

Title VI Service Equity Analysis

City of Phoenix Proposed October 2022 Service Change



City of Phoenix Public Transit Department



INTRODUCTION

Title VI of the Civil Rights Acts of 1964 prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal financial assistance. Federal law requires the City of Phoenix to evaluate service changes and proposed improvements at the planning and programming stages to determine whether those changes have a discriminatory impact. This process will be used to evaluate bus services in an objective manner to identify the potential for adverse, disproportionately high, or disparate impacts to minority and/or low-income populations.

The Phoenix Public Transit Department (PTD) manages modification to the region's transit network through service changes. Bus service changes are coordinated regionally and occur in April and October each year. Service modifications that are considered major service changes require service equity analysis to be conducted and considered by the Phoenix City Council before approval.

SERVICE EQUITY ANALYSIS POLICIES

This section describes Phoenix's Title VI Service Equity analysis policy, definition, and data analysis procedures. The City of Phoenix Public Transit Title VI Program is posted at <https://www.phoenix.gov/publictransit/title-vi-notice>

Major Service Change

The Major Service Change and Service Equity Policy developed jointly by both the City of Phoenix and Valley Metro defines a major service change as follows:

- Adding or Eliminating an entire route
- Expanding or reducing existing revenue miles on a route by more than 25% on Weekday, Saturday, or Sunday
- Expanding or reducing number of route directional miles more than 25%
- A change resulting in a 25% or greater variance from the existing route alignment¹²

¹ A change of 25 percent in weekly route revenue miles and/or route directional miles is the City of Phoenix threshold for determining whether a potential transit service change qualifies as a major service change (or "substantial" service change), according to the City of Phoenix resolution (1990). This percentage is generally an industry-wide percentage threshold used by peer transit systems throughout the United States. The City of Phoenix resolution also specifies that a public comment period will be initiated when a change in transit service of 25 percent or more is determined. Valley Metro has adopted the same thresholds.

² A change of 25 percent in Express/RAPID service route revenue miles and/or route directional miles does not apply to the portion of the routes that are on the freeway/highway because there are no stops or service. Only the portion of the routes that occurs on surface streets applies to the 25 percent threshold for a major service change.



All service change proposals that are determined to be a major service change will undergo Service Equity Analysis.

Adverse Effect

An adverse effect is defined as a reduction or addition in service that includes but is not limited to: changes in span of service, changes to frequency of service, the addition of new routes, the elimination of routes or route segments, or the modification of routes or route segments.

Disparate Impact

When the difference in adverse impacts between minority ridership³ and/or population⁴ and non-minority ridership and/or population on the affected service is equal to or greater than **five percent** compared to the transit system's minority and non-minority ridership⁵ and/or population, there would be a disparate impact.

Disproportionate Burden

When the difference in adverse impacts between low-income ridership³ and/or population⁴ and non-low-income ridership and/or population on an affected service is equal to or greater than **five percent** compared to the transit system's low-income and non-low-income ridership⁵ and/or population, there would be a disproportionate burden impact.

Should Valley Metro or the City of Phoenix find any disparate impact or disproportionate burden is found during the service equity analysis, steps will be taken to avoid, minimize, or mitigate the impacts.

Equity Analysis Data Sources

The following table identifies the data source for the service equity analysis depending on the type of service change being proposed.

³ The determination of the transit system and an affected route's minority and/or low-income ridership will be derived from the most recently completed, statistically valid regional on-board origin/destination survey.

⁴ The determination of the potential ridership for service expansion or the addition of a new service will be derived from the most recent American Community Survey data for the census tract or census block group surrounding the expanded route or new route.

⁵ The transit system's ridership is separated into Local Bus Service (local fixed bus routes, key local service, light rail, streetcar and circulator bus service) and Express/RAPID Service (commuter bus service). The affected service would be compared to the overall transit system's ridership by Local Bus Service or Express/RAPID Bus Service.



Category	Action	Sub Action	Evaluation Method
Service Level ⁶ Change	Reduction	Not Applicable	O/D ⁷ Data
	Expansion	Not Applicable	
Route Length	Reduction	Not Applicable	O/D Data
	Expansion	Not Applicable	Census Data
Route Alignment Change	Reduction	Not Applicable	O/D Data
	Expansion	Not Applicable	O/D Data and Census Data
	Modification	Eliminated Segment(s)	O/D Data and Census Data
		Segment(s) to New Areas	Census Data
	Elimination	Not Applicable	O/D Data
New Route	New Route	Not Applicable	Census Data
Fare Media Access	Modifications	Not Applicable	O/D Data Census Data

Transit System Minority/ Low-Income Population Benchmarks

Service Equity Analysis benchmarks based on October 2021 Service Area Census Data (2019 ACS):

Service Type	Minority	Low-Income
Local Bus	50.17%	25.74%
Circulator	56.82%	29.29%
Express/RAPID Bus	50.40%	25.10%

Service Equity Analysis benchmarks based on 2019 O/D Data

Service Type	Minority	Low-Income
Local Bus	62.2%	45.0%
Circulator	60.1%	45.8%
Express/RAPID Bus	43.5%	4.9%

⁶ Service Level- Refers to the span of service, days of operations, trips and headways (service frequencies) for a transit route or the regional transit system.

⁷ Origin/Destination Survey Data



SERVICE EQUITY ANALYSIS OF OCTOBER 2022 SERVICE CHANGES

Description of Proposed Changes

In October 2022, Phoenix proposes to extend Route 43 (43rd Ave) by one mile to Lower Buckeye Road and increase Route 156 (Chandler Blvd) peak weekday frequency to every 15 minutes between 48th Street and Gilbert Road.

Route 43- 43rd Ave

CURRENT ROUTE

Route 43 is a local route contracted by the City of Phoenix to operate on 43rd Avenue between Union Hills Drive to the north and Buckeye Road to the south. This 15-mile route provides connection opportunity with 16 other local routes in the region and one circulator route operated by the City of Glendale (GUS2). The route runs in both the City of Phoenix and the City of Glendale with a 30-minute frequency daily.

PROPOSED CHANGES

In early 2022, PTD received requests from west Phoenix businesses on 43rd Avenue to explore options to extend the route further south to provide transit service for warehouse workers. After initial evaluation of extension considerations that include vehicle availability, bus turn-around routing, and roadway condition, staff has determined the extension is feasible. As a result, PTD is proposing to extend Route 43 one mile south to Lower Buckeye Road that would not only provide transit service to businesses between Buckeye Road and Lower Buckeye Road, it would also provide another transit connection with Route 28 on Lower Buckeye Road.

Route 156- Chandler Blvd

CURRENT ROUTE

Route 156 is a local route contracted by the Regional Public Transportation Authority (RPTA) to operate on Chandler Blvd. between 48th Street in Phoenix and ASU Polytechnic Campus in Mesa. This 21-mile-long route operates in Chandler, Gilbert, Mesa, and Phoenix. The route provides connection opportunity with 9 other local routes in the region and one circulator route operated by the City of Phoenix (ALEX in Ahwatukee). The route operates daily on a 30-minute frequency.

PROPOSED CHANGES

The City of Chandler is proposing to introduce weekday peak hour 15-minute frequency on Route 156 within its jurisdictions. The Phoenix portion of the route is the half mile section of Chandler Blvd between 48th Street and the I-10 freeway



ramp. To promote regional connectivity and avoid bus trips ending at the city boundary, Phoenix is proposing to extend the peak hour frequency improvement to the western end of the line at 48th Street on Chandler Blvd.

Public Input Process

The Public Transit Department will use the locally adopted public outreach process to solicit public feedback on proposed service changes. The process opened on May 2, 2022 and ends June 3, 2022, and includes methods such as:

- Posting proposed service change details and an online passenger survey.
- Implementing on-board announcements requesting passenger input on the proposed service changes.
- Posting flyers at impacted stops along affected routes.
- Joint online public hearing with Valley Metro on May 18, 2022

Magnitude of Service Change

The first step of the Title VI assessment is to measure and document the magnitude of service change being proposed to determine if a project qualifies as a “major service change”. As both Route 43 and Route 156 cross jurisdictional boundaries, revenue and directional miles are summarized for both total route and Phoenix portion only.

Table 1: Magnitude of Impact- Major Change Indicators by Individual Projects

Project	Add or Eliminate Route	Expanding or reducing existing route by more than 25% of Weekday route revenue miles	Expanding or reducing existing route by more than 25% of Saturday routes revenue miles	Expanding or reducing existing route by more than 25% of Sunday route revenue miles	Expanding or reducing number of route directional miles more than 25%	A change resulting in a 25% or greater variance from the existing route alignment	Continue to Assess Mitigation
Route 43	NO	NO	NO	NO	NO	NO	NO
Route 156	NO	NO	NO	NO	NO	NO	NO

Table 2a: Revenue Miles Change (Total Route)

Routes	Current Revenue Miles			Proposed Revenue Miles			% Difference		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
43	1,187	1,108	1,108	1,266	1,181	1,181	6.7%	6.6%	6.6%
156	1,416	1,191	998	1,526	1,191	998	7.8%	0.0%	0.0%



Table 2b: Revenue Miles Change (Phoenix Only)

Routes	Current Revenue Miles			Proposed Revenue Miles			% Difference		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
43	992	923	923	1,071	996	996	8.0%	7.9%	7.9%
156	34	29	24	39	29	24	14.7%	0.0%	0.0%

Table 3a: Directional Miles Change (Total Route)

Routes	Current Directional Miles	Proposed Directional Miles	% Difference
43	30.0	32.0	6.7%
156	43.0	43.0	0.0%

Table 3b: Directional Miles Change (Phoenix Only)

Routes	Current Directional Miles	Proposed Directional Miles	% Difference
43	25.0	27.0	8.0%
156	1.0	1.0	0.0%

Findings

October 2022 proposed service change does not qualify as a major service change. As a result, no further Title VI analysis or mitigation efforts is required.



SERVICE EQUITY ANALYSIS FOR PHOENIX OPERATED ROUTE IN OTHER JURISDICTIONS

In addition to Phoenix proposed changes, PTD also conducts service equity analysis for proposed service changes on routes operating by Phoenix in another jurisdictions:

Route 106- Peoria Road

CURRENT ROUTE

Route 106 is a local route contracted by the City of Phoenix to operate on Peoria Road between Sunnyslope Transit Center in Phoenix and Banner Medical Center Sun City. This 21-mile-long route operates in Glendale, Peoria, Phoenix, Sun City and Youngtown. The route provides connection opportunity with 14 other local routes in the region, one limited route, three express routes and three circulator routes. On weekdays, the route operates at a 30-minute frequency except in Sun City and Youngtown where the frequency is hourly. On Saturdays, the route operates every 30 minutes in Phoenix and hourly in Glendale and Peoria. The route does not operate in Sun City or Youngtown on Saturdays. On Sundays, the route operates every 30 minutes in Phoenix and hourly in Glendale. There is no Sunday service in Peoria, Youngtown, and Sun City.

PROPOSED CHANGES

The City of Peoria is proposing to introduce hourly Sunday service on Route 106 within its jurisdiction.

Magnitude of Service Change

The first step of the Title VI assessment is to measure and document the magnitude of service change being proposed to determine if a project qualifies as a “major service change”. As routes do cross jurisdictional boundaries, revenue and directional miles are summarized for both total route and in the jurisdiction with proposed service change only.



Table 4: Magnitude of Impact- Major Change Indicators by Individual Projects- City of Peoria

Project	Add or Eliminate Route	Expanding or reducing existing route by more than 25% of Weekday route revenue miles	Expanding or reducing existing route by more than 25% of Saturday routes revenue miles	Expanding or reducing existing route by more than 25% of Sunday route revenue miles	Expanding or reducing number of route directional miles more than 25%	A change resulting in a 25% or greater variance from the existing route alignment	Continue to Assess Mitigation
Route 106	NO	NO	NO	YES	NO	NO	YES

Table 5a: Revenue Miles Change (Total Route)

Routes	Current Revenue Miles			Proposed Revenue Miles			% Difference		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
106	1,266	832	696	1,266	832	811	0.0%	0.0%	16.6%

Table 5b: Revenue Miles Change (Peoria Only)

Routes	Current Revenue Miles			Proposed Revenue Miles			% Difference		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
106	260	122	-	260	122	115	0.0%	0.0%	100.0%

Table 6a: Directional Miles Change (Total Route)

Routes	Current Directional Miles	Proposed Directional Miles	% Difference
106	41.7	41.7	0.0%

Table 6b: Directional Miles Change (Peoria Only)

Routes	Current Directional Miles	Proposed Directional Miles	% Difference
106	8.2	8.2	0.0%

Findings

The proposed Sunday addition of Route 106 in the City of Peoria does qualify as a major service change as there is 100% change of revenue miles on Sunday. The route change does impact several areas that include above average minority and low-income population. Although any service reduction or deviation in this area would result in disparate impact to minority population or disproportional burden on the low-income community, the nature of the proposed service change is to add more transit service



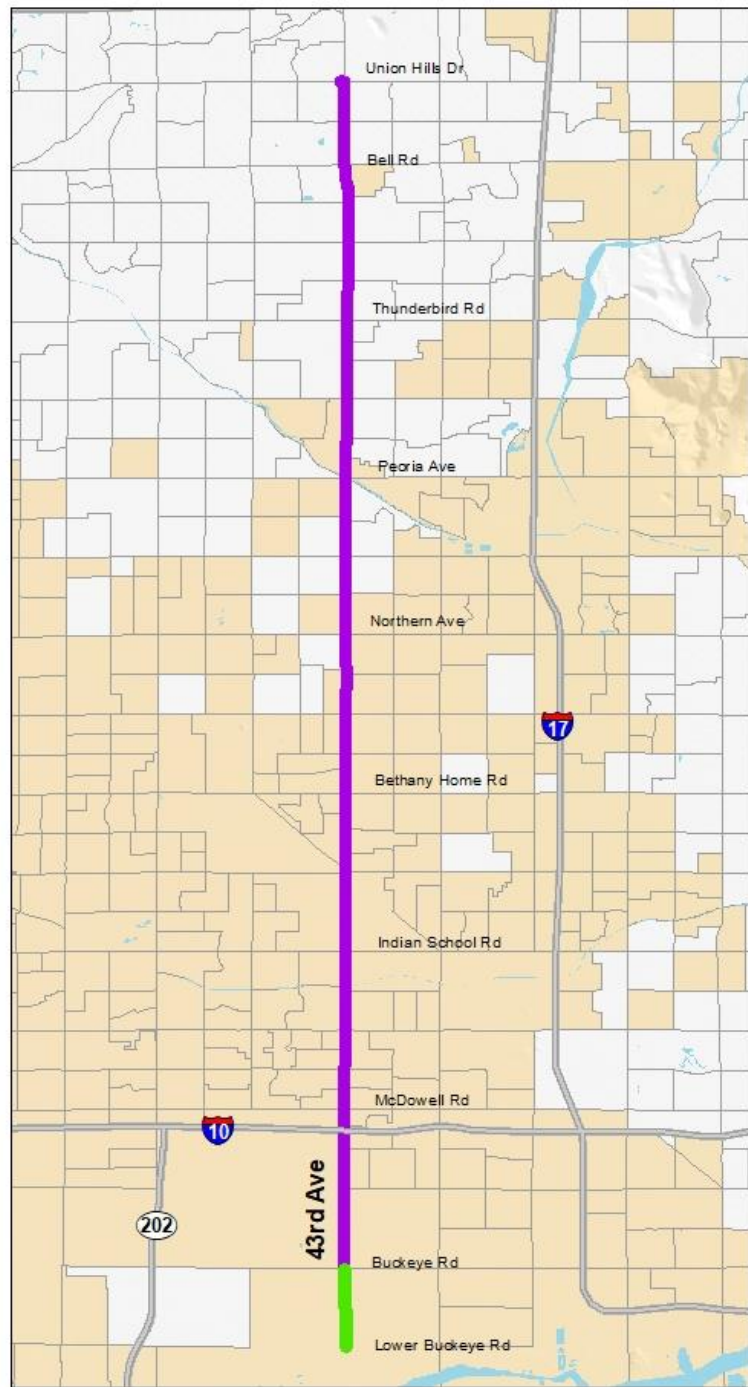
where it is currently unavailable. As a result, no disparate impact to minority population or disproportional burden to low-income population is found with this service change proposal.

Maps

Map 1 and Map 2 illustrate the distribution of Title VI populations and the proposed October 2022 service changes to Route 43. Map 3 and Map 4 illustrate the distribution of Title VI populations and Route 106: Map 5 and Map 6 illustrate the distribution of Title VI populations and Route 156:



Map 1: October 2022 Service Change and Minority Population Route 43



Legend

- Current Routing
- Extend Route

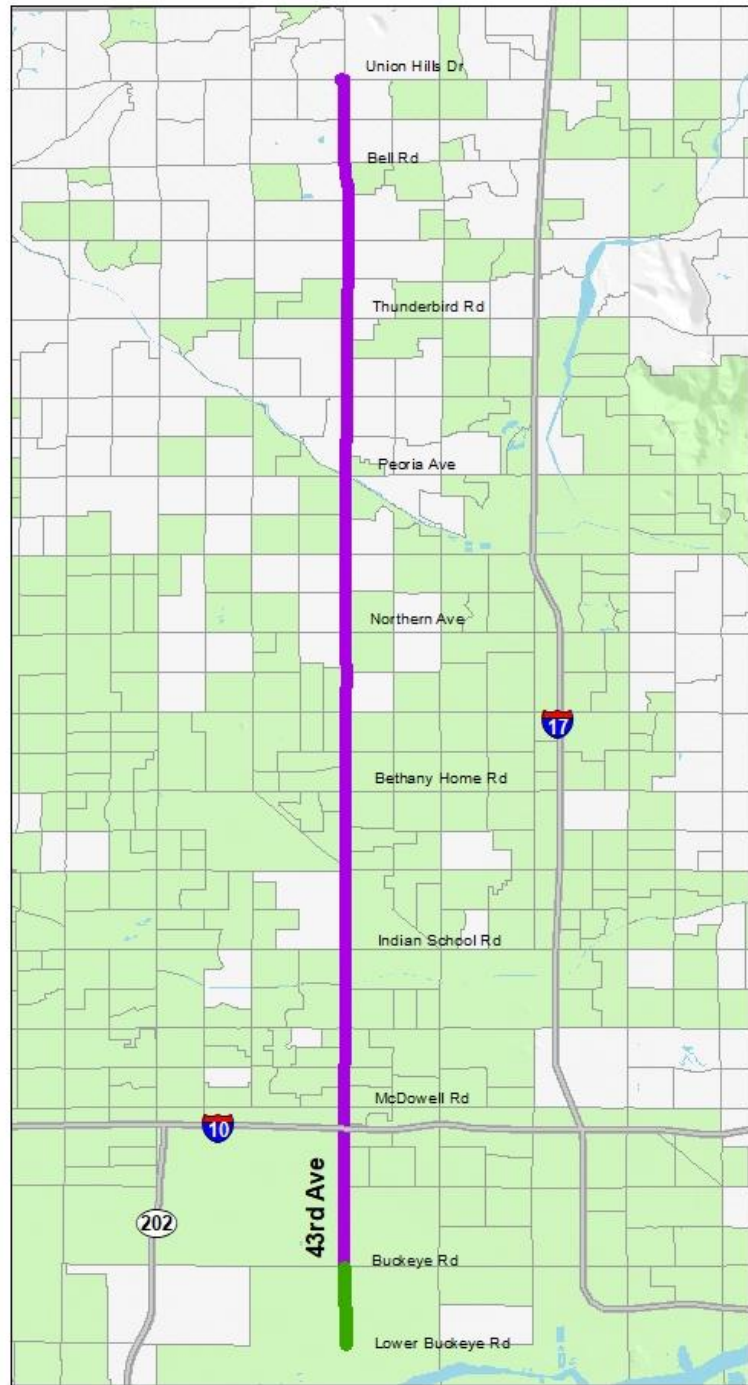
Minority Pop > Local Route Average (50.17%)

0 1 2 4 Miles





Map 2: October 2022 Service Change and Low-Income Population Route 43

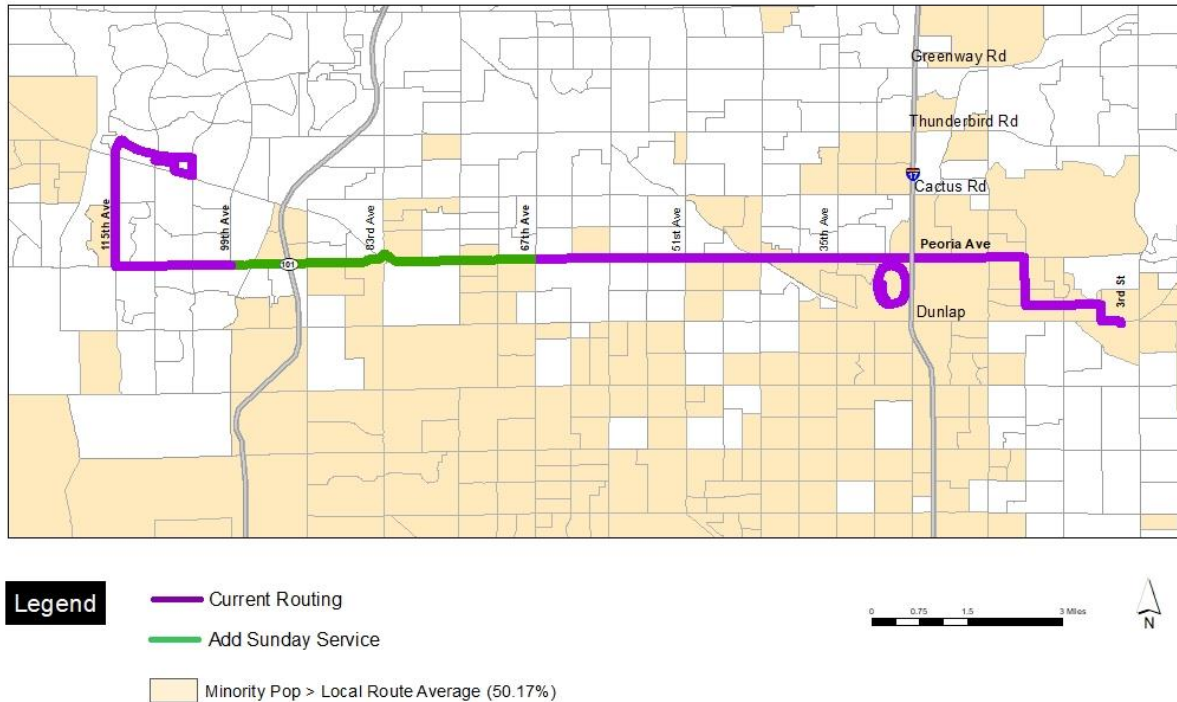


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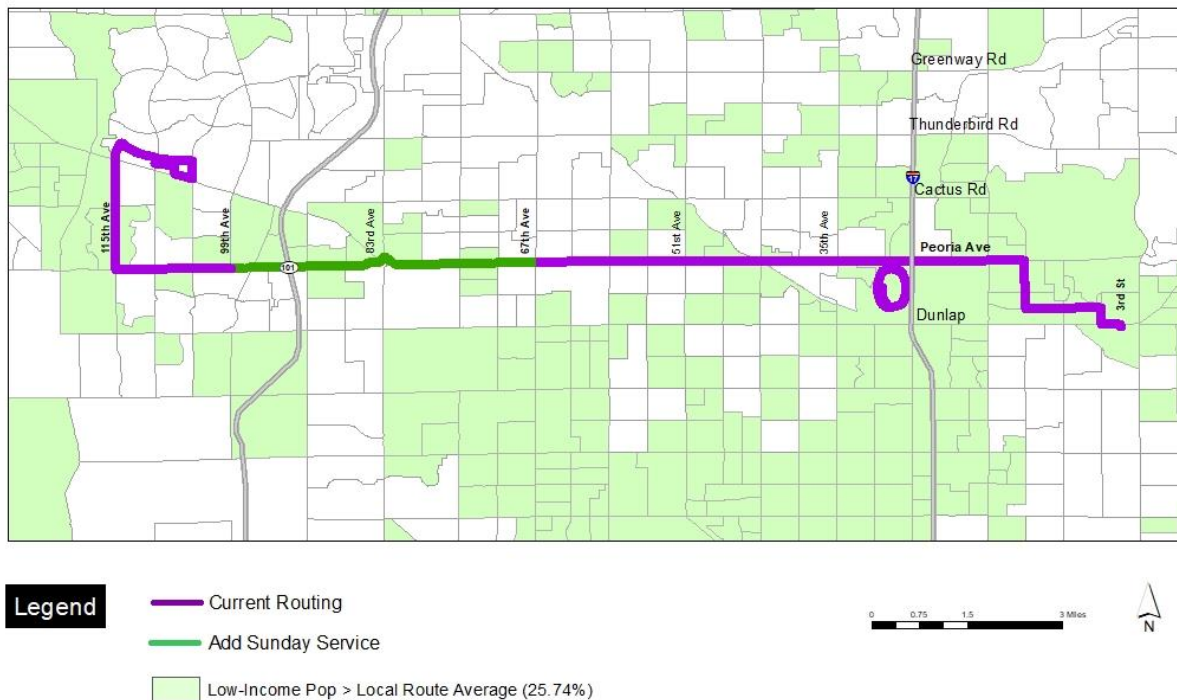
- Current Routing
 - Extend Route
 - Low-Income Pop > Local Route Average (25.74%)
- 0 1 2 4 Miles



Map 3: October 2022 Service Change and Minority Population Route 106

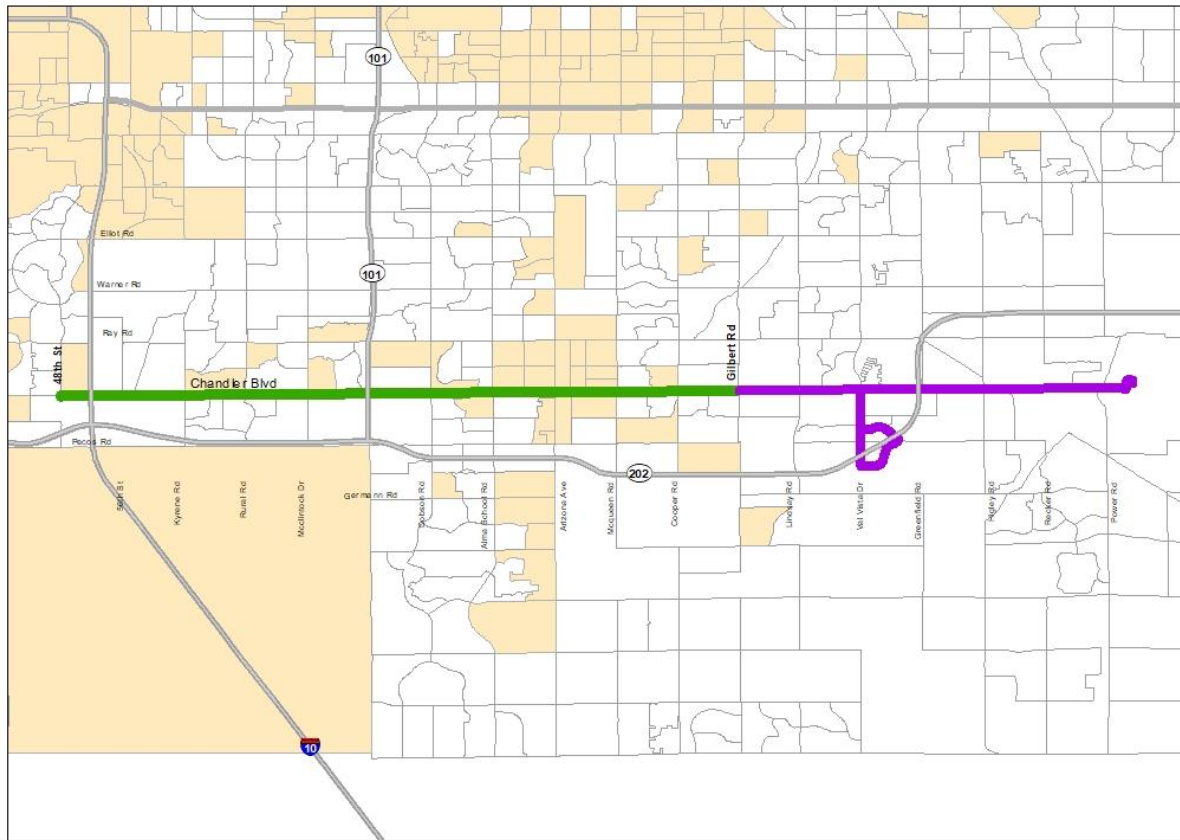


Map 4: October 2022 Service Change and Low-Income Population Route 106





Map 5: October 2022 Service Change and Minority Population Route 156



Legend

— Current Routing

— Increase Frequency

Minority Pop > Local Route Average (50.17%)





Map 6: October 2022 Service Change and Low-Income Population Route 156

