

Title VI Service Equity Analysis: 2016 FAX Network to Faster FAX

Introduction

As a recipient of funding from the Federal Transit Administration (FTA), FAX is required to comply with FTA's Title VI Requirements and Guidelines, as detailed in FTA Circular 4702.1B. For fixed transit providers operating more than fifty vehicles in peak service, these requirements include evaluating major service changes to determine whether those changes will have a discriminatory impact based on race, color, or national origin.

FAX has developed a 2016 Title VI Report demonstrating its compliance with Title VI requirements. The Title VI report includes how FAX complies with general reporting requirements and requirements for fixed route providers. While the requirement to evaluate service changes is addressed, including a discussion of FAX's locally developed process for evaluating service changes, some elements expressed in FTA C4702.1B are not included.

This Title VI Service Equity Analysis serves to discuss, evaluate, and recommend the additional service equity analysis-related policies that have not yet been adopted by FAX.

The recommendations were formulated in a meeting of the FAX representatives and consulting team. Both the peer analysis and public input received during the public participation process were considered.

Title VI Service Equity Analysis Requirements and Policies

FTA requirements for evaluating major service changes include developing the following policies:

- ✓ Major Service Change Policy
- ✓ Disparate Impact Policy
- ✓ Disproportionate Burden Policy

These policies must be developed with public input. Details about service equity analysis policies are provided below. The basis of Title VI and definitions of the three service equity policies were summarized in boards and handouts in English and Spanish and presented at eight community workshops.

Major Service Change Policy

A major service change policy *establishes a percentage threshold for what is a major service change*. When that threshold is exceeded, it triggers a service equity analysis.



A major service change policy is typically presented as a numerical standard, such as a change that affects “x” percent of a route or “x” number of route miles or hours. There can also be a threshold for the number of people affected. It can be route-specific or systemwide. If the threshold is exceeded, then a service equity analysis is required for disparate impacts for minority populations and disproportionate burden for low income populations.

Disparate Impact Policy

Disparate Impact is a ***facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin.***

The Disparate Impact Policy establishes a threshold for determining when a major service change has a disparate impact on minority populations. That is, do minority populations bear more of the impacts than nonminority populations?

Disproportionate Burden Policy

Disproportionate Burden is a ***facially neutral policy or practice that disproportionately affects low income populations*** more than non-low income populations.

The Disproportionate Burden Policy establishes a threshold for determining whether a major service change has a disproportionate burden on low income populations versus non-low income populations. That is, do low income populations bear more of the impacts than non-low income populations?

The Disproportionate Burden Policy applies only to low income populations that are not also minority populations.

Title VI Target Populations

Title VI protects individuals from discrimination based on their race, color, or national origin. While low income populations are not specifically protected under Title VI, this population must be considered when evaluating service changes. FTA C 4702.1B states that, “recognizing the inherent overlap of environmental justice principles in this area, and because it is important to evaluate the impacts of service and fare changes on passengers who are transit-dependent, FTA requires transit providers to evaluate proposed service and fare changes to determine whether low income populations will bear a disproportionate burden of the changes,” (Chapter IV-11).

Defining Minority Population

Minority population means any readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, are geographically dispersed/transient populations (such as migrant workers or Native Americans) who will be similarly affected by a proposed Federal Department of Transportation program, policy, or activity.

Minority persons include the following:

- ✓ American Indian and Alaska Native, which refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment.
- ✓ Asian, which refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- ✓ Black or African American, which refers to people having origins in any of the Black racial groups of Africa.
- ✓ Hispanic or Latino, which includes persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
- ✓ Native Hawaiian or Other Pacific Islander, which refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Defining Low Income Population

Low income population refers to any readily identifiable group of low income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FTA program, policy or activity.

Low income person means a person whose median household income is at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines of 150 percent of the poverty line. Based upon 2017 Federal Poverty Levels, this would reflect an income of less than \$18,090 for a single individual and less than \$36,900 for a family of four.

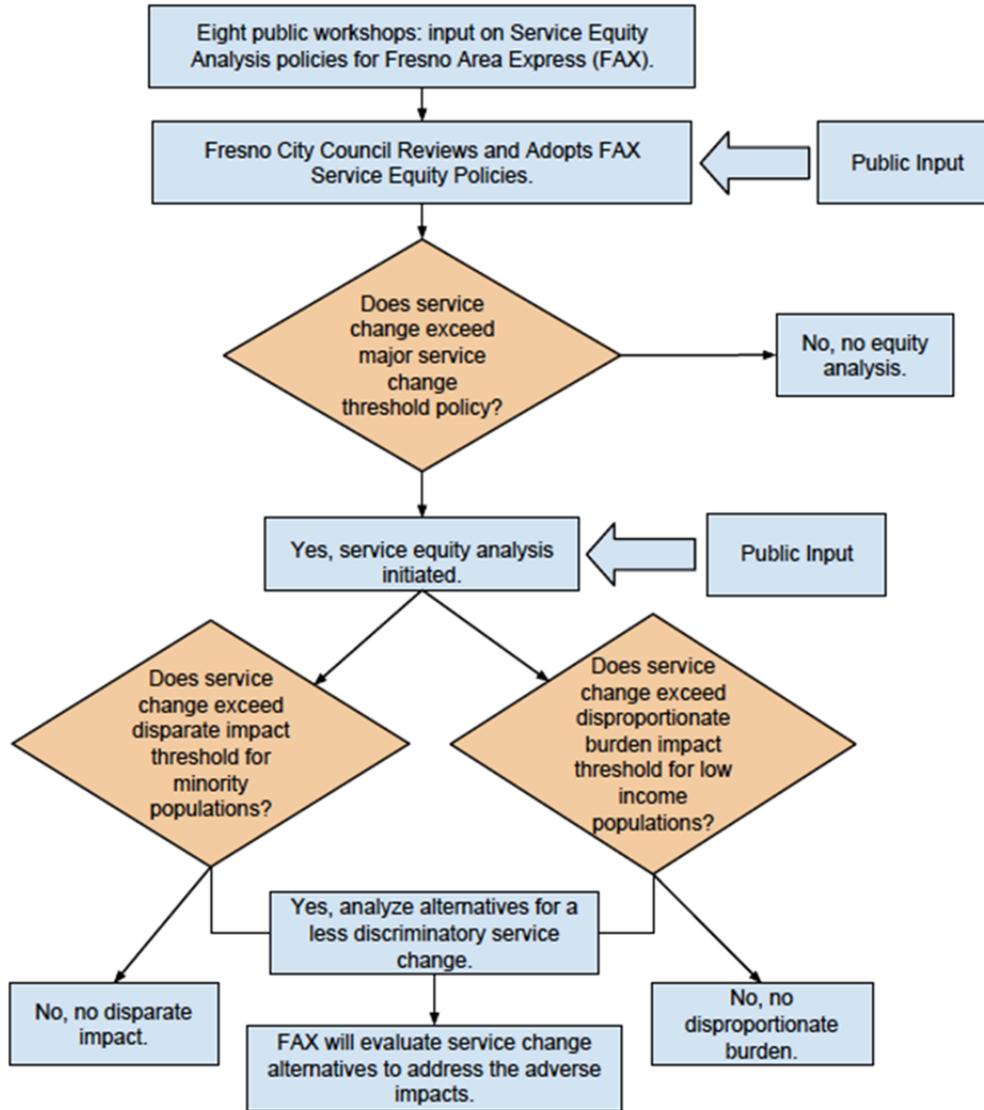
Title VI Service Equity Analysis Process

FTA Title VI regulations provide guidelines for the development of the required Title VI service equity analysis procedures and the conduct of a service equity analysis. This process, also presented in Figure 1, is summarized below:

- ✓ The transit provider must develop a Major Service Change Policy to identify what changes are considered “major.” Service changes that meet this threshold are subject to a service equity analysis.
 - The transit provider shall engage the public in the decision-making process to develop the Major Service Change Policy.
- ✓ The transit provider must develop a Disparate Impact Policy to establish a threshold for determining when adverse effects of service changes are borne disproportionately by minority populations.
 - The transit provider shall engage the public in the decision-making process to develop the Disparate Impact Policy.
- ✓ The transit provider must develop a Disproportionate Burden Policy to establish a threshold for determining when adverse effects of service changes are borne disproportionately by low income populations.

- The transit provider shall engage the public in the decision-making process to develop the Disproportionate Burden Policy.
- The transit provider's approval of these policies must be included in the provider's Title VI Program.
- ✓ When the transit provider is considering changes that meet the established major service change policy, the transit provider must conduct an equity analysis.
 - An equity analysis shall include evaluating the impacts of proposed service changes on minority and low-income populations and use the established thresholds to determine if any of the impacts will result in disparate burdens on minority populations or disproportionate burdens on low income populations
 - The transit provider must develop written procedures for evaluation of service changes consistent with FTA C 4702. 1B, Chapter IV, Section 7. Framework for these procedures are detailed in FTA C 4702. 1B.
- ✓ If the threshold for disparate impacts or disproportionate burdens has been exceeded, the transit provider will take steps to avoid, minimize, or mitigate impacts where practicable.
 - Where disparate impacts are identified, the transit provider shall provide a meaningful opportunity for public comment on any proposed mitigation measures, including any less discriminatory alternatives that may be available.
 - The transit provider may implement the service change only if the transit provider has a substantial legitimate justification for the proposed service change, and the transit provider can show that there are no alternatives that would have a less disparate impact
 - Additional requirements for analyzing and implementing alternatives are detailed in FTA C 4702. 1B, Chapter IV, Section 7.
 - The written procedures and results of equity analyses and the board's consideration, awareness, and approval of the analysis shall be included in the transit provider's Title VI Program.

Figure 1 - Title VI Service Equity Analysis Process Flowchart



Review of Peer Policies

Introduction

The Title VI service equity analysis policies of several of FAX's peers were reviewed to understand how similar agencies identify these policies. The six peer agencies were selected by FAX project staff and include Sun Tran, ABQ RIDE, Sun Metro, San Joaquin RTD, and Sacramento RT. The Title VI Program and policies of a seventh peer, Modesto Area Express, was reviewed but not included in this analysis as they are not required to develop these policies based on the number of vehicles they operate.

Peer Major Service Change Policies

Observations

Observations from the review of Peer Major Service Change Policies, as shown in Table 1, included:

- ✓ All peer policies for major service changes are at the individual route level.
- ✓ Peer policies demonstrate how thresholds can apply to multiple criteria, such as revenue hours; revenue miles; route length; bus stops; or ridership. All peers used more than one criterion to define major service change.
- ✓ Major service change includes reductions and increases in service.
- ✓ The threshold for determining a major service change varies among peers from 15 percent change to 35 percent change on any route, including new and existing.
- ✓ Five of the six peers (all Peers except ABQ Ride) identify exemptions to their Major Service Change Policy, including changes to demonstration, temporary, or special event services and changes due to emergencies or natural disasters.

Policy Considerations

The adopted major service policy should clearly state that:

- ✓ The percentage change that is considered "major". A 25% percent threshold seems to be a reasonable threshold for being a major change and is the midpoint of peer agencies.
- ✓ Major change is at the route level.
- ✓ The service parameters to be included. Keeping it simple as RTD in Stockton has done is one clear option. Including 1) the number of route miles of a route and 2) daily revenue miles provides two simple parameters as part of the policy.
- ✓ The exemptions that FAX would like to include in the policy. At a minimum, these exemptions should be included:
 - Emergency changes due to forces of nature
 - Temporary route detours
 - Elimination of a demonstration or pilot route lasting 1 year or less
 - Initiation/discontinuance of any promotional fares

Table 1 - Peer Major Service Change Policies

Peer Agencies	Major Service Change Thresholds	Exemptions
<p>Sun Tran Tucson, AZ</p>	<p>A Major Service Change adds or removes 25% or more of the:</p> <ol style="list-style-type: none"> 1. Revenue miles on any route; 2. Revenue hours on any route; 3. Ridership on any route. 	<ol style="list-style-type: none"> 1. Initiation/discontinuance of temporary or demonstration services 2. Initiation/discontinuance of any promotional fares. 3. Natural or catastrophic disasters 4. Temporary route detours
<p>ABQ RIDE Albuquerque, NM</p>	<p>A Major Service Change increases or decreases service on any route by 35% or more of the:</p> <ol style="list-style-type: none"> 1. Revenue hours of service; 2. Service to bus stops on that route. 	<p>N/A</p>
<p>GET Bus Bakersfield, CA</p>	<p>A Major Service Change is the establishment of a new transit route, or increases or decreases of 25% or more of:</p> <ol style="list-style-type: none"> 1. Route length of a route; 2. Revenue miles on a route; 3. Revenue hours on a route. 	<ol style="list-style-type: none"> 1. Discontinuance of temporary services 2. Adjustments during new line “Break-In” period 3. Forces of nature 4. Competing infrastructure failures 5. Reductions to overlapping services
<p>Sun Metro El Paso, TX</p>	<p>A Major Service Change is a reduction or increase of 30% or more in:</p> <ol style="list-style-type: none"> 1. Revenue miles on any service area or route; 2. Revenue hours on any service area or route. 	<ol style="list-style-type: none"> 1. Changes to routes with fewer than 20 total trips 2. Introduction/discontinuation of short/limited-term service 3. Sun Metro-operated transit service replaced by different mode or operator 4. Deactivation of routes with fewer than 10 passengers/hour or 1.0 passengers/mile after 6 months
<p>San Joaquin RTD Stockton, CA</p>	<p>A Major Service Change increases or reduces 25% or more of:</p> <ol style="list-style-type: none"> 1. Daily revenue miles of a route; 2. The number of transit route miles of a route. 	<ol style="list-style-type: none"> 1. Experimental or emergency service 2. Standard seasonal variations in service
<p>Sacramento RT Sacramento, CA</p>	<p>A Major Service Change:</p> <ol style="list-style-type: none"> 1. Creation of any new bus route exceeding 150 daily revenue miles; 2. Creation of any new light rail route or extension of any existing light rail routes; 3. Any change to an existing bus or light rail route that affects 15% or more of daily revenue miles. 	<ol style="list-style-type: none"> 1. Elimination of routes according to RT’s route sunset process 2. Creation/alteration/elimination of a supplemental route¹ 3. Emergency changes 4. Creation/alteration/ elimination of temporary/demonstration service lasting 1 year or less 5. Creation/alteration/elimination of special event service

Recommendation for Major Service Change Policy

A Major Service Change adds or removes 25% or more:

- ✓ Revenue miles on any route
- ✓ Revenue hours on any route

Recommended exemptions to the Major Service Change Policy are:

- ✓ Initiation /discontinuance of temporary or demonstration services lasting 1 year or less
- ✓ Initiation/discontinuance of any promotional fares
- ✓ Changes to or suspension of routes due to natural or catastrophic disasters
- ✓ Temporary route detours: short-term changes to a route caused by road construction, routine road maintenance, road closures, emergency road conditions, fiscal crisis, civil demonstrations, or any uncontrollable circumstance.
- ✓ Initiation/discontinuance of any Special Event Routing

Peer Disparate Impact Policies

Observations

The review of Peers' Disparate Impact Policies, as shown in Table 2, yielded the following observations:

- ✓ Three of the six peers (Sun Tran; Sun Metro; Sacramento RT) analyze the impact of changes to the minority population compared to the impact on the general population.
- ✓ Two peers (ABQ Ride; Get Bus) analyze impact of changes to the minority population compared to the size of the minority population in the service area.
- ✓ One peer (San Joaquin RTD) has classified routes as minority or non-minority. To identify disparate impact, they analyze change to vehicle revenue miles on affected minority-classified routes compared to change to vehicle revenue miles on affected non-minority-classified routes.
- ✓ The threshold for identifying a disparate impact varies among peers from 10 percent to 25 percent.

Policy Considerations for Disparate Impact

The disparate impact policy should include:

- ✓ The population that the minority population is compared to. The whole rationale of the service equity analysis is to ensure that discrimination against minority populations along route does not occur. The best basis for this comparison would appear to be the comparison with either non-minority populations or the general population
- ✓ The percentage change threshold that when exceeded would be a disparate impact. Overall, a 10% threshold seems low and a 25% disparate impact seems like a very high bar for a disparate impact. A disparate impact of 15% to 20% would seem like a reasonable threshold.

Table 2 - Peer Disparate Impact Policies

Peer Agencies	Disparate Impact Policy (Minority only or Minority and Low income)
Sun Tran Tucson, AZ	A Disparate Impact exists if a major service change requires a minority population to bear adverse effects by 20% or more than the adverse effects borne by the general population.
ABQ RIDE Albuquerque, NM	A Disparate Impact exists when the percent of minorities adversely affected by a major service change is greater by 10% than the average percent of minorities in the service area.
GET Bus Bakersfield, CA	A Disparate Impact exists when the minority population adversely affected by a major service change is more than 10% than the average minority population in the service area.
Sun Metro El Paso, TX	A Disparate Impact exists if a major service change requires a minority population to bear adverse effects over 25% than the adverse effects borne by the general population.
San Joaquin RTD Stockton, CA	A Disparate Impact exists if the percentage of vehicle revenue hours on minority-classified routes affected by the major service change is at least 25% higher than the vehicle revenue hours on non-minority-classified routes affected by the major service change.
Sacramento RT Sacramento, CA	A Disparate Impact exists if a major service change requires a minority population to bear adverse effects by 15% or more than the adverse effects borne by the general population.

Recommendation for Disparate Impact Policy

A Disparate Impact exists if a major service change requires a minority population to bear adverse effects by **20%** or more than the adverse effects borne by the general population in the affected area.

Peer Disproportionate Burden Policies

Observations

The review of Peers’ Disproportionate Burden Policies, depicted in Table 3, yielded the following observations:

- ✓ Three of the six peers (Sun Tran; Sun Metro; Sacramento RT) analyze the impact of changes to the low income population compared to the impact on the general population.
- ✓ Two peers (ABQ Ride; Get Bus) analyze impact of changes to the low income population compared to the size of the low income population in the service area.

- ✓ One peer (San Joaquin RTD) has classified routes as below-poverty-level or above-poverty-level. To identify disproportionate burden, they analyze change to vehicle revenue miles on affected on below-poverty-level-classified routes compared to change to vehicle revenue miles on affected above-poverty-level-classified routes.
- ✓ The threshold for identifying a disproportionate burden varies among peers from 10 percent to 25 percent.

Policy Considerations for Disproportionate Burden

The disproportionate burden policy should include:

- ✓ The population that the low income population is compared to. Again, the whole purpose of the service equity policy is to ensure lack of discrimination against low income populations. It would make sense to compare the low income population compared to the general population.
- ✓ The percentage threshold that when exceeded would be a disproportionate burden. This should likely be the same percentage established for disparate impact of 15% to 20% but FAX has option of considering alternative thresholds.

Table 3 - Peer Disproportionate Burden Policies

Peer Agencies	Disproportionate Burden Policies (Low income only)
Sun Tran Tucson, AZ	A Disproportionate Burden exists if a major service change requires a low income population to bear adverse effects by 20% or more than the adverse effects borne by the general populations.
ABQ RIDE Albuquerque, NM	A Disproportionate Burden exists when the percent of low income households adversely affected by a major service change is greater by 10% than the average percent of low income households in the service area.
GET Bus Bakersfield, CA	A Disproportionate Burden exists when the low income population adversely affected by a major service change is more than 10% than the average low income population of the service area.
Sun Metro El Paso, TX	A Disproportionate Burden exists if a major service change requires a low income population to bear adverse effects over 25% than the adverse effects borne by the general population.
San Joaquin RTD Stockton, CA	A Disproportionate Burden exists if the percentage of vehicle revenue hours on below-poverty-level classified routes affected by the major service change is at least 25% higher than the percentage of vehicle revenue hours on above-poverty-level classified routes affected by the major service change.
Sacramento RT Sacramento, CA	A Disproportionate Burden exists if a major service change requires a low income population to bear adverse effects by 15% or more than the adverse effects borne by general populations.

Recommendation for Disproportionate Burden Policy

A Disproportionate Burden exists if a major service change requires a low income population to bear adverse effects by 20% or more than the adverse effects borne by the general population.

Title VI Analysis of “Faster FAX’ Network Redesign Scenario

An analysis of the impact of potential future service adjustments on minority, low-income and general populations served by FAX was conducted to gauge the degree to which the changes to the network currently under consideration would impact different groups. This analysis compared a model of the existing network to a future redesign scenario call “Faster FAX”, elements of which were presented to the public in meetings, public workshops, and pop-up events. This scenario was designed to introduce elements of the 2015 “Strategic Service Enhancement” network into the system as currently operated.

Faster FAX

The Faster FAX network scenario describes a set of possible changes to the FAX network intended to improve the frequency of service to key destinations and high-density areas capable of generating high ridership per unit cost. Elements of this scenario are likely to be implemented by FAX in the future, though the ultimate design of the service to be implemented will depend on currently-available operational resources.

The major changes included in the Faster FAX scenario, compared to the existing network following the implementation of FAX Q Bus Rapid Transit (BRT) service are:

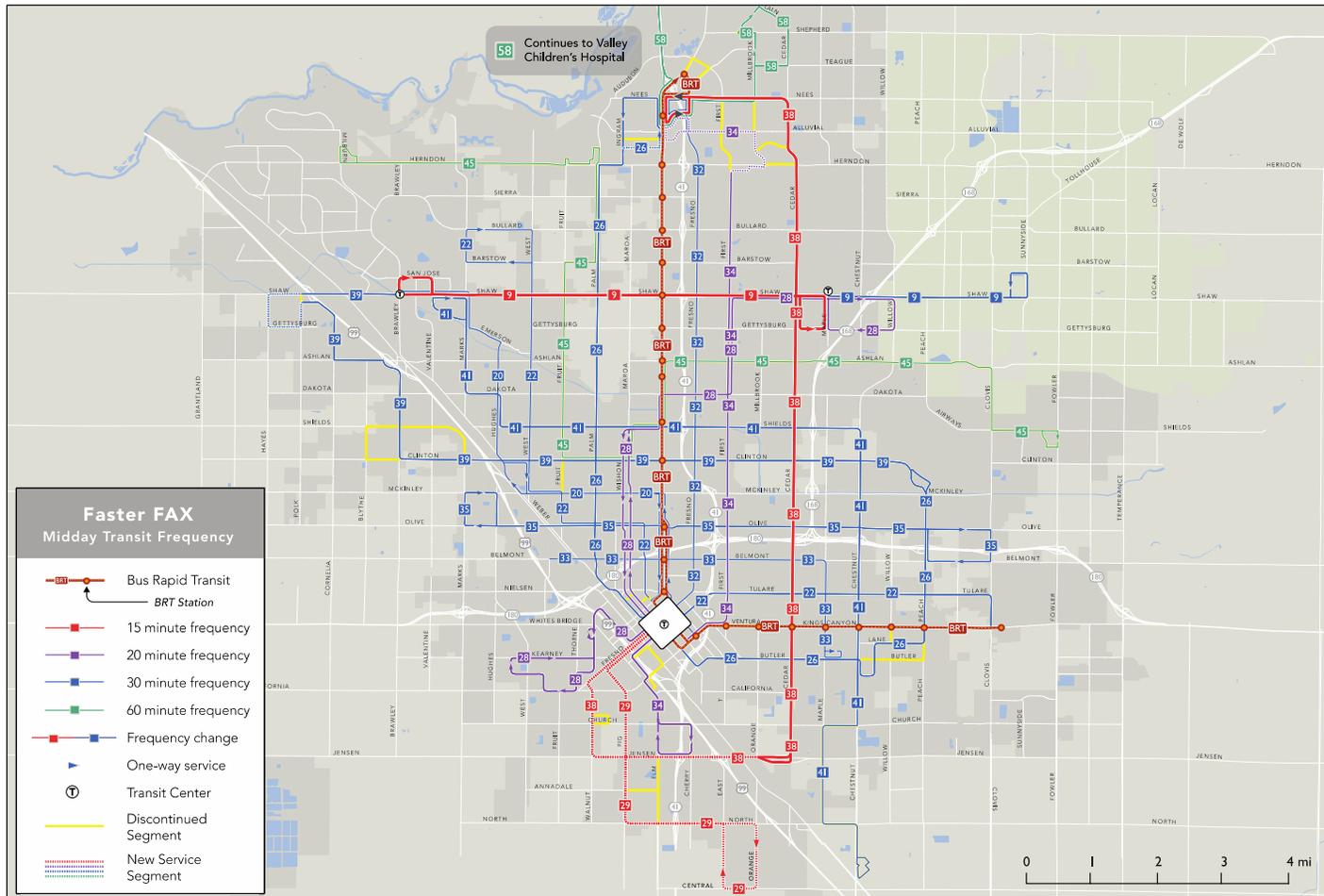
- ✓ Extension of FAX 15 high-frequency service on route 38-Cedar for the entire length of the route. Today, 15-minute service is available only on Cedar Avenue between River Park and Jensen Avenue. In the Faster FAX scenario, 15-minute service is available during peak and rush hour on all segments of the route, including the portion between Jensen Avenue and Cedar Avenue and Downtown Fresno passing through southwest Fresno.
- ✓ New Route 29, a high-frequency 15-minute pilot project connecting Downtown Fresno and the North Pointe Business Park located southwest of the intersection of North Ave and East Ave. This pilot service will operate from Downtown via Fresno Street, Martin Luther King (MLK) Boulevard, North Avenue, Orange Avenue, Central Avenue and East Avenue.
- ✓ Route adjustment to routes 9 and 39. The segment of Route 9 west of Brawley Avenue is discontinued, and Route 39 is extended north to serve the area west of Highway 99. The extended Route 39 would use the same alignment as the current Route 9, except that instead of using Polk Avenue to reach Shaw Avenue from Fairmont Avenue, the redesigned Route 39 would circulate around Polk Avenue, Gettysburg Avenue, and Hayes Avenue, extending bus service to Inspiration Park and the nearby neighborhoods for the first time. Service to the segments of Shields Avenue, Blythe Avenue, and Clinton Avenue currently served by the one-way turnaround loops of routes 9 and 39 would be discontinued. This service adjustment is mapped in detail in Figure 2.
- ✓ Redesign of route 32 along MLK Boulevard. in southwest Fresno. Currently, the route operates a counterclockwise loop at its southern end via MLK Boulevard, North Avenue, Elm Avenue, and

Annadale Avenue. In the Faster FAX scenario, this loop is realigned to run clockwise via Jensen, Elm, North and MLK. The New Route 29 replaced Route 32 south of Courthouse Park

- ✓ Route 26 is realigned at Chestnut Avenue, and would now run (described eastbound from Butler Avenue and Chestnut Avenue) south on Chestnut Avenue, east on Hamilton Avenue and north on Winery Avenue, before resuming its current route. This allows Route 26 to more directly serve the Senior Citizen's Village and commercial area at the intersection of Kings Canyon Avenue and Peach Avenue, which was previously served by the loop of route 28 (discontinued with the implementation of FAX Q BRT service).
- ✓ Route 34 is realigned at its northern end, in order to facilitate a transfer with BRT and other FAX routes near River Park. It's existing north end one-way turnaround loop via Herndon Avenue, Cedar Avenue, Spruce Avenue, Millbrook Avenue, Nees Avenue, and First Avenue is replaced with two-way service to Riverpark via Millbrook Avenue and Alluvial Avenue. This improves access to both Kaiser Hospital and St. Agnes Medical Center.
- ✓ Route 45 is realigned in its segment between the intersections of Fruit Avenue and Clinton Avenue and Maroa Avenue and Clinton Avenue. Rather than operating via McKinley Avenue as in the existing network, route 45 would now operate directly via Clinton Avenue between these points, improving travel times for people using the route to access connections to BRT from western Fresno. Route 45 is also adjusted near its eastern end.
- ✓ The segment of Route 41 serving the town of Malaga (south of Jensen Ave.) is continued.

A map of Faster FAX is shown below in Figure 2. This map color codes each line by its midday frequency, the level of service that would be available between approximately 10 am and 3 pm. Dashed lines represent segments of new service (new routing or major frequency changes), while yellow lines represent currently served segments where service would be discontinued.

Figure 2 - Faster FAX Network Scenario



2016 FAX Network to Faster FAX Title VI Service Equity Analysis

This section provides a preliminary analysis of the impact of Faster FAX on the distribution of service to minority and low-income communities, an overview of impacts that would be anticipated with future service changes introducing adjustments to the network consistent with this scenario. The Title VI analysis module provided in the transit planning software package Remix was used to conduct this assessment. A detailed description of the methodology used for this analysis is described here: <https://www.remix.com/title-vi>

The flow chart in Figure 1 above shows the steps necessary for conducting the Title VI Service Equity Analysis. The following are the questions that need to be answered in sequential order:

1. Does the Faster FAX service change exceed the proposed major service change threshold policy of 25% for one or more routes?
2. If yes to #1, does the Faster FAX service change require the minority population to bear adverse effects by **20%** or more than the effects borne by the general population?
3. If yes to #1, does the Faster FAX service change require the low income population to bear adverse effects by **20%** or more than the adverse effects borne by the general population?
4. If yes to #2 or #3, what are the service alternatives for a less discriminatory service change?

1. Does the Faster FAX service change exceed the proposed major service change threshold policy of 25% for one or more routes?

To answer question #1, Table 4 below shows the change in the distribution of service for the 2016 Network compared to Faster FAX. The far right column indicates whether or not the proposed 25% major service change threshold policy by route has been exceeded.

Table 4 - Change in Distribution of Service by Route

Route	November 2016 Network (Trapeze)		Faster FAX 2018				Meets or Exceeds Major Change Threshold (Faster FAX vs 2016)?
	Annual Revenue Hours	Annual Revenue Miles	Est. Annual Revenue Hours	Rev. Hr % of 2016	Est. Annual Revenue Miles	Rev. Mi. % of 2016	
1 (BRT)	n/a	n/a	70,285	new route	764,299	new route	YES
9	26,812	303,208	30,249	113%	303,504	100%	
20	13,763	170,343	16,056	117%	196,097	115%	
22	21,725	268,840	24,768	114%	291,822	109%	
26	36,700	462,356	30,120	82%	333,179	72%	YES
28	36,100	387,448	39,786	110%	394,852	102%	
29			21,300	new route	225,180	new route	YES
30	33,003	350,515	-	0%	-	0%	YES
32	27,307	283,303	19,416	71%	171,346	60%	YES
33	7,981	97,459	8,226	103%	101,756	104%	
34	33,339	356,963	36,720	110%	386,251	108%	
35	13,772	167,338	13,692	99%	159,208	95%	
38	37,892	491,882	48,423	128%	662,261	135%	YES
39	n/a	n/a	23,825	new route	296,008	new route	YES
41	23,931	292,269	30,120	126%	335,508	115%	YES
45	13,227	187,098	13,194	100%	184,299	99%	
58	3,916	59,726	3,786	97%	64,324	108%	
System Total	329,468	3,878,748	429,966		4,869,895		
Change from 2016			131%		126%		

Of the changes included in Faster FAX, changes to six routes meet or exceed the Major Change threshold of +/- 25% change in annual revenue hours or miles. The routes exceeding this threshold are routes 1 (BRT) 26, 30, 29/32, 38 39 and 41. However, for the purposes of the service equity analysis, the 2016 Network Routes 28 and 30 have been transformed into the Q (Route 1) plus Route 28. Therefore, a separate analysis is not conducted for Route 30.

2. Since six route configurations exceed the major service change threshold, does the Faster FAX service change on any of these three routes cause the minority population to bear adverse affects by 20% or more than than the effects borne by the general population?

Table 5 is a summary of the disparate impact analysis for the seven routes that exceed the 25% threshold.

Table 5 – Disparate Impact on Minority Populations

Route	Disparate Impact Minorities*	Exceeds 20% Threshold?
28/30=1+28(BRT)	-1.46%	No
26	1.88%	No
29/32	-9.05%	No
38	0.45%	No
39	0%	No
41	-0.10%	No

* % impact borne more by minorities compared to general public. Negative percentage means minorities bear less burden than general population or a positive benefit for minority populations

The transition from Routes 28 and 30 on the 2016 network to the Q BRT and Route 28 have resulted in a positive benefit for minority populations in Fresno. The new combined Route 29/32 shows that there are more person trips and a net benefit for minorities compared to the general public.

An important finding of the analysis is that the Faster FAX service has no disparate impact on minority populations that exceed the 20% threshold.

3. Since six route configurations exceed the major service change threshold, does the Faster FAX service change on any of these six routes cause the low income population to bear adverse affects by 20% or more than than the effects borne by the general population?

Table 6 shows the disproportionate burden on the low income populations. There is also a net benefit for low income populations compared to the general public from the transition of Routes 28 and 30 in the 2016 FAX network to the Q BRT and Route 28 in the Faster FAX network.

Table 6 – Disproportionate Burden On Low Income Populations

Route	Disproportionate Burden Low Income*	Exceeds 20% Threshold?
28/30=1+28(BRT)	-2.38%	No
26	-1.37%	No
29/32	-33.62%	No
38	0.93%	No
39	0%%	No
41	-0.08%	No

* % impact borne more by low income individuals compared to general public.

Negative percentage means low income individuals bear less burden than general population or a positive benefit for low-income populations

For the combined Route 29/32, there is a net benefit of almost 34% to low income populations compared to the general public.

An important finding of the analysis is that the Faster FAX service has no disproportionate burden on low income populations in Fresno when comparing the 2016 FAX Network to the Faster FAX network.

With no disparate impact on minority populations and no disproportionate burden impact on low income populations, there is no need for FAX to make service adjustments to address any discriminatory issues.