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# MAYOR & COUNCIL MEMORANDUM

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April 4, 2023

Subject: Discussion and Direction Relating to Fare-Free Transit for Sun Tran, Sun Link and Sun Van (City Wide)

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Issue – In response to the COVID-19 pandemic, Mayor & Council directed the City Manager to suspend the collection of transit fares in March 2020. Since that time, Sun Tran, Sun Link and Sun Van have been operating fare-free. The suspension of fares for Sun Tran, Sun Link and Sun Van is set to expire on June 30, 2023. This item is to allow for Mayor & Council to continue discussions related to fare-free transit operations.

City Manager's Office Recommendation – Mayor and Council directed the City Manager and staff to return with data regarding funding options for transit services. It is recommended Mayor and Council discuss and provide direction on the materials presented.

Background – On March 17, 2020, Mayor and Council directed the City Manager, in coordination with the Department of Transportation and Mobility (DTM), and Sun Tran, to suspend the collection of fares as part of the City's efforts to mitigate the spread of COVID-19 and lessen the negative financial impact of the pandemic on Tucson residents. Since the initial suspension of fare collection, Mayor and Council has extended the moratorium on fare collection four additional times, most recently on December 20, 2022. During the most recent transit fare discussion, Mayor and Council requested that the Department of Transportation and Mobility return in early 2023 with additional information regarding fare-free transit implementation, funding options and more extensive ridership data. These items are presented for Mayor and Council review and discussion within the following section of this memorandum.

Present Consideration(s) –

***Industrywide Discussion***

There are a multitude of jurisdictions which are experimenting with fare-free transit operations to varying degrees, ranging from pilot projects to permanent implementation. While many of these jurisdictions are still in the nascent stages of operating fare-free, there are a number of details which are emerging that provide insight as it relates to the City of Tucson's local transit system. Additionally, in tandem with fare-free discussions, there has been a similar focus on increasing ridership within fare-free communities. Some key takeaways from this discussion are paraphrased and highlighted below:

- In a broad sense, fare-free operations can be implemented to promote transit usage, reduce barriers to transit, improve equity in transit services and spur economic recovery.
- Fare-free transit operations have the potential to be an impactful policy measure, especially when it promotes an increase in ridership, allowing jurisdictions to reap benefits such as improved air quality, decreased congestion, and overall, more vibrant cities.
- Transit can be made more attractive to the community by running increased service in coordination with the removal of cost barriers.

- There are several key predictors of transit use, such as income, age, race, and nativity; however, the strongest predictor tends to be zero-vehicle households. Recognizing that the built environment in many jurisdictions accommodates the presence of private vehicles, a key strategy for the promotion of transit can include removing motor vehicle subsidies at the policy level.
- For jurisdictions seeking to increase ridership, there are greater gains to be had by convincing community members who rarely or never use transit to begin riding occasionally rather than trying to win back former transit riders.
- Even under fare-free operations, transit agencies must strive to provide a high-quality product in order to promote an increase in transit ridership.
- There exists a false-choice binary between fare-free operations and improvement of service; as such, zero-fare services should be considered as a service improvement.

### ***Local Funding Options***

In order for the City of Tucson to continue to keep transit options, a vital service to some of the most vulnerable within our community, fare-free, there must be new approaches to transit funding that are not only able to recuperate the loss in farebox revenue but also ensure that operations are financially sustainable. Therefore, it is important to consider some of the funding options available for use:

- *Advertising*: this funding source is already in use in the form of bus wraps and advertising signage at bus stops. The City is currently in the process of migrating from a contract with Ad-Vision to a new provider, Lamar. It should be noted that this revenue source has limited potential and can sometimes be viewed as unattractive among the community. Additionally, Sun Tran has received some concerns regarding visibility for buses that have been wrapped with advertising.
- *Expanded parking pricing*: City of Tucson already collects revenue from both on-street and garage parking in various locations around the community. Metered parking could be expanded and/or pricing increased for additional revenue collections. Added advantages of this measure include promoting the use of alternate modes of transportation and congestion relief. Considerations include the need for additional meters, enforcement and the imposition of transaction costs.
- *Parking taxes*: a special tax on commercial parking transactions. This revenue source is not currently being used in Tucson but has been successfully implemented in other municipalities. It should be recognized that this could be seen as a hindrance to development.
- *Parking levy*: a special property tax on parking spaces throughout the region. While not currently being used, this revenue source has large potential and could be used in tandem with the development code to achieve strategic goals for the community. Some potential downsides to this levy are the cost to implement and opposition by developers.

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- *Hotel/motel surcharge*: The City currently imposes a hotel/motel surcharge of \$4/night for rooms within the City Limits. This surcharge was last updated in 2016 (increased from \$2/night) and generated approximately \$8M for fiscal year 2022. It should be noted that this surcharge exists in addition to a transient retail tax also levied for hotel/motel rooms, which generated approximately \$15M in FY22. There is the potential to use a portion of the hotel/motel surcharge as a method for funding transit operations, with an initial proposal to use \$2M of this revenue source towards transit.
- *Access agreements*: agreements between municipalities and private businesses to assist in funding transit operations. For City of Tucson, these potential public-private partnerships can play a key role in ensuring the sustainability of fare-free transit operations as they allow for the recouperation of farebox revenue and help lessen the burden on the General Fund (GF). Table 6 provides an overview of the region's largest employers, according to the PAG Travel Reduction Program FY2021-22 Annual Report. Table 8 provides an estimated transit ridership figure for employers based on reported bus/streetcar utilization (from TRP report). Currently, the City has solidified one transit access agreement for the amount of \$800K annually to be contributed by Tucson Medical Center (TMC).
- *Utility fee*: a levy on utility accounts in the region. This fee would require a public vote and could be considered regressive, disproportionately impacting vulnerable residents.
- *Vehicle miles traveled tax*: a distance-based fee on vehicles registered in the region. A levy of this scale would require approval through the Arizona State Legislature and could be costly to implement. An added benefit of this tax would be a reduction in vehicular traffic and congestion relief.

### ***University of Arizona Data***

According to Pima Association of Governments' (PAG) Travel Reduction Program (TRP) FY2021-22 Annual Report, the University of Arizona (UA) Main Campus is the second largest employer in the region, with 13,230 employees as of 2022 (PAG, 2022). The University of Arizona lists the current enrollment at the UA Main Campus at 39,606 for Fall 2022 (University Analytics and Institutional Research, 2023). With an excess of 50,000 individuals either directly employed or attending classes on the UA Main Campus, it is important to analyze how this population benefits from the fare-free transit network.

### ***Sun Tran UA Student Ridership***

In 2022, Sun Tran conducted an On-Board Survey to gain demographic data on transit riders. This On-Board Survey looked at one-way trip data and found that 3.0% of Sun Tran riders were College/University students coming from school (origin) and 3.3% of riders were College/University students going to school (destination). While these are useful data points, the survey did not specify between University of Arizona students, Pima Community College (PCC) students, or one of the smaller regional institutions of higher education. As such, there was a need to look closer at UA student ridership using a more dialed-in approach.

Sun Tran buses are equipped with Automated Passenger Counters (APCs) which are able to detect riders boarding and alighting (deboarding) from vehicles at every stop throughout the day. APC data is a powerful tool to show the movement of riders throughout the transit system; however, there needs to be a spatial component to help isolate transit users specific to the UA student

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population. To achieve this, staff isolated bus stops within immediate range of the UA Main Campus, 35 in total, which are primarily located around the perimeter of campus along the major routes of Speedway Bl, Campbell Av, 6th St, and Euclid Av. Once the bus stops were identified, APC data for those stops was then annualized for the 2022-23 school year, factoring in dates in the school year when school is not in session. Next, a ¼-mi buffer area was applied to each stop, representing the industry standard distance which individuals are willing to walk (walkshed) in order to access transit (Nabors, Schneider, Lieberman, & Mitchell, 2008). Staff then enriched these ¼-mi buffer areas with population density and demographic census data (2020) to extrapolate the percentage of UA students living within walking distance of UA bus stops, which amounts to 79.9%. A map of this location and associated data is presented as Figure 1. Applying this percentage to the total APC activity around these stops, the estimated ridership for the 2022-23 school year is approximately 350,037 (shown in Table 1). Knowing the estimated ridership that can be attributed to UA students can help facilitate the conversation regarding the continued financial sustainability of the City’s transit system.

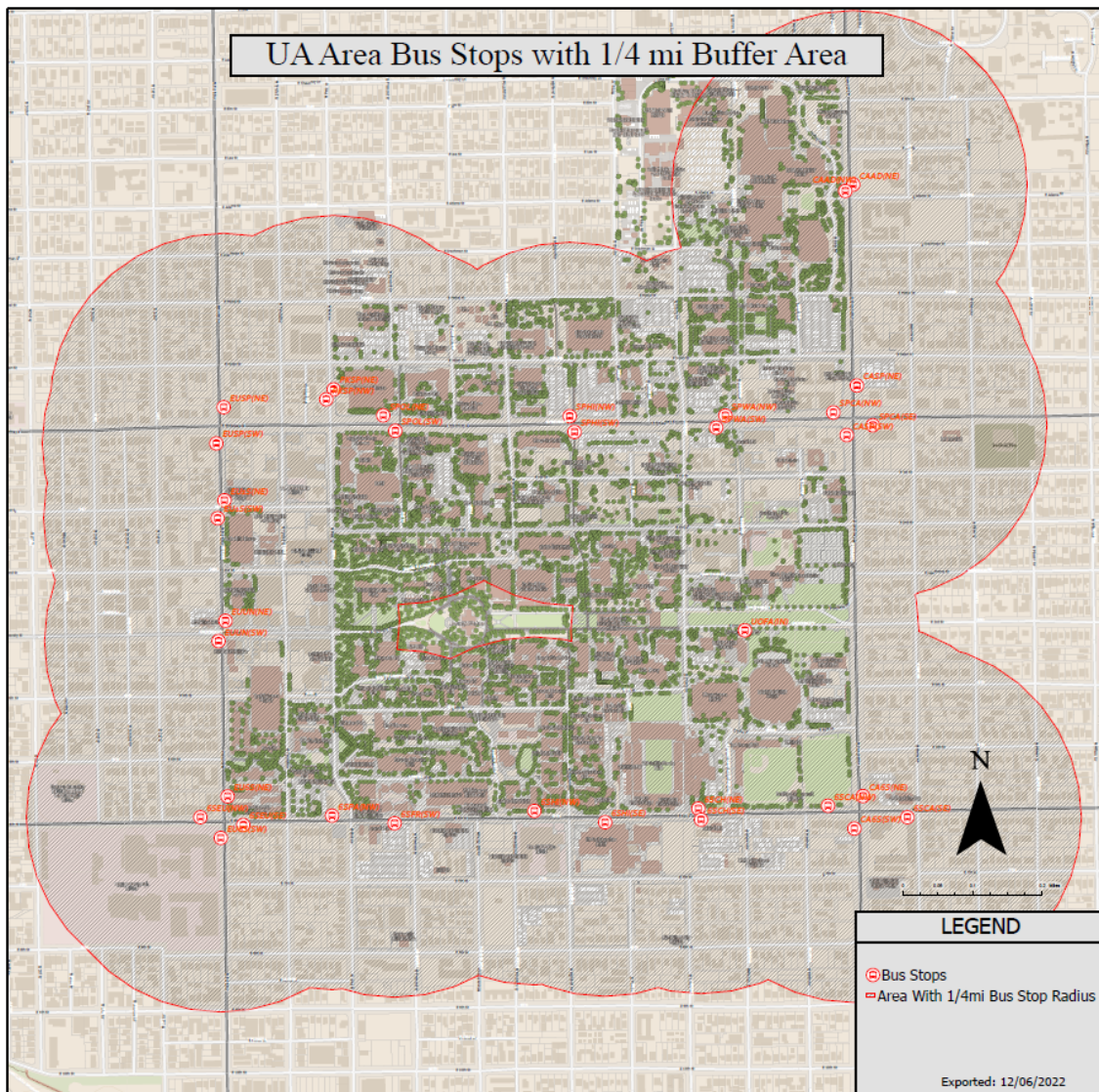


Figure 1: Sun Tran Bus Stop in UA Main Campus Vicinity with 1/4-mi Walking Buffer

<b>Population within 1/4mi Buffer of UA Bus Stops</b>	
	<b>2020 Population Est.</b>
Enrolled in Public College or Grad School	11,786
Total Population	14,747
Percentage College/Grad Student	<b>79.9%</b>
Estimated Total Ridership at Bus Stops for 2022/23 School Year	437,976
Estimated UA Student-Generated Sun Tran Ridership for FY2022/23 School Year	<b>350,037</b>

*Table 1: UA Vicinity Bus Stop, Population, Demographic, and Ridership Estimates*

*Sun Tran UA Faculty/Staff Ridership*

In addition to student ridership, as outlined above, Sun Tran also provides the opportunity for fare-free transit to the 13,230 faculty and staff that work on the Main Campus. Using the most recent published Travel Reduction Plan (TRP) data, Table 8 outlines both bus and streetcar ridership.

*Sun Link UA Student/Faculty/Staff Ridership*

The Sun Link Streetcar is a fixed-guideway rail system that provides access to the UA campus at a number of dedicated stops along its route. As with all transit operations within the Tucson Metro region, Sun Link services are currently operating fare-free for all riders. Sun Link staff performed a similar analysis using recent APC data for stops along the entirety of the Sun Link route and determined that approximately 83% of all streetcar use can be attributed to UA student and staff activities. Annualizing the APC data for the 2022-23 school year, once again accounting for various school breaks, Sun Link ridership is estimated to be 1,720,176. Factoring in the percentage of rides that can be attributed to UA students and staff yields 1,427,746 in streetcar ridership.

To add additional context, prior to the COVID-19 pandemic and the establishment of fare-free transit, the University of Arizona participated in revenue generation for the transit system through the U Pass program by paying 50% of student and staff transit pass costs. The costs covered by the University were paid directly to Sun Tran and include both the University portion and student/employee contribution. For FY2019, these bus pass sales amounted to \$813,824.

***Pima Community College Data***

*Sun Tran PCC Student Ridership*

Pima Community College (PCC), with 5 campuses across the region, is another educational institution that benefits from fare-free transit operations. Like the UA, it is valuable to quantify the amount of ridership generated by PCC students and staff.

Once again, the 2022 On-Board Survey indicates, based on one-way trip data, that 3.0% of Sun Tran riders were College/University students coming from school (origin) and 3.3% of riders were College/University students going to school (destination). Due to the non-specificity of these findings, a closer look at PCC ridership was deemed necessary and staff once again used APC data to extract deeper information.

Using a similar strategy to the analysis noted in the UA section, staff applied a ¼-mi buffer to all PCC campuses and intersected this area with bus stops to identify which stops are within typical walking distance to PCC. Once these stops were identified, staff compared recent weekday APC data from July 2022 (summer break) to September 2022 (school in-session) to look for a difference in ridership that can be attributed to PCC students. One caveat to this approach is that two of the PCC Campuses, West and Desert Vista, have bus stops within the campus interior and no nearby destinations. In these two instances, the entirety of bus stop activity for the interior bus stops can be attributed to PCC students and staff and the estimated ridership for these PCC campuses is enumerated in Table 2. The remaining data, excluding PCC West/Desert Vista, was then aggregated separately, as shown in Table 3.

<b>ALL STOPS within ¼-mi of Selected PCC Campuses with Interior Bus Stops</b>	
PCC Campus	Estimated Annual Ridership
WEST CAMPUS	108,533
DESERT VISTA CAMPUS	4,119
<b>Total</b>	<b>112,651</b>

Table 2: Estimated Ridership at Selected PCC Campuses

<b>ALL STOPS within ¼-mi of Selected PCC Campuses</b>			
PCC Campus	9/22 to 7/22 Delta Daily Average Weekday Ridership	School Days (based on CY2022-23 16-week traditional Fall/Spring semesters, minus holidays)	Estimated Annual Ridership
DOWNTOWN CAMPUS	205.6	148	30,431
EAST CAMPUS	10.7	148	1,587
NORTHWEST CAMPUS	2.4	148	352
<b>Total</b>			<b>32,371</b>

Table 3: Estimated Ridership at Selected PCC Campuses based on Delta September-July Ridership Values at Bus Stops within PCC Walkshed

Note, the data presented in Table 3 is likely an undercount of true PCC-generated ridership, as PCC operates during Summer session as well as the traditional Fall/Spring schedule.

To add additional context, prior to the COVID-19 pandemic and the establishment of fare-free transit, Pima Community College participated in revenue generation for the transit system through the purchase of bus passes. For FY2019, these bus pass sales amounted to \$28,578.

*Sun Tran PCC Faculty/Staff Ridership*

In addition to PCC student ridership, as outlined above, Sun Tran also provides the opportunity for fare-free transit to the sizable amount of faculty and staff that work in PCC facilities across the region. Using the most recent published Travel Reduction Plan (TRP) data, an estimated 2,849 members of PCC faculty and staff have access to free transit at all 5 PCC campuses and administrative facilities. This population should be taken into consideration when we look holistically at the benefit which PCC receives from transit operations.

**Public School Student Data**

Similar to University of Arizona students, fare-free transit operations also benefit members of the community needing to travel to-and-from local public schools. This category of rider is also

difficult to identify discretely from APC data but staff has executed ways to extract this information, which is outlined below.

The 2022 Sun Tran On-Board Survey looked at one-way trip data and found that 3.6% of Sun Tran riders were school students (K-12) coming from school (origin) and 3.1% of riders were school students (K-12) going to school (destination). While this is a useful value, the survey did not specify which schools, school classifications (elementary, middle, high school), or school districts are using Sun Tran. As such, there was a need to look closer at public school students, using a spatial approach.

Utilizing a similar strategy as noted in the UA section, staff applied a ¼-mi buffer to all public schools and intersected that with bus stops to identify which stops are within typical walking distance to public schools. Once these stops were identified, staff compared recent weekday APC data from July 2022 (summer break) to September 2022 (school in-session) to look for a difference in ridership that can be attributed to public school students. This data was then aggregated at the school district level, as shown in Table 4.

<b>ALL STOPS within ¼-mi of Public Schools</b>			
Public School District	9/22 to 7/22 Delta Daily		Estimated Annual Ridership
	Average Weekday Ridership	School Days	
AMPHITHEATER UNIFIED SCHOOL DISTRICT	278.4	178	49,550
FLOWING WELLS UNIFIED SCHOOL DISTRICT	61.0	180	10,987
SUNNYSIDE UNIFIED SCHOOL DISTRICT	106.6	180	19,187
TUCSON UNIFIED SCHOOL DISTRICT	2,311.8	176	406,879
<b>Total</b>			<b>486,603</b>

Table 4: Estimated Ridership by School District based on Delta September-July Ridership Values at Bus Stops within Public School Walkshed

To add additional context, prior to the COVID-19 pandemic and the establishment of fare-free transit, some of the local public-school districts participated in revenue generation for the transit system through the purchase of bus passes for groups of students within their districts. These bus pass sales are highlighted in Table 5.

<b>FY2019 Bus Pass Sales by School District</b>	
Amphi Unified School District	\$ 2,429
Flowing Wells Unified School District	\$ 423
Sunnyside CTE Programs	\$ 1,936
TUSD Transportation	\$ 852,401
TUSD Exceptional Ed	\$ 12,756
TUSD Family & Community Outreach	\$ 23,500
Subtotal TUSD Sales	\$ 888,657
<b>Total FY19 Pass Sales for Public Schools</b>	<b>\$ 893,445</b>

Table 5: FY2019 Bus Pass Sales to Local School Districts

**Regional Employer Data**

Elected leadership recognizes the significance of fare-free transit as providing a critical service to our community. Historically, the City of Tucson, largely through General Fund contributions, has

carried the majority of the financial burden in funding local transit operations. Now that transit operations are fare-free and fare revenues are no longer available to help fund the system, the City acknowledges the importance of the business community in helping maintain fare-free transit through the coming years. To understand the importance of continued fare-free operations within our community, staff would like to demonstrate the role that the current transit system plays in connecting some of the major employers within the region to their employee base.

On an annual basis, Pima Association of Governments (PAG) conducts and produces a Travel Reduction Program (TRP) report. The most recent TRP report, completed for FY2021-22, lists the top employers for the region, as shown in Table 6.

<b>PAG TRP Largest 15 Employers in 2022</b>	
<b>Company Name</b>	<b>Employee Count</b>
Raytheon Missile & Defense (3 sites)	13,381
University of Arizona Main Campus Staff	13,230
Banner - University Medical Center Tucson	8,818
TUSD Morrow Education Center (1010 E 10th St)	6,790
Pima County	6,717
US Davis-Monthan Air Force Base	6,000
Tucson Medical Center	4,706
The City of Tucson	4,465
Amazon Fulfillment Center	4,303
US Southern AZ VA Health Care System	2,800
Target.COM	1,738
Northwest Medical Center	1,681
Rouche Tissue Diagnostics	1,500
US 162d WG, Arizona Air National Guard	1,500
HomeGoods Distribution Center	1,336
<b>Total Employees for Top 15 TRP Locations</b>	<b>78,965</b>

Table 6: Fifteen Top Employers in the Tucson Region based on TRP Data (PAG, 2022, p. 2)

Not only does the TRP highlight the top employers in the region, but the report also provides a critical link between these employment agencies and the travel patterns of their employees. Among the key data points enumerated in the TRP are the average number of days per week which employees report using alternative modes of transportation (alternative signifying modes other than driving alone). Also reported are the types of alternative transportation (e.g., carpool, bus, streetcar, bike, walk, telework, and condensed work week) as well as the percentage utilization of each of the alternative modes. These TRP survey metrics are expressed in Table 7. From this information, staff can extrapolate transit usage, in the form of bus and streetcar utilization, for major employers within the region. The results of this analysis are shown in Table 8.



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FY2021-22 TRP Survey Metrics	
Employees	135,131
Respondents	50,017
Response Rate	50.4%
Average Number of Alt Mode Days	3.32
Percentage Bus	0.94%
Percentage Streetcar	0.23%

Table 7: FY2021-22 TRP Survey Metrics (PAG, 2022, pp. 16, 17)

PAG TRP Largest 15 Employers in 2022			
Company Name	Employee Count	Estimated Annual Bus Ridership*	Estimated Annual Streetcar Ridership**
Raytheon Missile & Defense (3 sites)	13,381	21,715	No Streetcar Access
University of Arizona Main Campus Staff	13,230	21,470	5,253
Banner - University Medical Center Tucson	8,818	14,310	3,501
TUSD Morrow Education Center(1010 E 10th St)	6,790	11,019	No Streetcar Access
Pima County	6,717	10,900	2,667
US Davis-Monthan Air Force Base	6,000	9,737	No Streetcar Access
Tucson Medical Center	4,706	7,637	No Streetcar Access
The City of Tucson	4,465	7,246	1,773
Amazon Fulfillment Center	4,303	No Bus Access	No Streetcar Access
US Southern AZ VA Health Care System	2,800	4,544	No Streetcar Access
Target.COM	1,738	2,820	No Streetcar Access
Northwest Medical Center	1,681	No Bus Access	No Streetcar Access
Rouche Tissue Diagnostics	1,500	No Bus Access	No Streetcar Access
US 162d WG, Arizona Air National Guard	1,500	2,434	No Streetcar Access
HomeGoods Distribution Center	1,336	2,168	No Streetcar Access
<b>Total Employees for Top 15 TRP Locations</b>	<b>78,965</b>	<b>128,146</b>	<b>13,195</b>

\* Location(s) must be currently served by a Sun Tran or Sun Express Route; annualized amount based on the product of the employee count, average of number of alternative mode days, percentage of alternate mode participation and a 52 week year.

\*\* Location(s) must be currently served by the Sun Link Streetcar; annualized amount based on the product of the employee count, average of number of alternative mode days, percentage of alternate mode participation and a 52 week year.

Table 8: Estimated Ridership for Major Employers based on FY2021-22 TRP Data (PAG, 2022, pp. 2, 16, 17)

At Mayor and Council discretion, staff may use the values represented within Table 8 to inform conversations amongst regional employers regarding the potential for access agreements to help serve as a revenue source for transit operations.

**Works Cited**

Nabors, D., Schneider, R. L., Lieberman, K., & Mitchell, C. (2008, February). *Pedestrian Safety Guide fo Transit Agencies*. Retrieved from Federal Highway Administration - Safety: [https://safety.fhwa.dot.gov/ped\\_bike/ped\\_transit/ped\\_transguide/ch4.cfm](https://safety.fhwa.dot.gov/ped_bike/ped_transit/ped_transguide/ch4.cfm)

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Plan Tucson Consideration(s) – The discussion of this item relates to the following Built Environment Goals and Policies:

*Goal 22.* Well-maintained public facilities and infrastructure that support coordinated cost-effective service delivery for current and future residents.

*Public Infrastructure Policy 1.* Invest in highest priority needs to manage and maintain public infrastructure and facilities that are fundamental to economic development and to sustaining and enhancing living conditions in the community.

*Public Infrastructure Policy 2.* Prioritize major public infrastructure investments in developed areas and for improvements of the existing infrastructure.

*Land Use, Transportation & Urban Design Policy 13.* Continue to explore and monitor opportunities to increase the use of transit, walking, and bicycles as choices for transportation on a regular basis.

*Land Use, Transportation & Urban Design Policy 22.* Participate in efforts to develop a coordinated regional, multi-modal transportation system that improves efficiency, safety and reliability of transporting people and goods within the region and to destinations outside of the region

Financial Considerations – The revenue deficit from operating fare-free for transit services in FY23 is approximately \$9.1M.

Operating Cost and Maintenance Input – None at this time.

Legal Considerations – None at this time. In the event that the Mayor and Council want to consider the possibility of generating revenue from the tax examples provided in this Memorandum (e.g. parking tax, property tax levy), then further legal review and analysis will be required to determine the authority to assess those taxes.

Respectfully submitted,



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