

Final Report

Solano RTIF Nexus Update

Prepared for:
Solano Transportation Authority

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WC23-3964

FEHR  PEERS

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1. Introduction

Background and Purpose

Impact fees are established under a state law known as Assembly Bill (AB) 1600, the Mitigation Fee Act. Fees charged pursuant to this legislation are used to build capital facilities needed to offset the impacts generated by new development. It is common practice throughout California for local jurisdictions to establish impact fee programs to fund the construction of several types of public infrastructure and facilities; one common type of fee program is a traffic mitigation fee, which generates funds that are used to construct infrastructure and provide facilities that support the transportation needs of new residents and businesses.

Per the requirements of the Mitigation Fee Act, each impact fee program must be supported by a “nexus” analysis, which is a rational and documented set of procedures by which the agency establishes that there is a reasonable relationship (or “nexus”) between anticipated future development in the jurisdiction, the need for new infrastructure to support that development, and the fees that will be charged to help fund that infrastructure. Thus, the technical reports (such as this report) that are prepared to support a fee program are commonly called nexus studies.

Solano County currently maintains a Regional Transportation Impact Fee (RTIF) program as part of the Solano County Public Facilities Fee (PFF). The Solano RTIF was established in 2013 and has been continuously maintained since that time, as a mechanism for sharing the costs of needed transportation improvements among all development within the County. As required by State law, County staff prepares annual financial disclosure reports for the RTIF program, and every five years staff prepares a comprehensive review that describes the program in detail, including the program’s historical background, the projects that have been completed or modified, and the financial status of the overall program. The most recent annual financial report was presented to the Board of Supervisors in December 2022, while the most recent comprehensive five-year review was presented to the Board on July 23, 2019. The Solano Transportation Authority (STA) administers the funds collected through the RTIF program.

The current fee amount charged in the Solano RTIF program is \$2,500 per dwelling unit equivalent (DUE). The fee amount was adjusted at its most recent comprehensive review on 2019, which recommended increasing the fee from \$1,500 per DUE to \$2,500 per DUE, per the Board Resolution 2019-156. The most recent focused update conducted for the RTIF is documented in *Solano RTIF Nexus Update Final Report*, prepared by Fehr & Peers, dated August 27, 2021 (referred to in this document as the *2021 Nexus Update Report*). The most recent nexus update conducted for the entire PFF program, including the RTIF, is documented in *Nexus Analysis for Solano County Public Facilities Fee Update Final Report*, prepared by Economic & Planning Systems, dated August 6, 2019 (referred to in this document as the *2019 PFF Report*).

There is interest in conducting a targeted update of the RTIF to adjust the list of capital improvement projects. The fees will continue to be charged on new development that occurs anywhere in Solano County.



The purpose of this report is to serve as the necessary documentation to allow the County to adjust the capital improvements included in the RTIF program.

Organization of the Report

After this introductory section, the report contains four additional sections:

- *Section 2* – Project List, describes the list of capital improvement projects that would be included in the program.
- *Section 3* – Growth Projections, documents the amount of growth anticipated over the next twenty years in Solano County.
- *Section 4* – Nexus Analysis and Fee Calculations, describes the results of the nexus analysis and calculates the fee amounts using the information presented in the report.
- *Section 5* – Summary of Required Program Elements, summarizes how the information in this report satisfies the requirements of the Mitigation Fee Act (AB 1600).



2. Project List

The Solano RTIF program, as most recently updated in 2021, has a capital improvement list made up of 17 projects. Fifteen of the projects are individual capital improvements and the remaining two are general categories for: 1) County Road Projects, and 2) Express Bus Transit Centers and Train Stations. As documented in previous nexus studies, the transportation facilities included in the Solano RTIF project list are needed in whole or in part to accommodate the impacts of growth in Solano County. The Solano RTIF area and the current set of projects is shown on **Figure 1**.

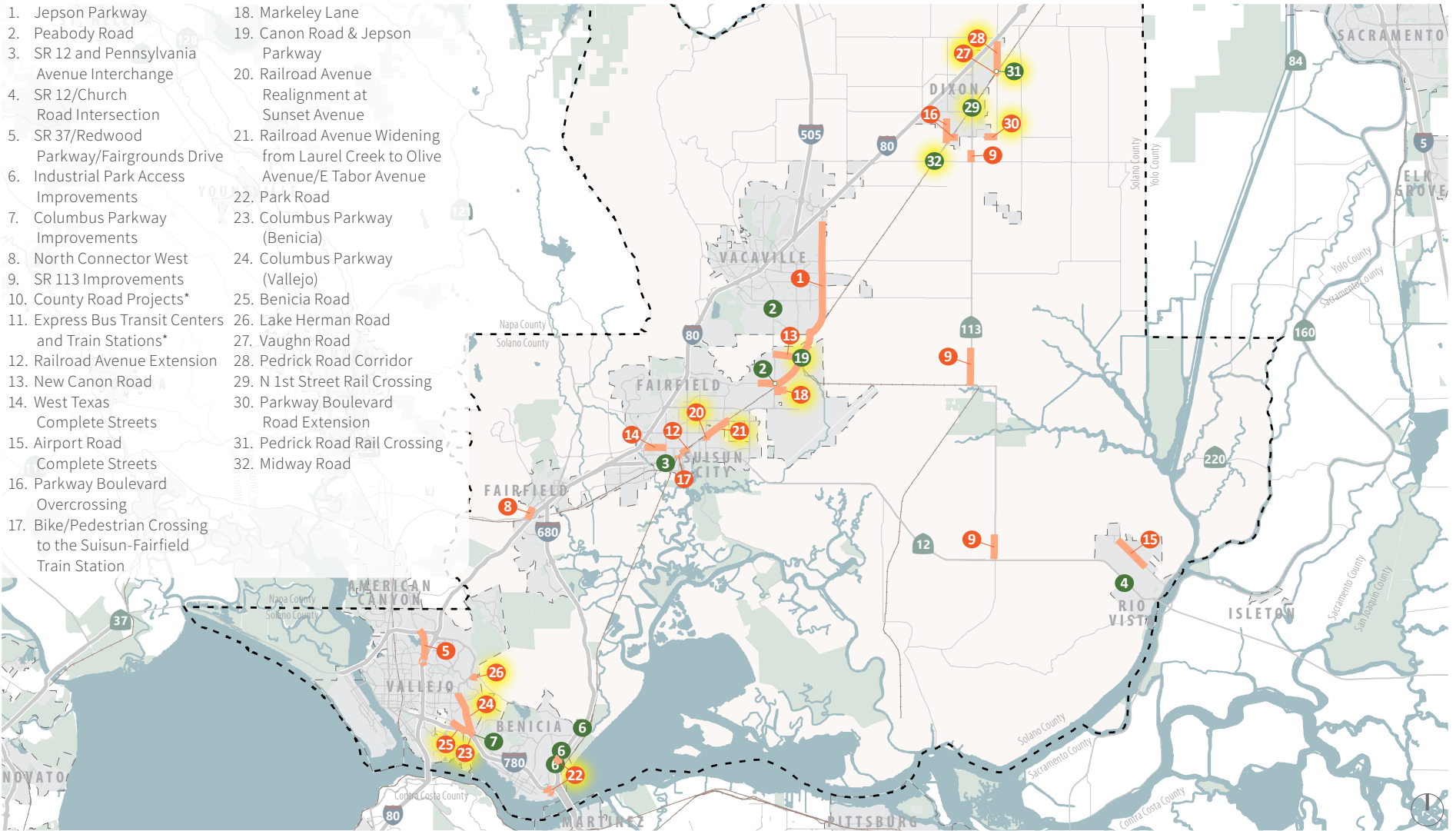
The primary purpose of this 2023 update is to incorporate additional transportation improvement projects that are consistent with the purpose of the RTIF. STA staff provided 15 additional projects for inclusion in this update. Three projects, Park Road, Benicia Road and Lake Herman Road, are projects that are intended to enhance conditions for bicyclists and pedestrians. These 15 new projects have been added to the project list as project numbers 18 through 32 (and are also shown on Figure 1); these projects need to undergo a nexus analysis in order to be incorporated into the Solano RTIF program.

The project sponsors for the 15 new projects provided recent cost estimates, which have been added to the updated project list. In addition, the estimated costs of the initial 17 projects have been escalated to account for inflation since the RTIF was last updated in 2021. The updated project list, including the cost estimates, is shown in **Table 1**.



Project List

- | | |
|--|---|
| 1. Jepson Parkway | 18. Markeley Lane |
| 2. Peabody Road | 19. Canon Road & Jepson Parkway |
| 3. SR 12 and Pennsylvania Avenue Interchange | 20. Railroad Avenue Realignment at Sunset Avenue |
| 4. SR 12/Church Road Intersection | 21. Railroad Avenue Widening from Laurel Creek to Olive Avenue/E Tabor Avenue |
| 5. SR 37/Redwood Parkway/Fairgrounds Drive | 22. Park Road |
| 6. Industrial Park Access Improvements | 23. Columbus Parkway (Benicia) |
| 7. Columbus Parkway Improvements | 24. Columbus Parkway (Vallejo) |
| 8. North Connector West | 25. Benicia Road |
| 9. SR 113 Improvements | 26. Lake Herman Road |
| 10. County Road Projects* | 27. Vaughn Road |
| 11. Express Bus Transit Centers and Train Stations* | 28. Pedrick Road Corridor |
| 12. Railroad Avenue Extension | 29. N 1st Street Rail Crossing |
| 13. New Canon Road | 30. Parkway Boulevard Road Extension |
| 14. West Texas Complete Streets | 31. Pedrick Road Rail Crossing |
| 15. Airport Road Complete Streets | 32. Midway Road |
| 16. Parkway Boulevard Overcrossing | |
| 17. Bike/Pedestrian Crossing to the Suisun-Fairfield Train Station | |



Note: Projects #10 and #11 are in multiple locations and are not displayed on the map.

- # Projects that Modify Intersections
- # Projects that Modify or Create Segments
- New RTIF Project
- Solano County



Figure 1

Table 1: Solano RTIF Projects

Number ¹	Agency	Facility	Description	Total Cost Estimate (2023 \$)
1	Fairfield/ Vacaville	Jepson Parkway	Construct remaining segments of Jepson Parkway in Fairfield and Vacaville.	\$346,009,000
2	Fairfield	Peabody Road	Widen Peabody Road from 2 to 4 lanes, from New Canon Rd to Fairfield city limits	\$8,212,000
3	Suisun City/ Fairfield	SR 12/Pennsylvania Ave	Construct new interchange	\$82,116,000
4	Rio Vista/ Solano County	SR 12/Church Road	Improve intersection	\$14,604,000
5	Vallejo	SR 37/Redwood Parkway/ Fairgrounds Drive	Widen roads and improve interchanges	\$109,067,000
6	Benicia	Industrial Park Access Improvements	Add traffic signals and better accommodate trucks at I-680/Lake Herman Rd, and I-80/Park/Industrial	\$33,138,000
7	Benicia	Columbus Parkway Improvements	Add traffic signal at Columbus/Rose and improve westbound approach	\$1,680,000
8	Fairfield/ Solano County	North Connector West	Construct North Connector from Business Center Drive to SR12	\$64,800,000
9	Dixon/ Solano County	SR 113 Improvements	TSM, TDM and ITS (e.g., incentives for carpooling, transit services, park-n-ride facilities, advance curve warning signs, speed feedback signs, fog detection)	\$7,350,000
10	Solano County	County Road Projects	Unincorporated County roadway improvements that address new growth impacts	\$23,623,000
11	Various	Express Bus Transit Centers and Train Stations	Countywide Express Bus Transit Centers and Train Stations that address new growth impacts	\$20,423,000
12	Suisun City	Railroad Ave Extension	Construct extension of Railroad Avenue to connect with SR12 and Main Street	\$11,747,000
13	Fairfield	New Canon Road	Construct extension of New Canon Road from Jepson Parkway to Travis AFB	\$51,044,000
14	Fairfield	West Texas Complete Streets	Modernize West Texas Street to improve conditions for bicyclists and pedestrians between Beck Avenue and Pennsylvania Avenue	\$21,402,000 ²
15	Rio Vista	Airport Road Complete Streets	Install 12-foot landscape strip along existing Class I bike and pedestrian path	\$6,200,000



16	Dixon	Parkway Blvd. Overcrossing	On Parkway Blvd from Valley Glen Dr. to Pitt School Rd: Construct new 4-lane roadway and overcrossing of UPRR & Porter Rd; On Pitt School Rd from south of Hillview Drive to Porter Rd: widen shoulders and reconstruct roadway	\$13,041,000
17	Fairfield/ Suisun City	Bike/Pedestrian Crossing to the Suisun-Fairfield Train Station	Construct a grade-separated north-south connection between Ohio Street in Fairfield to the existing plaza area south of Highway 12 in Suisun City	\$57,481,000
18	Fairfield	Markeley Lane	Markeley Lane will be extended to Peabody Road. The project would also reconstruct Markeley Lane to include new sidewalks and bike lanes.	\$5,800,000
19	Fairfield	Canon Road & Jepson Parkway	Construct a grade-separated rail overcrossing at Canon Road.	\$44,834,000
20	Suisun City	Railroad Avenue Realignment at Sunset Avenue	The project entails re-routing Railroad Avenue to an alignment that is generally along the east side of Laurel Creek, and connecting the realigned street segment to the Railroad Avenue West /Sunset Avenue t-intersection, resulting in a standard intersection having four approaches. The project includes installation of pedestrian and bicycle facilities, a median turn lane, street lighting, landscaping and wet utility installation.	\$11,900,000
21	Suisun City	Railroad Avenue Widening from Laurel Creek to Olive Road/East Tabor Avenue	The project entails widening Railroad Avenue from Laurel Creek to Humphrey Drive; constructing a new east-west road from Humphrey Drive to Olive Road; resurfacing Olive Avenue; and installing a traffic signal at the Olive Road/East Tabor Avenue intersection. The project includes installation of pedestrian and bicycle facilities, a median turn lane, street lighting, landscaping and wet utility installation.	\$35,000,000
22	Benicia	Park Road	Repave the street, install bike lanes, ADA compliant sidewalks, and stormwater structures. Project limits are Park Road between Adams Street and Oak Road also Park Road between Bayshore Road and Industrial Way.	\$3,000,000
23	Benicia	Columbus Parkway (Benicia)	Add 1 lane in each direction to eliminate traffic bottleneck between City of Vallejo and city limits and Rose Drive. Also install bike lanes and ADA compliant sidewalks and stormwater structures.	\$2,000,000
24	Vallejo	Columbus Parkway (Vallejo)	Ultimate improvements for Columbus Parkway from Benicia City limits to Springs Road. Installation of 4 lanes of travel way, sidewalk, curb & gutter, street lighting, landscaped median, green infrastructure elements, bike lanes, and supporting signage and striping.	\$8,000,000



25	Vallejo/ Solano County	Benicia Road	Installation of roadway improvements to provide bicycle and pedestrian facilities incorporating ADA compliant curb ramps and driveways between Columbus Parkway and Rollingwood Drive.	\$9,500,000
26	Vallejo/ Solano County	Lake Herman Road	Installation of roadway improvements to provide bicycle and pedestrian facilities incorporating necessary ADA compliant curb ramps and driveways, street lighting and green infrastructure elements.	\$10,500,000
27	Dixon/ Solano County	Vaughn Road	Construction of realigned eastern portion of Vaughn Road north along Union Pacific Railroad to connect to Pedrick Road	\$6,100,000
28	Dixon/ Solano County	Pedrick Road Corridor	Rehabilitation of existing Pedrick Road for approximately 1 mile between the Union Pacific Railroad and the I-80 Corridor. The project would expand the road to a 4-lane road and install new sidewalks and a bicycle lane.	\$7,000,000
29	Dixon	N 1 st Street Rail Crossing	Improvements to include improved lighting and striping for the existing railroad crossing.	\$500,000
30	Dixon	Parkway Boulevard Road Extension	Extension of existing East Parkway Boulevard to Pedrick Road.	\$7,000,000
31	Dixon	Pedrick Road Rail Crossing	Construction of a grade-separated railroad crossing at the UPRR crossing on Pedrick Road, and closure of the at-grade railroad crossing on Vaughn Road.	\$64,500,000
32	Solano County	Midway Road	Provide at-grade rail crossing on Midway Road.	\$2,300,000
TOTAL				\$1,089,871,000

Notes:

1: Project numbers 1 through 17 are part of the current RTIF program; project numbers 18-35 are proposed to be added to the program as a result of this targeted nexus update.

2: An existing deficiency reduction of 20% was applied to the cost of project number 14. The details of this adjustment are documented in *Solano RTIF Nexus Update Final Report, Fehr & Peers, August 2021*.

Sources: Solano County and STA, 2023.



3. Growth Projections

An important element of every fee calculation is the estimate of future growth in the fee area.

Land Use Projections

For the purposes of this targeted nexus update, the growth projections from the *2019 PFF Report* that were used in the *2021 Nexus Update Report* are maintained here, with the only adjustment being that the base year is now 2023 as compared to the 2021 base year used in the *2021 Nexus Update Report*. The countywide totals used in this analysis are shown in **Table 2**.

Table 2: Countywide Growth Projections

Land Use Type	2023 Base Year	2040 Projection	Growth
Population	442,450	516,222	73,772
Dwelling Units	154,336	177,085	22,749
Jobs	140,343	161,128	20,785
Service Population ¹	582,793	677,350	94,557

1: Service population is defined as the sum of residents and employees.

Source: *Nexus Analysis for Solano County Public Facilities Fee Update Final Report*, Economic & Planning Systems, August 2019; Fehr & Peers, 2023.

Dwelling Unit Equivalent (DUE) Projections

This analysis relies on Dwelling Unit Equivalent (DUE) factors to compare and evaluate future development across land use categories. Specifically, DUE factors compare residential and non-residential land uses to one another based on their trip characteristics in order to develop a common metric for analysis. The factors used to convert residential and non-residential growth into DUEs are shown in **Table 3**. These factors have been developed following the same structure established in the 2019 and 2021 Reports; the values in each column have been updated to reflect the most current data available.



Table 3: Dwelling Unit Equivalent Assumptions

Fee Category	Unit Type	Peak Hour Trip Rate ¹	Pass-through Trip Allowance ²	Peak Hour Trips per Unit ³	DUE per Unit ⁴
Residential					
Single Family	Unit	0.94	100%	0.94	1.00
Multifamily	Unit	0.51	100%	0.51	0.54
2 nd SFR Unit/Accessory Dwelling Unit (ADU)	Unit	0.48	100%	0.48	0.51
Age-Restricted/Senior Multifamily	Unit	0.25	100%	0.25	0.27
Nonresidential					
Retail/Commercial	KSF	3.40	50%	1.70	1.81
Service/Commercial	KSF	7.80	51%	3.98	4.23
Office	KSF	1.44	77%	1.11	1.18
Institutional/Assembly	KSF	0.49	64%	0.31	0.33
Lodging	Room	0.59	58%	0.34	0.36
Industrial	KSF	0.65	85%	0.55	0.59
Warehouse/Distribution	KSF	0.18	85%	0.15	0.16
Agricultural Uses					
Non-residential Agricultural Accessory Structure	KSF	0.19	80%	0.15	0.16

1. Reflects average number of trips at peak hour of day for the unit type indicated based on data from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition).
2. Discount to peak trip rate to account for pass-through trips.
3. Calculated as: Peak Hour Trip Rate * % Trip Allowance.
4. DUE per Unit is calculated by normalizing the Peak Hour Trips per Unit for each category such that the single-family residential category is assigned a DUE of 1.00. This is accomplished by dividing the Peak Hour Trips per Unit for each category by Peak Hour Trips per Unit of the single-family residential category. So, for example, the DUE per Unit for the Multi-family category is calculated as 0.51 / 0.94 = 0.54.

Source: *Nexus Analysis for Solano County Public Facilities Fee Update Final Report*, Economic & Planning Systems, August 2019; Fehr & Peers, 2023.

The DUE factors are then used to calculate total DUE growth by land use. The level of growth projected to occur in Solano County was taken from the *2019 PFF Report* and **Table 4** displays how that growth was multiplied by the DUE factors to derive total growth expressed in units of DUEs. Overall, these calculations result in an estimated 13 percent increase in DUEs countywide between 2023 and 2040.



Table 4: Growth Converted to DUEs

Land Use Type	# of Dwelling Units or # of Employees	KSF	DUE Conversion Factor	DUEs
Existing (2023)				
Single Family	116,543		1.00	116,543
Multifamily	37,793		0.54	20,505
<i>Total Residential</i>	<i>154,336</i>			<i>137,048</i>
Retail Employment	17,003	6,631	1.81	11,993
Non-Retail Employment	123,340	57,353	0.60	34,412
<i>Total Employment</i>	<i>140,343</i>			<i>46,404</i>
Total				183,452
Future (2040)				
Single Family	129,976		1.00	129,976
Multifamily	47,109		0.54	25,559
<i>Total Residential</i>	<i>177,085</i>			<i>155,535</i>
Retail Employment	17,205	6,710	1.81	12,135
Non-Retail Employment	143,923	66,924	0.60	40,155
<i>Total Employment</i>	<i>161,128</i>			<i>52,290</i>
Total				207,825
Growth (2023 - 2040)				
Single Family	13,433		1.00	13,433
Multifamily	9,316		0.54	5,054
<i>Total Residential</i>	<i>22,749</i>			<i>18,487</i>
Retail Employment	202	79	1.81	142
Non-Retail Employment	20,583	9,571	0.60	5,743
<i>Total Employment</i>	<i>20,785</i>			<i>5,885</i>
Total #				24,373
Total %				13%

Source: Nexus Analysis for Solano County Public Facilities Fee Update Final Report, Economic & Planning Systems, August 2019; Fehr & Peers, 2023.



4. Nexus Analysis and Fee Calculations

The nexus analysis process involves determining the relationship between the new development in the area subject to the fee and the cost of the improvements to be constructed. This process determines what proportion of the cost of each project would be funded by the fee program and determines if there are existing deficiencies that should be accounted for. The final result is a set of calculations for the maximum level of fee that could be applied to new development in Solano County.

Existing Deficiencies

The purpose of the existing deficiencies analysis is to establish whether the transportation facilities addressed by the projects in the fee program are currently deficient. If there are existing deficiencies at those locations, then an adjustment should be made in the fee calculations to ensure new development is not being required to pay for correcting an existing problem.

As in the original RTIF study, the determination of existing deficiencies is being drawn from the results of prior traffic analyses, and no new traffic data has been collected. Based on the available traffic analyses, no existing deficiencies were identified for the 15 new projects being added to the RTIF list

Modeling Analysis of Future Usage

The next step in the nexus analysis is to conduct an analysis of the future usage of the RTIF facilities. Consistent with the methods used in previous nexus studies, this analysis uses the available travel demand model to estimate the proportion of traffic on each of the new facilities that comes from new development and is regional in nature. Because the RTIF is charged to new development and is intended to support the construction of transportation infrastructure that serves regional travel needs, the focus of the nexus analysis is on travel from new development that serves multiple jurisdictions. It should be noted that this analysis focuses on the 15 projects that are proposed to be added to the RTIF; for the 17 projects that are already part of the RTIF, the nexus percentages have been taken directly from the *2021 Nexus Update Report*.

The travel model that is currently available to conduct this analysis is the Solano-Napa Activity Based Model (SNABM). Using the SNABM, the trip tables were separated into “baseline” and “growth” trip tables. The baseline trip table came from the 2023 scenario of the model and was subtracted from the 2040 trip table to produce a “growth” table that would represent the trips generated by new development. This is an important step since the fee will be charged only to new development and is based on an evaluation of that new development’s effects on the RTIF projects. The baseline and growth trip tables were then assigned simultaneously to a year 2040 network. This method allows for the production of a year 2040 traffic assignment, while still allowing each trip to be characterized as either part of the baseline or part of the growth increment.



Since the RTIF is a regional fee program, it is also important to identify the proportion of traffic on each facility that is regional in nature. As with all previous RTIF studies, trips have been divided into regional and non-regional types. Regional trips are those trips that cross at least one jurisdictional boundary (e.g., trips that travel between two different jurisdictions in the County, or that have one end inside the County and one end outside the County). Non-regional trips would be all other types of trips, including those that pass through the County without stopping, or those trips that remain entirely within a single jurisdiction.¹ The RTIF calculations are based on growth in regional trips only.

The results are shown in **Table 5**. The table lists each of the RTIF projects and shows the percentage of the new traffic on the facility (i.e., the traffic resulting from new growth in Solano County) that meets the definition of regional trips, as described above. The percentage of new regional traffic on each facility is then used as the percentage of that facility’s improvement cost that will be considered eligible for inclusion in the RTIF program. It is important to note that this percentage does not represent the traffic growth on the facility but the proportion of that growth that corresponds to regional traffic.

It should also be noted that some projects on the TIF list are not roadway capacity-enhancing projects but are active transportation-related projects. This includes project numbers 22, 25 and 26. These types of projects cannot be reflected in the SNABM model, so the modeling procedure described above is not applicable to them. Instead, because of the nature of these projects, and that they are expected to benefit all County residents and workers, both those that are already in the County and those that will come to the County as a result of new development, the proportion of the projects’ costs considered eligible for RTIF funding has been set to be the same as the projected growth in service population in the County based on the growth projections displayed in **Table 2** above. This is consistent with the approach used for existing projects number 10, 11 and 17.

The intent of this analysis is solely for the purposes of the RTIF process. The primary result is the percentage of new trips projected to use each facility that is regional. It is not intended for these results to be used to determine the appropriate size or configuration for any particular facility, or to directly support any project-specific planning activities.

Table 5: Project Costs Eligible for RTIF

Number	Project	Total Cost Estimate (2023 \$)	% of New Regional Trips	Cost Eligible for STA RTIF
1	Jepson Parkway	\$346,009,000	77.2%	\$267,118,900
2	Peabody Road	\$8,212,000	78.5%	\$6,446,400
3	SR 12/Pennsylvania Ave	\$82,116,000	58.4%	\$47,955,700
4	SR 12/Church Road	\$14,604,000	79.3%	\$11,581,000

¹ Note that local jurisdictions may be using different definitions of “regional” and “non-regional” trips in their local fee programs than the definitions used for the purposes of this RTIF analysis.



5	SR 37/Redwood Parkway/ Fairgrounds Drive	\$109,067,000	58.4%	\$63,695,100
6	Industrial Park Access Improvements	\$33,138,000	81.6%	\$27,040,600
7	Columbus Parkway Improvements	\$1,680,000	98.7%	\$1,658,200
8	North Connector West	\$64,800,000	83.1%	\$53,848,800
9	SR 113 Improvements	\$7,350,000	94.5%	\$6,945,800
10	County Road Projects	\$23,623,000	18.0%	\$4,252,100
11	Express Bus Transit Centers and Train Stations	\$20,423,000	18.0%	\$3,676,100
12	Railroad Ave Extension	\$11,747,000	39.9%	\$4,687,100
13	New Canon Road	\$51,044,000	80.3%	\$40,988,300
14	West Texas Complete Streets	\$21,402,000	40.4%	\$8,646,400
15	Airport Road Complete Streets	\$6,200,000	51.8%	\$3,211,600
16	Parkway Blvd. Overcrossing	\$13,041,000	81.6%	\$10,641,500
17	Bike/Pedestrian Crossing to the Suisun-Fairfield Train Station	\$57,481,000	18.0%	\$10,346,600
18	Markeley Lane	\$5,800,000	50.5%	\$2,930,100
19	Canon Road & Jepson Parkway	\$44,834,000	100.0%	\$44,834,000
20	Railroad Avenue Realignment at Sunset Avenue	\$11,900,000	86.8%	\$10,328,800
21	Railroad Avenue Widening from Laurel Creek to Olive Road/East Tabor Avenue	\$35,000,000	68.9%	\$24,131,900
22	Park Road	\$3,000,000	16.2%	\$486,700
23	Columbus Parkway (Benicia)	\$2,000,000	100.0%	\$2,000,000
24	Columbus Parkway (Vallejo)	\$8,000,000	80.2%	\$6,413,500
25	Benicia Road	\$9,500,000	16.2%	\$1,541,400
26	Lake Herman Road	\$10,500,000	16.2%	\$1,703,600
27	Vaughn Road	\$6,100,000	93.9%	\$5,730,000
28	Pedrick Road Corridor	\$7,000,000	100.0%	\$7,000,000
29	N 1st Street Rail Crossing	\$500,000	58.3%	\$291,400
30	Parkway Boulevard Road Extension	\$7,000,000	95.1%	\$6,659,900
31	Pedrick Road Rail Crossing	\$64,500,000	93.9%	\$60,587,800
33	Midway Road	\$2,300,000	92.9%	\$2,137,200
Total		\$1,089,871,000	70.0%	\$749,516,500

Source: Solano RTIF Nexus Update Final Report, Fehr & Peers, August 2021; Solano County, STA, SNABM. Fehr & Peers, 2023.



Fee Calculations

The maximum fee calculation is based on the total costs eligible for inclusion in the RTIF program divided by the projected amount of new development (expressed in units of DUEs) anticipated to occur between 2023 and 2040. **Table 6** presents these calculations, resulting in a maximum fee calculation of \$30,752 per DUE. **Table 7** applies this maximum value across all of the land use categories.

Table 6: Calculation of Maximum RTIF Fee per DUE

Calculation	Value
Cost Eligible for RTIF	\$749,516,500
DUE Growth	24,373
Maximum Fee per DUE	\$30,752

Source: Fehr & Peers, 2023.

Table 7: Maximum RTIF Fee per Land Use Category

Land Use Category	Peak Hour Trip Rate	Pass-through Trip Allowance	DUE Calculation	Maximum Fee per Unit
Residential				
Single Family	1.00	100%	1.00	\$30,752
Multifamily	0.54	100%	0.54	\$16,685
2 nd SFR Unit/Accessory Dwelling Unit (ADU)	0.51	100%	0.51	\$15,703
Age-Restricted/Senior Multifamily	0.27	100%	0.27	\$8,179
Nonresidential				
Retail/Commercial	3.62	50%	1.81	\$55,616
Service/Commercial	8.30	51%	4.23	\$130,142
Office	1.53	77%	1.18	\$36,275
Institutional/Assembly	0.52	64%	0.33	\$10,260
Lodging	0.63	58%	0.36	\$11,195
Industrial	0.65	85%	0.59	\$18,075
Warehouse/Distribution	0.19	85%	0.16	\$5,005
Agricultural Uses				
Non-residential Agricultural Accessory Structure	0.20	80%	0.16	\$4,973

Source: Fehr & Peers, 2023.

It should be emphasized that the values presented in this nexus report are the maximum fee levels that could be set. In the past, the actual RTIF fee amounts have been set lower than the maximum levels.



5. Summary of Required Program Elements

This report has provided a detailed discussion of the elements of the Solano County Regional Transportation Impact Fee program and explained the analytical techniques used to develop this nexus study. The report addresses the following fee program elements required by the Mitigation Fee Act (Government Code Section 66000 et seq), as summarized below.

Fundamental Nexus Requirements

Section 66001 contains several fundamental requirements that an agency must document when establishing or imposing an impact fee.

1. *Identifying the purpose of the fee*

The Solano RTIF program is established for the purpose of supporting public infrastructure improvements and facilities needed to mitigate the traffic-related impacts of new development in Solano County.

2. *Identifying how the fee will be used and the facilities to be funded through the fee*

The fee is used to help fund capital improvement projects that will accommodate future transportation needs throughout the County. Table 1 identifies the projects to be funded through the fee.

3. *Determining a reasonable relationship between the fee's use and the type of development on which the fee is imposed*

As described in this report, different types of development generate traffic with different characteristics. The calculations presented in Table 4 account for these characteristics by calculating the travel-related characteristics of different land use types. These considerations account for the differential impacts on the local transportation system generated by different development types.

4. *Determining a reasonable relationship between the need for the public facility and the type of development on which the fee is imposed*

The need for the facilities listed in Table 1 has been established through local and countywide planning processes prepared by the Solano Transportation Authority and local agencies throughout the County.

5. *Determining a reasonable relationship between the amount of the fee and the cost of the public facility (or portion of facility) attributable to new development*



Section 4 of this report describes the calculations applied to determine the cost of the public facility that is attributable to new development in the RTIF area, accounting for the effects of existing deficiencies. Thus, a reasonable effort has been made to quantitatively establish the relationship between the fees charged in the Solano RTIF program and the costs of public improvements attributable to new development within Solano County.

Additional Elements

Due to recent changes in state legislation, Gov. Code Section 66016.5 now defines several additional elements beyond the fundamental nexus requirements that have historically been part of the Mitigation Fee Act. These additional elements include the following:

- *If a nexus study supports the increase of an existing fee, review the assumptions of the nexus study supporting the original fee and evaluate the amount of fees collected under the original fee.*
 - The intent of this targeted update of the Solano RTIF nexus study is not to impose an increased fee, but rather to modify and update the list of capital improvement projects that would be considered eligible to receive RTIF funds. As described in Chapter 1 of this report, the Solano RTIF has been in place since 2013 and has been updated several times, most recently in 2021. All of the updates have maintained the same program structure as was established in 2013, and assumptions about future growth and future capital improvements have been updated each time using the most current data available. The amount of fees collected through the RTIF program since 2013 are approximately \$20.071M.
- *Calculate a fee imposed on a housing development project proportionately to the square footage of proposed units of the development.*
 - As described in Chapter 1 of this report, the Solano RTIF is one element of the larger Solano County Public Facilities Fee (PFF) program. The Solano County PFF program does not currently impose any of its fees based on the size of proposed housing units. If this RTIF program were to calculate fees based on housing unit size, the RTIF would then be inconsistent with all of the other PFF fees. When Solano County next updates the nexus study for the PFF program, it can determine a consistent method for calculating all of the fees based on housing unit size.
- *In large jurisdictions, adopt a capital improvement plan as a part of the nexus study.*
 - The County has its own CIP, which its Board of Supervisors approved on December 6, 2022. The County's approved CIP is from fiscal year (FY) 2022/23 through FY 2027/28. The cities in the County that participate in the RTIF have their own respective CIPs. These CIPs were approved by their respective City Councils.

