
Development (Impact) Fees

City of Tucson Infrastructure Improvements Plan Streets Facilities

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EXPIRES 6-30-2015

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□ INTRODUCTION

The City of Tucson collects development fees to offset some of the infrastructure costs associated with growth. The City currently charges fees for four public service categories: (1) streets facilities, (2) parks and recreational facilities, (3) police and (4) fire. In order to continue assessing and collecting the fees, the City must comply with Arizona Revised Statute ARS §9-463.05, as amended. Consequently, the City is preparing new development fee studies, project lists, fee schedules, and a City ordinance.

The statute codifies Senate Bill 1525, and includes major changes in development fee assessment procedures and programs. It also provides greater specificity regarding the types of “necessary public services” that can be funded with development fees. Prior to calculating the fees, two studies must be prepared: a land use assumptions report and an infrastructure improvements plan (IIP) for each fee category. As defined in ARS §9-463.05(T)(5), ‘Infrastructure improvements plan’ means a written plan that identifies each necessary public service or facility expansion that is proposed to be the subject of a development fee and otherwise complies with the requirements of this section, and may be the municipality’s capital improvements plan.”

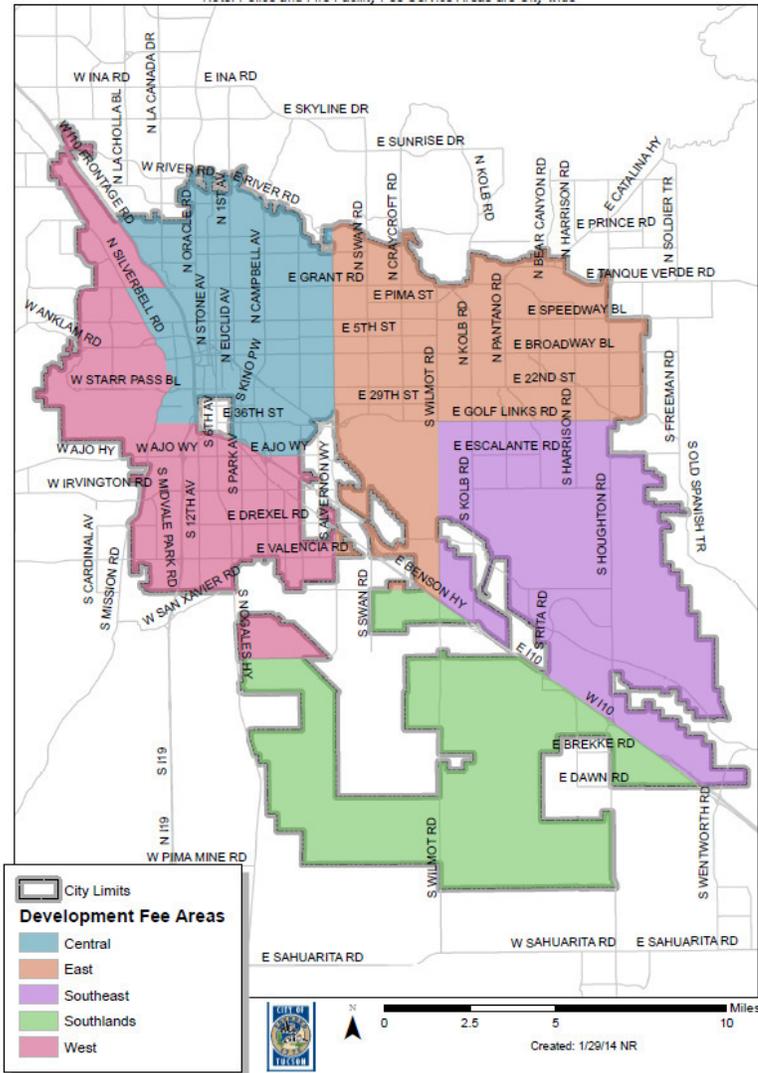
This report identifies the infrastructure needs for streets facilities for a 10-year planning horizon, and provides fee calculations that will be the basis for establishing fees to fund those facilities. The infrastructure needs are based on land use assumptions provided in a companion document. The land use assumptions were used to estimate the amount of new development projected to occur between 2014 and 2024. This report identifies the amount and type of streets infrastructure needed to provide that new development with the same level of streets facilities service as is provided to existing development in the City. This report also provides updated development fee calculations for streets infrastructure, which will be finalized in a subsequent document.

As a matter of policy, the City of Tucson recognizes that complete streets must be planned and implemented with a focus on accommodating alternative forms of transportation. Accordingly, and within the context of enabling legislation, this IIP includes projects that support multiple modes of travel, including motor vehicles, pedestrians, bicycles, and public transit.

Service Areas

As defined in ARS §9-463.05(T)(9), “‘Service area’ means any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed in the infrastructure improvements plan.” The City will utilize the same service areas currently used, with minor adjustments for recent annexations (see Exhibit 1).

Exhibit 1 Streets Facilities Development Fee Service Areas



Level of Service

The level of service (or LOS) for streets is typically based on the Highway Capacity Manual. LOS is a qualitative measure of system performance using letter grades, similar to academic grades. LOS A is uncongested, free-flowing traffic, whereas LOS F is extreme congestion. In urban areas, LOS D is almost universally adopted as the performance standard. This standard has been consistently utilized by the City of Tucson and the Pima Association of Governments for both planning and design purposes. Accordingly, this IIP incorporates LOS D as the performance standard for streets infrastructure.

As stated in ARS §9-463.05(B)(4), “Costs for necessary public services made necessary by new development shall be based on the same level of service provided to existing development in the service area.” ARS §9-463.05(B)(5)(d) also states that fees may not be used for “Upgrading, updating, expanding, correcting or replacing existing necessary public services to provide a higher level of service to existing development.” However, the statutes fail to define the term “Level of Service.”

Three of the service areas have existing LOS performance better than the adopted standard of LOS D. Both the West and Southeast areas operate now at LOS C, and the Southlands area operates at LOS B (see below). Using a uniform performance standard of LOS D throughout the City is recommended for several reasons: consistency with the Regional Transportation Plan; air quality mandates; recognition that the developing service areas are changing to a more urban condition; and retaining the current LOS in the developing areas will result in a substantially higher streets fee, which is addressed later in this report.

<u>Service Area</u>	<u>Existing LOS</u>
Central	D
West	C
East	D
Southeast	C
Southlands	B

□ NECESSARY PUBLIC SERVICES – EXISTING NEEDS

The City of Tucson and the consulting team identified the “necessary public services” for streets facilities to be included in this IIP. These projects, shown in Exhibit 2, are necessary in part because of projected growth as documented in the Land Use Assumptions report.

Due to the ten-year time period required by the statute, the analysis included years 2015 and 2025 conditions. Projected growth over the ten-year period will require adding an estimated 194 new lane-miles of arterial roadway capacity, based on the typical capacities of urban arterials. This includes widening existing arterials, along with adding or constructing several new corridors in the Southeast area (see alignments in Appendix E).

Also included are several capacity enhancement projects that impact and add roadway capacity through the construction of bus pullouts and intersection turn lanes. These improvements increase roadway capacity by reducing delays associated with transit users embarking and debarking from buses, and separating turning and through vehicles at intersections. Sidewalk additions and improvements are associated with these capacity enhancements, which will serve existing and future development. Three-quarters of the sidewalk, bus pullout and intersection capacity project costs were assigned to new development. The remaining one-quarter will be funded with other sources. This apportionment is indicated in Exhibit 2.

One of the City’s major streets facilities expenditures is to provide local matching funds for the Regional Transportation Authority (RTA) arterial projects. Funding for these projects, including a new half-cent sales tax and the required local match, was committed by the voters of Pima County on May 16, 2006. Use of development fee funds for the local match was assigned through subsequent, project-specific, intergovernmental agreements between the City and the RTA.¹

Traffic volumes and capacities for the proposed roadway projects for both 2015 and 2025 are provided in Exhibit 3. In a few cases (Broadway from Camino Seco to Houghton, for example) future volumes are approximately the same or less than current volumes. This is due to the travel demand model reassigning some trips to new and expanded parallel corridors.

¹ See <http://www.rtamobility.com/rtaplan.aspx> for information on the RTA Plan and its funding commitments.

Exhibit 2 Necessary Streets Facilities for Existing and New Development

Road Project	Limits		Project	# of Existing Lanes	# of Lanes	Length (mi) / Units	New capacity lane-miles	New sidewalk only miles	Total Project Cost (FEA)	City Contribution to RFA Project	Non-RFA Total Project Cost (Estimated)	Non-RFA Project Cost (Attributed to New Development)	Total Attributed to New Development	Source	Notes
22nd Street	I-10	Tucson Blvd	Widen from 4 lanes to 6	4	6	2.6	5.2		\$118,532,400	\$3,000,000		\$3,000,000	RFA	Only City Contribution applied to Devel Fee Calc	
Broadway Boulevard	Buclid Ave	Country Club Rd	Widen from 5 lanes to 8	5	8	1.9	7.6		\$24,780,600	\$3,000,000		\$3,000,000	RFA	Only City Contribution applied to Devel Fee Calc	
19th Avenue	River Rd	Grant Rd	Widen from 4 lanes to 6	4	6	3.1	6.2		\$79,372,670	\$3,000,000		\$3,000,000	RFA	Only City Contribution applied to Devel Fee Calc	
Grant Road	Orade Rd	Swan Rd	Widen from 4 lanes to 6	4	6	5.0	10.0		\$75,434,690	\$6,000,000		\$6,000,000	RFA	Only City Contribution applied to Devel Fee Calc	
Country Club Road	R. Lowell Rd	Prince Rd	Widen to 5 lanes, add sidewalk	2	5	0.5	1.5				\$4,722,448	\$1,224,329	\$1,224,329	RFA Cost Estimation	Based on ratio of increase in volume to increase in capacity, 28% applied to new development
Campbell Avenue	Grant Rd	R. Lowell Rd	Right turn lanes, bus pullouts (will require FCW)	5	5	1.0				\$1,800,000	\$1,250,000	\$1,250,000	RFA Built Projects*, RFA Cost Estimation for FCW	75% Applied to New Development	
Speedway Boulevard	Avemom Wy	Wilcox Rd	Sidewalks	N/A	N/A	3.0	6.0		\$3,000,000	\$2,250,000	\$2,250,000	\$2,250,000	Comparable Sidewalk Projects in TIP	75% Applied to New Development	
Speedway Boulevard	4th Ave	Park Ave	Sidewalks	N/A	N/A	0.5	1.0		\$500,000	\$375,000	\$375,000	\$375,000	Comparable Sidewalk Projects in TIP	75% Applied to New Development	
Stone Avenue	Grant Rd	Limberlost Dr	Sidewalks	N/A	N/A	2.3	4.6		\$2,300,000	\$1,725,000	\$1,725,000	\$1,725,000	Comparable Sidewalk Projects in TIP	75% Applied to New Development	
R. Lowell Road	Buclid Ave	Orade Rd	Sidewalks	N/A	N/A	1.00	2.0		\$1,000,000	\$750,000	\$750,000	\$750,000	Comparable Sidewalk Projects in TIP	75% Applied to New Development	
Campbell/Prince	Intersection		Right turn lanes, bus pullouts (will require FCW)	N/A	N/A	N/A				\$2,500,000	\$1,875,000	\$1,875,000	RFA built projects (http://www.rtamobility.com/documents/intersectionsafetyprogram.pdf) - average of 14 projects	75% Applied to New Development	
Avemom/R. Lowell	Intersection		Right turn lanes, bus pullouts	N/A	N/A	N/A				\$2,500,000	\$1,875,000	\$1,875,000	RFA built projects (http://www.rtamobility.com/documents/intersectionsafetyprogram.pdf) - average of 14 projects	75% Applied to New Development	
Modern Streetcar Line Extension (In-Pavement Components, Proposed)	UMCio Tohono Tada Center		Streetcar Line Extension (Proposed)			4.7			\$188,000,000 (Proposed)	\$28,000,000		\$28,000,000	CLA	15% Applied to New Development	
Bus Pullout Program	19 Locations*		New bus pullouts	N/A	N/A	19				\$2,850,000	\$2,137,500	\$2,137,500	RFA built projects (http://www.rtamobility.com/documents/pdf/FEACARTIP2013/FEACARTIP2013-07-31-Presentation-BusPulloutReport.pdf)	75% Applied to New Development	
Central Benefit Area Totals:									\$448,100,260	\$43,000,000	\$21,172,449	\$13,581,829	\$56,581,829		
Silverbell Road	Ina Rd	Grant Rd	Widen from 2 lanes to 4	2	4	7.6	15.2		\$61,955,610	\$5,000,000		\$5,000,000	RFA	Only City Contribution applied to Devel Fee Calc	
Sunset Road	Silverbell Rd	I-10 River Rd	New 3-lane roadway	N/A	3	0.9	2.7		\$38,062,010	\$5,000,000		\$5,000,000	RFA	Only City Contribution applied to Devel Fee Calc	
Grant Road	Silverbell Rd	I-10	Widen from 4 lanes to 6	4	6	1.4	2.8			\$11,780,000	\$4,014,739	\$4,014,739	CDT Staff	Based on ratio of increase in volume to increase in capacity, 34% applied to new development	
Ironwood Hill	Shannon	Silverbell Rd	Widen from 2 lanes to 4, includes 1 HAWK	2	4	1	2		\$15,000,000	\$5,508,078	\$5,508,078	CDT Staff	Based on ratio of increase in volume to increase in capacity, 37% applied to new development		
Ajo Way	Park Ave	Mission Rd	Right turn lanes, bus pullouts, sidewalks, access control	N/A	N/A	2.0	4.0		\$4,550,000	\$3,412,500	\$3,412,500	\$3,412,500	RFA Built Projects*	Excludes Holiday lane to 16th Street 75% Applied to New Development	
Irvington Road	Mission Rd	I-19	Right turn lanes, bus pullouts, sidewalks, access control	N/A	N/A	1.3	2.6		\$2,950,000	\$2,212,500	\$2,212,500	\$2,212,500	RFA Built Projects*	75% Applied to New Development	
12th Avenue	Ajo Wy	Drexel Rd	Right turn lanes, bus pullouts, sidewalks, access control	N/A	N/A	2.0	4.0		\$4,250,000	\$3,187,500	\$3,187,500	\$3,187,500	RFA Built Projects*	75% Applied to New Development	
Campbell Avenue	Irvington Rd	Valencia Rd	2 HAWKs, pedestrian refuge	N/A	N/A	N/A			\$400,000	\$300,000	\$300,000	\$300,000	CDT Staff	75% Applied to New Development	
Park Avenue	Irvington Rd	Valencia Rd	Bus pullouts	N/A	N/A	N/A			\$500,000	\$375,000	\$375,000	\$375,000	CDT Staff	75% Applied to New Development	
Drexel Road	12th Ave	Campbell Ave	Curb, sidewalk, bike lanes	N/A	N/A	2.0	4.0		\$5,090,000	\$3,810,000	\$3,810,000	\$3,810,000	RFA per mile costs plus sidewalk costs	75% Applied to New Development	
West Benefit Area Totals:									\$101,017,820	\$13,000,000	\$44,490,000	\$22,920,318	\$35,820,318		

Exhibit 2 (continued) Necessary Streets Facilities for Existing and New Development

Road Project	Limits	Project	# of Existing Lanes	# of lanes	Length (mi) Units	New capacity lane-miles	New sidewalk, only miles	Total Project Cost (RTA)	City Contribution to RTA Project	Total Project Cost (Estimated)	Project Cost (Attributed to New Development)	Source	Notes			
2nd Street	Cemino Seco	Old Spanish Tr	Widen from 2 lanes to 4	2	4	1.2	2.4	\$15,144,000	\$3,000,000		\$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc			
2nd Street	Old Spanish Tr	Houghton Rd	Widen from 2 lanes to 3	2	3	0.8	0.8				\$0	RTA	Only City Contribution applied to Devel Fee Calc			
Broadway Boulevard	Cemino Seco	Houghton Rd	Widen from 3 lanes to 4	3	4	2.0	2.0	\$16,086,800	\$3,000,000		\$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc			
Houghton Road	Golf Links Rd	Tanque Verde Rd	Widen from 2 lanes to 4	2	4	4.1	8.2	\$62,290,133	\$5,676,923		\$5,676,923	RTA	Cost of Houghton Road project is \$197,595,300. This represents proportional cost based on length (4.1 of 13 miles).			
Speedway Boulevard	Cemino Seco	Houghton Rd	Widen from 2 lanes to 4	2/3	4	2.0	4.0	\$17,127,000	\$3,000,000		\$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc			
Valencia Road	Alvernon Wy	Kolib Rd	Widen from 4 lanes to 6	4	6	4.3	8.6	\$91,124,970	\$5,676,923		\$5,676,923	RTA	Only City Contribution applied to Devel Fee Calc			
Cemino Seco	Wrightstown Rd	Speedway Blvd	Widen from 2 lanes to 4	2	4	0.6	1.2			\$5,000,000	\$993,803	\$993,803	COT Staff	Based on ratio of increase in volume to increase in capacity, 28% applied to new development		
Pentano Road	22nd St	Golf Links Rd	Sidewalks	N/A	N/A	1.3	2.6		\$1,000,000	\$975,000	\$975,000	RTA Built Projects	75% Applied to New Development			
2nd Street	Alvernon Wy	Wilnot Rd	Sidewalks	N/A	N/A	3.0	6.0		\$3,000,000	\$2,250,000	\$2,250,000	RTA Built Projects	75% Applied to New Development			
Wilnot Road	22nd St	Speedway Blvd	Sidewalks, 2 HAWKs	N/A	N/A	2.0	4.0		\$2,240,000	\$1,680,000	\$1,680,000	RTA Built Projects	75% Applied to New Development			
Speedway Boulevard	Alvernon Wy	Wilnot Rd	Sidewalks with FCW	N/A	N/A	3.0	6.0		\$4,500,000	\$3,375,000	\$3,375,000	RTA Built Projects, RPI Cost Estimation for FCW	75% Applied to New Development			
Speedway Boulevard	Speedway Blvd	Broadway Blvd	Right turn lanes, sidewalks, 2 HAWKs	3	3	1.0	2.0		\$2,350,000	\$1,762,500	\$1,762,500	RTA Built Projects*	75% Applied to New Development			
Pima Street	Alvernon Wy	Swan Rd	Sidewalks	N/A	N/A	1.0	2.0		\$1,000,000	\$750,000	\$750,000	RTA Built Projects	75% Applied to New Development			
Speedway Boulevard Graycroft Road	Intersection	Intersection Improvements	N/A	N/A	N/A				\$5,000,000	\$3,750,000	\$3,750,000	COT Staff	75% Applied to New Development			
Speedway Boulevard Swan Road	Intersection	Intersection Improvements	N/A	N/A	N/A				\$5,000,000	\$3,750,000	\$3,750,000	COT Staff	75% Applied to New Development			
Golf Links Road Swan Road	Intersection	Intersection Improvements	N/A	N/A	N/A				\$5,000,000	\$3,750,000	\$3,750,000	COT Staff	75% Applied to New Development			
River Road Graycroft Road	Intersection	Intersection Improvements	N/A	N/A	N/A				\$1,000,000	\$750,000	\$750,000	COT Staff	75% Applied to New Development			
Broadway Boulevard Pentano Road	Intersection	Intersection Improvements	N/A	N/A	N/A				\$5,000,000	\$3,750,000	\$3,750,000	COT Staff	75% Applied to New Development			
Bus Pullout Program	20 Locations*	New bus pullouts	N/A	N/A	20				\$3,000,000	\$2,250,000	\$2,250,000	RTA Built Projects	75% Applied to New Development			
East Benefit Area Totals:								\$161,779,903	\$20,353,846	\$43,930,000	\$29,786,903	\$50,140,149				
Houghton Road	I-10	Old Vail Rd	Widen from 2 lanes to 4	2	4	1.8	3.6	\$15,215,167	\$12,323,077		\$12,323,077	RTA	Cost of Houghton Road project is \$197,595,300. This represents proportional cost based on length (8.9 of 13 miles).			
Houghton Road	Old Vail Rd	Golf Links Rd	Widen from 2 lanes to 6	2	6	7.2	28.8				\$5,000,000	RTA	Only City Contribution applied to Devel Fee Calc			
Valencia Road	Kolib Rd	Houghton Rd	Widen from 2 lanes to 6	2	6	4.8	18.4	\$39,251,000	\$5,000,000		\$5,000,000	RTA	Only City Contribution applied to Devel Fee Calc			
Poomani Road	Houghton Rd	Valencia Rd	New 4-lane roadway	2*	4	2.0	6.7			\$12,595,455	\$12,595,455	COT Staff	All Applied to new development			
Valencia Road	Houghton Rd	City Limits	New 4-lane roadway	N/A	4	2.0	8.0			\$12,503,136	\$7,449,447	\$7,449,447	Designer Cost Estimate	Only City Contribution applied to Devel Fee Calc		
Val Vista	Valencia Rd	Mary Ann Goodland Wy	New 4-lane roadway	N/A	4	4.5	18.0			\$29,922,955	\$29,922,955		All Applied to new development			
Rita Road	Houghton Rd	Val Vista	New 4-lane roadway	N/A	4	2.5	10.0			\$18,722,727	\$18,722,727		All Applied to new development			
Old Vail Road	Rita Road	Houghton Rd	Widen from 2 lanes to 4	2	4	1.8	3.2			\$8,980,000	\$4,823,996	\$4,823,996	Based on ratio of increase in volume to increase in capacity, 54% applied to new development			
Mary Ann Goodland Way	Houghton Rd	City Limits	Widen from 2 lanes to 4	2	4	3.0	6.0			\$16,800,000	\$8,980,237	\$8,980,237	Based on ratio of increase in volume to increase in capacity, 44% applied to new development			
Irvington Road	Pentano Rd	Cemino Seco	Widen from 2 lanes to 4	2	4	2.0	4.0			\$11,200,000	\$3,267,122	\$3,267,122	Based on ratio of increase in volume to increase in capacity, 29% applied to new development			
Irvington Road	Cemino Seco	Houghton Rd	Widen from 2 lanes to 4	2	4	2.0	4.0			\$11,200,000	\$5,986,825	\$5,986,825	Based on ratio of increase in volume to increase in capacity, 53% applied to new development			
Southwest Benefit Area Totals:								\$173,466,167	\$17,323,077	\$121,704,272	\$91,746,764	\$109,071,841				
Wilnot Road	I-10	End of Road (1.5 Miles)	Widen from 2 lanes to 4	2	4	1.5	3.0			\$8,400,000	\$6,300,000	\$6,300,000	COT Staff	75% Applied to new development		
Southlands Benefit Area Totals:								\$0	\$0	\$8,400,000	\$6,300,000	\$6,300,000				
TOTALS								194,124	50,824	\$1,072,266,950	\$93,676,923	\$298,156,721	\$164,217,213	\$257,894,136		
								New Dev Cost = \$257,894,136								

*See Appendix for list of locations

**Poomani Rd is currently paved from Houghton Rd approximately 3,500 feet east

*Right turn lane cost was estimated based on bus pullout cost due to similar project type.

Exhibit 3 Traffic Volume and Capacity Table, 2015 and 2025

	Road Project		# of Existing Lanes	# of Lanes	Classification	Speed Limit (mph)	Existing Volume (veh/day)	Existing Capacity (veh/day)	2030 PAG Model	Future Volume (veh/day)	Future Capacity (veh/day)	
	Limits											
Central	22nd Street	I-10	Tucson Blvd	4	6	Arterial	35	38,363	30,420	46,139	43,386	45,810
	Broadway Boulevard	Eudid Ave	Country Club Rd	5	8	Arterial	35	39,823	30,420	63,210	54,188	61,290
	First Avenue	River Rd	Grant Rd	4	6	Arterial	45/40	38,178	35,820	56,190	49,398	53,910
	Grant Road	Orade Rd	Swan Rd	4	6	Arterial	40	37,382	35,820	64,802	53,944	53,910
	Country Club	Rt. Lowell Rd	Prince Rd	2	5	Arterial	35	20,135	15,930	28,346	25,292	35,820
	Cambell Avenue	Grant Rd	Rt. Lowell Rd	N/A								
	Speedway Boulevard	Alvernon Wy	Wilmot Rd									
	Speedway Boulevard	4th Ave	Park Ave									
	Stone Avenue	Grant Rd	Limberlost Dr									
	Rt. Lowell Road	Eudid Ave	Orade Rd									
	Campbell/ Prince	Intersection										
	Alvernon/R. Lowell	Intersection										
	Bus Pullout Program	19 Locations										
West	Silverbell Road	Ina Rd	Grant Rd	2	4	Arterial	45	13,776	15,930	31,310	23,814	35,820
	Sunset Road	Silverbell Rd	I-10/ River Rd	N/A	3	Arterial	N/A	N/A	N/A	24,625	20,954	16,727
	Grant Road	Silverbell Rd	I-10	4	6	Arterial	40	33,592	35,820	43,269	39,768	53,910
	Ironwood Hill	Painted Hills	Silverbell Rd	2	4	Arterial	40	23,437	15,930	35,206	30,740	35,820
	Ajo Way	Park Ave	Mission Rd	N/A								
	Irvington Road	Mission Rd	I-19									
	12th Avenue	Ajo Wy	Drexel Rd									
	Campbell Avenue	Irvington Rd	Valencia Rd									
	Park Avenue	Irvington Rd	Valencia Rd									
Drexel Road	12th Ave	Campbell Ave										

Exhibit 3 (continued) Traffic Volume and Capacity Table, 2015 and 2025

	Road Project	Limits		# of Existing Lanes	# of Lanes	Classification	Speed Limit (mph)	Existing Volume (veh/day)	Existing Capacity (veh/day)	2030 PAG Model	Future Volume (veh/day)	Future Capacity (veh/day)
East	22nd Street	Camino Seco	Old Spanish Tr	2	4	Arterial	40	19,900	15,930	25,223	23,307	35,820
	22nd Street	Old Spanish Tr	Houghton Rd	2	3	Arterial	40	8,713	15,930	9,501	9,231	16,727
	Broadway Boulevard	Camino Seco	Houghton Rd	3	4	Arterial	40	31,120	16,727	23,240	25,616	35,820
	Houghton Road	Golf Links Rd	Tanque Verde Rd	2	4	Arterial	45	25,892	15,930	57,652	44,150	35,820
	Speedway Boulevard	Camino Seco	Houghton Rd	2	4	Arterial	40	19,342	15,930	22,696	21,518	35,820
	Valencia Road	Alvernon Wy	Kolb Rd	4	6	Arterial	50	44,596	35,820	81,215	66,505	53,910
	Camino Seco	Wrightstown Rd	Speedway Blvd	2	4	Arterial	25	6,685	15,930	13,420	10,638	35,820
	Pantano Road	22nd St	Golf Links Rd	N/A								
	22nd Street	Alvernon Wy	Wilmot Rd									
	Wilmot Road	22nd St	Speedway Blvd									
	Speedway Boulevard	Alvernon Wy	Wilmot Rd									
	Rosemont Boulevard	Speedway Blvd	Broadway Blvd									
	Prima Street	Alvernon Wy	Swan Rd									
	Speedway Blvd/ Graycroft Rd	Intersection										
	Speedway Blvd/ Swan Rd	Intersection										
	Golf Links Road/ Swan Road	Intersection										
	River Road/ Graycroft Road	Intersection										
Broadway Blvd/ Pantano Rd	Intersection											
Bus Pullout Program	20 Locations											
Southeast	Houghton Road	I-10	Old Vail Rd	2	4	Arterial	55	16,917	15,930	46,927	33,398	35,820
	Houghton Road	Old Vail Rd	Golf Links Rd	2	6	Arterial	50	32,200	15,930	88,300	63,085	53,910
	Valencia Road	Kolb Rd	Houghton Rd	2	6	Arterial	50	23,472	15,930	78,436	52,464	53,910
	Poorman Road	Houghton Rd	Valencia Rd	2*	4	Arterial	35	N/A	N/A	23,966	17,148	30,420
	Valencia Road	Houghton Rd	Qty Limits	N/A	4	Arterial	45	N/A	N/A	55,910	40,005	35,820
	Val Vista	Valencia Rd	Mary Ann Cleveland Way	N/A	4	Arterial	35	N/A	N/A	29,179	20,878	30,420
	Rita Road	Houghton Rd	Val Vista	N/A	4	Arterial	40	N/A	N/A	42,028	30,072	35,820
	Old Vail Road	Rita Rd	Houghton Rd	3	4	Arterial	45	5,623	16,727	26,744	15,903	35,820
	Mary Ann Cleveland Way	Houghton Rd	East City Limit	2	4	Arterial	40	10,159	15,930	25,934	18,976	35,820
	Irvington Road	Pantano Rd	Camino Seco	2	4	Arterial	45	13,901	15,930	23,457	19,703	35,820
Irvington Road	Camino Seco	Houghton Rd	2	4	Arterial	45	13,449	15,930	32,223	24,081	35,820	
South Lands	Wilmot Road	I-10	End of Road (1.5 Miles)	2	4	Arterial	45	8,657	15,930	36,786	22,711	35,820

*Poorman Road is a paved two-lane roadway from Houghton Road approximately 3,500 feet east. The remaining section is unpaved.

Necessary public services were estimated by calculating the daily roadway capacity for one lane-mile of a typical arterial roadway. The general daily capacity per lane ranges from 7,000 vehicles per lane per day (vplpd) to 9,000 vplpd, depending on the facility, access control measures, and whether the roadway is within an urban, suburban, or rural setting. Level of service (LOS) D is the performance standard for most urban areas in the U.S and is the performance standard utilized in this study. LOS D allows limited congestion during peak periods and free-flowing conditions during off-peak periods.

Current Florida Department of Transportation (FDOT) LOS standards² suggest that the LOS D criteria be similar to the current per lane service volumes used by the City of Tucson. The FDOT LOS standards are widely applied by planning and transportation departments across the U.S to estimate planning level capacities for arterial roadways. To establish a consistent performance measure, it is recommended using a LOS D standard, based on FDOT's 2012 Generalized Service Volumes Tables.

□ NECESSARY PUBLIC SERVICES – NEEDS ATTRIBUTABLE TO NEW DEVELOPMENT

ARS §9-463.05(E)(3) requires “A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to development in the service area based on the approved land use assumptions, including a forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in this state, as applicable.”

Statutes allow development fee funding for streets improvements beyond merely widening or extending facilities to provide vehicular capacity. Fundable streets facilities are defined in ARS 9-463.05(T)(7)(e) as “[s]treet facilities located in the service area, including arterial or collector streets or roads that have been designated on an officially adopted plan of the municipality, traffic signals and rights-of-way and improvements thereon.” This IIP includes funding primarily for additional lane-miles, but also for capacity-enhancing bus pullouts and pedestrian facility expansions in denser areas where additional arterial and collector lane-miles are infeasible.

As indicated in Exhibit 2, there are an estimated 194 lane-miles of roadway widening capacity projects and several other capacity enhancement projects, including sidewalk expansions, bus pullouts and intersection improvements. The cost of these projects attributable to new development is estimated to be \$257,894,136. The cost of preparing the updates every five years, based on the estimated cost of this study, is \$90,000 (\$45,000 X 2). Therefore the total cost for providing these necessary public streets facilities is \$257,984,136 over the ten-year time frame.

² Florida DOT is a leader in capacity analysis. Its procedures are used widely, including in eastern Pima County. The procedures rely on the USDOT's Highway Capacity Manual.

□ TRAVEL DEMAND PER SERVICE UNIT – METHODOLOGY

ARS§9-463.05(E)(4) requires “A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial and industrial.”

Typical land use categories are used in calculating trip generation for the residential, commercial and other land uses. Each of these land uses has documented trip rate data from the current edition of the Institute of Transportation Engineers' (ITE) Trip Generation. The PAG four-step travel demand model also includes trip generation as part of its process, and it applies rates similar to those of ITE. The land uses included in the fee study, and the associated daily trip generation rates, other factors and the calculated Service Units (SUs), are shown in Exhibit 4. The following factors are used to develop the unit demand.

Average Trip Length

The average trip length for a particular land use is based on trip length data from the 2009 National Household Travel Survey (NHTS), the nation's inventory of daily and long-distance travel. The survey includes demographic characteristics of households, people, and vehicles, as well as detailed information on daily and longer-distance travel for all purposes by all modes. NHTS survey data are collected from a sample of U.S. households, and expanded to provide national estimates of trips and miles by travel mode, trip purpose and a host of household attributes.

ITE Trip Rates

The ITE Trip Generation document contains trip rate data per unit of land use measurement for over 170 land uses. The current ITE Trip Generation (9th Edition) was produced in 2012. Daily weekday rates have been applied in the demand unit calculations.

Primary Trips

Primary trips are one-way movements to or from a land use that the driver intended to make without consideration to other stops along the way (i.e., the primary purpose of the trip). Drivers may also divert their path from the primary purpose destination to another destination. These diverted trips are called “pass-by” trips if the secondary trip destination is along the arterial network the driver intended to traverse on his/her primary trip. Alternatively, a “diverted trip” is one in which the driver diverts from his/her primary destination path to an alternative path. The fee calculation methodology used in this study is based on the primary trip data for each land use, as provided in the Trip Generation document.

Exhibit 4 Typical Streets Facilities Demand per Unit of Land Use

Land Use Category	Unit	% Primary Trips	Average Weekday Trip Rate per Unit	Average Trip Length	% Travel Demand on Tucson Arterial	Vehicle Miles of Travel Demand per Unit	Representative ITE Category	Service Units (SU) per Unit of Development	
Residential									
	Single Family Residential	Dwelling Unit	100%	9.52	9.5	60%	54	210	1.0
	Condo/ Townhouse	Dwelling Unit	100%	6.65	9.5	60%	38	220	0.7
	Multi-family/ Apartments	Dwelling Unit	100%	5.63	9.7	60%	33	320	0.6
Retail	Average, all uses	1000 sf	35%	85	6.2	60%	111	820	2.0
Office	Average, all uses	1000 sf	75%	11.03	13.4	60%	66	710	1.2
Industrial	Average, all uses	1000 sf	70%	4.01	9.7	60%	16	110, 120, 150	0.3

Travel Demand on the Arterial System

Only trips on the arterial system are considered in the derivation of the development fee amounts. For most of the categories, 60% of the travel is assumed to occur on City arterials, and the rest is either on local and collector streets, on the freeway, or extraterritorial (i.e., outside the City of Tucson limits). Exceptions include student housing, senior multi-family housing, and mini-storage uses, which will have a higher estimated proportion (70%) of travel within the city.

Vehicle-Miles of Travel (VMT) Per Service Unit

This is the product of the four factors applied in Exhibit 4 and discussed above. The VMT demand per service unit is calculated as follows, using the single-family residential unit as an example: Multiply the per cent primary trips (1.0 or 100%) times the average weekday trip rate (9.52 per unit) times the average trip length (9.5 miles) times the percent travel made on Tucson arterials (60% or .6) which yields 54.3 which is rounded to 54. The number 54 is assigned a service unit value of 1.0. The vehicle miles of travel for all other land use categories are compared to this value to establish an equivalency in service units. For example, the VMT per 1000 square feet of "Retail" is 111. The number of service units per 1000 square feet of Retail is therefore calculated as $111/54$, or 2.0.

PROJECTED SERVICE UNITS FOR NEW DEVELOPMENT

ARSS 9-463.05(E)(5) requires "The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria." Further, AFS 9-463.05(E)(6) requires "The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."

Residential and non-residential growth projections are provided in the Land Use Assumptions report, Exhibits 6 and 11, respectively. These show an additional 30,555 housing units and 38 million square feet of nonresidential floor area by 2024, which is equivalent to a total of 56,926 new service units, as shown in Exhibit 5. This exhibit also shows the number of service units per development unit, taken from Exhibit 4.

The number of service units was obtained by multiplying the amount of new development by the weighting factor, for each land use category. For example, in the Central service area, for office use, multiply 3,188 (1000s square feet) times 1.2 to get 3,826 new service units of office use in the Central area.

Exhibit 5 Estimate of Service Units Through 2024

		SFR	Condo/TH	MFR/APT	Retail	Office	Industrial	Totals
Land Development by Service Area in Dwelling Units or 1000s of sf (From Land Use Assumptions Report)	Central	2,605	998	3,175	1,380	3,188	571	11,917
	West	2,188	645	1,682	553	1,384	10,644	17,096
	East	4,012	845	1,030	782	2,433	379	9,481
	South east	9,378	1,382	2,317	1,770	5,212	8,164	28,223
	Southlands	190	58	51	123	663	831	1,916
	Totals	18,373	3,928	8,255	4,608	12,880	20,589	68,633

		SFR	Condo/TH	MFR/APT	Retail	Office	Industrial
Service Unit Weight Factors, All Areas (From Exhibit 4)		1.00	0.70	0.60	2.00	1.20	0.30

		SFR	Condo/TH	MFR/APT	Retail	Office	Industrial	Totals
Service Units by Service Area	Central	2,605	699	1,905	2,760	3,826	171	11,966
	West	2,188	452	1,009	1,106	1,661	3,193	9,609
	East	4,012	592	618	1,564	2,920	114	9,820
	South east	9,378	967	1,390	3,540	6,254	2,449	23,978
	Southlands	190	41	31	246	796	249	1,553
	Totals	18,373	2,751	4,953	9,216	15,456	6,177	56,926

The current fee schedule for streets (prior to this update) includes a 23% reduction for the Central service area. The 2007 fee studies justified this reduction because “78% of Central Core residents take private motor vehicles to work”³. No reductions are currently applied to the other service areas. For this update, it is recommended that all service areas be assessed 100% of the fees, because while the needs in the dense Central service area are not necessarily less, they are different. For example, the Central city area has an estimated walk score of 70 and a bike score of 85, compared to an overall average of 39 and 64 respectively for the entire City.⁴ Therefore, it is appropriate to expand capacity through effective strategies that complement vehicular travel (bus pullouts, intersection improvements) and support alternative means of travel (bus pullouts and pedestrian capacity expansion).

Recent research documented in the 2010 Highway Capacity Manual includes procedures for assessing the capacities of alternate mode facilities, including pedestrian, bicycle and transit facilities. The Central service area includes many alternate modes facilities, such as bus stops, bus pullouts, sidewalks and bicycle lanes. More of these projects are planned for the area because traditional road widening is infeasible. As indicated earlier, three-quarters of the costs of these alternate mode capacity improvement projects have been applied to new development. These facilities are included in the proposed projects list used to calculate the development fees for each of the service areas. Based on the above, it is recommended that all benefit areas be assessed 100% of the proposed fees.

□ REVENUE CONSIDERATIONS

ARS §9-463.05(E)(7) requires “A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved land use assumptions, and a plan to include these contributions in determining the extent of the burden imposed by the development as required in subsection B, paragraph 12 of this section.”

The equitable imposition of a streets development fee requires that credits be considered as well as costs. This is because streets facilities are typically funded by multiple sources. To the extent that new development contributes to the various funding sources for new infrastructure, credit must be assigned to avoid over-charging, as new development already contributes its fair share of infrastructure costs through development fees. Exhibit 6 shows existing continuing revenue sources, most of which are not creditable against the streets development fee because they are either not used for capacity expansion, are intermittent and unreliable, or are paid for by others. Similarly, the cost of correcting existing deficiencies cannot be imposed on new development. The City typically mitigates existing deficiencies through use of maintenance bonds, regional funds, and federal grants, all of which are intermittent and unreliable.

³ Duncan and Associates, Tucson Road and Park Impact Fee Study, June 15, 2004, page 7.

⁴ See <http://www.walkscore.com/AZ/Tucson>

Exhibit 6 Continuing Revenue Sources

Revenue Source	Current Rate/ Formula	Applicability	Used for Street Expansion or Capacity
Municipal Property Tax	\$1.43 per \$100 net assessed valuation ⁵	All Real Property	No
Sales Tax (Transaction Privilege Tax)	2% ⁶	Commercial Development	No
Construction Sales Tax (CST)	Tucson does not currently assess a CST.	All Development	No
Regional Transportation Authority of Pima County Sales Tax	0.5% applied to all taxable transactions in Pima County	All Development	Yes
Tucson HURF	FY2013 budget amounts/ FY 2013 population = state shared revenue per capita	All Road Users and Vehicle Owners	Yes
State Grant Revenues	Undeterminable and Intermittent	Not Applicable	Yes
Federal Grant Revenues	Undeterminable and Intermittent	Not Applicable	Yes
City of Tucson Streets Bonds	Include in municipal property tax rate, above	All Real Property	Maintenance only; not capacity
Pima County 1997 HURF Revenue Bonds ⁷	Similar to HURF above; project constrained	Unincorporated Pima County revenues shared with Tucson	Yes, but not using City funding

⁵ See http://www.pima.gov/Taxes/A_Tax.html. Includes primary, secondary, and involuntary tort judgments (self-insurance).

⁶ Base rate; other rates apply. See <http://www.modelcitytaxcode.org/pdf/CombinedRateSheet.pdf>

⁷ See -

http://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Administration/Bonds/Bond%20Projects/CIP_BondUpdate3.13.PFD0F7.pdf

Credit for Other Funding Sources Collected or Utilized by the City

The City has one continuous revenue source that is creditable as an offset against development fees, the state-shared Highway User Revenue Fund (HURF)⁸. The HURF is dedicated almost exclusively to road repair, with little left for capacity expansion. Tucson received \$401,037,621 from fiscal year (FY) 2006 through FY2013. Of that amount, the City applied an average 3.46% per year to capital and/or capacity projects, as shown in Exhibit 7. The trend is downward, meaning that over time a smaller portion has been allocated to capital projects and a larger portion to maintenance.

For the portion used for capital projects, the credit calculation assumes a 20-year design life, an FY 2015 HURF forecast of \$80.28/per capita⁹, and the 3.46% toward capital projects. For a detached single family residence with an average of 2.8 persons, the credited amount is \$156, for a condo/attached unit the amount is \$106, and for multi-family/apartment/mobile home housing the amount is \$94¹⁰. Exhibit 8 is a summary of HURF credits applied to residential development.

A credit for the RTA sales tax imposed on new development is provided. The tax rate of 0.5% and is applied to the taxable value of new construction. The taxable value is 65% of contract amount pursuant to state law. Then the tax paid is adjusted to reflect the share that RTA projects in this IIP represent of the overall RTA plan. See Exhibit 9 for the calculations.

The cost of new capacity calculation is shown in Exhibit 10, and discussed below. The net fees per service area and land use type are provided in Exhibit 11.

Note that Pima County Bonds, which partially fund some projects within City limits, are paid for with revenues collected from the unincorporated population¹¹. These bonds are not being retired using City funds or City HURF, therefore no credit can be provided. The County has several General Obligation bond programs authorized in 1997, 2004, and 2006, none of which include roadway projects¹².

Similarly, the City's prior general obligation (GO) bonds for streets purposes were considered for credit purposes. While these bonds rely on the general fund for debt service, they are not used for capacity projects, and therefore, credit is not appropriate.

⁸ Information about the HURF, its collection and distribution is available at <https://www.azdot.gov/about/FinancialManagementServices/transportation-funding>

⁹ Based on projected HURF revenues of \$43,121,000 and a population of 537,129.

¹⁰ As an example calculation for a single family residence, the credit is 2.8 persons/home x \$80.28 per person x 20 years x 3.46% = \$155.55, which is rounded to \$156.

¹¹ For an explanation of why County funds are being spent within the City, see the first footnote in Arizona Auditor General's report at http://www.azauditor.gov/Reports/Counties/Pima/Financial_Audits/County-Wide/Special_Review_1997_Transportation_Bond_Improvement_Plan/Pima_County_1997_Transportation_Bond_Improvement_Plan_Special%20Review.pdf

¹² See http://www.azauditor.gov/Reports/Counties/Pima/Financial_Audits/County-Wide/Specials/Pima_Cty_Gen_Obl_Bd_Programs_Jan_2013.pdf

Exhibit 7 Percent HURF Spent on Capital Projects

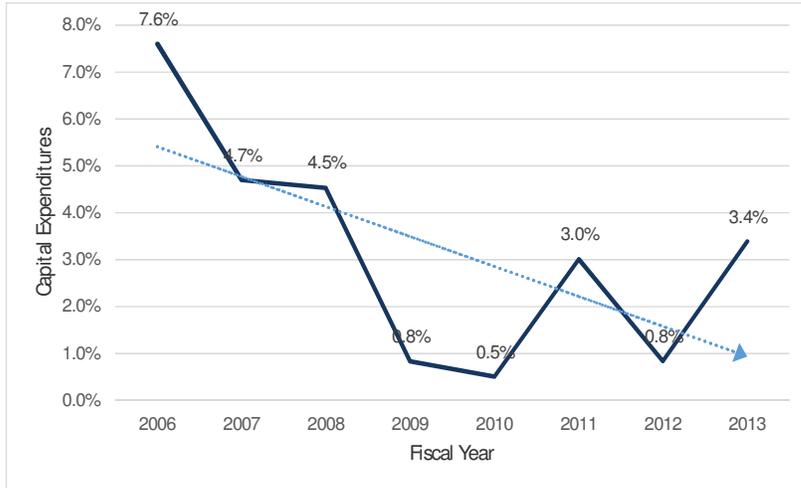


Exhibit 8 Summary of HURF Credit

Revenue Source	Creditable Amount (\$156 per Residential SU)	Applicability
Tucson Allocation of State Shared Revenues (HURF)	\$156 for a typical Unit (i.e., SFR) \$106 per condo/ attached unit \$94 per multi-family/ apartment/ mobile home	All Residential Development

Exhibit 9 Summary of RTA Sales Tax Credit

Land Use Category	Unit	Cost per Unit	Taxable Cost per Unit (65%)	RTA Sales Tax (@ 0.5%)	RTA Sales Tax Credit Factor	RTA Sales Tax Credit per Unit	RTA Sales Tax Credit per Unit, Rounded
Residential							
Single Family Detached	Dwelling Unit	\$237,572	\$154,421.80	\$772.11	42.2%	\$325.83	\$326.00
Condo/Townhouse	Dwelling Unit	\$111,701	\$72,605.65	\$363.03	42.2%	\$153.20	\$153.00
Manufactured Housings and Apartments	Dwelling Unit	\$111,701	\$72,605.65	\$363.03	42.2%	\$153.20	\$153.00
Non-Residential							
Retail	1000 Sq. Ft.	\$102,390	\$66,553.50	\$332.77	42.2%	\$140.43	\$140.00
Office	1000 Sq. Ft.	\$139,200	\$90,480.00	\$452.40	42.2%	\$190.91	\$191.00
Industrial	1000 Sq. Ft.	\$139,200	\$90,480.00	\$452.40	42.2%	\$190.91	\$191.00

RTA credit factor is the RTA plan cost estimated for the Development Fee funded arterial projects divided by the RTA plan revenue forecast.
 $\$886,043,350 / \$2,100,000,000 = 42.2\%$

Exhibit 10 Cost of LOSD Capacity and Fee Calculation

Cost per Lane Mile of capacity	\$1,400,000
Capacity per lane mile	8000 vehicles per day
Cost per VMT	\$175
<hr/>	
Example, single-family residential use	
Trip Rate	9.52 trips per day
Trip Length	9.5 miles
% Travel on Arterial System	60%
Fee per Dwelling Unit (DU)	\$9,496
Trips with residential origin/destination	65%
Adjust Fee per DU, residential	\$6,173
Less HURF Credit per residential	\$156
Less RTA Credit per DU	\$326
Net Fee per DU (Residential, rounded)	\$5,691
<hr/>	
Example, retail use	
Service Unit Weight Factor, retail	2.0
Fee per retail, prior to adjustments	\$18,992
Trips with nonresidential origin/destination	35%
Adjusted Fee per Building Unit (Retail, rounded)	\$6,647
Less RTA Credit	\$140
Net Fee per Building Unit (Retail, rounded)	\$6,507

Using a single-family residence as an example, the net fee per dwelling unit is calculated as follows: the capital cost per lane mile (\$1,400,000¹³) is divided by the capacity per lane mile in vehicles per day (8,000) to get a cost of \$175 per daily vehicle mile of arterial capacity. This number is then multiplied by the percent of primary trips per day (100% or 1), then multiplied by the trip generation rate (9.52 trips per day), then multiplied by the average trip length (9.5 miles), and then multiplied by the percent travel on the arterial/major collector system (60% or 0.60). The fee per dwelling unit obtained is \$9,496.

The next-to-final calculation allocates trips to the residential and non-residential sectors, which is split 65%/35%. Without such allocation, there would be a double accounting of travel demand and an over-collection of fees. Therefore, the net adjusted fee for residential development is \$9,496 x 0.65 = \$6,173. Finally, the HUFF credit of \$156 and RTA credit of \$326 are then subtracted to get the net fee per single family residence, which is rounded to \$5,691.

The fee for non-residential uses is calculated as follows, using the retail use as an example. The net fee per dwelling unit (i.e., for one single-family residential unit) is \$9,496. This is multiplied by the service unit weight factor for retail, which is 2.0 (see Exhibit 5), which yields \$18,992. This number is then multiplied by the percentage of trips allocated to non-residential uses, which is 35% or 0.35, to yield \$6,647 (rounded). Then, the RTA credit of \$140 is subtracted to yield a net fee of \$6,507.

Exhibit 11 shows the estimated fees and credits for the various land use categories. Exhibit 11 also shows the City's current fees, for comparison purposes. Exhibit 12 shows the expected revenues over the ten-year period. The expected revenues are obtained by multiplying the development fees times the number of units in each service area. The total estimated revenue is approximately \$245 million over the ten-year period, which is close to the estimated \$258 million in capacity needs identified in Exhibit 2.

Exhibit 11 Estimated Fees and Credits by Land Use Category

	SFR	Condo/TH	MFR/APT	Retail	Office	Industrial
Estimated Fee, W/O Deduction for Credits, per Dwelling Unit or Building Unit	\$6,172.53	\$4,320.77	\$3,703.52	\$6,647.34	\$3,988.40	\$997.10
HUFF Credit	\$156.00	\$109.20	\$93.60	\$0.00	\$0.00	\$0.00
RTA Credit	\$326.00	\$153.00	\$153.00	\$140.00	\$191.00	\$191.00
Estimated Fee, with Deduction for Credits, per Dwelling Unit or Building Unit	\$5,690.53	\$4,058.57	\$3,456.92	\$6,507.34	\$3,797.40	\$806.10
Estimated Fee, with Deduction for Credits, per Dwelling Unit or Building Unit,	\$5,691	\$4,059	\$3,457	\$6,507	\$3,797	\$806
Current Fee, per Unit	\$5,160	\$3,870	\$2,749	\$4,282	\$5,087	\$2,196

¹³ Unit costs are based on the PAG Regionally Significant Routes Study, which demonstrates a typical inclusive cost of up to \$2.5 million per lane-mile for major urban arterials. For further information, see <http://www.pagnet.org/documents/transportation/rsc/FSC-FinalReport-2014-01-28.pdf>.

Exhibit 12 Expected Revenue from New Development (10-Year Total)

		SFR	Condo/ TH	MFR/ APT	Retail	Office	Industrial	Total
Estimated Development Fees for Streets (Ten Year Total, 2014\$)	Central	\$ 14,825,055	\$ 4,050,882	\$ 10,975,975	\$ 8,979,660	\$ 12,104,836	\$ 460,226	\$ 51,396,634
	West	\$ 12,451,908	\$ 2,618,055	\$ 5,814,674	\$ 3,598,371	\$ 5,255,048	\$ 8,579,064	\$ 38,317,120
	East	\$ 22,832,292	\$ 3,429,865	\$ 3,960,710	\$ 5,088,474	\$ 9,238,101	\$ 305,474	\$ 44,454,906
	Southeast	\$ 53,370,198	\$ 5,609,538	\$ 8,009,869	\$ 11,517,390	\$ 19,789,964	\$ 6,580,184	\$ 104,877,143
	Southlands	\$ 1,081,290	\$ 235,422	\$ 176,307	\$ 800,361	\$ 2,517,411	\$ 699,786	\$ 5,480,577
	Total	\$ 104,960,743	\$ 15,943,752	\$ 28,537,535	\$ 29,984,256	\$ 48,905,360	\$ 16,994,734	\$ 244,526,380

□ LOSBY SERVICE AREA

As mentioned earlier, the existing system performance varies by service area. Continuing to provide the existing LOS in the West, Southeast, and Southlands areas, which is comparatively higher than in other areas of the city, would result in a significantly higher fee than the average fee calculated for LOSD performance, which is the typical standard for urban areas. Exhibit 13 shows the implications of maintaining the existing LOS in those areas, for a single-family residence. The estimates in the table are based on the \$1.4 million per lane-mile of arterial capacity at LOSD, factored by the ratio of arterial capacity at LOS C and LOS B as compared to LOSD. As indicated, fees would more than double in the West and Southeast areas, and triple in the Southlands area.

Exhibit 13 Fee by Benefit Area and LOS Standard

Service Area	Proposed Streets Fee per Unit with LOSD	Existing LOS	Estimated Fee per Unit With Current LOS	Increase per Unit
Central	\$5,691	D	\$5,691	\$0
West	\$5,691	C	\$12,715	\$7,024
East	\$5,691	D	\$5,691	\$0
Southeast	\$5,691	C	\$12,715	\$7,024
South Lands	\$5,691	B	\$18,437	\$12,746

Expanding this table to include the different land use types would result in the following fees by LOS standard shown in Exhibit 14.

Exhibit 14 Fee by Land Use Type and LOS Standard

		Fees by Land Use					
	Service Areas	SFR	Condo/ TH	MFR/ APT	Retail	Office	Industrial
LOSB	Southlands	\$18,437	\$13,150	\$11,230	\$21,084	\$12,304	\$2,612
LOSC	West, Southeast	\$12,715	\$9,069	\$7,745	\$14,541	\$8,485	\$1,801
LOSD	Central, East	\$5,691	\$4,059	\$3,457	\$6,507	\$3,797	\$806

□ **RECOMMENDED MAXIMUM FEES**

Adopting fees no greater than those shown in Exhibit 11 for LOS D performance in all service areas is recommended as the most reasonable and beneficial for the City of Tucson, current residents and the development community.

Once a unit fee(s) is established, it will be used to expand the land use categories and create a more detailed fee table for inclusion in the required Streets Fee Study.

Appendices

A - List of Preparers

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Marcos U. Esparza, P.E.

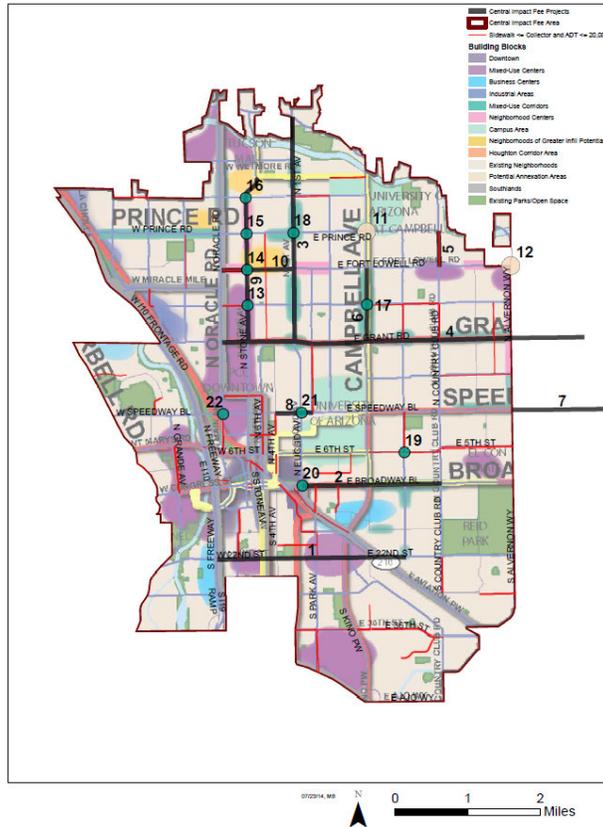
Psomas
Alejandro Angel, P.E., PTOE, Ph.D.
Darlene Danehy, P.E., PTOE, LEED AP

B - Panel on Streets Infrastructure

City of Tucson
Nicole Ewing-Gavin, AICP, Director, Office of Integrated Planning
Andrew McGovern, P.E., Administrator, TDOT
Roy Quaron, Finance Manager, TDOT
Lynne Birkinbine, Manager, Office of Integrated Planning
Joanne Hershenhorn, Project Coordinator, Office of Integrated Planning

C- Service Area Maps and Projects

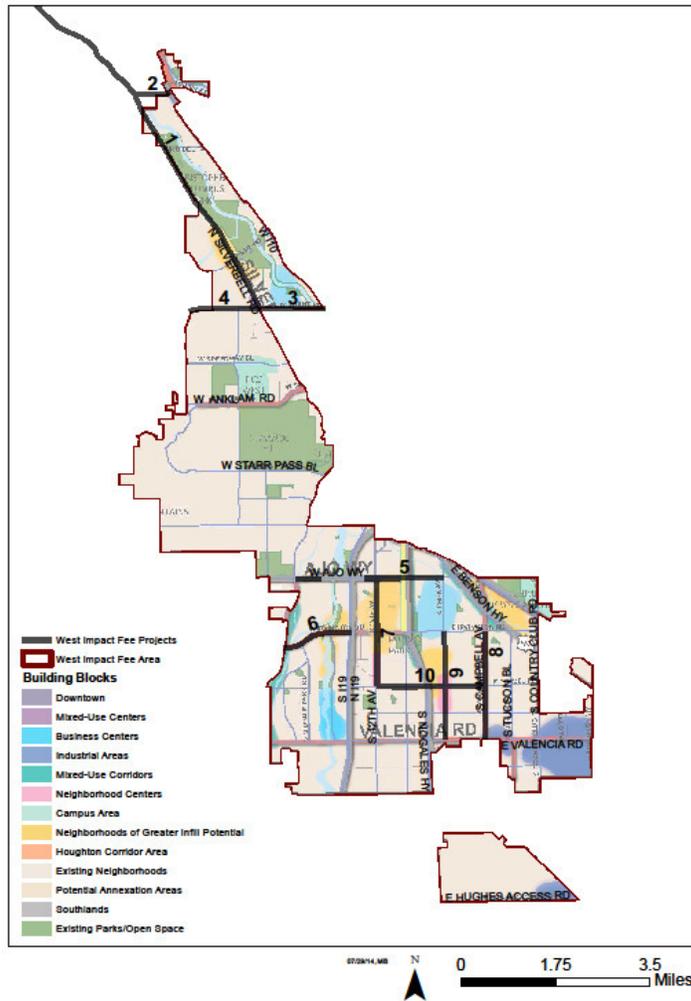
Central Impact Fee Area



Central Service Area Projects

Number	Project	Description
1	22nd from I-10 to Tucson	Widen from four to six lanes
2	Broadway from Euclid to Country Club	Widen from five to eight lanes
3	1st from River to Grant	Widen from four to six lanes
4	Grant from Orade to Swan	Widen from four to six lanes
5	Country Club from Ft. Lowell to Prince	Widen to five lanes, sidewalks
6	Campbell from Grant to Ft. Lowell	Access control, bus pullouts, sidewalks
7	Speedway from Alvernon to Wilmot	Sidewalks
8	Speedway from 4th to Park	Sidewalks
9	Stone from Grant to Limberlost	Sidewalks
10	R. Lowell from Euclid to Orade	Sidewalks
11	Campbell/Prince Intersection	Right turn lanes and bus pullouts, will require r/w acquisition
12	Alvernon/R. Lowell Intersection	Right turn lanes and bus pullouts
Bus Pullouts		
13	Stone at Genn	Northbound, Southbound
14	Stone at Ft. Lowell	Northbound, Southbound
15	Stone at Prince	Northbound, Southbound
16	Stone at Fdger	Northbound, Southbound
17	Campbell at Genn	Southbound, Westbound
18	Prince at 1st Ave	Eastbound, Westbound
19	6th St at Tucson Blvd	Eastbound, Westbound
20	Euclid at Broadway	Northbound
21	Euclid at Speedway	Northbound, Southbound
22	Speedway at Grande	Eastbound, Westbound

West Impact Fee Area



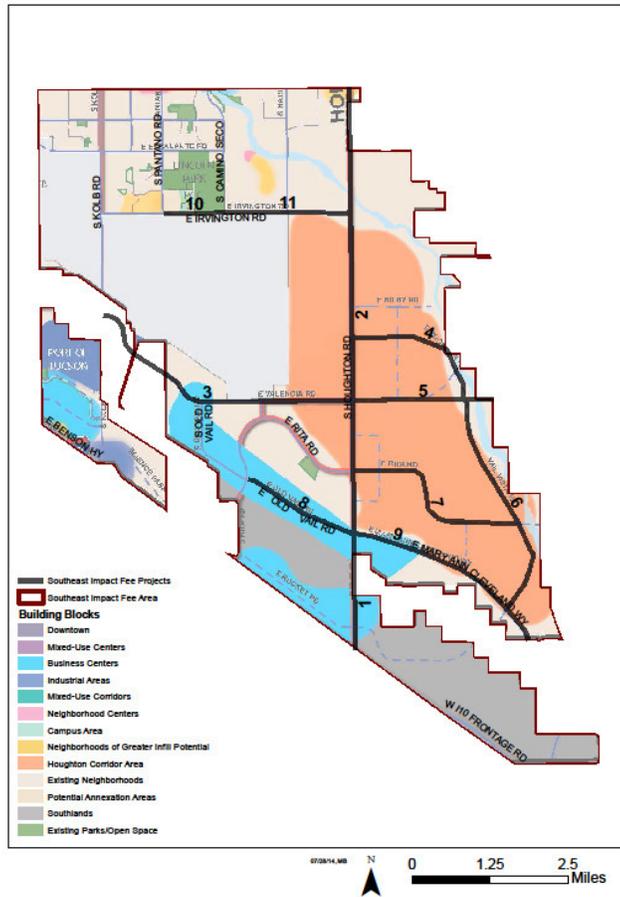
West Service Area Projects

Number	Project	Description
1	Silverbell from Ina to Grant	Widen from 2 to 4 lanes
2	Sunset from Silverbell to I-10	New 3-lane roadway
3	Grant from Silverbell to I-10	Widen from 4 to 6 lanes
4	Ironwood Hill from City Limits to Silverbell	4-lane divided roadway with curbs, sidewalks, bike lanes, streetlights and 1 Hawk
5	Ajo from Park to Mission (excluding Holiday Isle to 16th)	Right turn lanes, bus pullouts, sidewalks, access control
6	Irvington from Mission to I-19	Right turn lanes, bus pullouts, sidewalks, access control
7	12th Ave from Ajo to Drexel	Right turn lanes, bus pullouts, sidewalks, access control
8	Campbell from Irvington to Valencia	Right turn lanes, 2 Hawks, pedestrian refuges
9	Park from Irvington to Valencia	Bus pullouts
10	Drexel from 12th Avenue to Campbell Avenue	Curb, Sidewalks, and Bike Lanes

East Service Area Projects

Number	Project	Description
1	22nd from Camino Seco to Old Spanish Tr	Widen from 2 to 4 lanes
2	22nd from Old Spanish Tr to Houghton	Widen from 2 to 3 lanes
3	Broadway from Camino Seco to Houghton	Widen from 3 to 4 lanes
4	Houghton from Golf Links to Tanque Verde	Widen from 2 to 4 lanes
5	Speedway from Camino Seco to Houghton	Widen from 2-3 lanes to 4 lanes
6	Valencia from Alvernon to Kolb	Widen from 4 to 6 lanes
7	Camino Seco from Wrightstown to Speedway	Widen from 2 to 4 lanes
8	Pantano from 22nd to Golf Links	Sidewalks
9	22nd from Alvernon to Wilmot	Sidewalks
10	Wilmot from 22nd to Speedway	Sidewalks and 2 Hawks
11	Speedway from Alvernon to Wilmot	Sidewalks with ROW acquisition
12	Rosemont from Speedway to Broadway	Right turn lanes, sidewalks, and 2 Hawks
13	Pima from Alvernon to Swan	Sidewalks
14	Speedway/ Craycroft Intersection	
15	Speedway/ Swan Intersection	
16	Golf Links/ Swan Intersection	
17	River/ Craycroft Intersection	
18	Broadway/ Pantano Intersection	
Bus Pullouts		
19	5th St. at Craycroft	Westbound
20	29th at Swan	Eastbound, Westbound
21	5th St. at Swan	Northbound, Southbound, Eastbound, Westbound
22	5th St. at Wilmot	Northbound, Westbound
23	Pima at Craycroft	Eastbound, Westbound
24	Pima at Swan	Eastbound, Westbound
25	Pima at Alvernon	Eastbound, Westbound
26	Grant at Beverly	Eastbound, Westbound
27	Golf Links at Pantano Rd.	Eastbound, Westbound
28	Tanque Verde at Sabino Canyon	Eastbound

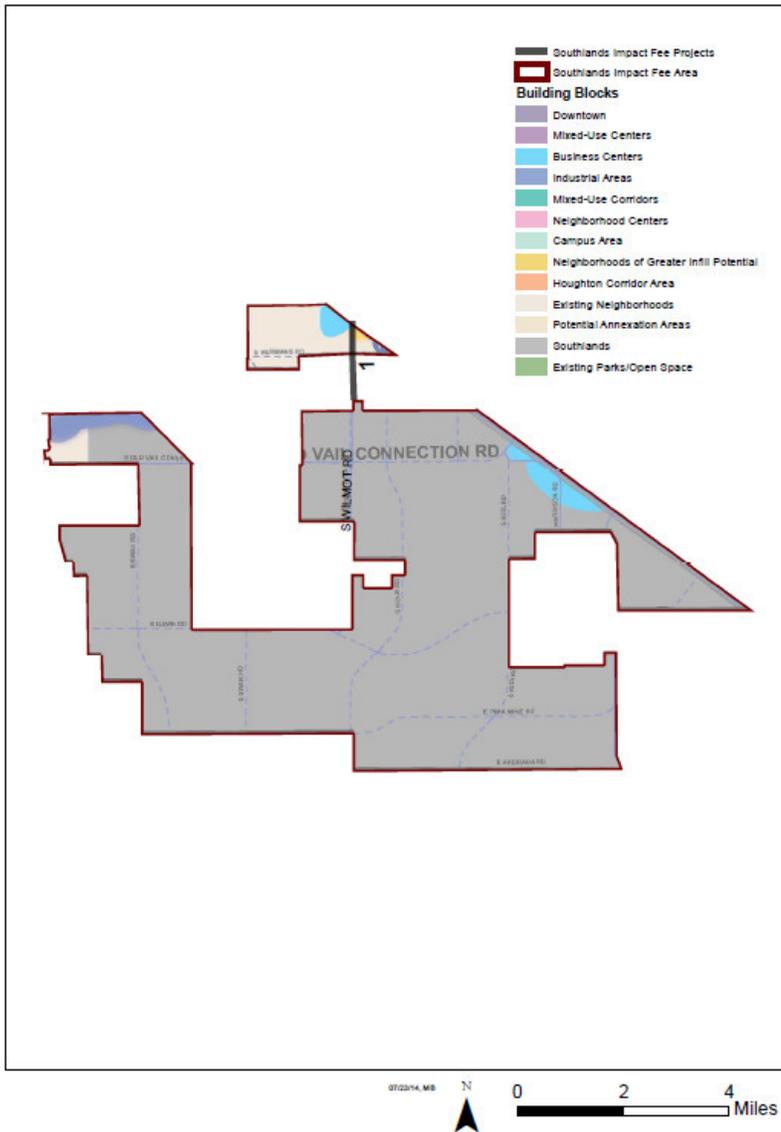
Southeast Impact Fee Area



Southeast Service Area Projects

Number	Project	Description
1	Houghton from I-10 to Old Vail Rd	Widen from 2lanes to 4
2	Houghton from Old Vail Rd to Golf Links Rd	Widen from 2lanes to 6
3	Valencia from Kolb to Houghton	Widen from 2lanes to 6
4	Poorman Rd from Houghton to Valencia	New 4-lane roadway
5	Valencia from Houghton to City Limits	New 4-lane roadway
6	Val Vista from Valencia to Mary Ann Cleveland	New 4-lane roadway
7	Rita Rd from Houghton to Val Vista	New 4-lane roadway
8	Old Vail Rd from Rita Rd to Houghton	Widen from 2lanes to 4
9	Mary Ann Cleveland from Houghton to City Limits	Widen from 2lanes to 4
10	Irvington from Pantano to Camino Seco	Widen from 2lanes to 4
11	Irvington from Camino Seco to Houghton	Widen from 2lanes to 4

Southlands Impact Fee Area



Southlands Service Area Project

Number	Project	Description
1	Wilmot from I-10 to End of Road (1.5 Miles)	Widen from 2 to 4 lanes

D - Proposed Bus Pullout Locations (Preliminary, 39 Pullouts)

		Direction of Travel			
		Northbound	Southbound	Eastbound	Westbound
CENTRAL SERVICE AREA	Stone at Glenn	X	X		
	Stone at Ft. Lowell	X	X		
	Stone at Prince	X	X		
	Stone at Roger	X	X		
	Campbell at Glenn		X		X
	Prince at First Ave			X	X
	6th Street at Tucson Blvd			X	X
	Euclid at Broadway	X			
	Euclid at Speedway	X	X		
	Speedway at Grande			X	X

EAST SERVICE AREA	5th Street at Craycroft				X
	29th at Swan			X	X
	5th Street at Swan	X	X	X	X
	5th Street at Wilmot	X			X
	Pima at Craycroft			X	X
	Pima at Swan			X	X
	Pima at Alvernon			X	X
	Grant at Beverly			X	X
	Golf Links at Pantano Road			X	X
	Tanque Verde at Sabino Canyon			X	

