF AREA SUBJECT TO LANDSCAPING AND TOPSOIL REQUIREMENTS (ORIGINAL MAP AMENDED BY THIS ORDINANCE NO. 06-13 ON FILE IN THE CITY RECORDER'S OFFICE) and as described as follows:

Beginning at the West 1/4 Corner of Section 10, Township 2 South, Range 4 East, Salt Lake Base & Meridian; running thence east along the center section line to the center of Section 10, T2S, R4E; thence north along the center section line to a point on the easterly Park City limit line, said point being South 00°04'16" West 564.84 feet from the north 1/4 corner of Section 10, T2S, R4E; thence along the easterly Park City limit line for the following thirteen (13) courses: North 60°11'00" East 508.36'; thence North 62°56' East 1500.00'; thence North 41°00' West 30.60 feet; thence North 75°55' East 1431.27'; thence North 78°12'40" East 44.69 feet; thence North 53°45'47" East 917.79 feet; thence South 89°18'31" East 47.22 feet; thence North 00°01'06" East 1324.11 feet; thence North 89°49'09" West 195.80 feet; thence South 22°00'47" West 432.52'; thence South 89°40'28" West 829.07 feet; thence North 00°09'00" West 199.12 feet; thence West 154.34 feet to a point on the west line of Section 2, T2S, R4E; thence south on the section line to the southerly right-of-way line of State Route

248; thence westerly along said southerly right-of-way line to the easterly right-of-way line of State Route 224, also known as Park Avenue; thence southerly along the easterly line of Park Avenue to the west line of Main Street; thence southerly along the westerly line of Main Street to the northerly line of Hillside Avenue; thence easterly along the northerly line of Hillside Avenue to the westerly line of Marsac Avenue, also known as State Route 224; thence northerly along the westerly line of Marsac Avenue to the westerly line of Deer Valley Drive; thence northerly along the westerly line of Deer Valley Drive, also known as State Route 224, to the southerly line of Section 9, T2S, R4E; thence easterly to the west line of Section 10, T2S, R4E; thence northerly to the point of beginning.

Together with the following additional parcels:

Spiro Annexation Area Legal Description:

A parcel of land located in Summit County, Utah, situated in the southeast quarter of Section 8, Township 2 South, Range 4 East, Salt Lake Base and Meridian, being more particularly described as follows:

Beginning at a point that is South 396.80 feet and West 1705.14 feet from the East quarter corner of Section 8, Township 2 South, Range 4 East, Salt Lake Base and Meridian, said point being a 5/8" rebar on the westerly right-of-way line of Three Kings Drive, as described on the Arsenic Hall Annexation Plat, recorded no. 345954 in the office of the Summit County Recorder, said point also being on a curve to the left having a radius of 625.00 feet of which the radius point bears North 71°08'49" East; and running thence southeasterly along said right-of-way line the following three (3) courses: (1) southeasterly along the arc of said curve 352.91 feet through a central angle of 32°21'09"; thence (2) South 51°12'20" east 141.13 feet to a point on a curve to the right having a radius of 290.00 feet, of which the radius point bears South 38°47'40" West; thence (3) along the arc of said curve 70.86 feet through a central angle of 14°00'00"; thence along the southwesterly right-of-way line of Three Kings Drive and along the arc of a 680.00 foot radius curve to the left, of which the chord bears South 47°16'17" East 235.91 feet; thence along the westerly boundary of the Dedication Plat of Three Kings Drive and Crescent Road, recorded no.116010 in the office of the Summit County Recorder, the following eight (8) courses: (1) South 57°12'20" east 39.07 feet to a point on a curve to the right having a radius of 495.00 feet, of which the radius point bears South 32°47'40" West; thence (2) along the arc of said curve 324.24 feet through a central angle of 37°31'50"; thence(3) South 19°40'30" East 385.45 feet to a point on a curve to the left having a radius of 439.15 feet, of which the radius point bears North 70°19'30" East; thence (4) along the arc of said curve 112.97 feet through a central angle of 14°44'21" to a point of reverse curve to the right having a radius of 15.00 feet, of which the radius point bears South 55°35'09" West; thence (5) southerly along the arc of said curve 22.24 feet through a central angle of 84° 57'02" to a point of compound curve to the right having a radius of 54.94 feet, of which the radius point bears North 39°27'49" West; thence (6) westerly along the arc of said curve 115.99 feet through a central angle of 120°57'49"; thence (7) North 08°30'00" West 31.49 feet to a point on a curve to the

left having a radius of 105.00 feet, of which the radius point bears South 81°30’00” West; thence (8) along the arc of said curve 378.43 feet through a central angle of 206°30’00” to a point on the easterly line of Park Properties, Inc. parcel, Entry no. 129128, Book M73, page 31, in the office of the Summit County Recorder; thence along the easterly boundary of said parcel the following five (5) courses: (1) North 42°30’00” West 220.00 feet; thence (2) North 11°00’00” West 235.00 feet; thence (3) North 21°32’29” West 149.57 feet (deed North 21°30’00” West 150.00 feet) to a 5/8” rebar; thence (4) North 42 30’49” West 195.18 feet (deed North 42°30’00” West 195.29 feet) to a 5/8” rebar; thence (5) North 89°57’46” West 225.95 feet (deed West 224.19 feet) to a 5/8” rebar; thence along a boundary of Park Properties, Inc. parcel, Entry no. 324886, Book 565, Page 717, in the office of the Summit County Recorder the following three (3) courses: (1) North 02°45’19” East 99.92 feet (deed North 100.20 feet) to a 5/8” rebar; thence (2) North 89°51’20” West 496.04 feet to a 5/8” rebar; thence (3) North 89°35’52” West 481.94 feet (deed North89 45’00” West 992.17 feet for courses (2) and (3) to a point on the west line of the southeast quarter of Section 8, Township 2 South, Range 4 East, Salt Lake Basin and Meridian; thence along said quarter section line North 00°15’24” West 407.62 feet to a point on the Bernolfo Family Limited Partnership parcel, Entry no. 470116, Book 1017, Page 262, in the office of the Summit County Recorder, thence North 89°59’54” East 482.91 feet (deed East 493.92 feet) to a point on the Vince D. Donile parcel, Entry no. 423999, Book 865, Page 287, in the office of the Summit County Recorder, said point being a 5/8” rebar and cap; thence along said parcel the following five (5) courses: (1) South 89°59’49” East 358.30 feet (deed East 358.35 feet) to a point on a non tangent curve to the right having a radius of 110.00 feet, of which the radius point bears South 88°41’47” East (deed South 88°44’18” East); thence (2) northerly along the arc of said curve 24.32 feet (deed 24.14 feet) through a central angle of 12°39’58” to a 5/8” rebar cap; thence (3) North 13°46’17” East 49.98 feet (deed North 13°50’00” East 50.00 feet) to a 5/8” rebar and cap on a curve to the right having a radius of 60.00 feet (chord bears North 27 16’47” East 28.00 feet); thence (4) northeasterly along the arc of said curve 28.26 feet (deed 28.27 feet) through a central angle of 26°59’09” to a 5/8” rebar and cap; thence (5) North 40°46’38” East 83.23 feet (deed North 40°50’00” East 83.24 feet) to the point of beginning.

The basis for bearing for the above description is South 00°16’20” West 2627.35 feet between the Northeast corner of Section 8, and the East quarter corner of Section 8, Township 2 South, Range 4 East, Salt Lake Base & Meridian. Tax Serial Nos. PP-25-A and PCA-1002-C-1.

To be combined with a parcel of land located in Summit County, Utah, situated in the southeast quarter of Section 8, Township 2 South, Range 4 East, Salt Lake Base and Meridian, being more particularly described as follows:

Beginning at a point that is West 1727.82 feet and South 310.72 feet from the East quarter corner of Section 8, Township 2 South, Range 4 East, Salt Lake Base and Meridian, said point being on the westerly right-of-way of Three Kings Drive and running thence West 417.99 feet; thence South 246.59 feet; thence East 358.35 feet to a point on a curve to the right, the radius point of which bears South 88°44’18” east 110.00 feet; thence northeasterly

along the arc of said curve 24.14 feet to the point of tangency; thence North 13°50'00" East 50.00 feet to the point of a 60.00 foot radius curve to the right; thence northeasterly along the arc of said curve 28.27 feet to the point of tangency; thence North 40°50'00" East 83.24 feet to a point on the westerly right-of-way of Three Kings Drive, said point being on a curve to the right, the radius point of which bears North 71°07'38" East 625 feet; thence northwesterly along the arc of said curve and along the right-of-way 89.33 feet to the point of beginning. Tax Serial No. PCA-1002-F.

Also including the Park City High School and Elementary School properties identified as Tax Serial Numbers PCA-2-2300-X, PCA-2-2300-A-1-X, PCA-2-2101-6-A-X, PCA-2-2101-6-X.

EXCEPTING THEREFROM all lots and parcels platted as Chatham Crossing Subdivision, Hearthstone Subdivision, Aerie Subdivision and Aerie Subdivision Phase 2, according to the official plats thereof recorded in the office of the Summit County Recorder.

HISTORY
Amended by Ord. 03-50 on 12/11/2003
Amended by Ord. 05-02 on 1/13/2005
Amended by Ord. 06-13 on 3/26/2006

11-15-2 Minimum Coverage ~~With~~ with Topsoil ~~Or~~ or Other Acceptable Media

1. All real property within the Soils Ordinance Boundary must be covered and maintained with a minimum cover of six inches (6") of approved topsoil ~~and~~ or acceptable cover described in Section 11-15-3 over soils exceeding the lead levels specified in Section 11-15-7, except where such real property is covered by asphalt, concrete, permanent structures or paving materials.
2. As used in this Chapter, "approved topsoil" is soil that does not exceed 200 mg/Kg (total) lead. representatively sampled and analyzed under method SW-846 6010.
3. Parking of vehicles or recreational equipment shall be contained on impervious surfaces and not areas that have been capped with acceptable media.

HISTORY
Amended by Ord. 03-50 on 12/11/2003
Amended by Ord. 05-02 on 1/13/2005

11-15-3 Acceptable Cover

1. All areas within the Soils Ordinance Boundary where real property is covered with six inches (6") or more of "approved topsoil" defined in Section 11-15-2 (~~B~~2) must be vegetated with grass or other suitable vegetation to prevent erosion of the 6" topsoil layer as determined by the Building Department.
2. Owners who practice Water Wise Landscaping are allowed to employ a weed barrier fabric if the ~~property~~ barrier fabric is covered with six inches (6") of rock or bark and maintained to prevent soil break through.

3. As used in this Chapter, "soil break through" is defined as soil migrating through the fabric and cover in a manner that exposes the public and shall be deemed in violation of this Chapter.
4. As used in this Chapter, Water Wise Landscaping - as defined in the Land Management Code 15-15 - within the Soils Ordinance Boundary remains subject to the regulations within this Chapter.

HISTORY
Amended by Ord. 03-50 on 12/11/2003
Amended by Ord. 2019-30 on 5/30/2019

11-15-4 Additional Landscaping Requirements

In addition to the minimum coverage ~~of topsoil~~ requirements set forth in Section 11-15-2 and the vegetation requirements set forth in Section 11-15-3, the following additional requirements shall apply:

1. **FLOWER OR VEGETABLE PLANTING BED AT GRADE**. All flower or vegetable planting beds at grade shall be clearly defined with edging material to prevent edge drift and shall have a minimum depth of twenty-four inches (24") of approved topsoil so that tailings are not mixed with the soil through normal tilling procedures. Such topsoil shall extend twelve inches (12") beyond the edge of the flower or vegetable planting bed.
2. **FLOWER OR VEGETABLE PLANTING BED ABOVE GRADE**. All flower or vegetable planting beds above grade shall extend a minimum of sixteen inches (16") above the grade of the six inches (6") of approved topsoil cover and shall contain only approved topsoil.
3. **SHRUBS AND TREES**. All shrubs planted after the passage of this Chapter shall be surrounded by approved topsoil for an area, which is three times bigger than the rootball and extends six inches (6") below the lowest root of the shrub at planting. All trees planted after the passage of this Chapter shall have a minimum of eighteen inches (18") of approved topsoil around the rootball with a minimum of twelve inches (12") of approved topsoil below the lowest root of the tree.

HISTORY
Amended by Ord. 03-50 on 12/11/2003

11-15-5 ~~Disposal Or Removal Of~~ Management of Area Soil

1. Following any work causing the disturbance of soils within the Soils Ordinance Boundary, such as digging, landscaping, and tilling soils, all disturbed soils must be collected and reintroduced onsite by either onsite soil capping specified in Section 11-15-2 or off-site ~~disposal~~ as required by this Chapter ~~and/~~or State ~~and/~~or Federal law.
2. All soils generated from the Soils Ordinance Boundary that cannot be reintroduced within the Soils Ordinance Boundary and are destined ~~for~~ off-site ~~disposal~~ must be sampled and characterized with representative sampling and tested at a State

Certified Laboratory in accordance with the requirements of the facility accepting such soils.

3. Soils exhibiting a hazardous characteristic exceeding the following Toxic Characteristic Leaching Procedure (TCLP) standards, must be managed as a hazardous waste and disposed of within a Utah Department of Environmental Quality permitted facility:

   Arsenic – 5.0 mg/L (TCLP) Method 6010 B

   Lead – 5.0 mg/L (TCLP) Method 6010 B
4. Soils not failing the TCLP standards may be disposed within a non-hazardous landfill facility upon providing ~~a "Disposal Acceptance Letter"~~ evidence to the Building Department ~~is~~ of acceptance issued by the disposal facility.
5. No soils generated within the Soils Ordinance Boundary are allowed to be exported for use as fill outside the Soils Ordinance Boundary.
6. Reuse of generated soils within the Soils Ordinance Boundary is acceptable provided the receiving property is covered with six inches (6") of clean topsoil or covered with an acceptable media, i.e. vegetation, bark, rock, as required by this Chapter.
7. Soils that are relocated within the Soils Ordinance Boundary must be pre-approved by the Building Department before being relocated and reused.

HISTORY
Amended by Ord. 03-50 on 12/11/2003

11-15-6 Dust Control

Contractor or owner is responsible for controlling dust during the time between beginning of construction activity and the establishment of plant growth sufficient to control the emissions of dust from any site within the Soils Ordinance Boundary. Due care shall be taken by the contractor or owner~~,~~ to protect ~~workmen~~ workers while working within the site and neighboring properties and the public from ~~any~~ exposure to dust emissions during construction activity by controlling dust, providing suitable breathing apparatus~~,~~ or other appropriate control.

11-15-7 Certificate ~~Of~~ of Compliance

1. Upon application by the owner of record or agent to the Park City Building Department and payment of the fee established by the department, the Park City Building Department shall inspect the applicant's property for compliance with this Chapter. When the property inspected complies with this Chapter, a Certificate of Compliance shall be issued to the owner by the Park City Building Department.
2. Verifying ~~soil cap depth and~~ cover meets the requirements of Sections 11-15-2, 11-15-3, or 11-15-4 or representative ~~samples~~ soil sample results that are equal to or below the following standards will result in full compliance and eligibility for the certificate:

Occupied Property – Lead 200 mg/Kg (Total) Method SW-846 6010

Vacant Property – Lead 1000 mg/Kg (Total) Method SW-846 6010

HISTORY
Amended by Ord. 03-50 on 12/11/2003

11-15-8 Transit Center Disturbance

All construction activity, utility modification, and landscaping that results in the breach of the installed protective cap or the generation of soils with Assessor Parcel No. MTC-A must be conducted in accordance to the implemented Site Management Plan, which is retained within the Building Department.

HISTORY
Amended by Ord. 02-32 on 8/22/2002
Amended by Ord. 03-50 on 12/11/2003

11-15-9 Property ~~With~~ with Known Non-Compliant Levels ~~Of~~ of Lead

~~1. Property exceeding the lead levels defined in Section 11-15-7 that have been representatively sampled and have not been capped per Section 11-15-2 are required to comply with this Chapter by December 31, 2004.~~

~~2. Non-compliant lots exceeding the criteria within Section 11-15-7 will be sent two (2) warning notices in an effort to correct the non-compliance issue.~~

Repealed.

HISTORY
Amended by Ord. 03-50 on 12/11/2003

11-15-10 Wells

All wells for culinary irrigation or stock watering use are prohibited in the Soils Ordinance Boundary.

11-15-11 Non-Sampled And Uncharacterized Lots

~~1. Lots that have not been characterized through representative sampling and are within the original Soils Ordinance Boundary are required to be sampled by the year 2006.~~

Repealed.

11-15-12 Failure To Comply With Chapter

1. ~~2.~~After the property has been sampled, lots exceeding the lead levels within Section 11-15-7 are required to comply with this Chapter within a 12-month period.

~~**11-15-12 Failure To Comply With Chapter**~~

2. Any person failing to ~~landscape, maintain landscaping, control dust or dispose of tailings as required by this Chapter and/or~~ comply with the provisions of this Chapter~~,~~ shall be guilty of a Class B misdemeanor. Any person failing to comply with the provisions of this Chapter may be found to have caused a public nuisance as determined by the City Council of Park City, and appropriate legal action may be taken against that person.

HISTORY
Amended by Ord. 03-50 on 12/11/2003

Ordinance No. 2023-27

AN ORDINANCE AMENDING TITLE 11, BUILDING AND BUILDING REGULATIONS, CHAPTER 15, PARK CITY LANDSCAPING AND MAINTENANCE OF SOIL COVER, OF THE MUNICIPAL CODE OF PARK CITY

WHEREAS, the presence of residential soils impacted with heavy metal constituents originating from historic mine tailings have been a cause for study and testing in regard to public health and environment; and

WHEREAS, the City, Environmental Protection Agency (EPA), and Utah Department of Environmental Quality (UDEQ) developed a series of scientific studies that focused on air, water, and health resulting with two EPA letters written in 1988 giving qualified approval of PCMC proposal for a local ordinance and the subsequent reenacting of the ordinance; and

WHEREAS, the EPA has identified the existence of mine tailings with heavy metal constituents in Park City and has made specific recommendations for mitigating any potential public health and environmental concerns; and

WHEREAS, the City Council of Park City, Utah desires to take every reasonable and practical step to protect the health of its residents by implementing the EPA's recommendations to assure the continued health, safety, and welfare of the residents within Park City.

BE IT ORDAINED BY THE CITY COUNCIL OF PARK CITY, UTAH, THAT:

Amendment Title 11, Chapter 15 of the Municipal Code of Park City is hereby amended as follows in Exhibits A. This Ordinance shall become effective upon publication.

PASSED AND ADOPTED this 1st day of June, 2023.

PARK CITY MUNICIPAL CORPORATION

_____
Mayor Nann Worel

Attest:

_____
Michelle Kellogg, City Recorder

Approved as to form:

_____
City Attorney's Office

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Engineering
Item Type: Staff Report
Agenda Section: NEW BUSINESS

Subject:
Consideration to Authorize the City Manager to Execute the Following: a Construction Agreement with Granite Construction Company in a Form Approved by the City Attorney, Not to Exceed $1,743,177 to Construct Corridor Improvements; a Design Professional Services Agreement with HDR Engineers, Inc., in a Form Approved by the City Attorney, Not to Exceed $350,000 to Provide Public Involvement Support and Construction Management Services
(A) Public Input (B) Action

Suggested Action:

Attachments:
SR-248 Corridor Improvements Staff Report
Exhibit A: Site Improvements Map
Exhibit B: Granite Construction Company Bid Schedule

City Council Staff Report

Subject: **Contract Awards for SR-248 Corridor Improvements**
Author: **Gabriel Shields, PE, Transportation Engineer**
Department: **Engineering**
Date: **June 1, 2023**
Type of Item: **New Business**

Recommendation

Review and consider a request to authorize the City Manager to execute:

- A construction agreement with Granite Construction Company (Contractor) in a form approved by the City Attorney, not to exceed $1,743,177, to construct transit related corridor improvements on SR-248; and
- A design professional services agreement with HDR Engineers, Inc. (Consultant) in a form approved by the City Attorney, not to exceed $350,000, to provide construction management ($300K) and public involvement services ($50K) throughout the construction phase.

Executive Summary

The Engineering Department completed the design of the SR-248 Corridor Improvements (Project) in response to unanimous Council support to improve eastbound (outbound) transit facilities on February 2, 2023. In addition to enhanced eastbound transit facilities, the Project provides the following community benefits:

- Provides transit drivable paved shoulders from Bonanza Drive to Richardson Flat Road;
- Reduced lane widths on SR-248 for traffic calming and slowing average speeds;
- Pavement preservation and damage repairs; and
- Additional landscaping and erosion mitigation for surrounding neighborhoods.

The Project is the initial step in the SR-248 Transit Corridor improvement program to provide additional and expanded transit priority. By installing the ability to operate on shoulders and removing neckdowns, the SR-248 corridor will present a consistent footprint to support operational concepts such as reversible lanes, BRT, and other mobility solutions.

While the community had a previous discussion about major SR-248 roadway widening, this Project is much smaller, focused solely on improving transit, and is not expected to generate additional traffic or create more vehicular noise. Instead, it will create opportunities for transit services to bypass congestion during peak times and reenter the travel lane at the point where congestion clears.

The Project is fully funded through the Third Quarter Summit County Transportation Sales Tax. The Engineering Department is seeking Council consideration to approve two separate contracts.

Background - Construction

In response to the direction provided by Council on February 2, 2023, and community and stakeholder sentiment regarding an eastbound express transit lane from Bonanza Drive to Richardson Flat Road, Transportation Planning and Engineering contracted with Horrocks Engineers to develop a scope and fee to create plans, specifications, and estimates required to implement eastbound shoulder lanes on SR-248. Following City Council approval on February 16, 2023, Engineering led efforts with Horrocks to complete the design in close collaboration with UDOT, as SR-248 is a State facility.

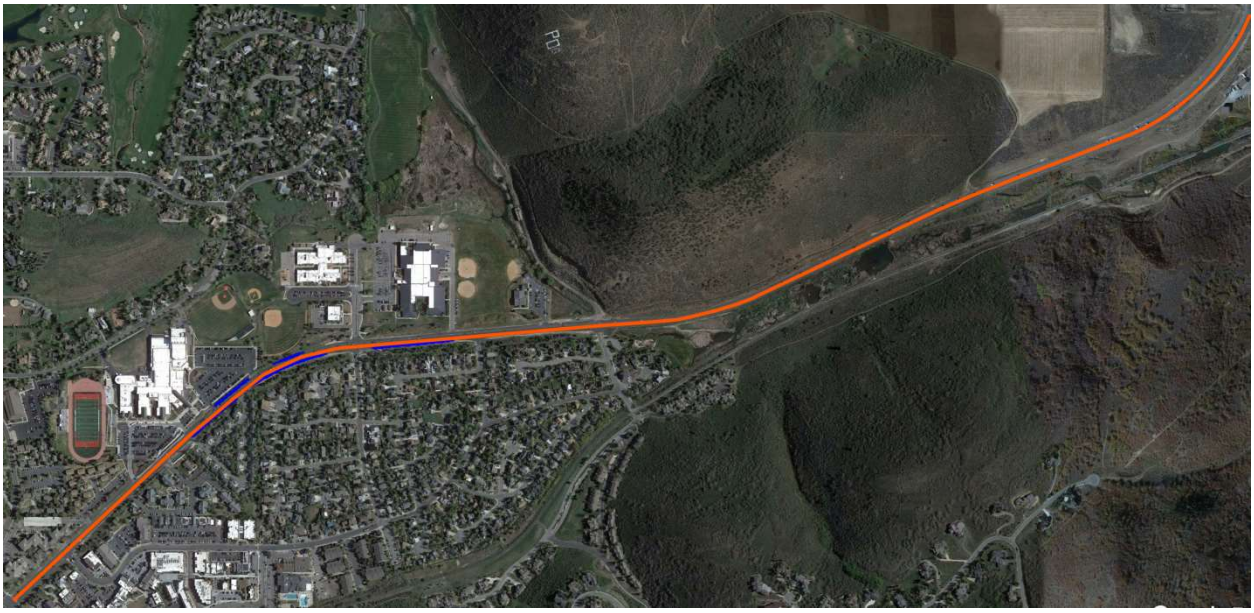


Figure 1 - Project Limits Shown in Orange; Shoulder Improvements in Blue

In discussions with UDOT, it was mutually agreed that the project intention was not to create a road-widening project but to provide a consistent shoulder in the Project area to facilitate transit priority during peak demand periods. The methodology follows operational practices enacted and already in place on SR-224. The Project area is the existing westbound SR-248. Despite previous Council direction and community sentiment to create express transit lanes, we anticipate some will oppose the incremental improvement as simply road-widening.

With respect to concerns regarding road-widening, Engineering directed Horrocks to develop separate bid packages which separate the project at the intersection of Wyatt Earp. Bid 1 includes all shoulder improvements, repaving, and striping from Cooke Drive to Richardson Flat Road. Bid 2 includes only the improvements east of Wyatt Earp to Richardson Flat Road. While bid 2 does not require shoulder improvements, the transit benefits are reduced to the segment between Wyatt Earp and Richardson Flat Road.

Engineering recommends bid 1 and associated contracts be awarded, however, the Contractor was also the lowest bidder for bid 2. Full pricing is included below.



Figure 2 - Existing Soft Shoulder on SR-248 at Cooke Drive

To provide consistent transit priority, the Project identified a series of disconnected soft shoulder areas that could be expanded with relatively minimal effort. In these areas, shoulders will be provided with full-depth paving to achieve a minimum 10’ width section that can accommodate a public transit bus. Additionally, a review of all the travel lanes, medians, and turn lanes in the Westbound corridor was conducted to help optimize the use of existing asphalt and minimize, where possible, the need to expand shoulder paving.

In locations where shoulder paving occurs, seeding and vegetation will be installed to enhance and improve the visual aesthetics of the corridor and aid in erosion mitigation. Fortunately, the Project is performed almost entirely within the UDOT right-of-way and maintains existing drainage patterns without impacting private property or any structures.

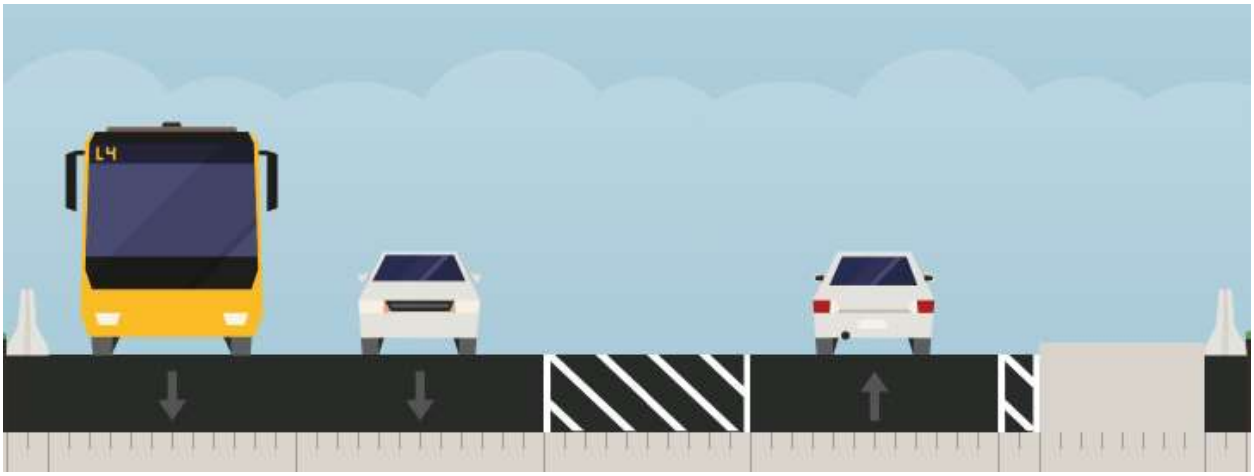


Figure 3 - SR-248 Existing Conditions with Westbound Buses in Shoulders at Peak Time

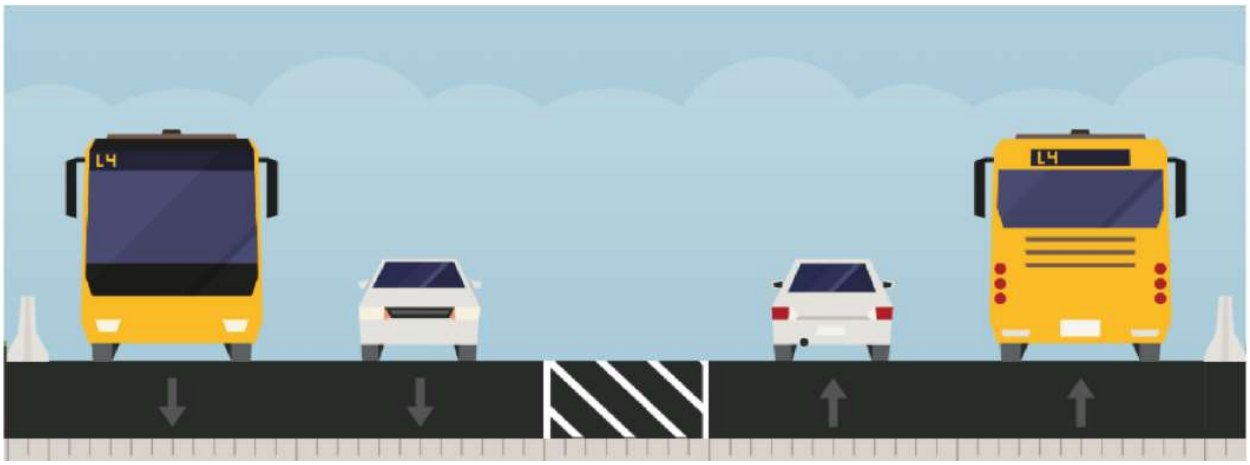


Figure 4 - SR-248 Proposed Conditions with Westbound and Eastbound Buses in Shoulders at Peak Time

About corridor aesthetics, the Bus Stop Site Improvements Program approved by Council on April 27, 2023, will install a series of bus pads, benches, shelters, sidewalk connections, and other amenities at SR-248 stops at Cooke Drive and Comstock. These improvements will include further landscaping and create opportunities for public art and beautification on the corridor.



Figure 5 - Existing Bus Stop at SR-248 & Comstock

Background – Public Involvement and Construction Management

Outside Public involvement (PI) support is proposed to help augment efforts by the Park City Community Engagement Team. The Consultant will coordinate outreach and stakeholder communication between UDOT and numerous Park City channels. Similar exercises were conducted successfully with the Rossi Hill project and were received very favorably by residents and stakeholders. Specifically, the Consultant will provide the following:

- Conduct needs assessment to identify the issues and challenges faced by the community and stakeholders related to the roadway reconstruction project;
- Identify and engage with stakeholders who will be affected by the project, including local businesses, residents, and community organizations;
- Develop a stakeholder engagement plan that outlines the objectives, activities, and timelines for engaging with stakeholders throughout the project;
- Provide regular updates to stakeholders on the project's progress and any changes to the project timeline or design;
- Address any concerns or issues raised by stakeholders during the project;
- Develop a communication plan that outlines the objectives, activities, and timelines for communicating with stakeholders throughout the project;
- Identify the communication channels that will be used to reach stakeholders, including social media, project website, email newsletters, and public meetings; and
- Develop messaging that is clear, concise, easy to understand, and tailored to the needs and interests of different stakeholder groups.

To ensure construction complies with the engineering designs and specifications and UDOT standards and warrants, a Construction Manager (CM) is necessary to oversee the construction phase. Tasks provided under the CM scope include:

- Preconstruction: meetings and agendas, project setup, site visits;
- Construction Management: weekly meetings, development of a Quality Management Plan (QMP) concerning pay items and submittal requirements along with the Minimum Sampling & Testing Requirements (MS&TR), review and response to Requests for Information (RFIs), review of submittals, processing of change orders, and final walkthroughs;
- Project Administration: project documentation, meeting minutes, check and review all quantities measured for payment; track workdays and schedule;
- Field Inspection: daily inspection of work, daily diary entries, traffic control and maintenance of traffic inspection, sampling of soils, testing of concrete, aggregate testing, and density testing per UDOT MS&TR; and
- Materials Testing: soils and aggregate testing in a lab setting, concrete strength testing, lab documentation, and results reporting.

Analysis

Engineering completed the design phase and released bidding documents from May 2 to May 23. The procurement for PI and CM was completed through a Request for Statement of Qualifications to firms listed on the UDOT vendor list for both work disciplines. Having received a bid from the Contractor within an acceptable range of the Engineer's Estimate and an SOQ from a qualified Consultant, Engineering recommends proceeding with the construction project with the Contractor and Consultant.

Funding Source

The construction, public involvement, and construction management funding are programmed under Capital Project number CP0465 and fully funded through Third Quarter County Sales Tax. A summary of outstanding project expenses and revenues is included below:

Expenses		
	Bid 1	Bid 2
Construction	$1,743,177.00	$785.181.84
Public Involvement & Construction Management	$350,000.00	$300,000.00
Contingency (5%)	$104,660.00	$54,260.00
Total	$2,197,837	$1,139,441.84

Revenues	
057483 Transit Fund * THIRD QUARTER COUNTY TAX	$5,232,647
Total	

Exhibits

Exhibit A: Site Improvements Maps
Exhibit B: Granite Construction Company Bid Schedule

Bid 1 Map

Shoulder improvement shown in Blue

Pavement preservation shown in Orange



Bid 1 Map

Shoulder improvement shown in Blue



Bid 2 Map

Pavement preservation shown in Orange



DOCUMENT 00 43 -00 - BID SCHEDULE

PART 1 GENERAL

Follow the requirements of the Materials Minimum Sampling and Testing Requirements:

http://www.udot.utah.gov/go.mstr

1.1 DOCUMENT INCLUDES

A. BID #1 (BID SCHEDULE A ITEMS AND BID SCHEDULE B ITEMS).

Bid Item	Item Name	Units	Quantity	Unit Price	Amount
1	Mobilization	LUMP	1	$ 63,400.00	$63,400.00
2	Public Information Services	LUMP	1	$ 100.00	$100.00
3	Traffic Control	LUMP	1	$ 62,000.00	$62,000.00
4	Survey	LUMP	1	$ 8,590.20	$8,590.20
5	Silt Fence	FT	2,010	$ 5.50	$11,055.00
6	Remove Hydrant	EACH	1	$ 1,000.00	$1,000.00
7	Furnish and Install Hydrant	EACH	1	$ 12,250.00	$12,250.00
8	Broadcast Seed, HECP Type 1	ACRE	0.40	$ 6,700.00	$2,680.00
9	Remove and Replace Utility Concrete Collar	EACH	36	$ 1,185.00	$42,660.00
10	Roadway Excavation (Plan Quantity)	CU YD	2,662	$ 84.00	$223,608.00
11	Borrow (Plan Quantity)	CU YD	41	$ 59.00	$2,419.00
12	Contractor Furnished Top Soil (6" Depth)	CU YD	314	$ 46.00	$14,444.00
13	Granular Borrow (Plan Quantity)	CU YD	802	$ 61.00	$48,922.00
15	Untreated Base Course (Plan Quantity)	CU YD	402	$ 80.00	$32,160.00
15	HMA - 1/2 Inch	TON	7,002	$ 95.50	$668,691.00
16	Open Graded Surface Course	TON	2,867	$ 110.00	$315,370.00
17	Rotomilling - 3 Inch	SQ YD	54,204	$ 2.45	$132,799.80
18	Separation Fabric	SQ YD	2,406	$ 3.25	$7,819.50
1	Emulsified Asphalt (Tack)	TON	19	$ 1,500.00	$28,500.00
20	Asphalt Pavement Soft Spot Repair (Contingency Item)	CU YD	100	$ 252.00	$25,200.00
21	Pavement Marking Paint	GAL	488	$ 45.75	$22,326.00
22	Pavement Message (Preformed Thermoplastic)	EACH	30	$ 215.00	$6,450.00
23	Pavement Message (Preformed Thermoplastic Stop Line, Crosswalks - 24 inch)	FT	153	$ 15.50	$2,371.50
24	Sign Post P3	EACH	4	$ 320.00	$1,280.00
25	Slipbase Sign Base (B3)	EACH	7	$ 455.00	$3,185.00
26	Remove Sign Less Than 20 Sq Ft	EACH	11	$ 152.00	$1,672.00
27	Install Sign Less Than 20 Sq Ft	EACH	8	$ 152.00	$1,216.00
28	Relocate Sign Less Than 20 Sq Ft	EACH	4	$ 252.00	$1,008.00

BID #1 TOTAL

One Million Seven Hundred Forty Three Thoussand One Hundred Seventy Seven Dollars No Cents 1,743,177.00

B. BID #2 (BID SCHEDULE B ITEMS).

Bid Item	Item Name	Units	Quantity	Unit Price	Amount
1	Mobilization	LUMP	1	$ 22,600.00	$ 22,600.00
2	Public Information Services	LuMP	1	$ 100.00	$ 100.00
3	Traffic Control	LUMP	1	$ 18,600.00	$ 18,600.00
4	Survey	LUMP	1	$ 8,200.00	$ 8,200.00
5	Silt Fence	FT	0	$ -	$ -
6	Remove Hydrant	EACH	0	$ -	$ -
7	Furnish and Install Hydrant	EACH	0	$ -	$ -
8	Broadcast Seed, HECP Type 1	ACRE	0	$ -	$ -
9	Remove and Replace Utility Concrete Collar	EACH	23	$ 1,200.00	$ 27,600.00
10	Roadway Excavation (Plan Quantity)	CU YD	0		$ -
11	Borrow (Plan Quantity)	CU YD	0		$ -
12	Contractor Furnished Topsoil (6" Depth)	CU YD	0		$ -
13	Granular Borrow (Plan Quantity)	CU YD	0		$ -
14	Untreated Base Course (Plan Quantity)	CU YD	0		$ -
15	HMA - 1/2 Inch	TON	3,964	$ 98.00	$ 388,472.00
16	Open Graded Surface Course	TON	1,761	$ 111.00	$ 195,471.00
17	Rotomilling - 3 Inch	SQ YD	34,776	$ 2.09	$ 72,681.84
18	Separation Fabric	SQ YD	0	$ -	$ -
19	Emulsified Asphalt (Tack)	TON	11	$ 1,500.00	$ 16,500.00
20	Asphalt Pavement Soft Spot Repair (Contingency Item)	CU YD	65	$ 185.00	$ 12,025.00
21	Pavement Marking Paint	GAL	332	$ 48.00	$ 15,936.00
22	Pavement Message (Preformed Thermoplastic)	EACH	10	$ 245.00	$ 2,450.00
23	Pavement Message (Preformed Thermoplastic Stop Line, Crosswalks - 24 inch)	FT	56	$ 16.00	$ 896.00
24	Sign Post P3	EACH	1	$ 350.00	$ 350.00
25	Slipbase Sign Base (B3)	EACH	1	$ 550.00	$ 550.00
26	Remove Sign Less Than 20 Sq Ft	EACH	7	$ 250.00	$ 1,750.00
27	Install Sign Less Than 20 Sq Ft	EACH	5	$ 200.00	$ 1,000.00
28	Relocate Sign Less Than 20 Sq Ft	EACH	0	$ -	$ -

BID #2 TOTAL

Seven hundred Eihty Five thousand One hundred eithty one dollars eighty four cents 785,181.84

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Budget, Debt & Grants
Item Type: Staff Report
Agenda Section: NEW BUSINESS

Subject:
Consideration to Set the Date of June 22, 2023, for a Public Hearing on Ordinance 2023-31, an Ordinance Establishing Compensation for the Elected and Statutory Officers for FY 2024
(A) Public Hearing (B) Action

Suggested Action:

Attachments:
Council Compensation Staff Report
Exhibit A: FY24 Council Compensation Ordinance

City Council Staff Report

Subject: Council and Statutory Officer Compensation
Author: Budget, Debt, and Grants
Department: Budget, Debt, and Grants
Date: June 1, 2023
Type of Item: Legislative

Recommendation

The Budget Team recommends Council hold a public hearing to establish City Council, Mayoral, and Statutory Officer Compensation, according to Exhibit A, with adoption on June 22, 2023.

Background

Under code **10-3-818,** elective and statutory officers of municipalities shall receive compensation for their services, set by adopting an ordinance after holding a public hearing. The City is obligated to advertise the time and place of public hearings at least seven days in advance on the Utah Public Notice website, City website, and in City Hall. Public hearings will be held on June 1 and June 22 and notice was posted on the Utah Public Notice website.

Analysis

For FY24, the Elected Official and Statutory Officer Compensation recommendations are consistent with the Pay Plan recommendation presented to Council during the April 4, 2023 operating budget summary. Recommendations included a 5.50% increase to keep pace with regional inflation.

Elected and Statutory Officer Compensation Rate Changes

Mayor		**FY23**		**FY24**	
Wages	$	50,053.00	$	52,806.00	
Health Benefits (or cash in lieu)	$	22,600.00	$	21,371.00	Enhanced health benefits at lower premiums with new vendor
Car Allowance	$	3,000.00	$	3,000.00	
Total	**$**	**75,653.00**	**$**	**77,177.00**	
City Council		**FY23**		**FY24**	
Wages	$	25,856.00	$	27,278.00	
Health Benefits (or cash in lieu)	$	22,600.00	$	21,371.00	Enhanced health benefits at lower premiums with new vendor
Total	**$**	**48,456.00**	**$**	**48,649.00**	
Statutory Officers		**FY23 Range**		**FY24 Range**	
City Manager		$158,250 – $211,000		$175,160 - 233,547	
City Attorney		$176,493 – $235,324		$186,200 – $248,267	
City Treasurer		$82,860 – $110,480		$90,687 – $120,917	
City Engineer		$124,938 – $166,585		$131,810 – $175,747	
City Recorder		$82,860 – $110,480		$87,392 – $116,556	

Exhibits

A – FY24 Council Compensation Ordinance

Ordinance No. 2023-31

ORDINANCE ESTABLISHING COMPENSATION FOR THE MAYOR, CITY COUNCIL, AND STATUTORY OFFICERS FOR FISCAL YEAR 2023 – 2024 IN PARK CITY, UTAH

WHEREAS, the City Council has the power to establish compensation schedules pursuant to UCA Section 10-3-818; and

WHEREAS, the number of duties for the Mayor and City Council is significant and each elected officer is required to devote considerable time and expense to public service and community affairs; and

WHEREAS, a public hearing was duly advertised and held on June 1, 2023;

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Park City, Utah that:

SECTION 1. REPEALER: All previous compensation ordinances regarding elected and statutory officers hereby are repealed.

SECTION 2. COMPENSATION FOR MAYOR, CITY COUNCIL, AND STATUTORY OFFICERS ADOPTED: The following salary levels are hereby adopted:

	FY 2023-2024
Mayor	
Wages	$52,806.00 per year
Health Benefits (or cash in lieu)	$ 21,371.00 per year
Car Allowance	$3,000.00 per year
Total	**$77,177.00 per year**
City Council	
Wages	$27,278.00 per year
Health Benefits (or cash in lieu)	$21,371.00 per year
Total	**$48,649.00 per year**
City Manager	$175,160 – 233,547 per year
City Attorney	$186,200 – $248,267 per year
City Treasurer	$90,687 – $120,917 per year
City Engineer	$131,810 – $175,747 per year
City Recorder	$87,392 – $116,556 per year

SECTION 3. BENEFITS: The Mayor and each member of the City Council shall receive family medical insurance. This benefit may be received as cash in lieu of the insurance coverage in the amount of $21,371.00. The Mayor shall also receive $250 per

month in car allowance. In addition, the Mayor and Mayor Pro-Tem. shall receive $100 per wedding performed. Statutory officers are eligible for all benefits available to regular Full-Time Equivalents unless otherwise determined by the Mayor and City Council.

SECTION 4. EFFECTIVE DATE. This Ordinance shall be effective July 1, 2023.

PASSED AND ADOPTED this 22nd day of June, 2023.

PARK CITY MUNICIPAL CORPORATION

_____
Mayor Nann Worel

Attest:

_____
Michelle Kellogg, City Recorder

Approved as to form:

_____
City Attorney's Office

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Executive
Item Type: Information
Agenda Section: OLD BUSINESS

Subject:
Childcare Discussion

Suggested Action:

Attachments:
Park City Cares About Kids Proposal
Developmental and Workforce Benefits of High-Quality Childcare
Park City Child Care Needs Assessment



PARK CITY
COMMUNITY
FOUNDATION

Park City Cares About Kids March 2023

The Challenge

66% of Park City parents of children ≤ 5 are paying more than 10% of their income on childcare.

83% of Park City parents with children ≤ 5 rely on some form of childcare.

88% of Park City survey respondents responded that it is **extremely or somewhat difficult** to find quality, affordable childcare in our community.

94% of Park City survey respondents think that the cost of childcare in our community is either **extremely or somewhat unaffordable**.

$1.16 million in federal funds provided to Park City's childcare industry in 2022 are expiring in September 2023.

90% of likely eligible children <5 in Summit County are not receiving the childcare subsidy from DWS.

40% of Summit County childcare providers responded that their program would be closed now without receipt of stabilization payments.

72% of Park City School District English-Language Learning Students are not proficient in literacy when they start kindergarten.

$1.36 billion loss annually to Utah's economy due to childcare issues.

Park City has a childcare problem. There are not enough options available to meet the need and the existing options are too expensive for many of our community members, even with the benefit of significant federal investment that will no longer be available by the Summer of 2024. According to the U.S. Chamber of Commerce Foundation's report released in December, 2022,[i] "**[c]hildcare is crucial for Utah's economic infrastructure and provides a stable foundation for Utah to continue to thrive as a business environment**." Inadequate access to childcare negatively affects family income, business productivity, and tax revenue. This lack of high-quality, affordable childcare options damages these children's future potential and exacerbates inequalities in the community.

The Park City Cares About Kids Program seeks to support all Summit County licensed, residential certificate, and Department of Workforce Services (DWS)-approved family, friend, and neighbor (FFN)[ii] providers who care for and educate children under age five of parents/guardians who live or work in Park City.

This program seeks to:

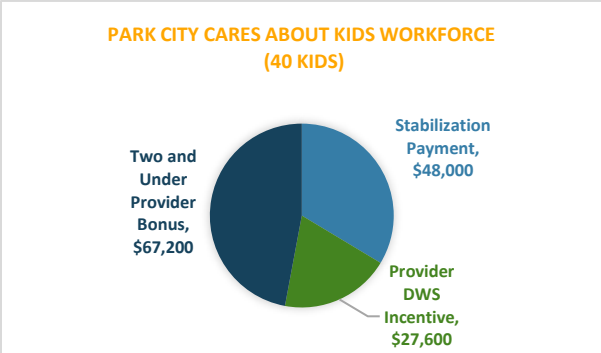
(1) **stabilize** the childcare industry by increasing compensation for the Summit County early childhood workforce serving families who live or work in Park City;
(2) **address the affordability gap** for income-eligible Park City residents with children under age five who need childcare;
(3) **increase utilization** of the federal childcare subsidies available through DWS by Park City resident and workforce families;
(4) **increase** Summit County licensed, residential certificate, or DWS-approved FFN **capacity** to care for Park City resident and workforce children **under age two**; and
(5) **increase** licensed family, residential certificate, and DWS-approved FFN **capacity** in Park City.

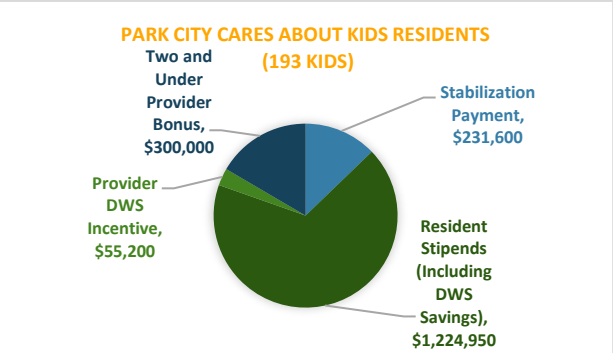
Absent seismic changes in investment in early care and education at the federal or state level, the need for local funds to support the Park City Cares About Kids program is perpetual. This issue will not be solved with one-time or temporary funding. The estimated cost for the first year of this program to serve approximately 193 Park City resident children and 40 workforce children is **$2,039,054**. The program leverages federal, philanthropic, and family contributions to provide high-quality, affordable, and accessible early care and

education options for families with children under age five who live or work in Park City.

The program has several components described more fully below and summarized in the following chart:

Summit County Early Childhood **Provider** Workforce Stabilization Payments Supporting **Resident** and **Workforce** Families in Park City ($100 per month/233 children)	$279,600
Park City **Resident** Childcare Stipend (Up to 100% AMI/72 children)	$1,055,844
Park City **Resident** Childcare Stipend (Between 100% and 120% AMI/44 children)	$261,888
Park City **Resident** Childcare Stipend (Between 120% and 140% AMI/16 children)	$42,624
DWS-Augmented Park City **Resident** Stipends (20 children)	($135,402)
Early Care and Education **Provider** Incentive to Accept Park City **Resident** and **Workforce** Children Using DWS Subsidy ($100 per month/69 children)	$82,800
Navigator Payments for **Staff** Assisting Park City **Resident** or **Workforce** Families with Kids Under Age Five Apply for the DWS Subsidy ($500/69 children)	$34,500
Summit County Childcare **Provider** Bonus for Providing Care for Park City **Resident** or **Workforce** Children Under Age Two ($200 a month/153 kids)	$367,200
Park City Licensed Family, Residential Certificate and DWS-Approved FFN **Provider** Startup Bonus (5 X $5000 and 10 X $2500)	$50,000

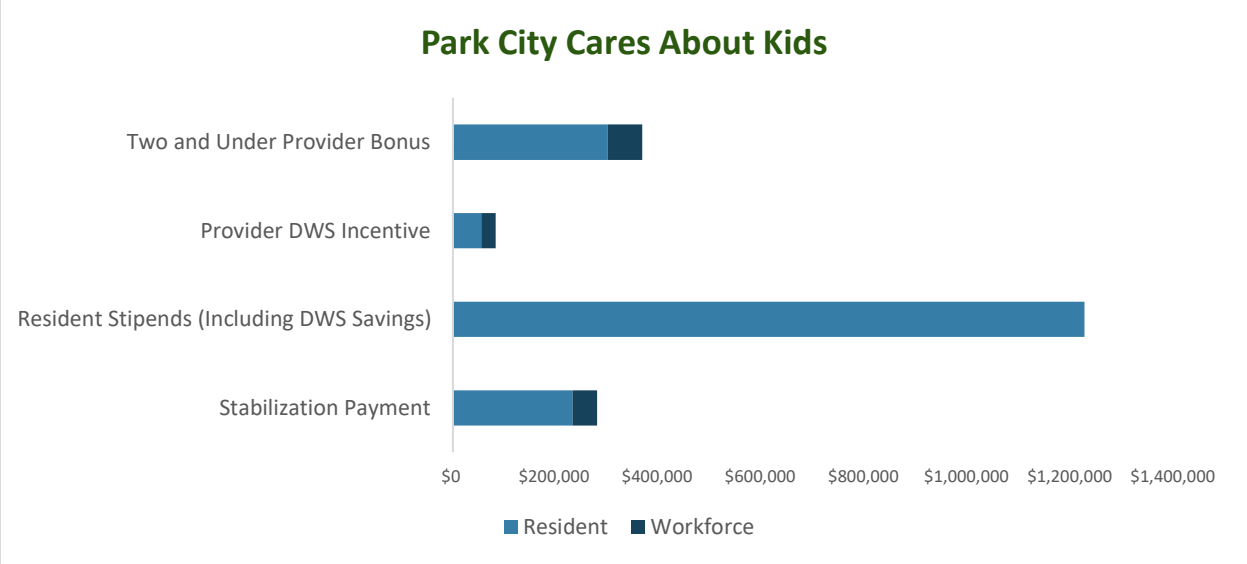




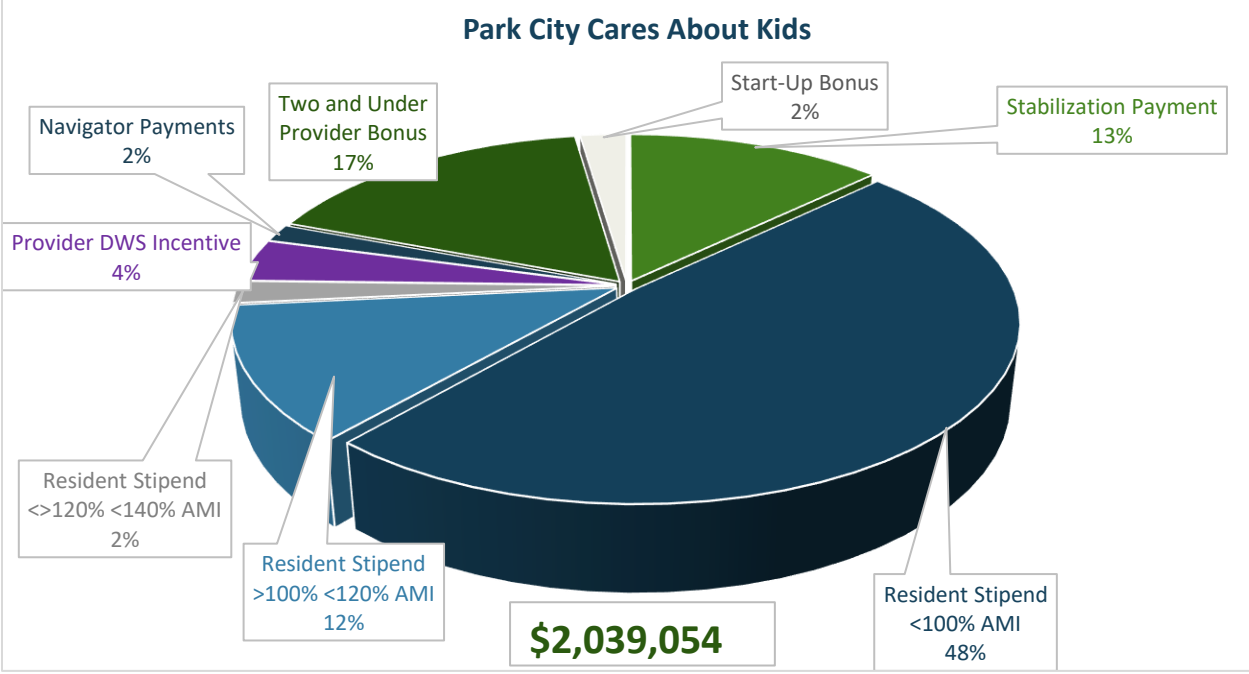
Eary care and education providers, resident, and workforce families will all benefit, but the majority of the funding will address the affordability gap for resident families. The largest portion of the funding supports an estimated 132 Park City income-eligible resident children through tuition stipends ($1,224,950). In addition, an estimated 193 resident children (comprised of 132 children in famlies earning less than 140% AMI and 61 children in families earning above 140% AMI) will benefit from provider stabilization payments ($231,600), an estimated 46 resident children will benefit from provider DWS incentives ($55,200) and an estimated 125 resident children will benefit from provider incentives for serving children under age two ($300,00).

Families who work in Park City, but do not live within the city limits will also benefit. Additional funds ($142,800) are made available to qualifying providers to incentivize them to provide early care and

education for an estimated 40 children whose families work in Park City ($48,000), with additional incentives to care for an estimated 23 children using the DWS subsidy ($27,600) and an estimated 28 children under age two ($67,200). In addition, the program includes navigator payments ($34,500) to assist families who apply for, and receive, the DWS childcare subsidy for an estimated 69 children and provider start-up bonuses ($50,000) to encourage more non-center providers to offer services in Park City.



Although all of the funds will be paid directly to the providers, the resident stipends (60% of the program) will directly reduce parental contributions and address the affordability gap. The remaining investments (40%) will financially support qualifying early care and education providers who serve Park City resident and workforce children and incentivize them to (1) open new home-based options, (2) serve low-income families who qualify for the childcare subsidy from DWS, and (3) serve children under age two.



Compensation for Summit County Early Childhood Provider Workforce Serving Families Who Live or Work in Park City ($279,600/233 Children)

Summit County early care and education providers are struggling to recruit and retain qualified staff, which is essential to maintaining this critical service. In order to offset the loss of federal stabilization grant funds (currently typically $400 per month, per child, up to licensed capacity), a stabilization payment of $100 per month, per child under age five whose parents/guardians either live or work in Park City will be paid directly to qualified providers in Summit County on a monthly basis. In order to qualify for these payments, the provider must be licensed, residential certificate,[iii] or a DWS-approved FFN caregiver whose minimum wage to their early care and education workforce is at least an average of $20 an hour. The Park City Child Care Needs Assessment estimates the demand for licensed care for Park City resident and workforce children under age 5 is approximately 233 children, so the monthly cost is estimated to be $23,300, or $279,600 a year. These payments would be paid directly to providers on a monthly basis based upon the number of qualifying children who are enrolled for the upcoming month.

Address Affordability Gap by Providing Monthly Childcare Stipends to Summit County Childcare Providers Serving Park City Resident Families ($1,360,352/132 Children)

Even for those parents who obtain a childcare provider, the costs are unaffordable for many. The recommended benchmark is that families should not pay more than 7% of their family income on childcare.[iv] Based on 2022 Area Median Income for Summit County, those maximum monthly parental contributions would be as follows:

Summit County 7% AMI	2-person	3-person	4-person	5-person
100% AMI	$624	$702	$780	$842
80% AMI	$499	$562	$624	$674
60% AMI	$375	$421	$468	$505
50% AMI	$312	$351	$390	$421

Based on survey results, the majority (66%) of parents of children aged five or younger in Park City are paying more than 10% of their income on childcare. Local Park City tuition stipends can help close the affordability gap so that parents can access high-quality early care and education for their children. These tuition stipends must include an annual escalator to adjust the area median income and market rate each year based upon an annual market study of local early care and education providers.

Stipends and required parent contributions may not exceed actual tuition charged by the providers. With the exception of the DWS-augmented stipend discussed below, if the providers charge less, than the stipend is reduced. If the tuition charged is more than the combined total of the maximum amount of the stipend and the expected family contribution, that additional payment will be the responsibility of the family.

Stipends will be paid directly to Summit County licensed providers and those residential certificate and FFN providers who are approved to receive the DWS subsidy on a monthly basis. In order to incentivize more Summit County licensed family providers to provide care for Park City resident children, there is no reduction in the maximum amount of monthly stipend available to families using licensed family, residential certificate, or FFN providers.

Full Park City stipends would be available for each income-qualifying child under age five who lives in Park City who is not eligible for the DWS childcare subsidy. Families who appear to be eligible for the DWS subsidy must show proof that DWS has determined that they do not meet the eligibility requirements (not a denial based upon lack of documentation or other deficiencies in the application process) in order to qualify for the Park City childcare stipend.

The stipend is set up in three different income categories, with the percentage of parental contribution increasing as income increases: (1) those families earning less than the median income will pay 7% of income, (2) those families earning more than the median but less than 120% of the median income will pay 10% of income, and (3) those families earning between 120% and 140% of area median income will pay 12% of their income for childcare.

Childcare Stipend for Families Earning Less Than 100% AMI for Children Under Age 5 ($1,055,844/72 Children)

Assuming a general average tuition of $1700 a month, and capping parental contributions at the recommended 7% of income, the chart below shows the monthly difference between what the private center-based market is charging in Summit County and what is considered to be affordable for parents for one child per month, based upon area median income by household size ("Affordability Gap").

Because parent contributions are based upon a percentage of income, monthly stipends would decrease as income increases as shown in the following chart:

Affordability Gap (7%)	Avg.	2 person	3 person	4 person	5 person
100% AMI	**$963**	**$1,076**	**$998**	**$920**	**$858**
80% AMI	**$1,110**	**$1,201**	**$1,138**	**$1,076**	**$1,026**
60% AMI	**$1,258**	**$1,326**	**$1,279**	**$1,232**	**$1,195**
50% AMI	**$1,332**	**$1,388**	**$1,349**	**$1,310**	**$1,279**

AMI Range	Avg. Monthly Affordability Gap	<2	2-<5	Total Monthly Affordability Gap <2	Total Monthly Affordability Gap 2-<5	Total Monthly Affordability Gap <5
>100%	$864	78	42	$67,295	$36,644	$103,940
>80% <100%	$1,031	9	5	$8,926	$4,860	$13,786
>50% <80%	$1,171	8	5	$9,887	$5,384	$15,272
<50%	$1,282	30	16	$38,153	$20,776	$58,929

In order to estimate average parent contributions at 7% of income for families earning less than the area median income, and assuming no DWS childcare subsidy is used by the families who qualify (*see* discussion below), this would cost an estimated $87,987 a month or $1,055,844 a year to support an estimated 72 Park City resident children.

Reduced Childcare Stipend for Families Earning Between 100% and 120% AMI for Children Under Age 5 ($261,888/44 Children)

Families in this income bracket will not qualify for the childcare subsidy from DWS, but still struggle to afford high-quality care and education for their children. The Summit County and Park City Needs Assessments do not estimate the number of children by age by income range above 100% of AMI, so the cost of providing this subsidy must be estimated separately.

The average family size in Park City is 2.88. The area median income for a three-person household in Summit County in 2022 is $120,400 and so 120% of AMI for a three-person household is $144,480. Assuming families in this higher income range could pay 10% of their income towards childcare, an increase from the 7% family contribution expected from families earning below the median income, that would be an average of $1,204 per month in parent contributions, leaving an average affordability gap of $496 per month to reach the average tuition of $1,700.

Based upon census data, there are an estimated 102 (27% of 378) children under age six living in households in Park City in the income range of $100,000 to $149,999. Assuming the ages are split evenly, then removing the five-year-olds (83.3%) would leave 85 children under age five living in households in Park City in this income range. The 2020 census finds that 52% of Park City households with children under age six have all available parents in the workforce.[v] Applying 52% to the estimated 85 children results in 44 Park City resident children under age five living in families earning between 100% to 120% of Summit County AMI that need childcare. The affordability gap for these families, assuming they pay 10% of income towards childcare, is $21,824 a month, or $261,888 a year.

Reduced Childcare Stipend for Families Earning Between 120% and 140% AMI for Children Under Age 5 ($42,624/16 Children)

Families in this income bracket will not qualify for the childcare subsidy from DWS, but still struggle to afford high-quality care and education for their children. The Summit County Needs Assessment does not estimate the number of children by age by income range above 100% of AMI, so the cost of providing this subsidy must be estimated separately.

In Summit County in 2022, 140% of AMI for a three-person household is $168,560. Assuming families in this higher income range could pay 12% of their income towards childcare, many larger families could afford local childcare expenses of $1700 per month, but many smaller-sized families could not.

Summit County 12% of Monthly AMI	Avg.	2 person	3 person	4 person	5 person
120%	$1,520	$1,284	$1,445	$1,616	$1,733
130%	$1,646	$1,391	$1,565	$1,751	$1,877
140%	$1,773	$1,498	$1,686	$1,886	$2,022

The average childcare affordability gap for the 2 and 3-person households in these income ranges is $222 per month. Based upon census data, there are an estimated 38 children (27% of 142) children under age six living in households in Park City in the income range of $150,000 to $199,999.[vi] Assuming the ages are split evenly, then removing the five-year-olds (83.3%) would leave 32 children under age five living in households in Park City in this income range. Assuming 52% of these children have all available parents in the workforce, that would mean 16 children would need childcare. The average affordability gap ($222) for these families in the 120% to 140% AMI range, assuming they pay 12% of income towards childcare, is $3,552 a month, or $42,624 a year.

Incentivize Increased Utilization of Available DWS Childcare Subsidies Through Navigator Bonuses and Increased Monthly Provider Stipends

Addressing Park City's childcare affordability gap requires leveraging all available resources, notably the federally-funded childcare subsidies available from DWS. In order to increase utilization of DWS' childcare subsidy, the program must incentivize providers not only to accept the subsidy, but also to encourage parents to apply for the program. Given the large waitlists at local providers, and the amount of contact they have with families who are interested in licensed childcare, these providers are critical to any increase in utilization of the DWS subsidy. Also, the application process can be cumbersome and difficult for families to navigate, so incentives must be in place to encourage professional staff to assist families to navigate the application process.

Enhanced Local Family Stipends and Provider Payments to Augment DWS Subsidy Payments

Local stipends should encourage parents to apply for, and providers to accept, the DWS subsidy. Thus, the Park City Cares About Kids program must ensure that both families and providers are better off financially when using the DWS subsidy.

DWS-Augmented Park City Stipends (Savings of $135,402 from Standard Park City Stipend Category/20 Children/Additional $200 per month)

The amount of the childcare subsidy provided by DWS depends upon the age of the child, the type of childcare provider, and the amount of care required. Payments are made directly to providers. The monthly maximum subsidies provided for family and center-based care are adjusted each year and the amounts effective as of October 1, 2022, are listed below.[vii]

DWS Monthly Subsidy Family	<2	2 Yr	3 Yr	4 Yr	DWS Annual Monthly Center	<2	2 Yr	3 Yr	4 Yr
	$750	$685	$660	$650		$1,040	$819	$756	$752

Because increasing utilization of the DWS subsidy is essential to reducing the overall affordability gap in Park City, and the families that qualify for the DWS subsidy are some of the lowest-income families needing childcare, the program includes an additional $200 per month, per child under age five for those resident families that combine the DWS subsidy with the Park City stipend. This funding can reduce the parental contribution if applicable. Using an average Park City stipend of $1,165 per month, per child, the Park City stipend necessary to ensure that the total financial assistance available to families when combining the Park City stipend with the DWS subsidy is at least $1,365 per child, per month (an average additional incentive of $200 more per month, per child to encourage families to use the DWS subsidy) is as follows:

PC Stipend to Augment DWS Family	<2	2 Yr	3 Yr	4 Yr	PC Stipend to Augment DWS Center	<2	2 Yr	3 Yr	4 Yr
	$615	$680	$705	$715		$325	$546	$609	$613

The Park City Child Care Needs Assessment estimates there are 46 children under age five in Park City who earn less than 50% of the AMI and therefore likely qualify for a subsidy from DWS(currently 5 receive it).

Although each DWS-Augmented PC stipend amount will vary depending upon the amount of the DWS subsidy (*see* chart above), since DWS pays much higher subsidies for center-based care, the average DWS-Augmented PC stipend for licensed-family based care would be $679 per month, per child, but the average DWS-Augmented PC stipend for center-based care would be only $523 per month, per child. The overall average DWS-Augmented PC stipend would be $601 if the children were split evenly. Since there are many more spaces in licensed centers (622) than in licensed family providers (108) in Summit County, the lower DWS-Augmented PC stipends necessary for center-based care are more likely to be used, generating greater savings than presented in this estimate.

Using the general average DWS-Augmented PC stipend of $601, representing an average savings of $564 a month (reduction in average PC Stipend of $1,165 to average DWS-Augmented PC stipend of $601), and assuming that efforts to increase utilization of the DWS subsidy results in 20 Park City resident children under age five receiving the DWS subsidy (less than half of the estimated eligible population and an increase of 15 children from current use), the estimated monthly savings is $11,283, and annual savings of $135,402. The more Park City resident children that receive the DWS subsidy, the greater these savings will be.

*Summit County Childcare **Provider** Incentive to Accept Park City **Resident** and **Workforce** Children Under Age Five Using DWS Subsidy ($82,800/69 Children)*

Being approved for the DWS childcare subsidy has no benefit if the families can not find a provider who will accept this subsidy. In order to incentivize providers to care for children who have been approved for the DWS childcare subsidy, the program will provide a bonus to Summit County early care and education

providers of $100 per month, per Park City resident or workforce child under age five who receives the DWS childcare subsidy. Assuming 46[viii] Park City resident children under age five and 23 Park City workforce children under age five receive the DWS subsidy (total of 69 children) this would cost $6,900 per month or $82,800 per year.

*Navigator Payments for Staff Assisting Park City **Resident** or **Workforce** Families with Kids Under 5 Apply for the DWS Childcare Subsidy ($34,400/69 Children)*

In order to assist Park City resident and workforce parents navigate the application process for the DWS subsidy, and to compensate for the additional staff time needed to administer the application process, the program will pay any professional staff (either at qualifying local early care and education providers or at Holy Cross Ministries or other agencies that assist clients complete eligibility applications) a bonus of $500 per successful application filed for the DWS childcare subsidy for households living or working in Park City with any children under age 5. Assuming 69 children qualify, this would be an annual cost of $34,500.

Summit County Childcare Provider Bonus for Providing Care for Park City Resident or Workforce Children Under Two ($367,200/153 Children)

Infant care is typically the hardest to find and the most expensive to provide, at a critical time in child development. In order to offset some of the additional costs associated with providing infant care and encourage more providers to increase capacity under age 2, the program will provide a $200 monthly bonus per child to Summit County licensed, residential certificate or DWS-approved FFN early care and education providers who provide care to Park City resident or workforce children under age 2. Assuming there are 125 Park City resident and 28 workforce children under age 2 who want licensed, residential certificate or DWS-approved FFN care in Summit County, this would cost $30,600 per month, or $367,200 a year.

Park City Licensed Family, Residential Certificate and DWS-Approved FFN Startup Bonus ($50,000/15 New Providers)

There are no family-licensed providers located in Park City and no DWS-approved FFN providers in Park City currently serving any children receiving the DWS childcare subsidy (there are 2 DWS-approved FFN providers located in other portions of Summit County). According to survey results, 31% of Park City parents with children under age six use FFN care. The program would like to encourage these FFN providers to become approved by DWS so that families who qualify for the DWS childcare subsidy can access this type of care and also to encourage family childcare providers to become licensed or regulated.

There is some time and expense associated with becoming licensed or DWS-approved. In order to defray those expenses, each newly-licensed family provider located within Park City will be entitled to a startup bonus of $5000. Each new residential certificate or DWS-approved FFN provider located in Park City will be entitled to a startup bonus of $2500. In the hopes that five newly-licensed family providers and ten newly-residential certificate or DWS-approved FFN providers locate in Park City, the estimated cost of these startup bonuses is $50,000.

Streamlined Administration

For far too long, the United States has made it difficult and burdensome for parents to access any kind of financial support for childcare. This program seeks to reduce administrative burdens that often exacerbate inequity and discourage families from accessing available resources. In order to determine eligibility, the program will follow recent guidelines from the Federal Administration for Children and Families, Office of Child Care, to create a family-friendly child care assistance application.[ix] No information regarding legal residency status of the child, the parent/guardian, or members of the household will be requested. No minimum work hours will be required, and income verification will include earned income but not money from other public benefits or child support. No more than one month's worth of proof of income will be required and documentation may include pay stubs, tax returns, employer letters, bank statements, or, if those are not available, self-certification by a signed and dated statement that includes a description of the parent/guardian's work, and amount of income earned in the past month.

The Early Childhood Fund at the Park City Community Foundation is seeking board approval to cover the costs associated with hiring a full-time staff member in the Park City Economic Development Department (or other department, as determined by City staff) to administer this program for the first two years. In addition, the Early Childhood Fund will cover the costs (up to $50,000) of designing a custom-built online application program to the City's specifications, along the lines of the example applications provided in the federal guide to create a family-friendly childcare assistance application, but tailored to also include the other payments and program requirements as outlined above.

Expanding Capacity in Future Years

Due to the precarious nature of the childcare industry in Park City and the upcoming loss of $1,160,502 per year of federal stabilization grants to childcare providers located in zip code 84060, this program is primarily seeking to sustain and enhance the existing capacity, address the affordability gap for working families, and increase early care and education workforce compensation during this inaugural year. One-time funding will not suffice; this need is perpetual.

If the program successfully increases utilization of the DWS childcare subsidy, future years will likely need less funds to provide as local childcare stipends, but likely will need additional funds to address inflationary pressures and expand capacity.

Expanding preschool options will also help address the affordability gap and may reduce the need for local stipends in the future. For example, currently, tuition for full-day (8:15 a.m.-3:05 p.m.), four-day-a-week preschool at PCSD is $500 per month. This tuition falls within the 7% family contribution for most families earning more than 60% AMI, and those families below that income level likely qualify for the DWS childcare subsidy.

Future years' needs are beyond the scope of this proposal at this time, but increasing preschool access and utilization of the DWS subsidy will also likely reduce the affordability gap for Park City residents and workforce.

End Notes

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[i] U.S. Chamber of Commerce Foundation, *Untapped Potential in UT: How Childcare Impacts Utah's Workforce Productivity and the State Economy*, (December, 2022), available at: https://uw.org/wp-content/uploads/UntappedPotential_UTAH_011223_DIGITAL.pdf.

[ii] All license exempt, family, friend and neighbor providers must have DWS Child Care Approval from the Department of Health, Child Care Licensing (CCL) Program before DWS subsidy payments can be authorized. Information about how to receive FFN provider approval can be found at: https://childcarelicensing.utah.gov/.

[iii] For a summary of Licensed Family and Residential Certificate requirements, visit: https://childcarelicensing.utah.gov/wp-content/uploads/2022/08/Family-RC-Comparison-Chart.pdf.

[iv] Childcare and Development Fund (CCDF) Program Final Rule, 81 Fed Reg 67438 at 67515 (9/30/2016) (Childcare Development Fund federal benchmark for affordable parent fees set at 7%); *see also* 45 C.F.R. §98.45(k); https://www.acf.hhs.gov/occ/faq/childcare-and-development-fund-final-rule-frequently-asked-questions.

[v] 2020 Decennial Census, DEC Summary File 3.

[vi] ESRI Business Analysis data from Jeffery B. Jones, AICP, Summit County Economic Development Department, (December 2022).

[vii] DWS Financial/SNAP/Childcare Eligibility Manual, Table 3 (effective October 1, 2022), available at: https://jobs.utah.gov/Infosource/eligibilitymanual/Eligibility_Manual.htm.

[viii] For purposes of predicting the savings in monthly stipends needed, in order to be conservative, the proposal assumes only 20 Park City children under six utilize the DWS subsidy, but in order to maximize the potential for increased utilization, the remaining incentives are budgeted at the estimated full utilization rate.

[ix] Child Care Technical Assistance Network, *Creating a Family-Friendly Child Care Assistance Application*, available at: https://childcareta.acf.hhs.gov/creating-family-friendly-child-care-assistance-application#WhyGuide.



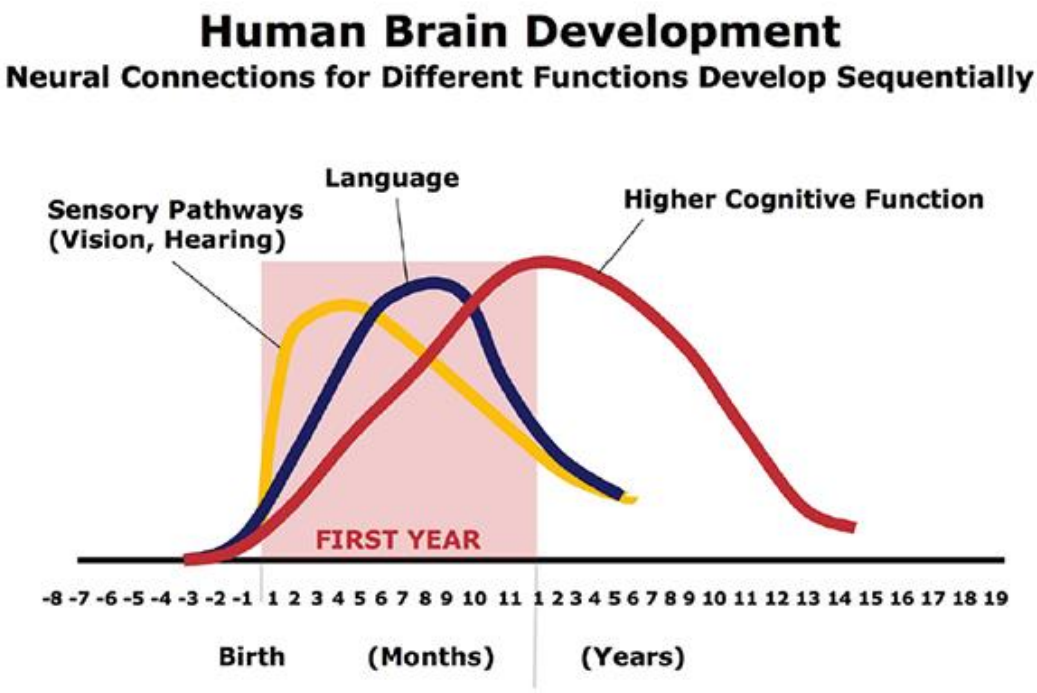
PARK CITY
COMMUNITY
FOUNDATION

Developmental and Workforce Benefits of High-Quality Early Care and Education

Investments in early childhood care and education "support children's healthy development and early learning starting at birth, which cascades into longer-term and broader benefits for them, their communities, and the economy."[i] The U.S. Chamber of Commerce Foundation views childcare as **"a two-generation workforce issue: essential to support the workforce of today and vital to develop our workforce of tomorrow."** Since high-quality early education supports the growth and development of the child, thereby setting him or her up for future success and wellness, while simultaneously providing parents the option to participate more fully in the workforce, the developmental and economic benefits derived from high-quality early care and education are immense.

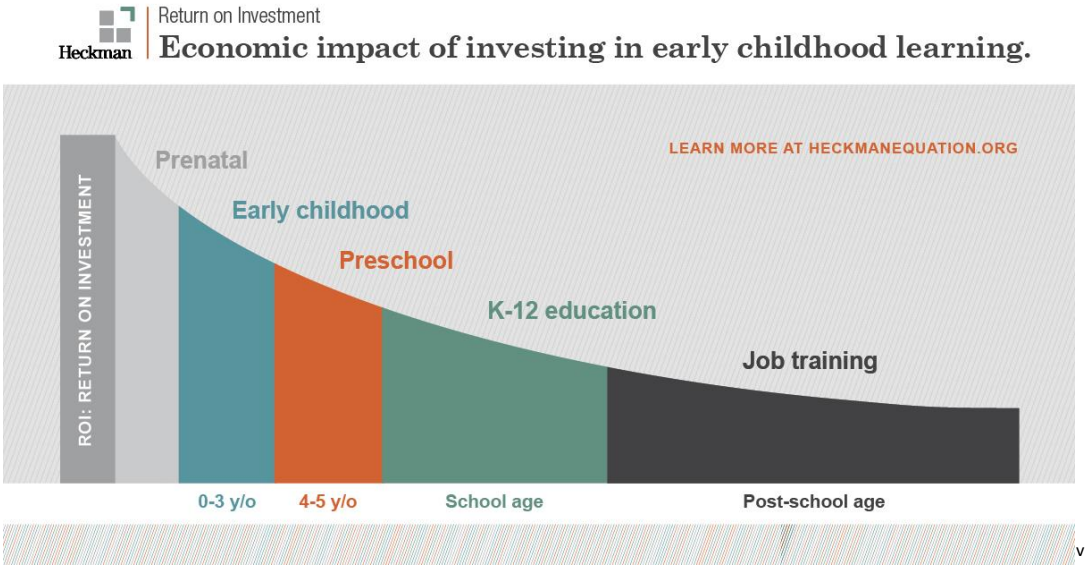
Developmental Benefits

Prenatal and early childhood experiences form the foundation of emotional, social, cognitive, and language development. This is because human brains are not fully formed at birth; instead, their basic architecture is constructed through an ongoing process, with the first years comprising the most important part. The Center on the Developing Child at Harvard University has determined that in the first few years of life, more than 1 million new neural connections are formed every second; this time of heightened neural plasticity means it is "easier and more effective to influence a baby's developing brain architecture than to rewrite part of its circuitry in the adult years."[ii]



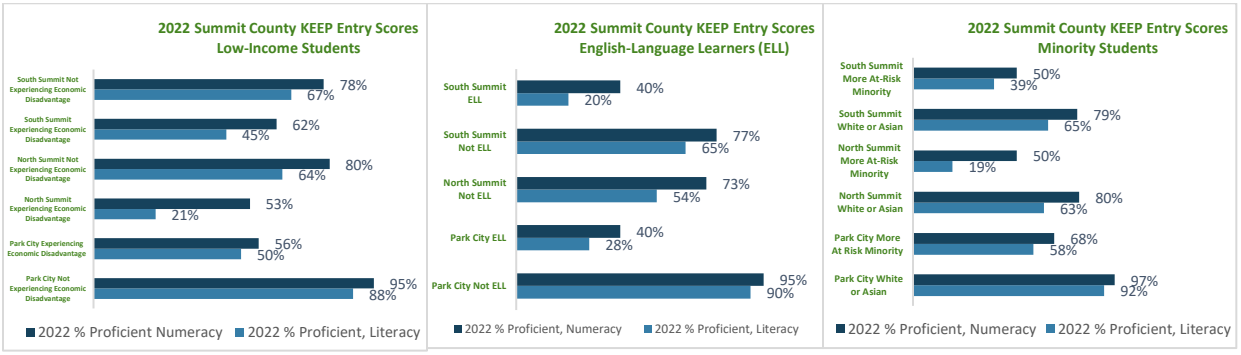
[iii]

Because our brains grow faster in early childhood than at any later point in life, the most fiscally responsible public investment we can make is to invest in our citizens early, when the returns are the highest.[iv] Nobel-laureate economics professor at the University of Chicago, Dr. James Heckman, finds that investing early has the greatest returns.



[v]

Lack of school readiness is one of the many ways in which communities pay for missed opportunities in providing high-quality early childhood experiences and environments. In Summit County, our minority, dual-language learning, and low-income students are disproportionately less ready for school than their peers, based on the Kindergarten Entry and Exit (KEEP) scores.[vi]



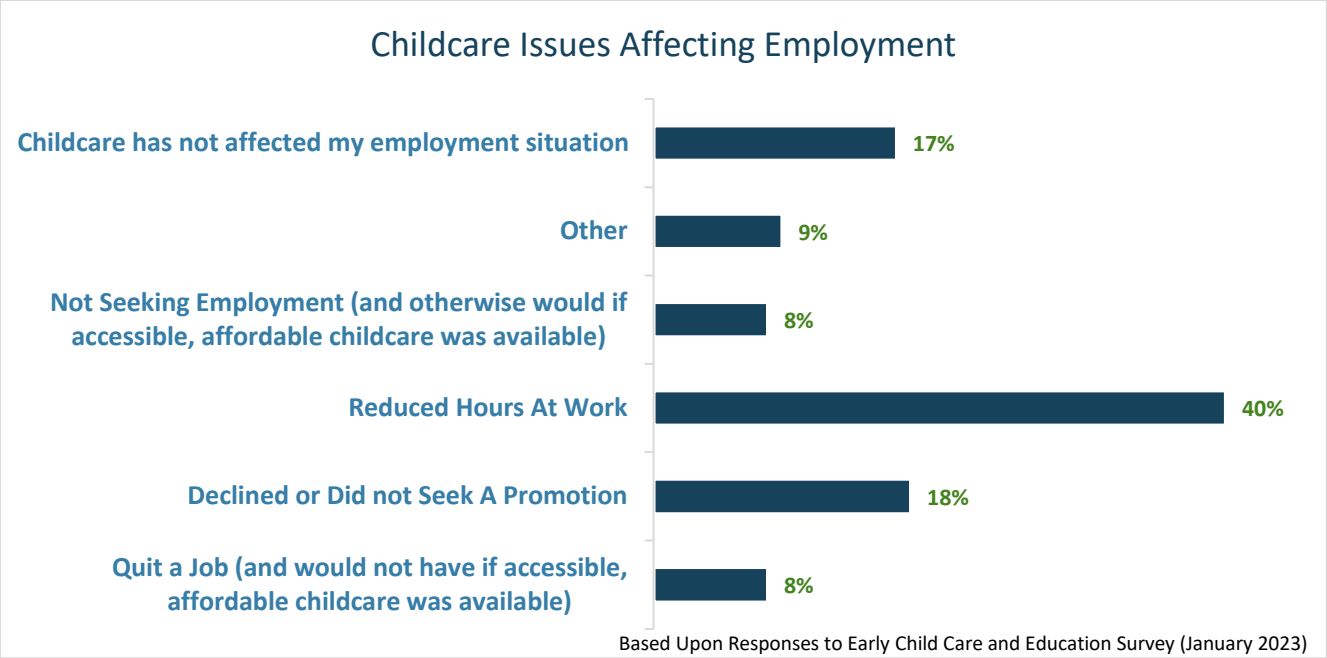
Workforce Benefits

According to the U.S. Chamber of Commerce Foundation's report released in December, 2022,[vii] "**[c]hildcare is crucial for Utah's economic infrastructure and provides a stable foundation for Utah to continue to thrive as a business environment**." Inadequate access to childcare negatively affects family income, business productivity, and tax revenue. Nationally, insufficient care for children under the age of three is estimated annually to cost each individual child's parent $3,350, each business employing a parent $1,150, and each taxpayer $630.[viii] One third of businesses report that childcare issues factored "a great deal" into loss of productivity for employees.[ix]

In Utah, lack of access to childcare results in an estimated $1.36 billion loss annually for Utah's economy and Utah loses an estimated $258 million annually in tax revenue due to childcare issues.[x] The topline findings show that lack of childcare is damaging Utah's economy and exacerbating workforce shortages:



More locally, 83% of Summit County parents responded that childcare issues had affected their employment, such as causing them to reduce hours at work (40%) or declining/not seeking promotions (18%).



The Bipartisan Policy Center quantified the economic burden of Summit County's childcare gaps on households, businesses and tax revenues for both the immediate one-year impact and the future impact (representing the annual value plus losses that accumulate over the next 10 years due to the compounding nature of deficits incurred in the initial year).[xi] The low and high estimates for Summit County are shown in the table below:

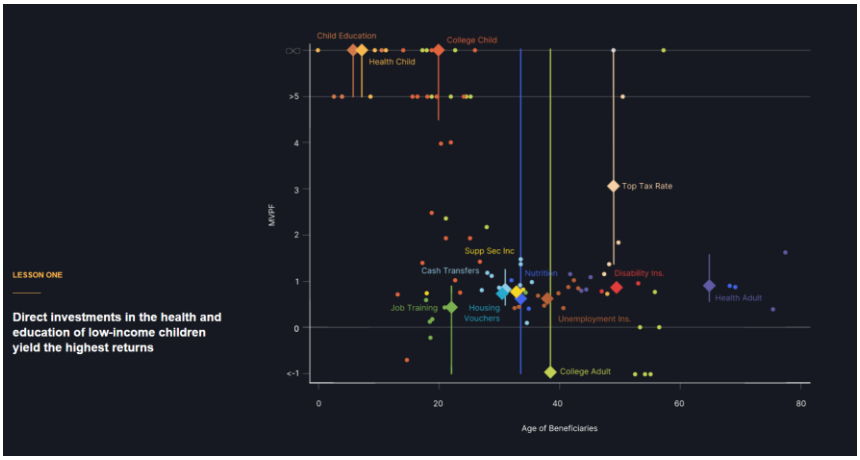
	Annual-Low	Annual-High	Future Value-Low	Future Value-High
Summit County	$21,073,000	$32,183,000	$35,711,000	$54,539,000

Societal Benefits

Early care and education benefits the child and his/her parents, but also society as a whole. These investments can "advance both economic efficiency and equity."[xii] Societal benefits include greater productivity and economic growth, less individual reliance on government transfers, and fewer bad outcomes that are costly for society such as poor health, noncompletion of high school and crime.[xiii] Improvements in early childhood education, for example, have been found to lead to a 20% reduction in later criminal behavior.[xiv]

Because of the numerous societal benefits, investments for early childhood are an excellent use of public funding. Two economists from Harvard University have set forth a mathematical analysis to determine what government expenditures are most effective at improving social well being.





Using their marginal value of public funds (MVPF) analysis, which measures the "bang for the buck" of government spending on a given policy, direct investments in low-income children's health and education have had the highest MVPF and yield the greatest returns compared against 133 policies in the U.S. over the past half century.[xv] MVPFs are high throughout childhood and some direct investments in low-income children's health and education pay for themselves.[xvi]

Conclusion

Investing in high-quality, affordable childcare and early childhood education in coordination with parental support and health programs helps:

(1) close the achievement gap,
(2) assist local employers in attracting and retaining their workforce,
(3) strengthen school districts,
(4) break the cycle of poverty, and
(5) maximize our collective return on investment.

End Notes

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[i] Economic Report of the President, 125 (March 2023) available at: https://www.whitehouse.gov/wp-content/uploads/2023/03/ERP-2023.pdf.

[ii] Center on the Developing Child, Harvard University, In Brief: The Science of Early Childhood Development, available at: https://developingchild.harvard.edu/resources/inbrief-science-of-ecd/.

[iii] Center on the Developing Child, Harvard University, In Brief: The Science of Early Childhood Development, available at: https://developingchild.harvard.edu/resources/inbrief-science-of-ecd/.

[iv] Heckman: The economics of human potential, available at: https://heckmanequation.org/.

[v] Heckman: Economic Impact of Investing in Early Childhood Learning, available at: https://heckmanequation.org/www/assets/2020/06/F_Heckman_Sharegraphic_ROIChart_2019-1.jpg.

[vi] Email from Jon Collins, Research Consultant, Utah State Board of Education to Kristen Schulz, Early Childhood Alliance, (January 19, 2023).

[vii] U.S. Chamber of Commerce Foundation, *Untapped Potential in UT: How Childcare Impacts Utah's Workforce Productivity and the State Economy*, (December 2022), available at: https://uw.org/wp-content/uploads/UntappedPotential_UTAH_011223_DIGITAL.pdf.

[viii] Ready Nation, Council for a Strong America, *Want to Grow the Economy? Fix the Childcare Crisis*, (January 2019), available at: https://strongnation.s3.amazonaws.com/documents/602/83bb2275-ce07-4d74-bcee-ff6178daf6bd.pdf.

[ix] U.S. Chamber of Commerce Foundation, *Employer Roadmap: Childcare Solutions for Working Parents*, (March 2022), available at: https://www.uschamberfoundation.org/sites/default/files/ECE%20Employer%20Roadmap_March%202022.pdf.

[x] U.S. Chamber of Commerce Foundation, *Untapped Potential in UT: How Childcare Impacts Utah's Workforce Productivity and the State Economy*, (December, 2022), available at: https://uw.org/wp-content/uploads/UntappedPotential_UTAH_011223_DIGITAL.pdf.

[xi] Bipartisan Policy Center, Child Care Gaps Assessment, Summit County, Utah, available at https://childcaregap.org/.

[xii] Economic Report of the President, 127 (March 2023) available at: https://www.whitehouse.gov/wp-content/uploads/2023/03/ERP-2023.pdf.

[xiii] Economic Report of the President, 127 (March 2023) available at: https://www.whitehouse.gov/wp-content/uploads/2023/03/ERP-2023.pdf.

[xiv] John Anders, Andrew C. Barr, and Alexander A. Smith, *The Effect of Early Childhood Education on Adult Criminality: Evidence from the 1960s through 1990s,* American Economic Journal: Economic Policy, 15(1): 37-69, (February 2023), available at: https://www.aeaweb.org/articles?id=10.1257/pol.20200660&from=f.

[xv] Nathaniel Hendren and Ben Sprung-Keyser, *A Unified Welfare Analysis of Government Policies*, Quarterly Journal of Economics, 135(3) (February 2020), available at: https://opportunityinsights.org/wp-content/uploads/2019/07/Welfare_paper.pdf.

[xvi] Policy Impacts, *MVPF Lessons*, available at: https://www.policyimpacts.org/mvpf-explained/mvpf-lessons.



Park City
Childcare Needs Assessment
March 2023

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Section I.
Executive Summary

Section I. Executive Summary

The Challenge

66% of Park City parents of children ≤ 5 are paying more than 10% of their income on childcare.

83% of Park City parents with children ≤ 5 rely on some form of childcare.

88% of Park City survey respondents responded that it is **extremely or somewhat difficult** to find quality, affordable childcare in our community.

94% of Park City survey respondents think that the cost of childcare in our community is either **extremely or somewhat unaffordable**.

90% of likely eligible children <5 in Summit County are not receiving the childcare subsidy from DWS.

40% of Summit County childcare providers responded that their program would be closed now without receipt of stabilization payments.

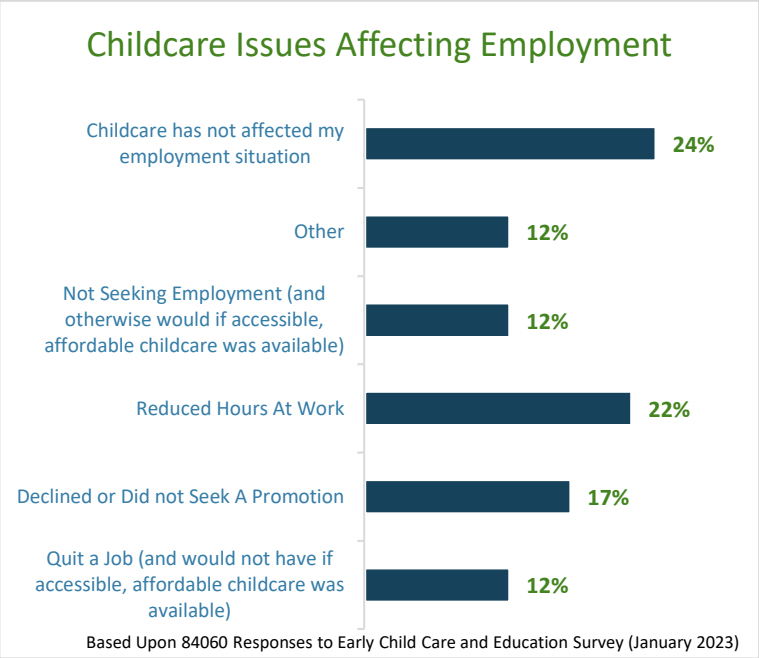
$1.16 million in federal funds provided to Park City's childcare industry in 2022 are expiring in September, 2023.

72% of Park City School District English-Language Learning Students are not proficient in literacy when they start kindergarten.

Park City has a childcare problem. There are not enough childcare options available to meet the need and the options that are available are too expensive for many of our community members, even with the benefit of significant federal investment that will no longer be available by the Summer of 2024. This lack of high-quality, affordable childcare options damages these children's future potential as well as the existing workforce and exacerbates inequalities in the community.

Park City's Working Families Need Childcare

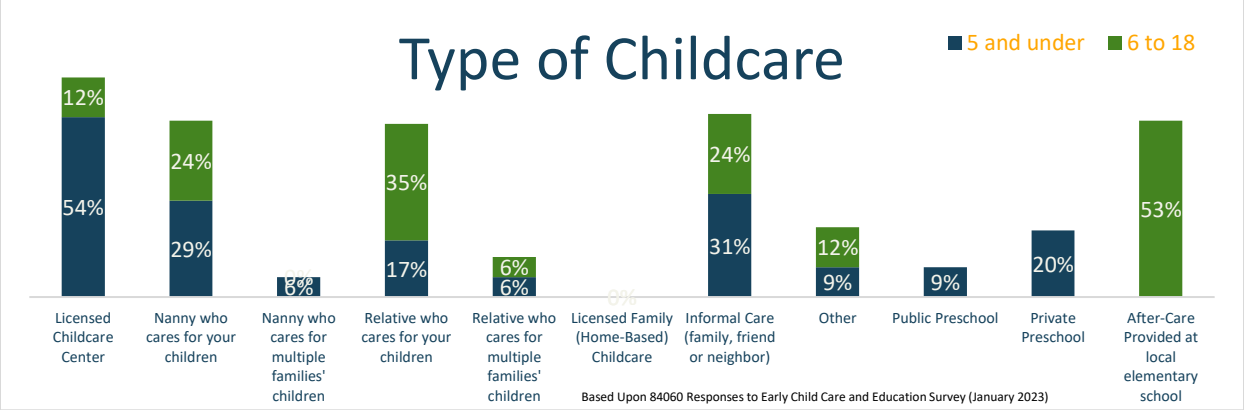
Most families in Park City with children have parents who work. 83% of Park City survey respondents with children aged five and under and 50% of respondents with children aged between six and eighteen rely on someone outside of themselves or their spouse/partner/co-parent to provide childcare. These parents rely on childcare to be in the workforce. 76% of Park City parents responded that childcare issues had affected their employment, such as causing them to reduce hours at work (22%) or declining/not seeking promotions (17%).



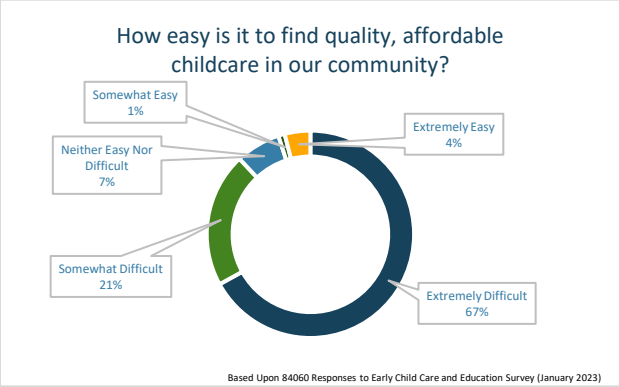
Current Park City Childcare Offerings Are Insufficient

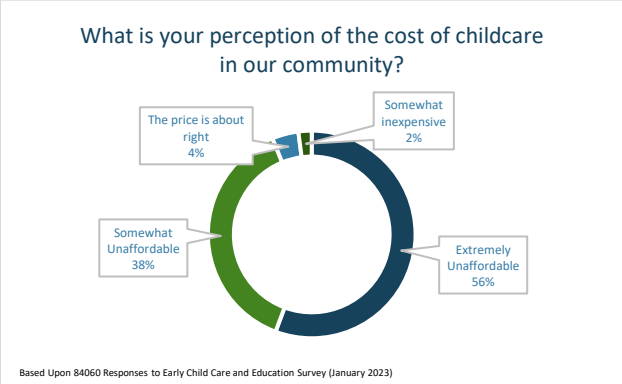
The majority of children needing care, and able to enroll in a program, in Park City aged five and under are in a licensed childcare center, while the largest proportion of children needing

care between the ages of six and eighteen are in the after-care programs provided at local elementary schools.

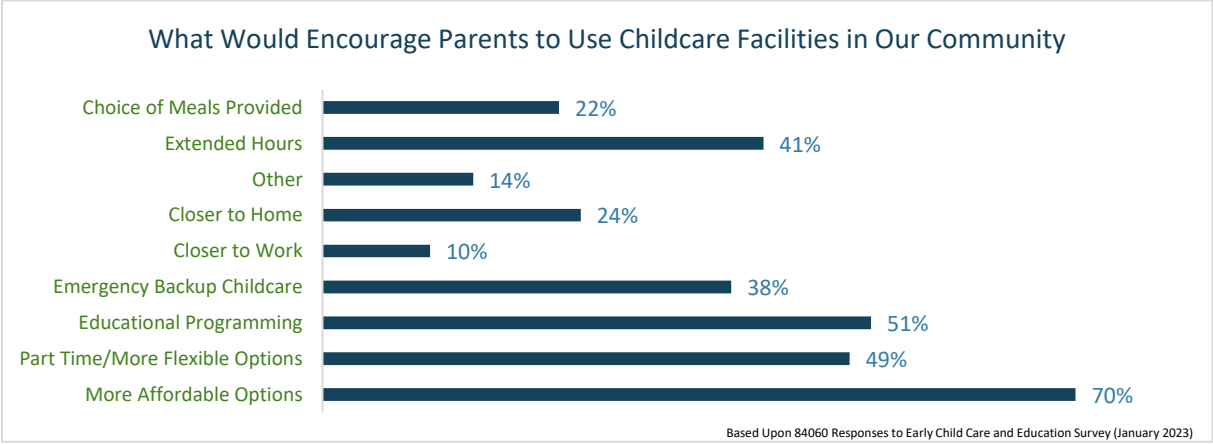


A very high percentage (88%) of Park City survey respondents responded that it is extremely (67%) or somewhat (21%) difficult to find quality, affordable childcare in our community. Similarly, the majority of Park City respondents (94%) think that the cost of childcare in our community is either extremely unaffordable (56%) or somewhat unaffordable (38%).





Park City parents responding to the survey factor in many variables when deciding to use childcare, but affordability was the most selected factor that would encourage parents to use childcare facilities in our community.



Childcare is Unaffordable for Many Families

Even for those parents who obtain a childcare provider, the costs are unaffordable for many. Based upon survey results, the majority (66%) of parents of children aged five or younger in Park City are paying more than 10% of their income on childcare. Assuming a general average tuition of $1700 a month, and capping parental contributions at the recommended 7% of income, the chart below shows the monthly difference between what the private center-based market is charging in Summit County and what is considered to be affordable for parents for one child per month, based upon area median income by household size ("Affordability Gap").

Affordability Gap	1 person	2 person	3 person	4 person	5 person	6 person	7 person	8 person
100% AMI	**$1,154**	**$1,076**	**$998**	**$920**	**$858**	**$795**	**$733**	**$670**
80% AMI	**$1,263**	**$1,201**	**$1,138**	**$1,076**	**$1,026**	**$976**	**$926**	**$876**
60% AMI	**$1,372**	**$1,326**	**$1,279**	**$1,232**	**$1,195**	**$1,157**	**$1,120**	**$1,082**
50% AMI	**$1,427**	**$1,388**	**$1,349**	**$1,310**	**$1,279**	**$1,248**	**$1,216**	**$1,185**

From a systemic viewpoint, using the Summit County Child Care Needs Assessment methodology, but estimating only the need of resident children of Park City, the monthly and annual affordability gap are estimated as follows:

AMI Range	Avg. Monthly Affordability Gap Per Child	Total Park City Monthly Affordability Gap Under Age 2	Total Park City Monthly Affordability Gap Age 2-5	Total Park City Monthly Affordability Gap Under Age 5	Total Park City Annual Affordability Gap Under Age 5
>100%	$864	$47,041	$40,223	$87,264	$1,047,166
>80% <100%	$1,031	$9,678	$8,275	$17,953	$215,431
>50% <80%	$1,171	$9,890	$8,456	$18,346	$220,155
<50%	$1,282	$26,470	$22,633	$49,103	$589,236

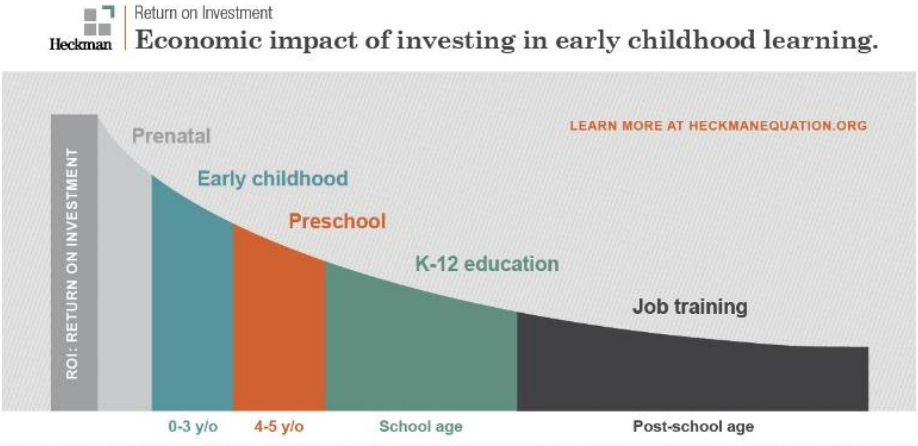
Most families do not receive any kind of financial support to cover the costs of childcare. The vast majority (90%) of income-eligible families with children under the age of five who need childcare in Summit County do not receive the childcare subsidy offered by the Utah Department of Workforce Services. Increasing utilization of this subsidy is essential to reducing the affordability gap.

Losing Federal Pandemic Support Will Further Decrease Access and Increase Costs

Childcare in Park City is likely to become more expensive in the coming years when pandemic-federal funds expire. Utah's childcare industry has been supported in recent years by over half a billion dollars ($573,873,964) in three rounds of federal pandemic relief funds.[i] Most of these funds must be expended by September 30, 2023, and the remaining $163 million in ARPA discretionary funding must be expended by September 30, 2024. These federal funds provided the Park City childcare industry with an investment of over 1.16 million dollars in calendar year 2022 alone.[ii] In Summit County, 40% of childcare provider survey respondents reported that their program would be closed now without the stabilization payments

and all of the recipients used the stabilization payments to increase wages for their employees. Loss of the stabilization grants will only exacerbate historically inadequate compensation causing a likely increasing workforce shortage in the early childcare industry.

Lack Of Access to High-Quality Early Care and Education Harms the Community At Large



Prenatal and early childhood experiences are important to a child's well-being and future success because they form the foundation of emotional, social, cognitive, and language development. Investing in high-quality, affordable childcare and early childhood education in coordination with parental support and health programs helps: (1) close the achievement gap, (2) assist local employers in attracting and retaining their workforce, (3) strengthen school districts, (4) break the cycle of poverty, and (5) maximize our collective return on investment.

Lack of school readiness is one of the many ways in which communities pay for missed opportunities in providing high-quality early childhood experiences and environments. In the Park City School District, the minority, dual-language learning, and low-income students are disproportionately less ready for school than their peers, based on the Kindergarten Entry and Exit (KEEP) scores.[iii]

Section II.
DEMOGRAPHIC TRENDS

Section II. Demographic Trends

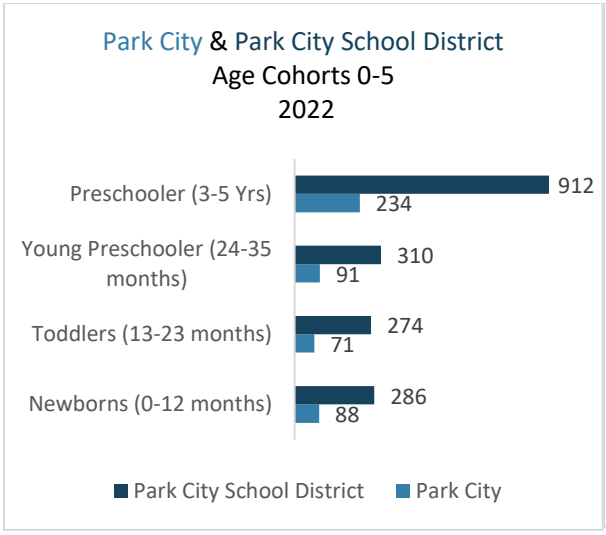
This section summarizes the demographic trends and existing childcare options in Park City, Utah. It relies upon the Summit County Childhood Needs Assessment ("Needs Assessment") developed by the Economic Development Department of Summit County and the Early Childhood Alliance in February, 2023. The discussion below attempts to track the Summit County analysis, but using available Park City specific data.

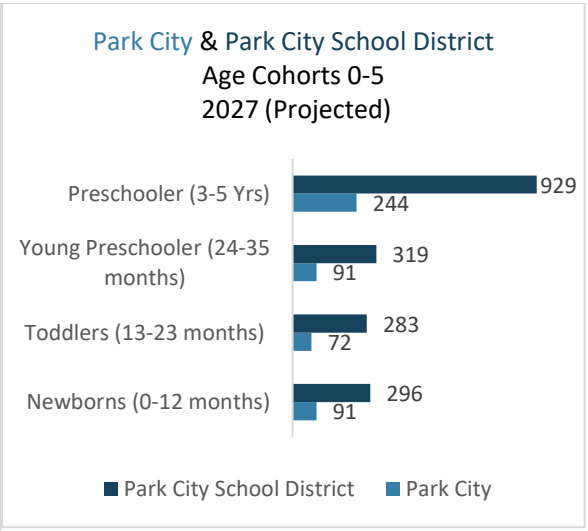
Population

Park City's 2020 population is estimated at 27,826, comprising 9,307 households, 2,866 of which have their own children under the age of 18: (1) 11.4% have children under 6 years only, (2) 14% have under 6 years and 6 to 17 years, and (3) 74.6% have 6 to 17 years only.[iv] The average family size in Park City is 2.88.[v]

Early Childhood Population

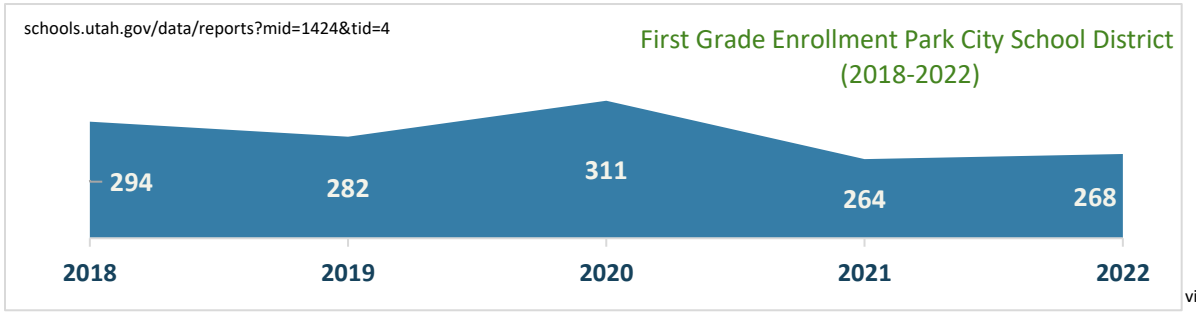
In 2022, Park City has an estimated 484 children under the age of 6 and this is projected to grow slightly to 498 by 2027.[vi]





17% of the children under age 6 in Summit County live in Park City and 19% of the children ages 6 to 17 years old.[vii]

Public school enrollments are declining. Kindergarten attendance is optional in Utah. Based upon first-grade attendance between 2018 and 2022, total first grade enrollment has declined in Park City School District since 2019 from 294 to 268 students.



[viii]

The 2020 census finds that 52% of Park City households with children under age 6 have all available parents in the workforce and this rises to 60% for children ages 6 to 17 years.[ix]

	Kids Under Age 6			
	Total	All Parents in Labor Force	One Parent in Labor Force, One Not	No Parents In Labor Force
Park City #	430	223	196	11
Park City %		52%	46%	3%

	Kids Age 6 to 17 Years Old			
	Total	All Parents in Labor Force	One Parent in Labor Force, One Not	No Parents In Labor Force
Park City #	1,165	697	417	51
Park City %		60%	36%	4%

Housing

Park City's housing stock is comprised of a mix of vacant, owner-occupied or rental units, and is very expensive. *See* Attached Housing Profile for Park City as Attachment 1.

Employment

Given the expensive housing in Park City, many of the employees commute in to work. 2022 Park City (zip 84060) Commuter Data estimates that there are 9,210 inbound commuters and 2,452 outbound commuters, for a total net inbound migration of 6,757 commuters.[x] Park City represents 55% of the inbound commuters into Summit County.

2022 Commuter Data[xi]

ZIP	Inbound Commuters	Outbound Commuters	Net Commuters
84060, Park City	9,210	2,452	6,757
84098, Snyderville Basin	9,763	10,022	-259
84033, 84017, Henefer and Coalville	1,001	2,570	-1,569
84036, 84061, 84055, Peoa, Oakley, Kamas, Francis	1,787	3,660	-1,873
Summit County	16,675	13,755	2,920

Income

Park City is one of the wealthier communities in Utah. For family households in Park City, the annual median household income is $117,348, the annual mean income is $185,728, and is broken into the following income categories:[xii]

Total	2,022
Less than $10,000	5.6%
$10,000 to $14,999	1.7%
$15,000 to $24,999	3.9%
$25,000 to $34,999	2.7%
$35,000 to $49,999	6.0%
$50,000 to $74,999	8.4%
$75,000 to $99,999	9.5%
$100,000 to $149,999	23.7%
$150,000 to $199,999	8.9%
$200,000 or more	29.8%
Median income (dollars)	117,348

Section III.
Childcare Options

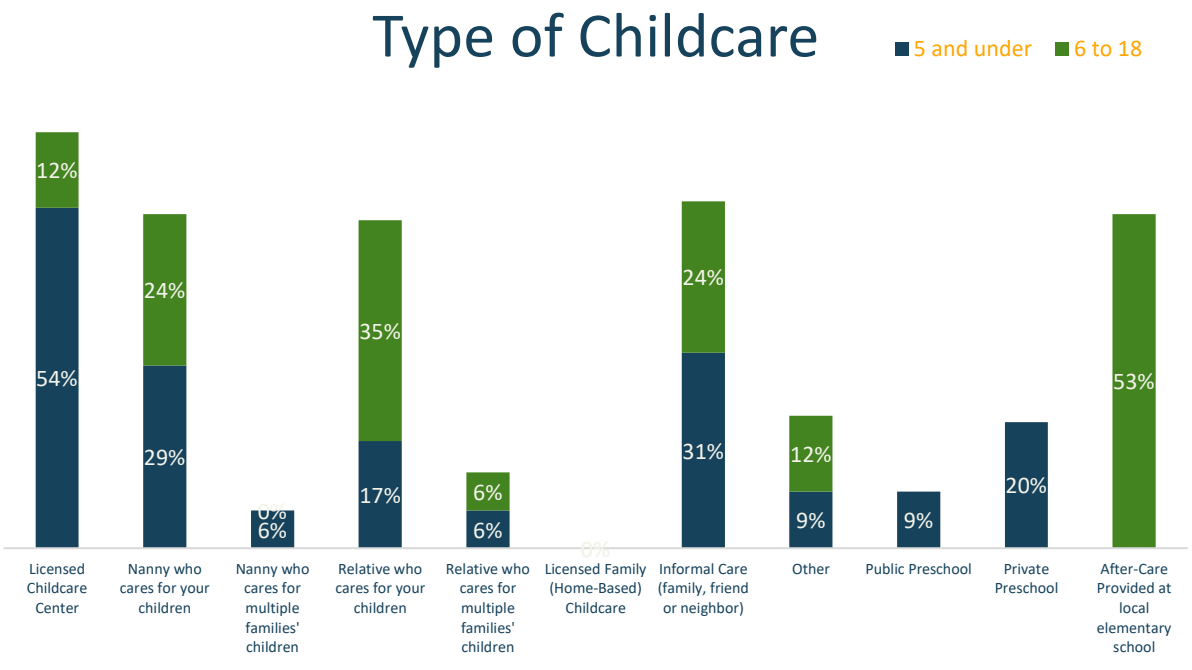
Section III. Childcare Options

Parental choice is paramount in deciding what type of childcare best suits each family's needs. There are numerous modalities of care, including center-based, family-based, preschool, after-school, summer, and informal family, friend and neighbor care. Many families use a combination of childcare types and providers. For example, many children may attend an academic year program and then use a different provider during the Summer. Similarly, three-year old children will often attend a partial day public or private preschool program and then be cared for by either a nanny or a family, friend or neighbor informal care provider the rest of the day. Although there are numerous childcare options in our community, there are not enough of them to meet the need and many families can not afford what is currently available.

Need and Preferences for Childcare

The majority of families in Park City with children have parents who work. 52% of Park City households with children under age 6 have all available parents in the workforce and this rises to 60% for children ages 6 to 17 years.[xiii] The vast majority (83%) of Park City parents survey respondents with children aged five or under and slightly less (50%) parents with children aged 6 to 18 rely on someone outside of themselves and their spouse/partner/co-parent to provide childcare.

In a survey of Utah working parents, 43% of parents indicated they preferred childcare at a school or center and 24% responded that they preferred childcare with a home-based provider.[xiv] Here in Park City, based on survey results attached as Attachment 4, the majority (54%)of children needing care five and under are in a licensed childcare center, while the majority (53%) of children needing care between the ages of six and eighteen are in the after-care programs provided at local elementary schools.



Based Upon 84060 Responses to Early Child Care and Education Survey (January 2023)

Availability of Childcare

Informal family, friend, and neighbor care is the most common form of non-parental care in the United States and nearly half of all children under the age of 6 spend time in some type of informal care.[xv] This appears to be less in Park City, where 24% of survey respondents with children aged five or under reported using family, friend, and neighbor care. Because informal care, by definition, is unregulated, it is difficult to accurately quantify its availability or assess its quality. Also, during the 2022 legislative session, Utah House Bill 15 made unlicensed care more likely by: (1) increasing the number of children for whom unlicensed home childcare providers can care from four to six; (2) removing the limit on the number of children under two years of age that can be cared for by a certified residential childcare provider; and (3) limiting to ten the total number of children under the age of 13 that any person can care for in their home without a license or certificate.[xvi] Many Park City families are using nannies, but survey responses from Park City indicate that these families are at the higher end of the income range, with 55% of these households earning over $200,000 per year and another 18% earning $150,000 to $199,000 per year.

Licensed Care

Licensed providers are more easily quantifiable than informal care, but the licensed capacity does not necessarily equate to actual capacity and there are several types of licensed care serving different ages, populations, and needs. Parents also often combine licensed care, such as preschool, with informal care to meet their needs.

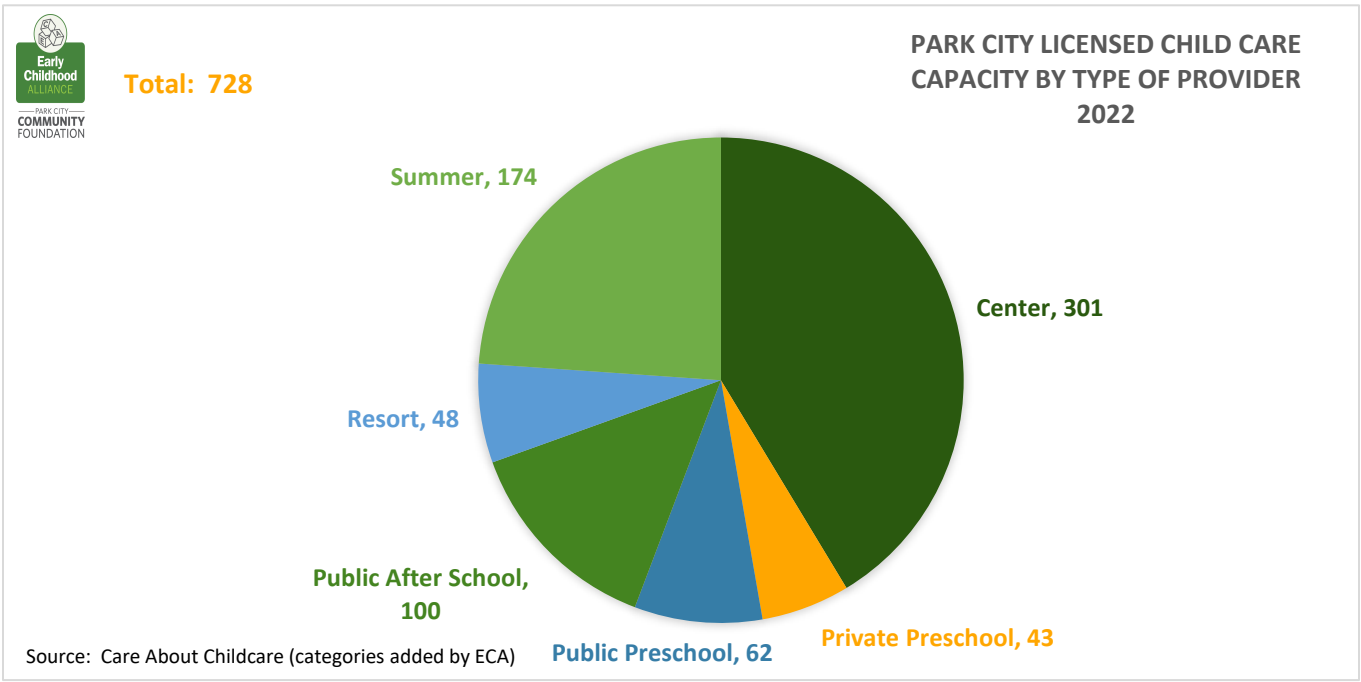
Licensed vs. Actual Capacity

Licensed capacity often overstates actual capacity since providers sometimes use lower ratios than licensing standards allow to improve quality and many providers are currently experiencing staffing shortages and so are not able to serve as many children as their licensed capacity shows. The National Association for the Education of Young Children conducted a survey of early childhood educators in Utah in October of 2022. Almost a quarter (23.1%) reported that they are serving fewer children than they would like to serve and the most common reason that programs are under-enrolled is that parents can't afford to enroll.[xvii] More locally, in Park City, based on responses in October of 2022, Deer Valley Children's Center and PC Tots both offered lower ratios to improve quality, and the Park City Cooperative Preschool does not fill to licensed capacity due to its current classroom set up.[xviii]

Total Licensed Capacity

The licensed childcare providers in Park City are set forth in the table below, organized by type of care and showing each provider's total licensed capacity, with the exception of Deer Valley, which was separated to more accurately describe its Deer Valley Academy and resort guest services. There are no licensed family providers in Park City. Adding additional capacity in family care in Park City using Wonderschool Academy or other childcare business creation support resources may help fill this need. Licensed capacity is not available by age group, since each facility is provided a total capacity and is allowed to decide which age groups to serve, and how many in each age group.[xix]

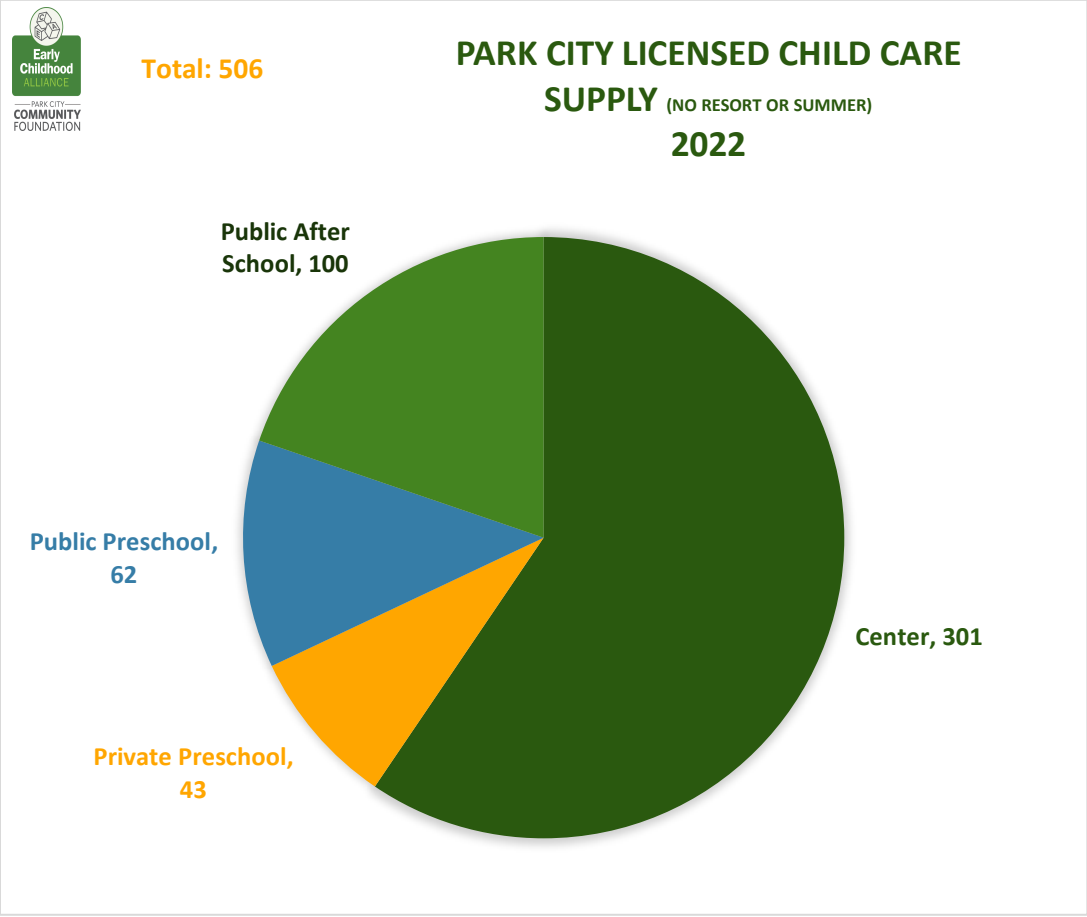
Type	Facility	Capacity
Center	Alpine Adventurers Academy	88
Center	Alpine Adventurers Academy II	53
Center	PC Tots	96
Center	PC Tots Too	34
Center	Deer Valley Academy	30
Private Preschool	Holy Cross Ministries	23
Private Preschool	Park City Cooperative Preschool	20
Public After School	McPolin Elementary After School Program	100
Public Preschool	McPolin Elementary Preschool	62
Resort	Deer Valley Child Care	48
Summer	Park City Recreation Summer Day Camp	91
Summer	Park City Kids Camp (Vail)	83
Total	12	728



Source: Care About Childcare (categories added by ECA)

In terms of early care and education, the primary providers of licensed care for the Park City workforce are the center, family, and private/public preschool providers since afterschool and summer providers typically serve kids over age five. Public and private preschool programs offer another 105 spots, but many of those programs have shorter hours and days of the week and so may not fully satisfy the needs of full-time working parents.

Removing the resort and summer providers leaves 506 licensed spaces for the local workforce.



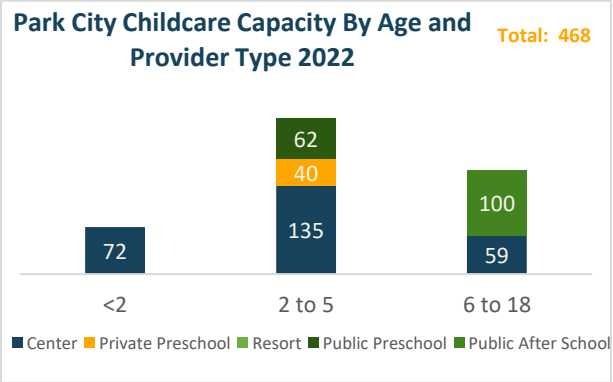
Resort Childcare Serves Local and Guest Children

Some (48) of the licensed capacity in Summit County is based at Deer Valley, which often serves guest children in addition to the local workforce families. Vail's Park City Kids Camp at the base of Park City Mountain Resort operates only in the Summer (June-mid August), and therefore is categorized as a summer provider, not a resort. It has not been open the past few years due to COVID and it is uncertain whether it will open for the 2023 Summer.[xx] Deer Valley offers an academic-year round program called Deer Valley Academy for 30 children, 11 of whom are under 2; guest children are also served, but this number fluctuates greatly depending on demand and available staffing, with an estimated peak time of 48 children.[xxi] The ratio of guest to local use fluctuates between roughly 50%/50% and 70% guest and 30% local during the busy periods.[xxii] Deer Valley is separated into the Deer Valley Academy (30 center spots) and Deer Valley Child Care (48 resort spots) to recognize their two programs.

A new childcare provider located near the base of Park City Mountain Resort, Wildings Mountain Camp, will also begin offering daily drop-in care, after-school enrichment programs, summer camps, and Friday and Saturday evening drop-in playgroup for children who are potty-trained up to age eleven, but is not yet reflected in the licensing numbers.

In total, the available workforce childcare by age is estimated to be 468 spaces, slightly different than the formal licensing capacity of 506 (excluding resort and summer programs) due to adjustments in capacity numbers provided by providers. Care for children under age two has 15% of these spaces, preschool-aged children (2 to 5) have 51% of the available spaces, and children aged 5 to 19 have the remaining 34% of spaces.

Type	<2	2 to 5	6 to 18
Center	72	135	59
Private Preschool	0	40	0
Public Preschool	0	62	0
Public After School	0	0	100
Total	72	237	159



Child Care for Children Under Age 2 (72)

Care for children under age 2 is very limited in Park City. There are no licensed family providers. That leaves licensed centers: PC Tots and Alpine Adventures, which both operate two locations in Park City. Alpine Adventures II serves infants through five, so estimates were based upon PC Tot's percentage of children and Alpine Adventures serves infants through age twelve and so estimates were based upon Creekside Kids' breakdown. Using those assumptions, there are an estimated 72 licensed spots available for children under 2, which represents 15% of the total licensed care available in Park City.

Preschool Care (237)

As children age, the options for care increase as public and private preschools also offer services to this age group. Based upon the assumptions described above, there are an estimated 237 spaces available for children aged two to five, representing 51% of the total licensed childcare capacity within Park City with the public and private preschools adding a lot of capacity to the center providers.

Park City School District Is Expanding Preschool Programs

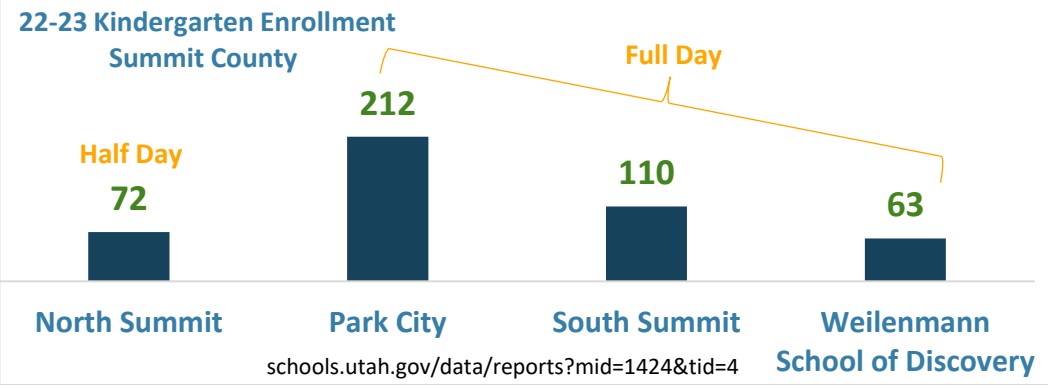
The Park City School District offers preschool programs at all four of its elementary schools. Four-year old children may attend full-day (8:15 a.m. to 3:05 p.m.) four days a week at all four schools and a half-day program (12:05 p.m. to 3:05 p.m.) is available at Jeremy Ranch four days a week. Three-year old students may attend half day (8:15 a.m. to 11:15 a.m.) two days a week. The 3-year old program costs $150 per month and the 4-year old program is $500 per month for full-day and $275 per month for the half day program. Tuition may be reduced if families qualify for a fee reduction. PCSD's preschool program started in 2010 and the Park City Education Foundation provides over $100,000 each year to support this critical

program.[xxiii] Given the hours of availability, it is likely that many families are combining preschool with other forms of childcare to manage all of their childcare needs.

Additional preschool opportunities for 3 and 4-year-old children are likely to become available in the coming years. The Park City School District passed at $79.2 million bond in November 2021. In addition to changes at the upper levels, the Park City School District plans to expand preschool programs at all four of its elementary schools.[xxiv] Although those classrooms were initially expected to come on line in September/October of 2023, given construction delays, that timeline is being extended.[xxv] Once construction is completed, Park City School District will have sixteen preschool classrooms, four at each of the four elementary schools, adding an additional capacity of eighteen public preschool spaces at McPolin Elementary.[xxvi]

Expanding Access to Full-Day Kindergarten

With the recent passage of H.B. 477, Utah will now provide full funding for optional full-day kindergarten, which will potentially add additional early learning opportunities for Summit County's five-year old population.



[xxvii]

Currently, local education agencies receive only .55 of the weighted pupil unit (WPU)for kindergarten students. Since the full WPU will be provided in the 2023-2024 school year, school districts like Park City that are currently providing full day kindergarten will free up funding that may be available for expanding preschool programs.

School-Aged Care (159)

As children get older, many families take advantage of the after-school programs operated by the local elementary schools. There are 159 spaces available and 53% of survey respondents with children aged six through eighteen reported using these after-care programs. Survey results also show an increase in the use of relative care as children age. In general, Park City survey respondents used licensed care much more for their children 5 and under (83%) and less as the children got older (50%). Based upon the assumptions described above, there are an estimated 159 spaces for children aged 6 and older, representing 34% of the licensed childcare spaces in Park City.

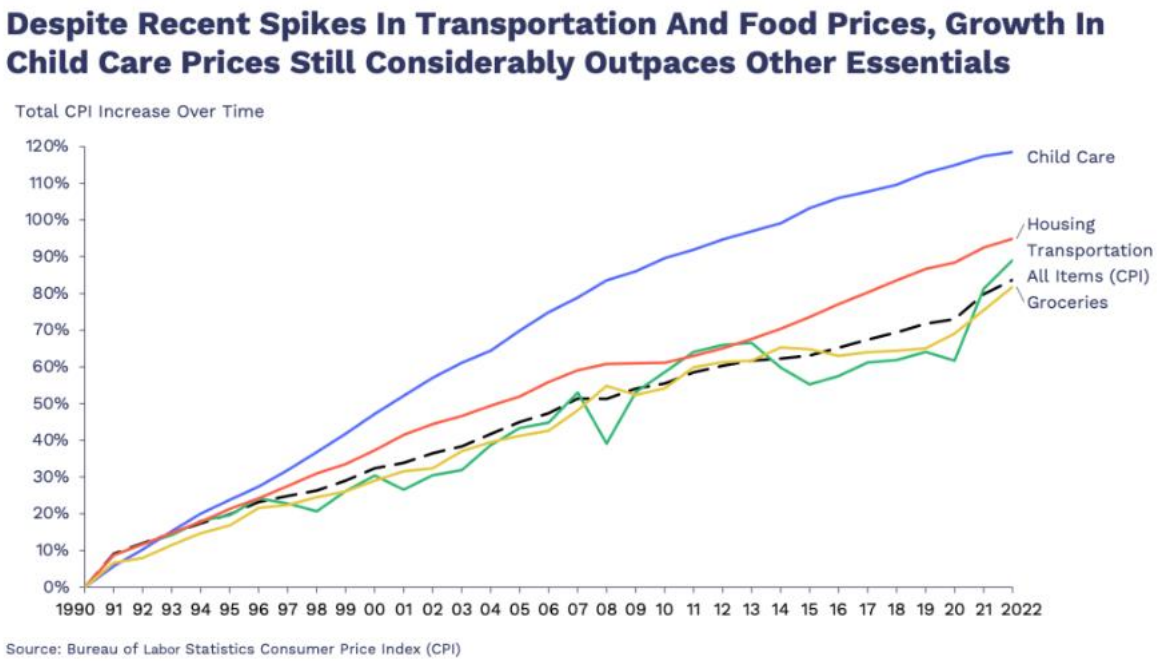
Care for Children with Special Needs

Eight Park City parents who responded to the survey have children under age nineteen with special needs or a disability, with a total of 4 children aged five or under and 5 children aged six through eighteen. The majority of these parents (71%) responded that it is extremely (57%) or somewhat (14%) difficult to find

quality, affordable childcare in our community. The Care About Childcare website no longer allows users searching for childcare to filter by whether the providers serve children with special needs, so it is difficult to quantify the availability of this service in Park City.

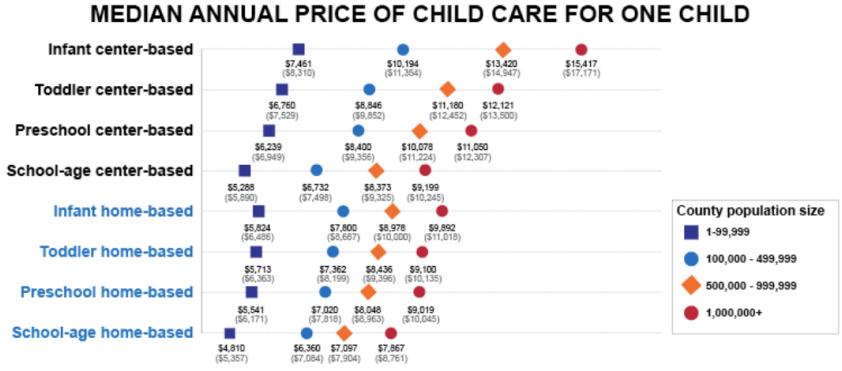
Affordability of Childcare

Childcare has always been expensive, but the costs are increasing. Nationally, the costs of childcare have increased at a greater rate than other household expenses such as housing, transportation, and groceries.



xxviii

Pricing of care differs greatly depending on the quality of care (higher-quality care requires trained teachers with lower ratios), amount (some families need more than 40 hours per week of care), timing (some families need care during evening and weekends), and age of the child. In general, due to higher staffing ratios, the cost of care typically decreases as the child ages, center-based care is the more expensive than home-based care, and care is more expensive as area population increases.



Source: National Database of Childcare Prices 2018 (U.S. Department of Labor Women's Bureau) and American Community Survey 2014-2018 (U.S. Census Bureau)
Note: Childcare prices are presented in 2018 and 2022 real dollars. Estimates for 2022 are in parentheses.

xxix

Infant care is typically the hardest to find and the most expensive. In fact, it costs more to send an infant to childcare in Utah ($14,064)[xxx] than tuition and fees for residents this year at the University of Utah ($9,002);[xxxi] and, unlike college tuition, there are very few grants, loans, or scholarships available to cover these costs.

The recommended benchmark is that families should not pay more than 7% of their family income on childcare.[xxxii] Based on 2022 Area Median Income for Summit County, those maximum monthly parental contributions for select household sizes would be as follows:

Summit County 7% AMI	2 person	3 person	4 person	5 person
100% AMI	$624	$702	$780	$842
80% AMI	$499	$562	$624	$674
60% AMI	$375	$421	$468	$505
50% AMI	$312	$351	$390	$421

If parental contributions are increased to 10% of income, the monthly parental contributions for select household sizes would be as follows:

Summit County Monthly 10% 2022 AMI	1 person	2 person	3 person	4 person	5 person
100%	$780	$892	$1,003	$1,123	$1,203
80%	$624	$713	$803	$891	$963
60%	$468	$535	$602	$669	$722
50%	$390	$446	$502	$557	$602

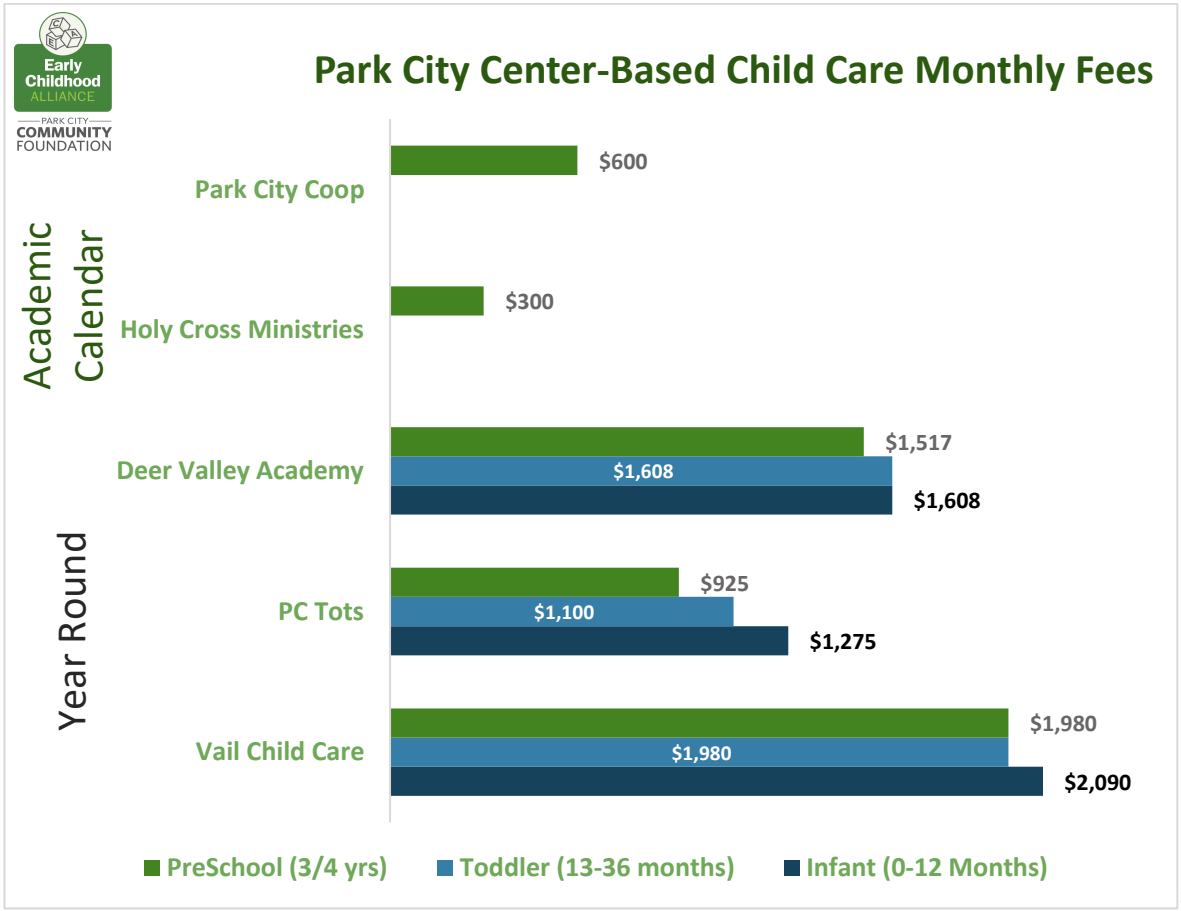
As discussed in the demographic section above, the working household children in Summit County are estimated to be distributed amongst the household income categories as follows:

Age Cohorts	<2		2-<5		5 to 9		10 to 14	
Resident Children Needing Licensed Care	125		68		112		135	
	#	%	#	%	#	%	#	%
Household Income <= 30% HAMFI	19	15%	10	15%	17	15%	21	11%
Household Income >30% to <=50% HAMFI	11	8%	6	8%	9	8%	11	11%
Household Income >50% to <=80% HAMFI	8	7%	5	7%	8	7%	9	9%
Household Income >80% to <=100% HAMFI	9	7%	5	7%	8	7%	9	10%
Household Income >100% HAMFI	78	62%	42	62%	70	62%	84	58%

This model estimates that there are 47 children under 2 and 26 children aged 2 to 5 for a total of 72 children under age five living in Park City who need childcare and whose families earn less than 100% AMI.

Local Childcare Tuition

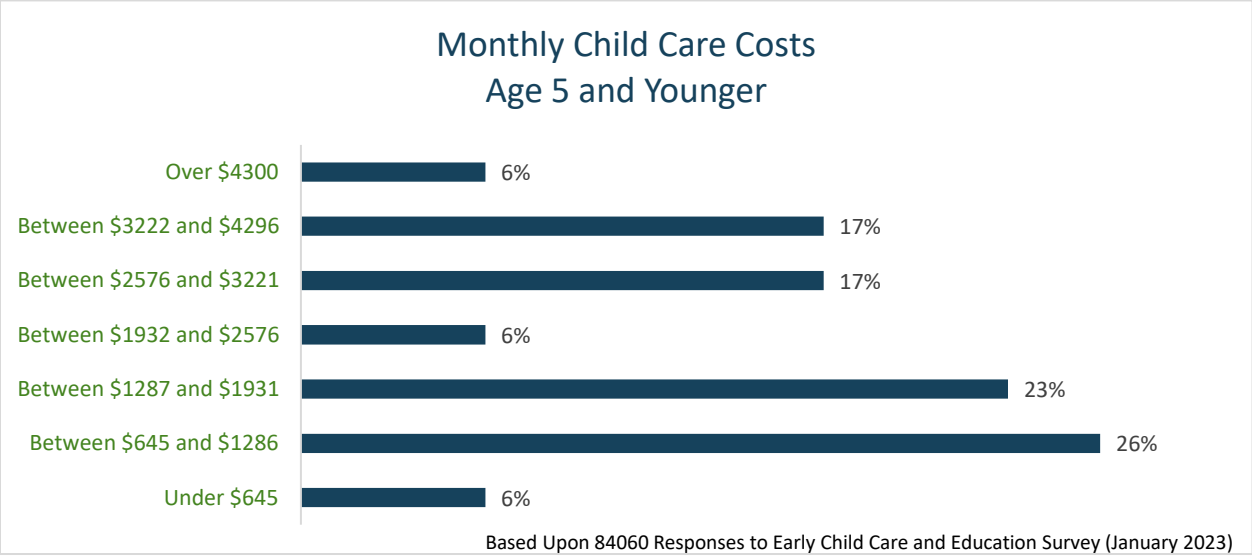
Pricing for home-based licensed care varies depending upon the provider. Pricing for several of the licensed, center-based providers in Park City is set forth below, categorized by whether their programs run on an academic or calendar year.



[xxxiii]

Since Holy Cross Ministries and PC Tots are nonprofit organizations that subsidize their programs through philanthropic fundraising, they do not reflect the true private market tuition. Looking at the average charges based on tuition schedules throughout Summit County at Creekside Kids, Peek Program, Deer Valley, Vail, Soaring Wings Montessori, Little Miners Montessori, Alpine Adventures and Park City Day School, the average monthly costs charged to parents are $1,678 for infants, $1648.63 for toddlers, and $1585.13 for preschool children.

Based on the 84060 responses to the Survey of Childcare Needs, and assuming 4.3 weeks in each month, parents with children age 5 or younger are paying between $645 and more than $4,300 a month for childcare, with a third paying between $1,287 and $1,931. The chart below shows the responses from parents with children aged 5 or younger for how much they pay per child for childcare in a typical week.



Gap Between Tuition and Affordability for Early Care and Education

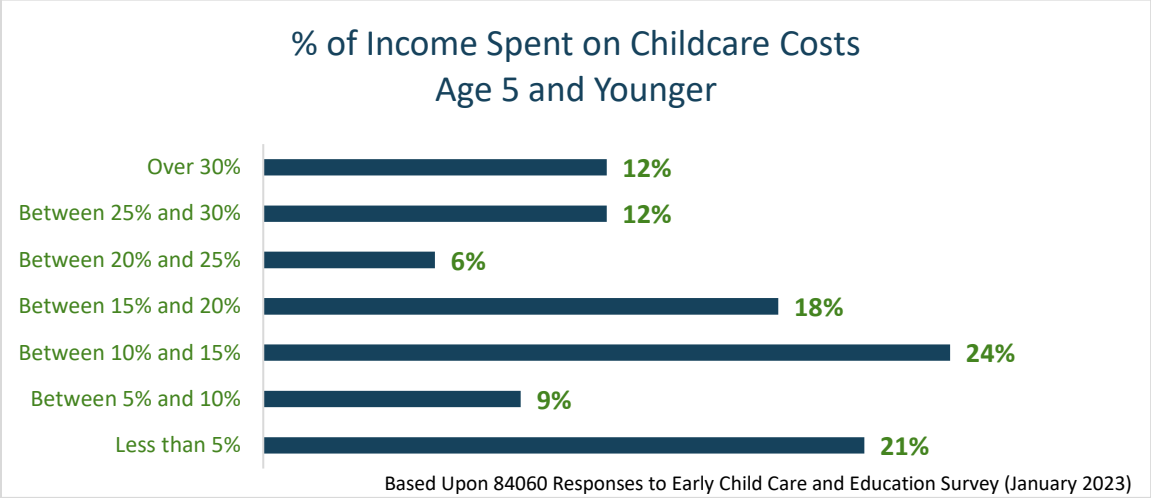
Assuming a general average tuition of $1700 a month for care age 5 and under, and capping parental contributions at 7% of income, the chart below shows the monthly difference between what the private market is charging and what is considered to be affordable for parents (7% of their income) for one child per month as well as the average for all household sizes in that income category. This is known as the affordability gap.

Monthly Affordability Gap (7%)	Avg.	2 person	3 person	4 person	5 person
100%	$963	$1,076	$998	$920	$858
80%	$1,110	$1,201	$1,138	$1,076	$1,026
60%	$1,258	$1,326	$1,279	$1,232	$1,195
50%	$1,332	$1,388	$1,349	$1,310	$1,279

If parental contributions are increased to 10%, then the affordability gap for selected household sizes is as follows:

Monthly Affordability Gap (10%) 2022 AMI	Avg.	2 person	3 person	4 person	5 person
100%	$645	$808	$697	$578	$497
80%	$858	$987	$897	$809	$737
60%	$1,068	$1,165	$1,098	$1,032	$978
50%	$1,173	$1,254	$1,198	$1,143	$1,098

Based on survey results from zip 84060, the majority (72%) of parents of children aged five or younger in Park City are paying more than 10% of their income on childcare.



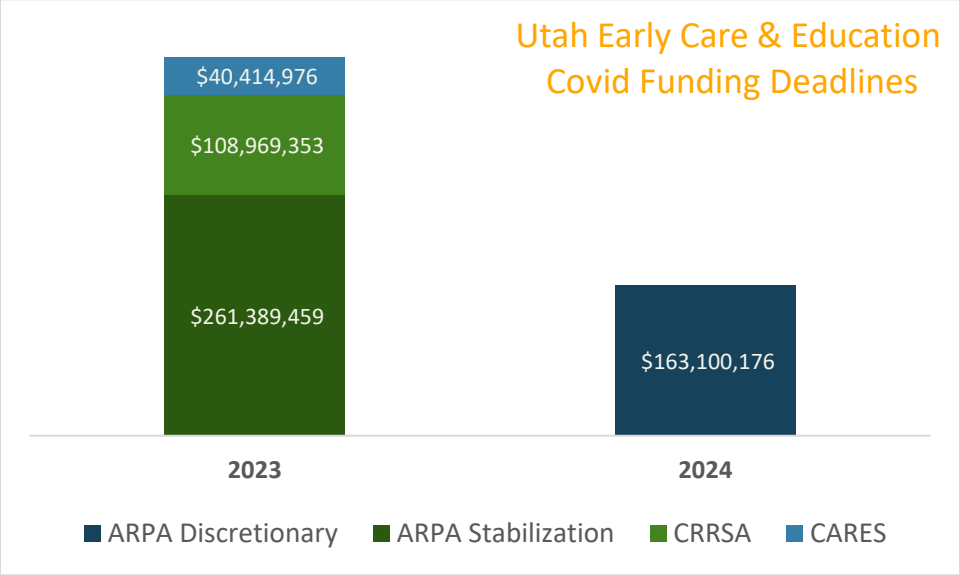
Combining the average monthly affordability gap with the estimated number of children in each income range, the scope of the early childcare affordability issue becomes apparent.

AMI Range	Avg. Monthly Affordability Gap	<2	2-<5	Total Monthly Affordability Gap <2	Total Monthly Affordability Gap 2- <5	Total Monthly Affordability Gap <5
>100%	$864	78	42	$67,295	$36,644	$103,940
>80% <100%	$1,031	9	5	$8,926	$4,860	$13,786
>50% <80%	$1,171	8	5	$9,887	$5,384	$15,272
<50%	$1,282	30	16	$38,153	$20,776	$58,929

As discussed below, most of the children living in households earning less than 50% of Summit County AMI, and depending on family size, some of the children living in households earning up to approximately 70% of Summit County AMI may qualify for the childcare subsidy from the Department of Workforce Services, which would cover most of that affordability gap, since the monthly DWS subsidy amount for children under two at a licensed center is $1043 a month.[xxxiv]

Increasing Costs Once Federal Funds End

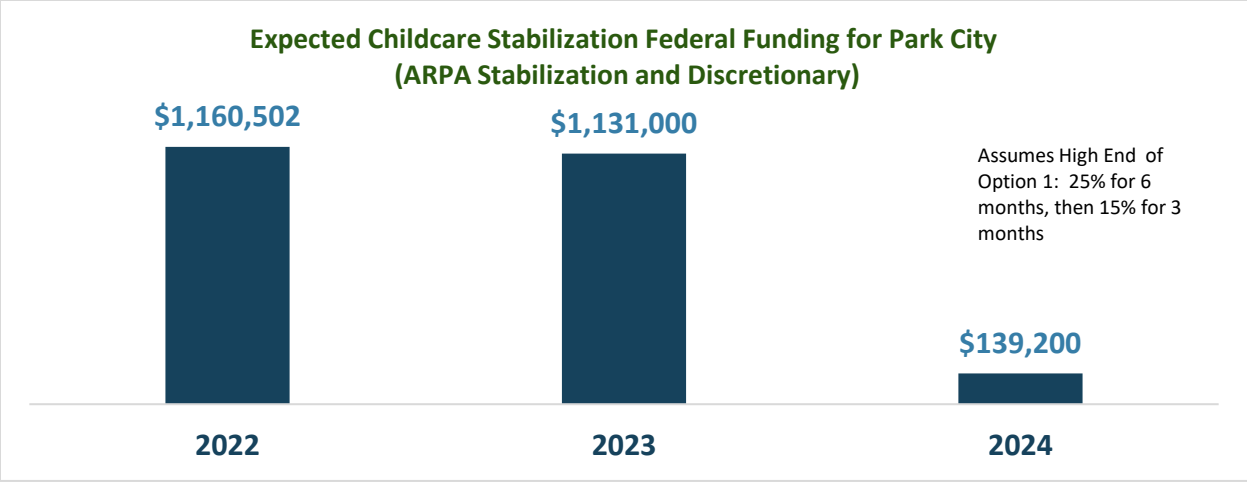
Childcare in Park City is likely to become more expensive in the coming years when pandemic-related federal funds expire. Utah's childcare industry has been supported in recent years by over half a billion dollars ($573,873,964) in three rounds of federal pandemic relief funds.[xxxv] Most of these funds must be expended by September 30, 2023, and the remaining $163 million in ARPA discretionary funding must be expended by September 30, 2024.



Summit County childcare providers have collectively received over $2.372 million in stabilization grants in calendar year 2022 alone ($1,160,502 of which went to providers located in zip code 84060), an additional two providers received stabilization grant funding from CRRSA funds in the amount of $155,200and 142 workers in Summit County received the Youth and Early Care Workforce Bonus totaling $284,000 in September of 2022, providing the Summit County childcare industry with an investment of over $2.8 million dollars in calendar year 2022 alone.[xxxvi]

Utah childcare providers reported that 41.8% of them would have closed their programs without these stabilization grants.[xxxvii] More locally, in Summit County, 40% of survey respondents reported that their program would be closed now without the stabilization payments and all of the recipients used the stabilization payments to increase wages for their employees.

The Office of Childcare has provided two options for tapering the stabilization grants using ARPA discretionary funds.[xxxviii] Using the best-case scenario from Option 1, Summit County stabilization grants are estimated to be as follows:



Utah childcare providers report that when the stabilization grants end, the majority (68.4%) will have to raise tuition and more than a third (36.7%) will have to cut wages or will be unable to sustain wage/salary increases.[xxxix] More locally, survey respondents indicated that once the stabilization payments run out, one third will have to raise tuition, and 17% will have to have staff wage cuts and layoffs. Note, however, that there were only six responses to this question, so it might not be reflective of the providers more generally.

Absent additional public support, the Bipartisan Policy Center has predicted that this childcare funding cliff will have "disastrous consequences for childcare providers still struggling with the lingering impacts of the pandemic."[xl] Most early childhood programs are small businesses, often women-owned, that make all other work possible. Allowing this sector to fail will have ripple effects across the economy as a whole, prevent parents from working to their full potential, and negatively impact the children who will be relegated to low-quality childcare options.[xli] The U.S. Chamber of Commerce Foundation conducted an economic impact study in Utah in October of 2022,[xlii] which found that:

- Childcare issues result in an estimated $1.36 billion loss annually for Utah's economy;
- Utah loses an estimated $258 million annually in tax revenue due to childcare issues; and
- Absences and employee turnover due to childcare cost Utah employers an estimated $1.10 billion per year.

A large share of this loss to tax revenue and economy is tied to Summit County since Summit County has the highest average adjusted gross income in Utah ($131,558), and the largest portion (57%) of state tax revenue is derived from Individual Income Taxes.[xliii]

Childcare Assistance

There is limited childcare tuition assistance available through philanthropic donations and federal funding administered by the Utah Department of Workforce Services.

Private Assistance

Several of the Park City childcare providers offer privately-funded financial assistance to their clients such as PC Tots (approximately 50% of families receive tuition assistance, but all families are subsidized since the tuition charged is less than the actual costs), and Holy Cross Ministries (offered based on a sliding income scale). The Park City School District Preschool at McPolin is able to offer fee waivers to income-

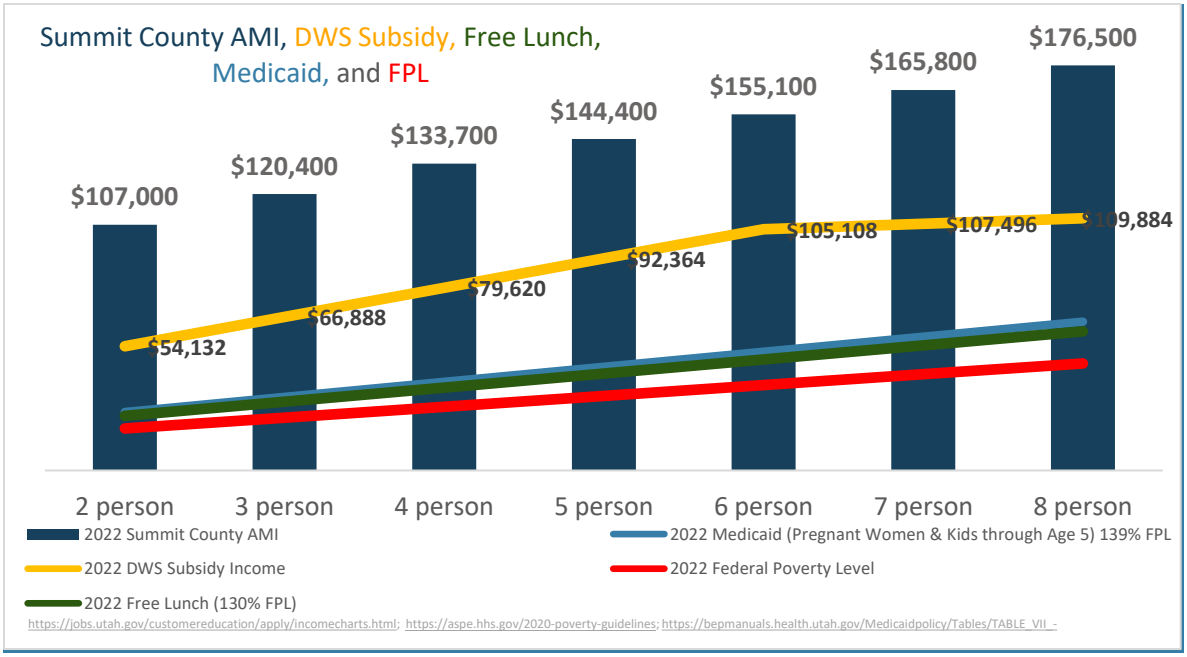
eligible families in part because of the $100,000 annual support provided by the Park City Education Foundation. These types of private assistance rely on philanthropic support and require extensive fundraising efforts.

Federal Assistance

The Utah Department of Workforce Services Office of Childcare (DWS) administers federal Child Care Development Block Grant funds as a childcare subsidy program. These subsidies are available to families that earn 85% or less of the state median income and are working or in school and can demonstrate a need for childcare, among other requirements. Because Summit County's Area Median Income levels are higher than the state levels, this results in an income limitation that is likely to range between 51% and 64% of Summit County's area median income, depending upon household size.[xliv]

	2-person	3-person	4-person	5-person
DWS Childcare Subsidy Income Limits	$54,132	$66,888	$79,620	$92,364
% Summit County AMI	51%	56%	60%	64%

To get a sense of the DWS childcare subsidy income level qualification in comparison to other federally-funded programs that support young children such as free lunch and Medicaid, the chart below shows these income caps relative to the Summit County area median income and the federal poverty level.



In September of 2022, there were only 8 children living in Park City who received a childcare subsidy from the DWS program, and the majority of these children (5) are five years old or younger.[xlv]

	Provider Type	Ages 0-5	Ages 6+
Zip Codes 84060 and 84061	Licensed Center	4	3
	Licensed-Exempt Center	1	
Totals		5	3

There were 15 households in Park City with children under age 18 with qualifying income levels who responded to the Summit County Childcare Needs Assessment survey. Across the State of Utah only 9.5% of eligible children under 6 are served.[xlvi] In addition to obtaining the subsidy, families will also need to find a qualified provided who will accept the subsidy, and the lack of available spaces may also decrease the utilization. Increasing utilization of the DWS subsidy program would greatly improve childcare access and affordability in Park City. Connecting families to staff that can help them navigate this application process, such as Holy Cross Ministries' Promotor/a Outreach Program,[xlvii] would help increase utilization.

For the children who benefit from the DWS subsidy, the maximum amount of subsidy is substantial, and can be as much as $12,516 per year. The amount of subsidy depends upon the age of the child, the type of childcare provider, and the amount of care required. Payments are made directly to providers. The annual maximum subsidies provided for family and center-based care are adjusted each year and the amounts effective as of October 1, 2022, are listed below.[xlviii]

	Infants	1 Yr	2 Yr	3 Yr	4 Yr
DWS Annual Subsidy Family Care	$9,024	$9,024	$8,244	$7,944	$7,812

	Infants	1 Yr	2 Yr	3 Yr	4 Yr
DWS Annual Subsidy Center-Based Care	$12,516	$12,516	$9,852	$9,084	$9,048

Currently, no co-payment is required from the parents whose children benefit from the DWS subsidy. Starting in the Spring of 2023, however, parents will be expected to pay up to 7% of income as a co-payment, and possibly more than that depending upon the selected provider's tuition. *See* the DWS flyer attached as Attachment 3. The Office of Childcare Policy Division has clarified that there is nothing in federal law or Child Care Development Fund regulations that prohibits a third party from making the copayment on the parent's behalf, so long as it is not using federal funds.[xlix]

Childcare Workforce

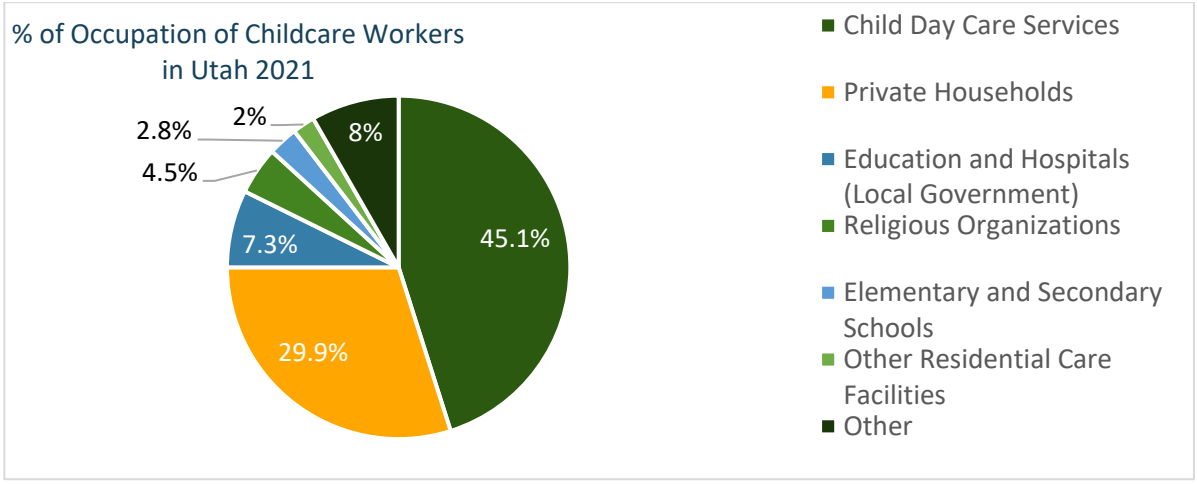
The childcare industry is experiencing a workforce shortage across the nation. The Center for the Study of Childcare Employment at Berkeley tracks childcare sector jobs each month. As of December, 2022, the childcare industry has not recovered since the COVID 19 pandemic began and has lost over 79,600 jobs since February of 2020, or roughly 8% of its workforce.l The Stanford Center on Early Childhood conducts national parent and provider surveys and found in December of 2022 that: (1) in every month of 2022, more than half of providers across all settings reported difficulty retaining and recruiting staff; (2) the impacts of staff shortages include less time and resources to prep activities and lessons for class, sanitize

their classrooms, and keep their work days and class routines consistent; and (3) in November, 71% of provider reported feeling burned out.[li]

Here in Utah, almost half (45.4%) of childcare programs report that they were experiencing a staffing shortage in October of 2022 and the number one thing needed to stay was competitive wages.[lii] Hiring qualified childcare staff has been difficult since the pandemic, particularly given the relatively low wages and lack of benefits. One of Park City's childcare providers, the Park City School District Childcare Center, closed in September 2022 in part because of an inability to provide competitive wages.[liii] Similarly, the Park City Cooperative preschool "came within days of shutting down in August [2022] due to almost not being able to hire a new teacher."[liv]

Typical compensation for childcare workers (SOC 39-9011) in Summit County, UT ranges from $25,442 to $34,422. The median wage is $29,932, which is 10.3% higher than the national median of $27,143. When you adjust the median wage for regional cost of living (which is 34.9% above the average) workers "feel like" they only make $22,188. In Utah, the typical compensation for these ranges from $20,183 to $27,307 and the median wage is $23,745. When you adjust the median wage for Utah for cost of living (which is 3.5% above the average) workers "feel like" they only make $22,942—which is still higher than Summit County's COL adjusted wage.

In December of 2022, there are 12,086 childcare workers in Utah and the median salary is $22,600. [lv]The demand based on online job postings is about average (the national average for an area this size is 147 job postings per month, and Utah had 145 job postings).[lvi]



[lvii]

The vast majority (92%) of the childcare workers in Utah are female and have at least a high school diploma or equivalent or more advanced education (88%), with 31% having an associate degree or higher.[lviii]

Based on survey results, 64% of the early care and education providers in Summit County are fully staffed, and the reported wages for an employee with a bachelor's degree in early childhood related topics were $25,000, $35,500 for a lead teacher, and between $23 to $26 per hour. The majority (63%) of respondents have difficulty hiring staff because the commute is too long, the salary is not competitive, and the cost of housing is too high. None of the survey respondents provide paid parental leave and 40% don't provide any benefits at all.

Section IV.
Parent Preferences & Needs

Section IV. Parent Preferences and Needs

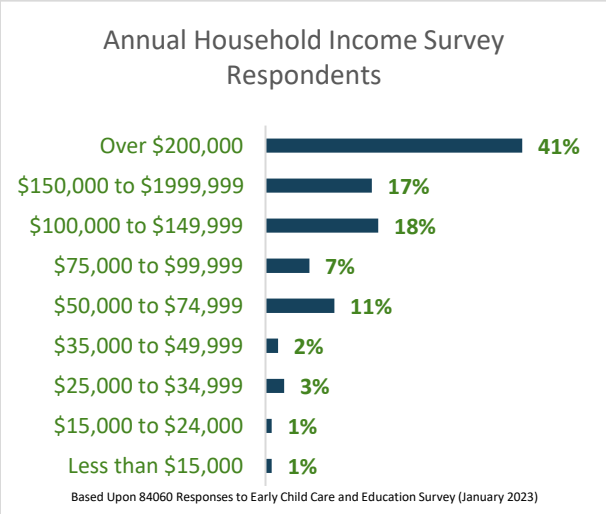
Summit County 2023 Survey

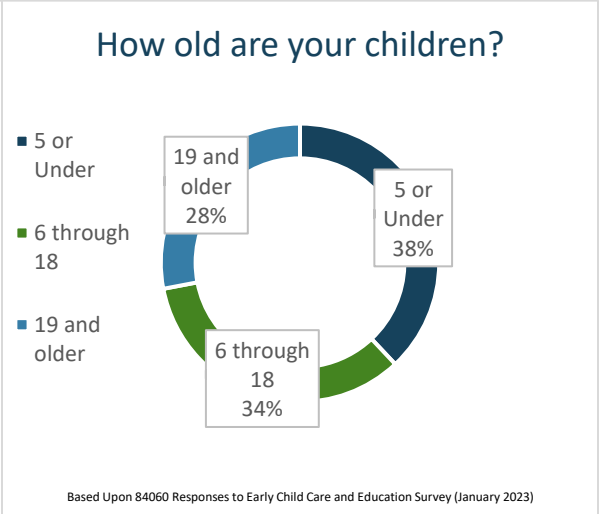
Summit County and the Early Childhood Alliance conducted a survey from December 19, 2022, until January 15, 2023 to gather community feedback regarding current childcare use, availability, cost, and preferences. The survey was available in English and Spanish and there were 726 respondents. To see the full results, please refer to the Summit County Needs Assessment. The discussion below relates to the responses from the 137 respondents who live in zip 84060. The full survey results from these residents of zip code 84060 are included as Attachment 4.

Park City Resident Survey Respondent Demographics

The vast majority (98%) are residents of Summit County, 88% live here full time (10-12 months out of the year), and a little more than half (51%) work for a business located in Summit County. Most respondents are parents (83%) who are married (80%) and lived in a two-person (32%), three-person (20%), or four-person (29%) family (89%) household. The majority (80%) of respondents are white and 10% are of Spanish, Hispanic or Latino origin.

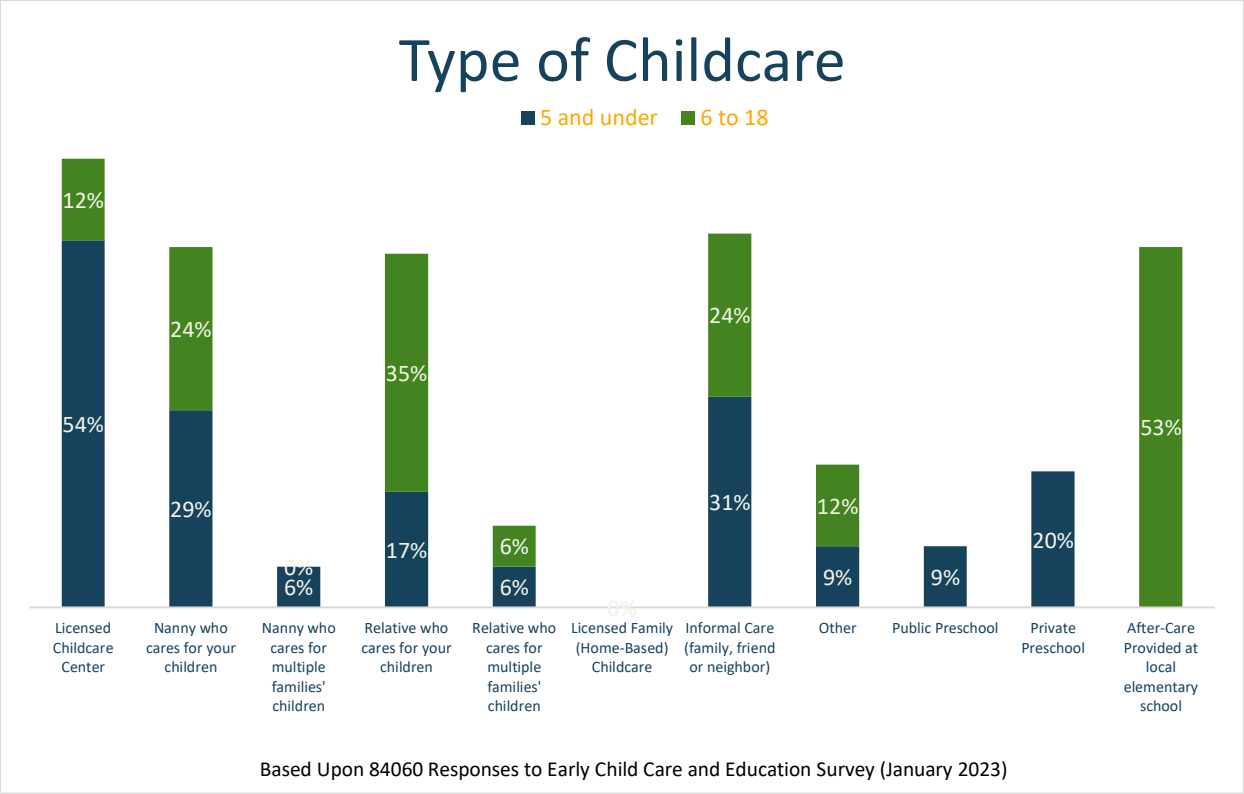
Nearly one third of the parents (38%) have children under age 5, a third (34%) have children aged 6 through 18, and 28% have children aged 19 and older. A few parents (8%) have children under age 19 with special needs or a disability. Several (21%) of the respondents said that they are extremely or somewhat likely to birth, foster, or adopt a child in the next five years. The majority (71%) work full time. The income levels are set forth below:





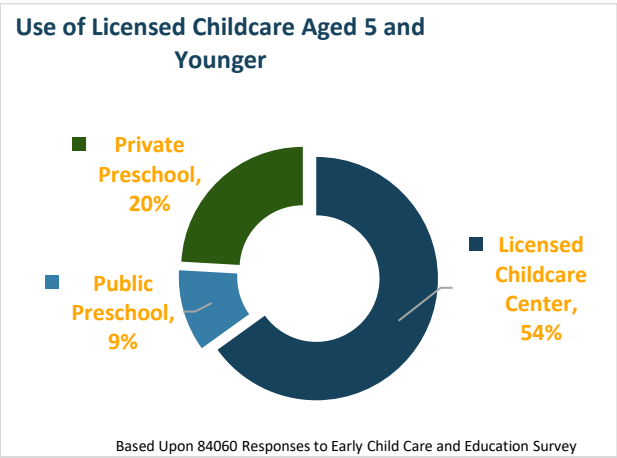
Park City Resident Survey Respondent Childcare Use

The vast majority (83%) of parents with children under age 5 and slightly less (50%) parents with children aged 6 to 18 rely on someone outside of themselves and their spouse/partner/co-parent to provide childcare. The type of care changes as the children age, and many families are using several types of care.

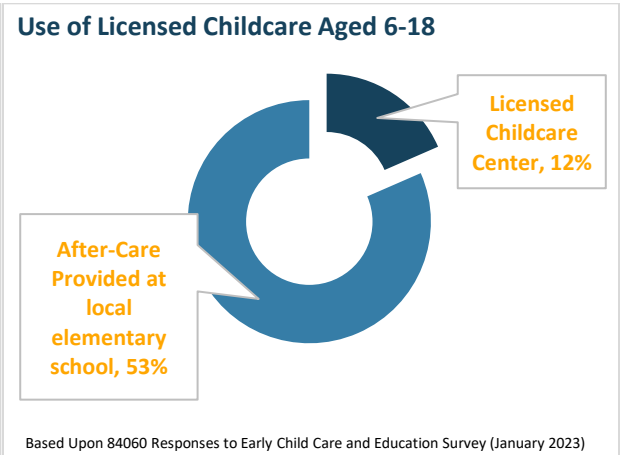


Based Upon 84060 Responses to Early Child Care and Education Survey (January 2023)

Families with children 5 and under primarily use licensed centers (54%), followed by informal care (31%), nannies (29%), relatives (23%) and private preschool (20%). The majority (72%) of these parents are using some form of licensed care for their children aged 5 and under, and many are likely combining this licensed care with other care from relatives, nannies, or neighbors. Older children, ages 6 to 18, are most often in after-care programs located at the local elementary schools (53%), cared for by a relative (41%) or cared for by a family, friend, or neighbor (24%). Use of licensed care decreases as the children age, where 65% of these families are using some form of licensed care.

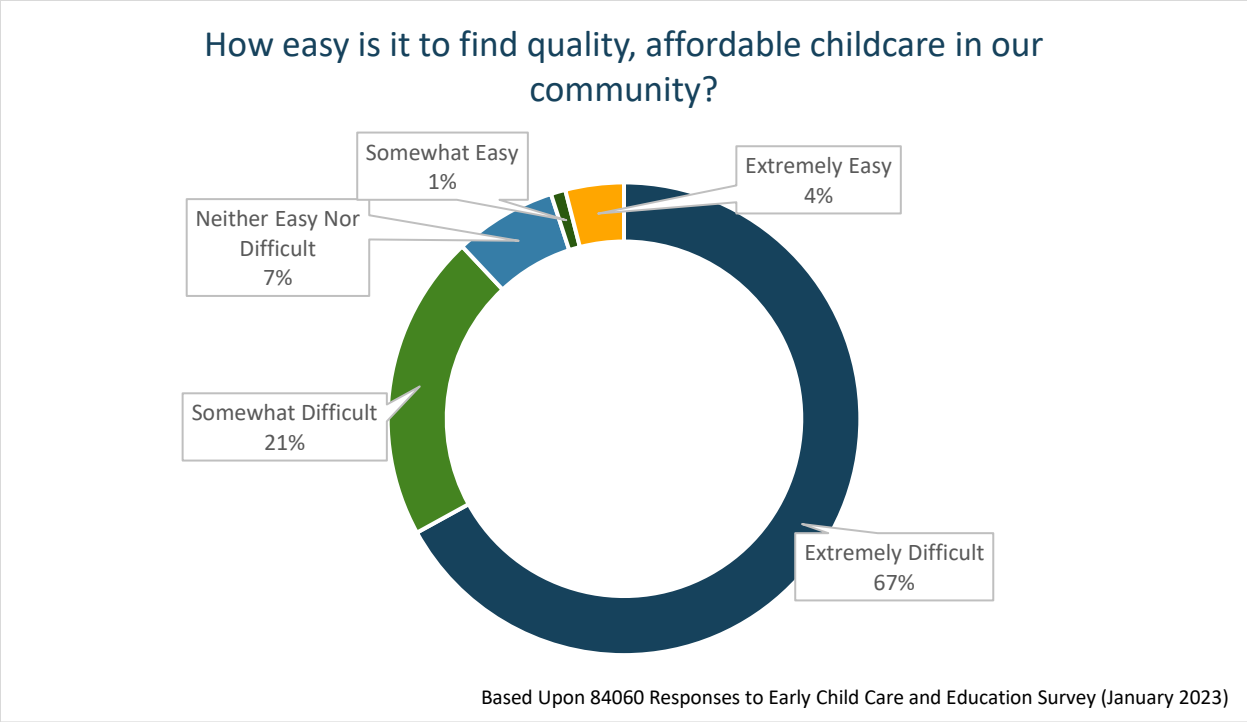


Based Upon 84060 Responses to Early Child Care and Education Survey

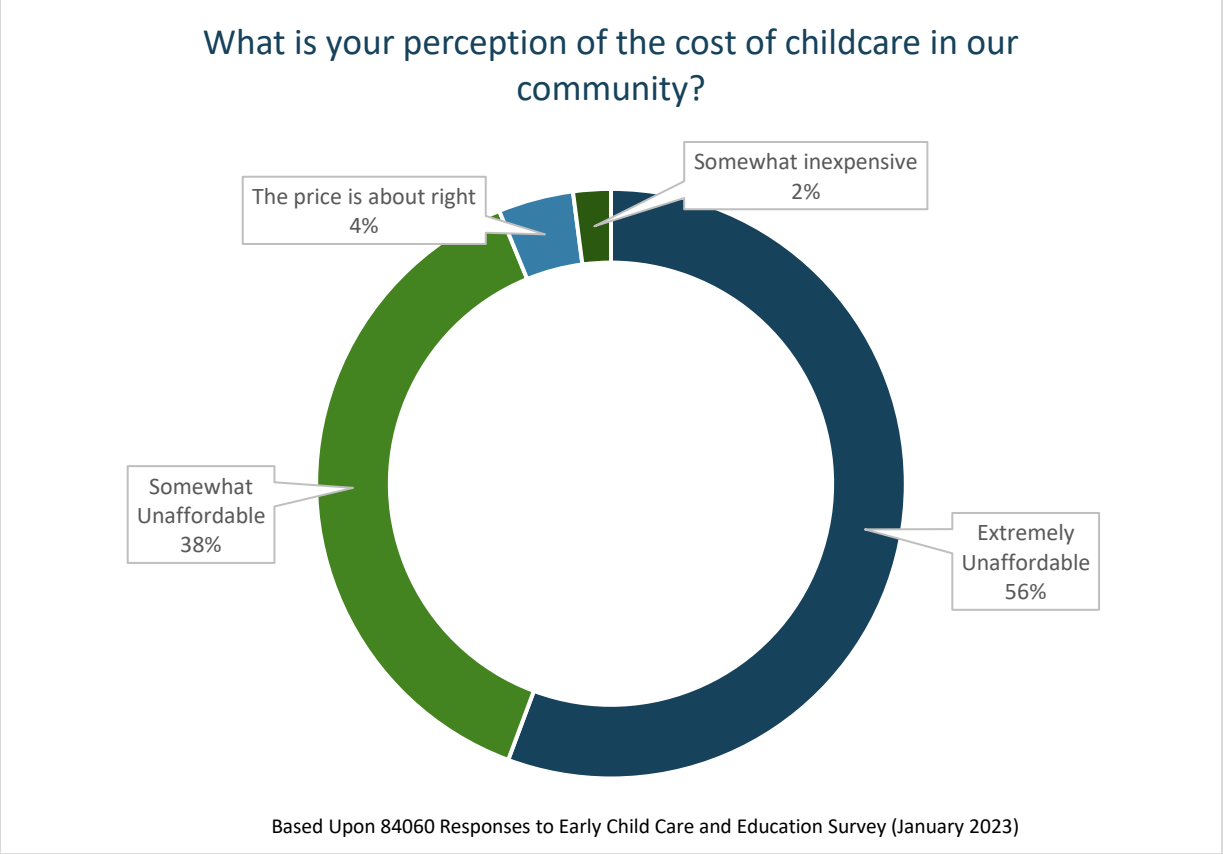


Based Upon 84060 Responses to Early Child Care and Education Survey (January 2023)

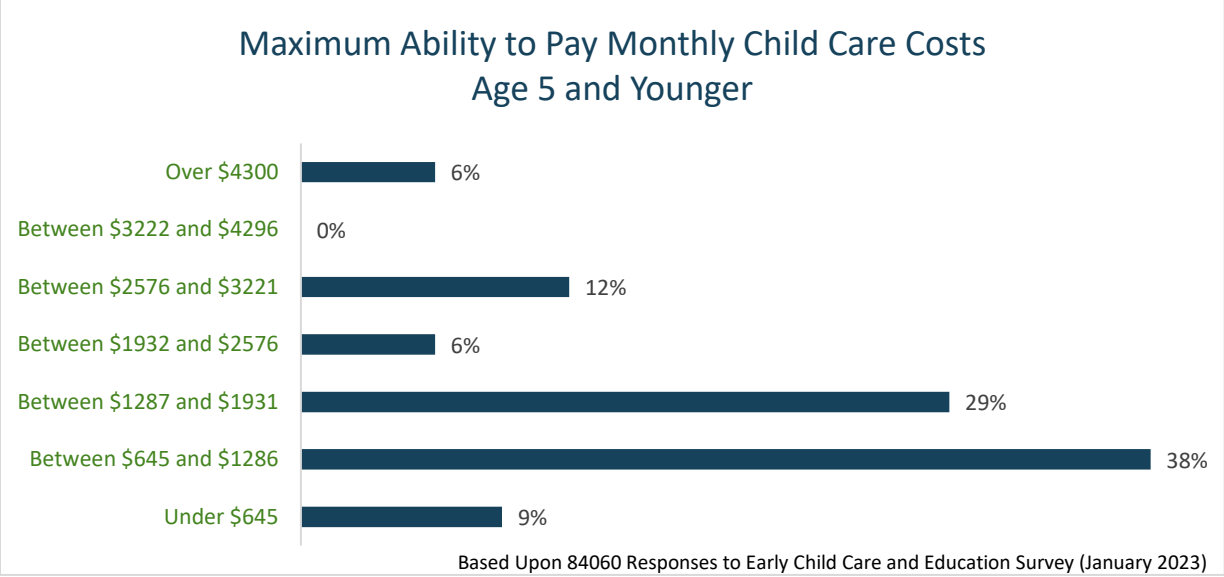
A very high percentage (88%) of respondents think that it is extremely (67%) or somewhat (21%) difficult to find quality, affordable childcare in our community.



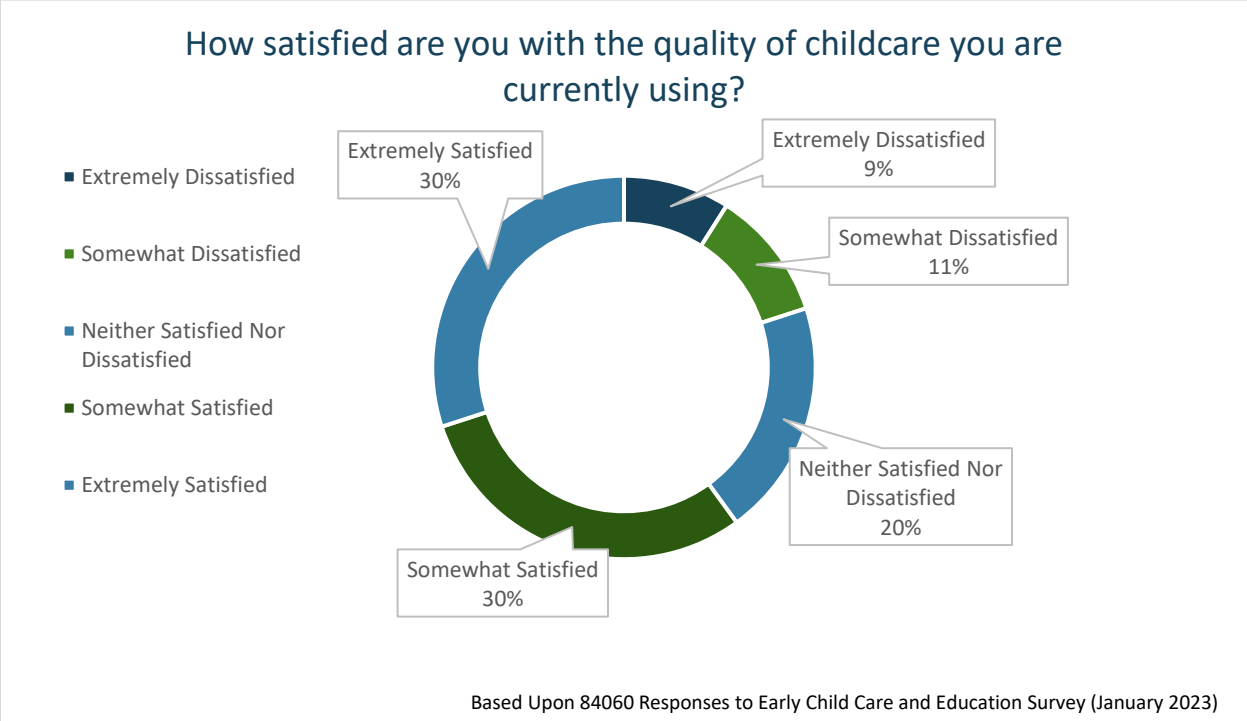
Similarly, the majority (91%) think that the cost of childcare in our community is either extremely unaffordable (54%) or somewhat unaffordable (37%).



In trying to determine what is affordable for our parents, for children aged five or younger, 37% of Park City survey respondents can pay a maximum of between $645 and $1,286 per child, per month for childcare, and another 29% can pay a maximum of between $1,287 and $1,931 per month.

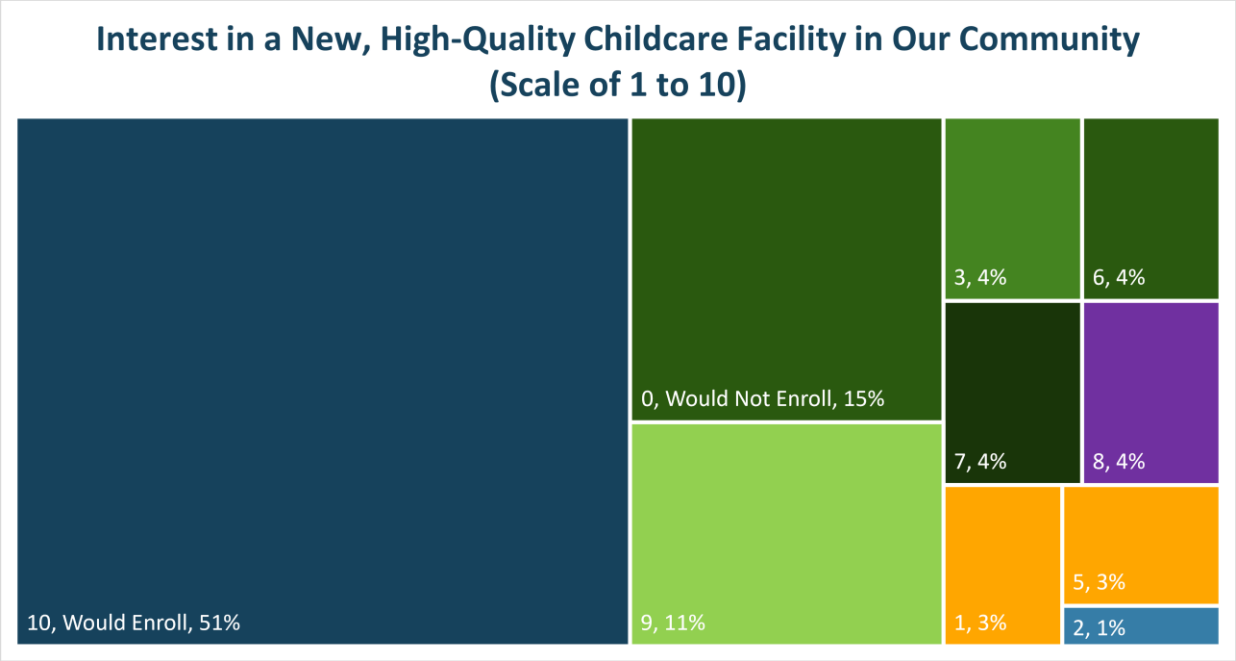


Park City parents are generally satisfied with the quality of the childcare they are using, with almost one third (30%) saying that are extremely satisfied and another large group (30%) reporting they are somewhat satisfied with the quality.

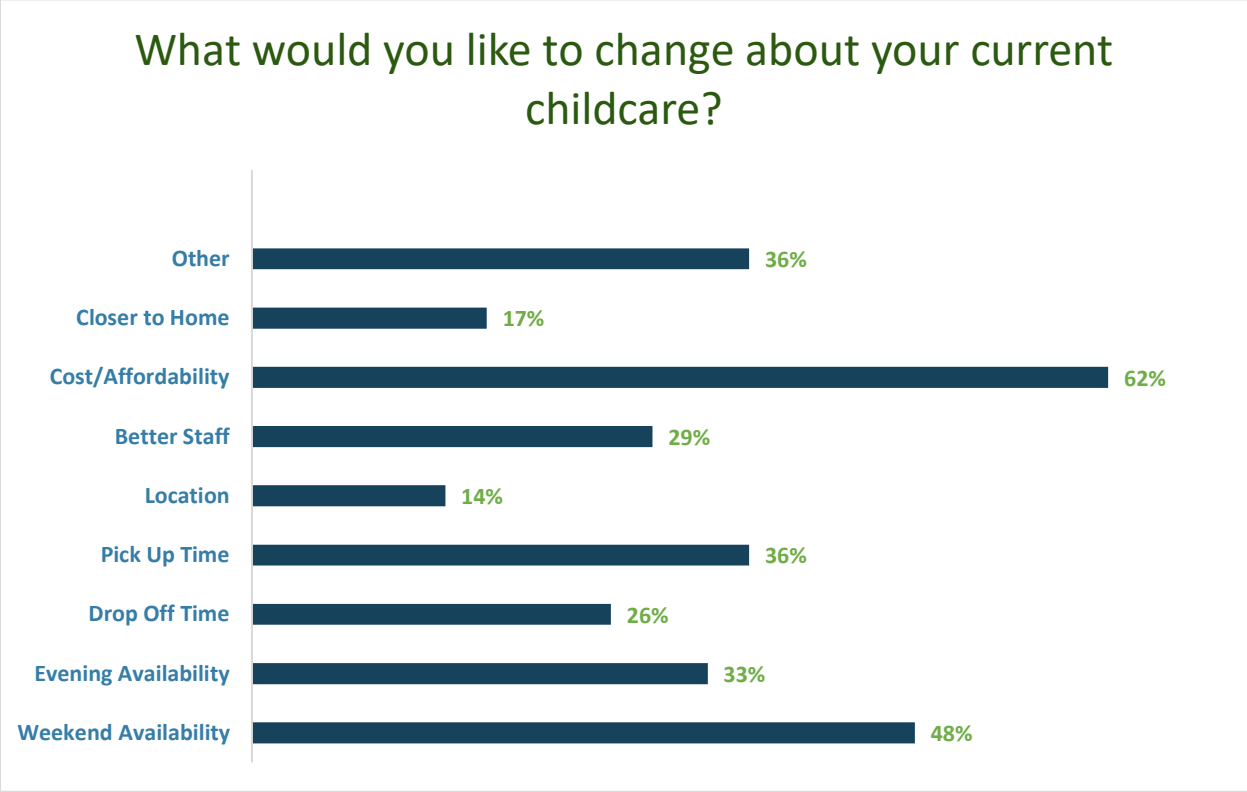


While most Park City parents seem satisfied with quality, parents have expressed an interest in many other changes to their current childcare situation, such as weekend availability, revised pick up times, and

cost. Not surprisingly, many parents expressed interest in a new, high-quality childcare facility in our community, assuming reasonable cost and location.



The largest factor that would encourage Park City parents to use childcare facilities in our community is having more affordable options.



The vast majority of Park City parents expressed the most interest (91%) in a childcare facility located in the Park City School District, within the city limits, followed (36%) by a facility located within the city limits of Park City. Almost one half (52%) need care on the weekends. Parents of children aged 5 and under typically want the services to begin between 7 am and 8 am (52%), followed closely by between 8 am and 9 am (33%), and to end between 5 pm and 6 pm (33%), followed closely by between 4 pm and 5 pm (24%).

National Survey Regarding Access and Effect on Employment

The Stanford Center on Early Childhood conducts national parent and provider surveys and found in December of 2022 that "[c]are has not been available for the majority of parents needing it and the parents who do have care experienced ongoing disruptions in that care that have impacted their ability to work."[lix] This analysis also found:

1. In every month of 2022, more than 75% of parents looking for child care reported difficulty finding any kind of care; and
2. The majority of parents using any kind of care reported that disruptions to their arrangement impacted their ability to work (in October, 85% of parents reported care disruption-related impacts to their ability to work).

Section V.
Demand Analysis

Section V. Demand Analysis

This demand analysis, attached as Attachment 5, mirrors the Summit County Demand Analysis and is based upon two drivers: (1) resident demand (2) and non-resident in-commuter demand. While the data is fairly strong with respect to the number of children by age whose parent or parents are in the workforce, and therefore likely need childcare, assumptions must be made with respect to how many of the parents needing care for their children would like that care to be provided by a licensed provider. This demand model is limited to licensed providers since those are quantifiable, and therefore that additional categorization must be made. The demand model is also based upon Lightcast Quarter 1 2023 data since this is the most current and accurate information, even though this creates some discrepancies with 2020 census data.

As discussed above, not all parents who need childcare prefer licensed childcare options; many parents prefer informal and relative care. Park City survey respondents used licensed care much more for their children 5 and under (83%) and less as the children got older (63%). It is likely, however, that the survey respondents included many more users of licensed care, since several centers asked their parents to complete the survey, and people using childcare are more likely to respond to a childcare survey, therefore the survey responses likely overstate the demand for licensed care. Many of the survey comments, however, stressed the difficulty finding licensed care for young children and the wait lists at local providers decrease as children age, so clearly the demand is high.

Other childcare demand models either assume that all children of working families want to use licensed care (such as the Utah Access to Childcare Report)[lx] or base this assumption on survey results of current use (such as San Mateo County's Child Care Needs Assessment).[lxi] For purposes of these estimates, in order to be conservative, the model assumes a lower demand for licensed care than reflected in either the labor participation rate or the current type of use based upon survey response. This model assumes that 75% of the children under age 2 who need childcare want to be in licensed care, 80% of children under age 5, 50% of children aged 5 to 9, 40% of children aged 10 to 14 and 0% of children aged 15 to 19. This oldest age group is excluded from the need projections because most of the licensed centers and after-school programs end by that age and it is assumed that many families are meeting any childcare needs for this oldest age group with non-licensed providers. These assumptions regarding desire for licensed care are used consistently between years 2022 and 2032 among resident parents. For commuting parents, the desire for licensed care once children are five years old and enter school is assumed to be zero since it is unlikely that employees are using after-school care near their employer.

Resident Demand (440)

This category captures the estimated demand for licensed childcare for children of parents who live in Park City. The chart below estimates by age group the number of Park City resident children who need some form of childcare and the number of these children that are estimated to need licensed care. Older children are assumed not to need any licensed care.

Age Range	<2	2-<5	5-9	10-14	15-19
# Children Needing Care	167	75	223	338	304
# Children Needing Licensed Care	125	68	112	135	0

Non-Resident In-Commuter Demand (40)

This category captures the estimated demand for licensed childcare for children of parents who live outside Park City but work within it.

There are an estimated 15,494 inbound commuters who work in, but live outside, Park City. Many of these workers use childcare facilities located in Summit County. For example, of the 67 families served by PC Tots, 15 (22%) live outside Summit County (1 lives in Salt Lake City, 11 live in Heber, 1 lives in Ogden, and 2 live in Murray) and another 18 (27%) live within Summit County but commute from more rural communities to drop off their children at the two PC Tots centers located in Park City (6 live in Coalville, 11 live in Kamas, and 1 lives in Peoa).

Applying the percentage of children of total population by age to this group, the chart below estimates the number of children of local employee nonresidents. The model then assigns the same parent preference for licensed care as was used for residents and applies a capture rate of 5%[lxii] (meaning that only 5% of the children of nonresident employees who want licensed care would like that care to be near their employer in Park City). The demand for school-aged children for licensed care in Park City is assumed to be zero since it is unlikely that parents would drive down to pick their children up from school and drive back to some form of licensed after-school care in Park City. The chart below shows, by age group, the total number of children of nonresident Park City employees and the number of these children that are estimated to need licensed care in Park City.

Age Range	<2	2-<5	5-9	10-14	15-19
# Children	759	232	1085	1162	1328
# Children Needing Licensed Care in Park City	28	11	0	0	0

Total Projected Demand for Licensed Care (480)

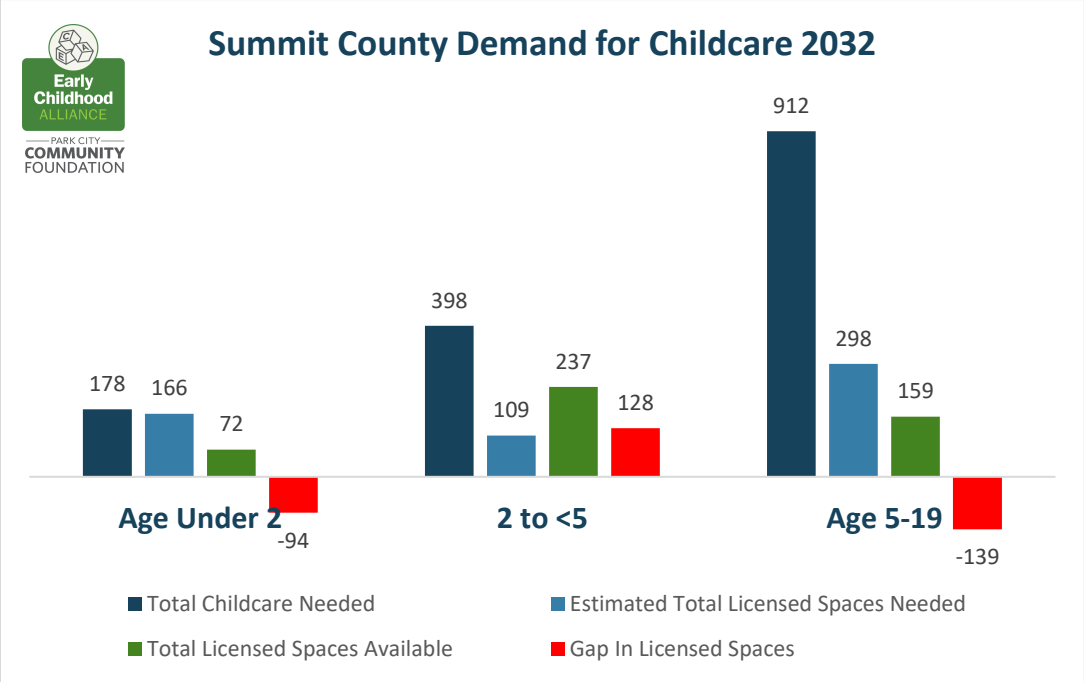
In sum, the estimated need for licensed care in Park City from resident children is 440 and 40 from non-resident in-commuter children for a total demand of 480. This is further broken down to be 233 under age five and 247 for ages five through eighteen.

The need is particularly great for care under age 2 since the current capacity meets only 47% of the projected demand. The two to five age range shows excess capacity. As discussed earlier, many of these preschool programs do not offer all-day programs that meet the needs of working families and so are often likely combined with other forms of childcare.

Park City Demand for Child Care Spaces 2022				
Age Group	**<2**	**2-<5**	**5-19**	**Total**
Resident Demand	125	68	247	440
Employee Demand	28	11	0	40
Total Spaces Needed	153	79	247	480
% Distribution of Need	32%	17%	51%	100%
Total Spaces Available	72	237	159	468
% Spaces Available	15%	51%	34%	85%
Additional Spaces Needed	81	-158	88	12
% of Demand Met With Current Spaces	47%	299%	64%	102%

Ten-Year Childcare Needs Projections in Year 2032

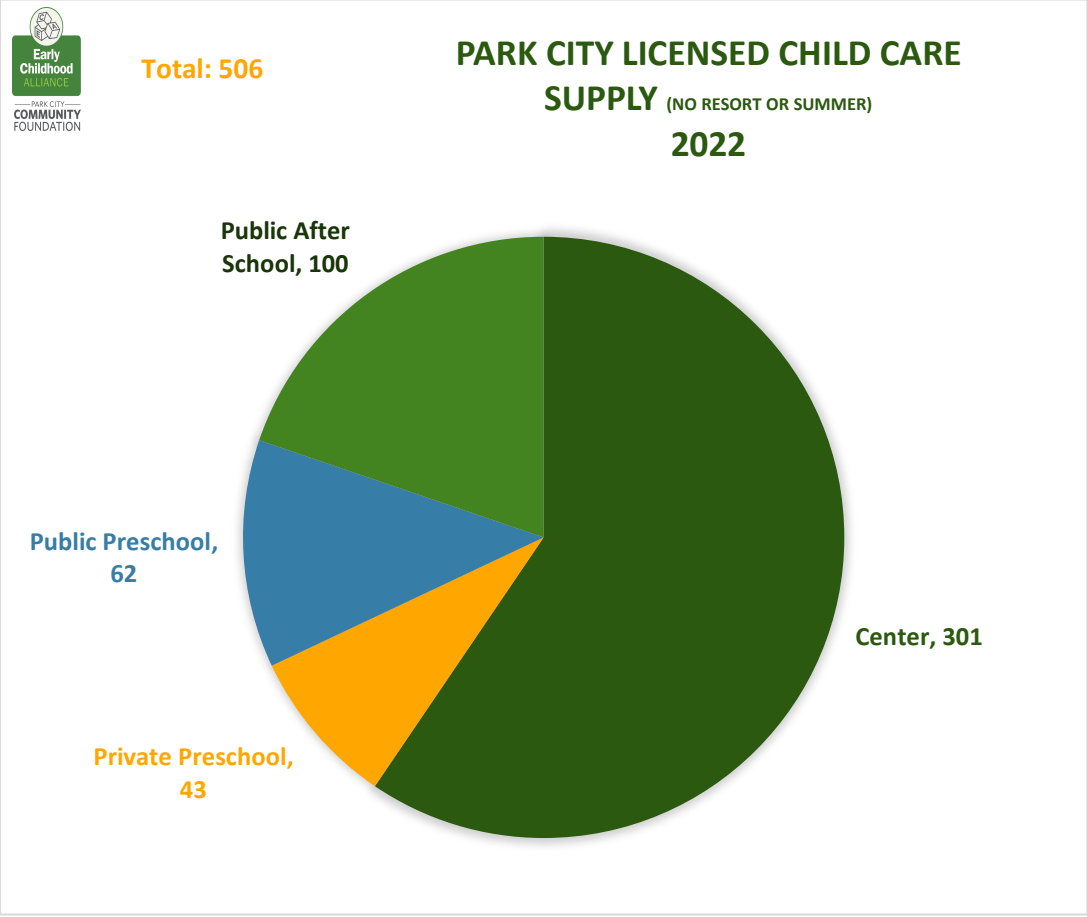
Adding additional preschool capacity at the Park City School District will increase capacity for the 3-year olds (half day program) and the 4-year old (full day program) students who enroll. Thus excess capacity is shown for the years 2 to 5, but might not have the hours and daily availability needed to meet workforce family needs. Due to the upcoming loss of federal stabilization funds, and other difficulties outlined in this report, the model does not predict any additional licensed providers entering the market.



Park City Demand for Childcare 2032				
Age Group	Age Under 2	2 to <5	Age 5-19	Total
Total Childcare Needed	178	398	912	1310
Estimated Total Licensed Spaces Needed	166	109	298	406
Total Licensed Spaces Available	72	237	159	468
Gap In Licensed Spaces	-94	128	-139	62

Total Supply of Licensed Care (1512)

This model does not include the demand by visiting guests, so the resort capacity is not included in the supply of licensed care (note that the Deer Valley Academy is included since this is available on an academic calendar). To the extent that some of the resort spaces are used by local families when it is not high season, this is likely countered by the fact that many centers are not operating at full licensed capacity. Similarly, the Summer programs provide great options for care when the academic programs are not in session, but most children who need care in the Summer also need care during the academic year and so the Summer Programs are not included since they compliment the academic-year offerings.



Note that the total capacity based on the licensed capacity from the state Office of Childcare (506) differs slightly from the aggregate actual capacity by age estimates (468). This is because some childcare providers supplied detailed information about the number of children they serve by age group, but sometimes providers reported more children than capacity because not all children attend everyday of

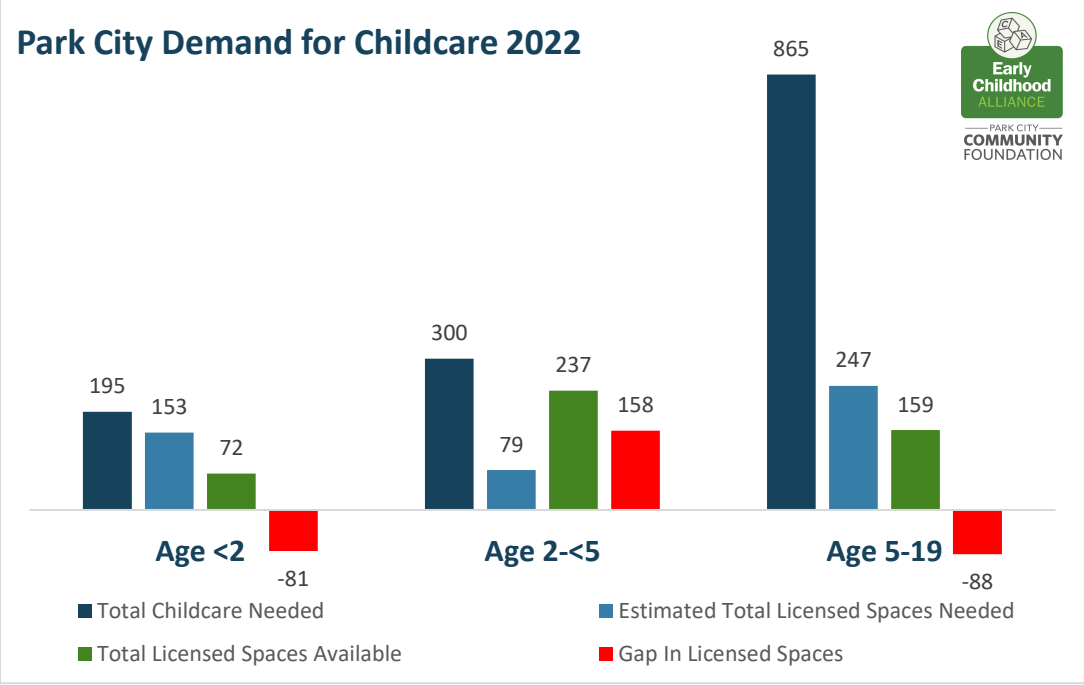
the week (for example, some children attend on a MWF schedule, while others attend T/TH). Also, assumptions had to be made for some providers in order to estimate capacity by age range.

Additional Need for Licensed Care

In total, Park City needs 480 licensed childcare options, but currently only has 468 spaces available, leaving a gap of 12. In particular, kids under age 2 and over age 5 need more licensed care, because the currently available spots meet only 47% and 64% of the estimated demand.

More specifically, Park City's total estimated licensed demand, current licensed availability, and the gap between what is available and what is estimated to be needed in licensed care is as follows:

Park City Demand for Child Care Spaces 2022				
Age Group	**<2**	**2-<5**	**5-19**	**Total**
Resident Demand	125	68	247	440
Employee Demand	28	11	0	40
Total Spaces Needed	153	79	247	480
% Distribution of Need	32%	17%	51%	100%
Total Spaces Available	72	237	159	468
% Spaces Available	15%	51%	34%	85%
Additional Spaces Needed	81	-158	88	12
% of Demand Met With Current Spaces	47%	299%	64%	102%



The analysis shows there is a surplus of licensed spots for preschool-aged children. Many preschools provide a spot for children, but it may not satisfy all of the childcare needs since many programs operate for only a few hours a day, a few days a week. Because there are so many more years of school-aged children, even assuming zero need for licensed care for children over the age 13, there is still a need for more licensed care to serve the school-aged population, primarily during the elementary school ages.

Section VI. Conclusion

Section VI. Conclusion

There can be no keener revelation of a society's soul than the way in which it treats its children.

-Nelson Mandela

Prenatal and early childhood experiences form the foundation of our emotional, social, cognitive, and language development. We do not have enough high-quality, affordable childcare options for our families, and parents are scrambling.

The private market in childcare is failing because compensation is too low to attract and retain early childcare educators, but parents can't afford to pay more, and very few families qualify for any public assistance.

Investing in high-quality, affordable childcare and early childhood education in coordination with parental support and health programs helps: (1) close the achievement gap; (2) assist local employers in attracting and retaining their workforce; (3) strengthen our school districts; (4) break the cycle of poverty, and (5) maximize our collective return on investment.

It is clear that even with significant federal financial support that is coming to an end, Summit County does not have enough childcare options available to meet the need and that the options that are available are too expensive for many of our community members. It is also clear that the lack of high-quality, affordable, childcare options damages our children's future potential as well as our existing workforce, and exacerbates inequalities in our community.

As Elliot Haspel clearly outlined in his opinion piece in the *Deseret News* when discussing the impending federal funding child care fiscal cliff, "***the damage from inaction is difficult to overstate yet easy to predict. . . . Quality child care will become a luxury good, nearly impossible to find for all but the wealthiest***."[lxiii]

Section VII. Attachments

Section VII. Attachments

Attachment 1: Park City Housing Profile

Housing Profile

Park City, UT 34
Park City, UT (4958070)
Geography: Place

Prepared by Jeffrey B. Jones, AICP

Population		Households	
2010 Total Population	7,600	2022 Median Household Income	$125,251
2020 Total Population	8,396	2027 Median Household Income	$140,439
2022 Total Population	8,619	2022-2027 Annual Rate	2.32%
2027 Total Population	8,680		
2022-2027 Annual Rate	0.14%		

	Census 2010		2022		2027	
Housing Units by Occupancy Status and Tenure	Number	Percent	Number	Percent	Number	Percent
Total Housing Units	9,429	100.0%	7,983	100.0%	8,041	100.0%
Occupied	2,893	30.7%	3,472	43.5%	3,494	43.5%
Owner	1,776	18.8%	2,141	26.8%	2,189	27.2%
Renter	1,117	11.8%	1,331	16.7%	1,305	16.2%
Vacant	6,536	69.3%	4,511	56.5%	4,547	56.5%

	2022		2027	
Owner Occupied Housing Units by Value	Number	Percent	Number	Percent
Total	2,141	100.0%	2,189	100.0%
<$50,000	4	0.2%	1	0.0%
$50,000-$99,999	0	0.0%	0	0.0%
$100,000-$149,999	0	0.0%	0	0.0%
$150,000-$199,999	4	0.2%	2	0.1%
$200,000-$249,999	7	0.3%	4	0.2%
$250,000-$299,999	14	0.7%	6	0.3%
$300,000-$399,999	42	2.0%	23	1.1%
$400,000-$499,999	48	2.2%	31	1.4%
$500,000-$749,999	401	18.7%	362	16.5%
$750,000-$999,999	557	26.0%	592	27.0%
$1,000,000-$1,499,999	228	10.6%	249	11.4%
$1,500,000-$1,999,999	385	18.0%	414	18.9%
$2,000,000+	451	21.1%	505	23.1%
Median Value	$997,083		$1,147,590	
Average Value	$1,286,326		$1,343,616	

Census 2010 Housing Units	Number	Percent
Total	9,429	100.0%
In Urbanized Areas	0	0.0%
In Urban Clusters	5,459	57.9%
Rural Housing Units	3,970	42.1%

Data Note: Persons of Hispanic Origin may be of any race.
Source: Esri forecasts for 2022 and 2027. U.S. Census Bureau 2010 decennial Census data converted by Esri into 2020 geography.

October 26, 2022

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Attachment 2: Stabilization Grant Providers in Summit County

Stabilization Grant Providers in Summit County

Zip Code	Number of Providers per Zip Code	Provider Zip Code	License Type	January	February	March	April	May	June	July	August	September	October	November	Total Amount Jan-Nov	Projected January-December
84017	2	84017	Licensed Family	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 5,600.00	$ 5,600.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 59,200.00	$ 65,600.00
84024	0	84017	Licensed Family	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,800.00	$ 2,800.00	$ 2,800.00	$ 2,800.00	$ 2,800.00	$ 2,800.00	$ 2,800.00	$ 27,600.00	$ 30,400.00
84033	0	84036	Licensed Family	NA	$ 4,800.00	$ 4,800.00	$ 4,800.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 59,200.00	$ 65,600.00
84036	3	84036	Licensed Family	$ 4,800.00	$ 4,800.00	$ 4,800.00	$ 4,800.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 64,000.00	$ 70,400.00
84055	1	84036	Licensed Family	$ 4,800.00	$ 4,800.00	$ 4,800.00	$ 4,800.00	$ 4,000.00	$ 8,000.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 63,200.00	$ 69,600.00
84060	5	84055	Licensed Family	NA	NA	NA	NA	NA	NA	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 6,400.00	$ 32,000.00	$ 38,400.00
84061	0	84060	Center	NA	NA	$ 26,400.00	$ 26,400.00	$ 35,200.00	$ 35,200.00	$ 35,200.00	$ 35,200.00	$ 35,200.00	$ 35,200.00	$ 35,200.00	$ 299,200.00	$ 334,400.00
84068	0	84060	Center	$ 28,800.00	$ 28,800.00	$ 28,800.00	$ 28,800.00	$ 38,400.00	$ 38,400.00	$ 38,400.00	$ 38,400.00	$ 38,400.00	$ 38,400.00	$ 38,400.00	$ 384,000.00	$ 422,400.00
84098	5	84060	Center	$ 10,200.00	$ 10,200.00	$ 10,200.00	$ 10,200.00	$ 13,600.00	$ 13,600.00	$ 13,600.00	$ 13,600.00	$ 13,600.00	$ 13,600.00	$ 13,600.00	$ 136,000.00	$ 149,600.00
	16	84060	Center	NA	NA	NA	$ 8,050.00	$ 8,050.00	$ 9,200.00	$ 9,200.00	$ 9,200.00	$ 9,200.00	$ 9,200.00	$ 9,200.00	$ 71,300.00	$ 80,500.00

84060	DWS Approved Exempt Center	$ 14,000.00	$ 14,000.00	$ 14,000.00	$ 14,000.00	$ 19,600.00	$ 19,600.00	$ 19,600.00	$ 19,600.00	$ 1.00	$ 1.00	$ 19,600.00	$ 154,002.00	$ 173,602.00
84098	Center	$ 22,800.00	$ 22,800.00	$ 22,800.00	$ 22,800.00	$ 30,400.00	$ 30,400.00	$ 30,400.00	$ 30,400.00	$ 30,400.00	$ 30,400.00	$ 30,400.00	$ 304,000.00	$ 334,400.00
84098	DWS Approved Exempt Center	$ 10,800.00	$ 10,800.00	$ 10,800.00	$ 10,800.00	$ 14,400.00	$ 14,400.00	$ 14,400.00	$ 1.00	$ 1.00	$ 12,600.00	$ 1.00	$ 99,003.00	$ 99,004.00
84098	DWS Approved Exempt Center	$ 9,000.00	$ 9,000.00	$ 9,000.00	$ 9,000.00	$ 12,000.00	$ 12,000.00	$ 12,000.00	$ 12,000.00	$ 1.00	$ 1.00	$ 1.00	$ 84,003.00	$ 84,004.00
84098	Center	$ 13,500.00	$ 13,500.00	$ 13,500.00	$ 13,500.00	$ 18,000.00	$ 18,000.00	$ 18,000.00	$ 18,000.00	$ 18,000.00	$ 18,000.00	$ 18,000.00	$ 180,000.00	$ 198,000.00
84098	DWS Approved Exempt Center	$ 16,800.00	$ 16,800.00	$ 16,800.00	$ 16,800.00	$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 1.00	$ 1.00	$ 1.00	$ 156,803.00	$ 156,804.00
														$ -
		$ 141,500.00	$ 146,300.00	$ 172,700.00	$ 180,750.00	$ 237,250.00	$ 242,400.00	$ 248,000.00	$ 233,601.00	$ 179,604.00	$ 192,203.00	$ 199,203.00	$ 2,173,511.00	$ 2,372,714.00

WORKFORCE SERVICES
CHILD CARE

Do you need help paying for child care?

The child care assistance program helps pay for all or part of the cost of child care.



To qualify you must:

- Be the parent, foster parent, approved relative or legal guardian to the child needing care
  - The child must be under age 13 (or under age 18 if the child has special needs).
  - The child must be a U.S. citizen, authorized non-U.S. citizen, refugee or U.S. permanent resident.
- Be eligible based upon your household size and monthly income
- Work an average of 15 hours or more per week earning at least minimum wage
  - For two-parent households: one parent must work an average of 15 hours per week and the second parent must work an average of 30 hours per week.
- Need child care for the purpose of employment or approved school or training activities
- Select an approved provider
  - If you need help finding a provider, go to cac.utah.gov to search in your area. You may also select a family, friend or neighbor who completes all requirements with the Department of Health, Child Care Licensing. The payment for care will be made directly to your provider.

To apply:

Submit an online or paper application. To apply online, go to jobs.utah.gov/mycase.

You can receive assistance on your application from our staff at an employment center or through online chat. Spanish-speaking staff are available or call 1-866-435-7414 for help in other languages.

What is NOT needed:

- A social security number

  The social security number on the application is not required for child care eligibility.

- Any information regarding your immigration or work authorization status or the status of your family or household members

  Using child care benefits will not be considered in public charge determinations. Immigration information is private and confidential.

Do not skip applying if you were denied in the past or think you make too much money. The income eligibility limits for child care have increased. If you were denied in the past we encourage you to apply again.

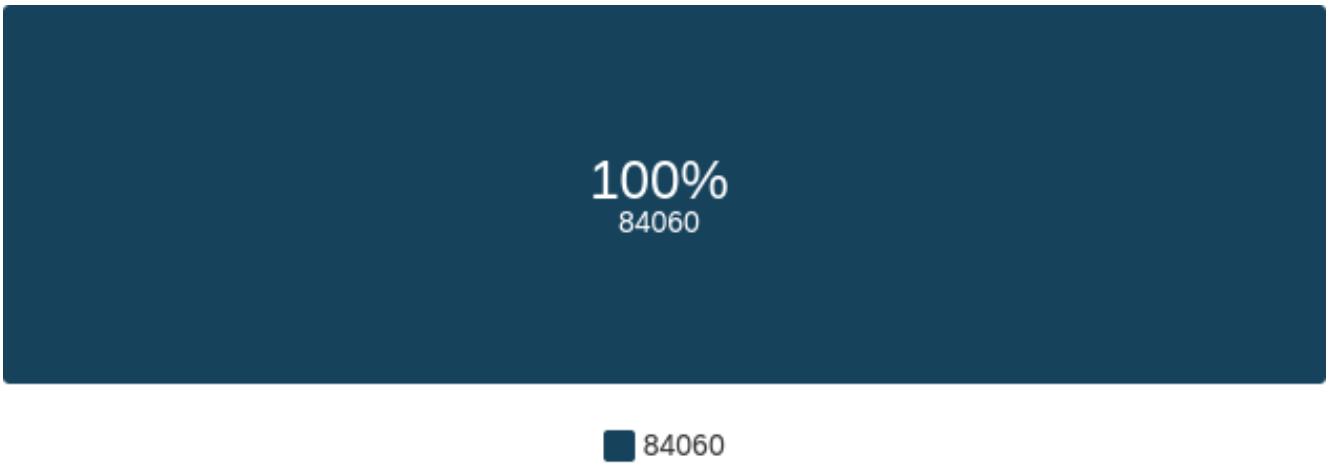
jobs.utah.gov/occ

Auxiliary aids (accommodations) and services are available upon request to individuals with disabilities by calling 801-526-9240. Individuals who are deaf, hard of hearing, or have speech impairments may call Relay Utah by dialing 711. Spanish Relay Utah: 1-888-346-3162.

OCC_2_4/05/22

Summit County Childcare Needs Assessment Survey Responses (84060 Residents Only)

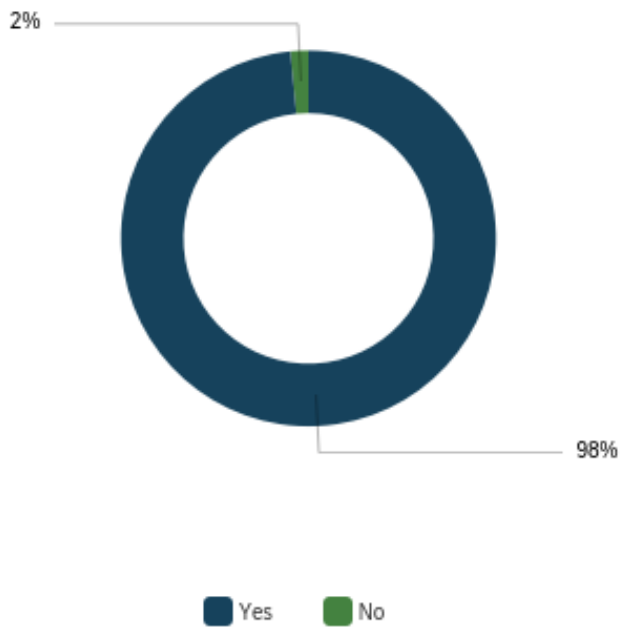
Q3 - What is your zip code?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your zip code?	5	5	5	0	0	137

#	What is your zip code?	Percentage
4	84060	100%
	Total	137

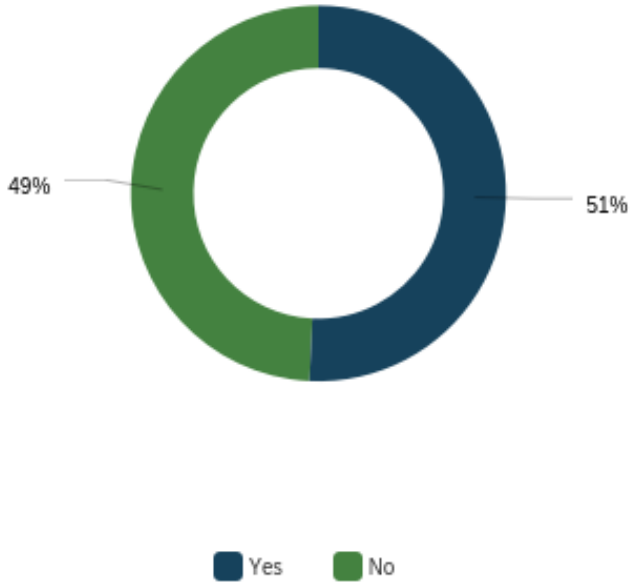
Q4 - Are you a resident of Summit County, Utah?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Are you a resident of Summit County, Utah?	4	5	4	0	0	129

#	Are you a resident of Summit County, Utah?	Percentage
4	Yes	98%
5	No	2%
	Total	129

Q5 - Do you work for a business located in Summit County, Utah?

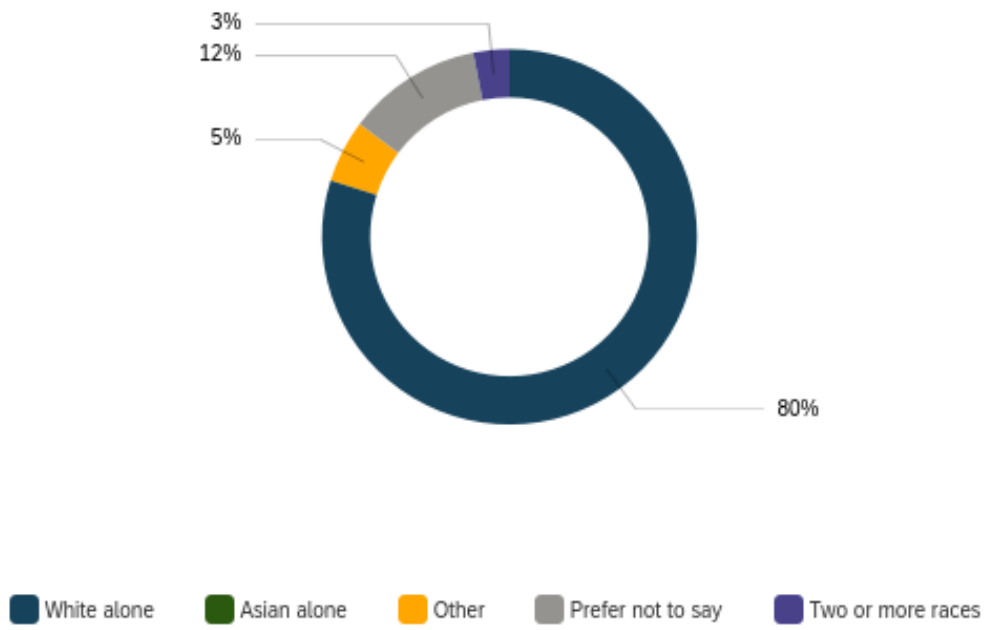


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you work for a business located in Summit County, Utah?	4	5	4	0	0	130

#	Do you work for a business located in Summit County, Utah?	Percentage
4	Yes	51%
5	No	49%
	Total	130

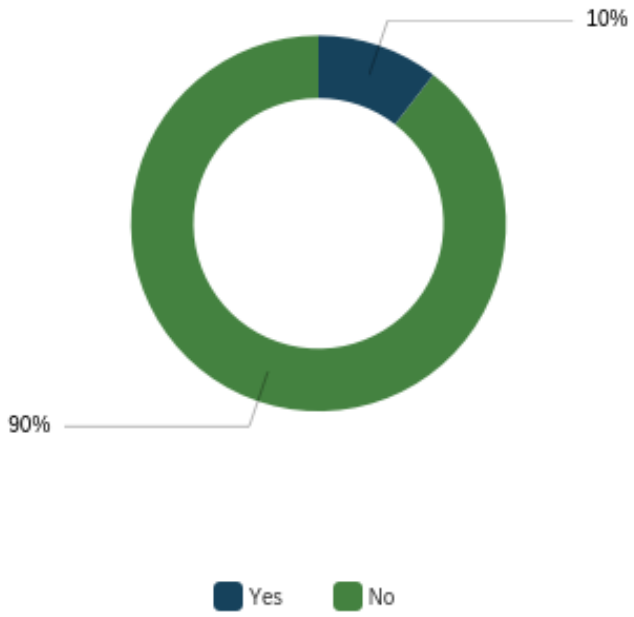
Q6 - What is your race? (select all that apply)

Q6 - What is your race? (select all that apply)



#	What is your race? (select all that apply) - Selected Choice	Percentage
1	White alone	80%
2	Black or African American alone	0%
3	American Indian/Native American or Alaska Native alone	0%
4	Asian alone	0%
5	Pacific Islander alone	0%
6	Other	5%
7	Prefer not to say	12%
8	Two or more races	3%
	Total	129

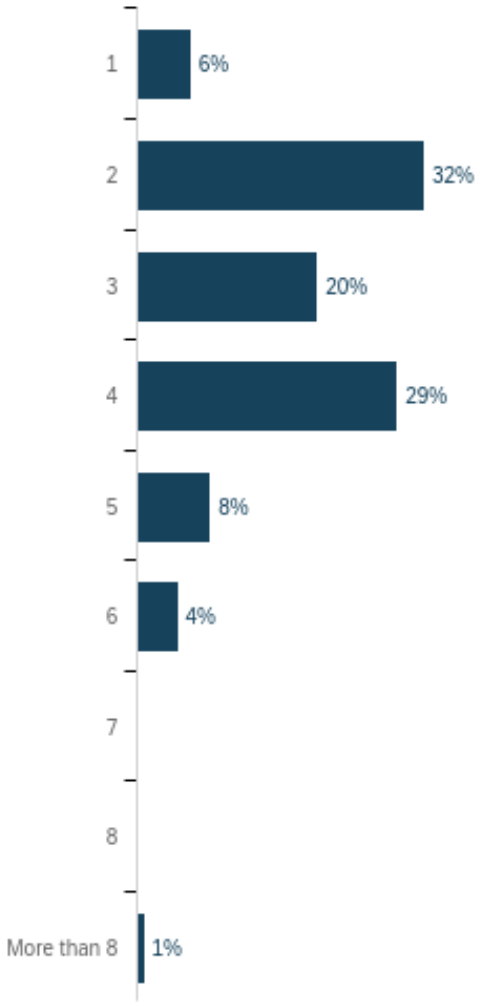
Q7 - Are you of Spanish, Hispanic, or Latino origin of any race?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Are you of Spanish, Hispanic, or Latino origin of any race?	1	2	2	0	0	124

#	Are you of Spanish, Hispanic, or Latino origin of any race?	Percentage
1	Yes	10%
2	No	90%
	Total	124

Q8 - How many members are in your household (all related or unrelated persons living together)?

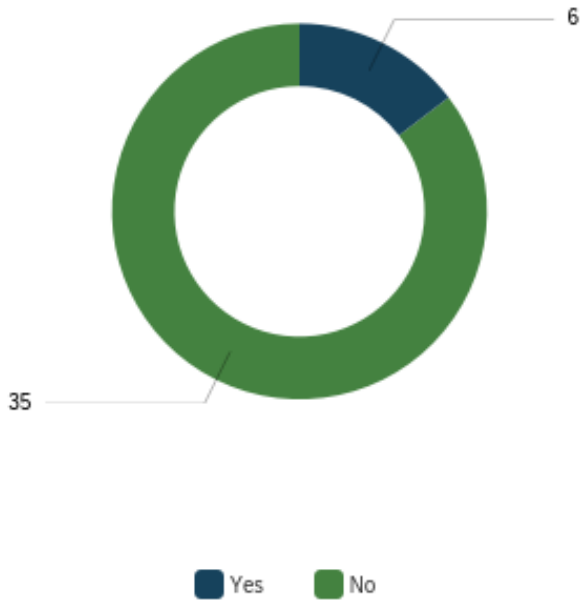


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How many members are in your household (all related or unrelated persons living together)?	1	9	3	1	2	135

#	How many members are in your household (all related or unrelated persons living together)?	Percentage
1	1	6%
2	2	32%
3	3	20%
4	4	29%
5	5	8%

6		6	4%
7		7	0%
8		8	0%
9		More than 8	1%
		Total	135

Q9 - For your 2-person household, is your annual household gross income less than $54,132?

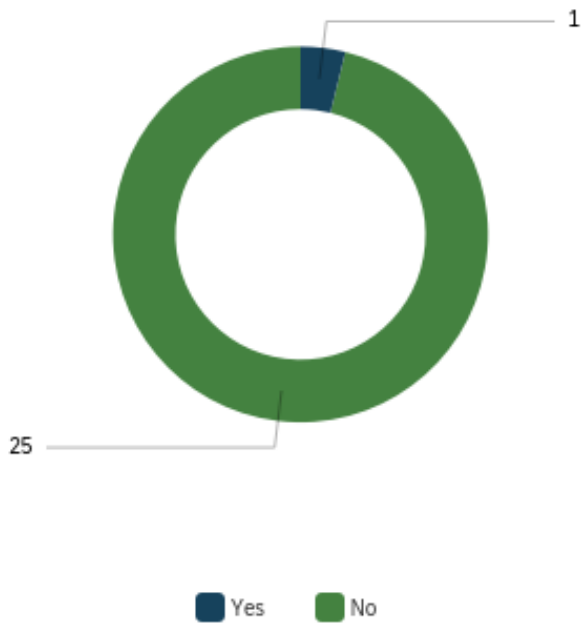


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your 2-person household, is your annual household gross income less than $54,132?	1	2	2	0	0	41

#	For your 2-person household, is your annual household gross income less than $54,132?	Percentage
1	Yes	15%

2		No	85%
		Total	41

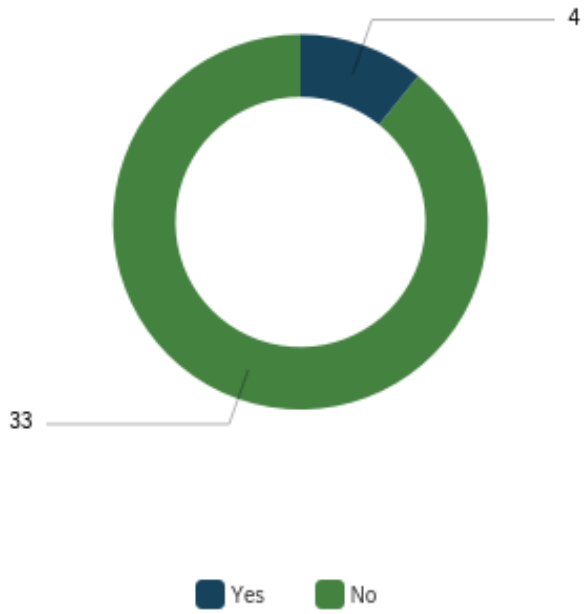
Q10 - For your 3-person household, is your annual household gross income less than $66,888?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your 3-person household, is your annual household gross income less than $66,888?	1	2	2	0	0	26

#	For your 3-person household, is your annual household gross income less than $66,888?	Percentage
1	Yes	4%
2	No	96%
	Total	26

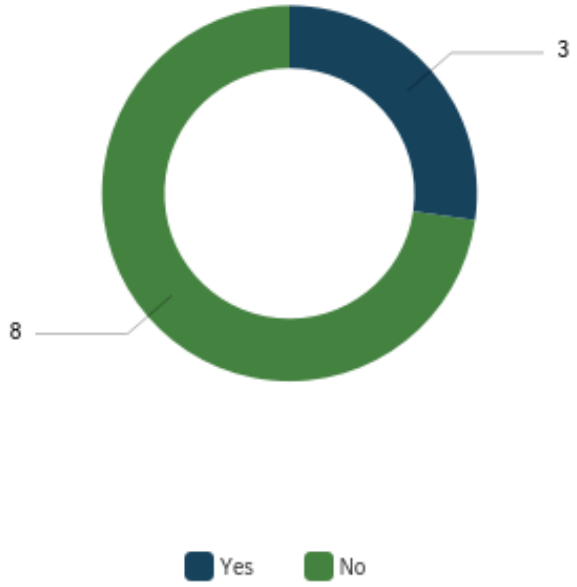
Q11 - For your 4-person household, is your annual household gross income less than $79,620?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your 4-person household, is your annual household gross income less than $79,620?	1	2	2	0	0	37

#	For your 4-person household, is your annual household gross income less than $79,620?	Percentage
1	Yes	11%
2	No	89%
	Total	37

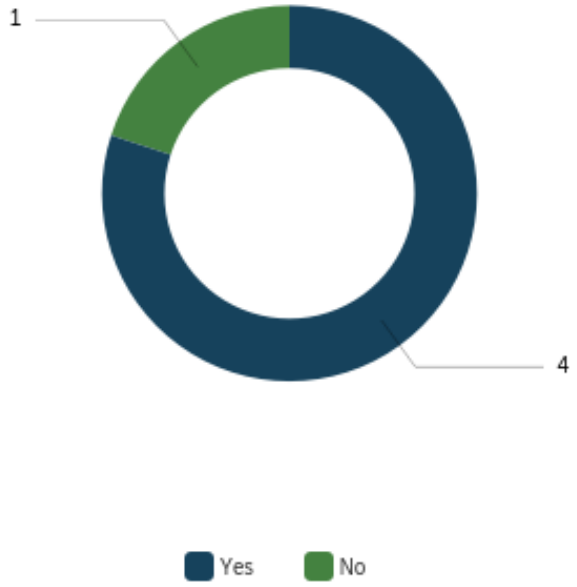
Q12 - For your 5-person household, is your annual household gross income less than $92,364?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your 5-person household, is your annual household gross income less than $92,364?	1	2	2	0	0	11

#	For your 5-person household, is your annual household gross income less than $92,364?	Percentage
1	Yes	27%
2	No	73%
	Total	11

Q13 - For your 6-person household, is your annual household gross income less than $105,108?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your 6-person household, is your annual household gross income less than $105,108?	1	2	1	0	0	5

#	For your 6-person household, is your annual household gross income less than $105,108?	Percentage
1	Yes	80%
2	No	20%
	Total	5

Q14 - For your 7-person household, is your annual household gross income less than $107,496?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your 7-person household, is your annual household gross income less than $107,496?	0	0	0	0	0	0

#	For your 7-person household, is your annual household gross income less than $107,496?	Percentage
1	Yes	NaN%
2	No	NaN%
	Total	0

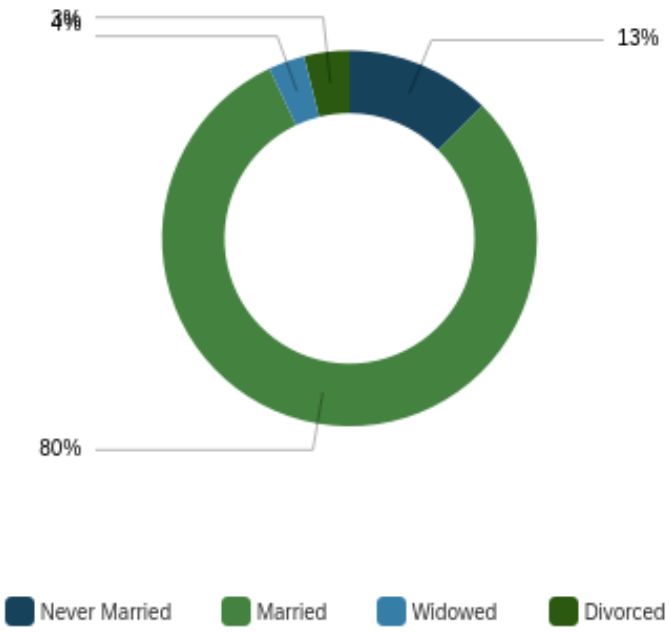
Q15 - For your 8-person household, is your annual household gross income less than $109,884?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your 8-person household, is your annual household gross income less than $109,884?	0	0	0	0	0	0

#	For your 8-person household, is your annual household gross income less than $109,884?	Percentage
1	Yes	NaN%
2	No	NaN%
	Total	0

Q16 - Define your current marital status.

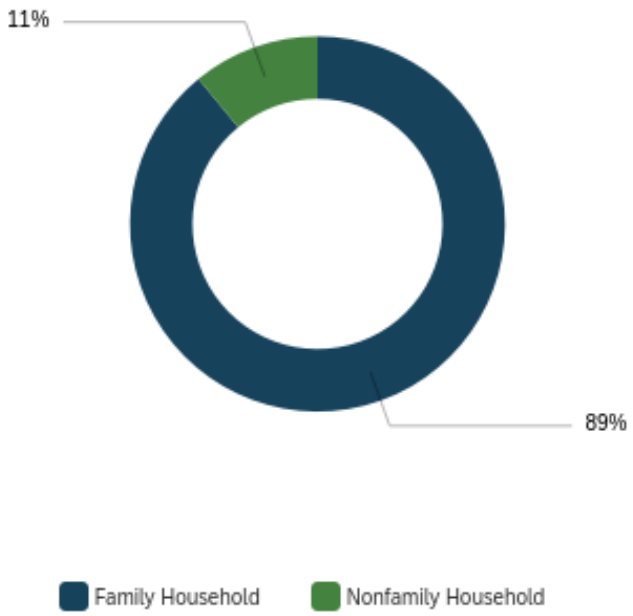


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Define your current marital status.	1	5	3	1	1	128

#	Define your current marital status.	Percentage
1	Never Married	13%
3	Married	80%
4	Widowed	3%
5	Divorced	4%
	Total	128

Q17 - A nonfamily household consists of a household living alone (1-person household) or where the householder shares the home exclusively with people to whom he or she is not related (roomates). A family household consists of two or more individuals who are related by birth, marriage, or adoption, although

they also may include other unrelated people. Do you live in a family or nonfamily household?

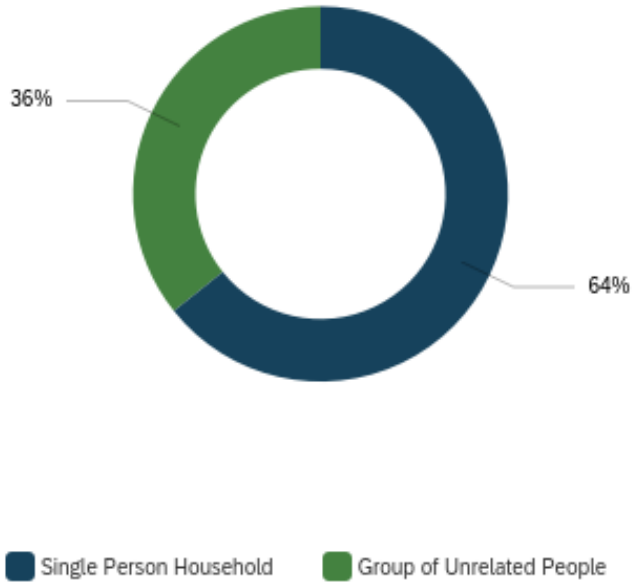


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	A nonfamily household consists of a household living alone (1-person household) or where the householder shares the home exclusively with people to whom he or she is not related (roomates). A family household consists of two or more individuals who are related by birth, marriage, or adoption, although they also may include other unrelated people. Do you live in a family or nonfamily household?	1	4	1	1	1	128

#	A nonfamily household consists of a household living alone (1-person household) or where the householder shares the home exclusively with people to whom he or she is not related (roomates). A family household consists of two or more individuals who are related by birth, marriage, or adoption, although they also may include other unrelated people. Do you live in a family or nonfamily household?	Percentage
1	Family Household	89%
4	Nonfamily Household	11%

	Total	128

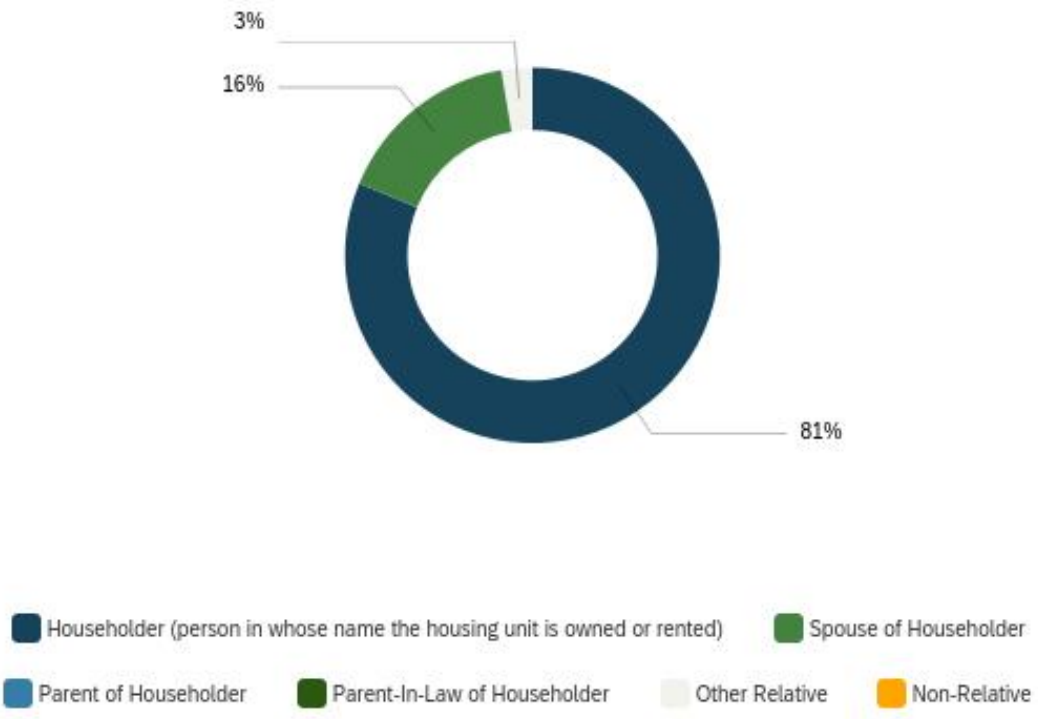
Q18 - Please identify your current type of nonfamily household.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Please identify your current type of nonfamily household.	1	4	2	1	2	14

#	Please identify your current type of nonfamily household.	Percentage
1	Single Person Household	64%
4	Group of Unrelated People	36%
	Total	14

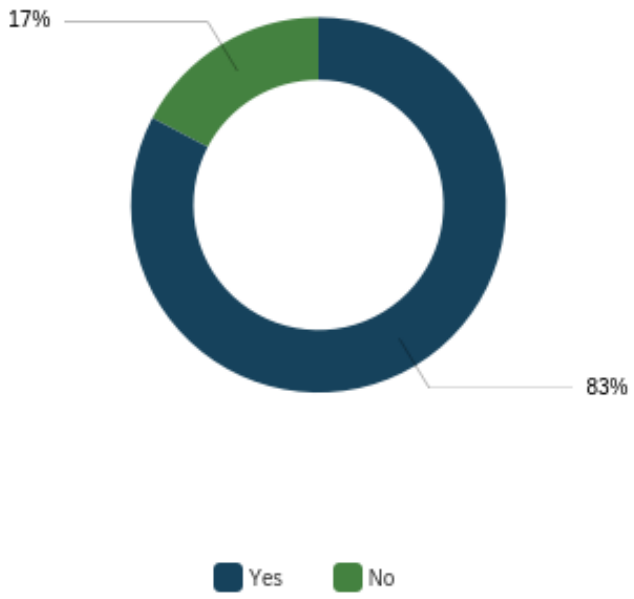
Q19 - If you identify as a member of a family household, please identify your position within that household.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	If you identify as a member of a family household, please identify your position within that household.	1	13	2	2	5	112

#	If you identify as a member of a family household, please identify your position within that household.	Percentage
1	Householder (person in whose name the housing unit is owned or rented)	81%
4	Spouse of Householder	16%
11	Parent of Householder	0%
12	Parent-In-Law of Householder	0%
13	Other Relative	3%
14	Non-Relative	0%
	Total	112

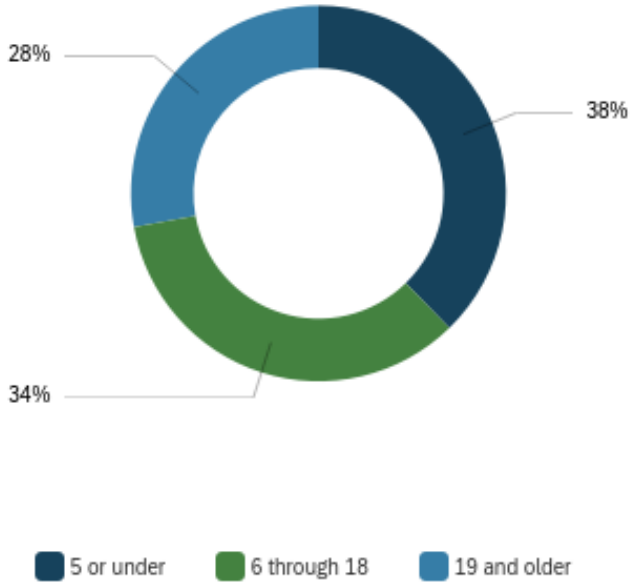
Q20 - Are you a parent (children of any age)?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Are you a parent (children of any age)?	1	2	1	0	0	127

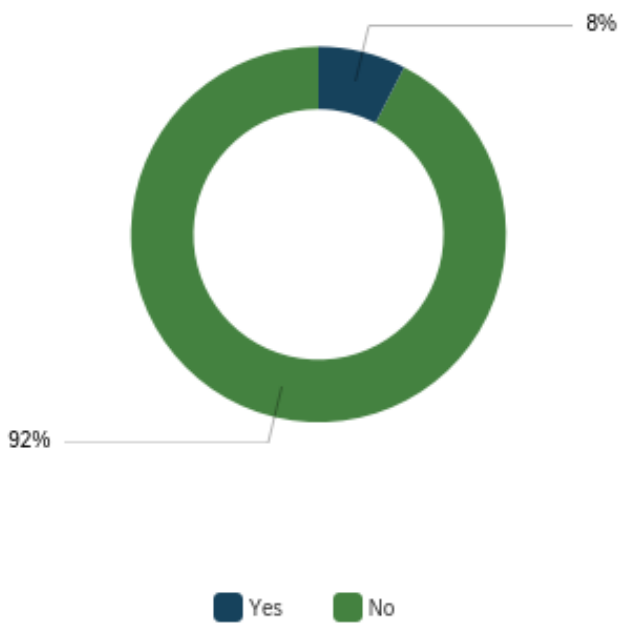
#	Are you a parent (children of any age)?	Percentage
1	Yes	83%
2	No	17%
	Total	127

Q21 - How old are your children?



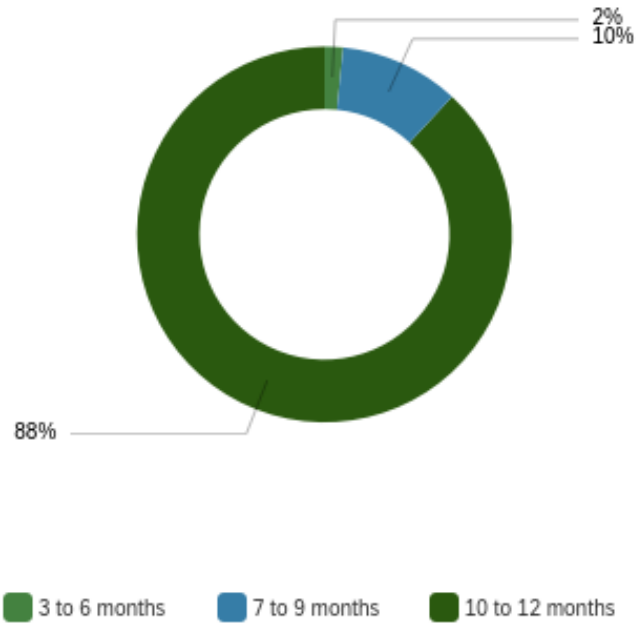
#	How old are your children?	Percentage
1	5 or under	38%
2	6 through 18	34%
3	19 and older	28%
	Total	122

Q22 - Do you have a child under age 19 with special needs or a disability?



#	Do you have a child under age 19 with special needs or a disability?	Percentage
1	Yes	8%
2	No	92%
	Total	106

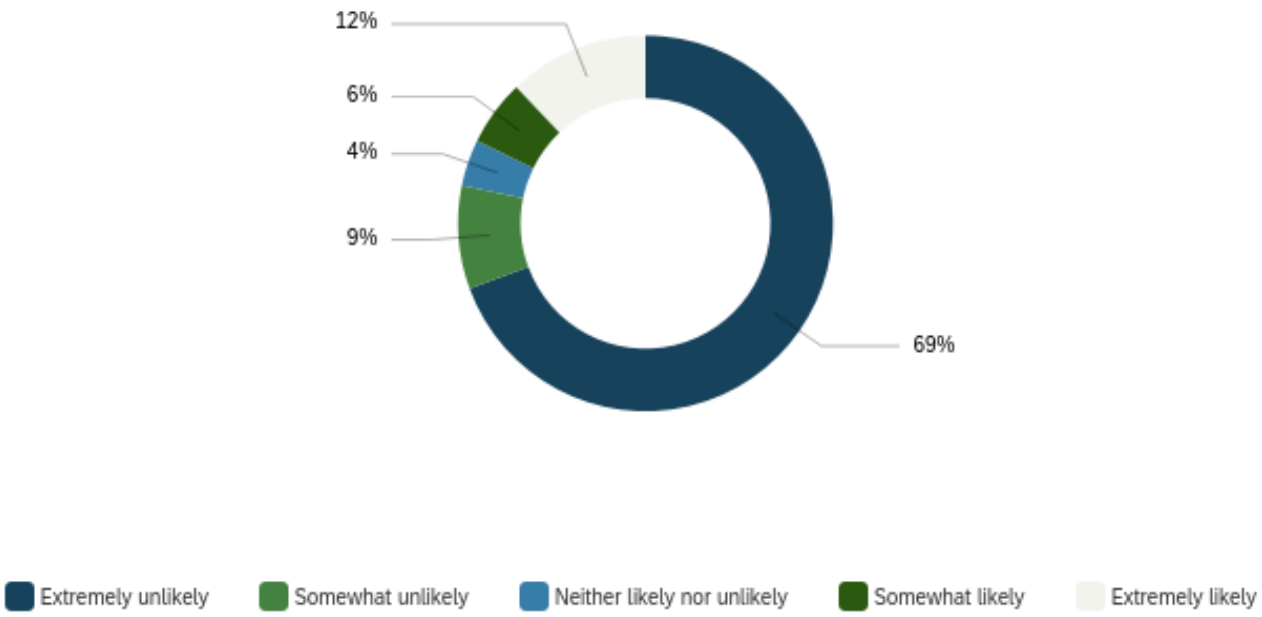
Q23 - How many months do you spend at your home in Utah during a typical year?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How many months do you spend at your home in Utah during a typical year?	2	4	4	0	0	126

#	How many months do you spend at your home in Utah during a typical year?	Percentage
1	2 months or less	0%
2	3 to 6 months	2%
3	7 to 9 months	10%
4	10 to 12 months	88%
	Total	126

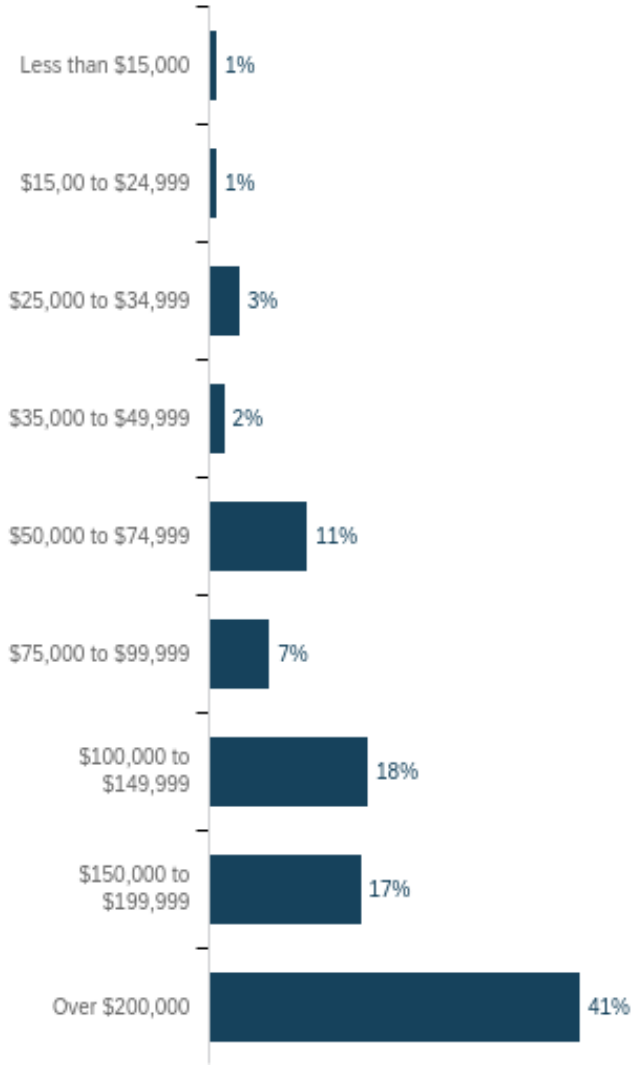
Q24 - How likely are you to birth, foster, or adopt a child in the next five years?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How likely are you to birth, foster, or adopt a child in the next five years?	9	13	10	1	2	124

#	How likely are you to birth, foster, or adopt a child in the next five years?	Percentage
9	Extremely unlikely	69%
10	Somewhat unlikely	9%
11	Neither likely nor unlikely	4%
12	Somewhat likely	6%
13	Extremely likely	12%
	Total	124

Q25 - Please select your annual household income (combined pretax income of all workers in household):

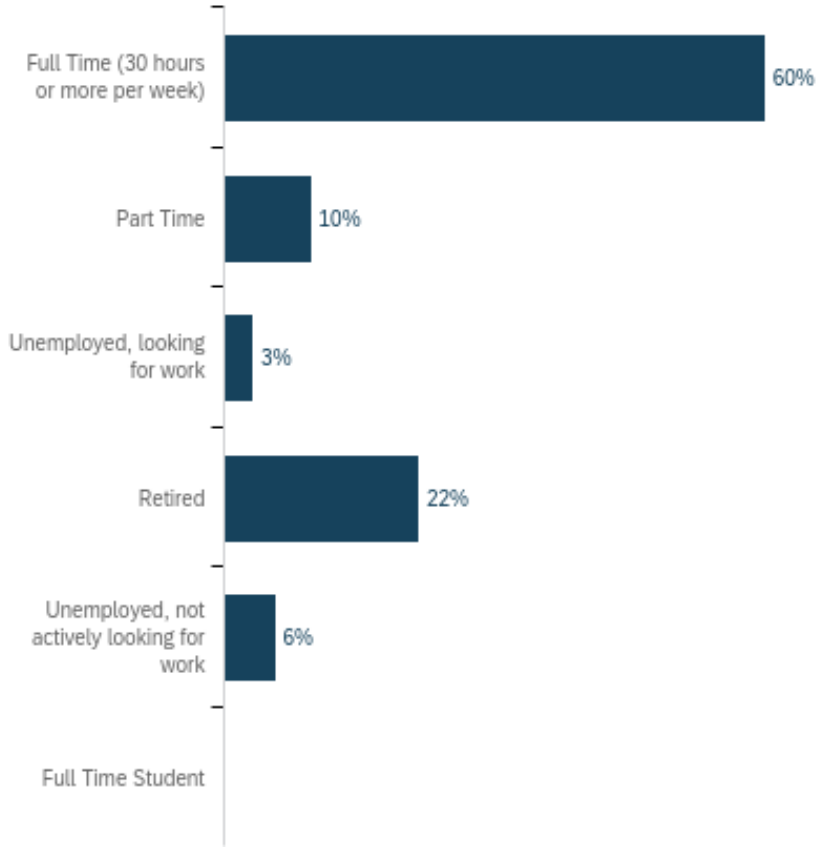


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Please select your annual household income (combined pretax income of all workers in household):	1	9	7	2	3	119

#	Please select your annual household income (combined pretax income of all workers in household):	Percentage
1	Less than $15,000	1%
2	$15,00 to $24,999	1%
3	$25,000 to $34,999	3%

4	$35,000 to $49,999	2%
5	$50,000 to $74,999	11%
6	$75,000 to $99,999	7%
7	$100,000 to $149,999	18%
8	$150,000 to $199,999	17%
9	Over $200,000	41%
	Total	119

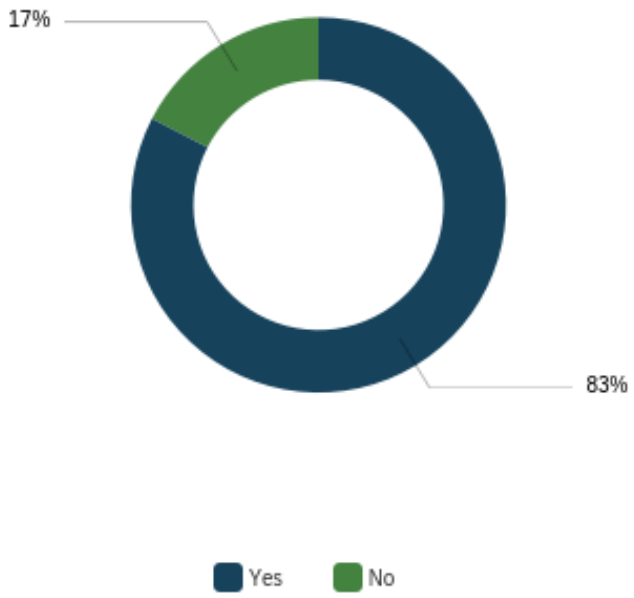
Q26 - What is your employment status?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your employment status?	1	12	4	4	17	125

#	What is your employment status?	Percentage
1	Full Time (30 hours or more per week)	60%
2	Part Time	10%
3	Unemployed, looking for work	3%
10	Retired	22%
12	Unemployed, not actively looking for work	6%
13	Full Time Student	0%
	Total	125

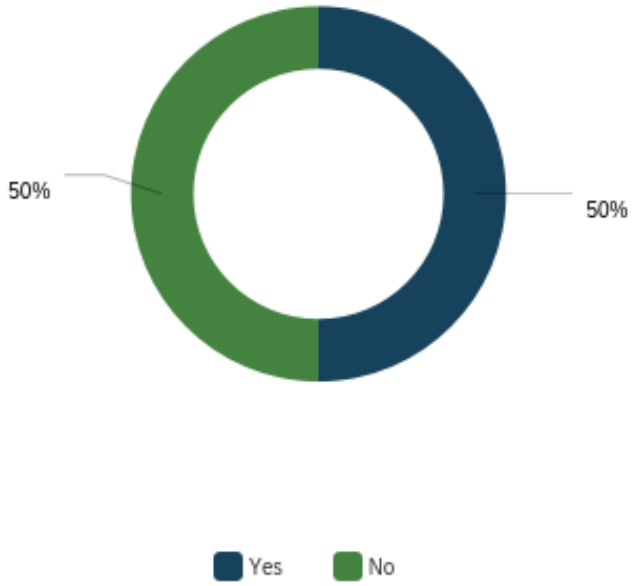
Q27 - For your children aged 5 or younger, do you rely on anyone outside of yourself and your spouse/partner/co-parent to provide childcare?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged 5 or younger, do you rely on anyone outside of yourself and your spouse/partner/co-parent to provide childcare?	1	2	1	0	0	46

#	For your children aged 5 or younger, do you rely on anyone outside of yourself and your spouse/partner/co-parent to provide childcare?	Percentage
1	Yes	83%
2	No	17%
	Total	46

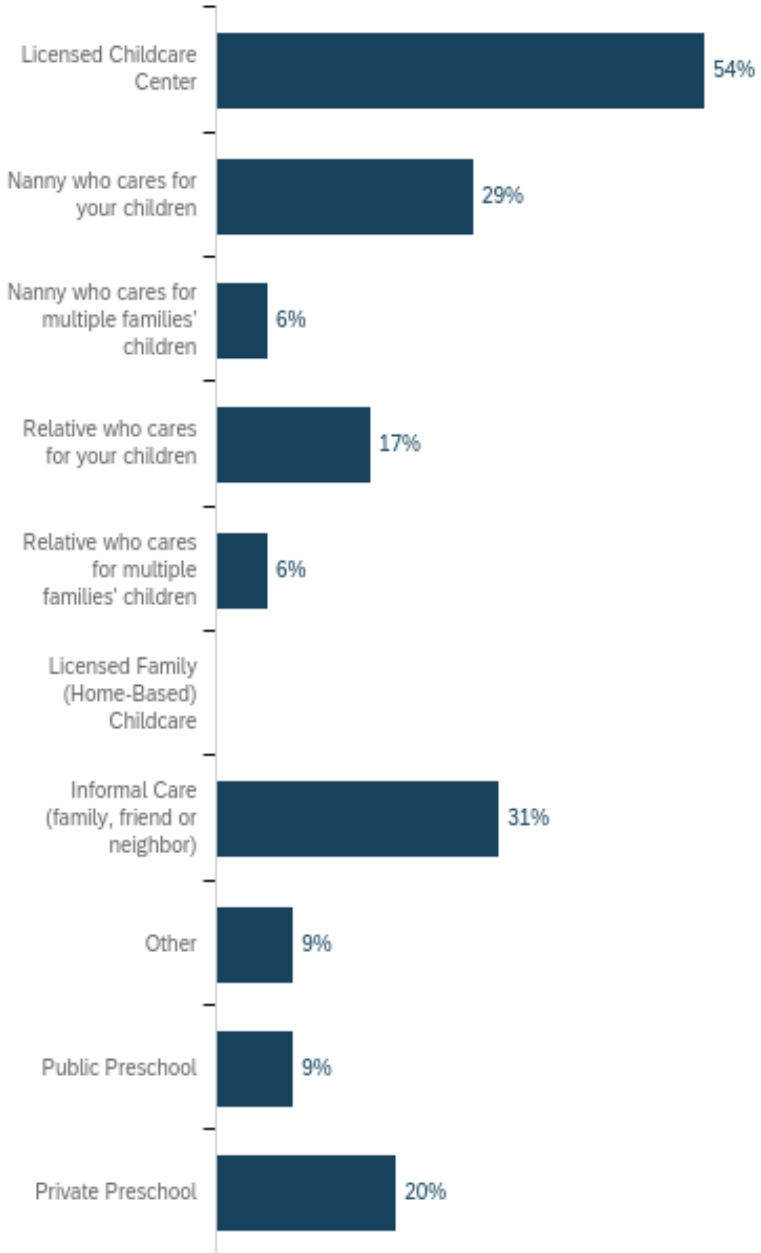
Q28 - For your children aged between 6 and 18, do you rely on anyone outside of yourself and your spouse/partner/co-parent to provide childcare?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged between 6 and 18, do you rely on anyone outside of yourself and your spouse/partner/co-parent to provide childcare?	1	2	2	1	0	44

#	For your children aged between 6 and 18, do you rely on anyone outside of yourself and your spouse/partner/co-parent to provide childcare?	Percentage
1	Yes	50%
2	No	50%
	Total	44

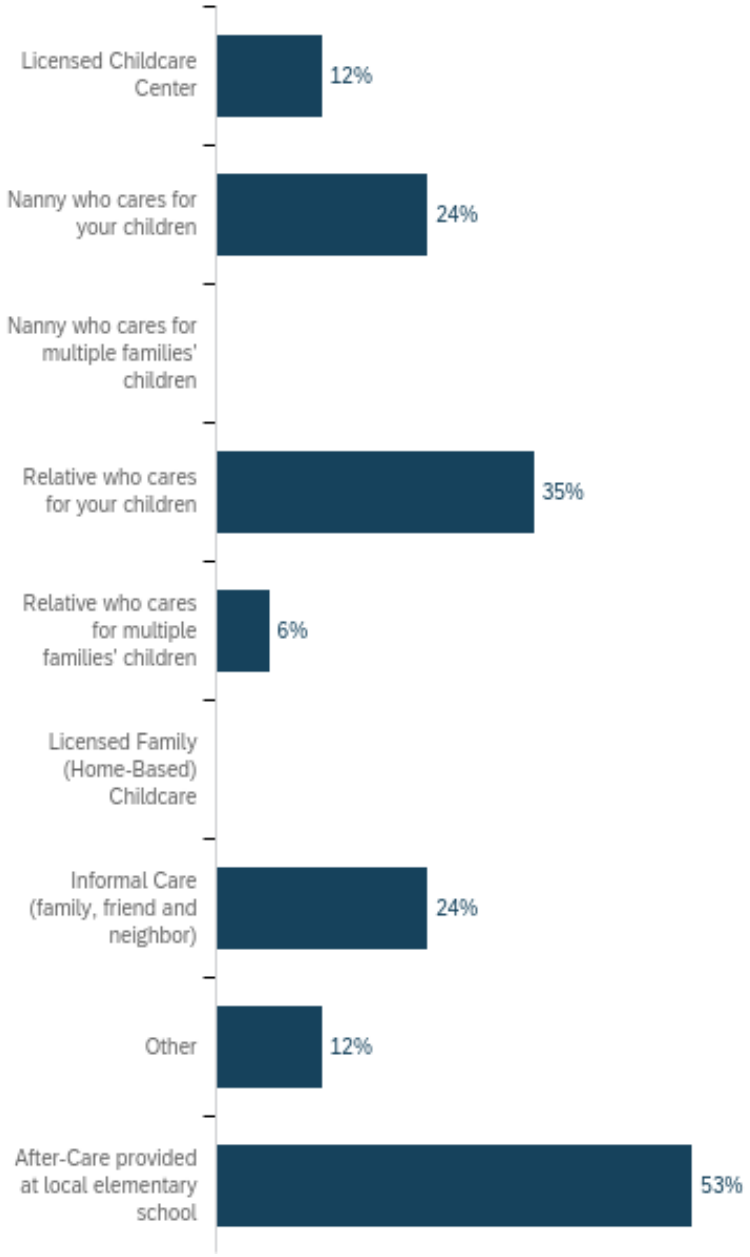
Q29 - What type of childcare do you rely upon for your children aged 5 and younger (select all that apply)?



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#	What type of childcare do you rely upon for your children aged 5 and younger (select all that apply)? - Selected Choice	Percentage
1	Licensed Childcare Center	30%
2	Nanny who cares for your children	16%
3	Nanny who cares for multiple families' children	3%
4	Relative who cares for your children	10%
5	Relative who cares for multiple families' children	3%
6	Licensed Family (Home-Based) Childcare	0%
7	Informal Care (family, friend or neighbor)	17%
8	Other	5%
9	Public Preschool	5%
10	Private Preschool	11%
	Total	63

Q30 - What type of childcare do you rely upon for your children aged 6 to 18 (check all that apply)?



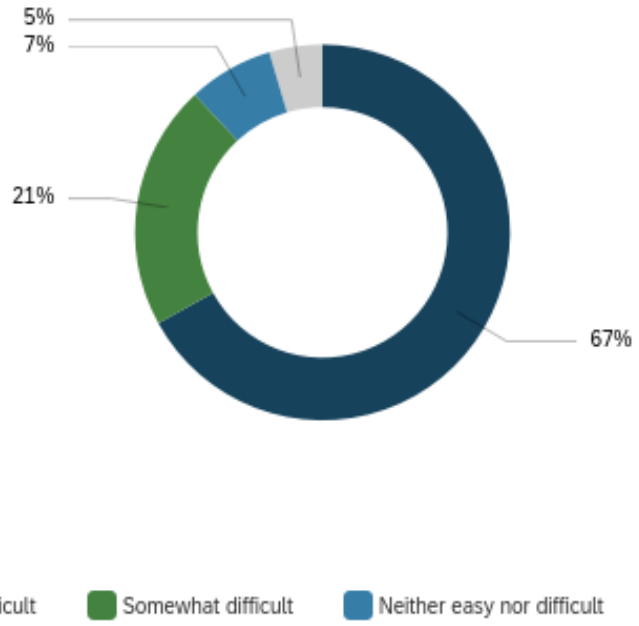
#	What type of childcare do you rely upon for your children aged 6 to 18 (check all that apply)? - Selected Choice	Percentage
1	Licensed Childcare Center	7%
2	Nanny who cares for your children	14%
3	Nanny who cares for multiple families' children	0%
4	Relative who cares for your children	21%
5	Relative who cares for multiple families' children	4%
6	Licensed Family (Home-Based) Childcare	0%

7	Informal Care (family, friend and neighbor)	14%
8	Other	7%
9	After-Care provided at local elementary school	32%
	Total	28

Q30_8_TEXT - Other

Other - Text
School
Summer camp

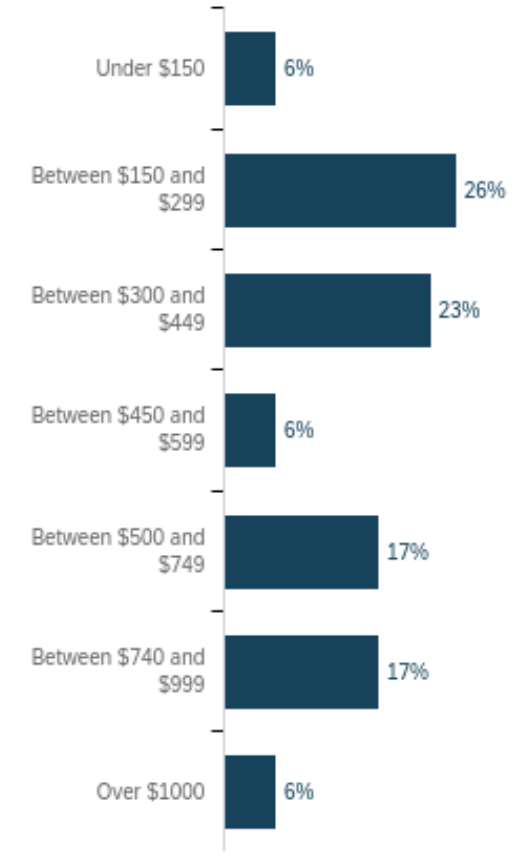
Q31 - 12. How easy is it to find quality, affordable childcare in our community?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	12. How easy is it to find quality, affordable childcare in our community?	1	5	2	1	1	109

#	12. How easy is it to find quality, affordable childcare in our community?	Percentage
1	Extremely difficult	67%
2	Somewhat difficult	21%
3	Neither easy nor difficult	7%
4	Somewhat easy	1%
5	Extremely easy	4%
	Total	109

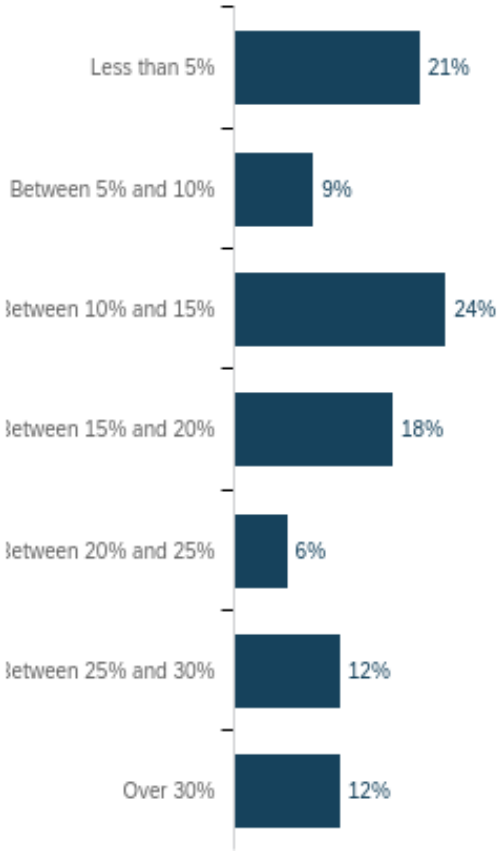
Q32 - For your children aged 5 or younger, how much do you pay per child for childcare in a typical week?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged 5 or younger, how much do you pay per child for childcare in a typical week?	1	7	4	2	3	35

#	For your children aged 5 or younger, how much do you pay per child for childcare in a typical week?	Percentage
1	Under $150	6%
2	Between $150 and $299	26%
3	Between $300 and $449	23%
4	Between $450 and $599	6%
5	Between $500 and $749	17%
6	Between $740 and $999	17%
7	Over $1000	6%
	Total	35

Q33 - For your children aged 5 or younger, what percentage of your annual gross income do you spend on childcare?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged 5 or younger, what percentage of your annual gross income do you spend on childcare?	1	7	4	2	4	34

#	For your children aged 5 or younger, what percentage of your annual gross income do you spend on childcare?	Percentage
1	Less than 5%	21%
2	Between 5% and 10%	9%
3	Between 10% and 15%	24%
4	Between 15% and 20%	18%
5	Between 20% and 25%	6%
6	Between 25% and 30%	12%
7	Over 30%	12%

	Total	34

Q34 - For your children aged between 6 and 18, how much do you pay per child for childcare in a typical week?

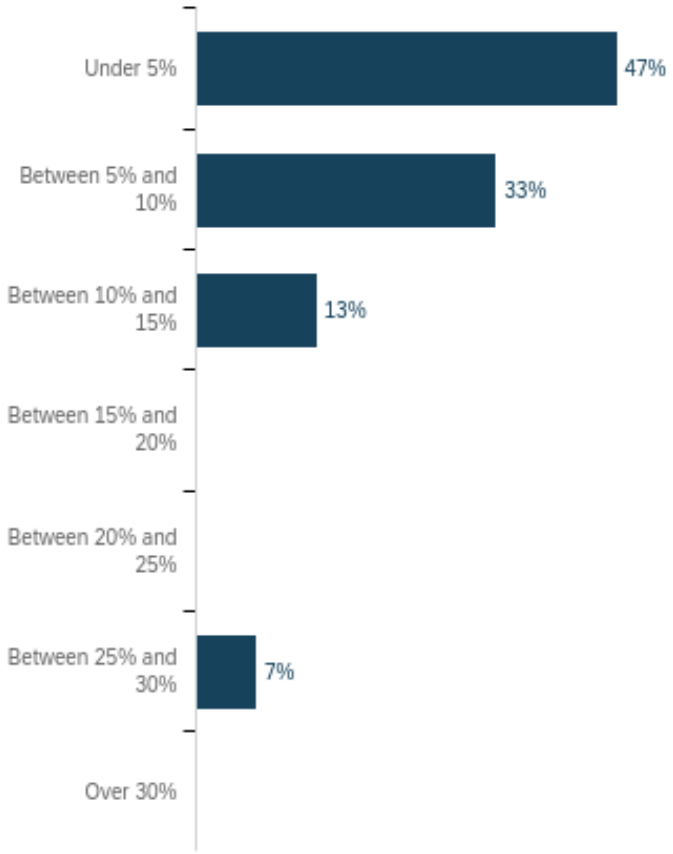


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged between 6 and 18, how much do you pay per child for childcare in a typical week?	1	7	2	1	2	17

#	For your children aged between 6 and 18, how much do you pay per child for childcare in a typical week?	Percentage
1	Under $150	41%
2	Between $150 and $299	35%

3	Between $300 and $449	18%
4	Between $450 and $599	0%
5	Between $500and $749	0%
6	Between $740 and $999	0%
7	Over $1000	6%
	Total	17

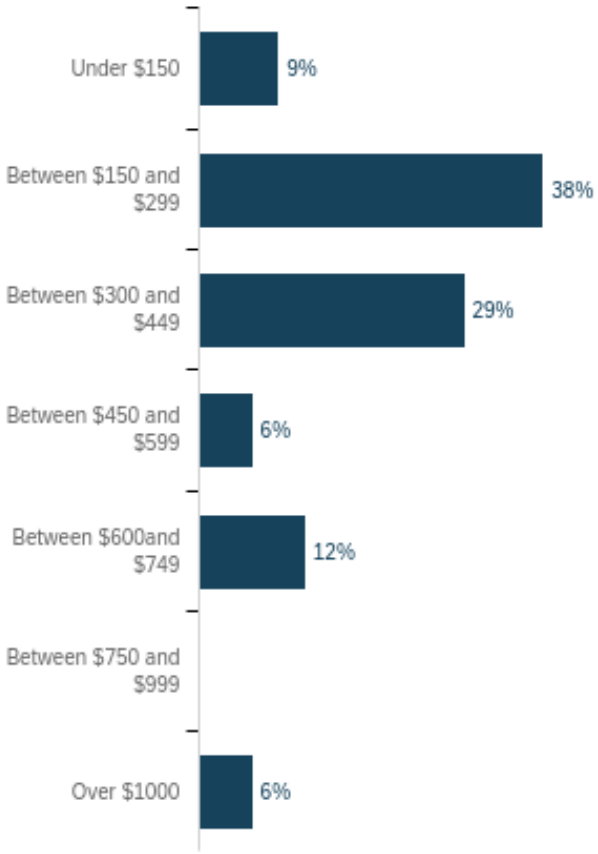
Q35 - For your children aged between 6 and 18, what percentage of your annual gross income do you spend on childcare?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged between 6 and 18, what percentage of your annual gross income do you spend on childcare?	1	6	2	1	2	15

#	For your children aged between 6 and 18, what percentage of your annual gross income do you spend on childcare?	Percentage
1	Under 5%	47%
2	Between 5% and 10%	33%
3	Between 10% and 15%	13%
4	Between 15% and 20%	0%
5	Between 20% and 25%	0%
6	Between 25% and 30%	7%
7	Over 30%	0%
	Total	15

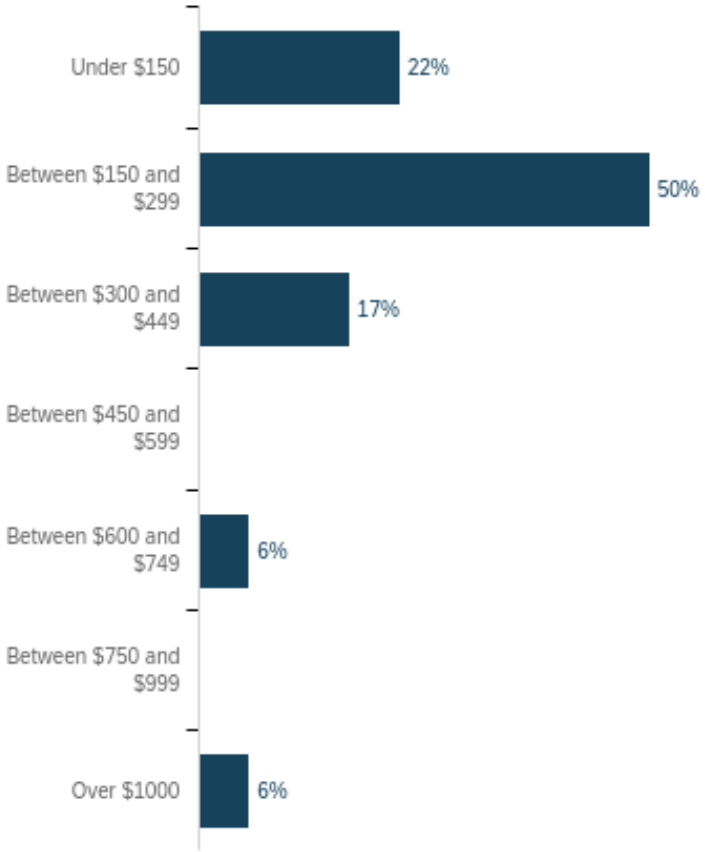
Q36 - For your children aged 5 or younger, what is the maximum rate per week, per child, that you are willing to pay if a new, high-quality childcare facility opened in your community?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged 5 or younger, what is the maximum rate per week, per child, that you are willing to pay if a new, high-quality childcare facility opened in your community?	1	7	3	1	2	34

#	For your children aged 5 or younger, what is the maximum rate per week, per child, that you are willing to pay if a new, high-quality childcare facility opened in your community?	Percentage
1	Under $150	9%
2	Between $150 and $299	38%
3	Between $300 and $449	29%
4	Between $450 and $599	6%
5	Between $600and $749	12%
6	Between $750 and $999	0%
7	Over $1000	6%
	Total	34

Q37 - For your children aged between 6 and 18, what is the maximum rate per week, per child, that you are willing to pay if a new, high-quality childcare facility opened in your community?

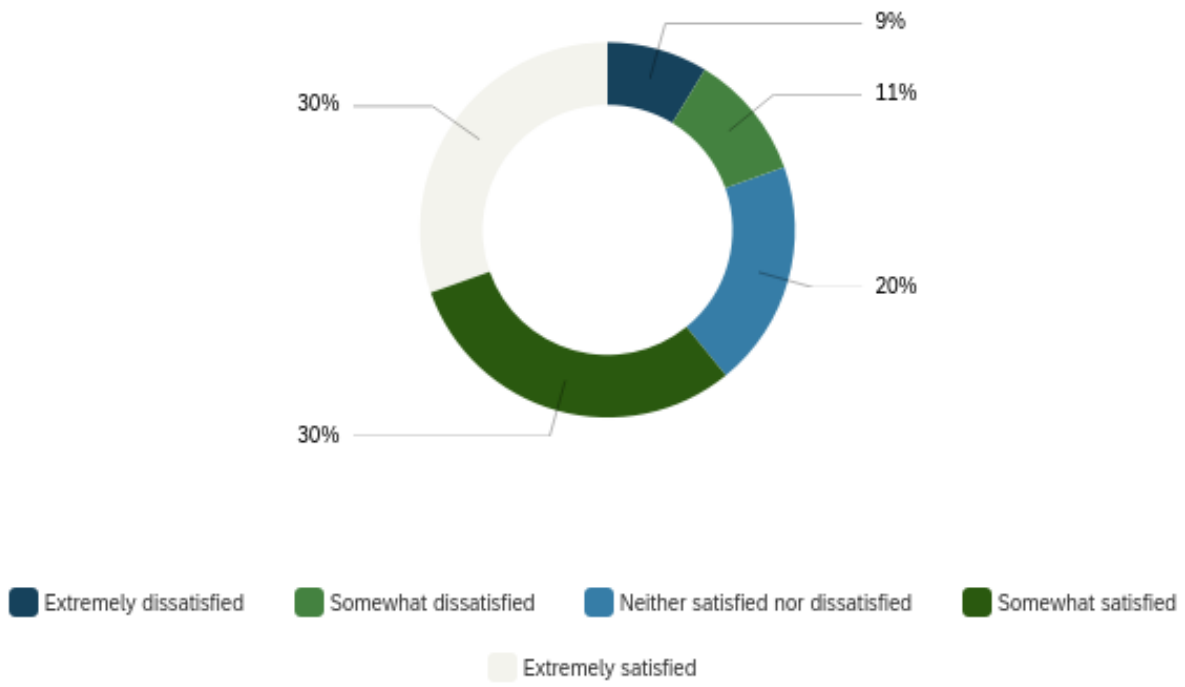


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged between 6 and 18, what is the maximum rate per week, per child, that you are willing to pay if a new, high-quality childcare facility opened in your community?	1	7	2	1	2	18

#	For your children aged between 6 and 18, what is the maximum rate per week, per child, that you are willing to pay if a new, high-quality childcare facility opened in your community?	Percentage
1	Under $150	22%
2	Between $150 and $299	50%
3	Between $300 and $449	17%
4	Between $450 and $599	0%
5	Between $600 and $749	6%
6	Between $750 and $999	0%
7	Over $1000	6%

	Total	18

Q38 - How satisfied are you with the quality of childcare you are currently using?

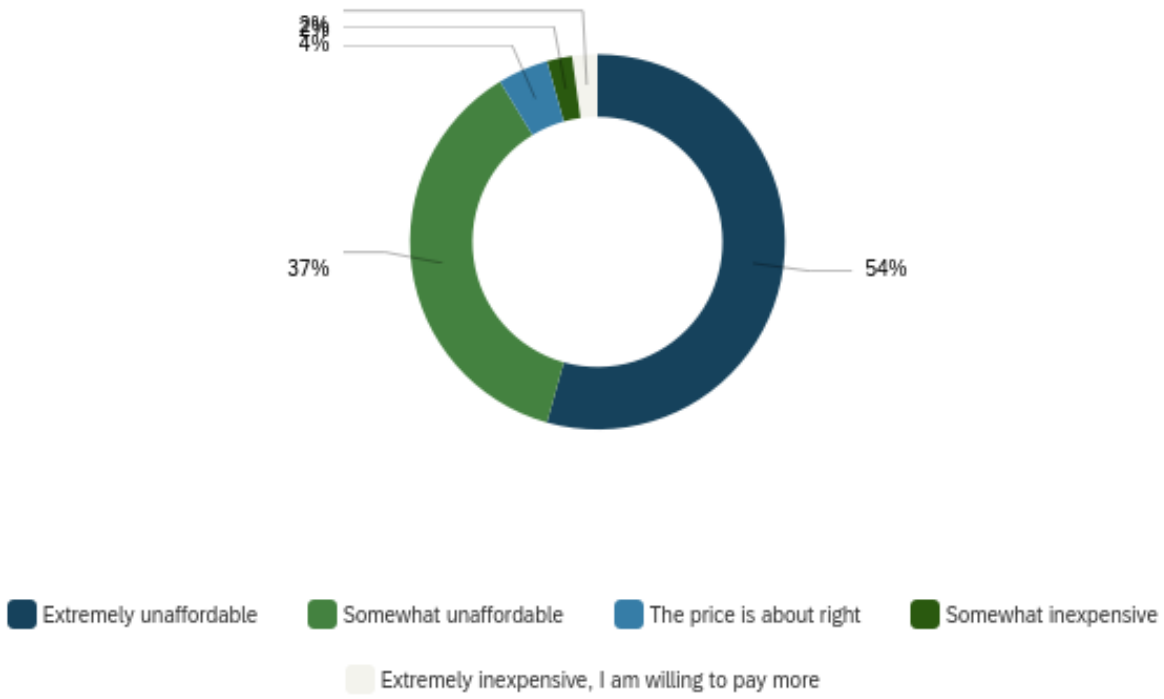


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How satisfied are you with the quality of childcare you are currently using?	1	5	4	1	2	46

#	How satisfied are you with the quality of childcare you are currently using?	Percentage
1	Extremely dissatisfied	9%
2	Somewhat dissatisfied	11%
3	Neither satisfied nor dissatisfied	20%
4	Somewhat satisfied	30%
5	Extremely satisfied	30%

	Total	46

Q39 - What is your perception of the cost of childcare in our community?

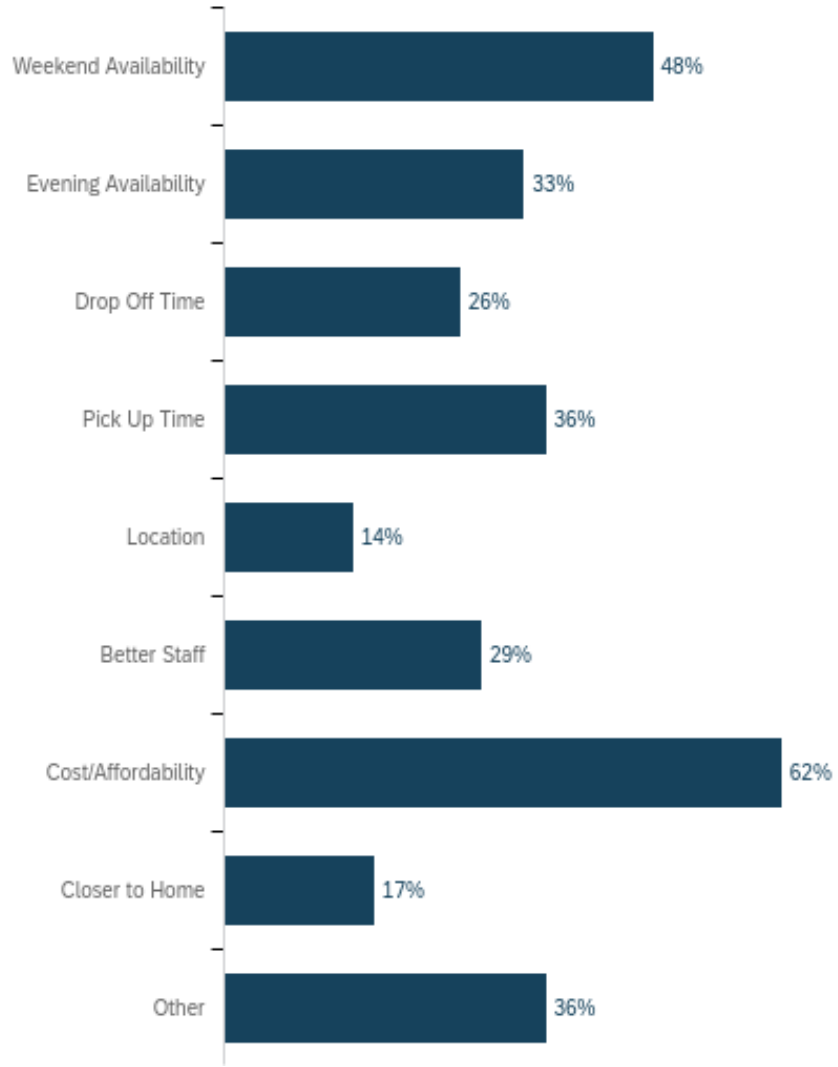


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your perception of the cost of childcare in our community?	9	13	10	1	1	46

#	What is your perception of the cost of childcare in our community?	Percentage
9	Extremely unaffordable	54%
10	Somewhat unaffordable	37%
11	The price is about right	4%
12	Somewhat inexpensive	2%
13	Extremely inexpensive, I am willing to pay more	2%

	Total	46

Q40 - Would you like to change any of the following about your current childcare situation (check all that apply)?



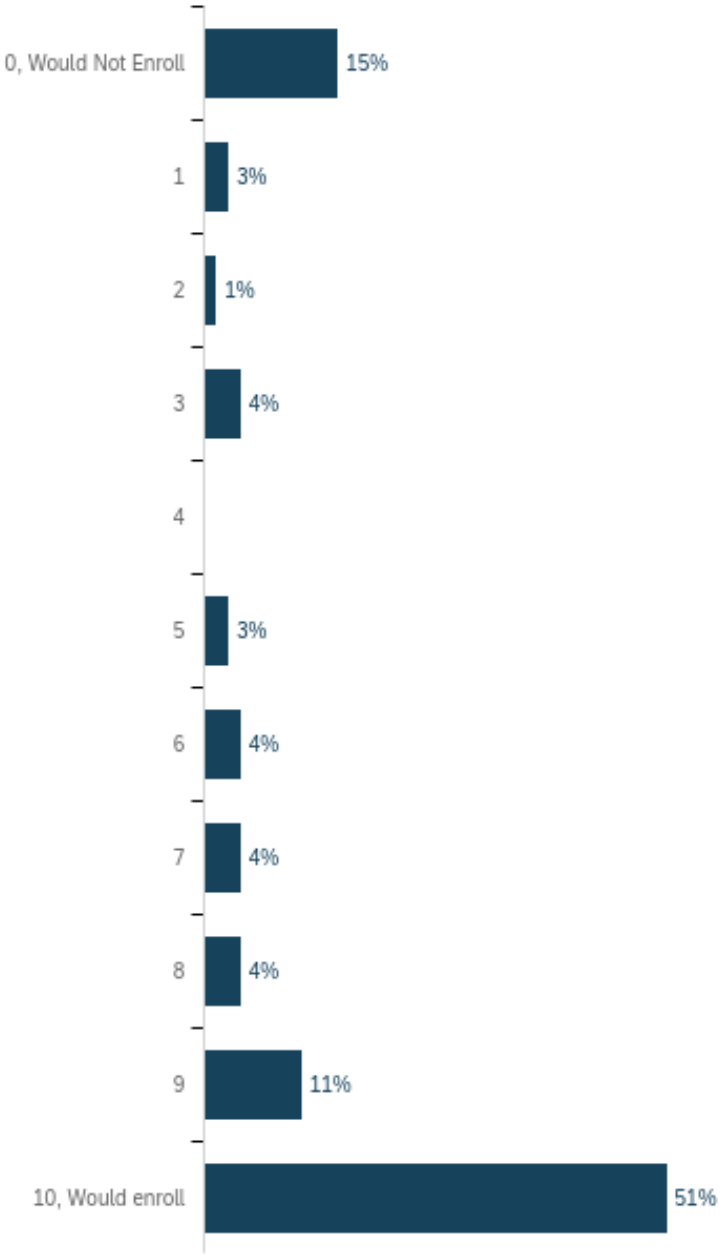
#	Would you like to change any of the following about your current childcare situation (check all that apply)? - Selected Choice	Percentage
1	Weekend Availability	16%
2	Evening Availability	11%
3	Drop Off Time	9%
4	Pick Up Time	12%
5	Location	5%

6	Better Staff	10%
7	Cost/Affordability	21%
8	Closer to Home	6%
9	Other	12%
	Total	126

Q40_9_TEXT - Other

Other - Text
This is not about what I want for my child, as we are now in school and things are better. But ages 0-5 there is so little availability- no matter how much money you have to spend. Infant childcare is about 20-30 licensed spots total for the whole county. My family is fine now, but families with young children are in a desperate situation
Too many kids for teacher ratio
holiday hours
None
Holiday availability (summer, Xmas, etc)
The ability to get into childcare after being on the waiting list for over two years that
More options especially for early childhood ages during school breaks
flexbility to fit my work schedule
Provide food
MorRe options and availability
Hispanic only
Days off, states they follow the district calendar but there are more days off then I have PTO
Availability- most have waitlists
Holiday/non-school availability

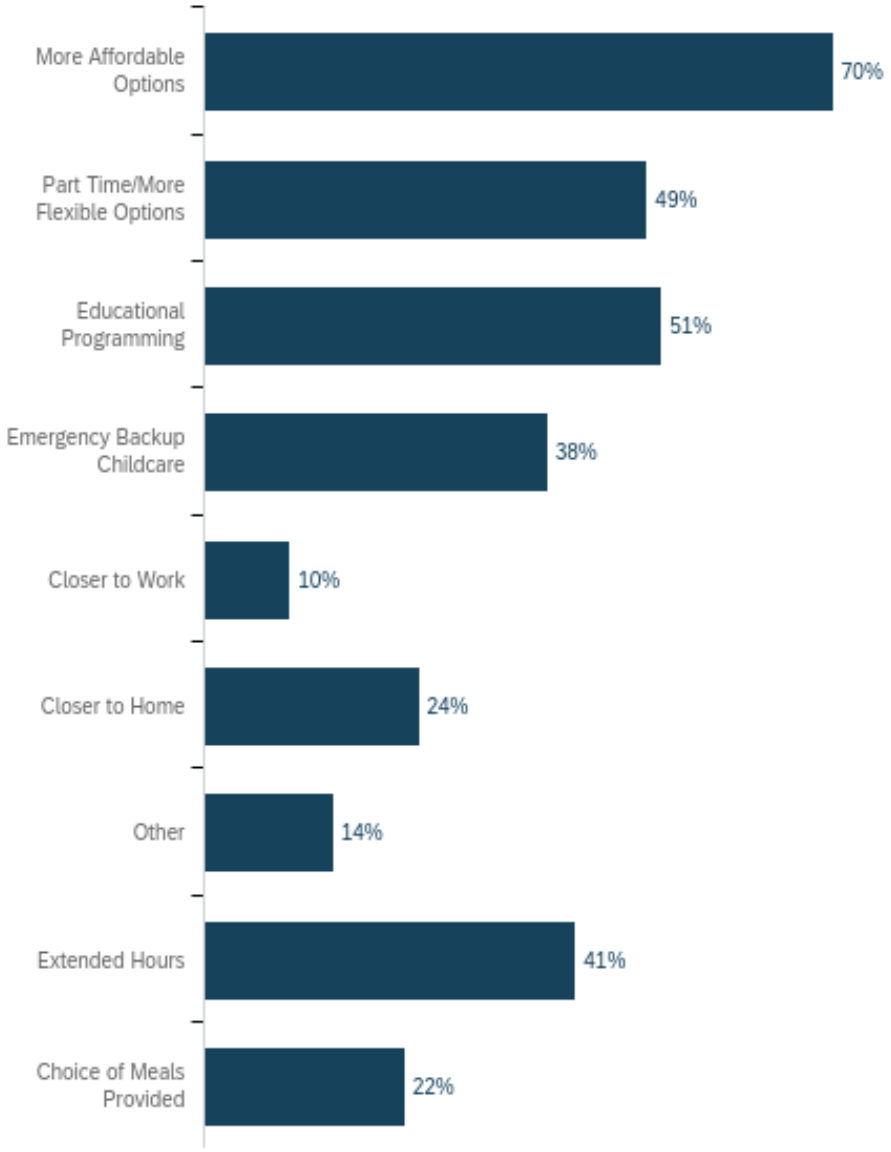
Q41 - Please rate your interest in a new, high-quality childcare facility in our community, assuming reasonable cost and location?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Please rate your interest in a new, high-quality childcare facility in our community, assuming reasonable cost and location?	29	39	36	4	14	74

#	Please rate your interest in a new, high-quality childcare facility in our community, assuming reasonable cost and location?	Percentage
29	0, Would Not Enroll	15%
30	1	3%
31	2	1%
32	3	4%
33	4	0%
34	5	3%
35	6	4%
36	7	4%
37	8	4%
38	9	11%
39	10, Would enroll	51%
	Total	74

Q42 - Which of the following would encourage you to use childcare facilities in our community (select all that apply)?



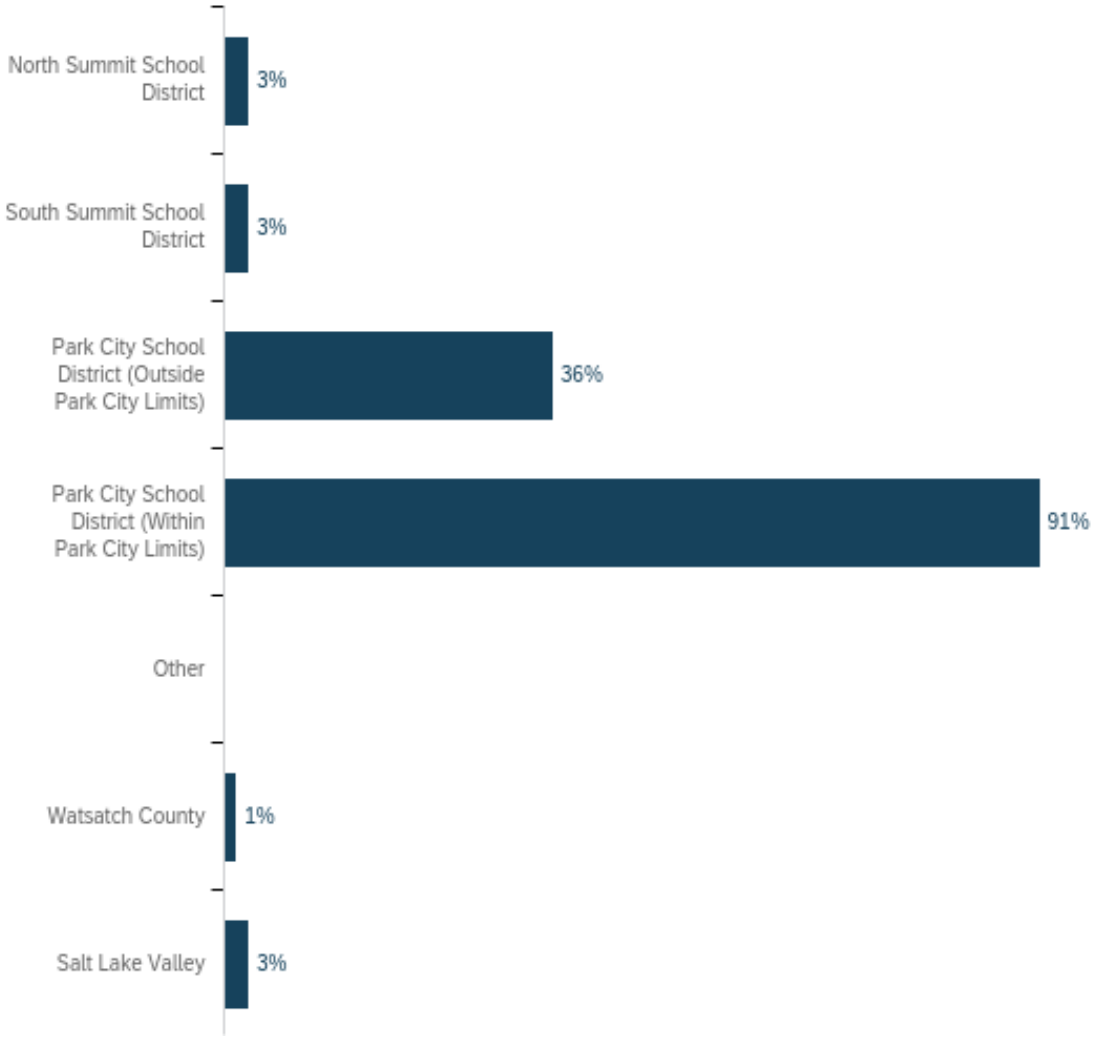
#	Which of the following would encourage you to use childcare facilities in our community (select all that apply)? - Selected Choice	Percentage
1	More Affordable Options	22%
3	Part Time/More Flexible Options	15%
4	Educational Programming	16%
5	Emergency Backup Childcare	12%
6	Closer to Work	3%
7	Closer to Home	7%
8	Other	4%
9	Extended Hours	13%

10		Choice of Meals Provided	7%
		Total	201

Q42_8_TEXT - Other

Other - Text
Summer and school break care
I would use any child care that I could get into with my kid
We no longer need this service but did when the children were younger.
Transportation from schools
Good Staff
n/a
No longer need it. But did.
Inclusivity
Better education options and outside time

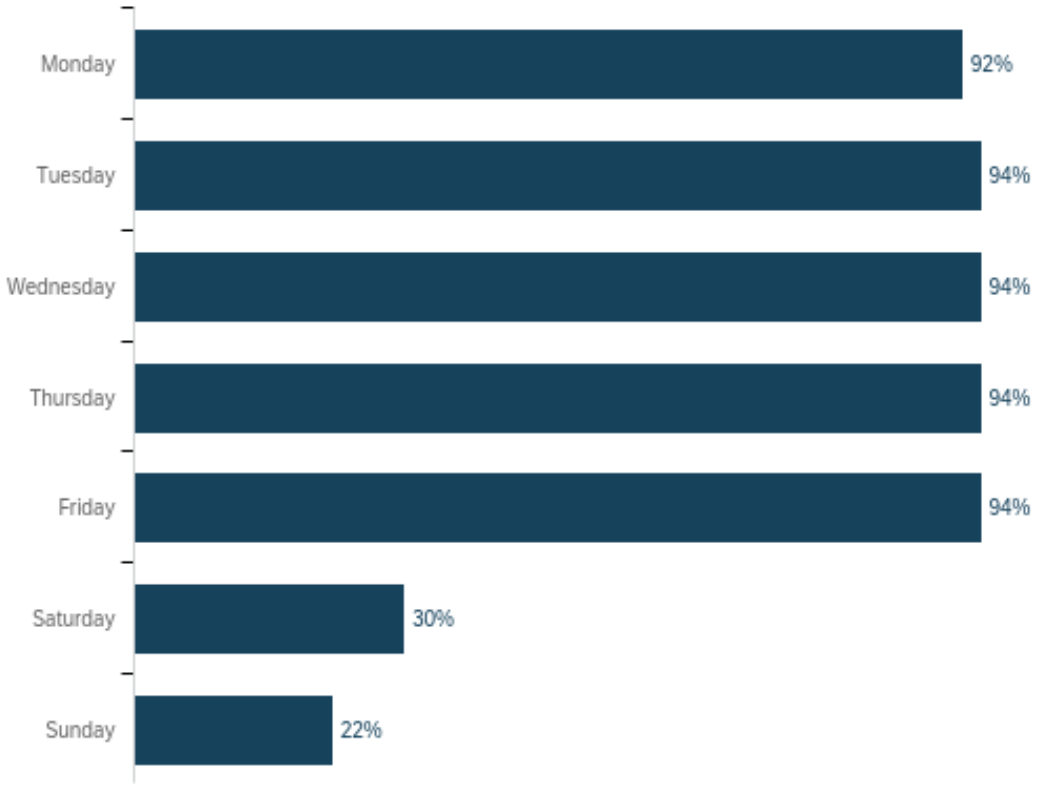
Q43 - What location do you prefer for a childcare facility (check all that apply)?



#	What location do you prefer for a childcare facility (check all that apply)? - Selected Choice	Percentage
1	North Summit School District	2%
3	South Summit School District	2%
4	Park City School District (Outside Park City Limits)	27%
6	Park City School District (Within Park City Limits)	66%
8	Other	0%
11	Watsatch County	1%
12	Salt Lake Valley	2%
	Total	101

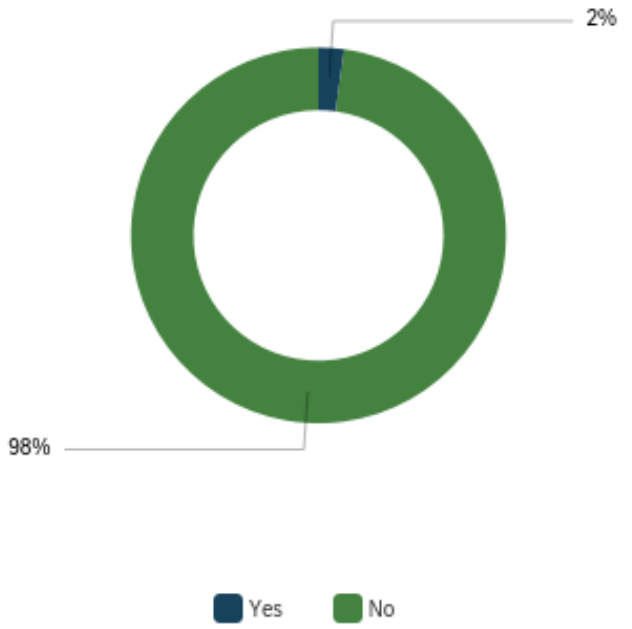
Q43_8_TEXT - Other
Other - Text

Q44 - What days do you need childcare? Check all that apply:



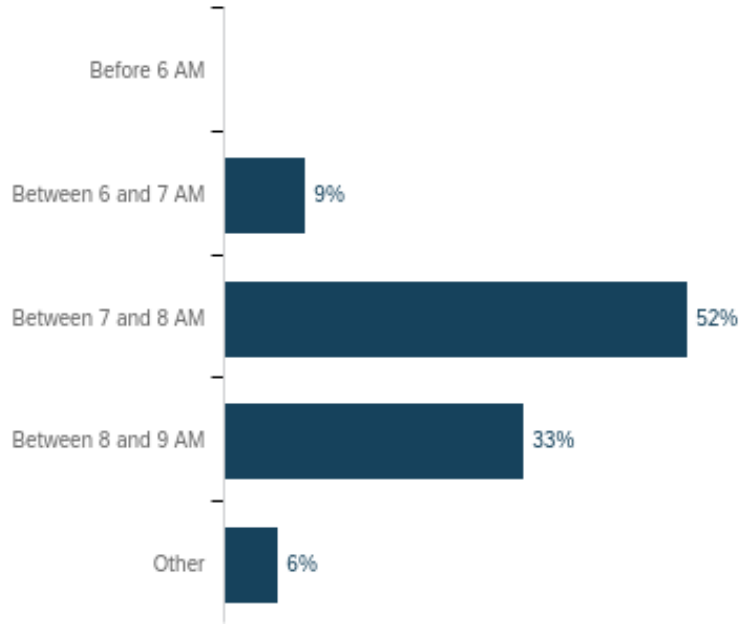
#	What days do you need childcare? Check all that apply:	Percentage
9	Monday	18%
10	Tuesday	18%
11	Wednesday	18%
12	Thursday	18%
13	Friday	18%
14	Saturday	6%
15	Sunday	4%
	Total	260

Q45 - Does your family currently use the childcare subsidy that is offered by the Utah Department of Workforce Services, Office of Child Care (for information about this subsidy, visit: https://jobs.utah.gov/customereducation/services/childcare/)?



#	Does your family currently use the childcare subsidy that is offered by the Utah Department of Workforce Services, Office of Child Care (for information about this subsidy, visit: https://jobs.utah.gov/customereducation/services/childcare/)?	Percentage
9	Yes	2%
10	No	98%
	Total	46

Q46 - For your children aged 5 and under, what time do you need childcare services to begin?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged 5 and under, what time do you need childcare services to begin? - Selected Choice	10	13	11	1	1	33

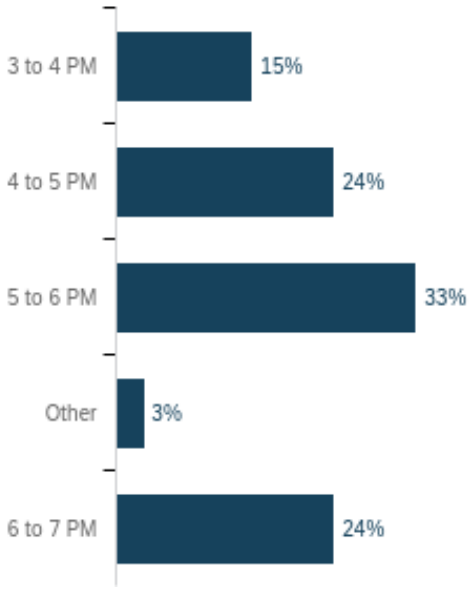
#	For your children aged 5 and under, what time do you need childcare services to begin? - Selected Choice	Percentage
9	Before 6 AM	0%
10	Between 6 and 7 AM	9%
11	Between 7 and 8 AM	52%
12	Between 8 and 9 AM	33%
13	Other	6%
	Total	33

Q46_13_TEXT - Other

Other - Text

97

Q47 - For your chidren aged 5 and under, what time do you need childcare services to end?



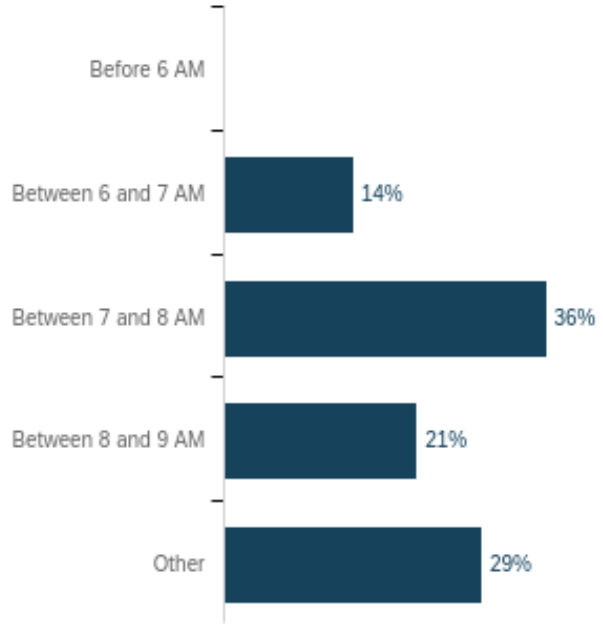
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your chidren aged 5 and under, what time do you need childcare services to end? - Selected Choice	9	16	12	3	7	33

#	For your chidren aged 5 and under, what time do you need childcare services to end? - Selected Choice	Percentage
9	3 to 4 PM	15%
10	4 to 5 PM	24%
11	5 to 6 PM	33%
13	Other	3%
16	6 to 7 PM	24%
	Total	33

Q47_13_TEXT - Other

Other - Text
24/7/365

Q48 - For your chidren aged between 6 and 18, what time do you need childcare services to begin?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your chidren aged between 6 and 18, what time do you need childcare services to begin? - Selected Choice	10	13	12	1	1	14

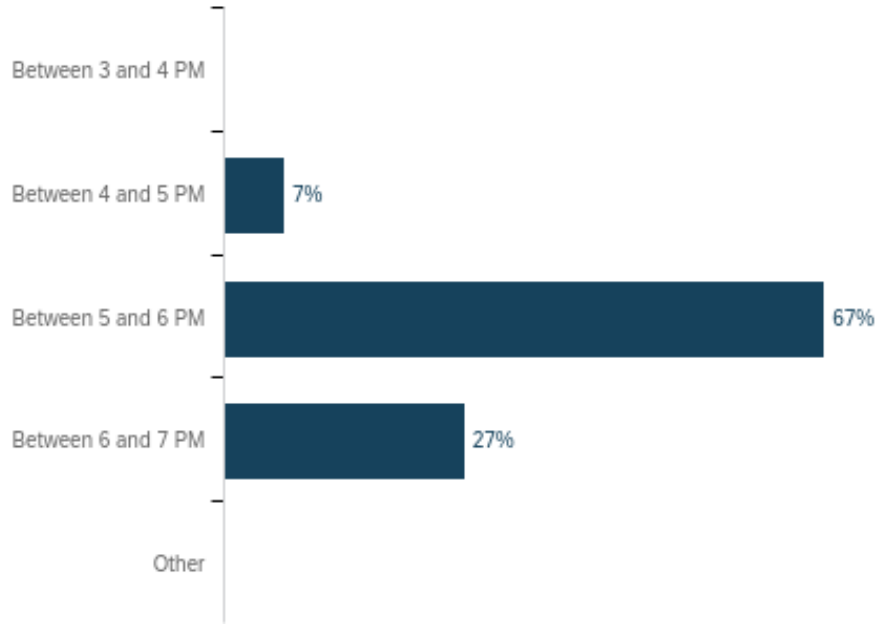
#	For your chidren aged between 6 and 18, what time do you need childcare services to begin? - Selected Choice	Percentage
9	Before 6 AM	0%
10	Between 6 and 7 AM	14%
11	Between 7 and 8 AM	36%
12	Between 8 and 9 AM	21%

13		Other	29%
		Total	14

Q48_13_TEXT - Other

Other - Text
afterschool
Afterschool only
After school care

Q49 - For your children aged between 6 and 18, what time do you need childcare services to end?

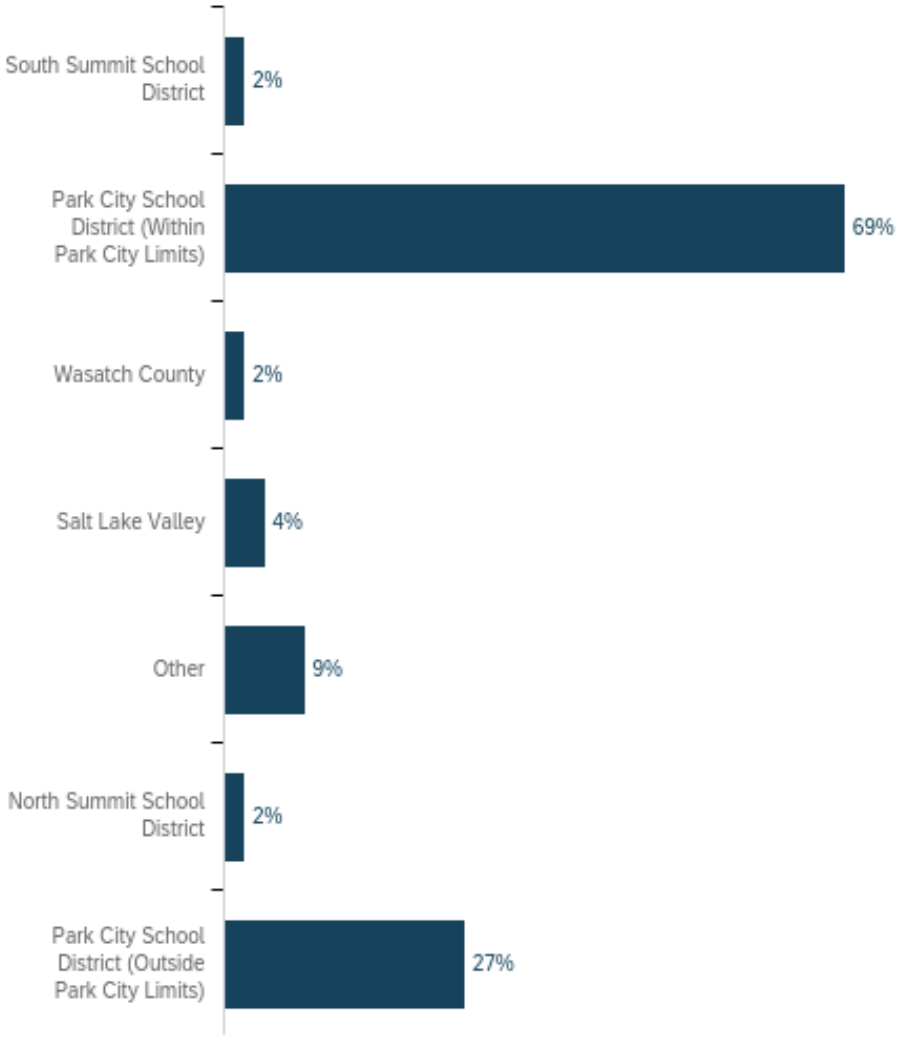


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	For your children aged between 6 and 18, what time do you need childcare services to end? - Selected Choice	10	12	11	1	0	15

#	For your children aged between 6 and 18, what time do you need childcare services to end? - Selected Choice	Percentage
9	Between 3 and 4 PM	0%
10	Between 4 and 5 PM	7%
11	Between 5 and 6 PM	67%
12	Between 6 and 7 PM	27%
13	Other	0%
	Total	15

Q49_13_TEXT - Other
Other - Text

Q50 - What is the location of your current childcare provider (select all that apply)?

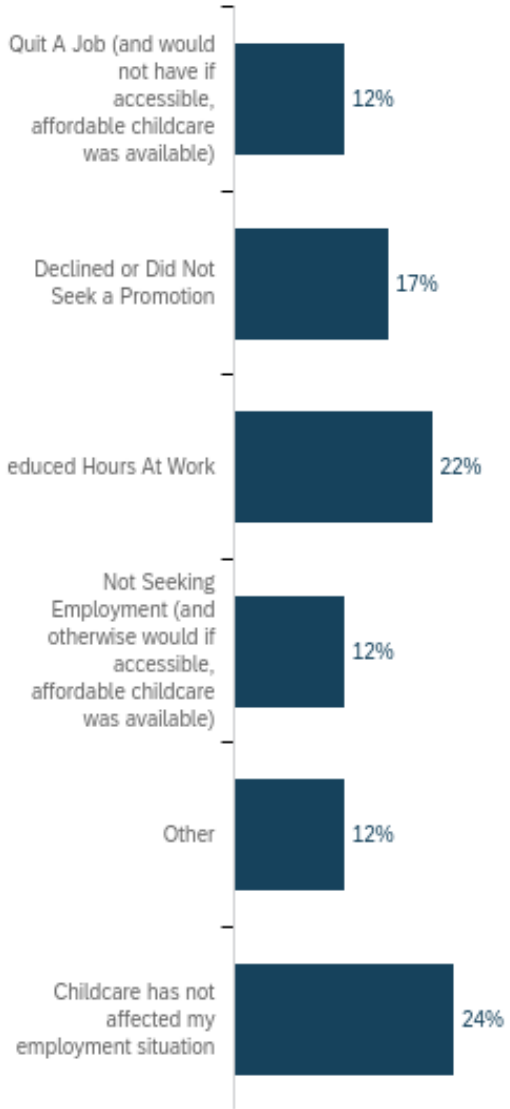


#	What is the location of your current childcare provider (select all that apply)? - Selected Choice	Percentage
1	South Summit School District	2%
2	Park City School District (Within Park City Limits)	60%
3	Wasatch County	2%
4	Salt Lake Valley	4%
5	Other	8%
7	North Summit School District	2%
8	Park City School District (Outside Park City Limits)	23%
	Total	52

Q50_5_TEXT - Other

Other - Text
at home
Home
Friends in Park City
Texas

Q51 - Have childcare issues caused any of the following employment situations for you or your spouse/partner/co-parent?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Have childcare issues caused any of the following employment situations for you or your spouse/partner/co-parent? - Selected Choice	1	10	7	3	11	41

#	Have childcare issues caused any of the following employment situations for you or your spouse/partner/co-parent? - Selected Choice	Percentage
1	Quit A Job (and would not have if accessible, affordable childcare was available)	12%
2	Declined or Did Not Seek a Promotion	17%
7	Reduced Hours At Work	22%
8	Not Seeking Employment (and otherwise would if accessible, affordable childcare was available)	12%
9	Other	12%
10	Childcare has not affected my employment situation	24%
	Total	41

Q51_9_TEXT - Other

Other - Text
If we can’t get into a child care for a second kid, we are going to have to look at options such as quitting our jobs
More stressful
I hate working
We are lucky to have 5 days a week covered, but not having care during the pandemic greatly affected my mental health during the pandemic and even with care we feel very stressed because there has been so much sickness this year. It has been very difficult to keep up with work.
Live/work out of state for childcare and employment part of the time

Q52 - Please share any additional thoughts you have regarding access to childcare and early education in our community.

Please share any additional thoughts you have regarding access to childcare and early education in our community.
Seria perfecta si hubiese un lugar como el de school redness, de Holycross. Donde sabemos que están muy bien cuidados pero a la misma vez aprendiendo académicamente! Gracias 🙏

No one solution seems to fix the problem. Due to limited space or hours, we ended up needing to use three different care providers when using childcare in Summit County.

PCSD closed the faculty/staff daycare program of more than 40 years duration. This program served faculty and staff members with young children. This exemplifies poor leadership in an area and by an organization that should be leading the way in childcare!

This survey was designed to only seek self interest responses. Just because we managed to find a way to age 7, and now have school and aftercare, doesn't mean that I don't think the community desperately needs more options. Especially ages 0-2, and more extended hours for ages 3-5. And physically located out of park city proper (you try driving your kid into the prospector area at 8 am in the winter to drop off for daycare, and still get to work on time). Kimball junction has nothing. Quinn's junction- more nothing. Affordable is certainly an issue, but before you can tackle affordable, you just need to have something. Anything. I put my name on waitlists for daycare in PC and SLC when I was 12 weeks pregnant. Some places called when my kid was 2 telling me they had a spot. We probably need 5x the number of current spots to fit the community need. Hours need to be adequate to cover 8 hour workday (and this still only somewhat helps the many people who work non 8-5 hours).

As I work at a nonprofit assisting people in crisis and need in Summit and Wasatch counties, my experience has been that there are many parents (particularly single parents) who are very limited by a lack of affordable childcare. It impacts their ability to work and to provide for their families. It is a huge barrier for many of our applicants needing financial assistance.

My husband and I have opposite schedules and only one child who is old enough to be gaining more independence now. We've been able to manage with our current resources and flexible work schedules.

I'm stuck between wanting to take care of my children and wanting to work. There's no affordable childcare and if there is they're normally too many kids per teacher or they have a waiting list for months or even years. A babysitter costs the same or more than what I would get paid in a regular job.

Though I am not seeking childcare myself, I've heard through anecdotes, KPCW, and nonprofit professionals that there is a long waitlist for available slots for people living/working in PC.

We have to increase the access and lower the costs, which will require govermental involvement.

Young families are being forced to move from Park City due to the lack of affordable child care.

My oldest grandchildren attended PCTots starting when they first opened their doors. I signed them up the moment PCTots was offering spaces. Since then, my younger grandson has been on their waiting list for 2 years. He has also been on the waiting list for 2 years at Alpine Adventures and the PCHigh School daycare (which has subsequently closed). Other options are extremely expensive ie. nanny, Soaring Wings, Little Miners, and they don't offer a complete day for parents who work a full time 8-5 job.

My kids are now in full time school but we are left scrambling during summer break and long school breaks. Very limited camp options, almost all are week to week, especially hard to find full day… super expensive and getting a place in one is a competitive sport and nearly impossible—especially to get two kids of different ages into the same ones/same schedules. We would use some kind of childcare during the summers and school breaks.

We currently enroll our 2 daughters at an after school program at school that allows both my wife and I to keep and work in our full time jobs. This program as I understand has a waiting list and could facilitate with more funding, more children. Previous to being in the public school system, we did use local childcare (PC Tots and Alpine Adventurers). They were both fantastic. The latter was pricey but still had issues keeping steady staff. The former was great too and as I understand has a hard time keeping staff. Providing a subsidy or otherwise facilitating more childcare options within the community would go a great way to keeping people living here, and allowing those that commute in, to have a place to safely drop their children off, assisting with creating wealth and security, however little or great for a segment of the community that is in desperate need.

More affordable options are needed for children of school employees, city staff, and resort/hospitality employees. The childcare programs need to pay their staff well and provide a safe and educational environment with access to outdoor activities.

Childcare is very expensive and hard to find according to my daughter and friends with grandchildren in the area. If you have a school age child, there are after school programs that are reasonable but need to be expanded to include holiday periods. Summer programs are expensive and again hard to get into.

We have a fantastic childcare situation, but SO many of our friends and contacts are struggling to find spots at all, or to find affordable spots. I have heard of families driving to Salt Lake to drop kids at childcare and then coming back up to PC to work. WILD.

I think it's a major factor in why people like me are deciding not to have children which is really sad.

Finding adequate childcare in this community has been extremely difficult, our child has been on the waiting list for two years for four separate daycare facilities, one of which ended up closing down. We can't compete with the individuals who can afford nannies in this town but we also can't get into childcare because of the extensive waiting lists.

Although we now have our two children in elementary school and are able to access and afford the afterschool program, we are incredibly supportive of government-subsidized childcare for our community members. We are relatively high-wage earners with advanced degrees, but childcare was expensive for us when the children were little. I'm unsure how others manage, and a community can judge itself by how it cares for its youngest members. Strong families lead to strong communities. Thank you for leading this important work.

Please prioritize more and more affordable options for the community.

My experience with this is volunteering in public school systems for over 25 years many here in PC. Then listening to the parents of who my child babysat. Childcare workers, facilities, and education should be supplemented by public funding. When my own children were young I started a business in my home, stayed up most nights working because factoring in childcare costs for multiple children - I made more working from home. Thankfully, I had a education behind me that allowed for that choice. Most who work in the daily jobs needed to keep all of our lives going don't have the choices I did. Teachers also need to be payed more. Having volunteered in public schools for over 25 years I have witnessed how amazing that are and under supported. Most have masters degrees and should not have to go to a second job to make ends meet! Lack of support and education for children will impact all our lives in a negative way.

It is hard to find preschool options that cover a full workday here in park city. I would love to enroll my son in the park city 3 yo preschool program, but 2 days a week is not much time in school, and leaves me still needing full time childcare due to the hours it operates. If they could offer 3 days a week it would help be able to offset the cost of other childcare.

Please provide more options. It's extremely challenging for so many locals. With all the new Covid move ins, and their money- the demand only grows for childcare needs, but the costs and hours are out of balance with the needs.

All group care programs should require children to be vaccinated fully, with the only exceptions being medical conditions.

Not enough access to summer camps

I would need to know that my child is in good hands as I have worked at childcare places where the some of the staff has lacked the patience among other important things in order to work with children.

Childcare is a parental responsibility. Govt tax fund should not be used to provide free childcare Education is a community responsibility That is different than childcare

I am a grandparent who assists with childcare for my three grandchildren. Two live in the SLC area and have access to childcare which is much more affordable and has operating hour more realistic for full-time working parents. My daughter here in PC is a business owner and has to supplement her very expensive childcare, to cover short hours and many closed days. For most working parents in PC childcare is totally unaffordable.

I feel like I've been very fortunate to even find a spot at a childcare location, so I'm a lucky one. If this community wants to stay a true community with families, there needs to be more options and ones that are affordable. Subsidies would help but also ensuring our teachers/community workers have accessible options without getting placed on a waitlist 20 kids deep needs to be a priority.

PC Tots and PC Tots Too fill a gap providing affordable childcare. I believe we need more affordable childcare options in our community as well as pre-school and school options to fill the gap.

I don't think we need to have preschool in the already crowded schools. There are plenty of options outside of the school

Although I do not have a child of my own yet, many of my coworkers experience issues related to the affordability of childcare or ease of finding support when they or their child are sick last minute.

We need quality childcare so mothers can work. Utah makes life miserable for working mothers with odd school hours that don't match work obligations and incessant demands for random volunteering. Federal Reserve Chairman Jerome Powell says

it is workforce limits that is key to keeping inflation high, via the 55% of PCE that is services X housing. Not supporting women is only making inflation both worse and more long lasting. Total mis-management.

I have 5 children, why should I be paying for childcare? I'd like to have more children but need more gov't assistance

Would love to see a childcare option that does not follow a district calendar. Being a working parents that is not suitable for either of our schedules. There are options for such daycare but we have been on the waitlist for almost 2 year at this point. The need is here in the community but the supply is not there.

State or county subsidies should be available for low income people in need of childcare. Early preschools would help. Utah doesn't provide enough support for any public school or childhood education, including childcare. It should be a priority. Utah is being very shortsighted.

I don't have children myself, however I have many friends in Park City that have small children (not yet elementary school age) and struggle to find childcare. Most options are full and not taking new enrollment and all are extremely costly. I hear about this challenge all the time from friends and co-workers that consider leaving their job due to childcare challenges and would be very interested to have another option available in our community.

More scholarships spots for kids at PC tots.

My husband recently lost our childcare and are now both working part time to keep my child at home. Our childcare options are so expensive in this town that it's not worth us working full time. We are now living on an extreme budget. It's stressful each month to pay bills.

I am not sure why the local government should be subsiding child care. Private sector wages need to rise to allow parents to pay for childcare, or private employers need to subsidize child care costs. Why are taxpayers subsidizing profitable private sector employers?

I didn't need childcare until my son was at McPolin Elementary. While prices have increased, I still find the $350/mo affordable. The biggest challenge is summertime. In order to get into programs (after school, summer camps, etc.) you need to make it a full priority. I wake up early to make the on-line registrations. I speak to counselors and program directors ahead of time so they know of my interest. Some times it feels like an all day activity to get there. I would love if afterschool programs and summer camp programs could expand. However, I have an older child. I know it's different with smaller children.

The County and City need to find a way to ensure that every child in Summit County has access to high quality safe and affordable child care.

There is a huge need for affordable childcare in our community! My daughter has been unable to get into any childcare center that we can afford. My husband had to stay at home for the first 2 years of her life because we couldn't afford the childcare that was available. It has a huge impact on our community.

Both are necessary if we want Park City to be a place for families. Otherwise, we are a vacation town with transients.

My grandchildren are in daycare. It is very expensive and there is pressure to get on a list ASAP.

Any and all funds that can help parents find quality, affordable care for their children so they can work is advisable. Maybe Summit County could create incentives for Child Care businesses or partner with corporate entities like Deer Valley and Park City Ski Resorts to create the needed child care facilities and staff.

We are ready to start a family and the cost of childcare and availability is extremely challenging. If we are unable to find childcare then one of us will need to quit our jobs which then would make us unable to afford our mortgage. We do earn sufficient income but we live in a one bedroom condo and we can't afford a two bedroom home (starting around $3,000) and childcare which is over $1200 per month. It's extremely difficult to afford to live in park city and raise a family in park city.

I would be willing to pay more in taxes for a subsidized child care option for Park City residents and/or teachers at our district. We need to attract good teachers and offering free or subsidized child care is a great option. We have no options in Park City and many parents have had to get creative.

No taxes for 70 year Olds on Social security

the question asking if I am a householder or living in a house is inappropriate. Our house is held by a trust. We are all a part of it. Childcare is very difficult to find and affordable childcare is not existent.

Very difficult to find baby sitters and if you do very expensive. Concerned about shortage of day care and pre school availability and the high cost in Park City area.

Inclusivity. We don’t need more facilities that don’t care who the next generation is.

Our childcare needs have not kept pace with the growth of our community-plain and simple.

We desperately need more options for high quality, flexible care.

My answers are reflective of my current situation - two children in school. However one of the reasons I would not have any more children is the lack of affordable childcare in Park City. When my youngest was still in care it was over $1000 a month for just one child. When both my children were in care I was paying at a minimum double that. As a single mom that was a huge amount of my income that was crippling.

Wait lists for daycares in the Park City area are too long. I put in for a spot for my child before any of my immediate family knew I was having a baby because I was so worried I would not have childcare when I had to go back to work to the University of Utah.

We are lucky because we have close proximity to a high quality affordable childcare center near our home and work. Many of my friends have been trying to find care for their babies for almost a year. If they can find a spot, they can’t afford it. I love my kids teachers, but I see the stress it puts o them in the winter to commute in bad weather and spend hours stuck in traffic. I hope we are making it worth their while to continue to work up here and hope there will be more affordable housing options soon. I think the state, or city and county need to step up and help address this issue, but don’t see a lot desire from elected officials to address this issue.

Unaffordable, several viable options closed out without community support, quality educators moved, irreplaceable resources left this community, rents and cost of operating facilities make it economically impossible to create new early childcare centers in Park City

Childcare is not only unaffordable, but the ones available are also less than ideal from a staffing standpoint. If we make $180k per year and find it unaffordable, I cannot imagine what most of the employees that keep Park City operating are doing making half of that. It would be amazing for Park City to offer its own City/county daycare for district employees (speaking on behalf of friends in the district system) and for subsidies to be offered for those that cannot afford it. The district pre-schools being expanded would help tremendously and pressure should be applied to the resorts to offer childcare to their employees as well.

Childcare Supply and Demand Summary

2022 by Age Cohort	<5	5-9	10-14	15-19
	193	112	135	0
2022 Total Resident Childcare Demand	440			
2032 by Age Cohort	<5	5-9	10-14	15-19
	228	177	121	0
2032 Resident Childcare Demand	526			
	<5	5-9	10-14	15-19
New Demand from 2022 to 2032	35	65	-14	0
10 YR Resident Demand Increase 2022 to 2032	86			

2022 Imported Labor by Age Cohort	<5	5-9	10-14	15-19
2022 Imported Labor Demand	40	0	0	0
Total Imported Labor	40			
2032 Imported Labor by Age Cohort	<5	5-9	10-14	15-19
2032 Imported Labor Demand	47	0	0	0
Total Imported Labor	47			
New Demand from Imported Labor 2022 to 2032	7	0	0	0
10 YR Imported Labor Demand Increase 2022 to 2032	7			

Total Demand 2022	480
Total Demand 2032	573
10 Year Demand 2022 to 2032	93

2022 Infant Care	<2	2-<5	<5
Infant Care is a subset of the <5 Age Cohort Resident	125	68	193
Imported labor	28	11	40
Total 2022	153	79	233

2022 Income Stratification	<5	5-9	10-14	15-19	
	233	112	135	0	
Household Income <= 30% HAMFI	36	17	21	0	0.154
Household Income >30% to <=50% HAMFI	20	9	11	0	0.084
Household Income >50% to <=80% HAMFI	16	8	9	0	0.068
Household Income >80% to <=100% HAMFI	16	8	9	0	0.069
Household Income >100% HAMFI	145	70	84	0	0.623

Child Care Supply	<5	5-9	10-14	15-19
	309	53	53	53
Total Childcare Supply	468			

Infant Care Supply	<2
	72

Net Surplus or Gap	-12
Infant Care Gap	-81

End Notes

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[i] Office of Childcare Advisory Committee Meeting, (May 11, 2022), available at: https://www.utah.gov/pmn/files/846161.pdf.

[ii] Email from Shelle Allinson, Information Disclosure Officer, to Kristen Schulz, Early Childhood Alliance, (November 7, 2022) in response to GRAMA request, *see* Attachment 2.

[iii] Email from Jon Collins, Research Consultant, Utah State Board of Education to Kristen Schulz, Early Childhood Alliance, (March 18, 2022).

[iv] American Community Survey, 2021: ACS 5-Year Estimates, S1101 Households and Families, available at: https://data.census.gov/table?q=Park+City+Utah&tid=ACSST5Y2021.S1101.

[v] ESRI Business Analysis data from Jeffery B. Jones, AICP, Summit County Economic Development Department, (December 2022).

[vi] ESRI Business Analysis data from Jeffery B. Jones, AICP, Summit County Economic Development Department, (October 2022).

[vii] 2020 Decennial Census, DEC Summary File 3.

[viii] Utah State Board of Education, Fall Enrollment by Grade Levels and Demographics (November 2022), available at: https://schools.utah.gov/data/reports?mid=1424&tid=4.

[ix] 2020 Decennial Census, DEC Summary File 3.

[x] Data from Jeffery B. Jones, AICP, Summit County Economic Development Department, obtained from Lightcast Development, (January 2023).

[xi] Data from Jeffery B. Jones, AICP, Summit County Economic Development Department, obtained from Lightcast Development, (January 2023).

[xii] American Community Survey, Income in the Past 12 Months (in 2018 Inflation-Adjusted Dollars), Table S1901, available at: https://data.census.gov/table?q=Park+City+CCD,+Summit+County,+Utah+Income+and+Poverty&t=Income+(Households,+Families,+Individuals)&g=0100000US_0400000US49_1600000US4958070&tid=ACSST5Y2018.S1901.

[xiii] 2020 Decennial Census, DEC Summary File 3.

[xiv] Kem C. Gardner Policy Institute, University of Utah, Work/Life Balance Preferences: Utah Parents, Table 20, (September 2022) available at: https://gardner.utah.edu/wp-content/uploads/Family-Friendly-Sep2022.pdf.

[xv] National Center for Children in Poverty, Demographics of Family, Friend, and Neighbor Childcare in the United States (August 2008), available at: https://www.nccp.org/publication/demographics-of-family-friend-and-neighbor-childcare-in-the-united-states/#:~:text=FFN%20care%20is%20the%20most,for%20school%2Dage%20children).

[xvi] https://le.utah.gov/~2022/bills/static/HB0015.html.

[xvii] NAEYC, Uncertainty Ahead Means Instability Now, Utah, (December 2022), available at: https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/our-work/public-policy-advocacy/utah_naeyc_2022_fall_survey.pdf.

[xviii] Data based on email responses from providers in response to questions by Kristen Schulz, Early Childhood Alliance, (October 2022).

[xix] E-mail from Utah Child Care Licensing, Office of Licensing, DHHS, to Kristen Schulz, Early Childhood Alliance, (January 23, 2023).

[xx] Email from Valarie Vazquez, Director, Little Adventures Children's Center, To Kristen Schulz, Early Childhood Alliance, (January 24, 2023).

[xxi] Phone conversation between Kristen Schulz, Early Childhood Alliance, and Tracy Webb, Deer Valley, January 25, 2023.

[xxii] Email from Cindy Judkins, Deer Valley Children's Programs Manager, to Kristen Schulz, Early Childhood Alliance, (January 26, 2023).

[xxiii] Park City Education Foundation, *Preschool*, available at: https://pcef4kids.org/programs/preschool.html.

[xxiv] Park City School District, The Future of Learning, https://pcfutureoflearning.pcschools.us/bond-projects/.

[xxv] https://pcfutureoflearning.pcschools.us/wp-content/uploads/2021/09/Timeline.pdf; https://www.parkrecord.com/news/summit-county/park-city-school-district-ceases-construction-on-kearns-boulevard-campus/.

[xxvi] Email from Dr. Jill Gildea, Park City School District Superintendent, to Kristen Schulz, Early Childhood Alliance, (January 28, 2023).

[xxvii] Utah State Board of Education, Fall Enrollment by Grade Levels and Demographics (November 2022), available at: https://schools.utah.gov/data/reports?mid=1424&tid=4.

[xxviii] Jane Fillion, New Data Finds Childcare Prices Continue to Rise Ahead of Midterm Elections, Outpacing Inflation & Following Decades-Long Trend of Annual Increases, First Five Years Fund, (October 12, 2022), based on information provided by the Bureau of Labor Statistics Consumer Price Index, available at: https://www.ffyf.org/new-data-finds-childcare-prices-continue-to-rise-ahead-of-midterm-elections-outpacing-inflation-following-decades-long-trend-of-annual-increases/.

[xxix] U.S. Department of Labor, Women's Bureau, National Database of Childcare Prices, available at: https://blog.dol.gov/2023/01/24/new-childcare-data-shows-prices-are-untenable-for-families.

[xxx] University of Utah Department of Economics, *Utah 2021 Childcare Market Rate Study*, prepared for the Utah Department of Workforce Services Office of Childcare, (May 2021), available at: https://jobs.utah.gov/occ/occmarket.pdf.

[xxxi] The University of Utah, Costs of Attendance, Resident, Tuition and Fees, 2022-2023 Academic Year, available at: https://financialaid.utah.edu/tuition-and-fees/cost-of-attendance.php.

[xxxii] Childcare and Development Fund (CCDF) Program Final Rule, 81 Fed Reg 67438 at 67515 (9/30/2016) (Childcare Development Fund federal benchmark for affordable parent fees set at 7%); *see also* 45 C.F.R. §98.45(k); https://www.acf.hhs.gov/occ/faq/childcare-and-development-fund-final-rule-frequently-asked-questions.

[xxxiii] Data provided by childcare providers, parents and via website review by Kristen Schulz, Early Childhood Alliance, (October 2022-January 2023).

[xxxiv] DWS Financial/SNAP/Childcare Eligibility Manual, Table 3 (effective October 1, 2022), available at: https://jobs.utah.gov/Infosource/eligibilitymanual/Eligibility_Manual.htm.

[xxxv] Office of Childcare Advisory Committee Meeting, (May 11, 2022), available at: https://www.utah.gov/pmn/files/846161.pdf.

[xxxvi] Email from Shelle Allinson, Information Disclosure Officer, to Kristen Schulz, Early Childhood Alliance, (November 7, 2022) in response to GRAMA request, *see* Attachment 4; email from Utah Open Record Portal Team, to Kristen Schulz, Early Childhood Alliance, (February 6, 2023).

[xxxvii] NAEYC, Uncertainty Ahead Means Instability Now, Utah, (December 2022), available at: https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/our-work/public-policy-advocacy/utah_naeyc_2022_fall_survey.pdf.

[xxxviii] Department of Workforce Services Office of Child Care Advisory Committee Meeting (March 9, 2023), available at: https://www.utah.gov/pmn/files/951825.pdf.

[xxxix] NAEYC, Uncertainty Ahead Means Instability Now, Utah, (December 2022), available at: https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/our-work/public-policy-advocacy/utah_naeyc_2022_fall_survey.pdf.

[xl] Bipartisan Policy Center, States Face a $48 Billion Childcare Funding Cliff, (June 3, 2022), available at: https://bipartisanpolicy.org/blog/states-face-a-48-billion-childcare-funding-cliff/.

[xli] Bryce Covert, Early Learning Nation, Economists Find Investing in Childcare Will Dramatically Reduce Costs, Increase Mother's Employment and Increase Quality Care, (July 24, 2022), available at: https://earlylearningnation.com/2022/06/economists-find-investing-in-childcare-will-dramatically-reduce-costs-increase-mothers-employment-and-increase-quality-care/.

[xlii] U.S. Chamber of Commerce Foundation, *How Childcare Impacts Utah's Workforce Productivity and the State Economy*, available at: https://uw.org/wp-content/uploads/UntappedPotential_UTAH_011223_DIGITAL.pdf.

[xliii] Utah State Tax Commission, *Annual Report, Fiscal Year 2020-2021,* at pgs. 10 & 28, available at: https://tax.utah.gov/commission/reports/fy21report.pdf.

[xliv] Child Care Income Eligibility and Co-Payment, (effective October 1, 2022), available at: https://jobs.utah.gov/occ/provider/cctable4.pdf.

[xlv] Email from Ann Stockham Mejia, Childcare Subsidy Manager, to Kristen Schulz, Early Childhood Alliance, (October 31, 2022).

[xlvi] First Five Years Fund, *Early Childhood Education in Utah*, available at: https://www.ffyf.org/wp-content/uploads/2022/07/FFYF_Utah_2022.pdf.

[xlvii] Holy Cross Ministries' Promotor(as) are bilingual, bicultural outreach workers help individuals navigate the complexities of the healthcare system and other social services, such as the childcare subsidy. More information is available at: https://www.hcmutah.org/promotora-outreach-program/.

[xlviii] DWS Financial/SNAP/Childcare Eligibility Manual, Table 3 (effective October 1, 2022), available at: https://jobs.utah.gov/Infosource/eligibilitymanual/Eligibility_Manual.htm.

[xlix] Email from Ann Stockham Mejia, Child Care Subsidy Program Manager, Utah Department of Workforce Services, to Kristen Schulz, Early Childhood Alliance, (January 3, 2023).

[l] Center for the Study of Childcare Employment Jobs Tracker, (November, 2022) available at: https://cscce.berkeley.edu/publications/brief/childcare-sector-jobs-bls-analysis/.

[li] Stanford Center on Early Childhood, *Overdue: A New Child Care System That Supports Children, Families & Providers,* (December 2022), available at: https://static1.squarespace.com/static/5e7cf2f62c45da32f3c6065e/t/63a1d9582916181ff4b729be/1671551320275/overdue_new_child_care_system_factsheet_dec2022.pdf.

[lii] NAEYC, Uncertainty Ahead Means Instability Now, Utah, (December 2022), available at: https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/our-work/public-policy-advocacy/utah_naeyc_2022_fall_survey.pdf.

[liii] Andrea Buchanan, Park City School District Childcare Center Closing, KPCW, (August 15, 2022), available at: https://www.kpcw.org/park-city/2022-08-15/park-city-school-district-childcare-center-closing.

[liv] Child-Care and Early Education Providers Survey, write in response to question 29 by President of the Coop Board, Attachment 7 to the Summit County Childcare Needs Assessment.

[lv] Data from Jeffery B. Jones, AICP, Summit County Economic Development Department, obtained from Lightcast Occupation Snapshot Report, Q1 2023 Data Set for Childcare Workers.

[lvi] Data from Jeffery B. Jones, AICP, Summit County Economic Development Department, obtained from Lightcast Occupation Snapshot Report, Q4 2022 Data Set for Childcare Workers.

[lvii] Data from Jeffery B. Jones, AICP, Summit County Economic Development Department, obtained from Lightcast Occupation Snapshot Report, Q4 2022 Data Set for Childcare Workers.

[lviii] Data from Jeffery B. Jones, AICP, Summit County Economic Development Department, obtained from Lightcast Occupation Snapshot Report, Q4 2022 Data Set for Childcare Workers.

[lix] Stanford Center on Early Childhood, *Overdue: A New Child Care System That Supports Children, Families & Providers,* (December 2022), available at: https://static1.squarespace.com/static/5e7cf2f62c45da32f3c6065e/t/63a1d9582916181ff4b729be/1671551320275/overdue_new_child_care_system_factsheet_dec2022.pdf.

[lx] Utah Department of Workforce Services, Child Care Access in Utah (March 2020), available at: https://jobs.utah.gov/occ/ccaccess.pdf.

[lxi] Brion Economics, San Mateo County Child Care Needs Assessment-2022, (November 2022), available at: file:///C:/Users/kschu/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/VA50C333/SMC%202022%20Child%20Care%20Needs%20Assess%20Final%20Report.pdf.

[lxii] This capture rate was selected by Jeff Jones after reviewing several other child care demand models.

[lxiii] Elliot Haspel, "Perspective: America is barreling toward a child care cliff," *Deseret News*, (November 20, 2022), available at: https://www.deseret.com/2022/11/20/23466194/child-care-crisis-covid-aid-omnibus-spending-bill.

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Budget, Debt & Grants
Item Type: Staff Report
Agenda Section: OLD BUSINESS

Subject:
Discuss FY2023-24 City Manager's Recommended Budget
(A) Public Hearing

Suggested Action:

Attachments:
Budget Staff Report

City Council Staff Report

Subject: City Manager's FY24 Recommended Budget
Department: Budget, Debt, & Grants
Date: June 1, 2023
Type of Item: Administrative

Summary Recommendation

Over the last several months, the Budget Team has presented detailed aspects of the FY24 City Manager's Recommended Budget to the Council and the public. This report includes an update on the General Plan and information on the GO Recreation bond.

The City Council's feedback is requested in anticipation of adopting the final budget and fee schedule planned for June 22, 2023.

Background

The Budget Team presented the Tentative Budget on May 11, 2023, as required by State law. The Council adopted the Tentative Budget after holding extensive work sessions for several months to discuss detailed information on the proposed FY23 operating and capital budgets, answer Council questions, and receive public input. Below is a recap of the future scheduled budget meetings and topics:

- **June 1, 2023**: Review miscellaneous budget items, preview Budget Policy changes, and review Elected and Statutory Officer Compensation.
- **June 15, 2022**: Follow up on minor Fee Schedule changes, Budget Policy changes, and address any remaining miscellaneous or outstanding budget items.
- **June 22, 2023**: City Council will take public input, hold a public hearing, and consider adopting a Final FY24 Budget, Budget Policy, Fee Schedule, and Elected and Statutory Officer Compensation.

Analysis

General Plan Update Clarification

In FY24, the Planning Department will begin the process of updating the City's General Plan, a comprehensive guide for future growth, development, and preservation. The Planning Department will begin RFP development this summer and will release the RFP and begin work on the plan in FY24. While this is an exciting community project, it will consume significant resources monetarily and in professional staff time. Separately, an additional staff member is requested to help the Housing and Planning teams improve administrative and logistical support. In addition, we will continue our work on Small Area and Feasibility Plans and Land Management Code updates. This clarification is necessary due to a previous timeline that had been presented to Council, that was inadvertently moved up.

Recreation GO Bond
At the February 2, 2023, City Council meeting, Council supported a potential 2023 General Obligation bond for new recreation capital investments at the PC MARC, City Park, and the Park City Sports Complex.

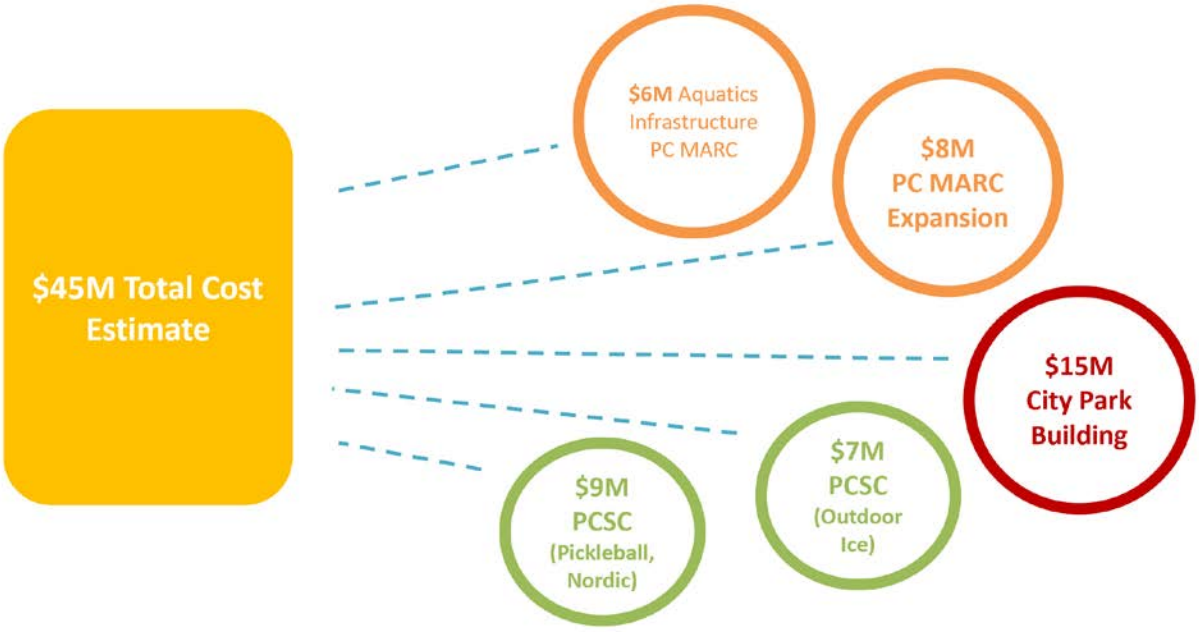
This came about because the City engaged VCBO Architecture to complete a study to evaluate the broad recreation needs of the community and create a master plan for future improvements at the PC MARC and the Park City Sports Complex at Quinn's Junction. A steering committee made up of representatives from PCMC, the Recreation Advisory Board (RAB), and members of the local pickleball community was formed to guide the master planning process and support VCBO in creating a master plan. The steering committee met over several months to develop concept designs for PC MARC & PCSC.

The first effort of the steering committee was to create and distribute a community-wide survey. This survey was created to provide the community with an opportunity for feedback on the existing recreation programs and facilities and to provide input on desired improvements.

Based on the survey results, RAB compiled a prioritized list of potential recreation capital project priorities:

1. **PC MARC Aquatics Infrastructure** - The recommended project concept replaces both outdoor pools and creates one large body of water that includes lap lanes, a zero-entry water feature, and youth and teen activity elements. By combining the two pools into one body of water, the PC MARC would have a more efficient operation as the pool would have only one mechanical and filtration system. A relocation of pools into one body of water would also reduce the number of lifeguards needed. The existing pools were constructed in 1991 and 2003, and have not had a significant renovation since.
2. **Rebuild City Park Building –** Recommended to create a 15,000 sq ft facility to house year-round childcare in the space as well as expand summer day camp occupancy and community uses when not used for summer camp. The childcare space could be built by PCMC and leased to a childcare provider, for example. This could help with the childcare conversation the community is having and support the demand for increased summer camp space. For example, for the past three years, the Day Camp has sold out within 10 minutes to an hour on the priority registration date for 84060 residents or employees. A rebuild could also include relocating the playground, basketball court, and volleyball court, as well as adding a splash pad and improved parking.
3. **PC Sports Complex (Pickleball, Nordic) –** The recommended project scope includes eight indoor and sixteen outdoor pickleball courts, 100 parking stalls, a Nordic training area, and improved trail access. The indoor pickleball courts are envisioned to be a utilitarian building with community spaces that could be used by trail users and others. The details of the space would be refined in future planning for the facility, and a variety of models have been discussed (public private partnerships, private fundraising, etc.).

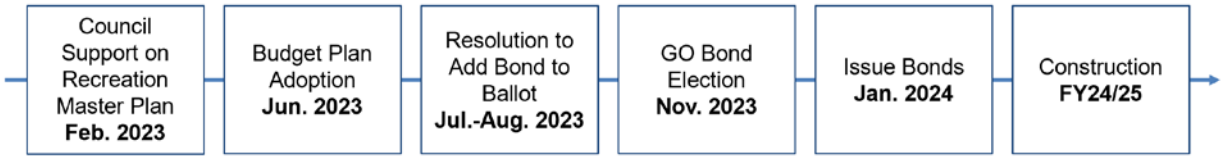
4. **PC MARC Fitness Expansion -** The recommended project concept identifies 14,000 sq ft of additional fitness space added in the proximity of the current lap pool. The space could be two stories and would be utilized for fitness and other community needs identified through a future public engagement process. This phase of the PC MARC would be completed well after the pools are relocated so the community could still have access to the lap pool in the meantime.
5. **PC Sports Complex (Outdoor Ice) -** This phase includes constructing a covered refrigerated outdoor ice sheet, building a bicycle pump track, expanding the existing trials and parks maintenance building, and installing field lights on the stadium field to the east of the ice arena. This phase could be built as part of the initial project as it would meet many community recreational needs and enhance support facilities, or it could be contemplated in a future phase.



Overall expenses for the projects are estimated to be upwards of $45M given the dramatic inflationary increases in the development and construction industry. Initially, we took the financial strategy alternatives to the RAB for their consideration. The RAB recommended a general obligation (GO) bond not-to-exceed $50M. Thereafter, Council seemed to prefer funding the City Park Building and MARC Aquatics out of the existing CIP funds and fund balance.

As part of the FY24 Final Budget, Council could adopt a budget strategy to execute a Recreation Bond. The projects that are not funded from the CIP fund balance are not currently in the Tentative Budget adopted by Council on May 11. However, Council may choose to add project budgets once a clear direction is given on a GO bond. Importantly, a Council FY24 Budget adoption does not authorize a GO Bond to be placed on the ballot. It does, however, provide initial policy direction to professional staff and important stakeholders.

A timeline for the potential steps involved if Council desires a General Obligation Bond is below:



As a result, we put together five different bonding scenarios for your consideration. The scenarios represent different grouping of projects, and financial strategies and impact.

Amount	Project	Scen A	Scen B	Scen C	Scen D	Scen E
$15M	City Park Bldg	Fund	Fund	Fund	Fund	Fund
$6M	Aquatics	Fund	Fund	Fund	Fund	Fund
$8M	MARC Expansion	GO	Delay	GO	GO	Delay
$9M	PCSC (Pickleball, Nordic)	GO	GO	Delay	GO	GO
$7M	PCSC (Outdoor Ice)	GO	GO	GO	Delay	Delay
	GO Total	$30M	$20M	$20M	$20M	$10M

PC Single Family Median						
Annual	Primary	$291.13	$194.08	$194.08	$194.08	$97.04
	Non-Primary	$529.32	$352.88	$352.88	$352.88	$176.44
Monthly	Primary	$24.26	$16.17	$16.17	$16.17	$8.09
	Non-Primary	$44.11	$29.41	$29.41	$29.41	$14.71

Preview of Budget Policies & Objectives

The City's Budget Policies and Objectives are adopted as part of the annual City Budget. Historical policies cover revenue management, fees, and rates, capital financing and debt management, reserves, capital improvement management, human resource management, and public service contracts. They also govern the stewardship of public funds and ensure transparency in the budgeting process.

On June 15, the Budget Department is proposing a comprehensive cleanup and reorganization of our Budget Policy to match current practices, procedures, and State Code. This will make the policies more clear and more concise. The changes include:

- More clear fund balance thresholds for each type of fund in the City;
- Reorganizing different sections to enhance comprehension;
- Consolidation of policies to reduce redundancy;
- Remove out-of-date policies; and
- Remove policies that don't belong in the Budget policies.

Department Review:

This report has been reviewed by the Budget, Legal, and City Manager departments.

Council Agenda Item Report

Meeting Date: June 1, 2023
Submitted by: Michelle Kellogg
Submitting Department: Sustainability
Item Type: Staff Report
Agenda Section: OLD BUSINESS

Subject:
Sundance Film Festival 2023 Debrief
(A) Public Input

Suggested Action:

Attachments:
2023 Sundance Film Festival Staff Report

City Council Staff Report

Subject: 2023 Sundance Film Festival Debrief
Author: Jenny Diersen
Department: Special Events
Date: June 1, 2023
Type of Item: Administrative – Work Session

Recommendation
Review and discuss an operational and economic impact debrief from the Sundance Institutes 2023 Sundance Film Festival (SFF).

Executive Summary
Each year following the SFF, the Sundance Institute and City evaluate the Festival's operational successes and challenges. Separately, the Sundance Institute obtains an independent economic impact evaluation, which includes the City and state of Utah. The work session is primarily an opportunity to hear directly from the Sundance Institute regarding community and economic benefits.

Analysis
PCMC entered into a long-term contract with the Sundance Institute in October 2013. There is an extensive background and history associated with the Sundance Film Festival, which can be found here. The 40th anniversary of the SFF will take place on January 18–28, 2024.

Park City's role as a host community is intrinsically linked to the continued success of SFF, providing incredible cultural and economic opportunities for our residents, students, visitors, and businesses. The combined dedication and effort of Sundance's staff and volunteers, City staff, and the collaborative effort of our community members and partners contribute to the Festival's overall success.

The items in the debrief should be carefully considered, as each item affects the overall success and operations during the Festival. We conducted an extensive post-event debrief with the community, internally, and with Sundance Institute. We are also evaluating the Festival's traffic circulation plans and will return at a subsequent meeting with alternatives to consider for the future.

This year's Festival returned to an in-person-only format for the first five days, and hybrid (in-person and virtual) the second half (Supplemental Plan; December 15, 2022 (report p. 926, minutes p. 16, and Supplemental Plan Amendment; January 12, 2023 report p. 84 / minutes p. 6). We saw numerous improvements in the areas of transportation, Festival operations, public safety, community engagement, and overall reduction of impacts. Sundance will provide updates on the following areas:

1. Economic Impact Report – Sundance will provide a verbal update during the work session, followed by an official written report.
2. Operational Items:

a. Supporting and advancing community's priorities–Sustainability, Transportation, Social Equity, and Accessibility. This will be presented by Sundance.
b. Improving Festival Information & Public Engagement- Outreach information includes Rules of the Road Permitting Guidelines, a Community Impact Guide (English & Spanish), and an after-Festival survey.
c. Finance & Licensing – Convention Sales Licenses, Convention Chain Business (CCB) Restrictions, and Vacancy Ordinance.
    i. We had 89 CSLs compared to 103 in 2020. Many unaffiliated groups seemed to wait until the last minute to obtain required permitting, even though we performed extensive outreach the about Rules of the Road in October.
    ii. This was the first year we reached the CCB limitations south of Heber. We have several unaffiliated CCBs that were not allowed storefront space.
    iii. Three storefronts were deemed dark, and one location did not obtain a one-time exception.

3. Transportation – We created a robust transportation plan focused on residential protection, transit priority, and traffic flow.
    a. On top of standard Winter Transit Service, including Richardson Flat service and micro transit service, we added 750 hours of increased transit. Overall Citywide, total ridership was 187,252 (*in 2020, it was 288,107 when the City and County were a unified system). On the first Saturday, more than 350 cars parked at the Richardson Flat Park and Ride. We are working to obtain ridership from High Valley Transit so we can have a better comparison to last year's ridership and hope to provide this update at the City Council meeting.
    b. Parking – Parking was heavily managed during the Festival and influenced by Special Event Parking rates. Even with a fee of $50 on Saturday, China Bridge reached capacity. The Flagpole Lot remained dedicated to employees throughout the Festival, and we saw strong utilization.
    c. One-Way Circulation – After the success of the one-way traffic pattern on Park Avenue during the 2020 SFF and extensive evaluation of several options, a one-way circulation pattern was developed to improve traffic flows on Main Street (p. 6 / minutes p. 1). We have tried many options to improve the traffic flow on Main Street over the years. We are doing a deep dive and evaluating traffic patterns from the debrief we held and will return at a future meeting to explore new possibilities.
    d. Residential Area Mitigation – Significant effort went into protecting residential areas within Old Town. While we had a few places to address, this was largely a success.
    e. Ski Resorts – For the first time, we saw both ski resort parking areas overflow during Sundance, which also exacerbated traffic congestion, particularly during egress.

Areas of focus for next year's Festival:

1. Revisit the circulation plan and look to balance and create a more dynamic transportation system and manage impacts.
2. In collaboration with HPCA, continue to improve communications and collaboration. We are confident that merchants and business owners are

receiving information, but in some cases, the information does not seem to reach all frontline employees. HPCA is involved throughout the process and have provided quality suggestions for improving Festival operations.

3. Continue to collaborate with the Institute and HPCA to identify opportunities for locals to engage in the Festival during the second week.

Funding

Included in the approved FY23 budget, City services are budgeted and tracked within individual department budgets, and are waived pursuant to the Agreement with Sundance and total $722,733. Additionally, per the Agreement and section E.11, we anticipate receiving an invoice from Sundance regarding annual contributions estimated at $320,000, which is also covered within the existing FY23 budget. This brings total costs to 1,043,373.

Item	Estimate	Actual Costs
Special Event Application Fee	$640	$640
Transit Services	$93,294	$93,294
Police Services	$336,190	$232,875
Kane Security	$200,000	$252,624
City Facility Use	$32,935	$32,925
Parks and Streets Equipment & Signs	$18,655	$18,655
Trash and Recycling	$11,760	$11,760
Maintenance - Increased Cleanings	$11,520	$11,520
Parking Removal of Main Street, Brew Pub, Swede Alley	$30,000	$30,000
Parking Passes for China Bridge	$18,000	$18,000
Building Permits	$17,000	$17,000
Park City Fire Standby	$12,000	$4,080
Estimated Annual Festival Payment	$310,000	$320,000
Totals	**$1,091,994**	**$1,043,373**
**Festival Sponsors Acura and Lyft pay the City for parking used on Swede Alley and Bob Wells Plaza (totaling $34,000)*		