

J-U-B ENGINEERS, INC.

# MOAB STORM WATER

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## Impact Fee Facility Plan

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**4/11/2023**

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## Executive Summary

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### Impact Fee Facilities Plan

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Moab City is preparing an Impact Fee Facilities Plan (IFFP) for the storm water system. The purpose of the IFFP is to determine the storm water facilities needed as a result of new growth and to identify which improvements may be funded by impact fees. The storm water system modeling and analysis used as the basis of this IFFP was completed as part of the City's Storm Water Master Plan dated October 2017. Moab City contracted with J-U-B Engineers, Inc. (J-U-B) to prepare this IFFP and J-U-B contracted with Zions Public Finance, Inc (ZPFI) to prepare the Impact Fee Analysis (IFA).

The Utah Code 11-36a-301 requires that a municipality “prepare an impact fee facilities plan to determine the public facilities required to serve development resulting from new development activity.” Utah Code 11-36a defines the elements that are to be included within the IFFP. The IFFP must establish an existing level of service, identify capacity in existing facilities, and the demands placed on the systems from future growth. The City must then identify a future level of service and the projects or improvements required to maintain that level of service.

The proposed level of service matches the existing level of service for Moab City. The projects that will be required for Moab City to maintain their existing level of service are identified in the Executive Summary Table 1.

Executive Summary Table 1: Projects

Project Number	Project Location	Project Description	Estimated Total Cost	Impact Fee Eligible Costs	Property Owner Estimated Cost	Estimated Year of Construction	Existing Contribution	10-Yr Growth Contribution
<b>P30</b>	Kane Creek Boulevard	Storm Drain Piping	\$198,000			2024	100%	0%
<b>P28B</b>	100 South to Mill Creek	Storm Drain Piping	\$1,855,963	\$109,821		2024	94%	6%
<b>P35</b>	200 South to 200 East	Storm Drain Piping	\$76,431			2023	100%	0%
<b>P12B</b>	100 West & Park Drive & 350 West	Storm Drain Piping	\$1,127,710	\$57,116		2025	95%	5%
<b>P10</b>	Aspen Ave and Kane Creek Boulevard	Storm Drain Piping	\$161,514			2024	100%	0%
<b>P18</b>	400 North from 500 West	Storm Drain Improvement	\$1,075,795	\$197,946		2026	82%	18%
<b>P9</b>	Dogwood Ave & Kane Creek Boulevard	Storm Drain Piping	\$637,402			2027	100%	0%

Project Number	Project Location	Project Description	Estimated Total Cost	Impact Fee Eligible Costs	Property Owner Estimated Cost	Estimated Year of Construction	Existing Contribution	10-Yr Growth Contribution
<b>P32</b>	Hale Ave to 400 West	Storm Drain Piping	\$167,282			2028	100%	0%
<b>P3</b>	Bittle Lane	Storm Drain Piping	\$464,351	\$294,863		2028	37%	63%
<b>P4</b>	Jackson Street	Install Debris Basin, Inlet Structure, and SDP	\$281,207	\$98,422		2025	65%	35%
<b>P2</b>	Private Drive at 425 East	Install Open Channel	\$116,809	\$56,652		2025	52%	48%
<b>P16</b>	510 North 500 West	Storm Drain Piping	\$12,979	\$1,557		2025	88%	12%
<b>P39</b>	500 West by Mill Creek	Storm Drain Piping	\$62,010	\$62,010		2025	52%	48%
<b>P40</b>	Moab City Parking Lot and Yard	Storm Drain Piping	\$57,683	\$33,168		2026	43%	57%
<b>P33</b>	250 North 300 East	Install Curb and Gutter and Regrade Hill	\$14,421			2026	100%	0%
<b>P36</b>	Rosetree Lane	Regrade Road and Install Ditch	\$44,705			2026	100%	0%

Project Number	Project Location	Project Description	Estimated Total Cost	Impact Fee Eligible Costs	Property Owner Estimated Cost	Estimated Year of Construction	Existing Contribution	10-Yr Growth Contribution
<b>P37</b>	Center Street from 650 East to 500 East	Erosion Control and Diversion Structure	\$5,768			2026	100%	0%
<b>P38</b>	Bowling Alley Lane & Bittle Lane	Regrade Bittle Lane	\$8,653			2026	100%	0%
<b>P17</b>	Carlos Court and Juan Court	Storm Drain Piping	\$158,629			2024	100%	0%
<b>P5</b>	Loveridge Drive to Locust Lane	Storm Drain Piping	\$57,683	\$36,052		2024	38%	62%
<b>P13</b>	Nob Hill and Main Street to 300 North and 100 West	Storm Drain Piping	\$152,861			2029	100%	0%
<b>P34</b>	Stewart Lane from 350 North to Mill Creek	Storm Drain Piping	\$393,689	\$393,689		2029	0%	100%

<b>Project Number</b>	<b>Project Location</b>	<b>Project Description</b>	<b>Estimated Total Cost</b>	<b>Impact Fee Eligible Costs</b>	<b>Property Owner Estimated Cost</b>	<b>Estimated Year of Construction</b>	<b>Existing Contribution</b>	<b>10-Yr Growth Contribution</b>
<b>P11</b>	Pear Tree Lane	Storm Drain Piping	\$550,876	\$550,876		2030	0%	100%
	<b>Total</b>		\$7,682,421	\$1,892,174	\$0			

## Introduction

### Background

Moab City is preparing an Impact Fee Facilities Plan (IFFP) for the storm water system. The storm water system modeling and analysis used as the basis of this IFFP was completed as part of the City’s Storm Water Master Plan dated October 2017. Refer to the Storm Water Master Plan for additional information on the planning and evaluation of the City’s storm water system. The purpose of the IFFP is to determine the storm water facilities needed as a result of new development and to identify improvements which may be funded by impact fees.

### Service Area

The Service Area for this study is the current City limits.

### Population Growth

Projections for population growth in Moab City are as follows:

**Table 1: Projected Population Growth, 2020- 2030**

Year	Population
2020	5,634
2021	5,686
2022	5,738
2023	5,790
2024	5,842
2025	5,894
2026	5,946
2027	5,998
2028	6,050
2029	6,102
2030	6,181

Source: Kem C. Gardner Policy Institute and US Census Bureau

## Utah Code Legal Requirements

Utah law requires that communities prepare an Impact Fee Facilities Plan (IFFP) before preparing an Impact Fee Analysis (IFA) and enacting an impact fee. Utah law also requires that communities give notice of their intent to prepare and adopt an IFFP. This IFFP follows all legal requirements as outlined below. The City has contracted with J-U-B Engineers, Inc. (J-U-B) to prepare the Impact Fee Facilities Plan (IFFP) and J-U-B has contracted with Zions Public Finance, Inc. (ZPFI) to prepare the Impact Fee Analysis (IFA).

### Notice of Intent to Prepare Impact Fee Facilities Plan

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A local political subdivision must provide written notice of its intent to prepare an IFFP before preparing the Plan (Utah Code §11-36a-501). This notice must be posted on the Utah Public Notice website. The City has complied with this noticing requirement for the IFFP by posting notice.

### Preparation of Impact Fee Facilities Plan

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Utah Code requires that each local political subdivision, before imposing an impact fee, prepare an impact fee facilities plan. (Utah Code 11-36a-301).

Section 11-36a-302(a) of the Utah Code outlines the requirements of an impact fee facilities plan which is required to identify the following:

- (i) identify the existing level of service
- (ii) establish a proposed level of service
- (iii) identify any excess capacity to accommodate future growth at the proposed level of service
- (iv) identify demands placed upon existing facilities by new development activity at the proposed level of service; and
- (v) identify the means by which the political subdivision or private entity will meet those growth demands.

Further, the proposed level of service may:

- (i) exceed the existing level of service if, independent of the use of impact fees, the political subdivision or private entity provides, implements, and maintains the means to increase the existing level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service; or
- (ii) establish a new public facility if, independent of the use of impact fees, the political subdivision or private entity provides, implements, and maintains the means to increase the existing level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service.

In preparing an impact fee facilities plan, each local political subdivision shall generally consider all revenue sources to finance the impacts on system improvements, including:

- (a) grants
- (b) bonds
- (c) interfund loans
- (d) transfers from the General Fund

- (e) impact fees; and
- (f) anticipated or accepted dedications of system improvements.

#### Certification of Impact Fee Facilities Plan

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Utah Code states that an impact fee facilities plan shall include a written certification from the person or entity that prepares the impact fee facilities plan. This certification is included at the conclusion of this analysis.

#### Existing Levels of Service

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Utah Code 11-36a-302(1)(a)(i)

The level of service is the “performance standard or unit of demand for each capital component of a public facility within a service area” as defined by the Impact Fees Act. This section discusses the level of service being currently provided to existing users.

#### Existing Performance Standard

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Moab City has established an existing level of service to protect its residents and infrastructure from flooding. This level of service is used in the storm water master plan. The design storm is used to define how much rainfall occurs and at what rate the rainfall is occurring. The current design storm for Moab City is a 10-year 24-hour storm for inlets, laterals, minor trunk lines, gutters, and roadside ditches and 100-year 24 hour for storage facilities, culverts, and major conveyance facilities. The maximum allowable discharge is the lesser of the predevelopment discharge or 0.03 cfs/acre for region 1 and 0.3 cfs/acre for region 2, see figure 2-1 in the Grand County Design Criteria For Drainage Studies within Spanish Valley for the boundaries of the allowable regional release rates. Discharges above the above criteria are detained in regional or localized detention ponds.

#### Storm Water Pipes

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Storm water pipes are designed for the flows based on the predevelopment runoff or at an allowable release rate of 0.03 cfs/acre for region 1 and 0.3 cfs/acre for region 2. During storm events greater than Moab City design storm, the pipes may pressurize, and storm water may flood the streets.

#### Detention Basins

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Detention basins have been constructed throughout the city. All detention basins are designed to a maximum release rate of 0.03 cfs/acre in region 1 and 0.3 cfs/acre in region 2 using the 100-year 24-hour design storm. The detention basins have emergency overflows to the streets.

#### Existing Level of Service

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The current level of service (LOS) for the storm drain system is the same as the 2017 Storm Water Master Plan, the LOS release criteria is summarized in Table 2.

Table 2: Existing Level of Service

Category	Existing Level of Service
Maximum Allowable Runoff	0.03 cfs/acre for region 1 0.3 cfs/acre for region 2
Existing Pipelines	10-year 24-hour storm
Detention Basins	100-year 24-hour storm

**Proposed Levels of Service**

Utah Code 11-36a-302(1)(a)(ii)

The proposed level of service is used to evaluate future needs of the system. Per the Impact Fee Act the “proposed level of service may diminish or equal the existing level of service” (Utah Code 11-36a-302(1)(b)). A proposed level of service may “exceed the existing level of service if, independent of the use of impact fees, the political subdivision or private entity provides, implements, and maintains the means to increase the existing level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service” (Utah Code 11-36a-302(1)(c)(i)).

The proposed level of service matches the existing level of service for Moab City. All future storm drain facilities will be constructed to meet the same level of service.

**Excess Capacity to Accommodate Future Growth at Proposed Levels of Service**

Utah Code 11-36a-302(1)(a)(iii)

There is 37% excess capacity in the overall existing system based on the ratio of the max flow depth over the pipe size. The identified proposed projects in Table 4 are upsized storm drain pipelines and are intended to be constructed to address existing deficiencies and to accommodate for future growth. The proposed storm drain improvements plan will upsize existing storm drainpipes that are currently undersized. A portion of the proposed project pipe capacity will be expended by the existing conditions. Table 4 shows the percentage that is expended by the existing flows and the capacity available for future growth. Refer to the Moab Storm Water Master Plan for the capacities available in the existing system.

**Demands Placed Upon Existing Public Facilities by New Development Activity at the Proposed Level of Service**

Utah Code 11-36a-302(1)(a)(iv)

As shown above (Table 1) in the population projection from the Utah Governor’s Office of Management and Budget and US Census Bureau, Moab City is projected to grow at 9.7% for the

next ten years. The planning period for this storm water IFFP is ten years. Table 3 shows the land growth projections.

**Table 3: Developed Land**

<b>Development Period</b>	<b>Developed Land (Acres)</b>
<b>Existing Development (2022)</b>	1,080
<b>Future Development (10 – Year)</b>	250
<b>Total At Buildout</b>	3,075

As shown in Table 3, it is anticipated that the city will have 250 acres of new development occur in the next 10 years. The acreage shown in the table is total acreage. This includes residential, commercial, open space, streets, etc. Based on the level of service of discharge per acre, all acreage will contribute equally to the storm drain needs.

### **Meeting Required Infrastructure Demands For New Growth**

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Utah Code 11-36a-302(1)(a)(v)

To meet the requirements of the Impact Fee Act, a storm water model was built as part of the Storm Water Master Plan. The capacities of the existing system were analyzed, deficiencies were identified, and suggested projects were identified. The future developments were placed in the model. The model was run, and future deficiencies in the storm drain system were identified. Projects to resolve the future deficiencies have been identified.

#### **10 Year Improvement Plan**

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In the Storm Water Master Plan, the capital facility projects needed to provide service to the City at projected 10 year and buildout scenarios were identified. Only infrastructure to be constructed within the next 10 years has been considered in the calculation of the impact fees. Table 4 shows the projects to be constructed in the next 10 years and their percentages attributed to growth. Detailed cost estimates for the projects can be found in the 2017 Storm Water Master Plan. The cost estimates in the 2017 Stormwater Master Plan have been updated to 2022 values using construction cost indexes increases (44.2%).

The project costs have been broken down to show the percentage of project costs to existing deficiencies and the next 10-years. These projects will serve growth for the next ten years and until the city is at buildout.

Table 4: Proposed Project

Project Number	Project Location	Project Description	Estimated Total Cost	Impact Fee Eligible Costs	Property Owner Estimated Cost	Estimated Year of Construction	Existing Contribution	10-Yr Growth Contribution
<b>P30</b>	Kane Creek Boulevard	Storm Drain Piping	\$198,000			2024	100%	0%
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<b>P9</b>	Dogwood Ave & Kane Creek Boulevard	Storm Drain Piping	\$637,402			2027	100%	0%
<b>P32</b>	Hale Ave to 400 West	Storm Drain Piping	\$167,282			2028	100%	0%

Project Number	Project Location	Project Description	Estimated Total Cost	Impact Fee Eligible Costs	Property Owner Estimated Cost	Estimated Year of Construction	Existing Contribution	10-Yr Growth Contribution
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P4	Jackson Street	Install Debris Basin, Inlet Structure, and SDP	\$281,207	\$98,422		2025	65%	35%
P2	Private Drive at 425 East	Install Open Channel	\$116,809	\$56,652		2025	52%	49%
P16	510 North 500 West	Storm Drain Piping	\$12,979	\$1,557		2025	88%	12%
P39	500 West by Mill Creek	Storm Drain Piping	\$62,010	\$62,010		2025	52%	48%
P40	Moab City Parking Lot and Yard	Storm Drain Piping	\$57,683	\$33,168		2026	43%	58%
P33	250 North 300 East	Install Curb and Gutter and Regrade Hill	\$14,421			2026	100%	0%
P36	Rosetree Lane	Regrade Road and Install Ditch	\$44,705			2026	100%	0%

Project Number	Project Location	Project Description	Estimated Total Cost	Impact Fee Eligible Costs	Property Owner Estimated Cost	Estimated Year of Construction	Existing Contribution	10-Yr Growth Contribution
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P38	Bowling Alley Lane & Bittle Lane	Regrade Bittle Lane	\$8,653			2026	100%	0%
P17	Carlos Court and Juan Court	Storm Drain Piping	\$158,629			2024	100%	0%
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P13	Nob Hill and Main Street to 300 North and 100 West	Storm Drain Piping	\$152,861			2029	100%	0%
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Project Number	Project Location	Project Description	Estimated Total Cost	Impact Fee Eligible Costs	Property Owner Estimated Cost	Estimated Year of Construction	Existing Contribution	10-Yr Growth Contribution
P11	Pear Tree Lane	Storm Drain Piping	\$550,876	\$550,876		2030	0%	100%
	<b>Total</b>		\$7,682,421	\$1,892,174	\$0			

Table 5: Project Schedule

Project Number	Project Location	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Beyond
P30	Kane Creek Boulevard		\$198,000									
P28B	100 South to Mill Creek		\$1,855,963									
P35	200 South to 200 East	\$76,431										
P12B	100 West & Park Drive & 350 West			\$1,127,710								
P10	Aspen Ave and Kane Creek Boulevard		\$161,514									
P18	400 North from 500 West				\$1,075,795							
P9	Dogwood Ave & Kane Creek Boulevard					\$637,402						
P32	Hale Ave to 400 West						\$167,282					
P3	Bittle Lane						\$464,351					
P4	Jackson Street			\$281,207								
P2	Private Drive at 425 East			\$116,809								

Project Number	Project Location	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Beyond
P16	510 North 500 West			\$12,979								
P39	500 West by Mill Creek			\$62,010								
P40	Moab City Parking Lot and Yard				\$57,683							
P33	250 North 300 East				\$14,421							
P36	Rosetree Lane				\$44,705							
P37	Center Street from 650 East to 500 East				\$5,768							
P38	Bowling Alley Lane & Bittle Lane				\$8,653							
P17	Carlos Court and Juan Court		\$158,629									
P5	Loveridge Drive to Locust Lane		\$57,683									
P13	Nob Hill and Main Street to 300 North and 100 West							\$152,861				
P34	Stewart Lane from 350 North to Mill Creek							\$393,689				
P11	Pear Tree Lane								\$550,876			
	<b>Annual Project Cost (2023 Costs)</b>	<b>\$76,431</b>	<b>\$2,431,789</b>	<b>\$1,600,025</b>	<b>\$1,207,025</b>	<b>\$637,402</b>	<b>\$631,633</b>	<b>\$546,550</b>	<b>\$550,876</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## Consideration of Revenue Sources to Finance Impacts on Improvements

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Utah Code 11-36a-302(2)

This Impact Fee Facilities Plan includes a discussion of potential revenue sources for the storm water system. These revenue sources include grants, bonds, interfund loans, transfers from the General Fund, impact fees and anticipated or accepted dedications of system improvements.

### Grants

Impact fees may not reimburse projects funded through grants. Grants for storm water systems are very difficult to find if not impossible. No grants have been included in the project costs. If grants are received, costs will be adjusted accordingly.

### Bonds

The City could issue bonds in the future in order to fund their storm water system. Bonds are planned and costs associated with bond issuance have been included in the calculation of impact fees.

### Impact Fees

Because of the growth anticipated to occur in the City, impact fees are a viable means of allowing new development to pay for the impacts that it places on the storm drain system. This IFFP is developed in accordance with legal guidelines so that an Impact Fee Analysis for the storm water system may be prepared and the City may charge impact fees. This will prevent existing users from subsidizing new growth.

### Anticipated or Accepted Dedications of System Improvements

Any item that a developer funds must be included in the IFFP if a credit against impact fees is to be issued and must be agreed upon with the City before construction of the improvements.

## Improvements to Maintain Level of Service

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Utah Code 11-36a-302(3)

State Law allows impact fees to be collected to maintain the same level of service in the storm water system as growth occurs. Only those projects associated with growth in the city have been included. These projects do not correct existing deficiencies.

## Certifications

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This IFFP has been prepared in accordance with Utah Code Title 11 Chapter 36a, Impact Fee Act. In accordance with Utah Code Title 11-36a-306(1), J-U-B Engineers, Inc. makes the following certification.

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;
  - c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement;
3. Complies in each and every relevant respect with the Impact Fees Act.

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Dated: April 11, 2023

J-U-B ENGINEERS, INC.