

Impact Fee Analyses for: Parks and Trails Roadways

Prepared for

North Logan City

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IMPACT FEE SUMMARIES**Parks and Trails Impact Fee Summary**Components of the Park and Trails Impact Fee

The parks and trails impact fee is comprised of three components: the level of service (LOS) per household for parks and trails, the cost per acre for parks and the cost per mile for trails, and the adjustment factor for the percent of parks and trails costs typically funded through other means than the city.

LOS Per Household for Parks and Trails. The existing level of service for developed parks and trails is 8.45 acres of developed park land per 1,000 persons and 0.346 miles of developed gravel trails and 0.426 miles of developed paved trails per 1,000 persons. The average household size in North Logan City as of the 2010 Census is 3.30 persons. To calculate the LOS per household, the LOS per 1,000 persons is multiplied by 3.30 and divided by 1,000. For parks, the LOS per household is $8.45 * 3.30 / 1,000 = 0.028$. For gravel trails, the LOS per household is $0.346 * 3.30 / 1,000 = 0.0011$. For paved trails, the LOS per household is $0.426 * 3.30 / 1,000 = 0.0014$.

Parks and trails base and development cost per acre and mile. The cost to develop park land and trails in the future is based on the current costs for the same types of development on existing parks. The average base cost for parks \$126,445 per acre. The average base cost of gravel trails is \$79,200 per mile and \$132,000 per mile for paved trails. Using an inventory of existing park improvements and the parks systems development costs, an average cost per acre for developed park land may be calculated. The average development cost for parks is \$156,445 per acre.

Adjustment Factor. The City has historically used RAPZ and Restaurant tax funds to provide new parks and trails services in the city. This is expected to continue in the future. The average percent of new parks development that has been funded by RAPZ and Restaurant Tax in the past nine years is 43%. This is used as an adjustment factor in the impact fee calculation.

Calculation of the Impact Fee. The following formula is used to calculate the parks and trails impact fee: *LOS Per Household for Parks and Trails * Parks and Trails Development Cost Per Acre and Mile * (1-Adjustment Factor) = Parks and Trails Impact Fee.*

For Parks: $0.028 * \$195,266 * (1-0.43) = \$3,109$

For Gravel Trails: $0.0011 * \$79,200 * (1-0.43) = \$52$

For Paved Trails: $0.0014 * \$132,000 * (1-0.43) = \$106$

Combined Impact Fee: $\$2,631 + \$52 + \$106 = \$3,267$

Roadways Impact Fee Summary

Components of the Roadways Impact Fee

The roadways impact fee is comprised of four components: the cost per trip for expanded capacity in existing roadways, the cost per trip for planned expanded capacity in future roadways, an alternate funding credit, and a cost per new residence or commercial/industrial entity for the roadways impact fee analysis.

Cost per trip for expanded capacity in existing roadways. The existing roadways in North Logan were planned to accommodate new development. The cost per trip for expanded capacity is calculated first by multiplying the cost of the roadways by the percent of the cost borne by the city. The result is multiplied by the percent of the roadways designed for new development. This cost for expanded capacity is then brought forward to 2019 dollars using a 5% discount rate, resulting in the present value of the expanded capacity. Then the total length of the roadways, in miles, is summed and multiplied by the trip capacity of the roadways in miles to yield the total capacity of the roadways, in trips. Finally, the present value of the expanded capacity is divided by the total trip capacity of the roads. The result is a cost per trip for expanded capacity in existing roadways of \$59.

Cost per trip for expanded capacity in future roadways. To maintain the current level of service, North Logan has planned system improvements to their roadways systems. A cost per trip for these improvements is calculated by first multiplying the expected cost of the improvements by the percent of the cost the city expects to bear and also by the percent of the cost allocated to new development. The length of the roadways, in miles, is summed and multiplied by the capacity of the roadways in trips to yield a trip capacity of the improvements. The cost per trip is then calculated by dividing the total cost of the new roads by the trip capacity.

Alternate funding credit. The City has historically used General Fund monies to fund some roads improvements. The General Fund has received Class B&C Roads funds and property tax from undeveloped property within the city. The alternate funding credit represents the percent of past roadways for expanded capacity (eligible for roadways impact fees) that were funded instead through the Class B&C Roads funds and taxes on undeveloped property. The credit amount is 0.6% and is subtracted from the total trip cost.

Impact fee analysis. The impact fees act allows cities to recoup the cost of preparation of an impact fee analysis by included the cost in the impact fee calculation. The cost per new residence or business is \$8.

Calculation of the Impact Fee. The following formula is used to calculate the roadways impact fee: *Cost per trip for expanded capacity in existing roadways + Cost per trip for expanded capacity in planned roadways – Alternate funding credit = Total cost per trip.* *Impact fee = Average trips per land use type * Total cost per trip + Impact fee analysis cost.*

For a single-family detached residential unit, the impact fee is:

$\$59 + \$115 - \$1 = \$173$ (Total cost per trip)

10.0 (average weekday trips) * $\$173 + \$8 = \$1,738$

IMPACT FEE FACILITIES PLANS

The Utah Impact Fees Act requires cities to create an Impact Fee Facilities Plan before imposing impact fees. The plans do not need to be separate from a master plan as long as the master plan contains the following elements:

- Identification of the existing level of service
- Proposal for a future level of service, if different from the existing level of service
- Identification of excess capacity
- Identification of means to meet growth demands

Parks Impact Fee Facilities Plan

A full inventory of existing parks was conducted to identify the existing level of service for North Logan residents. The inventory is included in the impact fee analysis (see Tables 1 and 4). This inventory included a calculation of the existing level of service, which is the level of service the city is adopting. For parks, there is no excess capacity as the level of service is determined by the current acreage of parks and miles of trails per resident. New development will require new parks and trails facilities. The city has identified the following means for funding new parks and trails: impact fees and RAPZ tax funds.

Roadways Impact Fee Facilities Plan

Roadways in North Logan City have a current Level of Service of B, with intersections have a current Level of Service of C. To maintain this level of service, the city has planned improvements to the roadways system. These improvements are listed in the North Logan 5-Year Capital Facilities Plan. The existing roadways also have excess capacity, which is identified in the North Logan City Roadways Capital Facilities Plan.

STEPS FOR CALCULATING THE IMPACT FEES

As outlined in the Impact Fees Act, the following steps are taken to calculate an impact fee:

- Step 1: Calculate new development's share of existing public facilities
- Step 2: Calculate new development's share of system improvements for each public facility by:
 - A. Identifying the established level of service for each public facility, and;
 - B. Identifying the impact on system improvements required to maintain the established level of service.
- Step 3: Other than impact fees, determine the manner of financing each public facility.
- Step 4: Determine whether impact fees are necessary to achieve an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received.
- Step 5: Assess the relative extent to which properties in North Logan City have already contributed to the cost of existing public facilities.
- Step 6: Assess the relative extent to which development activity will contribute to the cost of existing public facilities and system improvements in the future.
- Step 7: Assess the extent to which the development activity is entitled to a credit against impact fees because the development activity will dedicate system improvements or public facilities that will offset the demand for system improvements and assess any extraordinary costs in servicing the newly developed properties.
- Step 8: Based on the above steps and the requirements of Utah Code, Title 11 Chapter 36, identify how the impact fee is calculated.

PARKS AND TRAILS IMPACT FEE ANALYSIS

The following assumptions are used in the Parks and Trails Impact Fee Analysis:

- The existing level of service per 1,000 persons is 8.45 acres for parks, 0.346 miles for gravel trails and 0.426 miles for paved trails¹
- The existing level of service for parks and trails is the proposed level of service for parks and trails.

Step 1: Calculate New Development's Share of Existing Public Facilities

As the existing level of service for parks is also the proposed level of service, new development will not pay for any excess capacity in the parks system, but rather will pay for new park and trails systems developments to maintain the level of service.

Step 2: Calculate New Development's Share of System Improvements

Identifying the Established Level of Service

An inventory of parks was conducted to identify the existing level of service. The level of service for parks is 8.45 developed acres of park land per 1,000 persons. The level of service for gravel trails is 0.346 miles per 1,000 persons. The level of service for paved trails is 0.426 miles per 1,000 persons. The 2010 Census identified that the average household size in North Logan City is 3.30 persons. The parks and trails impact fee will be based on the average household. The level of service per household is calculated by multiplying the level of service per 1,000 persons by 3.30 and dividing by 1,000.

¹ City Staff

Table 1: Parks and Trails Existing Level of Service Per Household

Parks LOS Per Household	
Developed Acreage Per Park	
Elk Ridge	23.57
Cache Recreation Complex	46.2
King Nature Park	19.5
Sunny Hills	0.68
<i>Total Acres</i>	<i>89.95</i>
Current Population	10,646
LOS per 1,000 persons	8.45
Average Household Size	3.30
Parks LOS Per Household (in acres)	0.028
Trails LOS	
Developed Miles Per Trail (Gravel)	
Centennial Trail	1.49
Logan, Hyde Park, Smithfield Canal Trail	0.26
Middle Canal Trail	0.6
Hyde Park Canal Trail	0.33
Green Canyon Trail	0.23
King Nature Park Trail	0.77
<i>Total Miles (Gravel)</i>	<i>3.68</i>
Developed Miles Per Trail (Paved)	
1900 N (1700 E to 2000 E)	0.43
Wolfpack Way Trail	1.59
Cache Recreation Complex Pathway	1.44
Elk Ridge Park Trail	1.07
<i>Total Miles (Paved)</i>	<i>4.53</i>
Current Population	10,646
LOS per 1,000 persons (Gravel)	0.346
LOS per 1,000 persons (Paved)	0.426
Average Household Size	3.30
Trails LOS Per Household - Gravel (in miles)	0.0011
Trails LOS Per Household - Paved (in miles)	0.0014

The established level of service is based on developed park land and developed trails. To really understand what this level of service represents, the costs associated with developing parks and trails must be calculated.

Using conservative estimates of cost in today's dollars, the following table enumerates the standard costs associated with the basic development of parks and trails, not counting parks infrastructure.

Table 2: Parks and Trails Base Costs

Base Park Costs Per Acre	Cost
Land (unimproved)	\$100,000
Hydro-Seeding (at \$0.20 per sq. ft. labor included)	\$8,712
Prep Work (grading, topsoil)	\$6,933
Trees (at \$100 per tree, 8 trees per acre average)	\$800
Sprinkler System (components and labor included)	\$40,000
Base Park Cost Per Acre	\$156,445
Trail Costs Per Mile	Cost
Gravel Trail Construction Per Mile	\$79,200
Paved Trail Construction Per Mile	\$132,000

Park facilities also have other potential system developments that are eligible for impact fees. Those improvements must be fixed and have a life of at least ten years. The table below shows common park improvements found in North Logan City parks and a conservative estimate for providing those improvements in today's dollars.

Table 3: Parks System Development Costs

Parks Systems Improvements	2019
Baseball/Softball Field (base level)	\$20,000
Baseball/Softball Field	\$150,000
Basketball Court	\$112,000
Batting Cage	\$2,000
Benches	\$200
Bleachers (large)	\$10,000
Bleachers (small, moveable)	\$5,000
Cement Pad with Table	\$1,200
Climbing Wall	\$5,000
Concession Stand	\$15,000
Drinking Fountain	\$350
Equipment Storage Room	\$5,000
Fire Pit	\$150
Flag Pole	\$500
Frisbee Golf	\$500
Horse Arena	\$7,500
Horseshoe Pit	\$50
Hydro Seeding for Fields	\$0.10
Nature Pond	\$12,000
Parking Stall	\$2,500
Pavilion (extra large, with cement pad)	\$150,000
Pavilion (large, with cement pad)	\$80,000
Pavilion (small)	\$8,000
Picnic Table	\$600
Playground (large)	\$25,000
Playground (small)	\$8,000
Restroom (new condition)	\$112,000
Restroom (small, prefab)	\$80,000
Sand Volleyball Court	\$20,000
Crow's Nest	\$200,000
Skate Park	\$30,000
Splash Pad	\$75,000
Swingset	\$1,000
Tennis Court	\$112,000
Wood Fencing (per lineal foot)	\$4.50
Wood Bridge	\$500

To calculate an average cost per acre for developing parks in North Logan at the existing level of service, the park system developments at each park is shown below with an assigned cost from Table 3. Not all park system improvements were included in the tables. Only those considered in good or excellent condition during the park inventory were included. For instance, the old restrooms at Meadow View Park (now Cache Recreation Complex) were excluded from the tables.

**Table 4: Park Systems Development
Cost Per Acre**

Elk Ridge		
Baseball/Softball Field (base)	3	\$60,000
Basketball Court	1	\$112,000
Batting Cages	1	\$2,000
Benches	7	\$1,400
Bleachers (large)	2	\$20,000
Bleachers (small, moveable)	4	\$20,000
Cement Pad with Picnic Table	3	\$3,600
Climbing Wall	1	\$5,000
Drinking Fountains	2	\$700
Frisbee Golf	1	\$500
Parking Stalls	252	\$630,000
Pavilion (extra large, with cement pad)	1	\$150,000
Picnic Tables	43	\$25,800
Playground (large)	2	\$50,000
Playground (small)	1	\$8,000
Restroom (new condition)	1	\$112,000
Sand Volleyball Court	3	\$60,000
Splash Pad	1	\$75,000
Swingset	1	\$1,000
Tennis Court	1	\$112,000
Total		\$1,449,000
Developed Acres		23.57
Development Cost Per Acre		\$61,476

King Nature Park		
Benches	3	\$600
Drinking Fountains	1	\$350
Nature Pond	1	\$12,000
Pavilion (large, with cement pad)	1	\$80,000
Picnic Table	12	\$7,200
Restroom (small, prefab)	1	\$80,000
Wooden bridge	1	\$500
Wood fencing (lineal ft.)	2,000	\$9,000
Total		\$189,650
Developed Acres		19.5
Development Cost Per Acre		\$9,726
Cache Recreation Complex (including Meadowview Park)		
Baseball/Softball Field	2	\$300,000
Benches	6	\$1,200
Bleachers (small, moveable)	4	\$20,000
Crow's Nest	1	\$200,000
Picnic Tables	8	\$4,800
Splash Pad	1	\$75,000
Parking Stalls	410	\$1,025,000
Pavilion (small)	1	\$8,000
Playground (small)	1	\$8,000
Swing Set	1	\$1,000
Tennis Court	4	\$448,000
Total		\$2,091,000
Developed Acres		46.2
Development Cost Per Acre		\$45,260
Average cost per acre		\$38,821

Identifying the Impact on System Improvements Required to Maintain the Established Level of Service

To maintain the existing level of service for parks in North Logan City, the city must either develop more park land or further improve existing parks with system improvements, thereby increasing the value of the parks. An opportunity to improve the value of the developed parks would be to build new restrooms, which weren't included in the current level of service for the impact fee.

Step 3: Other Than Impact Fees, Determine the Manner of Financing Each Public Facility

North Logan City has historically used parks enterprise funds to pay for parks and trails improvements in North Logan. More recently, the city has been applying for RAPZ and Restaurant Tax monies to improve park facilities and trails. This is expected to continue. As these funds are often used to pay for parks systems improvements that are eligible for impact fee funds, an adjustment factor is calculated below. The adjustment factor estimates the average percent of park system improvement eligible for impact fees that have been paid through RAPZ and Restaurant tax monies instead of impact fees. The impact fee is reduced by this percentage in the impact fee calculation.

Table 5: Adjustment Factor

Year	Total RAPZ and Restaurant Awarded Funds to North Logan City for Recreation Facilities	Facility/Project	% of RAPZ and Restaurant Awarded Funds Used for Parks Systems Developments	Parks Impact Fees Expended for Parks Systems Developments	Proportion of Parks Improvements from RAPZ and Restaurant Funds
2019	\$112,000	Cache Recreation Complex Multi-Use fields and Playground	100%	\$136,500	45%
2018	\$102,000	Cache Recreation Complex Multi-Use fields and Parking Lot	100%	\$195,030	34%
2017	\$230,000	Cache Recreation Complex Field Construction	100%	\$575,200	29%
2016	\$137,200	Cache Recreation Complex Field Construction	100%	\$126,500	52%
2015	\$208,000	Cache Recreation Complex General Site Grading	100%	\$0	100%
2014	\$70,000	Elk Ridge Park Grass Soccer Fields and Path	100%	\$144,000	33%
2013	\$60,000	Elk Ridge Park Grass Soccer Fields and Path	100%	\$158,000	28%
2012	\$70,000	Cache Recreation Complex Splash Pad	100%	\$75,000	48%
2011	\$60,000	Elk Ridge Park Baseball/Softball Fields	100%	\$280,940	18%
Average Percent of Eligible Parks Systems Improvements Costs Funded by RAPZ/Restaurant Tax					43%

Step 4: Determine Whether Impact Fees are Necessary

The Utah Impact Fees Act requires cities to determine whether impact fees are necessary to achieve an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received.

Current and past city residents have already paid for the existing parks and trails in North Logan City to achieve the existing level of service. Impact fees are an equitable way for new development to similarly pay to maintain that level of service.

Step 5: Assess the Relative Extent of Contributions by Undeveloped Properties to the Cost of Existing Facilities

No monies from undeveloped properties, such as through property taxes, have been used to finance any parks system improvements included in this analysis. Therefore, undeveloped properties have not contributed to the cost of existing facilities.

Step 6: Relative Extent of Future Contributions to Cost of Existing Facilities

New residents in North Logan City will contribute to RAPZ and Restaurant tax funds through their taxes. The adjustment factor eliminates the concern that those monies will then be used to fund improvements that their impact fees are also funding.

Step 7: Calculation of Credit Entitlements and Extraordinary Costs

New development may be entitled to a credit when the development provides common facilities inside or outside the proposed development when similar facilities have been funded through general taxation or other means in other parts of the municipality. Credits must be determined by the city on a per development basis. Extraordinary costs should be evaluated by the city on a per development basis. This procedure should also be addressed in the impact fee ordinance.

Step 8: Calculation of Impact Fee

The recommended maximum parks and trails impact fee is calculated by summing the individual parks impact fee and trail impact fee.

The parks impact fee is calculated by multiplying the parks level of service per household by the base and development cost per acre for parks. This amount is then reduced by 43%, the adjustment factor, yielding the parks impact fee per household.

The trails impact fee is calculated by multiplying the trails level of service per household by the trails development costs. This is then reduced by 43%, the adjustment factor, yielding the trails impact fee per household.

Table 6: Impact Fee Calculation

Parks	
Parks LOS Per Household (acres) = LOS * Average Household Size / 1,000	0.028
Parks Base and Development Cost Per Acre - from Tables 2 and 4 = Base Cost Per Acre + Development Cost Per Acre	\$195,266
Parks Cost Per Household = Parks Base and Development Cost per Acre * Parks LOS Per Household	\$5,444
Adjustment Factor - from Table 5	43%
Parks Impact Fee Per Household = Parks Cost Per Household * (1-Adjustment Factor)	\$3,109
Trails	
Gravel Trails LOS Per Household (miles) = LOS * Average Household Size / 1,000	0.0011
Paved Trails LOS Per Household (miles) = LOS * Average Household Size / 1,000	0.0014
Gravel Trails Base Cost Per Mile - from Table 2	\$79,200
Paved Trails Base Cost Per Mile - from Table 2	\$132,000
Gravel Trails Cost Per Household = Trails Cost per Mile * Trails LOS Per Household	\$90
Paved Trails Cost Per Household = Trails Cost per Mile * Trails LOS Per Household	\$185
Adjustment Factor - from Table 5	43%
Gravel Trails Impact Fee Per Household = Trails Cost Per Household * (1-Adjustment Factor)	\$52
Paved Trails Impact Fee Per Household = Trails Cost Per Household * (1-Adjustment Factor)	\$106
Trails Impact Fee Per Household	\$157
Combined Parks and Trails Impact Fee Per Household	\$3,267

The parks impact fee is determined by the average household size. If a development is approved with a demonstrably lower average household size, the parks impact fee could be adjusted for the average household size of the development. An example could be an independent senior living development.

ROADWAYS IMPACT FEE ANALYSIS

The following assumptions are used in the Parks and Roadways Impact Fee Analysis:

- The existing level of service for roadways is B and the existing level of service for intersections is C.²
- The growth rate for new residences will be about 3.87% per year. The growth rate for new commercial/industrial will be about 2.5% per year.³

Step 1: Calculate New Development's Share of Existing Public Facilities

North Logan City planned for new development when building roadway system improvements. The cost of this excess capacity may be assigned to new development. To calculate a cost per trip, first the cost of each roadway is multiplied by the percent of the cost borne by the city. This ensures that no grant monies are included in the impact fee calculation. Second, the result is multiplied by the percent of the cost that was for expanded capacity that may be allocated to new development. This yields the cost eligible for impact fees. This cost is then brought forward to 2019 dollars using a 5% discount rate. The length of each roadway, in miles, is summed to yield the total number of miles of roadways with excess capacity. Then the capacity of the roadways, 13,000 trips per day, is multiplied by the miles to yield an excess capacity of 50,050 trips. The total present value of the roadways is divided by the number of trips to yield the cost per trip.

² Lance Anderson, Cache Landmark Engineers

³ City officials

Table 7: Existing Roadways

Capital Improvements		Cost	Percent of Cost Borne by City	Percent of Cost for Expanded Capacity	Cost Eligible for Impact Fees (Expanded Capacity)	Present Value of Expanded Capacity	Length of Road (miles)
2015	200 E Phase I	\$2,100,652	10%	100%	\$210,065	\$255,336	0.5
2014	200 E Phase II	\$8,900,000	12.7%	100%	\$1,130,300	\$1,442,581	1.2
2019	2200 N 400 E	\$740,000	6.7%	100%	\$49,580	\$49,580	0.08
2019	2700 N	\$264,000	100%	45%	\$118,800	\$118,800	0.28
2018	2500 N — Crookston	\$11,700	27%	100%	\$3,159	\$3,317	0.07
2016	1200 E - Elk Ridge East	\$1,244,095	12%	100%	\$151,791	\$175,717	0.19
2009	1600 E (2700 N - 3100 N)	\$330,000	100%	27%	\$89,100	\$145,135	0.51
2019	2850 N EP Systems	\$155,911	27%	100%	\$42,096	\$42,096	0.14
2015	3100 N Main to 200 E	\$1,050,000	13%	100%	\$136,500	\$165,917	0.2
2015	2850 N GCHS	\$686,000	50%	100%	\$343,000	\$416,919	0.43
2015	2850 N Davis Dodge	\$213,000	100%	50%	\$106,500	\$129,451	0.13
2018	400 East — Brookhaven	\$34,000	100%	33%	\$11,220	\$11,781	0.12
Total						\$2,956,629	3.85
Cost per Trip							
Capacity of Roadways (Trips per mile)							13,000
Expanded Capacity (Trips)							50,050
Cost per Trip							\$59

Step 2: Calculate New Development's Share of System ImprovementsIdentifying the Established Level of Service and Identifying the Impact on System Improvements Required to Maintain the Established Level of Service

According to city engineers, the current level of service for roadways and intersections in North Logan City is B and C, respectively.⁴ As new development occurs, new traffic will be added to the roadways system. To maintain the current level of service into the future, the city will need to expand the capacity of their roadways and improve intersections. The following table shows the planned improvements from the Roadways Capital Facilities plan that are planned within the next 6 years.

⁴ Lance Anderson, Cache Landmark Engineers.

Table 8: Planned Roadways Improvements

Planned Improvements	Expected Cost	Percent of Cost City Expects to Bear	Percent Allocated to New Development	Cost Allocated to New Development	Length of Road (miles)
3100 N, 1200 E - 1600 E	\$1,300,000	15%	100%	\$195,000	0.5
1400 E - 3100 N COG Project	\$150,000	100%	100%	\$150,000	0.06
1400 E - Phillips Subdivision	\$100,000	100%	100%	\$100,000	0.06
400 W, 2850 N - 2200 N	\$2,500,000	50%	100%	\$1,250,000	0.74
1200 E, 2400 N - 2750 N	\$520,000	10%	100%	\$52,000	0.4
2500 N 800 E Intersection	\$550,000	100%	100%	\$550,000	0.08
2500 N Wolf Pack Intersection	\$250,000	10%	100%	\$25,000	0.08
2500 N, 1200 E - 1600 E	\$1,000,000	100%	100%	\$1,000,000	0.4
Widening and Expanding with Development	\$650,000	100%	100%	\$650,000	0.33
Total				\$3,972,000	2.65
Cost per Trip					
Capacity of Roadways (Trips per mile)					13,000
Expanded Capacity (Trips)					34,450
Cost per Trip					\$115

Step 3: Other Than Impact Fees, Determine the Manner of Financing Each Public Facility

North Logan City has historically paid for their share of roadways improvements with roads impact fees and the general fund. The table below shows the funding source for each of the roadways included in the existing facilities component of the impact fee. Only three roadways were funded with the general fund. Costs that were paid with grants were removed in the calculation of the cost of existing roadways in Table 7 and are not included in the impact fee.

Table 9: Percent of Cost Eligible for Impact Fees Paid through General Fund

Capital Improvements		Cost Eligible for Impact Fees	Funding Source for City's Share of Expense	Cost Paid through General Fund
2010	200 E Phase I	\$210,065	Impact Fees	\$0
2014	200 E Phase II	\$1,130,300	Impact Fees	\$0
2019	2200 N 400 E	\$49,580	Impact Fees	\$0
2019	2700 N	\$118,800	10% Impact Fees, 90% General Fund	\$106,920
2018	2500 N - Crookston	\$3,159	Impact Fees	\$0
2016	1200 E - Elk Ridge East	\$151,791	Impact Fees	\$0
2009	1600 E (2700 N - 3100 N)	\$89,100	Impact Fees	\$0
2019	2850 N EP Systems	\$42,096	Impact Fees	\$0
2015	3100 N Main to 200 E	\$136,500	Impact Fees	\$0
2015	2850 N GCHS	\$343,000	Impact Fees	\$0
2015	2850 N Davis Dodge	\$106,500	General Fund	\$106,500
2018	400 East -Brookhaven	\$11,220	General Fund	\$11,220
Total		\$2,392,111		\$224,640
Percent of Cost Eligible for Impact Fees Paid through General Fund				9.4%

The general fund receives Class B&C road funds as well as property tax income from undeveloped properties. Both of these income streams are contributed to by the owners of undeveloped property, so removing them from the impact fee calculation eliminates the possibility of double payment. The average general fund contribution from Class B&C road funds and property taxes on undeveloped property is 6.1%.

Table 10: Percent of General Fund Revenues from Class B&C Road Funds and Property Tax

Year	Total General Fund Revenues	Class B&C Road Fund Allocation	Property Tax Revenue	% of Property Tax from Undeveloped Property	Property Tax from Undeveloped Property	Percent of General Fund Revenues from Class B&C Road Funds or Property Tax on Undeveloped Property
2018	\$8,121,643	\$423,006	\$731,844	5%	\$36,592	5.7%
2017	\$6,323,202	\$408,269	\$657,368	5%	\$32,868	7.0%
2016	\$5,814,370	\$339,713	\$560,807	5%	\$28,040	6.3%
2015	\$5,835,144	\$305,911	\$572,167	5%	\$28,608	5.7%
2014	\$5,656,685	\$290,084	\$522,480	5%	\$26,124	5.6%
Average Percent						6.1%

The Alternate Funding Credit is calculated by multiplying the percent of cost eligible for impact fees paid through the general fund (from Table 9) by the average percent of general fund revenues from Class B&C road funds and property tax on undeveloped property (from Table 10). The result is an Alternate Funding Credit of 0.6%. This is subtracted in the calculation of the impact fee.

Table 11: Alternate Funding Credit

Percent of cost eligible for impact fees paid through General Fund (from Table 9)	9.4%
Percent of General Fund revenues from Class B&C Road Funds and Property Tax on Undeveloped Property (From Table 10)	6.1%
Alternate Funding Credit	0.6%

Step 4: Determine Whether Impact Fees are Necessary

The Utah Impact Fees Act requires cities to determine whether impact fees are necessary to achieve an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received.

Current and past city residents have already paid for the existing roadways in North Logan City to achieve the existing level of service. Impact fees are an equitable way for new development to similarly pay to maintain that level of service.

Step 5: Assess the Relative Extent of Contributions by Undeveloped Properties to the Cost of Existing Facilities

The Alternate Funding Credit calculated in Table 11 accounts for contributions by undeveloped properties to the cost of existing facilities.

Step 6: Relative Extent of Future Contributions to Cost of Existing Facilities

It is expected that the general fund might similarly be used in the future to fund roadways improvements, so the Alternate Funding Credit is subtracted from the impact fee.

Step 7: Calculation of Credit Entitlements and Extraordinary Costs

New development may be entitled to a credit when the development provides common facilities inside or outside the proposed development when similar facilities have been funded through general taxation or other means in other parts of the municipality. Credits must be determined by the city on a per development basis. Extraordinary costs should be evaluated by the city on a per development basis. This procedure should also be addressed in the impact fee ordinance.

Step 8: Calculation of Impact Fee

The cost of the impact fee analysis may be included in the impact fee calculation. The impact fee analysis will need to be reviewed in 2025. Therefore, the cost of the current analysis is divided by the expected increase in residences and businesses through 2025.

Table 12: Cost of Impact Fee Analysis

Cost of Roadways Impact Fee Analysis	\$8,000
Current Number of Households	4,105
Expected Growth Rate	3.87%
New Households in 2025	1,050
Current Number of Commercial/Industrial	100
Expected Commercial/Industrial Growth Rate	2.50%
New Commercial/Industrial in 2025	16
Cost of Impact Fee per New Residence or Business	\$8

Before calculating the impact fee, the results from Tables 7, 8 and 11 must be combined to yield the total cost per trip. The cost per trip for expanded capacity of existing roadways is added to the cost per trip for planned roadways. The alternate funding credit is subtracted from that result to yield a total cost per trip of \$173.

Table 13: Total Cost per Trip

Cost per Trip for Expanded Capacity of Existing Roadways (Table 7)	\$59
Cost per Trip for Planned Roadways System Improvements (Table 8)	\$115
Alternate Funding Credit (Table 11)	0.6%
Total Cost per Trip	\$173

The impact fee is based on the number of trips generated by different land use types. The table below shows several standard land use types and others maybe be found in the manual Trip Generation, by the Institute of Transportation Engineers. To calculate the impact fee, the trip rate for the land use type is multiplied by the total cost per trip from Table 13 to yield a total trip cost. The cost of the impact fee analysis is then added, from Table 12 to yield the suggested impact fee per land use type.

Table 14: Impact Fee Calculation

Residential	Trip Rate* (per unit)	Cost per Trip (Table 13)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per unit)
Single-Family Detached	10.0	\$173	\$1,730	\$8	\$1,738
Multi-Family Detached (1-3 levels)	7.3	\$173	\$1,266	\$8	\$1,274
Multi-Family Detached (4-10 levels)	5.4	\$173	\$941	\$8	\$949
Commercial/Industrial	Trip Rate* (per 1,000 square feet)	Cost per Trip (Table 13)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per 1,000 square feet)
Small office building	16.2	\$173	\$2,801	\$8	\$2,808
Medical or dental office building	34.8	\$173	\$6,020	\$8	\$6,028
Variety store (dollar store)	63.5	\$173	\$10,980	\$8	\$10,988
Gas Station	1202.8	\$173	\$208,090	\$8	\$208,097
Light industrial	5.0	\$173	\$865	\$8	\$873
Heavy industrial	1.5	\$173	\$260	\$8	\$267

*Trip Generation, 10th Edition, The Institute of Transportation Engineers

APPENDIX

Appendix A: Cost per Trip for Existing Roadways Over Time

Capital Improvement		Cost Eligible for Impact Fees	Present Value (2019)	Present Value (2020)	Present Value (2021)	Present Value (2022)	Present Value (2023)	Present Value (2024)	Present Value (2025)
2015	200 E Phase I	\$210,065	\$255,336	\$268,102	\$281,507	\$295,583	\$310,362	\$325,880	\$342,174
2014	200 E Phase II	\$1,130,300	\$1,442,581	\$1,514,710	\$1,590,446	\$1,669,968	\$1,753,466	\$1,841,140	\$1,933,197
2019	2200 N 400 E	\$49,580	\$49,580	\$52,059	\$54,662	\$57,395	\$60,265	\$63,278	\$66,442
2019	2700 N	\$118,800	\$118,800	\$124,740	\$130,977	\$137,526	\$144,402	\$151,622	\$159,203
2018	2500 N — Crookston	\$3,159	\$3,317	\$3,483	\$3,657	\$3,840	\$4,032	\$4,233	\$4,445
2016	1200 E - Elk Ridge East	\$151,791	\$175,717	\$184,503	\$193,728	\$203,414	\$213,585	\$224,264	\$235,478
2009	1600 E (2700 N - 3100 N)	\$89,100	\$145,135	\$152,391	\$160,011	\$168,011	\$176,412	\$185,233	\$194,494
2019	2850 N EP Systems	\$42,096	\$42,096	\$44,201	\$46,411	\$48,731	\$51,168	\$53,726	\$56,413
2015	3100 N Main to 200 E	\$136,500	\$165,917	\$174,212	\$182,923	\$192,069	\$201,673	\$211,756	\$222,344
2015	2850 N GCHS	\$343,000	\$416,919	\$437,765	\$459,653	\$482,635	\$506,767	\$532,106	\$558,711
2015	2850 N Davis Dodge	\$106,500	\$129,451	\$135,924	\$142,720	\$149,856	\$157,349	\$165,216	\$173,477
2018	400 East — Brookhaven	\$11,220	\$11,781	\$12,370	\$12,989	\$13,638	\$14,320	\$15,036	\$15,788
Total		\$2,956,629	\$3,104,460	\$3,259,683	\$3,422,667	\$3,593,801	\$3,773,491	\$3,962,165	
Expanded Capacity (Trips)		50,050	50,050	50,050	50,050	50,050	50,050	50,050	50,050
Cost per Trip		\$59	\$62	\$65	\$68	\$72	\$75	\$79	

Appendix B: Total Cost per Trip Over Time

2019	
Cost per Trip for Expanded Capacity of Existing Roadways (Appendix A)	\$59
Cost per Trip for Planned Roadways System Improvements (Table 8)	\$115
Alternate Funding Credit (Table 11)	0.6%
Total Cost per Trip	\$173
2020	
Cost per Trip for Expanded Capacity of Existing Roadways (Appendix A)	\$62
Cost per Trip for Planned Roadways System Improvements (Table 8)	\$115
Alternate Funding Credit (Table 11)	0.6%
Total Cost per Trip	\$176
2021	
Cost per Trip for Expanded Capacity of Existing Roadways (Appendix A)	\$65
Cost per Trip for Planned Roadways System Improvements (Table 8)	\$115
Alternate Funding Credit (Table 11)	0.6%
Total Cost per Trip	\$179
2022	
Cost per Trip for Expanded Capacity of Existing Roadways (Appendix A)	\$68
Cost per Trip for Planned Roadways System Improvements (Table 8)	\$115
Alternate Funding Credit (Table 11)	0.6%
Total Cost per Trip	\$183
2023	
Cost per Trip for Expanded Capacity of Existing Roadways (Appendix A)	\$72
Cost per Trip for Planned Roadways System Improvements (Table 8)	\$115
Alternate Funding Credit (Table 11)	0.6%
Total Cost per Trip	\$186
2024	
Cost per Trip for Expanded Capacity of Existing Roadways (Appendix A)	\$75
Cost per Trip for Planned Roadways System Improvements (Table 8)	\$115
Alternate Funding Credit (Table 11)	0.6%
Total Cost per Trip	\$190
2025	
Cost per Trip for Expanded Capacity of Existing Roadways (Appendix A)	\$79
Cost per Trip for Planned Roadways System Improvements (Table 8)	\$115
Alternate Funding Credit (Table 11)	0.6%
Total Cost per Trip	\$193

Appendix C: Roadways Impact Fee Over Time

2019					
Residential	Trip Rate* (per unit)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per unit)
Single-Family Detached	10.0	\$173	\$1,730	\$8	\$1,738
Multi-Family Detached (1-3 levels)	7.3	\$173	\$1,266	\$8	\$1,274
Multi-Family Detached (4-10 levels)	5.4	\$173	\$941	\$8	\$949
Commercial/Industrial	Trip Rate* (per 1,000 square feet)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per 1,000 square feet)
Small office building	16.2	\$173	\$2,801	\$8	\$2,808
Medical or dental office building	34.8	\$173	\$6,020	\$8	\$6,028
Variety store (dollar store)	63.5	\$173	\$10,980	\$8	\$10,988
Gas Station	1202.8	\$173	\$208,090	\$8	\$208,097
Light industrial	5.0	\$173	\$865	\$8	\$873
Heavy industrial	1.5	\$173	\$260	\$8	\$267
2020					
Residential	Trip Rate* (per unit)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per unit)
Single-Family Detached	10.0	\$176	\$1,763	\$8	\$1,771
Multi-Family Detached (1-3 levels)	7.3	\$176	\$1,291	\$8	\$1,298
Multi-Family Detached (4-10 levels)	5.4	\$176	\$959	\$8	\$967
Commercial/Industrial	Trip Rate* (per 1,000 square feet)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per 1,000 square feet)
Small office building	16.2	\$176	\$2,855	\$8	\$2,862
Medical or dental office building	34.8	\$176	\$6,136	\$8	\$6,143
Variety store (dollar store)	63.5	\$176	\$11,191	\$8	\$11,198
Gas Station	1202.8	\$176	\$212,078	\$8	\$212,086
Light industrial	5.0	\$176	\$882	\$8	\$889
Heavy industrial	1.5	\$176	\$264	\$8	\$272

Appendix C: Roadways Impact Fee Over Time, continued

2021					
Residential	Trip Rate* (per unit)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per unit)
Single-Family Detached	10.0	\$179	\$1,794	\$8	\$1,802
Multi-Family Detached (1-3 levels)	7.3	\$179	\$1,313	\$8	\$1,321
Multi-Family Detached (4-10 levels)	5.4	\$179	\$976	\$8	\$983
Commercial/Industrial	Trip Rate* (per 1,000 square feet)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per 1,000 square feet)
Small office building	16.2	\$179	\$2,904	\$8	\$2,912
Medical or dental office building	34.8	\$179	\$6,243	\$8	\$6,251
Variety store (dollar store)	63.5	\$179	\$11,387	\$8	\$11,394
Gas Station	1202.8	\$179	\$215,788	\$8	\$215,795
Light industrial	5.0	\$179	\$897	\$8	\$905
Heavy industrial	1.5	\$179	\$269	\$8	\$277
2022					
Residential	Trip Rate* (per unit)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per unit)
Single-Family Detached	10.0	\$183	\$1,826	\$8	\$1,834
Multi-Family Detached (1-3 levels)	7.3	\$183	\$1,337	\$8	\$1,344
Multi-Family Detached (4-10 levels)	5.4	\$183	\$994	\$8	\$1,001
Commercial/Industrial	Trip Rate* (per 1,000 square feet)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per 1,000 square feet)
Small office building	16.2	\$183	\$2,957	\$8	\$2,964
Medical or dental office building	34.8	\$183	\$6,356	\$8	\$6,363
Variety store (dollar store)	63.5	\$183	\$11,592	\$8	\$11,600
Gas Station	1202.8	\$183	\$219,682	\$8	\$219,690
Light industrial	5.0	\$183	\$913	\$8	\$921
Heavy industrial	1.5	\$183	\$274	\$8	\$281

Appendix C: Roadways Impact Fee Over Time, continued

2023					
Residential	Trip Rate* (per unit)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per unit)
Single-Family Detached	10.0	\$186	\$1,860	\$8	\$1,868
Multi-Family Detached (1-3 levels)	7.3	\$186	\$1,362	\$8	\$1,369
Multi-Family Detached (4-10 levels)	5.4	\$186	\$1,012	\$8	\$1,020
Commercial/Industrial	Trip Rate* (per 1,000 square feet)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per 1,000 square feet)
Small office building	16.2	\$186	\$3,012	\$8	\$3,019
Medical or dental office building	34.8	\$186	\$6,474	\$8	\$6,482
Variety store (dollar store)	63.5	\$186	\$11,808	\$8	\$11,815
Gas Station	1202.8	\$186	\$223,772	\$8	\$223,779
Light industrial	5.0	\$186	\$930	\$8	\$938
Heavy industrial	1.5	\$186	\$279	\$8	\$287
2024					
Residential	Trip Rate* (per unit)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per unit)
Single-Family Detached	10.0	\$190	\$1,896	\$8	\$1,904
Multi-Family Detached (1-3 levels)	7.3	\$190	\$1,388	\$8	\$1,395
Multi-Family Detached (4-10 levels)	5.4	\$190	\$1,031	\$8	\$1,039
Commercial/Industrial	Trip Rate* (per 1,000 square feet)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per 1,000 square feet)
Small office building	16.2	\$190	\$3,070	\$8	\$3,077
Medical or dental office building	34.8	\$190	\$6,598	\$8	\$6,606
Variety store (dollar store)	63.5	\$190	\$12,034	\$8	\$12,042
Gas Station	1202.8	\$190	\$228,065	\$8	\$228,073
Light industrial	5.0	\$190	\$948	\$8	\$956
Heavy industrial	1.5	\$190	\$284	\$8	\$292

Appendix C: Roadways Impact Fee Over Time, continued

2025					
Residential	Trip Rate* (per unit)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per unit)
Single-Family Detached	10.0	\$193	\$1,934	\$8	\$1,941
Multi-Family Detached (1-3 levels)	7.3	\$193	\$1,415	\$8	\$1,423
Multi-Family Detached (4-10 levels)	5.4	\$193	\$1,052	\$8	\$1,059
Commercial/Industrial	Trip Rate* (per 1,000 square feet)	Cost per Trip (Appendix B)	Trip Cost	Cost of Impact Fee Analysis (Table 12)	Impact Fee (per 1,000 square feet)
Small office building	16.2	\$193	\$3,130	\$8	\$3,138
Medical or dental office building	34.8	\$193	\$6,729	\$8	\$6,736
Variety store (dollar store)	63.5	\$193	\$12,272	\$8	\$12,280
Gas Station	1202.8	\$193	\$232,574	\$8	\$232,581
Light industrial	5.0	\$193	\$967	\$8	\$974
Heavy industrial	1.5	\$193	\$290	\$8	\$298