PARKS & TRAILS MASTER PLAN

IMPACT FEE FACILITIES PLAN AND ANALYSIS

March 2023

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I. EXECUTIVE SUMMARY

The following section is for summary purposes only. Detailed information regarding the numbers and figures presented herein are provided in the body of this Ivins City Parks and Trails Master Plan (Impact Fee Facilities Plan and Analysis).

A. USER ANALYSIS

Ivins City has experienced tremendous growth, presenting both challenges and opportunities as the City strives to maintain a high quality of life in regard to parks and recreation for its citizens. Ivins City has been continuously working towards these improvements; an example of this can be seen in Figure I-1. A population and growth projection gives the City an idea of what future demands will be required and how the City should plan through that period. The following points have been calculated and presented in this study:

- Growth Rate of 1.6% - 2.5% Per Year
- 20-Year Planning Horizon or Period
- 10-Year Impact Fee Analysis Period
- Existing Estimated Projections for 2022:
  - Population = 9,031
  - Households = 4,269
- Future Estimated Projections for 2032:
  - Population = 11,225
  - Households = 5,474
- Future Estimated Projections for 2042:
  - Population = 13,513
  - Households = 6,677



Figure I-1: UNITY Park

B. INVENTORY

Providing an accurate inventory is important to determining the existing level of service (LOS) for the community. To accomplish this, an inventory was collected from City staff which includes quantitative information. The inventory compilation is a three-step process: preliminary data collection, site visits, and data review and compilation. Once this is complete, an existing LOS can be calculated as presented in this plan:

- Existing Facilities:
  - 13 Parks = 31.09 *developed acres*
  - 18 Trail Systems = 12.78 *miles*
- Existing LOS:
  - Parks = 3.38 *acres/1,000 people*
  - Trails = 1.42 *miles/1,000 people*

C. LEVEL OF SERVICE ANALYSIS

The level of service analysis focuses on the desired or target LOS needed to maintain or exceed the existing LOS. Discussion on the target LOS, as well as the future demands due to growth, are outlined in the respective section of the plan. It was determined that the current LOS for Ivins City is sufficient and should be maintained throughout the 20-year planning horizon. It should be noted, any desires to increase the LOS currently provided will need to be funded by means other than impact fees.

- Target LOS:
  - Parks = 3.38 *acres/1,000 people*
  - Trails = 1.42 *miles/1,000 people*
- Growth Demand for 20-Year Planning Horizon:
  - Parks = 15.15 *acres*
  - Trails = 6.36 *miles*
- Growth Demand for 10-Year Impact Fee Period:
  - Parks = 7.42 *acres*
  - Trails = 3.12 *miles*

D. IMPACT FEE FACILITIES PLAN

The facilities plan provides further analysis of the future LOS needed and then outlines an action plan and recommended capital improvements to guide the Parks & Recreation Department and the City for the next 20 years. Ivins City has indicated that they desire their citizens to have access to a public park within five minutes' walking time. With this goal in mind, the area of potential parks and the number of miles of trails identified exceeds the required area and mileage necessary to maintain the existing LOS. Thus, the additional parks and trails are merely proposed as options to fulfill the City's objectives over the 20-year planning horizon. The impact fee analysis only focuses on the requirements necessary to maintain the LOS with impact fees through the next ten years; this is intended to better help the City maintain compliance with the six-year expend or encumber requirement of Utah's Impact Fee Act.

- 20-Year Park Facilities Plan
  - 6 Parks Identified = 57.5 *acres*
  - Minimum City Park Size = 2.0 *acres*
- 20-Year Trail Facilities Plan
  - 22 Improved Trail Systems Identified = 22.27 *miles*
  - Trail Material = Asphalt
  - Minimum Trail Width = 10.0 *feet*
- 10-Year Impact Fee Facilities Plan
  - Three Parks Identified = 7.42 *acres*
  - No Trails Identified: *The City's near-term prioritized trail projects will either be required as a condition of development in lieu of sidewalk in the right-of-way or are included in the City's transportation impact fee.*
  - Planning Study Identified: 1 *study*

E. IMPACT FEE ANALYSIS

Impact fees are a major source of funding for capital projects. It is important to direct these funds toward parks and recreation improvements that will meet future needs of the community and follow the facilities plans detailed in this report. Collection and expenditure of impact fees shall be in accordance with Utah Code 11-36a-101.

- Existing Impact Fee = $3,594.15 *per ERU*
- Unit Costs for New Infrastructure
  - Parks = $519,671.71 *per acre*
  - Trails = $733,949.64 *per mile*
- Impact Fee Analysis Period = 10 *years*
- Total Impact Fee Eligible Costs = $5,730,492
- Household Increase = 1,205 *households*
- Proposed Maximum Allowable Impact Fee = ***$4,756 per household***

II. INTRODUCTION

This section reviews the purpose and scope of this master plan and analysis, provides background information, and identifies the plan's area or limits.

A. PURPOSE AND SCOPE

Ivins City commissioned Sunrise Engineering, Inc. to conduct a Parks and Trails Impact Fee Facilities Plan and Analysis. The City understands the importance of an early planning process to ensure that a comprehensive community-wide park and trail system fulfills the current and future recreational needs of Ivins City residents.

Parks and trails facilities are an integral part of the community. The location and attributes of a park and trail can have a vast impact on the type and course of growth in the community. Likewise, these facilities can enhance the quality of life, and contribute positively to a neighborhood's aesthetics.



Figure II-1: Ivins City Park

As directed by the City, the specific objectives of this plan are to analyze population growth rates and projections, identify existing parks and trails facilities, calculate a current level of service (LOS), establish a facilities plan and master plan to accommodate future growth, and perform a financial and impact fee analysis. Ultimately, the goal of this plan is to provide a general guide to the City for making decisions pertaining to future parks and trails development and to set an equitable and lawful impact fee structure to be able to carry out the growth-related portions of the plan.

B. BACKGROUND INFORMATION

Ivins City is in southern Utah in the southwest portion of Washington County. Ivins City is located to the northwest of St. George City and Santa Clara.

The terrain surrounding Ivins City is characterized by mild to steep slopes with some natural drainages passing through the City. Ivins is bordered to the north by large red rock cliffs of Red Mountain, Snow Canyon State Park, and the Red Cliffs Desert Reserve. The Santa Clara River flows southwest of the City.

Ivins City is characterized by its arid climate which is typically hot and relatively dry in the summer months and mild in the winter months. The average annual rainfall is approximately less than 10 inches, with higher rainfall accumulation occurring primarily in the winter months.

Due to the area's temperate climate and location, Ivins City has experienced moderate to high growth rates over the past 30 years, but this slowed significantly after 2008, cutting the decade average growth

rate in half. However, the growth rate returned to moderate increases until 2020 and then experienced a significant increase that is still currently happening.

As with any other community, growth and development in the area have fostered the need for additional parks and trails to support the population increase.

C. ANALYSIS AREA

Generally speaking, the master plan area is contained within the existing Ivins City limits; see Appendix A map entitled, "Location Map".

The north border of the City is almost entirely bounded by the Red Cliffs Desert Reserve and Snow Canyon State Park; no development is expected in the region, but it was necessary to coordinate connections as the Reserve provides additional recreation opportunities to the citizens of the City.

Ivins City abuts St. George City, the largest city in the county, to the east and Santa Clara City to the southeast. The Shivwits band of Paiute Indians Reservation also borders the City to the west. Considerations were made in this plan to connect to their facilities wherever seemed appropriate.

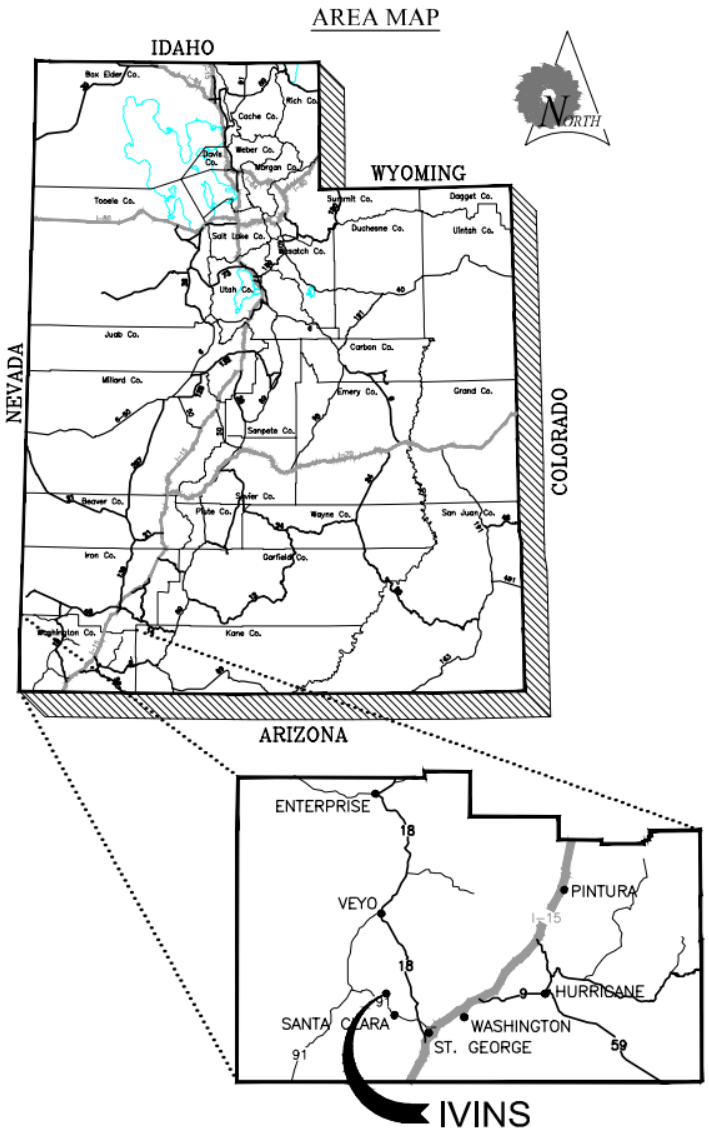


Figure II-2: Area Map

III. USER ANALYSIS

An important element in any community plan is a user analysis or a projection of the City's population growth rate. This projection gives the planner an idea of the future demands the City should plan for throughout the planning period. This section summarizes how the growth rate, planning period, population projections and capacity were calculated or obtained.

A. GROWTH RATE

To determine the level of service standard, projections for the population and growth rate must be calculated. Projecting the future population can be a subjective process, especially when historic growth trends are not anticipated to continue. With this in mind, Table III-1 summarizes periods of historic growth rates from official census data obtained from 1970 to 2010. 2020 data was provided via estimations made by the City in their 2020 Generic Master Plan. A table of these estimations can be found in Appendix B, Table B-1.

Table III-1: Historic Growth Rates

Year	Population	Annual Pop Growth rate (for previous decade)
1970	137	0.0%
1980	600	15.9%
1990	1,630	10.5%
2000	4,450	10.6%
2010	6,753	4.3%
2020	8,636	2.5%

Ivins City has grown significantly since 1970, with annual growth rates of 10%-16% until 2000. In discussion with the City, and to keep consistency between the City's master plans, the same population and projected growth data will be used here as was used in the 2020 Generic Master Plan. In that report, Ivins City established growth rates for each decade after 2010.

B. LENGTH OF PLANNING HORIZON

With approximate buildout occurring around the year 2060, this Parks and Trails Facilities Plan will use a 20-year planning period, beginning in the fiscal year 2022, and running through fiscal year 2042 when the population is projected to reach 13,513 people. The impact fee analysis included with this plan will use a 10-year calculation period. Importantly, Utah's Impact Fee Act requires that impact fees be spent and/or encumbered within six years of collection. To facilitate that requirement, the completion of the master plan facilities can be timed accordingly, phased, or projects may be financed and paid for over time. Planning for a wider period helps these decisions and represents smart planning.

C. POPULATION PROJECTION

An essential element in the development of this plan is the projection of the City's assumed growth rate within the planning horizon. It is important to understand that projected growth rates are not the cornerstone of this plan. If the projected population is reached earlier or later than anticipated, then future improvements to support growth may either come earlier or later. Impact fees should not be significantly affected if the actual rate of growth varies from the rate used in the plan.

Ivins City provided population estimates for each future decade in chapter two of their 2020 Generic Master Plan. Those estimates were then used to calculate the average growth rate percentage per year which was applied in the compound interest formula shown below.

$$F = P(1+i)^n$$

Where,
F = Future Value
P = Present Value
i = Growth Rate
n = Years

The current and projected populations were calculated using this formula and can be seen in Appendix B, Table B-2. Figure III-1 is an illustration of the data found in Table B-2.

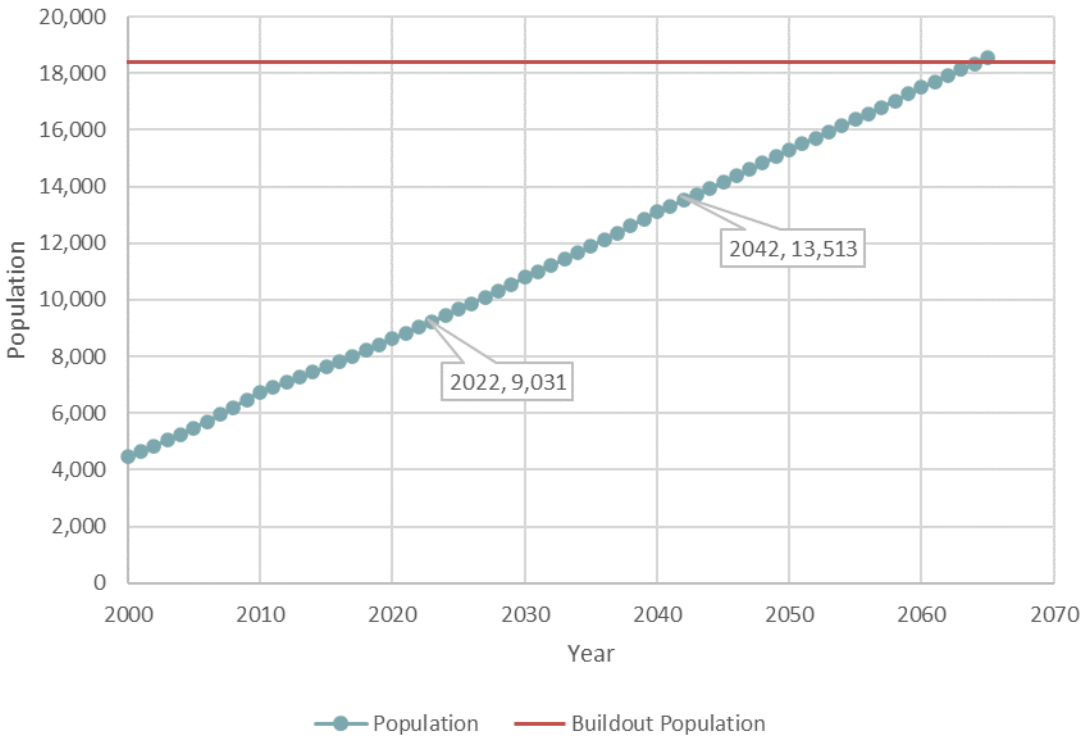


Figure III-1: Population Growth Table

D. HOUSING UNIT CAPACITY

Ivins City has asked that population projections match the Ivins City 2020 Generic Master Plan. It is important to note the population figures presented in this plan may not fully reflect the population capacity of Ivins City as it relates to total housing units.

A note from the Ivins City 2020 Generic Master Plan states that "A more recent analysis in March 2020 or GIS data from the County shows that 19.6% of properties with residential buildings are not primary residences…" The other 80.4% are to be considered primary residences. However, in determining an appropriate impact fee, both primary and non-primary residential homes will be used.

The 2020 Generic Master Plan provided the estimated number of primary resident households for the year 2020 to be 3,259 units. A table with this information can be seen in Appendix B Table B-1. The average yearly growth rate of households was then calculated based on the City's estimated number of

households in the following decade. Expected growth rates during the following decade were calculated to be 2.63%. Using the compound interest formula, the current number of households was then determined. The total number of households for 2020 was then determined to be 4,053 units since the provided primary resident households only account for 80.4% of the total number of units. The 2022 household estimate was determined to be 4,269 units, as shown below. Calculations for the current and projected population capacity are illustrated in the following equations.

Current Housing Unit Total (2022)

$$4{,}053\ households * (1 + 2.63\%)^2 = \mathbf{4{,}269\ households}$$

The number of primary resident households estimated in the 2020 Generic Master Plan for the year 2040 was 5,188 households. Expected growth rates during the following decade were calculated to be 1.72%. The estimated projected households only account for 80.4% of the total number of units, which is approximately 6,453 households.

20-year Housing Unit Total (2042)

$$6{,}453\ households * (1 + 1.72\%)^2 = \mathbf{6{,}677\ households}$$

From this information, the average number of people per household can be calculated as well as the total number of housing units. Table B-3 in Appendix B shows the yearly growth projections until 2042 using the same equation as shown above.

Table B-3 in Appendix B illustrates that the number of households at the end of the 10-year impact fee analysis period (in year 2032) is projected to be 5,474 households. Subtracting the current 4,269 households from the projected 5,474 households yields an increase of 1,205 households in that period. This is the number that is used as the denominator in the impact fee analysis.

E. NON-RESIDENTIAL UNITS

Consistent with previous parks and trails plans, the number of commercial, industrial, business, and non-residential units were not considered a part of this plan or analysis because their impact on the recreation within the City, at this time, is assumed to be negligible.

If it becomes apparent that these non-residential type units have an impact on the parks and trails facilities of Ivins City, the City may seek to perform additional analysis or impose an impact fee, but at this time no fee will be assessed.

IV. INVENTORY

This section seeks to inventory the existing parks and trails facilities within Ivins City, establish guidelines, standards, classifications, and existing LOS to be used throughout the facilities plan and in future parks and trails planning. Information was gathered from the City's Parks & Recreation and Public Works departments along with various site investigations and with information provided by City personnel.

A. NRPA GUIDELINES

The National Recreation and Park Association (NRPA) has identified and established standards for the development of park facilities to help communities set guidelines for the types, sizes, proximity, and number of recreational facilities that should be provided for the community (see Appendix C). The NRPA cautions communities that these standards are only guidelines, and that each community can adjust these standards to meet their individual requirements.

Ivins City is in a region known for a variety of outdoor recreational opportunities. Its proximity to state parks, national parks, hiking and biking trails, golf courses, national forests, etc. add to the recreational needs of the community. Therefore, it may not be necessary for the City to strictly adhere to these guidelines; however, these standards and guidelines are beneficial in planning and developing a recreational facilities plan.

Considering the unique features Ivins City has, combined with the NRPA's standard guidelines, recommendations for the planning, development, and facility guidelines have been set forth in this plan.

B. PARK & TRAIL CLASSIFICATION

Ivins City has various recreational demands and several types of facilities to meet these demands. Using the NRPA's standards as a basis, the park and trail classifications summarized in Table IV-1 have been identified as types of facilities that help meet the recreational demand of the community.

Following Table IV-1 is a description of each type of classification, general parameters that apply to the classification, specific examples of the classification, and if the classification is applicable to the overall LOS used in the impact fee analysis. A list of amenities in each existing park is shown in Appendix C.

Table IV-1: Ivins City Park & Trail Classifications

CLASSIFICATION	DESCRIPTION	TYPICAL SIZE	AREA SERVED	APPLICATION OF LOS
Private Park/Facility	Used to address limited or isolated recreational needs for private communities.	0.25 - 1 acre	0.15 mile radius	No
Special Use	Covers a broad range of parks and recreation facilities oriented toward single-purpose use.	0.1 - 1 acre	Variable	Yes
Neighborhood Park	Remains the basic unit of the park system and serves as the recreational and social focus of the neighborhood.	3 - 10 acres	0.4 mile radius	Yes
School Park	Often complement open space and could possibly serve in number of capacities such as a neighborhood park or youth athletic field.	Dependent upon school district	1 mile radius or boundary of school	No
Community Park	Serves broader purpose than neighborhood park. Focus is on meeting a wide range of recreational activities (passive, active, programmed sports, league play, tournaments, etc.) for the several neighborhoods or the entire community.	10 - 40+ acres	1.5 mile radius	Yes
Natural Resource Areas	Lands set aside for preservation of significant natural resources, remnant landscapes, open space and visual aesthetics or buffering.	Resource availability and Opportunity	Variable (usu. 0.4 mile radius)	No
Regional Park	Large recreation area that serves an entire city or region. Often includes multiple special use facilities and accommodates large numbers of people for a variety of day use activities.	Variable, large scale	Ivins City, Washington County, Southern Utah	No
Trail	Serves as paved transportation corridors for non-motorized modes of transportation. Used to interconnect parks, neighborhoods, downtown, and bordering cities and sites.	10 width, length varies	Ivins City and surrounding region	Yes
Unimproved Trail	Nature trails for pedestrians, which may use either hard or soft surfaces.	Width varies, length varies	Ivins City and surrounding region	No
Bike Route	Designated portions of the roadway for the preferential or exclusive use of bicyclists.	Width varies, length varies	Ivins City and surrounding region	No

i. Private Park/Facility



Figure IV-1: Private Clubhouse Area

Description: The private park/facility is the smallest park classification and is used to address limited or isolated recreational needs for private communities. They are generally developed within a residential area for the exclusive use of residents and are maintained through a neighborhood association. Even though all parks within this classification are private they still serve the recreational needs of the local neighborhoods, however, they are not a complete substitute for public recreation space. An example of this can be seen in Figure IV-1.

Location: Centrally located in a neighborhood, servicing a specific recreational need, or taking advantage of a unique opportunity. Often, the location of these private parks/facilities will be determined by the developer with the City often times negotiating final location.

Access: By way of interconnecting trails, sidewalks, or low-volume residential streets.

Desirable Size: 0.25 – 1 acre

Area Served: Variable

Examples: Private parks, private clubhouses

Application of LOS: No

ii. Special Use

Description: The special use classification covers a broad range of parks and recreation facilities oriented toward single-purpose use. These may be historical sites like historic buildings, gardens, amphitheaters, and cultural sites or specialized recreation facilities like age specific parks or activity specific facilities.

Location: Centrally located within its service area but this varies for each facility.

Access: By way of interconnecting trails, sidewalks, or low volume residential streets.

Area Served: Variable

Examples: Megan Park, Mohave Estates Park, Rocky Point Park

Application of LOS: Yes

iii. Neighborhood Park

Description: The neighborhood park remains the basic unit of the park system and serves as the recreational and social focus of the neighborhood. This type of park provides activities for all age groups and addresses the specific recreational needs of the nearby neighborhood it serves. Facilities may include play structures, picnic areas, shaded seating, soft and hard surface courts, restrooms, trails, and large informal open areas for unorganized play activities. Typically, parks in this classification have no lighted athletic fields for team competition, and no schedule for organized programs. An example of this can be seen in Figure IV-2.



Figure IV-2: Red Rock Park

Location: Centrally located within its service area and uninterrupted by non-residential roads and other physical barriers.

Access: By way of interconnecting trails, sidewalks, or low volume residential streets.

Desirable Size: 2 – 10 acres

Area Served: 0.4-mile radius

Examples: Del Coronado Park, Red Rock Park

Application of LOS: Yes

iv. School Park

Description: The school-park combines the resources of two public agencies and provides a range of recreational services and facilities to several neighborhoods that are served by a school. Depending on circumstances, school-park sites often complement open space and could possibly serve in several capacities, such as a neighborhood park or youth athletic field. Even though all parks within this classification are determined by the school district and location of schools, it is important to understand these schools serve the recreational needs of surrounding neighborhoods.

Location: Adjacent to a school facility.

Access: By way of interconnecting trails, sidewalks, and streets. Should have direct access from a collector level (larger) street.

Desirable Size: Dependent upon school district

Area Served: 1 mile or boundary of school

Examples: Red Mountain Elementary School, Vista School

Application of LOS: No

v. Community Park

Description: The community park is typically larger in size and serves a broader purpose than the neighborhood parks. Their focus is on meeting a wide range of recreational activities for several neighborhoods or sections of the community. They allow for group activities and offer other recreational opportunities not feasible – nor perhaps desirable – at the neighborhood level. Community parks can accommodate special events, gatherings, and can provide for a broad variety of activities and recreation opportunities. Community parks may be highly developed with amenities such as playgrounds, lighted athletic fields, programmed sports. These sports can accommodate specific needs of user groups and athletic associations based on demand and program offering. Community parks may also include large open spaces with sensitive environments such as wildlife habitat, river corridors, flood plains, greenways, and other protected open space and sensitive lands. An example of this park can be seen in Figure IV-3 and Figure IV-4.

Location: Community parks should be viewed as a strategically located community-wide facility rather than serving a defined neighborhood or area. They should not be adjacent to residential areas unless buffering (topographic breaks, vegetation, walls, etc.) is used, but more importantly the quality of the natural resource base should play a significant role in site selection. Identifying the location of these facilities is critical to avoid long term conflicts.



Figure IV-3: UNITY Park Field

Access: The site should be serviced by a collector level street and not through a residential road. Given that a community park will likely be used for types of league play and tournaments, access routes from outside the community should also be considered. The site should be easily accessible by way of interconnecting trails, as well.

Desirable Size: 10 – 40+ acres

Area Served: 1.5-mile radius

Examples: UNITY Park, Ivins City Park, Fire Lake at Ivins Reservoir, Desert Rose Park

Application of LOS: Yes



Figure IV-4: Ivins Reservoir

vi. Natural Resource Areas

Description: Natural resource areas are lands set aside for preservation of significant natural resources, remnant landscapes, open space, and visual aesthetics. These lands consist of individual sites exhibiting natural resources, are unsuitable for development but offer natural resource potential, or are protected lands. These areas may double as drainage ways, ponding areas, and utility easements.

Location: Resource availability and opportunity determine location.

Access: By way of interconnecting trails, sidewalks, or low-volume residential streets.

Desirable Size: Variable

Area Served: 0.4-mile radius

Examples: Kayenta Rock Park, Evening Star Park, Wintook Hill Open Space

Application of LOS: No

vii. Regional Park

Description: The regional park classification is a large recreation area that serves an entire city or region. The regional park often includes multiple special use facilities including golf courses, lakes, nature centers, campgrounds, state parks, national parks and a broad expanse of natural scenery or open space. Regional parks are designed to accommodate large numbers of people for a variety of day use activities. An example of this area can be seen in Figure IV-5.

Location: Often developed around a unique or significant resource or to emphasize a regional recreational interest. They also serve as a buffer and separation between communities or other areas.

Access: Regional parks are typically serviced by a main arterial.

Desirable Size: Variable, large scale

Area Served: Ivins City, Washington County, Utah

Examples: Snow Canyon State Park, Red Cliffs Desert Reserve, Santa Clara River Preserve, other Nearby State and National Parks

Application of LOS: No



Figure IV-5: Snow Canyon State Park

viii. Trail

Description: Trails or trail systems are generally transportation corridors for non-motorized modes of transportation such as walking, jogging, running, and cycling and provide valuable recreation and transportation opportunities for residents and visitors. They are used to interconnect parks,

neighborhoods, downtown, and bordering cities and sites. An example of this trail type can be seen in Figure IV-6.

Location: Generally located in natural corridors such as along streambanks and riverbanks and along washes. They may also be within the ROW of roads to allow safer pedestrian and cyclist routes than on the shoulder of the road.



Figure IV-6: Rocky Point Trail

Access: These trails should be serviced mainly by other park classifications to capitalize on existing facilities or features. All trails should interconnect and have access points to parks, residential roads, local connectors, and main thoroughfares.

Desirable Size: 10 feet in width, length varies

Area Served: Ivins City and surrounding region

Examples: Churchfield Trail, Padre Canyon Wash Trail, Rocky Point Trail

Application of LOS: Yes

ix. Unimproved Trail

Description: Unimproved trails emphasize a relationship with the natural environment. These are most often located within natural resource areas and greenways. Since regional and state parks often develop and maintain these types of trails, the need for them at the local level is often limited. They can provide a different opportunity for interconnectivity between other parts of the park system more oriented on the natural environment rather than city parks.

Location: Generally located in natural corridors but in more remote or less traveled areas than improved trails. Care should be taken to ensure preservation and enhancement of these natural corridors and habitat to maintain the fragile ecosystem in which they are placed.

Access: Since these trails are typically in remote areas, they may not be serviced by other park classifications. Some trails may require controlled access to preserve environmental features. Trails could interconnect and have access points to parks and residential roads.

Desirable Size: Width and length varies. Ivins City prefers to have 10 feet of trail width.

Area Served: Ivins City and surrounding region

Examples: Toe Trail, Red Mountain Trail, Hellhole Trail

Application of LOS: No

x. Bike Route

Description: Bikeways are paved segments of roadways that serve to safely separate bicyclists from traffic. Bike routes are essentially paved shoulders of segments of the roadway that serve this purpose. Bikeways serve commuters, fitness enthusiasts, and competitive athletes.

Location: Generally located along major arterial roads and major thoroughfare roads.

Access: Bikeways should be planned as stand-alone systems that connect to the off-street trail system.

Desirable Size: 5 feet in width, length varies (design standards should coincide with local, state, and federal standards).

Area Served: Ivins City and surrounding region

Examples: Snow Canyon Dr. Bike Route, Center St. Bike Route, Old Hwy 91 Bike Route

Application of LOS: No

xi. Additional Considerations

Ivins City has expressed an interest in adding bike lanes along major roadways in the City. Bike lanes differ from bike routes. Bike lanes are designated portions of the roadway, that are usually striped, for preferential or exclusive use by bicyclists. Constructing bike lanes over bike routes would be done at the discretion of the City.

C. EXISTING FACILITIES

Currently, there are 13 existing parks and 15 trails which are under the jurisdiction of the Ivins City Parks and Recreation Department. Maps of these parks and trail systems are found in Appendix A map titled "Existing Facilities" (Figure 2). Table IV-2 summarizes the acreage and names of the parks included in the existing facilities inventory. Table IV-3 shows the City's trails systems and their associated lengths that are part of the existing facilities inventory.

Table IV-2: Existing Parks

PARK NAME	CLASSIFICATION	DEVELOPED AREA *[acres]*	UNDEVELOPED AREA *[acres]*	EXISTING LOS AREA *[acres]*	TOTAL AREA *[acres]*
Abby Gale Shurtleff Park	Neighborhood Park	0.25	8.08	0.25	8.33
Del Coronado Park	Neighborhood Park	0.28	0.00	0.28	0.28
Desert Rose Park	Neighborhood Park	1.88	0.00	1.88	1.88
Evening Star Open Space	Natural Resource Areas	0.00	3.29	0.00	3.29
Fire Lake at Ivins Reservoir	Community Park	9.20	36.58	9.20	45.78
Ivins City Park	Community Park	3.26	0.00	3.26	3.26
Kayenta Rock Open Space	Natural Resource Areas	0.00	18.44	0.00	18.44
Megan Park	Special Use	0.26	0.00	0.26	0.26
Mohave Estates Park*	Special Use	0.56	0.00	0.00	0.56
Red Rock Park	Neighborhood Park	2.07	1.00	2.07	2.07
Rocky Point Park	Special Use	1.42	0.00	1.42	1.42
UNITY Park	Community Park	11.91	0.00	11.91	11.91
Wintook Hill Open Space	Natural Resource Areas	0.00	12.82	0.00	12.82
TOTAL		**31.09**	**80.21**	**30.53**	**110.29**

*Mohave Estates Park was donated and thus excluded from the existing Level of Service calculation.

Table IV-3: Existing Trails

Trail Name	Length *[miles]*
200 East Trail	1.35
400 South Trail	0.02
400 West Trail	0.41
800 South Trail	0.10
Kwavasa Drive Trail	0.57
Churchfield Trail	3.70
Ivins Reservoir Park Access	0.13
Ivins Reservoir Park Loop	1.12
Old Highway 91 Trail	0.05
Padre Canyon Wash Trail	0.31
Painted Hills Trail	0.23
Red Rock Trail	0.40
Snow Canyon Drive Trail	1.19
Taviawk Loop Trail	0.96
Toe Trail	0.14
Toe Trail Spur	0.19
Tuacahn Trail	1.43
UNITY Park Loop	0.48
TOTAL	**12.78**

V. LEVEL OF SERVICE ANALYSIS

This section sets forth goals set by Ivins City concerning parks and trails in the community, establishes a targeted LOS desired by Ivins City and quantifies the future demands on parks, trails, and recreation facilities necessary to maintain the existing LOS.

A. EXISTING LEVEL OF SERVICE

Establishing an existing level of service (LOS) is a fundamental part of an impact fee facilities plan and impact fee analysis. Specific terms used in this plan to characterize a level of service are defined as follows:

Existing LOS: The existing LOS is determined by calculating the total acreage of City-maintained park or mileage of City-maintained trail and dividing those totals by the current population per 1,000 residents. The "felt" level of service is the calculated LOS plus additional LOS not included in City offerings, such as national parks, BLM land, state parks, etc., which provide a "felt" LOS higher than the actual calculated LOS.

Target LOS: The level of service the City desires to attain categorized by parks and trails.

The LOS calculations only consider developed park acreage because that is the area that has been built. Undeveloped park acreage may be planned for future developed park acreage to achieve the target LOS. Based on the inventory, guidelines, and classifications, the existing LOS for Ivins City will be divided into two major classifications: Parks and Trails.

i. Parks

The existing LOS for parks is based upon an acreage per thousand people (acres/1,000 people) and will be divided into two sub-classifications: neighborhood parks and community parks.

To calculate the existing LOS, the area of each park is summed, then the total developed acreage is divided by the current estimated population and then multiplied by 1,000 as illustrated in the following equation.

$$\frac{Area\ of\ Parks}{9{,}031}(1{,}000) = Existing\ LOS$$

As illustrated in Table IV-2, while the City currently has 31.09 acres of developed park, the Mohave Estates Park was excluded from the level of service calculation on the basis that it was donated to rather than provided by the City for the benefit of its citizens. Thus, the area of parks utilized in the level of service calculation is 30.53 acres.

The figure of **3.38** (acres/1,000 people) is calculated to yield the existing developed LOS as shown in the equation below using values from Table IV-2.

$$\frac{30.53\ acres}{9{,}031\ people}(1{,}000) = \mathbf{3.38}\ acres/1{,}000\ people$$

ii. Trails

The existing LOS for trails is based upon a mileage per thousand people (miles/1,000 people) and is calculated in the same manner as was done for the parks LOS. The existing LOS for paved trails yields a figure of **1.42** (miles/1,000 people) as shown in the equation below using values from Table IV-3.

$$\frac{12.78\ miles}{9{,}031\ people}(1{,}000) = \mathbf{1.42}\ miles/1{,}000\ people$$

B. TARGET LEVEL OF SERVICE

For the target LOS to be established it is necessary to understand the existing LOS that is being provided to the citizens of Ivins City. After discussing the existing LOS with city officials, it was determined that the existing LOS is sufficient for the needs of the citizens of Ivins City. Since the citizens of Ivins City have access to numerous acres of state and federal land, it was determined that the NRPA suggested acreage of 6.0 acres per 1,000 residents is higher than appropriate for Ivins City. Additionally, any increase from the existing LOS to a higher target LOS requires funding from other fees besides impact fees (i.e., user fees or general fund).

Typically, a value of 6.0 acres of park per 1,000 residents is recommended by the NRPA but, this is generally for more urbanized cities. Regarding Ivins City, maintaining the existing LOS instead of trying to reach the NRPA recommendation was determined to be the best course of action, based upon the following points:

- NRPA standards are only guidelines, and each community can adjust these guidelines to meet their individual requirements.
- NRPA standards are tailored more for an urban environment.
- Ivins City is in an ideal location for outdoor recreation and access to numerous regional-type parks.
- Many of the recreational facilities such as trails, amphitheaters, regional parks, golf courses, etc. are not accounted for in the 6.0 acres of park per 1,000 residents but enhance the recreational opportunities for Ivins City residents.

The proposed facilities plan includes the parks and trails that the City would like to have at buildout and to fulfill their goal of providing an accessible park within five minutes' walking time of each resident. The required total area of parks, including existing, was calculated to be **62.19** acres, at a buildout population of 18,400 people, to maintain the existing LOS into the future. The required total miles of improved trails, including existing, was then calculated to be **26.13** miles, at the same buildout population of 18,400 people, to maintain the existing LOS for trails.

VI. IMPACT FEE FACILITIES PLAN

One reason Ivins City has experienced tremendous growth in the past 40 years is the quality of life it offers. It is the City's desire to provide proper planning so that this level of quality is maintained and enhanced. This section identifies proposed or future parks and trails and provides recommendations based upon the planning horizon for implementation of these facilities and ultimately, accomplishing the goal of maintaining the target LOS and quality of life in regard to parks and recreation found in Ivins City.

A. GROWTH DEMANDS

The additional growth demand or impact in terms of additional population during the planning period is calculated by taking the difference between future population at the end of the planning horizon (2042) and the current population (2022) as shown in the equation.

Projected Population Growth by 2042

$$13{,}513\ people - 9{,}031\ people = 4{,}482\ people$$

Once the population increase due to growth is calculated then this figure is simply multiplied by the target LOS to obtain the future target demand due to growth as shown in these equations.

Projected Facility Demand by 2042

Parks:

$$4{,}482\ people\ \left(\frac{3.38\ acres}{1{,}000\ people}\right) = \mathbf{15.15\ acres}$$

Trails:

$$4{,}482\ people\ \left(\frac{1.42\ miles}{1{,}000\ people}\right) = \mathbf{6.36\ miles}$$

This is the park acreage and trail mileage that should be built to match the target demand for growth in the 20-year planning horizon.

Similarly, the total required park acreage and trail miles can be calculated for the City at buildout.

Population Growth to Buildout

$$18{,}400\ people - 9{,}031\ people = 9{,}369\ people$$

The difference in population can then be multiplied by the target LOS to determine the required park acreage and trail miles needed to maintain the existing LOS at buildout.

Projected Facility Demand to Buildout

Parks:

$$9{,}369\ people\ \left(\frac{3.38\ acres}{1{,}000\ people}\right) = \mathbf{31.67\ acres}$$

Trails:

$$9{,}369\ people\ \left(\frac{1.42\ miles}{1{,}000\ people}\right) = \mathbf{13.30\ miles}$$

These values are not applicable to further calculations but provide an important reference point to help understand the future requirements of the City.

Lastly, the total required park acreage and trail miles for the 10-year impact fee analysis period can be calculated by the same process.

Projected Population Growth by 2032

$$11{,}225\ people - 9{,}031\ people = 2{,}194\ people$$

Projected Facility Demand to 2032

Parks:

$$2{,}194\ people\ \left(\frac{3.38\ acres}{1{,}000\ people}\right) = \mathbf{7.42\ acres}$$

Trails:

$$2{,}194\ people\ \left(\frac{1.42\ miles}{1{,}000\ people}\right) = \mathbf{3.12\ miles}$$

B. PARK FACILITIES PLAN

A Parks and Trails Master Plan provides Ivins City with direction in terms of park development to meet future demands and satisfy the recreational needs of the community. To meet future demands, six parks, with corresponding classification and approximate acreage have been identified and are itemized in Table VI-1.

Roughly, 57.5 acres have been identified as possible locations to convert into parks. A map identifying the potential location of each of these parks can be found in Appendix A Figure 4. Some of these parks are added to help the City achieve the goal of providing citizens with access to a park within five minutes of walking travel. The acreage proposed does increase the LOS provided and will require funding from other sources since impact fees cannot be applied to increase the existing LOS. For the purposes of the 10-year impact fee analysis horizon, only three of the parks have been selected to maintain the current LOS in the 10-year horizon, and only initial phases of these three projects could be implemented before

the LOS limit was reached. The three parks are highlighted in Table VI-1. These proposed parks service areas can be seen in Appendix A Figure 5.

Table VI-1: Proposed Parks

PARK NAME	CLASSIFICATION	TOTAL AREA *[acres]*	Park Type
Fitness Way Park	Community Park	4.5	New
400 W & 200 N Park	Community Park	5.0	New
400 E & 400 S Park	Community Park	10.0	New
Silver Sage Park	Community Park	10.0	New
North Kwavasa Park	Community Park	5.0	New
South Ivins Regional Park	Regional Park	23.0	New
	TOTAL	**57.5**	-

In certain instances, neighborhood parks are the responsibility of new development, to match the demand created by the development. These parks are sometimes built by the developer and then turned over to the City if the park meets four conditions: 1) minimum size of 2.0 acres, 2) satisfies an improvement according to the current Parks and Trails Master Plan, 3) park layout and amenities are agreed upon prior to construction, and 4) park is constructed according to City standards or better. This process can benefit both parties given that the new development is more appealing with a neighborhood park and the City acquires the park acreage required to be constructed by this plan and new development.

In the case of community parks, the City will generally be responsible for the development and construction of these types of facilities since they typically serve multiple neighborhoods and often require a great deal of planning to be strategically located to serve the entire community. Community parks typically provide large areas that may double as detention basins for storm water. The Ivins City storm drain utility, and the City in general, would benefit from having detention basins incorporated into public parks where detention facilities would be needed. Coordination with Ivins City Public Works is critical in knowing the location, size, and timeline for detention basins. For example, a detention basin may be needed and could potentially be incorporated at the site of 400 South Park near 400 East.

As shown previously, Ivins City's current LOS is 3.38 acres per 1,000 people. It is expected that this LOS will be maintained until buildout and can therefore be plotted against the population growth of the City. In Figure VI-1, the population was divided by 1,000 to match how the level of service is portrayed.

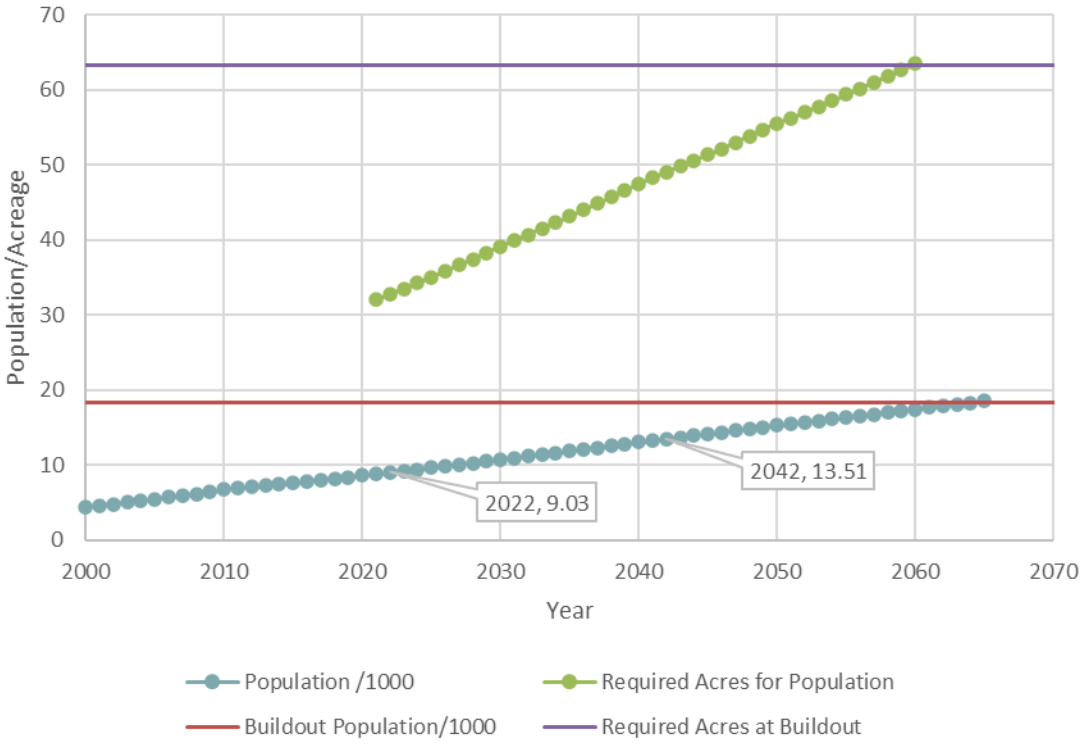


Figure VI-1: Required Acreage to Maintain LOS per 1,000 People

Of the 57.5 acres of park identified in this plan, only an average of 0.83 acres are required to be built per year to maintain the current LOS until buildout. Three of the six parks have been suggested for the City to focus on to help fulfill their goal of having a park within five minutes' walking time of each resident. If the 57.5 acres of proposed parks are pursued and implemented by buildout, the LOS of Ivins City will be raised to 4.78 acres/1,000 people by buildout at approximately year 2060. This would mean that 1.40 acres/1,000 people would need to be funded through means other than the impact fee fund.

It is important to note that UNITY Park has been completely paid off and is no longer eligible for financing via impact fees. To maintain the existing LOS within the 10-year impact fee analysis period, 7.42 acres of new developed park will need to be constructed. The selected parks have been highlighted in Table VI-1. These include Fitness Way Park, 400 W & 200 N Park, and 400 E & 400 S Park. The cumulative total area of these three parks exceeds 7.42 acres. Due to this, only initial phases of the parks may be constructed during the impact fee analysis horizon without raising the LOS. If the City desires to construct more than 7.42 acres of these parks within the 10-year horizon, it will need to do so with financing other than impact fees.

C. TRAIL FACILITIES PLAN

This section of the facilities plan provides Ivins City with direction in terms of trail development to meet future demands and emphasizes safe travel for pedestrians to and from parks and around the

Table VI-2: Proposed Trails

Trail Name	Length *[miles]*
Ivins Reservoir Loop East Connector*	0.08
Ivins Reservoir Loop North Connector*	0.38
Old Highway 91 Trail*	5.33
Red Rock Loop Connector*	0.33
Red Rock Park Loop*	0.53
200 East Trail	0.37
400 South Trail	1.41
400 West Trail	0.55
450 North Trail	0.67
800 South Trail	0.78
Kwavasa Drive Trail	3.47
Black Rock Trail	0.95
Churchfield Trail	1.60
Evening Star Drive Trail	1.04
Padre Canyon Wash Trail	0.23
Painted Hills Trail	0.20
Paiute Drive Trail	0.81
Pioneer Pkwy Trail	0.15
Puerto Drive Trail	0.51
Sage Way Trail	1.37
Taviawk Loop Trail	0.61
Toe Trail	0.92
TOTAL	**22.27**

*This trail will be required of the developer in lieu of sidewalk or is included in the City's transportation impact fee.

community. The focus is as much on transportation as it is on recreation. Table VI-2 identifies 22 trail systems, with corresponding approximate mileage, that the City has identified for possible future installation.

A total of approximately 22.27 miles of new trails, trail extensions, and trail systems have been identified as potential improvements in Ivins City. Near-term, prioritized trail segments have been highlighted in Table VI-2.

In most instances, trails will come with the arrival of new development. These trails are often built by the developer and then turned over to the City. If this is the case, the City requires the trail material to be asphalt, which complies with their standard specifications (esp. Standard Drawing R-10), and the trail must be ten feet in width at a minimum. This process benefits both parties given that the new development is more appealing with a network of trails and ties into the City trail system and the City obtains the constructed trail mileage needed by this plan and new development.

Since each of the near-term prioritized trails highlighted in Table VI-2 occur along public roadway rights-of-way and will be required of the developer as a condition of development or are included in the City's transportation impact fee analysis, these trail improvements are excluded from the impact fee analysis presented in this document.

D. ADDITIONAL CONSIDERATIONS

To help the City understand the level of service throughout the community, a set of maps entitled "Existing Theoretical Service Areas" (Figure 3) and "20-Year Proposed Theoretical Service Areas" (Figure 5) have been provided in Appendix A. These maps show the service area for the park classifications explained in Section IV.

When the service areas for multiple components, both existing and proposed, are plotted on a map a radius emerges that represents the cumulative service provided by that classification upon a geographic

area. These maps can be used to determine if there are areas with higher/lower levels of service, which in turn can be used in the park planning process.

All parts of the community will have different levels of service. For example, commercial and industrial areas might reasonably be expected to have lower levels of service for parks and trails opportunities than residential areas.

As Ivins City is between Snow Canyon State Park, St. George, Santa Clara, BLM land, and the Shivwits Band of Paiute Indians reservation, they have expressed interest in creating a trail network that connects to trails belonging to each of these entities to provide an interconnected regional trail network. The City has set a high priority to connect to these trails, but construction will be at the discretion of Ivins City.

VII. IMPACT FEE ANALYSIS

A final component to any community plan is an impact fee analysis or a calculation of costs attributed to growth within the planning horizon window. This calculation is considered an impact fee, or a payment of money imposed upon future development activity as a condition of development approval. This section includes a cost analysis of proposed improvements, impact fee calculations, cash flow analysis, and an impact fee certification.

A. EXISTING IMPACT FEE

As a result of the 2016 Impact Fee Analysis, the maximum allowable impact fee for parks and trails was $3,594.15 per residential unit. The actual impact fee that was adopted by City officials and is the current impact fee assessed is $3,594.15. Commercial and industrial properties are not charged a parks and recreation impact fee.

B. COST ANALYSIS

An important part of calculating any impact fee is understanding and estimating the costs associated with new infrastructure. The total cost for each classification has been divided into three cost categories:

Construction: The cost for construction was obtained from recent bid tabulations in neighboring communities for existing parks, trails, and recreation facilities. In recent years, construction of parks has seen a significant increase in costs. Inflation was considered and prices were increased based on the difference between when the bid tabulation was made and today.

Incidentals: Incidental costs such as planning, engineering design, and construction services, bidding and negotiating, inspection, preliminary engineering, environmental compliance, geotechnical reporting and testing, survey, origination fees, permitting, etc. were based upon previous projects and assumed to be 15% of the construction costs.

Land: Land costs for parks were based on pricing for raw land provided by Southern Utah Home Builders Association (SUHBA) and concurred by the City. Land for trails was assumed to be included within the roadway right-of-way (ROW) and required as a condition of development or included in the City's transportation impact fee and therefore was not included in the impact fee analysis in this plan.

The final unit costs calculated for all parks and trails including an impact fee facilities plan and analysis (IFFPA) update cost are summarized in the Table VII-1 in 2022 U.S. dollars. Detailed calculations on how these unit prices were calculated are found in Appendix D.

Table VII-1: Unit Cost Summary

COST CATEGORY	PARK ($/acre)	TRAIL ($/mile)	IFFPA (1 Plan)
Construction	$ 256,236.27	$ 638,217.08	-
Incidentals *(15%)*	$ 38,435.44	$ 95,732.56	
Land	$ 225,000.00	$ -	
Total	**$ 519,671.71**	**$ 733,949.64**	**$ 35,000.00**

Parks Cost: The eligible parks were based on the 7.42-acre demand needed to maintain the existing LOS through the 10-year impact fee analysis period. These parks, with their eligible acreage, were then multiplied by the previously calculated unit park costs. The selected parks can be seen in Table VII-2. Considering the current costs for each park and adjusting for inflation, the total estimated impact fee eligible cost for parks is **$5,695,492**. The percent impact fee eligible for each park was based on priority until the maximum acreage covered by impact fees was met.

Trails Cost: Because the near-term prioritized trails will be required as a condition of development in lieu of sidewalk or are included in the City's transportation impact fee, a cost for installing trail to meet growth-induced demand is not included in the impact fee analysis.

IFFPA Update Cost: This plan is recommended to be updated as frequently as needed based upon the needs and growth of the City, but typically every five years. Updates to this plan are considered 100% impact fee eligible and a single update to the plan is included in the amount of **$35,000**.

Table VII-2: Proposed Parks & Trails and Maximum Allowable Impact Fee

Name	Size	Current Costs	Start Year	% Impact Fee Eligible	Impact Fee Eligible	Costs at Project Start	Yearly Loan Payment	Impact Fee Eligible Costs
400 E & 400 S Park	10.0 *ac*	$ 5,196,717	2032	26.7%	$ 1,387,523	$ 1,864,716	$ 114,040	$ 2,280,798
400 W & 200 N Park	5.0 *ac*	$ 2,598,359	2028	50.0%	$ 1,299,179	$ 1,551,288	$ 94,872	$ 1,897,434
Fitness Way Park	4.5 *ac*	$ 2,338,523	2024	50.0%	$ 1,169,261	$ 1,240,469	$ 75,863	$ 1,517,261
Sage Way Park	5.0 *ac*	$ 2,598,359		0.0%	$ -	$ -	$ -	$ -
Silver Sage Park	10.0 *ac*	$ 5,196,717		0.0%	$ -	$ -	$ -	$ -
South Ivins Regional Park - Phase 1	23.0 *ac*	$ 11,952,449		0.0%	$ -	$ -	$ -	$ -
				Subtotal for Parks	***$ 3,855,964***	***$ 4,656,473***	***$ 284,775***	***$ 5,695,492***
Ivins Reservoir Loop North Connector*	0.38 *mi*	$ 278,974	2028	0.0%	$ -	$ -	$ -	$ -
Ivins Reservoir Loop East Connector*	0.08 *mi*	$ 59,706	2028	0.0%	$ -	$ -	$ -	$ -
Old Highway 91 Trail*	5.33 *mi*	$ 3,911,330	2022	0.0%	$ -	$ -	$ -	$ -
Red Rock Loop Connector*	0.33 *mi*	$ 239,723	2035	0.0%	$ -	$ -	$ -	$ -
Red Rock Park Loop*	0.53 *mi*	$ 386,784	2035	0.0%	$ -	$ -	$ -	$ -
				Subtotal for Trails	***$ -***	***$ -***	***$ -***	***$ -***
IFFP/IFA		$ 35,000	2023	100.0%	**$ 35,000**			**$ 35,000**
				Total	**$ 3,890,964**	**$ 4,656,473**		**$ 5,730,492**
*This trail will be required as a condition of development in lieu of sidewalk in the right-of-way or is included in the City's transportation impact fee.						**No. New Households**		**1,205**
						Impact Fee per Household		**$ 4,756**

C. PROPOSED IMPACT FEE

The impact fee facilities plan, included in Section VI, outlined the demand or impact to be placed on the Ivins City parks and trails facilities by growth and development. If only impact fees are used to build new developed parks and trails, the target LOS will be reached.

The above-mentioned cost analysis provides estimated costs for those planned improvements and gives a detailed perspective of how these costs apply to impact fees. Outside funding sources may be available to improve the parks and trails in Ivins. Other funding sources were not considered in this analysis; however, they may be sought after to increase the LOS of parks and trails above and beyond what impact fees will pay.

The general idea behind calculating a proposed impact fee amount is relatively simple: the total impact fee eligible expenses are divided by the total additional growth, or in this case, the growth in total households as calculated in Section III. The calculations for determining the proposed impact fee amount are shown in the equation below and the result of this equation can be seen in Table VII-2.

$$\frac{\$5{,}730{,}492}{1{,}205\ households} = \$\mathbf{4{,}756}\ \boldsymbol{per\ household}$$

This figure represents the maximum amount that can be charged per household. The City Council may set the actual impact fee, but it may not exceed this maximum amount.

A cash flow spreadsheet has been completed to show the collection and expenditure of impact fee funds based on the maximum allowable impact fee amount of $4,756 and is found in Appendix E.

The total acreage available for impact fees was determined to be the required acreage of parks needed to maintain the current LOS. To simplify calculations for percent eligibility, the proposed parks and trails to be built during the 10-year impact fee analysis period only show the acreage that is 100% impact fee eligible.

The total existing impact fee eligible acreage of existing parks is 30.53 acres. The existing parks acreage divided by the current 9,031 residents yields an impact fee eligible level of service of 3.38 acres per 1,000 people. Multiplying this level of service by the additional 2,194 people estimated to move into city boundaries by 2032 yields the maximum area of park eligible for impact fees of 7.42 acres. Focusing on the City's goal to have a park available within five minutes' walking time of most residents, portions of three parks were selected to be built as community parks in the 10-year impact fee analysis horizon.

This analysis meets the impact fee facilities plan requirements. Minor adjustments to actual facilities, such as location, size, and function may be necessary based on how future growth actually progresses.

D. IMPACT FEE RELATED ITEMS

In general, it is beneficial to update this impact fee facilities plan and analysis at least every five years, or more frequently if drastic growth or changes affect the assumptions and data in this plan. It is assumed that this plan will be updated as recommended.

There are a few items relating to impact fees that Ivins City must consider when planning for, collecting, and expending impact fees in accordance with Utah Code 11-36a-101.

City staff must understand that impact fees can only be expended for a system improvement that is identified in the impact fee facilities plan and that is for the specific facility type for which the fee was collected. Impact fees must be expended or encumbered for a permissible use within six years of their receipt unless 11-36a-602(2)(b) applies. Also, impact fees must have a proper accounting (track each fee in and out) in accordance with Utah Code 11-36a-601.

In accordance with Utah Code 11-36a-306, a certification of impact fee analysis is found in Appendix F.

APPENDIX A – MAPS

Ivins City Parks and Trails Master Plan

Location Map



Map Legend

Ivins City Municipality

N
W E
S

0 4,000 8,000

1in=4,000ft

IVINS CITY

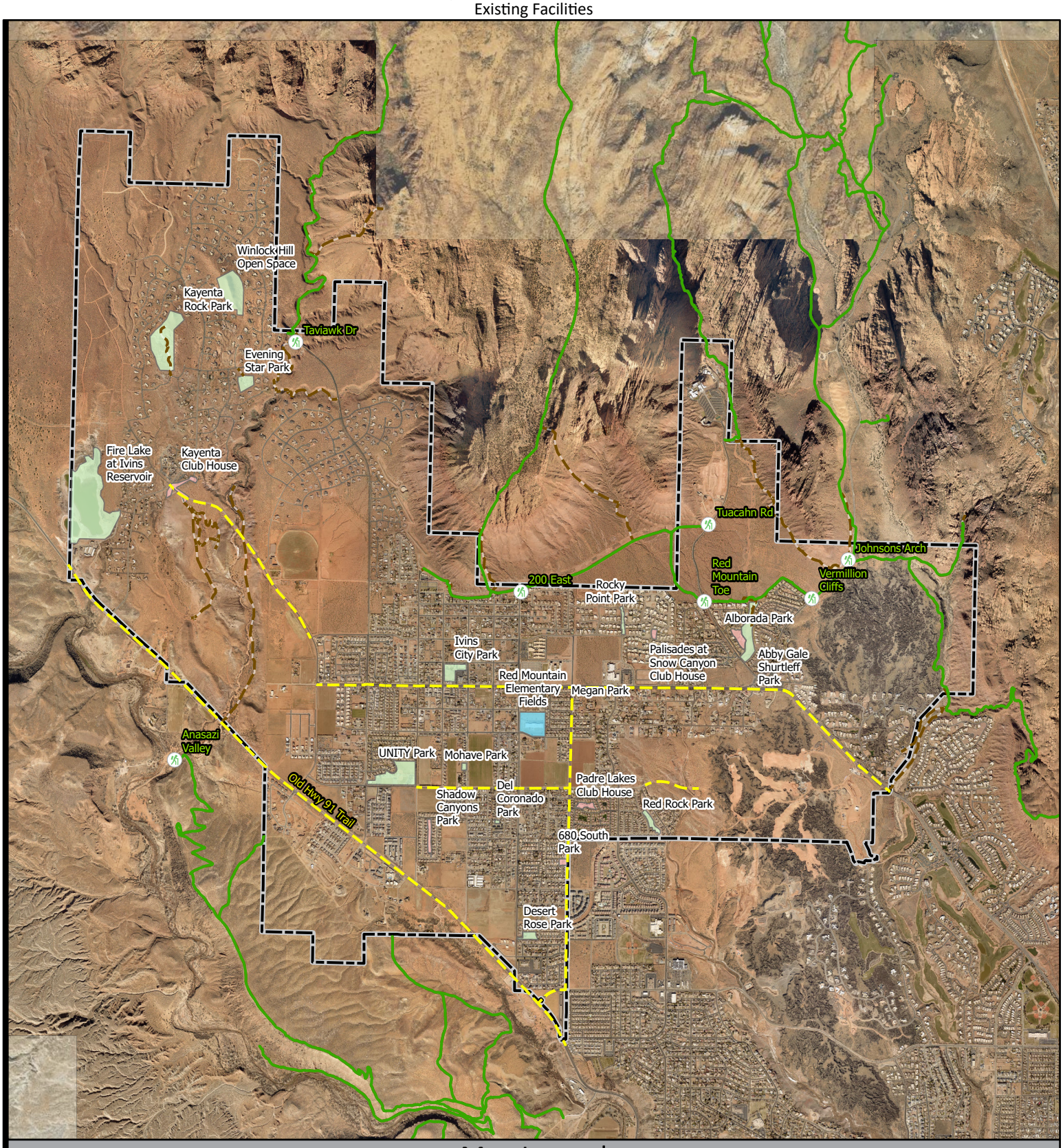
11 North 300 West, Washington City, Utah 84780, Tel 435.652.8450
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SEI NO.	DESIGNED	DRAWN	CHECKED	Figure 1
08011	MG	CD	JP	Updated 1/20/2023

SUNRISE ENGINEERING

Ivins City Parks and Trails Master Plan

Existing Facilities



Map Legend

School Parks
Private Parks
Ivins City Parks
Ivins City Municipality
BLM Trails
Existing Trails
Existing Unimproved Trails
Existing Bike Route
BLM Trailheads

N
W E
S

0 3,500 7,000

1in=3,500ft

IVINS CITY

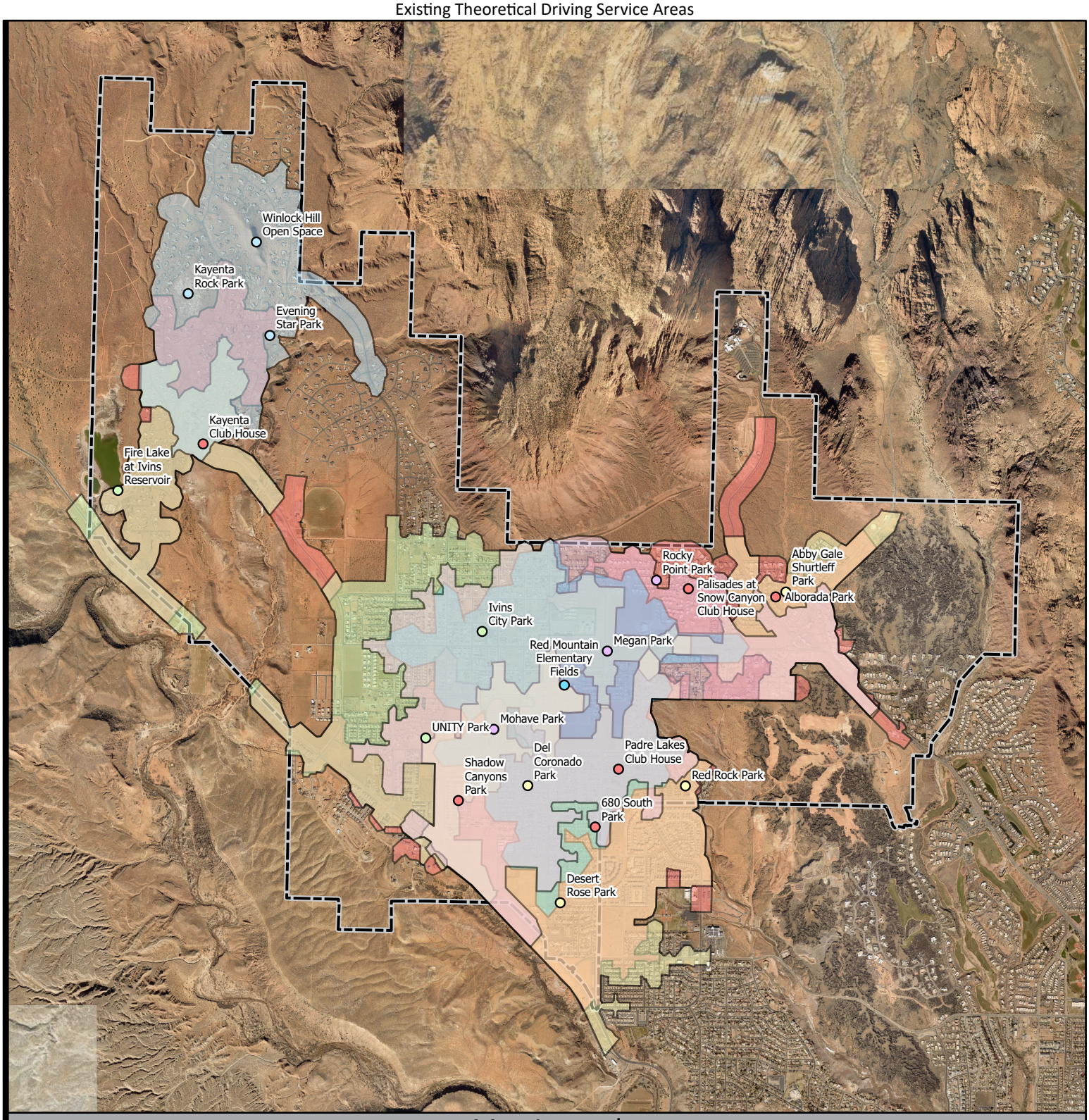
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SEI NO.	DESIGNED	DRAWN	CHECKED	Figure 2
08011	MG	CD	JP	Updated 1/20/2023

SUNRISE ENGINEERING

Ivins City Parks and Trails Master Plan

Existing Theoretical Driving Service Areas



Map Legend

- Private Parks 2.5 Minute Drive Time
- Special Use Parks 2.5 Minute Drive Time
- Natural Resource Areas 2.5 Minute Drive Time
- Neighborhood Parks 2.5 Minute Drive Time
- School Parks 2.5 Minute Drive Time
- Community Parks 2.5 Minute Drive Time
- Ivins City Municipality

- Private Parks
- Ivins City Special Use Parks
- Ivins City Natural Resource Areas
- Ivins City Neighborhood Parks
- School Parks
- Ivins City Community Parks

N W E S

0 3,500 7,000

1in=3,500ft

IVINS CITY UTAH

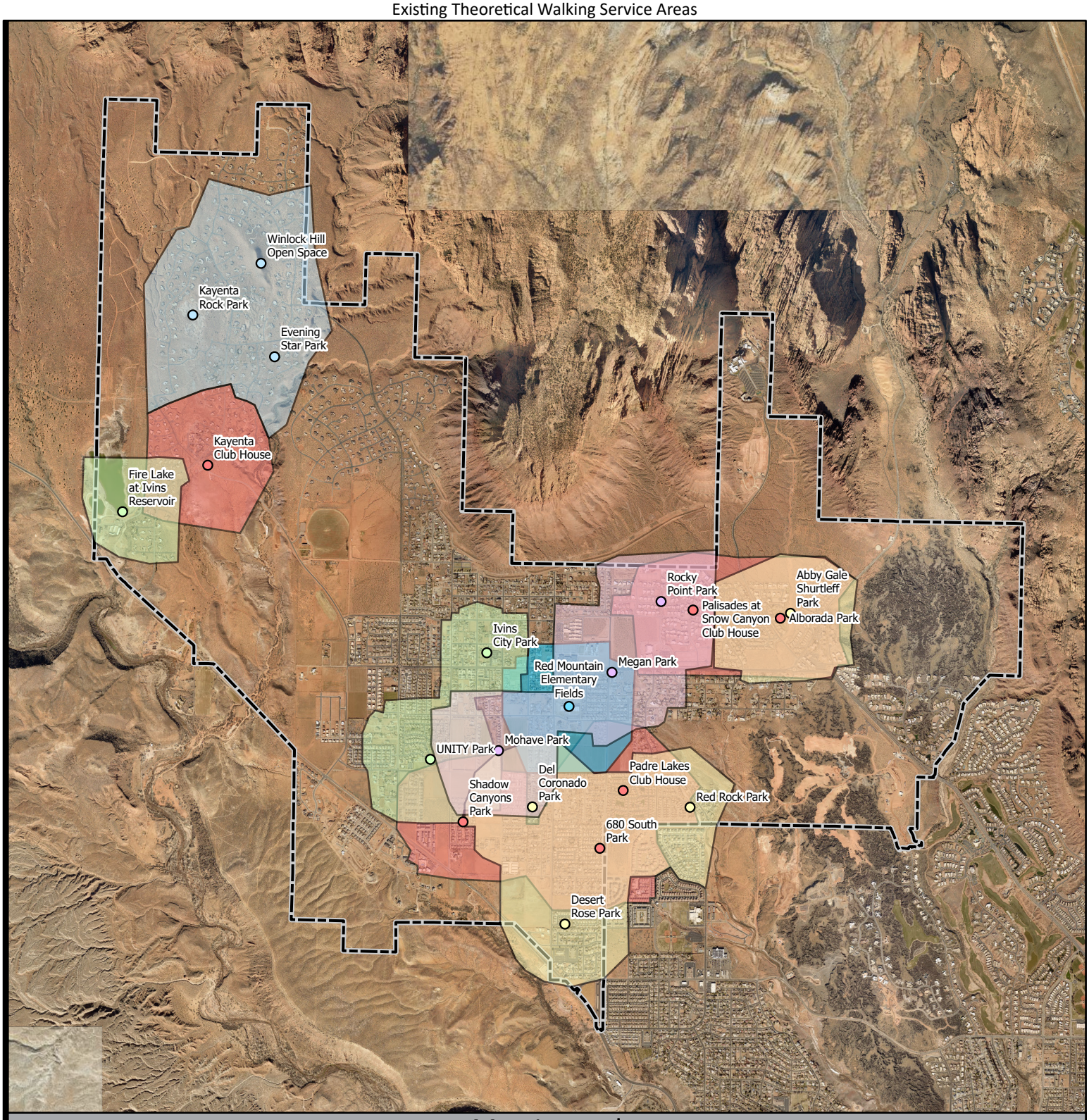
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SEI NO.	DESIGNED	DRAWN	CHECKED	Figure 3A
08011	MG	CD	JP	Updated 1/20/2023

SUNRISE ENGINEERING

Ivins City Parks and Trails Master Plan

Existing Theoretical Walking Service Areas



Map Legend

- Private Parks 5 Minute Walking Time
- School Parks 5 Minute Walking Time
- Community Parks 5 Minute Walking Time
- Neighborhood Parks 5 Minute Walking Time
- Natural Resource Areas 5 Minute Walking Time
- Special Use Parks 5 Minute Walking Time
- Ivins City Municipality
- Private Parks
- Ivins City Special Use Parks
- Ivins City Natural Resource Areas
- Ivins City Neighborhood Parks
- School Parks
- Ivins City Community Parks

N W E S

0 3,500 7,000

1in=3,500ft

IVINS CITY UTAH

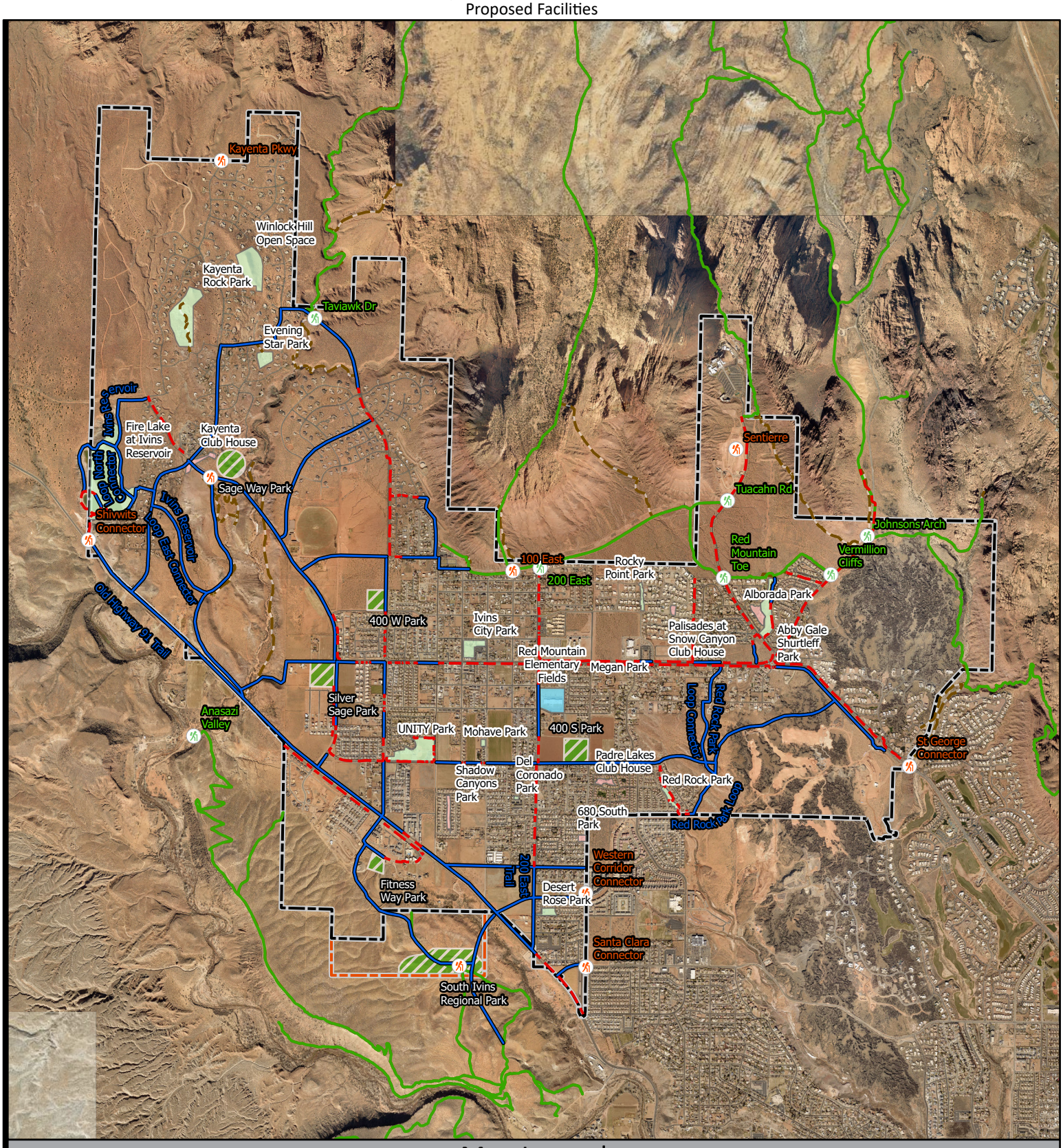
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SEI NO.	DESIGNED	DRAWN	CHECKED	Figure 3B
08011	MG	CD	JP	Updated 1/20/2023

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Ivins City Parks and Trails Master Plan

Proposed Facilities



Map Legend

- School Parks
- Private Parks
- Ivins City Parks
- Planned Ivins City Parks
- Ivins City Municipality
- Proposed Ivins City Municipality Annexation
- Existing Improved Trails
- Existing Unimproved Trails
- BLM Trails
- Planned Improved Trails
- BLM Trailheads
- Proposed Trailheads

0 3,500 7,000

1in=3,500ft

N W E S

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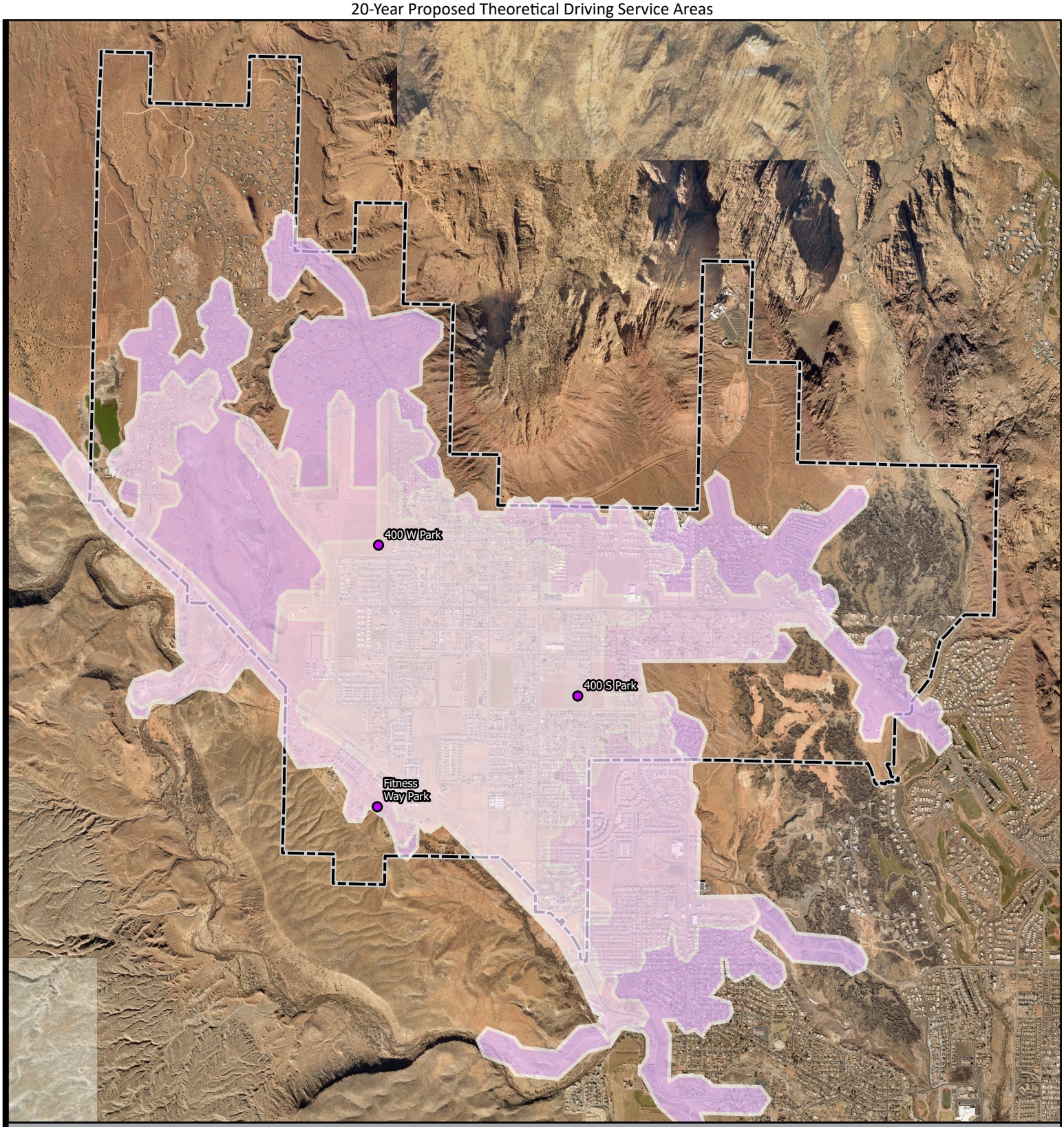
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SEI NO.	DESIGNED	DRAWN	CHECKED	Figure 4
08011	MG	CD	JP	Updated 2/28/2023

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Ivins City Parks and Trails Master Plan

20-Year Proposed Theoretical Driving Service Areas



Map Legend

Ivins City Municipality

Planned Parks 5 Minute Drive Time

Planned Ivins City Parks

N

W E

S

0 3,500 7,000

1in=3,500ft

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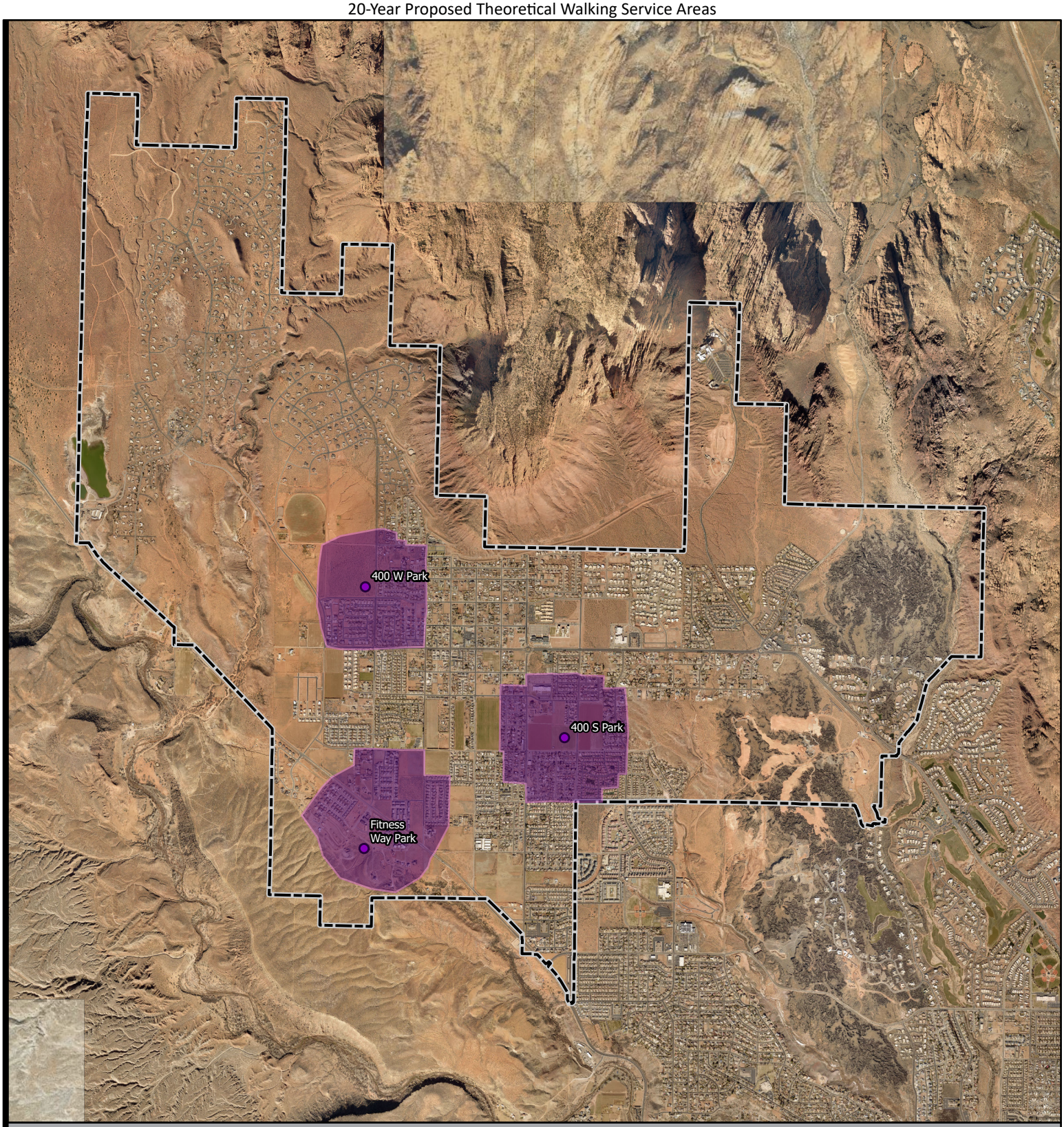
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08011	MG	CD	JP	Updated 2/28/2023

Figure 5A

SUNRISE ENGINEERING

Ivins City Parks and Trails Master Plan

20-Year Proposed Theoretical Walking Service Areas



Map Legend

Ivins City Municipality

Planned Parks 5 Minute Walking Time

Planned Ivins City Parks

N
W E
S

0 3,500 7,000

1in=3,500ft

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Figure 5B

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APPENDIX B – POPULATION AND GROWTH PROJECTIONS

Table B- 1: City Estimates on Population & Housing Growth by Decade (2020 Generic Masterplan Ch. 2)

Year	Population	Population % Growth	Total Housing Units	Total Residences % Growth	Resident Households*	Household Size	**Annual Pop Growth rate (for previous decade)**	**Annual Household Growth rate (for previous decade)**
1970	137							
1980	600	338%					15.92%	
1990	1630	172%					10.51%	
2000	4450	173%	1690		1435	3.10	10.56%	
2010	6753	52%	2880	70%	2427	2.78	4.26%	5.48%
2020	**8636**	**28%**	**4053**	**41%**	**3259**	**2.65**	**2.49%**	3.48%
2030	**10800**	**25%**	**5253**	**30%**	**4223**	**2.56**	**2.26%**	2.63%
2040	**13100**	**21%**	**6453**	**23%**	**5188**	**2.52**	**1.95%**	2.08%
2050	**15300**	**17%**	**7653**	**19%**	**6153**	**2.49**	**1.56%**	1.72%
2060†	**17500**	**14%**	**8853**	**16%**	**7118**	**2.46**	**1.35%**	1.47%
2070	**19700**	**13%**	**10053**	**14%**	**8083**	**2.44**	**1.19%**	1.28%

Table B- 2: Population Yearly Growth Estimates Based on City Estimates

Year	Source	Population	Growth
2000	Census	4,450	10.6%
2001	Estimate	4,640	4.3%
2002	Estimate	4,837	4.3%
2003	Estimate	5,043	4.3%
2004	Estimate	5,258	4.3%
2005	Estimate	5,482	4.3%
2006	Estimate	5,715	4.3%
2007	Estimate	5,959	4.3%
2008	Estimate	6,213	4.3%
2009	Estimate	6,477	4.3%
2010	Census	6,753	4.3%
2011	Estimate	6,921	2.5%
2012	Estimate	7,093	2.5%
2013	Estimate	7,270	2.5%
2014	Estimate	7,451	2.5%
2015	Estimate	7,637	2.5%
2016	Estimate	7,827	2.5%
2017	Estimate	8,022	2.5%
2018	Estimate	8,221	2.5%
2019	Estimate	8,426	2.5%
2020	City Estimate	8,636	2.5%
2021	Estimate	8,831	2.3%
2022	Estimate	9,031	2.3%
2023	Estimate	9,235	2.3%
2024	Estimate	9,444	2.3%
2025	Estimate	9,658	2.3%
2026	Estimate	9,876	2.3%
2027	Estimate	10,099	2.3%
2028	Estimate	10,328	2.3%
2029	Estimate	10,561	2.3%
2030	City Estimate	10,800	2.3%
2031	Estimate	11,011	1.9%
2032	Estimate	11,225	1.9%
2033	Estimate	11,444	1.9%
2034	Estimate	11,667	1.9%
2035	Estimate	11,895	1.9%
2036	Estimate	12,126	1.9%
2037	Estimate	12,363	1.9%
2038	Estimate	12,604	1.9%
2039	Estimate	12,850	1.9%
2040	City Estimate	13,100	1.9%
2041	Estimate	13,305	1.6%
2042	Estimate	13,513	1.6%

Table B- 3: Total Housing Yearly Growth Estimates Based on City Estimates

Year	Source	Population	Growth
2010	Census	2,880	5.5%
2011	Estimate	2,980	3.5%
2012	Estimate	3,084	3.5%
2013	Estimate	3,191	3.5%
2014	Estimate	3,302	3.5%
2015	Estimate	3,417	3.5%
2016	Estimate	3,535	3.5%
2017	Estimate	3,658	3.5%
2018	Estimate	3,785	3.5%
2019	Estimate	3,917	3.5%
2020	City Estimate	4,053	3.5%
2021	Estimate	4,159	2.6%
2022	Estimate	4,269	2.6%
2023	Estimate	4,381	2.6%
2024	Estimate	4,496	2.6%
2025	Estimate	4,614	2.6%
2026	Estimate	4,735	2.6%
2027	Estimate	4,860	2.6%
2028	Estimate	4,987	2.6%
2029	Estimate	5,119	2.6%
2030	City Estimate	5,253	2.6%
2031	Estimate	5,362	2.1%
2032	Estimate	5,474	2.1%
2033	Estimate	5,587	2.1%
2034	Estimate	5,704	2.1%
2035	Estimate	5,822	2.1%
2036	Estimate	5,943	2.1%
2037	Estimate	6,067	2.1%
2038	Estimate	6,193	2.1%
2039	Estimate	6,322	2.1%
2040	City Estimate	6,453	2.1%
2041	Estimate	6,564	1.7%
2042	Estimate	6,677	1.7%

APPENDIX C – NRPA STANDARDS AND GUIDELINES

Table C- 1: NRPA Parks Classifications

PARKS AND OPEN SPACE CLASSIFICATIONS				
Classification	**General Description**	**Location**	**Size Criteria**	**Application of LOS**
Mini-Park	Used to address limited, isolated or unique recreational needs	Less 1/4 mile distance in residential setting	Between 2500 sq. ft. and one acre in size	No
Neighborhood Park	Neighborhood park remains the basic unit of the park system and serves as the recreational and social focus of the neighborhood. Focus is on informal activity and passive recreation.	1/4 mile to 1/2 mile distance and uninterrupted by non-residential roads and other physical barriers	5 acres is considered minimum size. 5 to 10 acres is optimal	Yes
School Park	Depending on circumstances, combining parks with school sites can fulfill the space requirements for other classes of parks, such as neighborhood, community, sports complex, and special use.	Determined by location of school district property	Variable depends on function	No
Community Park	Serves broader purpose than neighborhood park. Focus is on meeting community-based recreation needs, as well as preserving unique landscapes and open spaces.	Determined by the quality and suitability of the site. Usually serves two or more neighborhoods within a 1/2 to 3 mile distance	As needed to accommodate desired uses. Usually between 30 and 50 acres	Yes
Large Urban Park	Large urban parks serve a broader purpose than community parks and are used when community and neighborhood parks are not adequate to serve the needs of the community. Focus is on meeting community-based recreational needs as well as preserving unique landscapes and open spaces.	Determined by the quality and suitability of the site. Usually serves the entire community.	As needed to accommodate desired uses. Usually a minimum of 50 acres with 75 or more acres being optimal	No
Natural Resource Areas	Lands set aside for preservation of significant natural resources, remnant landscapes, open space and visual aesthetics or buffering.	Resource availability and Opportunity	Variable	No
Greenways	Effectively tie the park system components together to form a continuous park environment.	Resource availability and Opportunity	Variable	No
Sports Complex	Consolidates heavily programmed athletic fields and associated facilities to larger and fewer sites strategically located throughout the community.	Strategically located Community-wide facilities	Determined by projected demand usually a minimum of 25 acres with 40 to 80 acres being optimal	No
Special Use	Covers a broad range of parks and recreation facilities oriented toward single-purpose use.	Variable – dependent on specific use	Variable	Depends on type of use
Private Park/Recreation Facility	Parks and recreational facilities that are privately owned yet contribute to the public park and recreation system.	Variable – dependent on specific use	Variable	Yes

Table C- 2: NRPA Trail Classifications

PATHWAY CLASSIFICATIONS		
Classification	**General Description**	**Description of Each Type**
Park Trail - Type I	Multi-purpose trails located within greenways, parks and natural resource areas. Focus is on recreational value and harmony with the natural environment.	Separate/single-purpose hard-surfaced trails for pedestrians or bicyclists/in-line skates.
Park Trail - Type II		Multipurpose hard-surfaced trails for pedestrians and bicyclists/in-line skaters.
Park Trail - Type III		Nature trails for pedestrians, which may use either hard or soft surfaces.
Connector Trails - Type I	Multipurpose trails that emphasize safe travel for pedestrians to and from parks and around the community. Focus is as much on transportation as it is on recreation.	Separate/single-purpose hard-surfaced trails for pedestrians or bicyclists/in-line skates located in independent rights-of-ways (ROWs) e.g., old railroad ROW.
Connector Trails - Type II		Separate/single-purpose hard-surfaced trails for pedestrians or bicyclists/in-line skates. Typically, located within road ROW.
On-Street Bikeways - Bike Route	Paved segments of roadways that serve as a means to safely separate bicyclists from vehicular traffic.	Designated portions of the roadway for the preferential or exclusive use of bicyclists.
On-Street Bikeways - Bike Lane		Shared portions of the roadway that provide separation between motor vehicles and bicyclists, such as paved shoulders.
All-Terrain Bike Trail	Off-road trail for all terrain (mountain) bikes.	Single-purpose loop trails usually located in larger parks and natural resource areas.
Cross-Country Ski Trail	Trails developed for traditional and skate-style cross-country skiing.	Loop trails usually located in larger parks and natural resource areas.
Equestrian Trails	Trails developed for horseback riding.	Loop trails usually located in larger parks and natural resource areas. Sometimes developed as multipurpose with hiking and all-terrain biking where conflicts can be controlled.

APPENDIX D – UNIT COST CALCULATIONS

Table D- 1: Former Bids on Parks Projects

PARKS								
Owner	Name	Year	Project Type	Project Costs			Total Acreage	Cost / Acre
				Construction	Incidentals	Total		
Washington City	Cemetery Phase 3 Improvements	2021	Upgrade	$ 353,533.00	$ 62,000.00	$ 415,533.00	2.6	$ 159,820.38
Lincoln County	Fairgrounds Phase 3	2021	New Facility	$ 1,539,606.00	$ 269,900.00	$ 1,809,506.00	15	$ 120,633.73
Mapleton City	Mapleton Ira Allan Park Sport Courts	2021	New Facility	$ 1,283,802.00	$ 225,100.00	$ 1,508,902.00	2	$ 754,451.00
Kane County	Jackson Flat Reservoir Improvement	2020	Upgrade	$ 184,678.00	$ 32,400.00	$ 217,078.00	1.5	$ 144,718.67
South Jordan	South Jordan Pickleball	2020	New Facility	$ 691,000.00	$ 121,100.00	$ 812,100.00	0.8	$ 1,015,125.00
Washington City	Green Spring Park Improvements	2019	Upgrade	$ 297,902.00	$ 52,200.00	$ 350,102.00	3.5	$ 100,029.14
Washington City	Boilers Park	2019	New Facility	$ 1,667,563.00	$ 292,300.00	$ 1,959,863.00	3.5	$ 559,960.86
St. George City	JC Snow Park Phase 2	2019	Upgrade	$ 213,612.00	$ 37,400.00	$ 251,012.00	2	$ 125,506.00
St. George City	Little Valley Phase 2 Recons	2017	Upgrade	$ 1,807,753.00	$ 316,900.00	$ 2,124,653.00	9.5	$ 223,647.68
St. George City	Hidden Valley Parks Courts	2017	Upgrade	$ 400,140.00	$ 70,100.00	$ 470,240.00	0.5	$ 940,480.00
St. George City	Sun River Pickleball Court Replacement	2016	Upgrade	$ 549,774.00	$ 96,400.00	$ 646,174.00	1.0	$ 646,174.00
St. George City	Little Valley Phase V - Sports Fields	2016	New Facility	$ 2,108,000.00	$ 369,500.00	$ 2,477,500.00	9.1	$ 272,181.34
St. George City	Bloomington Park Baseball Field 2	2016	New Facility	$ 429,000.00	$ 75,200.00	$ 504,200.00	3.9	$ 128,643.69
Washington City	Sullivan Virgin River Phase II	2015	New Facility	$ 4,245,600.00	$ 744,300.00	$ 4,989,900.00	26.2	$ 190,454.20
St. George City	Little Valley Pickleball Phase II	2015	New Facility	$ 962,200.00	$ 168,700.00	$ 1,130,900.00	2.9	$ 389,965.52
White Pine County	Camp Success	2015	Upgrade	$ 1,204,000.00	$ 441,000.00	$ 1,645,000.00	5.0	$ 329,000.00
Lincoln County	Echo Canyon RV Campground	2014	New Facility	$ 1,747,100.00	$ 433,152.07	$ 2,180,252.07	10.0	$ 217,677.90
Lincoln County	Pioneer Park Phase I & II	2,013	Upgrade	$ 749,700.00	$ 157,700.00	$ 907,400.00	3.2	$ 283,562.50
St. George City	Royal Oaks Park	2014	New Facility	$ 412,000.00	$ 72,200.00	$ 484,200.00	1.0	$ 484,200.00
St. George City	Silkwood Park	2014	New Facility	$ 385,300.00	$ 67,500.00	$ 452,800.00	1.5	$ 301,866.67
St. George City	Sunset Park	2014	Upgrade	$ 560,900.00	$ 98,300.00	$ 659,200.00	2.4	$ 274,666.67
White Pine County	Preston Park	2013	New Facility	$ 155,400.00	$ 36,500.00	$ 191,900.00	0.7	$ 274,142.86
White Pine County	North Ely Park	2013	New Facility	$ 162,400.00	$ 44,100.00	$ 206,500.00	1.0	$ 206,500.00
White Pine County	Bianchi Park	2013	Upgrade	$ 153,600.00	$ 22,100.00	$ 175,700.00	0.6	$ 292,833.33
White Pine County	McGill Park	2013	Upgrade	$ 255,100.00	$ 36,800.00	$ 291,900.00	1.3	$ 224,538.46
White Pine County	Steptoe Park	2013	Upgrade	$ 103,200.00	$ 14,900.00	$ 118,100.00	0.4	$ 295,250.00
White Pine County	Courthouse Park	2013	Upgrade	$ 229,500.00	$ 48,100.00	$ 277,600.00	1.3	$ 213,538.46
St. George City	Little Valley Pickleball	2012	New Facility	$ 813,800.00	$ 90,500.00	$ 904,300.00	2.5	$ 361,720.00
Lincoln County	Pioche Park Phase II	2012	Upgrade	$ 758,000.00	$ 167,500.00	$ 925,500.00	2.7	$ 342,777.78
Washington City	Sullivan Virgin River Phase I	2011	New Facility	$ 1,497,200.00	$ 262,500.00	$ 1,759,700.00	10.6	$ 166,009.43
Lincoln County	Rachel Park	2011	Upgrade	$ 239,600.00	$ 52,600.00	$ 292,200.00	1.5	$ 194,800.00
City of Caliente	Dixon Park	2008	New Facility	$ 2,180,900.00	$ 287,000.00	$ 2,467,900.00	5.3	$ 465,641.51
City of Caliente	Super Park	2008	New Facility	$ 784,900.00	$ 181,000.00	$ 965,900.00	3.0	$ 321,966.67
City of Caliente	Rose Park	2008	Upgrade	$ 394,900.00	$ 85,000.00	$ 479,900.00	1.3	$ 369,153.85
Washington City	Green Springs Park	2007	New Facility	$ 834,300.00	$ 146,300.00	$ 980,600.00	8.6	$ 114,023.26
			Subtotal	**$ 30,355,963.00**	**$ 5,678,252.07**	**$ 36,034,215.07**	**147.9**	**$ 243,576.97**
			Cost / Acre	**$ 205,194.24**	**$ 38,382.73**	**$ 243,576.97**		

Table D- 2: Inflated Values of Former Bids on Parks Projects

Inflated Project Costs					
Owner	**Name**	**Construction**	**Incidentals**	**Total**	**Cost/ Acre**
Washington City	Cemetery Phase 3 Improvements	$ 364,138.99	$ 63,860.00	$ 427,998.99	$ 164,615.00
Lincoln County	Fairgrounds Phase 3	$ 1,585,794.18	$ 277,997.00	$ 1,863,791.18	$ 124,252.75
Mapleton City	Mapleton Ira Allan Park Sport Courts	$ 1,322,316.06	$ 231,853.00	$ 1,554,169.06	$ 777,084.53
Kane County	Jackson Flat Reservoir Improvement	$ 195,924.89	$ 34,373.16	$ 230,298.05	$ 153,532.03
South Jordan	South Jordan Pickleball	$ 733,081.90	$ 128,474.99	$ 861,556.89	$ 1,076,946.11
Washington City	Green Spring Park Improvements	$ 325,525.56	$ 57,040.35	$ 382,565.91	$ 109,304.55
Washington City	Boilers Park	$ 1,822,191.11	$ 319,404.10	$ 2,141,595.22	$ 611,884.35
St. George City	JC Snow Park Phase 2	$ 233,419.60	$ 40,867.99	$ 274,287.59	$ 137,143.79
St. George City	Little Valley Phase 2 Recons	$ 2,095,681.19	$ 367,373.95	$ 2,463,055.14	$ 259,268.96
St. George City	Hidden Valley Parks Courts	$ 463,871.93	$ 81,265.11	$ 545,137.04	$ 1,090,274.08
St. George City	Sun River Pickleball Court Replacement	$ 656,458.91	$ 115,106.64	$ 771,565.55	$ 771,565.55
St. George City	Little Valley Phase V - Sports Fields	$ 2,517,062.24	$ 441,202.32	$ 2,958,264.56	$ 324,998.75
St. George City	Bloomington Park Baseball Field 2	$ 512,248.44	$ 89,792.73	$ 602,041.17	$ 153,607.30
Washington City	Sullivan Virgin River Phase II	$ 5,221,552.48	$ 915,395.12	$ 6,136,947.60	$ 234,234.64
St. George City	Little Valley Pickleball Phase II	$ 1,183,384.63	$ 207,479.72	$ 1,390,864.35	$ 479,608.40
White Pine County	Camp Success	$ 1,480,768.13	$ 542,374.37	$ 2,023,142.51	$ 404,628.50
Lincoln County	Echo Canyon RV Campground	$ 2,213,174.01	$ 548,704.08	$ 2,761,878.09	$ 275,747.85
Lincoln County	Pioneer Park Phase I & II	$ 978,188.46	$ 205,762.73	$ 1,183,951.19	$ 369,984.75
St. George City	Royal Oaks Park	$ 521,909.27	$ 91,460.80	$ 613,370.07	$ 613,370.07
St. George City	Silkwood Park	$ 488,086.51	$ 85,506.98	$ 573,593.49	$ 382,395.66
St. George City	Sunset Park	$ 710,531.34	$ 124,523.50	$ 835,054.84	$ 347,939.52
White Pine County	Preston Park	$ 202,761.75	$ 47,624.22	$ 250,385.97	$ 357,694.25
White Pine County	North Ely Park	$ 211,895.17	$ 57,540.50	$ 269,435.66	$ 269,435.66
White Pine County	Bianchi Park	$ 200,413.16	$ 28,835.49	$ 229,248.65	$ 382,081.08
White Pine County	McGill Park	$ 332,847.64	$ 48,015.65	$ 380,863.29	$ 292,971.76
White Pine County	Steptoe Park	$ 134,652.59	$ 19,441.12	$ 154,093.71	$ 385,234.28
White Pine County	Courthouse Park	$ 299,445.45	$ 62,759.59	$ 362,205.04	$ 278,619.26
St. George City	Little Valley Pickleball	$ 1,093,679.15	$ 121,624.43	$ 1,215,303.58	$ 486,121.43
Lincoln County	Pioche Park Phase II	$ 1,018,688.62	$ 225,105.99	$ 1,243,794.61	$ 460,664.67
Washington City	Sullivan Virgin River Phase I	$ 2,072,474.95	$ 363,361.39	$ 2,435,836.34	$ 229,795.88
Lincoln County	Rachel Park	$ 331,662.44	$ 72,810.70	$ 404,473.14	$ 269,648.76
City of Caliente	Dixon Park	$ 3,298,806.93	$ 434,113.25	$ 3,732,920.18	$ 704,324.56
City of Caliente	Super Park	$ 1,187,231.68	$ 273,778.74	$ 1,461,010.42	$ 487,003.47
City of Caliente	Rose Park	$ 597,321.68	$ 128,570.13	$ 725,891.81	$ 558,378.31
Washington City	Green Springs Park	$ 1,299,812.22	$ 227,930.63	$ 1,527,742.85	$ 177,644.52
	Subtotal	**$ 37,907,003.24**	**$ 7,081,330.50**	**$ 44,988,333.74**	
	Cost / Acre	**$ 256,236.27**	**$ 47,866.98**	**$ 304,103.25**	

Table D- 3: Former Bids on Trails Projects

TRAILS								
Owner	Name	Year	Project Costs			Total Miles	Cost / Mile	Cost / SF
			Construction	Incidentals	Total			
Sandy City	Sandy Canal Trail	2018	$ 572,694.00	$ 100,395.78	$ 673,089.78	0.63	$ 1,068,396.47	$ 20.23
Washington City	Three Rivers Trail Connection	2014	$ 1,200,000.00	$ 210,365.28	$ 1,410,365.28	2.32	$ 607,916.07	$ 11.51
Washington City	Three Rivers Trail Reconstruction	2011	$ 220,800.00	$ 38,707.21	$ 259,507.21	0.38	$ 685,099.04	$ 12.98
Washington City	Mill Creek Trail	2011	$ 38,560.00	$ 6,759.74	$ 45,319.74	0.10	$ 453,197.38	$ 8.58
Washington City	Virgin River Trail	2010	$ 101,200.00	$ 17,740.81	$ 118,940.81	0.50	$ 237,881.61	$ 4.51
St. George City	Virgin River Trail, South C	2013	$ 121,500.00	$ 21,299.48	$ 142,799.48	0.50	$ 285,598.97	$ 5.41
	Subtotal		**$ 2,254,754.00**	**$ 395,268.29**	**$ 2,650,022.29**	**4.43**	**$ 598,362.88**	**$ 10.54**
	Cost / Mile		**$ 509,113.12**	**$ 89,249.77**	**$ 598,362.88**			

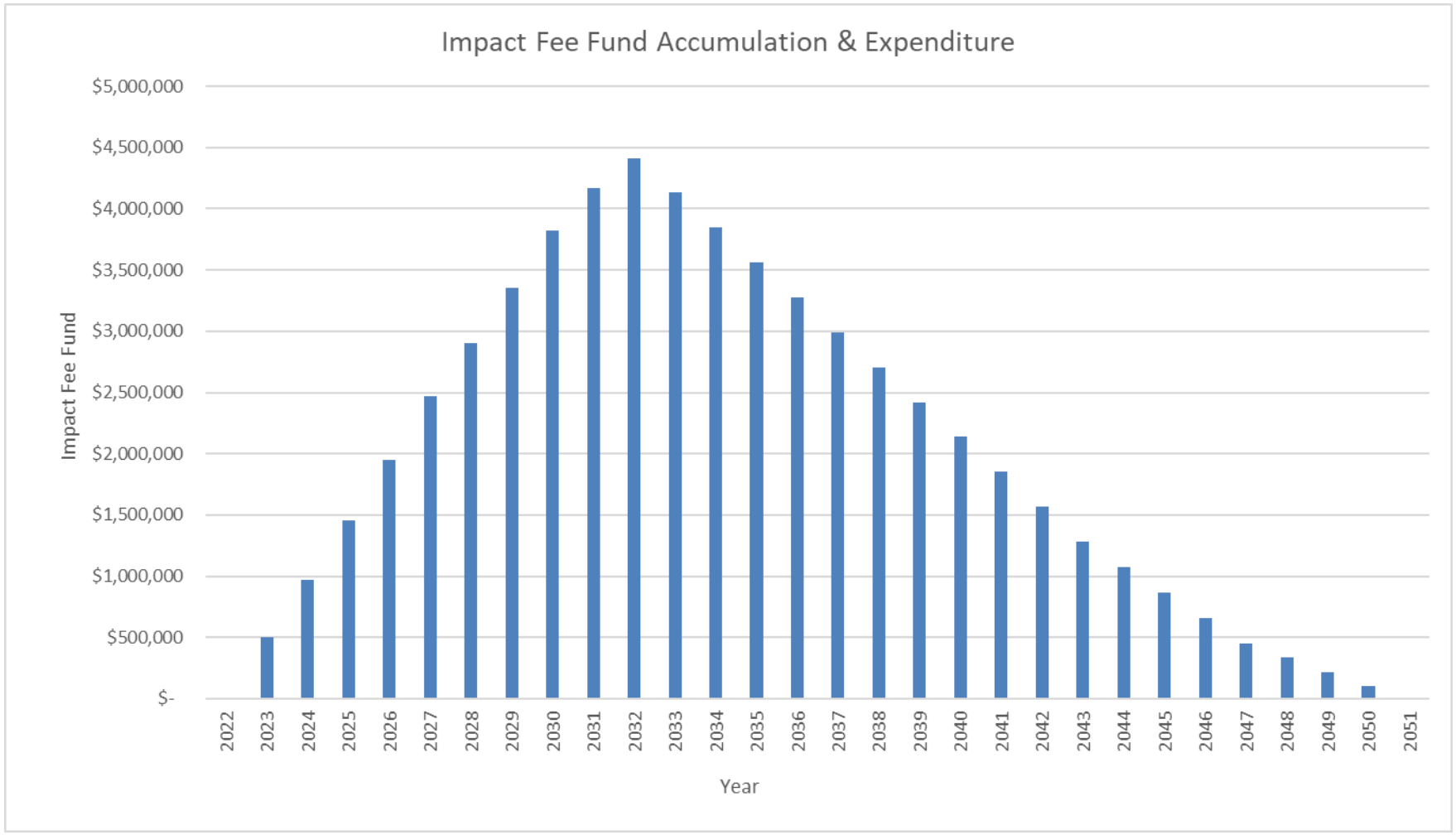
Table D- 4: Inflated Values of Former Bids on Trails Projects

Inflated Project Costs					
Owner	Name	Construction	Incidentals	Total	Cost/ Mile
Sandy City	Sandy Canal Trail	$ 644,572.14	$ 112,996.33	$ 757,568.47	$ 1,202,489.64
Washington City	Three Rivers Trail Connection	$ 1,520,124.10	$ 266,484.44	$ 1,786,608.54	$ 770,089.89
Washington City	Three Rivers Trail Reconstruction	$ 305,638.84	$ 53,579.83	$ 359,218.67	$ 948,337.29
Washington City	Mill Creek Trail	$ 53,376.06	$ 9,357.06	$ 62,733.12	$ 627,331.16
Washington City	Virgin River Trail	$ 144,287.00	$ 25,294.15	$ 169,581.15	$ 339,162.30
St. George City	Virgin River Trail, South C	$ 158,529.94	$ 27,791.00	$ 186,320.94	$ 372,641.88
	Subtotal	**$ 2,826,528.08**	**$ 495,502.80**	**$ 3,322,030.88**	
	Cost / Mile	**$ 638,217.08**	**$ 111,882.26**	**$ 750,099.34**	

APPENDIX E – CASH FLOW SPREADSHEET

Cashflow Analysis - Ivins City Parks & Trails Impact Fee Analysis

	Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Revenues																							
Total Households		4,159	4,269	4,381	4,496	4,614	4,735	4,860	4,987	5,119	5,253	5,362	5,474	5,587	5,704	5,822	5,943	6,067	6,193	6,322	6,453	6,564	6,677
New Households			0	112	115	118	121	124	128	131	134	109	111	0	0	0	0	0	0	0	0	0	0
Impact Fees Collected			$ -	$ 532,672	$ 546,940	$ 561,208	$ 575,476	$ 589,744	$ 608,768	$ 623,036	$ 637,304	$ 518,404	$ 527,916	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Expenses																							
400 E & 400 S Park	2032		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 114,040	$ 114,040	$ 114,040	$ 114,040	$ 114,040	$ 114,040	$ 114,040	$ 114,040	$ 114,040	$ 114,040	$ 114,040
400 W & 200 N Park	2028		$ -	$ -	$ -	$ -	$ -	$ -	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872	$ 94,872
Fitness Way Park	2024		$ -	$ -	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 75,863
Sage Way Park	-		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Silver Sage Park	-		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
South Ivins Regional Park - Phase 1	-		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ivins Reservoir Loop North Connector*	2028		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ivins Reservoir Loop East Connector*	2028		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Old Highway 91 Trail	2022		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Red Rock Loop Connector*	2035		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Red Rock Park Loop*	2035		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
IFFP/IFA	2023		$ 35,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Expenses Paid From																							
Impact Fees			$ 35,000	$ -	$ 75,863	$ 75,863	$ 75,863	$ 75,863	$ 170,735	$ 170,735	$ 170,735	$ 170,735	$ 284,775	$ 284,775	$ 284,775	$ 284,775	$ 284,775	$ 284,775	$ 284,775	$ 284,775	$ 284,775	$ 284,775	$ 284,775
Difference (Impact Fees Collected-Expenses)			$ (35,000)	$ 532,672	$ 471,077	$ 485,345	$ 499,613	$ 513,881	$ 438,033	$ 452,301	$ 466,569	$ 347,669	$ 243,141	$ (284,775)	$ (284,775)	$ (284,775)	$ (284,775)	$ (284,775)	$ (284,775)	$ (284,775)	$ (284,775)	$ (284,775)	$ (284,775)
Impact Fee Fund (w/o Existing Balance)			$ (35,000)	$ 497,672	$ 968,749	$ 1,454,094	$ 1,953,707	$ 2,467,588	$ 2,905,621	$ 3,357,922	$ 3,824,492	$ 4,172,161	$ 4,415,302	$ 4,130,528	$ 3,845,753	$ 3,560,979	$ 3,276,204	$ 2,991,429	$ 2,706,655	$ 2,421,880	$ 2,137,106	$ 1,852,331	$ 1,567,556
Impact Fee Fund w/ Existing Balance		$ 500,000	$ 465,000	$ 997,672	$ 1,468,749	$ 1,954,094	$ 2,453,707	$ 2,967,588	$ 3,405,621	$ 3,857,922	$ 4,324,492	$ 4,672,161	$ 4,915,302	$ 4,630,528	$ 4,345,753	$ 4,060,979	$ 3,776,204	$ 3,491,429	$ 3,206,655	$ 2,921,880	$ 2,637,106	$ 2,352,331	$ 2,067,556


Impact Fee Fund Accumulation & Expenditure
$5,000,000
$4,500,000
$4,000,000
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Impact Fee Fund
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APPENDIX F – IMPACT FEE CERTIFICATION

CERTIFICATION OF IMPACT FEE ANALYSIS BY CONSULTANT

In accordance with Utah Code Annotated § 11-36a-306, Joseph K Phillips, P.E., on behalf of Sunrise Engineering, Inc., make the following certification:

I certify that the attached Impact Fee Facilities Plan and Impact Fee Analysis:

1. Includes only the costs of public facilities that are:
    a. Allowed under the Impact Fees Act; and
    b. Actually incurred; or
    c. Projected to be incurred or encumbered within six years after the day on which each impact fee is paid;

2. Does not include:
    a. costs of operation and maintenance of public facilities;
    b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents; or
    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and that methodological standards set forth by the Federal Office of Management and Budget for federal grant reimbursement;

3. Offsets costs with grants or other alternate sources of payment; and

4. Complies in each and every relevant respect with the Impact Fees Act.

Joseph K Phillips, P.E., makes this certification with the following qualifications:

1. All of the recommendations for implementation of the Impact Fee Facilities Plan ("IFFP") made in the IFFP documents or in the Impact Fee Analysis documents are followed in their entirety by the Ivins City, Utah, staff, and elected officials.

2. If all or a portion of the IFFP or Impact Fee Analyses are modified or amended, this certification is no longer valid.

3. All information provided to Sunrise Engineering, Inc., its contractors or suppliers, is assumed to be correct, complete and accurate. This includes information provided by Ivins City, Utah, and outside sources.

4. The undersigned is trained and licensed as a professional engineer and has not been trained or licensed as a lawyer. Nothing in the foregoing certification shall be deemed an opinion of law or an opinion of compliance with law which under applicable professional licensing laws or regulations or other laws or regulations must be rendered by a lawyer licensed in the State of Utah.

5. The foregoing Certification is an expression of professional opinion based on the undersigned's best knowledge, information and belief and shall not be construed as a warranty or guaranty of any fact or circumstance.

6. The foregoing certification is made only to Ivins City, Utah, and may not be used or relied upon by any other person or entity without the expressed written authorization of the undersigned.

Sunrise Engineering, Inc.

By: _____

Dated: 03.03.23