



**PHOENIX  
TRANSPORTATION  
2050**



MOVING PHOENIX  
FORWARD



**ANNUAL  
PROGRESS  
REPORT**

**FISCAL YEAR 2019**

JULY 1, 2018  
THROUGH  
JUNE 30, 2019

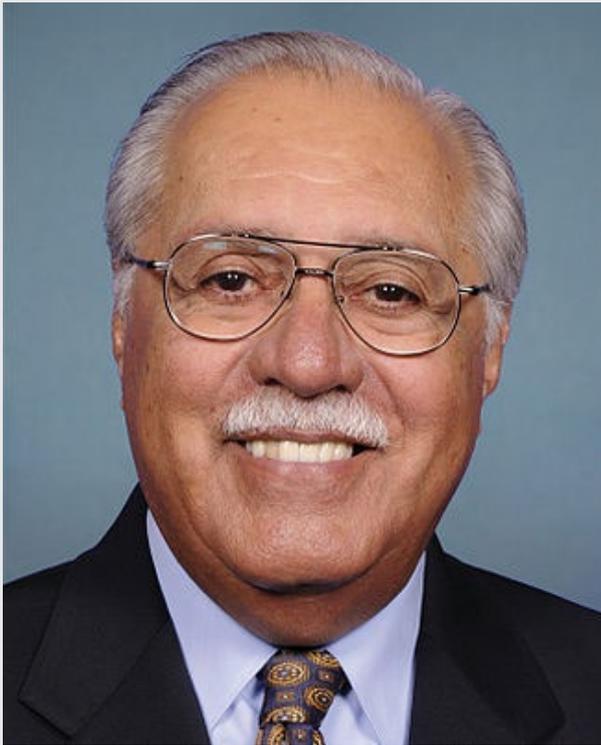
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# IN MEMORIAM

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**"After 11 terms in the House, it's hard to choose which achievement I'm most proud of. The brick-and-mortar projects were important, but I think what I'm most proud of is when my work directly impacted and helped people."**

**– Ed Pastor, United States House of Representatives, 1991 to 2015**



Ed Pastor  
1943–2018

Former U.S. Representative Ed Pastor, who passed away in 2018, is remembered as a trailblazing public servant by becoming the first Latino to serve Arizona in the United States Congress. In addition, having served 23 years in the House of Representatives, his legacy lives on through the numerous transportation projects he championed and the people he served during his lifetime.

On Capitol Hill, Congressman Pastor was instrumental in moving forward the Phoenix region's initial 20-mile light rail line. When the light rail project first entered the Federal Transit Administration's project pipeline in the late 1990s, Congressman Pastor was already working to secure early funding through the Appropriation Committee. He was key in having funds secured each year, until the city ultimately received a Full Funding Grant Agreement in 2005. Because of the Congressman's strong involvement, federal funding was able to become a reality in Phoenix.

In addition, Congressman Pastor worked with the City of Phoenix and Maricopa County in supporting three key transportation-related ballot measures approved by voters, including Phoenix's Transit 2000 plan in 2000; the county-wide Proposition 400 in 2004; and Phoenix's Transportation 2050 plan in 2015.

Serving as the first Chair of the Citizens Transportation Commission, Congressman Pastor led the way to implement Phoenix's Transportation 2050 Plan. For three years, he led the 15-member commission, representing the community at large to oversee bringing planned projects to reality. He was a staunch proponent of transparency, which this annual progress report embodies.

Amongst his various accomplishments, Congressman Pastor's list of contributions in transportation projects include:

- The light rail system through Phoenix, Tempe and Mesa, including a federal grant to help create a program to spur affordable housing and commercial development along the alignment.

- High capacity modern streetcar/light rail system to link the University of Arizona to downtown Tucson, area health establishments and business districts.
- New traffic control tower at Phoenix Sky Harbor International Airport.
- South Mountain Village bus service to improve transportation for area residents.
- Expanded bus and Dial-a-Ride service as well accelerated street improvements via the voter-approved Transportation 2050 plan.
- The 50th Street light rail station which adds a critical transportation option for the community and sets the new standard for accessibility across the nation.

He understood compromise and was a humble leader who diverted the credit and limelight to others. However, having access to jobs, education, and arts and culture via public transit were many passions driving Congressman Pastor to build a better life for Arizonans. He knew the importance of the role public transit plays in moving our local economy forward. He led the transformation of public transportation in metropolitan Phoenix.



Mayor Kate Gallego

“T2050 is a plan that’s about more than just transit investment, it’s about connecting our community. Phoenix is one of the largest cities in the country and we need a multimodal transit plan that is reflective of our status as a global city, as well as the fastest-growing city in the nation. 2019 has seen more city street miles paved than ever before, more bikes lanes and wheelchair ramps added, all thanks to the forethought of T2050. Robust, inclusive transportation options for our entire community are becoming a reality with the help of smart, long-range planning.”

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Councilwoman Thelda Williams  
Chair, Transportation, Infrastructure  
and Innovation Subcommittee

“The City of Phoenix’s transit system has improved immensely since the passing of the T2050 plan. In the last year alone, more than 950 miles of roadway have undergone some form of pavement maintenance, more than 4,400 ADA ramps have been installed, the new 50th Street and Washington Light Rail Station is connecting people to employment and resources and new buses are in service to keep our fleet more reliable for our riders.”

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Commissioner Jennifer Mellor  
Chair, Citizens Transportation  
Commission

“Thanks to Transportation 2050, Phoenix continues to benefit from newly paved roads, increased transit routes and frequency and continued light rail enhancements. The Citizen’s Transportation Commission will continue to make sound recommendations to ensure that your tax dollars are spent wisely to move Phoenix forward.”

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Annual Progress Report Fiscal Year 2019  
Interactive features may be found throughout the document in [orange](#).





On Aug. 25, 2015, Phoenix voters voiced their support for improving

streets and transit service throughout the city with the approval of Proposition 104.

The resulting 0.7 percent sales tax replaced a 0.4 percent sales tax, effective Jan. 1, 2016.



Revenue from the 35-year initiative funds the Phoenix Transportation 2050 (T2050) plan. Approximately 86 percent of funds are dedicated to public transit and approximately 14 percent to streets.

T2050 revenues supplement other sources of transportation funding, allowing the dollars to accomplish more for transit and streets. This report identifies progress through Fiscal Year (FY) 2019 and gives a glimpse of improvements planned for the next five years.

### Transportation, Infrastructure and Innovation Subcommittee Members



Councilwoman Thelda Williams, Chair



Councilwoman Betty Guardado



Councilwoman Laura Pastor



Councilwoman Debra Stark

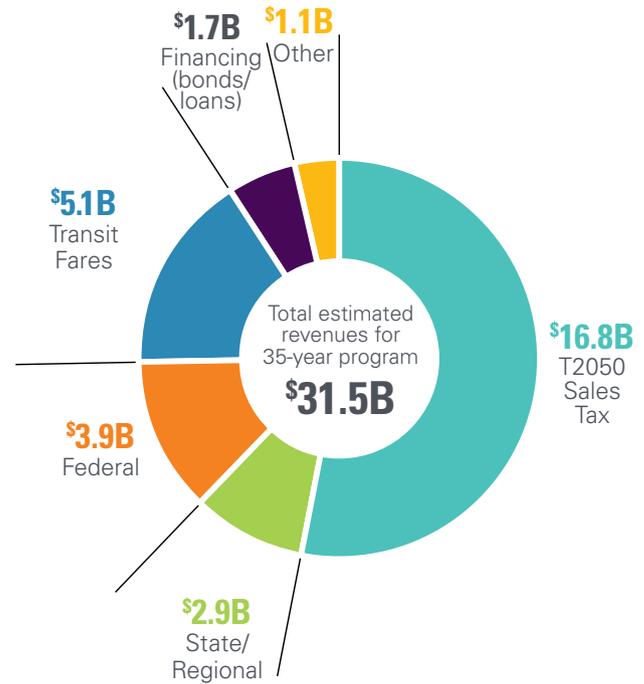
## Lifecycle Revenues

While the tax revenue is expected to generate a little more than half of the T2050 overall funds, the remaining funds will be comprised of federal, regional and other local funding sources. **Figure 1.1** shows funding sources as established at the program's launch.

In addition to these funds, Public Transit and Street Transportation departments staff members pursue opportunities to reduce costs through innovation and efficient project delivery methods.

More information on program assumptions can be found in the appendix, as well as projected and actual sales tax revenue in **Table A.1**. Additionally, regional and federal funding program information is available at [phoenix.gov/T2050/Funding](http://phoenix.gov/T2050/Funding).

**Figure 1.1 Sources of Funds**



## FUNDING

## PROGRAM AREAS

-  T2050 FUNDS
-  REGIONAL FUNDS
-  FEDERAL FUNDS
-  TRANSIT FARE REVENUES
-  FINANCING
-  OTHER TRANSIT REVENUES

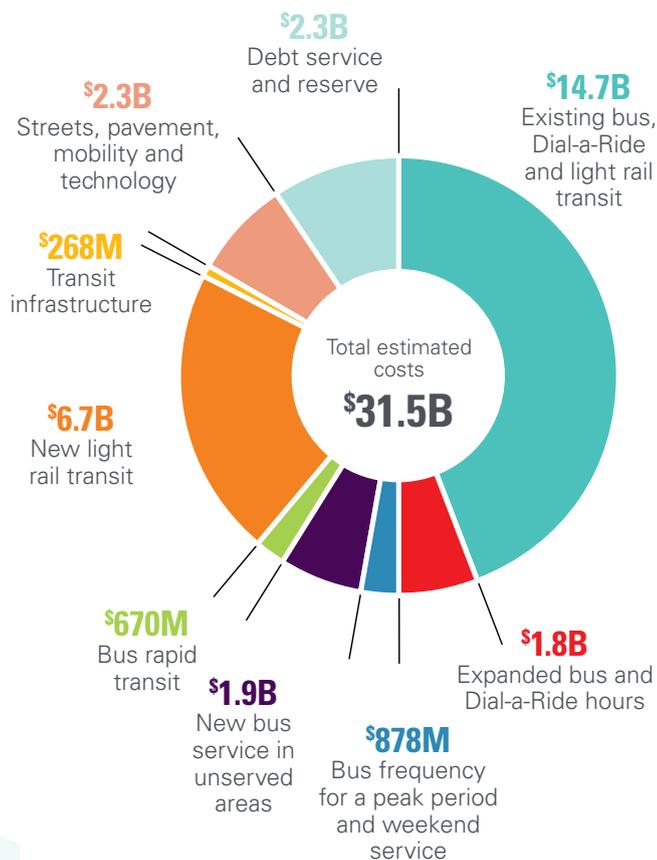


## Lifecycle Expenditures

At times, T2050's projected revenue will exceed projected expenditures for a given year. This deliberate strategy helps ensure the plan has available funds in future years for large expenses, such as light rail projects and park-and-ride facility construction.

Figure 1.2 shows planned uses of funds as established at the program's launch.

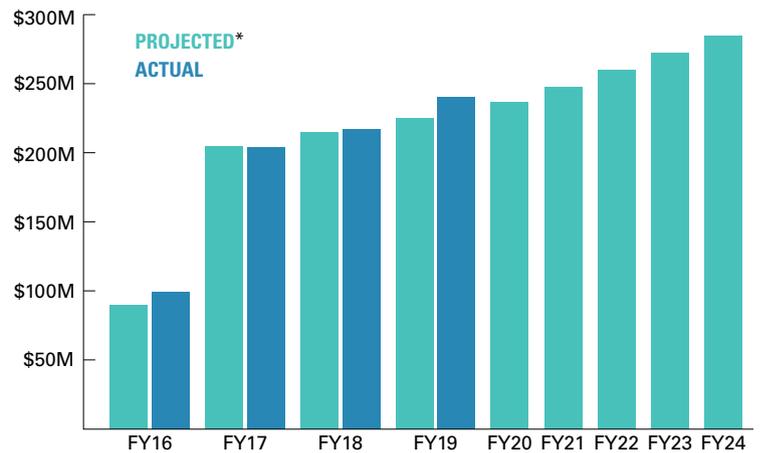
**Figure 1.2 Planned Uses of Funds**



## FY 2019 Financial Summary

The total budget for FY 2019 was nearly \$517 million. Please see Table A.2 in the appendix for budgeted and actual revenue and expenditures.

**Figure 1.3 T2050 Sales Tax Revenue Summary**



\* Projected sales tax revenues reflect the initial T2050 plan.

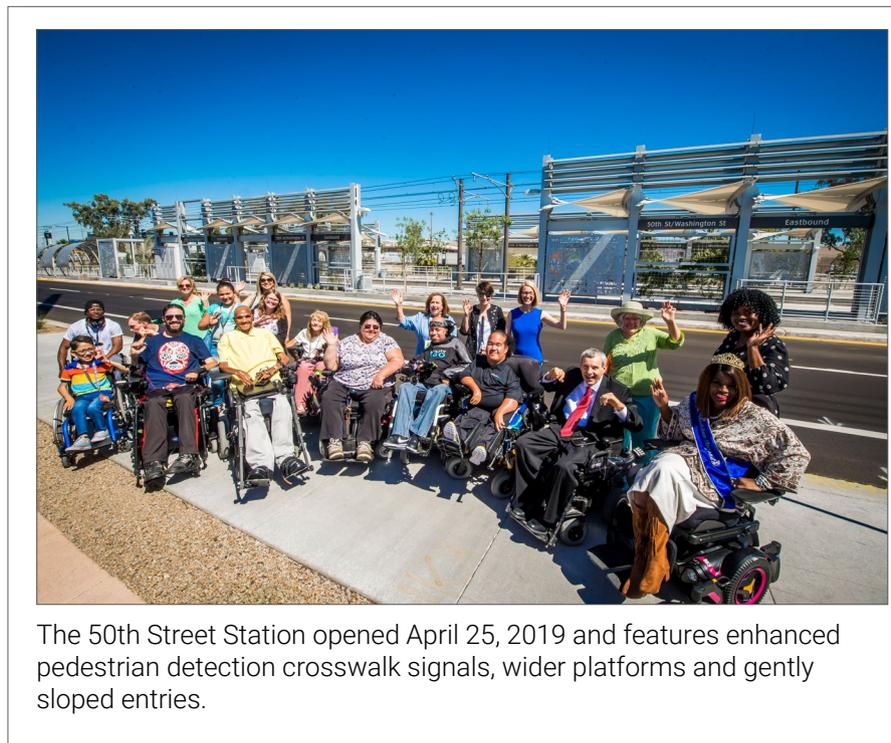
## Financial Projection

The balance of the T2050 funds is anticipated to increase through FY 2020, when funds will be used for the new light rail and major streets construction projects. Projected and actual sales tax revenue, as well as short-term projected revenue figures are shown in Figure 1.3. Please see Table A.3 in the appendix for the FY 2020–2024 five-year financial plan.

## Oversight and Public Input

Public outreach is vital to understanding residents' transportation needs. Staff members host open houses and meet-and-greet activities, conduct public meetings and attend community events to provide information and gather input. Outreach activities occur throughout the year for the planning and development of new bus routes and extensions; high-capacity transit options, such as light rail and bus rapid transit; building and improving roads; creating bike lanes; and installing ADA ramps.

Other, more formal, opportunities for public involvement occur at Phoenix City Council and subcommittee meetings and through the Citizens Transportation Commission (CTC).



In 2015, the mayor and Phoenix City Council established the 15-member CTC for the T2050 program. Commissioners are appointed by the Phoenix City Council and represent various facets of the community. CTC members, as of June 30, 2019, include Chairwoman Jennifer Mellor, Vice Chairman Rick Naimark, David Adame, Sue Glawe, Gail Knight, Gabriel Loyola, David Martin, Roy Miller, David Moody, Alex Navidad, Phil Pangrazio, David Siebert, William Smith and Quinn Tempest. The commission addresses street and transit needs, provides oversight on the expenditure of funds, and makes recommendations on plan elements.

The Phoenix City Council's Transportation, Infrastructure and Innovation subcommittee provides policy guidance on issues related to infrastructure, transportation, transit, streets, aviation/airport, water, technology, smart cities, innovation and sustainability.



Jennifer Mellor - Chair,  
Citizens Transportation  
Commission

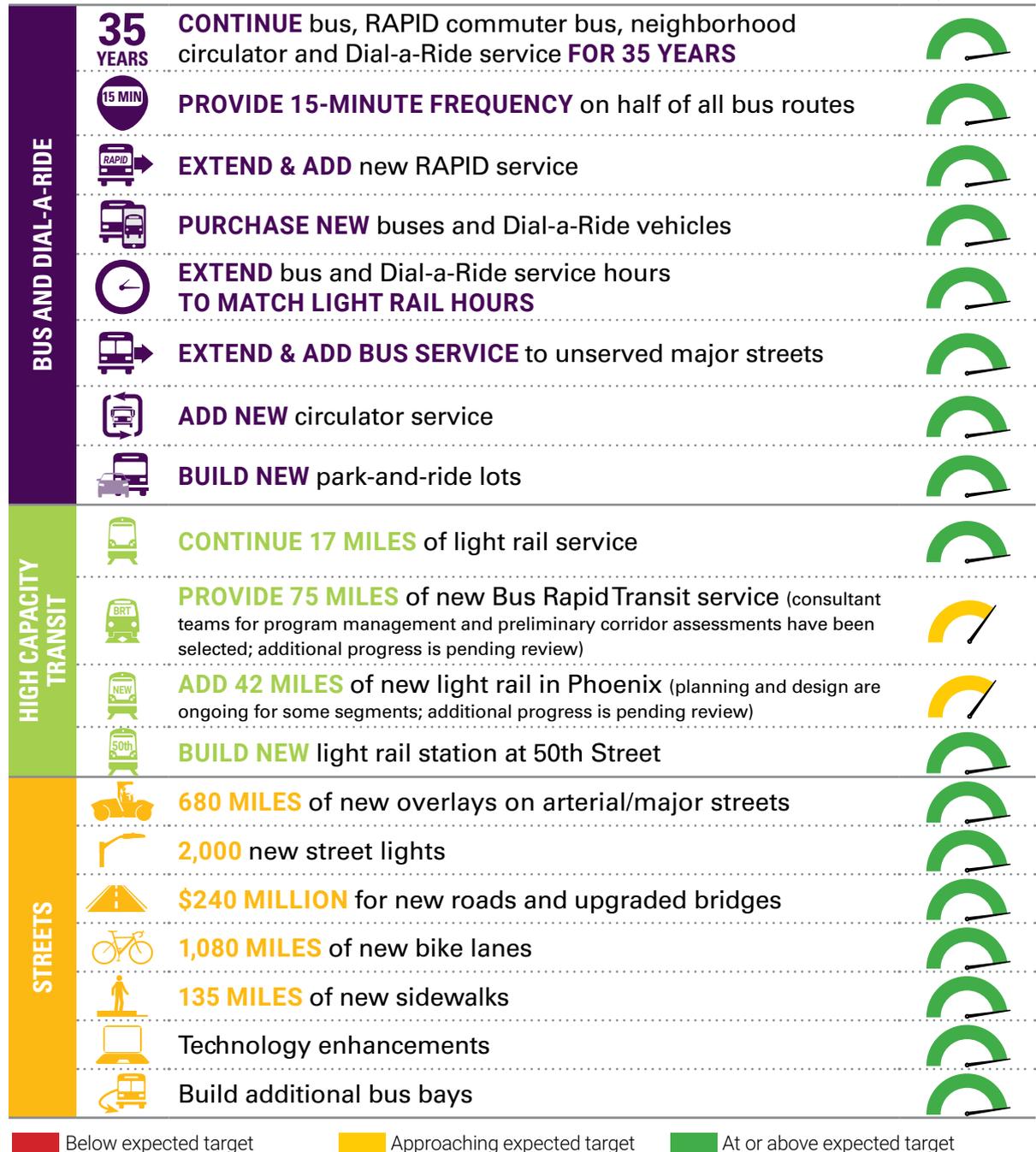


Since 2016, Phoenix has purchased 258 new local buses to modernize its fleet. Newer buses mean not only a more enjoyable experience for riders, but also utilize the latest low emission technology and use at least 50 percent less fuel than the buses they replace.

# T2050 35-YEAR GOALS

The voter-approved 35-year sales tax has been in effect for the past three-and-a-half years (10 percent of the duration of the tax). A gauge comparing the current progress to the expected progress is provided for each goal. Additional information about each of these goals follows.

EXPECTED  
PROGRESS AT 3.5  
YEARS (10 PERCENT)



Below expected target

Approaching expected target

At or above expected target



# BUS AND DIAL-A-RIDE



**CUMULATIVE PROGRESS** JAN. 1, 2016–JUNE 30, 2019

## EXTENDED SERVICE HOURS

for bus and Dial-a-Ride to **MATCH LIGHT RAIL HOURS**



## INCREASED FREQUENCY



off-peak to **15 MIN** on 5 routes:

**41**

Indian School  
Road

**19**

19th  
Avenue

**3**

Van Buren  
Street

**50**

Camelback  
Road

**29**

Thomas  
Road

**Weekday service levels  
on five holidays reinstated**  
(previously on a Sunday schedule)

**RAPID service**  
frequency increases

Weekdays & weekends  
**to 30 MIN  
or better**

## EXTENDED BUS ROUTES

- 51 51st Avenue** Lower Buckeye Road to Baseline Road
- 60 16th Street** Bethany Home Road & 16th Street to Camelback Road & 24th Street
- 19 23rd Avenue** Happy Valley Road to Pinnacle Peak Road
- 39 Shea Blvd** Dreamy Draw Park-and-Ride to 40th Street
- 122 Cactus Road** ASU West Campus to 19th Avenue/Dunlap Avenue Light Rail

## ADDED BUS ROUTES

- 32 32nd Street** Camelback Road to Baseline Road & Priest Drive
- 140 Ray Road** 48th Street to Gilbert Road

## ORDERED



**258** Local Buses



**37** Rapid Buses



**72** Dial-a-Ride  
Vehicles

## INSTALLED



**5** Bus Bays



**40** Bus Stops



**222** Bus Shelter  
Shade  
Structures

## IN DESIGN



**4** Bus Bays

# BUS AND DIAL-A-RIDE



**CUMULATIVE PROGRESS** JAN. 1, 2016–JUNE 30, 2019

## OTHER IMPROVEMENTS COMPLETED

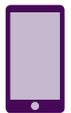
**\$123 MILLION RECEIVED**  
in FTA formula grants for  
Phoenix transit (3.5 year total)

**\$9 MILLION RECEIVED**  
in competitive grant funding to  
purchase buses (3.5 year total)

 **LIQUEFIED NATURAL GAS**  
contract saves \$2M in fuel costs each  
year

 **WEST TRANSIT FACILITY**  
contract awarded to operate 11  
regional routes and one circulator for  
6.3 million service miles annually

 **NORTH AND SOUTH FACILITIES**  
requests for proposal issued

 **ALTERNATIVE  
TRANSPORTATION SERVICES**  
technology enhancements include:  
ADA Ride, Senior Ride and Senior  
Center Shuttle, Employment  
Transportation and Medical Trip



**TRIPSPARK**  
customer web portal for Dial-a-Ride users



**SECURITY**  
increased patrols, Homeland Security  
endorsement to double K-9 security (FY 2018)



**REGIONAL DIAL-A-RIDE  
IMPLEMENTED**  
eliminating transfers



**SOUTH TRANSIT FACILITY**  
refurbished



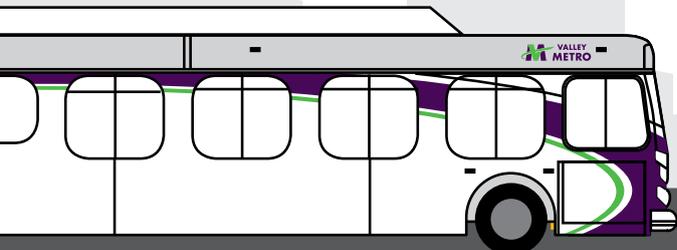
**COMPUTER AIDED DISPATCH**  
completed installation on 99% of buses



**AUDIO ON DIGITAL BUS SIGNS**  
completed



**FARE COLLECTION SYSTEM**  
request for proposals received and under  
evaluation





# BUS AND DIAL-A-RIDE



The Phoenix Public Transit Department provides residents with a range of transit options including local and commuter buses and alternative transportation services such as Dial-a-Ride for those with special needs. Phoenix is the largest member of Valley Metro, which is the regional public transportation agency that provides coordinated transit services to residents of metro Phoenix. Additional transit information is available at [phoenix.gov/publictransit](https://phoenix.gov/publictransit).

## Funding

T2050 funding of \$1.2 billion over five-years supported improvements such as greater bus frequency, additional and extended routes, new vehicles, security and technology enhancements, and shaded bus stops.

In addition to T2050 funds, the plan utilizes federal grants, local funds, fare revenues, transit advertising and the Regional Public Transportation Fund. Recent awards and grants include:

- Nearly \$123 million in Federal Transit Administration (FTA) formula (non-competitive) grants allocated for Phoenix transit projects (January 1, 2016 through June 30, 2018).
- \$9 million in competitive grant funding from the FTA Bus and Bus Facilities Infrastructure Investment Program for the purchase of new local buses (January 1, 2016 through June 30, 2018).

## Local Fixed Route

With more than 32 million passenger boardings in the last fiscal year, local fixed route bus service is at the heart of Phoenix's transit system. Bus service operates on a grid and provides a straight-forward, easy-to-navigate way for riders to connect to home, work, school and other key locations throughout the region. Residents are now able to use the services nearly 24 hours a day.

Improvements since T2050's inception include:

- Extending service hours for both bus and Dial-a-Ride to match light rail hours (FY 2016–2017).
  - Friday and Saturday hours extended until 2 a.m. and Sunday hours to 11 p.m.
  - Monday-Thursday service hours extended 4 a.m. to midnight.
- Increasing bus frequency to every 30 minutes – and more frequent for weekday routes with high ridership (FY 2016–2017).
- Increase bus frequency to every 15 minutes during off-peak hours on Routes 3 (Van Buren Street), 19 (19th Avenue), 29 (Thomas Road) and 50 (Camelback Road) (FY 2018).
- Increasing bus frequency to every 15 minutes during off-peak hours on Route 41 (Indian School Road) (FY 2019).
- Reinstating weekday service levels on five days that previously operated on a Sunday schedule including Veterans Day, the day after Thanksgiving, Christmas Eve, Martin Luther King Jr. Day and Presidents Day (FY 2019).

Additionally, Phoenix continues to purchase new buses. Since 2016, Phoenix has purchased 258 new local buses to modernize its fleet of approximately 500 vehicles. Newer buses mean not only a more enjoyable experience to riders, but also a more efficient and dependable ride.

**Table 2.1 T2050 Bus and Dial-a-Ride Progress**

### Completed FY 2019 (July 1, 2018–June 30, 2019)

#### Fund existing bus, RAPID commuter bus, neighborhood circulator and Dial-a-Ride service for 35 years

- Maintained existing services, which includes 38 Phoenix-operated local routes, six RAPID routes, four circulators and Dial-a-Ride.
- Maintained bus and Dial-a-Ride service hours to match light rail hours.

#### Improve bus frequency

- October 2018: Reinstated weekday service levels region-wide on five holidays that previously operated on a Sunday schedule.
- October 2018: Route 41 (Indian School) improved to run every 15 minutes or less between 32nd Street and 59th Avenue, Monday through Friday, 6 a.m. to 7 p.m.
- April 2019: Improvements were made to select RAPID service frequency.

#### New buses and Dial-a-Ride vehicles

- Ordered 39 new local buses
  - 33 are the standard 40-foot buses
  - 6 are the 60-foot articulated buses
- Ordered 25 new RAPID buses
  - 14 are the standard 40-foot buses
  - 11 are the 60-foot articulated buses

#### Incorporate technology

- Computer-Aided Dispatch Automated Vehicle Location (CAD/AVL)
  - Mini-fleet testing completed on nine city vehicles.
  - Full bus fleet installation initiated, with technology installed on 99 percent of buses.
- Alternative Transportation Programs
  - Allows passengers to schedule flexible transportation to meet their travel needs via ADA Ride, Senior Ride and Senior Center Shuttle, Employment Transportation and Medical Trip.
- Fare Collection System Request
  - Proposals received in May 2019 for system improvements which will include a mobile application, reloadable smartcards, revamped retail network, validators on buses and light rail, fare capping and a reduced fare registration ID program.

**Table 2.1 T2050 Bus and Dial-a-Ride Progress**

**Completed FY 2019 (July 1, 2018–June 30, 2019)**

**Bus bays**

- Utility and conflict resolution for four bus bays.

**Bus stops**

- 125 new shelters installed at existing bus stops to provide shade.

**Increase security**

- Increased patrols and crime reduction enforcement operations focused on public transportation.

**Other improvements**

- First Transit awarded contract to operate the 11 local bus routes and the MARY circulator originating at Phoenix's West Transit Facility. The \$296 million contract provides over 500 private sector jobs, including bus operators, maintenance technicians, road supervisors and dispatchers, and administrative/management positions.
- Both the north and south facilities fixed-route service requests for proposals were issued.

## RAPID Commuter



RAPID is a Phoenix-operated commuter bus service that connects residents in Phoenix's suburban areas with downtown Phoenix. There are currently six RAPID routes that provide riders with another option for their commute into downtown Phoenix.

Since the inception of T2050, 37 new RAPID buses were ordered. Based on customer data and input, in April 2019, Phoenix made improvements to the RAPID service including more trips for certain routes. In 2023, Phoenix anticipates adding a new RAPID route to southwest Phoenix utilizing the Loop 202 (South Mountain Freeway).

## Circulator Service



Phoenix has four circulator routes that connect area residents with key neighborhood destinations such as libraries, grocery stores and community centers. The circulators are named to represent their service areas and include ALEX (Ahwatukee Local Explorer), DASH (Downtown Area Shuttle), MARY (Maryvale Area Ride for You) and SMART (Sunnyslope Multi-Access Residential Transit).

Staff will conduct a study of Phoenix's current and potential circulator routes and make recommendations on improvements based on the results.



Route 29 (Thomas Road) is one of five new routes offering 15-minute off-peak frequency.

## Dial-a-Ride and Alternative Transportation Services



Dial-a-Ride (DAR) is a federally required paratransit service that complements local transit by providing a convenient transportation option for those unable to ride the bus or light rail. Under T2050, Phoenix expanded DAR service hours and replaced 72 vehicles.

TripSpark, the online reservation tool for Phoenix DAR was launched in 2018. Now scheduling a DAR trip is even easier as users can schedule their trips by phone or online.

Phoenix also continues to provide Alternative Transportation Services which include ADA Ride, Senior Ride and Senior Center Shuttle, Employment Transportation and Medical Trip.

### Table 2.2 T2050 Bus and Dial-a-Ride

#### Planned for FY 2020

#### Fund existing bus, RAPID commuter bus, neighborhood circulator and Dial-a-Ride service for 35 years

- Continue to provide safe and reliable services.
- Maintain bus and Dial-a-Ride service hours to match light rail hours.

#### Increase security

- Reduce violent crime on public transportation, with an emphasis on investigating and solving crime.

#### Bus stops

- Install new shelters at 80 bus stops to provide shade.

#### Incorporate technology

- Release operations control center request for proposals August 2019.
- Anticipate Phoenix City Council award of Regional Fare Collection System Improvements project contract by December 2019.

#### Other improvements

- Initiate a bus circulator study.

## Security



The Phoenix Police Department's Transit Enforcement Unit works with municipal security guards, a private security contractor and Valley Metro's fare enforcement security at Phoenix's seven transit centers, nine park-and-rides and three operation and maintenance facilities. Cameras are installed on vehicles and at city-owned and operated facilities to assist police and security when needed.

In FY 2018, the Department of Homeland Security delivered a positive endorsement to double the K-9 security detail from three to six teams, and nine municipal security guard positions were transferred from the Police Transit Unit to the Public Transit Department to supplement the private security contract. Over the past year, patrols and crime reduction enforcement operations increased with the goal of adding 20 transit unit police officers over the next five years.



Improvements to alternative transportation services include implementing regional Dial-a-Ride service, which eliminates transfers.



Workers install a new bus shade structure. More than 200 were installed in FY 2019.

## Bus Stops and Shelters



Since 2016, 40 new bus stops were installed to provide additional access to new and existing bus routes. Shade structures were added to 222 existing bus stops. Plans include installing additional shade structures at 80 existing bus stops for each of the next five years – for an additional 400 new shade structures installed by FY 2024.



### Table 2.3 T2050 Bus and Dial-a-Ride

#### Planned for FY 2021–2024

#### Fund existing bus, RAPID commuter bus, neighborhood circulator and Dial-a-Ride service for 35 years

- Continue to provide safe and reliable services.
- Maintain bus and Dial-a-Ride service hours to match light rail hours.

#### Improve bus frequency

- Introduce peak hour service (15 minutes or less) to at least three additional routes by FY 2021.
- Increase mid-day frequency to at least every 15 minutes on other bus routes currently without all day high frequency.
- Improve circulator frequency.

#### Extend and add bus service to unserved major streets

- Introduce new bus service on 56th Street between Shea Boulevard and Deer Valley Road by FY 2021.
- Construct the Laveen Park-and-Ride and introduce new RAPID service from Laveen to downtown Phoenix.

#### Increase security

- Add 20 police officers to the Transit Unit to maximize public safety coverage across the public transportation network.

#### Bus stops

- Install 56 new bus stops.
- Install new shelters at an additional 320 bus stops to provide riders with shade.

#### Incorporate technology

- Implement new Regional Fare Collection System improvements by late 2023. The project includes rollout of a new mobile application for purchasing transit fares, mobile ticketing and implementing a new reloadable smartcard that is account-based for the best in customer experience.

#### Other improvements

- Assess circulator service and improvement recommendations and identify locations for potential new service.
- Assess other services, such as partnerships or microtransit.

## Operations and Maintenance Facilities



Phoenix has three bus yards strategically located around the city where all bus maintenance, fueling and cleaning take place.

In FY 2018, the city awarded a new liquefied natural gas contract, saving \$2 million annually in fuel costs.

Additionally, the West Transit Facility fixed route services contract was awarded to First Transit, which accounts for 6.5 million revenue miles from the 11 local and one circulator route operated out of the West Transit Facility. The contract provides for more than 500 private sector jobs (bus operators, maintenance technicians, road supervisors and dispatchers, administrative/management positions) and serves some of the highest ridership routes in Phoenix, routes: 29 – Thomas Road, 41 – Indian School Road and 17 – McDowell Road.

Other anticipated contracts vital to operating and maintaining facilities include those for the Operations Control Center – the epicenter of dispatch operations – north facilities fixed route service and south facilities fixed route service.

Looking forward, a regional fare collection system vendor is anticipated to be selected in October 2019. Rollout of a new mobile application for purchasing transit fares and account-based reloadable smartcards are slated for late 2023.



An 18-month project began in March 2019 to replace and maintain trees. More than 200 trees will be pruned, removed, replaced or fenced at the base to ensure pedestrian-friendly landscaping and accessibility. Trees will also be planted in more than 180 empty tree wells.



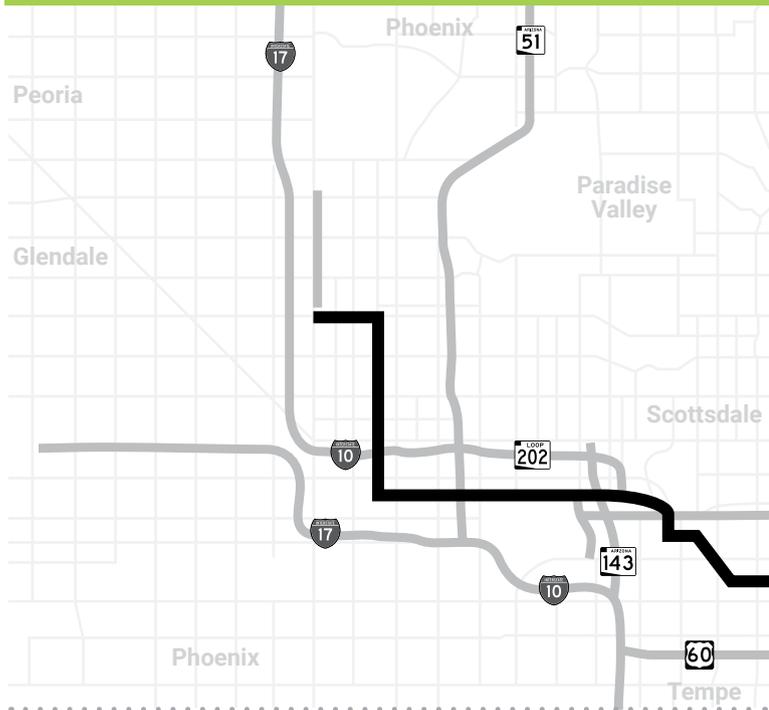
T2050 improvements include providing bus and Dial-a-Ride service hours to match light rail hours. Above, a Dial-a-Ride operator assists a passenger.



# HIGH CAPACITY TRANSIT



CUMULATIVE PROGRESS JAN. 1, 2016–JUNE 30, 2019



## SOUTH CENTRAL EXTENSION

- Accelerated completion by more than 10 years
- \$2 million grant awarded for business assistance and transit-oriented development land use planning services
- Expansion approved for transfer hub in downtown Phoenix
- Completed 60 percent design, underground utility survey and started engineering phase
- Construction to begin summer of 2019 at 7th Avenue and 7th Street



## NORTHWEST EXTENSION PHASE I

- Service began March 19, 2016

## NORTHWEST EXTENSION PHASE II

- Completed 40 percent design and geotechnical field investigations
- Surveying to identify underground utilities

## CAPITOL/I-10 WEST EXTENSION

- Evaluating alignment options and conducting traffic analysis
- Environmental assessment of environmental elements associated with the project
- Options for accelerating Phase II, which extends from the vicinity of the state capitol to 79th Avenue and I-10, are under consideration

## NORTHEAST EXTENSION

- Deferred to end of T2050 program by Phoenix City Council action in October 2018

## 50TH STREET STATION

- Opened April 25, 2019
- 2019 Sustainable Infrastructure Award from Arizona State University's Metis Center

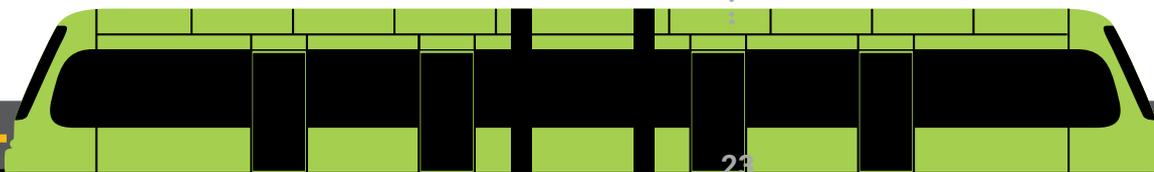
## WEST PHOENIX TRANSIT CORRIDOR STUDY

- Deferred to end of T2050 program by Phoenix City Council action in March 2019



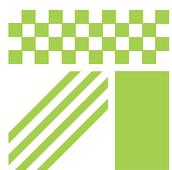
## BUS RAPID TRANSIT (BRT) SERVICE

- Launched program
- Selected BRT planning and design consultants
- Phoenix City Council recommended approval of consultant contracts





# HIGH CAPACITY TRANSIT



Phoenix currently offers 16.5 miles of light rail service – which represents a substantial portion of the 28-mile Valley Metro Rail light rail system. Light rail connects people to the downtown areas of Phoenix, Tempe and Mesa, as well as Sky Harbor Airport and many other key destinations in between. In addition to light rail, Phoenix is investing in bus rapid transit (BRT) to provide another option for high-capacity transit (HCT) service.

## Funding

The cities of Phoenix, Tempe and Mesa share the funding obligations for the ongoing operations and maintenance costs of the light rail system, including security and fare collection, vehicle and system maintenance, and administration of the operation.



Passengers board light rail. Of the 28 miles of light rail in the region, 16.5 miles are within Phoenix.

Phoenix's T2050 plan includes more than a \$1 billion investment planned for FY 2018-2023 for improving the city's HCT network. The plan includes developing BRT, and light rail improvements and expansion. In addition to revenues generated by the city's sales tax, T2050's other funding sources include federal grants, the Public Transportation Fund, fares, advertising, and other local funds.



Mayor Gallego at the opening of the 50th Street Station grand opening, April 25th, 2019.

### Table 3.1 T2050 High Capacity Transit Progress

Completed FY 2019 (July 1, 2018–June 30, 2019)

#### Increase light rail in Phoenix

##### South Central Extension

- Completed 60 percent design.
- Completed underground utility surveying along the alignment.
- Granted entry into Engineering Phase from the FTA.
- Conducted public meetings to gather input on the design, station artwork and traction power substations.
- FTA approved a Letter of No Prejudice allowing construction to begin summer 2019 at 7th Avenue and 7th Street.

##### Northwest Extension Phase II

- Completed 40 percent design.
- FTA staff, consultants and project staff reviewed project cost estimates and schedule.
- Completed the geotechnical field investigations.
- Conducted public meetings to gather input on the design, station artwork and traction power substations.
- Began underground utility surveying along the alignment.

##### Capitol/I-10 West Extension

- Began evaluation of alignment options at Washington Street between downtown Phoenix and the state capitol.
- Began traffic analysis of downtown Phoenix.
- Phoenix City Council action to conduct public outreach and develop options for accelerating Phase II of this project.

##### Northeast Extension

- In October 2018, the Phoenix City Council voted to defer the first-year expenditures of the Northeast Extension to the end of the T2050 program.

##### West Phoenix Extension

- In March 2019, the Phoenix City Council voted to defer the first-year expenditures of the West Phoenix Extension to the end of the T2050 program.

##### 50th Street Station

- Opened station and began revenue service April 25, 2019.
- Awarded a 2019 Sustainable Infrastructure Award from Arizona State University's Metis Center.

##### Bus Rapid Transit program

- BRT program management and preliminary services procured.

## Light Rail Service

### South Central Extension



The South Central Extension will connect the existing light rail system to South Phoenix, Central City-South and Warehouse District communities. The project will include a downtown hub near the Cityscape development, additional stations, and track and art elements.

Valley Metro opened a community office along the future corridor in January 2018 to provide residents and businesses with a convenient location to meet with project team members and learn more about the project.

FY 2019 accomplishments include completing the survey to identify underground utilities; entering the engineering phase; conducting public meetings to gather input on the design, station artwork, and traction power substations; and receiving FTA approval to begin construction at 7th Avenue and 7th Street during the summer of 2019.

### Northwest Extension Phase II



When completed, the Northwest Extension Phase II will extend the line west on Dunlap Avenue from 19th Avenue, north on 25th Avenue and across I-17 to end near Metrocenter Mall.

Early engineering work of the alignment is underway, and public meetings continue to be held to gather input on the design, station artwork and traction power substations.

### Capitol/I-10 West Extension



In 2016, the Capitol/I-10 West project was split into two phases for design and construction. The first phase, downtown to the capitol building, is expected to be finished in 2023. The second phase, from the capitol building to the 79th Avenue/I-10 Park-and-Ride in Maryvale, is under consideration for accelerated completion. Public outreach will be conducted, and options for potential advancement of this phase of the project will be developed.

The project team currently is evaluating alignment options at Washington Street between downtown Phoenix and the state capitol building and conducting a detailed traffic analysis of the downtown Phoenix area. Future steps include preparing the federally required Environmental Assessment of the project's corridor.



Passengers travel via light rail. T2050 allows the city to continue to provide light rail service.

## Northeast Extension



This corridor was anticipated to connect the existing light rail system to the Paradise Valley Mall area. In October 2018, the Phoenix City Council voted to defer the first-year expenditures to the end of the T2050 program.

## West Phoenix Transit Corridor Study



Initially scheduled to open in 2026, this extension was expected to connect the West/Northwest Valley with the existing light rail at 19th Avenue and Camelback Road to approximately 43rd Avenue. In 2017, the Glendale City Council voted to no longer participate in the study. In March 2019, the Phoenix City Council voted to defer the first-year expenditures to the end of the T2050 program.

### Table 3.2 T2050 High Capacity Transit Progress

#### Planned for FY 2020

##### Increase light rail in Phoenix

- South Central Extension: final design, third party utility relocation and rail construction.
- Northwest Extension Phase II: final design and pre-construction.
- Capitol/I-10 West: project evaluation and public meetings.

##### Bus Rapid Transit program

- Initiate BRT program planning and community engagement and education.

## 50th Street Station



The 50th Street Station opened on April 25, 2019. The station marks the first transit capital improvement project to take place under T2050, as well as the first new station to be constructed on the existing light rail line.

The station provides access to Ability360, a resource facility for the Valley's disabled community, as well as improved access to nearby businesses and transit-oriented development planned for the area. While all light rail stations are ADA accessible with features such as level boarding and lowered fare vending machines, the 50th Street Station includes an enhanced pedestrian detection crosswalk signal, wider platforms and more gently sloped entries.

The station also features a permanent tribute to Arizona Congressman Ed Pastor. The congressman was known for his genuine care for the communities he represented and for all Arizonans, and was a lifelong advocate for transit. He served as the first chair of the T2050 CTC.



A security staff member shows riders how to purchase fares at the Central Avenue and Roosevelt Street light rail platform.

## Bus Rapid Transit



Bus Rapid Transit (BRT) will offer another high-capacity transit option for Phoenix. The service relies on specialized buses and will utilize limited stops, signal prioritization and off-board fare collection to provide riders with a quick, reliable transit option in high demand travel areas.

The planning for future BRT is underway. In 2018, planning and design consultants were selected. Anticipated next steps include evaluation of potential corridors and related public outreach and education.

**Table 3.3 T2050 High Capacity Transit Progress**

Planned for FY 2021–2024

### Increase light rail in Phoenix

- South Central Extension: construction.
- Northwest Extension Phase II: construction.
- Capitol/I-10 West: submission request to begin project development to FTA.

### Bus Rapid Transit program

- Council approval of a BRT implementation plan.
- Initiate preliminary engineering of one or more corridors.





# STREET MAINTENANCE AND IMPROVEMENTS



CUMULATIVE PROGRESS JAN. 1, 2016–JUNE 30, 2019

	Miles new pavement	Miles pavement treatments
ARTERIAL/MAJOR COLLECTORS	122	237
MINOR COLLECTORS/LOCAL	269	1,078

137 NEW PROJECTS PLANNED

27 MILES OF NEW SIDEWALKS

COMPLETED 7 STUDIES



INSTALLED  
141 MILES OF NEW BICYCLE LANES



IMPROVED/INSTALLED

10,762 ADA RAMPS



PAINTED SIGNAL POLES at  
260 INTERSECTIONS



INSTALLED  
123 LEFT-TURN ARROWS



INSTALLED  
1,456 NEW STREET LIGHTS



REPLACED  
2,848 ILLUMINATED STREET SIGNS



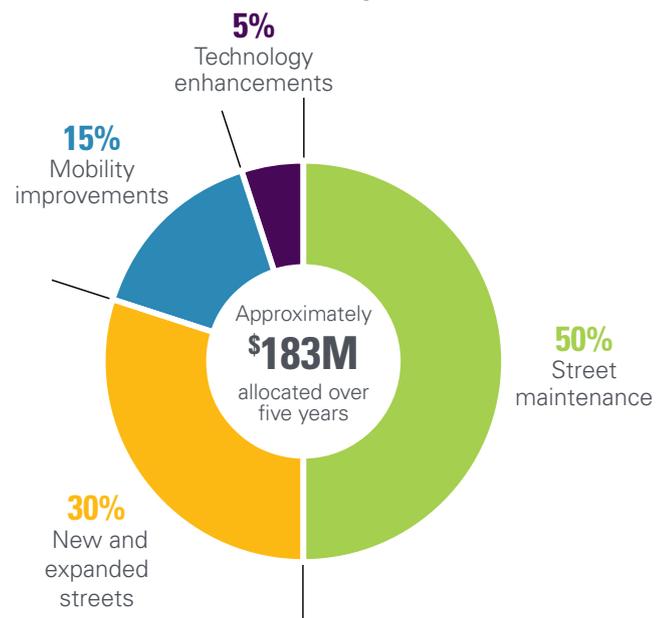
# STREET MAINTENANCE AND IMPROVEMENTS



The Street Transportation Department is dedicated to moving people and goods – including pedestrians, bicyclists and motorists – in a safe, efficient, and convenient manner via the street transportation network.

While paving and maintaining roads is the tangible foundation of these services, the department is responsible for street signs, traffic signals, street lights, bikeways, ADA ramps and sidewalks. Other behind-the-scenes functions include transportation planning, plan review for private development projects, city right-of-way landscaping, construction inspection, materials testing and technology enhancements such as the geographic information system (GIS). Additional information is available at [phoenix.gov/streets](https://phoenix.gov/streets).

**Figure 4.1 T2050 Funds for Street Improvement**



## Funding

With 14 percent of the revenues generated by the Transportation 2050 sales tax dedicated for street improvements, more than \$2.3 billion is projected for street improvements over a 35-year period from 2016 through 2050.

The current five-year plan earmarks about \$170 million in T2050 funding for street construction and maintenance projects. In October 2018, after extensive hearings and public meetings, the Phoenix City Council authorized the financing of \$200 million to accelerate pavement maintenance on arterial and major collector streets.

Other sources of department funding include the state-collected motor fuel tax, city's general fund, regional/Maricopa Association of Governments (MAG) funds, federal funds and impact fees.

## Accelerated Pavement Maintenance Program

Five-year pavement plans are approved by the Phoenix City Council each year, and about \$16 million is allocated under T2050 for pavement maintenance per year. However, with the addition of \$200 million over five years for pavement maintenance, funding for FY 2019 through FY 2023 is three-and-a-half times the level of typical years.

To fast-track paving, the department accelerated the five-year pavement plan for completion during the current and upcoming year (FY 2019–2020). With the projects moved forward, a resulting challenge was to determine how best to utilize the remaining three years of the paving schedule.

Street transportation staff members embarked on a substantial public involvement effort to explain the accelerated pavement maintenance program and ask residents where pavement needed to be repaired or replaced.



In February and March, Street Transportation Department staff members attended 64 events in 59 days. The Midtown Neighborhood Association (pictured above) provided staff members with the opportunity to present Accelerated Pavement Maintenance Program information to about 30 association members at their meeting.

Public involvement highlights:

- Presented information at 79 public meetings such as homeowner associations, block watch organizations, local business groups, and neighborhood community events.
- Offered information to about 11,200 people at these events.
- Developed [web page](#) content with [fact sheet](#), project links and email address, [pavement@phoenix.gov](mailto:pavement@phoenix.gov), which received about 300 requests for service or additional information.
- Created an interactive street maintenance tool for reporting areas with pavement concerns. Residents provided input regarding more than 7,200 locations.
- Generated more than 42,000 views through social media platforms to encourage feedback on streets in need of maintenance.

## Table 4.1 T2050 Street Maintenance and Improvements

Completed FY 2019 (July 1, 2018–June 30, 2019)

### Street projects

- 74 projects completed.

### Street pavement and overlays

- Oct. 3, 2018, the Phoenix City Council authorized an additional \$200 million over the next five years for the pavement maintenance program. The resulting Accelerated Pavement Maintenance Program fast-tracked completion of five years of planned projects in the current and upcoming year.
- 32.2 miles of new asphalt pavement on major streets.
- 116.1 miles of other pavement treatments, such as crack and fog sealing, on major collector streets.
- 94.0 miles of local streets were paved.
- 583.9 miles of other pavement treatments, such as crack and fog sealing, on local streets.
- Multi-year pavement maintenance program approved through FY 2023.

### Bicycle lanes

- Installed 22.5 miles of lanes.

### Street lights

- Installed 595 new street lights.

### Sidewalks

- Constructed 12 miles of sidewalks.

### Mobility studies

- Completed seven neighborhood pedestrian mobility studies.

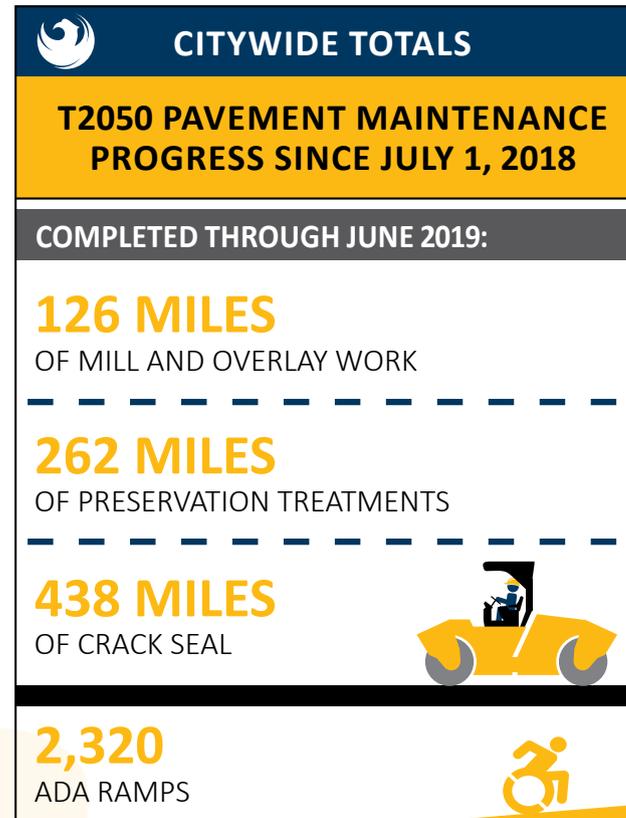
### Intersection technology enhancements

- Replaced 847 street signs at major intersections with illuminated signs.
- Repainted all signal poles at 111 major intersections to extend the lifecycle.
- Installed 42 new left-turn arrows at warranted intersections.

Locations suggested by the public were evaluated and used to help develop pavement maintenance plans for fiscal years 2021 through 2023. Plans were approved by the Phoenix City Council in June 2019.

FY 2019 pavement maintenance through the accelerated program included:

- 126 miles of mill and overlay work on arterial and local streets.
- 700 miles of preservation treatments including crack seal on arterial and local streets.
- 2,320 ADA ramps improved or installed.



## Table 4.2 T2050 Street Maintenance and Improvements

Planned for FY 2020

### Street pavement and overlays

- Pave at least 19 miles on major streets.

### Bicycle lanes

- Install more than 30 miles.

### Street lights

- Install 60 new street lights.

### Sidewalks

- Construct nearly four miles of new sidewalks.

### Mobility studies

- Complete three neighborhood pedestrian and mobility studies for major streets.

### Intersection technology enhancements

- Install 322 illuminated signs at major intersections.
- Repaint all signal poles at 110 major intersections.
- Install five left-turn arrows at warranted intersections.



More than 300 bicyclists participated in the Phoenix/Maricopa County Bike to Work Day on April 17, 2019.

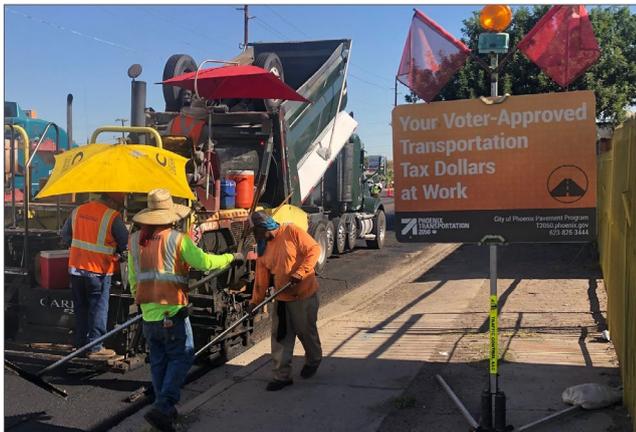
## Bicycle and Pedestrian Mobility



The T2050 mobility studies strive to identify barriers faced by pedestrians and bicyclists, and recommend solutions that will improve safety, convenience and quality of life. The program identifies opportunities for new sidewalk construction, bicycle facilities and connections to existing transit stops.

To date, 39 locations have been identified for study, seven studies are complete, and three will be completed in the next year.

T2050 commitments to mobility include the installation of 135 miles of new sidewalks and 1,080 miles of new bike lanes by 2050. In three-and-a-half years (10 percent of the 35-year program) the department installed 27 miles of new sidewalks (20 percent of the 35-year goal) and 141 miles of bike lanes (13 percent of the 35-year goal).



35th Avenue between Buckeye Road and Van Buren Street received mill and overlay work, which includes removal of the top layer of a street (milling) followed by laying new asphalt (overlying).



A maintenance crew member works above McDowell Road. As part of technology improvements, signal poles at 440 major intersections were repainted to protect and lengthen the lifespan of the technology housed inside.

## Intersection and Technology Enhancements

T2050 technology investments include improvements and maintenance of traffic control equipment, repainting traffic signal poles to extend their lifecycles, adding left-turn arrows at warranted intersections and replacing deteriorated street name signs with retroreflective signs that feature LED lighting. Other improvements include installing updated signals, signage, detection equipment, and traffic management and monitoring systems.

HAWKs (**H**igh-Intensity **A**ctivated cross**W**alks) provide enhanced safety for pedestrians crossing busy intersections and at mid-block locations. The push-button signals flash red beacons when activated. This year, Phoenix installed its 50th HAWK and 18 more are planned to be installed by December 2019.

**Table 4.3 T2050 Street Maintenance and Improvements**

Planned for FY 2021–2024

### Street pavement and overlays

- Pave at least 77 miles of new pavement on major streets.

### Bicycle lanes

- Install 123 miles.

### Street lights

- Install 240 new street lights.

### Sidewalks

- Construct 15 miles of sidewalks.

### Intersection technology enhancements

- Repaint all signal poles at 440 major intersections.
- Install five left-turn arrows at warranted intersections in FY 2021.



The Grand Canalscape project, which will create a nearly 12-mile continuous trail system along the Grand Canal from I-17 to the Phoenix/Tempe border, is funded by a Transportation Investment Generating Economic Recovery (TIGER) grant and is the site of Phoenix's 50th HAWK.

## Information Technology and GIS



In 2018, the Streets Transportation Department began to capture T2050 assets in the city's geographic information system (GIS), a map-based system that catalogues location data. The system is currently used to document mobility study details and in bikeway reporting. These services support a variety of resident service requests available at [phoenix.gov/your-service](https://phoenix.gov/your-service) including street light outage, missing street sign, potholes and other street maintenance.

An interactive [Pavement Maintenance Dashboard](#) was developed in June 2019. The map depicts near real-time information about pavement maintenance projects in the five-year pavement maintenance plan and allows users to sort projects by type, location and status.



In FY 2019, major streets received 32.2 miles of new pavement and 116.1 miles of preservation treatments, and local streets received 94.0 miles of new pavement and 583.9 miles of preservation treatments. Above, paving work at 52nd Street and Evans Drive.





# APPENDIX

## Lifecycle Programming Assumptions

As with any long-term plan, preparation of the financial model for the T2050 program required many assumptions for estimated costs, revenues and timing of projects and new services. Key assumptions of the T2050 program include:

- The implementation of projects and new services is projected to occur over the course of the 35-year plan as funding allows and service demand dictates.
- Capital and operating costs are estimated to grow at average inflation rates of three to four percent annually over the life of the plan. These inflation rates are somewhat higher than the typical annual increases the city has experienced in the large transit contracts, and provide for more conservative cost estimates.
- T2050 sales tax revenues are estimated to grow at an average annual rate of 4.75 percent, which is slightly lower than the 5.1 percent average annual growth rate in the Arizona Department of Transportation's most recent forecast prepared in September 2018 for the Proposition 400 Maricopa County Transportation Excise Tax.
- The existing 0.5 percent Proposition 400 regional tax, currently in place through December 31, 2025, is assumed to be extended for at least 20 years.
- Federal transit formula funds are assumed to continue through the life of the plan, with very modest increases over time, and are consistent with Maricopa Association of Government's long-term Regional Transportation Plan.

- The financial model is consistent with Valley Metro assumptions, ranging from zero to 39 percent, for the funding level from discretionary federal Capital Investment Grants for light rail capital costs. Discretionary federal Capital Investment Grants on average fund more than 40 percent of total project costs for current rail projects across the country.
- Transit fares are assumed to continue to be slightly lower than the regional fare policy goal of 25 percent recovery of direct transit operations costs, reflecting current fare recovery rate.
- As needed, some capital funding is assumed to be provided through financing, with the corresponding costs estimated using typical municipal bond offerings. Less expensive and more flexible types of financing will be explored to minimize financing costs.
- Other revenues, such as transit advertising and interest earnings on fund balance, are forecasted using very small growth rates.
- An operating reserve equivalent to 15 percent of annual public transit operating costs is assumed to be maintained throughout the life of the plan.



Phoenix has a comprehensive roadway network of nearly 5,000 miles of public streets, including arterial, collector, and local streets. Arterials are major streets, which are typically the major north/south and east/west transportation corridors spaced one mile apart. Collectors are important mid-level transportation corridors, which are generally the ½-mile streets between the arterial streets. Local streets are typically in residential areas and provide connectivity to collectors and arterials.

The following table includes the projected sales tax revenue for each year of the T2050 plan. Additionally, the table shows the anticipated allocation to the Public Transit and Street Transportation departments.

**Table A.1 T2050 Sales Tax Projected Revenue Stream**

Fiscal Year	Overall T2050 (2015 Forecast)	Actual Overall	Forecasted Public Transit (86.2%)	Actual Public Transit	Forecasted Street Transportation (13.8%)	Actual Street Transportation
2016	\$89,125,000	\$98,593,240	\$76,826,000	\$85,095,392	\$12,299,000	\$13,497,848
2017	\$204,006,000	\$203,352,480	\$175,853,000	\$175,430,201	\$28,153,000	\$27,922,279
2018	\$213,696,000	\$215,805,685	\$184,206,000	\$185,998,894	\$29,490,000	\$29,806,791
2019	\$224,401,000	\$239,179,006	\$193,434,000	\$206,200,341	\$30,967,000	\$32,978,665
2020	\$235,642,000		\$203,123,000		\$32,519,000	
2021	\$246,835,000		\$212,772,000		\$34,063,000	
2022	\$258,559,000		\$222,878,000		\$35,681,000	
2023	\$270,841,000		\$233,465,000		\$37,376,000	
2024	\$283,706,000		\$244,555,000		\$39,151,000	
2025	\$297,182,000		\$256,171,000		\$41,011,000	
2026	\$311,298,000		\$268,339,000		\$42,959,000	
2027	\$326,085,000		\$281,085,000		\$45,000,000	
2028	\$341,574,000		\$294,437,000		\$47,137,000	
2029	\$357,799,000		\$308,423,000		\$49,377,000	
2030	\$374,794,000		\$323,072,000		\$51,722,000	
2031	\$392,597,000		\$338,419,000		\$54,178,000	
2032	\$411,245,000		\$354,493,000		\$56,752,000	
2033	\$430,779,000		\$371,331,000		\$59,448,000	
2034	\$451,241,000		\$388,970,000		\$62,271,000	
2035	\$472,675,000		\$407,446,000		\$65,229,000	
2036	\$495,127,000		\$426,799,000		\$68,328,000	
2037	\$518,646,000		\$447,073,000		\$71,573,000	
2038	\$543,281,000		\$468,308,000		\$74,973,000	
2039	\$569,087,000		\$490,553,000		\$78,534,000	
2040	\$596,119,000		\$513,855,000		\$82,264,000	
2041	\$624,435,000		\$538,263,000		\$86,172,000	
2042	\$654,095,000		\$563,830,000		\$90,265,000	
2043	\$685,165,000		\$590,612,000		\$94,553,000	
2044	\$717,710,000		\$618,666,000		\$99,044,000	
2045	\$751,801,000		\$648,052,000		\$103,749,000	
2046	\$787,512,000		\$678,835,000		\$108,677,000	
2047	\$824,919,000		\$711,080,000		\$113,839,000	
2048	\$864,102,000		\$744,856,000		\$119,246,000	
2049	\$905,147,000		\$780,237,000		\$124,910,000	
2050	\$948,142,000		\$817,299,000		\$130,844,000	
<b>Total</b>	<b>\$16,679,368,000</b>		<b>\$14,377,615,000</b>		<b>\$2,301,753,000</b>	

**Table A.2 FY 2019 Financial Overview (July 1, 2018–June 30, 2019)**

	Budget	Actuals	Amount Over/ (Under Budget)	Percent Over/ Under Budget	Footnotes
<b>Source of Funds</b>					
Dedicated Sales Tax - T2050	234,946,000	239,179,000	4,233,000	1.8%	
Local Transportation Assistance	4,250,000	4,220,195	(29,805)	-0.7%	
Bus Fare Revenue	28,939,491	27,492,333	(1,447,158)	-5.0%	
Dial-a-Ride Fare Revenue	816,527	893,639	77,112	9.4%	
Rail Fare Revenue	8,400,000	7,136,294	(1,263,706)	-15.0%	1
Federal Transit Funds	93,540,440	55,847,283	(37,693,157)	-40.3%	2
Regional Transportation Tax	19,150,109	6,658,446	(12,491,663)	-65.2%	3
Other Revenue	12,743,309	19,443,722	6,700,413	52.6%	4
Fund Balance	114,282,844	55,963,361	(58,319,483)	-51.0%	
<b>Total Revenues</b>	<b>\$517,068,720</b>	<b>\$416,834,273</b>	<b>\$(100,234,447)</b>	<b>-19.4%</b>	
<b>Use of Funds</b>					
<b>Transit Operations</b>					
Local Fixed Route Bus	\$127,410,191	\$122,344,806	\$(5,065,384)	-4.0%	
RAPID Commuter Bus	3,861,484	3,707,965	(153,519)	-4.0%	
Neighborhood Circulator	3,236,558	3,107,884	(128,674)	-4.0%	
Dial-a-Ride Operations	20,986,871	20,767,062	(219,809)	-1.0%	
Light Rail Operations	35,689,205	35,230,695	(458,510)	-1.3%	
Bus Rapid Transit	-	-	-	0.0%	
Security	12,275,308	11,354,238	(921,070)	-7.5%	
Administration & Support	22,507,838	21,483,773	(1,024,065)	-4.5%	
<b>Total Operations</b>	<b>\$225,967,455</b>	<b>\$217,996,422</b>	<b>\$(7,971,033)</b>	<b>-3.5%</b>	
<b>Debt Service</b>	<b>\$67,296,000</b>	<b>\$67,288,731</b>	<b>\$(7,269)</b>	<b>0.0%</b>	
<b>Capital Projects</b>					
Bus and DAR Vehicles	\$73,416,180	\$43,069,974	\$(30,346,206)	-41.3%	5
Bus Passenger Facilities	14,596,692	5,084,920	(9,511,772)	-65.2%	6
Bus O & M Facilities	1,145,000	744,385	(400,615)	-35.0%	7
Bus and DAR Technology	43,023,348	1,105,098	(41,918,250)	-97.4%	8
Other Bus Capital	9,880,000	922,949	(8,957,051)	-90.7%	9
South Central Extension	30,214,983	36,936,338	6,721,355	22.2%	10
Northwest Light Rail Extension Phase II	20,135,218	9,965,879	(10,169,339)	-50.5%	11
Capitol/I-10 West Phase I Light Rail	136,592	8,430	(128,162)	-93.8%	12
Northeast Light Rail	-	8,251	8,251	0.0%	
48th Street LRT Station	116,042	937,643	821,601	708.0%	13
Other Light Rail	905,817	87,085	(818,732)	-90.4%	14
Bus Rapid Transit	-	3,460,661	3,460,661	0.0%	
Streets - Major Maintenance	25,791,403	25,653,845	(137,558)	-0.5%	
Streets - Major Transportation Projects	306,710	156,187	(150,523)	-49.1%	15
Streets - Mobility Projects	2,389,280	1,989,256	(400,024)	-16.7%	16
Streets - Other	537,000	535,682	(1,318)	-0.2%	
Streets - Technology	1,211,000	882,537	(328,463)	-27.1%	17
<b>Total Capital Projects</b>	<b>\$223,805,265</b>	<b>\$131,549,119</b>	<b>\$(92,256,146)</b>	<b>-41.2%</b>	
<b>Total Expenditures</b>	<b>\$517,068,720</b>	<b>\$416,834,273</b>	<b>\$(100,234,447)</b>	<b>-19.4%</b>	

Table A.2, found on the preceding page, includes the budgeted and actual revenue and expenditures during FY 2019. Footnotes are as follows:

1. Decrease due to reduced ridership and lower average fare.
2. Decrease due to delayed federally funded capital projects.
3. Decrease due to delayed regionally funded capital projects.
4. Liquefied natural gas (LNG) fuel tax credit refund from prior year delayed to 2018-19, and higher than anticipated interest earnings on T2050 fund balance.
5. Federal funds over programmed in the budget.
6. Laveen Park-and-Ride delayed, and bus stop improvements funds carried over to 2019-20.
7. Various building project budgets overprogrammed.
8. Fare Collection System and CAD/AVL upgrade projects delayed.
9. Unused contingency and delayed bus pullout projects.
10. South Central Extension funding agreement with Valley Metro not yet fully budgeted.
11. Northwest Extension Phase II expenditures less than anticipated at this point.
12. Capitol/I-10 West Phase I progress slower than anticipated.
13. Testing, land acquisition settlement and streets operations charges were higher than budgeted.
14. Less activity than anticipated.
15. Unused capacity for contracted services. Funds were carried over to 2019-20.
16. Unused capacity for contracted services. Funds were carried over to 2019-20.
17. Unused capacity for contracted services. Funds were carried over to 2019-20.

On the following page, Table A.3 includes the projected distribution of funds collected over the next five years. The table does not include actual collections. Please note: Bus Rapid Transit (BRT) capital and operations expenditures are planned to be incurred during this five-year plan, and the amounts reflected are preliminary, pending the results of the BRT study.



Street signs produced at the city of Phoenix sign shop await installation.

**Table A.3 Five-Year Implementation Plan (FY 2020–2024)**

	FY19–20	FY20–21	FY21–22	FY22–23	FY23–24
<b>Source of Funds</b>					
Dedicated Sales Tax-T2050	\$249,936,000	\$264,729,000	\$277,734,000	\$289,559,000	\$302,027,000
Local Transportation Assistance	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000
Bus Fare Revenue	27,787,000	29,140,000	36,061,000	36,908,000	37,704,000
DAR Fare Revenue	751,340	837,000	1,046,000	1,046,000	1,046,000
Rail Fare Revenue	7,790,000	7,868,000	9,835,000	9,934,000	11,601,000
Federal Transit Funds	124,892,000	219,878,000	229,290,000	186,318,000	231,216,000
Regional Transportation Tax	92,040,000	158,136,000	99,787,000	60,749,000	50,427,000
Bond Proceeds	105,210,000	174,971,000	124,743,000	129,179,000	50,344,000
Other Revenue	7,725,794	7,841,681	7,959,306	8,078,696	8,199,876
Fund Balance	115,741,310	6,519,579	(12,608,306)	(17,058,696)	(74,119,876)
<b>Total Revenues</b>	<b>\$736,173,444</b>	<b>\$874,220,260</b>	<b>\$778,147,000</b>	<b>\$709,013,000</b>	<b>\$622,745,000</b>
<b>Use of Funds</b>					
<b>Transit Operations</b>					
Local Fixed Route Bus	\$141,708,317	\$143,258,000	\$147,539,000	\$152,009,000	\$156,492,000
RAPID Commuter Bus	3,940,499	5,119,000	5,275,000	5,826,000	6,000,000
Neighborhood Circulator	4,537,785	7,677,000	7,906,000	8,146,000	10,802,000
Bus Rapid Transit	-	-	-	2,119,000	2,182,000
DAR Operations	19,571,000	20,158,000	20,763,000	21,386,000	22,027,000
Light Rail Operations	39,484,040	40,323,000	41,533,000	42,779,000	48,969,000
Security	11,819,000	12,174,000	12,539,000	12,915,000	13,302,000
Administration & Support	22,129,000	22,792,000	23,476,000	24,180,000	24,906,000
<b>Total Operations</b>	<b>\$243,189,642</b>	<b>\$251,501,000</b>	<b>\$259,031,000</b>	<b>\$269,360,000</b>	<b>\$284,680,000</b>
<b>Debt Service</b>	<b>\$70,616,000</b>	<b>\$5,078,000</b>	<b>\$13,524,000</b>	<b>\$19,562,000</b>	<b>\$25,823,000</b>
<b>Capital Projects</b>					
Bus and DAR Vehicles	\$43,901,345	\$38,749,000	\$55,196,000	\$30,482,000	\$30,167,000
Bus Passenger Facilities	13,099,746	5,438,000	3,567,000	3,672,000	3,782,000
Bus O&M Facilities	1,300,000	1,660,000	1,315,000	15,650,000	15,300,000
Bus and DAR Technology	71,150,051	340,000	1,090,000	1,040,000	340,000
Other Bus Capital	11,195,425	1,183,000	1,213,000	1,215,000	1,215,000
South Central Light Rail Extension	162,321,000	392,355,000	288,529,000	205,894,000	103,181,000
Northwest Light Rail Extension Phase II	73,165,000	92,654,000	78,084,000	73,775,000	35,346,000
Capitol/I-10 West Light Rail	-	12,282,000	38,441,000	50,885,000	60,851,000
Northeast Light Rail	-	-	-	-	-
50th Street Station	-	-	-	-	-
Other Light Rail	-	-	-	-	-
Bus Rapid Transit	10,132,900	30,558,000	14,048,000	12,125,000	41,400,000
<b>Total Public Transit T2050 Capital Projects</b>	<b>\$386,265,467</b>	<b>\$575,219,000</b>	<b>\$481,483,000</b>	<b>\$394,738,000</b>	<b>\$291,582,000</b>
Streets - Major Maintenance	\$15,504,000	\$16,263,000	\$17,053,000	\$18,130,000	\$19,790,000
Streets - Major Transportation Projects	16,525,335	16,535,000	1,077,000	1,926,000	-
Streets - Mobility Projects	2,443,000	8,034,260	4,248,000	2,655,000	-
Streets - Technology	1,090,000	1,050,000	1,191,000	2,102,000	330,000
Streets - Other	540,000	540,000	540,000	540,000	540,000
<b>Total Streets T2050 Capital Projects</b>	<b>\$36,102,335</b>	<b>\$42,422,260</b>	<b>\$24,109,000</b>	<b>\$25,353,000</b>	<b>\$20,660,000</b>
<b>Total Capital Projects</b>	<b>\$422,367,802</b>	<b>\$617,641,260</b>	<b>\$505,592,000</b>	<b>\$420,091,000</b>	<b>\$312,242,000</b>
<b>Total Expenditures</b>	<b>\$736,173,444</b>	<b>\$874,220,260</b>	<b>\$778,147,000</b>	<b>\$709,013,000</b>	<b>\$622,745,000</b>
<b>Fund Balance: Public Transit</b>	\$20,481,675	\$19,851,754	\$18,241,768	\$20,694,322	\$73,794,472
<b>Fund Balance: Streets</b>	22,693,632	16,803,974	31,022,266	45,628,408	66,648,134
<b>Total Fund Balance</b>	<b>\$43,175,307</b>	<b>\$36,655,728</b>	<b>\$49,264,034</b>	<b>\$66,322,730</b>	<b>\$140,442,606</b>
	\$(115,741,310)	\$36,655,728	\$49,264,034	\$66,322,730	\$140,442,606

