- A. The Purpose of a Frequent Transit Network (FTN) Policy is to support the long-term goal of developing and maintaining a frequent service grid as a basis for providing high quality transit services in the densely populated areas of Tucson where transit demand is strong.
 - 1. A FTN in the densely populated areas makes most efficient use of the community's resources by making transit a truly viable option for a large portion of the population.
 - 2. The first phase of the FTN allows for the riders to experience the enhanced transit opportunity, and then support its future improvement and growth. Routes currently in the FTN must remain at FTN service levels for a minimum for four years in order for the network's full impact on land use and therefore on transit demand to unfold.
 - 3. New routes may be added if they meet the criteria listed in Appendix D. Routes may be considered for inclusion based on other factors such as increased density in underserved areas or the need to improve connections between existing FTN routes.
- B. Criteria for Routes within the FTN.
 - 1. To qualify for inclusion in the FTN based current performance, a route must meet the following Performance Measures:
 - a. The route has had a regular occurrence and/or consistent overcrowding throughout the day on weekdays.
 - b.The route runs on a corridor of the city with at least one of the following characteristics:
 - High traffic volumes that exceed 20,000 vehicles : Source: PAG Traffic Count Map:

http://www.pagnet.org/documents/rdc/gis/maptrafficcount2012.pdf

- Strong land-use mix of commercial, office, public services, retail and residential (determined via land-use maps) Source: <u>https://www.tucsonaz.gov/files/integrated-</u> <u>planning/Plan_Tucson_Complete_Doc_11-13-13.pdf</u> (11/13/13, Chapter 3, Exhibit LT-3, Existing Land Uses)
- 3. The route serves major trip generators.
- c. The route has a grade of at least "M" in 3 of 5 "Performance Indicators" described in Appendix D & E.
- 2. Requirements and process for changes to the FTN
 - a. All routes are to be reviewed annually according to Performance Indicators listed in Appendix E.
 - b.Routes Graded with "M" or better in 3 of 5 Performance Indicators are deemed to be meeting expectations.

Exhibit 1 to Resolution 22737

- c.Routes not meeting expectations will be considered "under review" and will be given three years to meet expectations.
 - 1. After three years of not meeting expectations, routes will either be augmented to improve the route or extended one more year.
 - 2. If still failing to meet FTN expectations after four years, the route may be reduced in frequency to reflect demand.
- d.Routes not currently in the FTN can transition to the FTN after the annual review if they meet the required criteria.
- C. Public Outreach for the FTN.
 - 1. The current FTN will be marketed to the public as the routes that meet or exceed the following service objectives:

a.Frequency: Interval of 15 minutes or less between buses.b.Hours of Service: 6:00 a.m. to 6:00 p.m. Monday through Friday.

Note: Routes in the FTN may operate at varying frequencies outside the 6 am to 6 pm hours of service and on weekends.

Appendix A: Criteria for Expanding Frequency and Span

The objective of the FTN is to create a cost-effective, high-ridership fixed-route transit network by improving frequency and span of service. Analysis of the current FTN (Appendix B) reveals how FTN routes can be viewed in three different tiers, based on the following features, and how incremental improvements can be made:

- 1. Weekday daytime service: Features 1 & 2.
- 2. Weekday evening service; Feature 3 & 4.
- 3. Saturday daytime service: Features 5, 6 & 7.
- 4. Saturday evening service: Features 8, 9 & 10.
- 5. Sunday daytime service: Features 11, 12 & 13.
- 6. Sunday evening service: Features 14, 15 & 16.

In the interest of developing the overall utility of the routes in the FTN and thus of the whole transit network, evening and weekend service is emphasized alongside Monday through Friday daytime frequency in defining the tiers of frequent service.

This approach leaves room to upgrade a route within the FTN by improving its evening or weekend frequency or span, as well as to expand the FTN, either by upgrading existing routes to FTN status or by extending the FTN service level area covered by existing FTN routes.

Appendix B: FTN Tier Levels and Features

Tier One routes have 7 or more features Tier Two routes have 4 to 6 features Tier Three routes have 1 to 3 features	FTN Route Number:													
FTN Features:	4	6	7	8	9	11	12	15	16	18	34	700		
1. Weekday, daytime service, from 6:00 am to 6:00 pm, at 15 minute frequency.	x	x	x	x	x	x	x	x	x	x	x	x		
2. Weekday, daytime service, from 6:00 am to 6:00 pm, with better than 15 minute frequency.	x			x					x	x		x		
3. Weekday, evening service, from 6:00 pm to 12:00 am, at 30 minute frequency.	x			x			x		x	x		x		
 Weekday, evening service, from 6:00 pm to 12:00 am, at 15 minute frequency. 														
5. Saturday, daytime service, from 8:00 am to 4:00 pm, at 30 minute frequency.	x	x		x		x	x		x	x		x		
 Saturday, daytime service, from 8:00 am to 4:00 pm, better than 30 minute frequency. 				x					x	x		x		
 Saturday, daytime service, from 8:00 am to 4:00 pm, at 15 minute frequency. 														
 Saturday, evening service, from 4:00 pm to 10:00 pm, at 30 minute frequency. 														
9. Saturday, evening service, from 4:00 pm to 10:00 pm, better than 30 minute frequency.														
 Saturday, evening service, from 4:00 pm to 10:00 pm, at 15 minute frequency. 												x		
 Sunday, daytime service, from 8:00 am to 4:00 pm at 30 minute frequency. 	x			x		х	x		x	x		x		
12. Sunday, daytime service, from 8:00 am to 4:00 pm, better than 30 minute frequency.				x					x	x		x		
 Sunday, daytime service, from 8:00 am to 4:00 pm, at 15 minute frequency. 														
14. Sunday, evening service, from 4:00 pm to 8:00 pm, at 30 minute frequency.	x			x		x	x		x	x		x		
15. Sunday, evening service, from 4:00 pm to 8:00 pm, better than 30 minute frequency.														
 Sunday, evening service, from 4:00 pm to 0 pm, at 15 minute frequency. 														
Total 'X'	б	2	1	8	1	4	5	1	8	8	1	8		

Appendix C: FTN Tier Levels and Features Explained

- 1. Tier One FTN route offers the following service level:
 - a. Weekday frequency of 15 min or better from at least 6:00 am to 6:00 pm; 30 min or better from 5:00 am.
 - b. Weekday evening frequency of 30 min or better until midnight (i.e., two scheduled bus runs in the 11:00 pm hour).
 - c. Saturday frequency of 15 min or better from at least 8:00 am to 5:00 pm (i.e., four scheduled bus runs in the 4:00 pm hour); 30 min or better from at least 6:00 am to 8:00 pm.
 - d. Sunday frequency of 20 min or better from at least 8:00 am to 5:00 pm (i.e., three scheduled bus runs in the 6:00 pm hour); 30 min or better from at least 6:00 am to 8:00 pm.

Currently the criteria for Tier One are met or exceeded by Routes 8 (Broadway), 16 (Oracle/Ina), 18 (S. 6th Avenue), and 700 (Sun Link Streetcar).

- 2. Tier Two FTN route offers the following service level:
 - a. Weekday frequency of 15 min or better from at least 6:00 am to 6:00 pm
 - b. Weekday evening frequency of 30 min or better until at least 7:00 pm.Saturday frequency of 30 min or better from at least 6:00 am to 8:00 pm.
 - c. Sunday frequency of 30 min or better from at least 7:00 am to 8:00 pm.

Currently the criteria for Tier Two are met or exceeded by Routes 4 (Speedway), 11 (Alvernon), and 12 (10th/12th Avenue) in addition to the Tier One routes.

- 3. Tier Three FTN route offers the following service level, which is the minimum service level for inclusion in the Frequent Transit Network:
 - a. Weekday frequency of 15 min or better from at least 6:00 am to 6:00 pm; 30 min or better until at least 7:00 pm.
 - b. Weekday evening frequency of 30 min or better until at least 7:00 pm.
 - c. Saturday frequency of 60 min or better from at least 7:00 am to 8:00 pm.
 - d. Sunday frequency of 60 min or better from at least 7:00 am to 8:00 pm.

Currently the criteria for Tier Three are met or exceeded by Routes 6 (Euclid/N. 1st Avenue), 7 (22nd Street), 9 (Grant), 15 (Campbell), and 34 (/Craycroft/ Ft. Lowell) in addition to the Tier One and Tier Two routes.

City of Tucson Frequent Transit Network Policy

February 6, 2017

Appendix D: FTN System Performance Metrics

			F	requent	Transit N	letwork	(Sys	tem Pe	forr	nai	nce N	1etri	cs				
	E	xisting F	requent	Transit N	letwork	Routes	- 15	Minute	s or	Gre	eater	· - Y	TD Nov	emb	er 2	2015	
		Total	Total	Passenger	Total						nance I						
Route	Passengers	Hours	Miles	Revenue	Cost	-		Pass/Hour			-				Sub		
4	112,844	4,112	52,336	\$ 56,635		2.16	М	27.44	М	\$	2.84	М	17.7%		\$	2.34	М
8	126,000	4,159	51,880	62,045	321,193	2.43	М	30.30	М	\$	2.55	М	19.3%		\$	2.06	M
11	99,643	2,919	37,321	48,682	227,799	2.67	Α	34.14	Α	\$	2.29	Α	21.4%		\$	1.80	Α
12	44,704	1,840	19,063	18,790	131,928	2.35	М	24.30	М	\$	2.95	М	14.2%		\$	2.53	м
16	114,186	3,827	43,681	57,717	284,933	2.61	М	29.84	М	\$	2.50	М	20.3%		\$	1.99	M
18	106,922	2,421	23,866	42,439	170,404	4.48	Α	44.17	Α	\$	1.59	Α	24.9%		\$	1.20	А
	604,299	19,278	228,147	286,307	1,456,562	2.65		31.35		\$	2.41		19.7%		\$	1.94	
Base po	rtions of the routes				-			es 8, 16 and 18									
				uent Tra		vork Ro	outes	- Curre						Gre	ate	r	
		Total	Total	Passenger	Total						nance I						
Route	Passengers	Hours	Miles	Revenue	Cost		Grade	Pass/Hour			· .	Grade			Sub		Grade
3	68,712	3,096	43,482		\$ 251,827	1.58	U	22.19	U	\$	3.66	U	13.5%		\$	3.17	U
6	48,935	1,659	15,415	24,541	114,297	3.17	А	29.51	М	\$	2.34	Α	21.5%		\$	1.83	А
7	63,330	2,253	31,916	32,163	183,944	1.98	U	28.11	М	\$	2.90	м	17.5%		\$	2.40	М
9	51,790	2,039	23,644	24,794	152,782	2.19	М	25.40	М	\$	2.95	М	16.2%		\$	2.47	М
15	28,414	1,744	20,023	14,025	130,178	1.42	U	16.29	U	\$	4.58	U	10.8%		\$	4.09	U
34	48,213	1,952	22,681	25,499	146,373	2.13	М	24.70	М	\$	3.04	М	17.4%		\$	2.51	M
	309,395	12,742	157,161	155,015	979,401	1.97		24.28			3.17		15.8%			2.66	
	Bas	ed on the grades	as defined belov	v and the frequen	t route definitior	n also shown b	elow rou	te six would be	e the nex	t can	didate to	move to	a frequent ne	etwork			
		Ro	ute 19 -	For Cons	ideration	n (Exam	ple (of appli	catio	on e	of me	etric	s)				
		Tota	Total	For Cons Passenger	ideration Total				Per	forn	nance I	indicat	ors				
Route	Passengers	Total Hours	Total Miles	Passenger Revenue	Total Cost	Pass/Mile		Pass/Hour	Per	forn	nance I t/Pass	indicat	Recovery		Sub		Grade
Route 19	Passengers 32,712	Total Hours 1,001	Total Miles 9,464	Passenger Revenue 16,155	Total Cost 69,410	Pass/Mile 3.46	Grade	Pass/Hour 32.68	Per Grade A	forn Cos	nance I t/Pass 2.12	Indicat Grade A	Recovery 23.3%		Sub	0/Pass 1.63	Grade A
		Total Hours 1,001	Total Miles 9,464	Passenger Revenue 16,155 andidate based o	Total Cost 69,410 on grades but n	Pass/Mile 3.46 ot on the def	Grade A inition o	Pass/Hour 32.68 f High freque	Per Grade A ncy base	forn Cos	nance I t/Pass 2.12	Indicat Grade A	Recovery 23.3%		Sub		
		Total Hours 1,001 Route	Total Miles 9,464 19 would be c	Passenger Revenue 16,155 andidate based o	Total Cost 69,410 on grades but n Remaini	Pass/Mile 3.46 ot on the def	Grade A inition o	Pass/Hour 32.68 f High freque	Per Grade A ncy bas	forn Cost ed on	nance I t/Pass 2.12 n the den	Indicat Grade A nand me	Recovery 23.3%		Sub		
19	32,712	Total Hours 1,001 Route Total	Total Miles 9,464 19 would be c Total	Passenger Revenue 16,155 andidate based o Passenger	Total Cost 69,410 on grades but n Remaini Total	Pass/Mile 3.46 ot on the def ng Sun	Grade A inition o	Pass/Hour 32.68 f High freque Routes	Per Grade A ncy bas S Per	forn Cost ed on forn	nance I t/Pass 2.12 n the den nance I	Indicat Grade A nand mo Indicat	Recovery 23.3% etric	A		1.63	A
19 Route	32,712 Passengers	Total Hours 1,001 Route Total Hours	Total Miles 9,464 19 would be c Total Miles	Passenger Revenue 16,155 andidate based o Passenger Revenue	Total Cost 69,410 on grades but n Remaini Total Cost	Pass/Mile 3.46 ot on the def ng Sun Pass/Mile	Grade A inition o Tran Grade	Pass/Hour 32.68 f High freque Routes Pass/Hour	Per Grade A ncy base S Per Grade	forn Cosi ed on forn Cosi	nance I t/Pass 2.12 n the den nance I t/Pass	Indicat Grade A nand mo Indicat Grade	etric Recovery 23.3% etric cors Recovery	A Grade		1.63	A Grade
19 Route	32,712 Passengers 37,512	Total Hours 1,001 Route Total Hours 1,540	Total Miles 9,464 19 would be c Total Miles 18,890	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747	Total Cost 69,410 on grades but n Remaini Total Cost 118,091	Pass/Mile 3.46 ot on the def ng Sun Pass/Mile 1.99	Grade A inition o Tran Grade	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36	Per Grade A ncy bas S Per Grade M	forn Cost ed on forn Cost \$	nance I t/Pass 2.12 the den nance I t/Pass 3.15	ndicat Grade A nand mo ndicat Grade M	ors Recovery 23.3% etric cors Recovery 16.7%	A Grade M	Sub \$	1.63 D/Pass 2.62	A Grade U
19 Route 1 2	32,712 Passengers 37,512 24,740	Total Hours 1,001 Route Total Hours 1,540 1,453	Total Miles 9,464 19 would be c Total Miles 18,890 19,580	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676	Total Cost 69,410 on grades but n Remaini Total Cost 118,091 116,010	Pass/Mile 3.46 ot on the def ng Sun Pass/Mile 1.99 1.26	Grade A inition o Tran Grade U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03	Per Grade A ncy base S Per Grade M U	forn Cosi ed on forn Cosi \$ \$	nance I t/Pass 2.12 the den nance I t/Pass 3.15 4.69	Indicat Grade A nand mo Indicat Grade M U	etric Recovery 23.3% etric cors Recovery 16.7% 10.9%	A Grade M U	Sub \$ \$	1.63 D/Pass 2.62 4.18	A Grade U U
19 Route 1 2 5	32,712 Passengers 37,512 24,740 21,760	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403	Total Miles 9,464 19 would be co Total Miles 18,890 19,580 19,164	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581	Total Cost 69,410 on grades but n Remaini Total Cost 118,091 116,010 112,685	Pass/Mile 3.46 ot on the def ng Sun Pass/Mile 1.99 1.26 1.14	Grade A inition o Tran Grade U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51	Per Grade A ncy bas S Per Grade M U U U	forn Cost ed on forn Cost \$ \$ \$	nance I t/Pass 2.12 the den nance I t/Pass 3.15 4.69 5.18	indicat Grade A nand mo indicat Grade M U U U	etric Recovery 23.3% etric cors Recovery 16.7% 10.9% 9.4%	A Grade M U U	Sub \$ \$ \$	1.63 D/Pass 2.62 4.18 4.69	A Grade U U U
19 Route 1 2 5 10	32,712 Passengers 37,512 24,740 21,760 29,085	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969	Pass/Mile 3.46 ot on the def ng Sun Pass/Mile 1.99 1.26 1.14 2.03	Grade A inition o Tran Grade U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21	Per Grade A ncy bass Per Grade M U U U U M	forn Cost ed on forn Cost \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den nance I t/Pass 3.15 4.69 5.18 3.06	indicat Grade A nand me indicat Grade M U U U U M	Recovery 23.3% etric 23.3% ors Recovery 16.7% 10.9% 9.4% 16.7%	A Grade M U U M	Sub \$ \$	1.63 D/Pass 2.62 4.18 4.69 2.55	A Grade U U U M
19 Route 1 2 5 10 17	32,712 Passengers 37,512 24,740 21,760 29,085 71,730	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662	Total Cost 69,410 on grades but n Remaini Total Cost 118,091 116,010 112,685 88,969 220,478	Pass/Mile 3.46 ot on the def ng Sun Pass/Mile 1.99 1.26 1.14 2.03 1.88	Grade A inition o Tran Grade U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51	Per Grade A ncy base S Per Grade M U U U M M	forn Cost ed on forn Cost \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den nance I t/Pass 3.15 4.69 5.18 3.06 3.07	indicat Grade A mand me indicat Grade M U U U M M	ors Recovery 23.3% etric ors Recovery 16.7% 10.9% 9.4% 16.7% 18.0%	A Grade M U U M M	Sub \$ \$ \$ \$	1.63 D/Pass 2.62 4.18 4.69 2.55 2.52	A Grade U U U M M
19 Route 1 2 5 10 17 20	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969 220,478 47,163	Pass/Mile 3.46 ot on the def ng Sun 1.99 1.26 1.14 2.03 1.88 1.11	Grade A inition o Tran Grade U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13	Per Grade A ncy base S Per Grade M U U U M M M U	forn Cosi ed on forn Cosi \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 n the den nance I t/Pass 3.15 4.69 5.18 3.06 3.07 5.51	indicat Grade A mand me indicat Grade M U U U M M M U U	Recovery 23.3% etric cors Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3%	A Grade M U U M M U U	Sub \$ \$ \$ \$ \$ \$	1.63 D/Pass 2.62 4.18 4.69 2.55 2.52 5.00	A Grade U U U M M U
19 Route 1 2 5 10 17 20 21	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,403 1,154 2,706 606 868	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699 10,233	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479	Pass/Mile 3.46 ot on the def ng Sun 1.99 1.26 1.14 2.03 1.88 1.11 1.41	Grade A inition o Tran Grade U U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65	Per Grade A ncy bas S Per Grade M U U U M M U U U U	forn Cosi forn Cosi \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 n the den nance I t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53	indicat Grade A nand m indicat Grade M U U M M U U U U U U U U	Recovery 23.3% etric cors Recovery 16.7% 16.7% 16.7% 18.0% 9.3% 9.8%	A Grade M U U M M U U U U U U	Sub \$ \$ \$ \$ \$ \$ \$	1.63 D/Pass 2.62 4.18 4.69 2.55 2.52 5.00 4.09	A Grade U U M M U U U
19 Route 1 2 5 10 17 20 21 22	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606 868 773	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699 10,233 9,982	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566	Pass/Mile 3.46 ot on the def ng Sun 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.41	Grade A inition o Tran Grade U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48	Per Grade A ncy bas S Per Grade M U U U M M U U U U U U	forn Cosi ed on forn Cosi \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den nance I t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24	indicat Grade A anand mo indicat Grade M U U U M M U U U U U U U	Recovery 23.3% etric cors Recovery 16.7% 16.7% 16.7% 18.0% 9.3% 9.8% 10.7%	A Grade M U U U M M U U U U	sub \$ \$ \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79	A Grade U U U M M U U U U U U U U
19 Route 1 2 5 10 0 17 20 21 22 23	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278 33,265	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,403 1,154 2,706 606 868 773 1,614	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,580 19,164 14,342 38,157 7,699 10,233 9,982 19,401	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489 16,963	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566 122,744	Pass/Mile 3.46 ot on the def ng Sun 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.43 1.71	Grade A inition o Tran Grade U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48 20.61	Per Grade A ncy bass 5 Per Grade M U U U U U U U U U U	forn Cosi ed on forn Cosi \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24 3.69	Indicat Grade A anand me Indicat Grade M U U U U U U U U U U U U	Recovery 23.3% etric cors Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3% 9.8% 10.7% 13.8%	A Grade M U U U M U U U U U U U	Sub \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79 3.18	A Grade U U U M M U U U U U U
19 Route 1 2 5 10 17 20 21 22 23 24	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278 33,265 14,654	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606 868 773 1,614 586	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699 10,233 9,982 19,401 7,155	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489 16,963 7,721	Total Cost 69,410 on grades but n Remaini Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566 122,744 44,848	Pass/Mile 3.46 ot on the def ng Sun 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.43 1.71 2.05	Grade A inition o Tran Grade U U U U U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48 20.61 25.01	Per Grade A ncy bass Per Grade M U U U U U U U U U U U U U U U U U U	forn Cosi ed on forn Cosi \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24 3.69 3.06	indicat Grade A anand me indicat Grade M U U U U U U U U U U U U U U U U U U	Recovery 23.3% etric cors Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3% 9.8% 10.7% 13.8% 17.2%	A Grade M U U U U U U U U U U U U U U U U U U	sub \$ \$ \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79 3.18 2.53	A Grade U U U M M U U U U U U M
19 Route 1 2 5 10 17 20 21 22 23 24 25	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278 33,265 14,654 43,098	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606 868 773 1,614 586 1,708	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699 10,233 9,982 19,401 7,155 21,058	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489 16,963 7,721 22,132	Total Cost 69,410 on grades but n Remaini Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566 122,744 44,848 131,241	Pass/Mile 3.46 ot on the def ng Sun 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.43 1.71 2.05 2.05	Grade A inition o Tran Grade U U U U U U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48 20.61 25.01 25.24	Per Grade A ncy bass Per Grade M U U U U U U U U U U U U U U U U U U	forn Cost ed on forn \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24 3.69 3.06 3.05	Indicat Grade A mand me Indicat Grade M U U U U U U U U U U U U U U U U U U	Recovery 23.3% etric cors Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3% 9.8% 10.7% 13.8% 17.2% 16.9%	A Grade M U U U U U U U U U U U U U U U U U U	Sul \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79 3.18 2.53 2.53	A Grade U U U M M U U U U U U U U M M
19 Route 1 2 5 10 17 20 21 22 23 24 25 26	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278 33,265 14,654 43,098 22,294	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606 868 773 1,614 586 1,708 976	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699 10,233 9,982 19,401 7,155 21,058 16,255	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489 16,963 7,721 22,132 12,442	Total Cost 69,410 on grades but n Remaini Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566 122,744 44,848 131,241 86,025	Pass/Mile 3.46 ot on the def ng Sun 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.43 1.71 2.05 2.05 1.37	Grade A inition o Tran Grade U U U U U U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48 20.61 25.01 25.24 22.85	Per Grade A ncy bass Per Grade M U U U U U U U U U U U U U U U U U U	form Cost ed on form Cost \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24 3.69 3.06 3.05 3.86	indicat Grade A anand me indicat Grade M U U U U U U U U U U U U U U U U U U	Recovery 23.3% etric cors Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3% 9.8% 10.7% 13.8% 17.2% 16.9% 14.5%	A Grade M U U M M U U U U U U U U U U U U U U	Sul \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79 3.18 2.53 2.53 3.30	A Grade U U U M M U U U U U U U U U U
19 Route 1 2 5 10 17 20 21 22 23 24 25 26 27	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278 33,265 14,654 43,098 22,294 28,891	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606 868 773 1,614 586 1,708	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699 10,233 9,982 19,401 7,155 21,058	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489 16,963 7,721 22,132 12,442 15,140	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566 122,744 44,848 131,241 86,025 163,803	Pass/Mile 3.46 ot on the def ng Sun 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.43 1.71 2.05 2.05	Grade A inition o Tran Grade U U U U U U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48 20.61 25.24 22.85 15.16	Per Grade A ncy base S Per Grade M U U U U U U U U U U U U U U U U U U	forn Cost ed on forn \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24 3.69 3.06 3.05 3.86 5.67	Indicat Grade A mand me Indicat Grade M U U U U U U U U U U U U U U U U U U	Recovery 23.3% etric cors Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3% 10.7% 13.8% 17.2% 16.9% 14.5% 9.2%	A Grade M U U U U U U U U U U U U U U U U U U	Sul \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79 3.18 2.53 2.53 3.30 5.15	A Grade U U U M M U U U U U U M M
19 Route 1 2 5 10 17 20 21 22 23 24 25 26 27 29	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278 33,265 14,654 43,098 22,294 28,891 37,129	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606 868 773 1,614 586 1,708 976 1,906 1,566	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699 10,233 9,982 19,401 7,155 21,058 16,255 30,135 20,030	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489 16,963 7,721 22,132 12,442 15,140 21,771	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566 122,744 44,848 131,241 86,025 163,803 122,239	Pass/Mile 3.46 ot on the def ng Sun Pass/Mile 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.43 1.71 2.05 2.05 1.37 0.96 1.85	Grade A inition o Tran Grade U U U U U U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48 20.61 25.01 25.01 25.01 25.24 22.85 15.16 23.71	Per Grade A ncy bass Per Grade M U U U U U U U U U U U U U U U U U U	form Cost ed on form Cost \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24 3.06 3.05 3.86 5.67 3.29	indicat Grade A anand me indicat Grade M U U U U U U U U U U U U U U U U U U	Recovery 23.3% etric Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3% 9.8% 10.7% 13.8% 10.7% 13.8% 10.7% 13.8% 10.7% 14.5% 9.2% 17.8%	A Grade M U U M M U U U U U U U U U U U U U U	Sul \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79 3.79 3.18 2.53 3.30 5.15 2.71	A Grade U U U M M U U U U U U U U U U U
19 Route 1 2 5 10 17 20 21 22 23 24 25 26 27	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278 33,265 14,654 43,098 22,294 28,891	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606 868 773 1,614 586 1,708 976 1,906	Total Miles 9,464 19 would be c Total 18,890 19,580 19,164 14,342 38,157 7,699 10,233 9,982 19,401 7,155 21,058 16,255 30,135	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489 16,963 7,721 22,132 12,442 15,140	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566 122,744 44,848 131,241 86,025 163,803	Pass/Mile 3.46 ot on the def ng Sun 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.43 1.71 2.05 2.05 1.37 0.96	Grade A inition o Tran Grade U U U U U U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48 20.61 25.24 22.85 15.16	Per Grade A ncy base S Per Grade M U U U U U U U U U U U U U U U U U U	form Cost ed on form Cost \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24 3.69 3.06 3.05 3.86 5.67	indicat Grade A nand me indicat Grade M U U U U U U U U U U U U U U U U U U	Recovery 23.3% etric cors Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3% 10.7% 13.8% 17.2% 16.9% 14.5% 9.2%	A Grade M U U M M U U U U U U U U U U U U U U	Sul \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79 3.18 2.53 2.53 3.30 5.15	A Grade U U U M M U U U U U U U U U U U U U U
19 Route 1 2 5 10 17 20 21 22 23 24 25 26 27 29	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278 33,265 14,654 43,098 22,294 28,891 37,129 15,957	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606 868 773 1,614 586 1,708 976 1,906 1,566	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699 10,233 9,982 19,401 7,155 21,058 16,255 30,135 20,030	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489 16,963 7,721 22,132 12,442 15,140 21,771 9,077 4,364	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566 122,744 44,848 131,241 86,025 163,803 122,239	Pass/Mile 3.46 ot on the def ng Sun Pass/Mile 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.43 1.71 2.05 2.05 1.37 0.96 1.85	Grade A inition o Tran Grade U U U U U U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48 20.61 25.01 25.01 25.01 25.24 22.85 15.16 23.71	Per Grade A ncy base S Per Grade M U U U U U U U U U U U U U M M	forn Cosi ed on forn Cosi \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24 3.06 3.05 3.86 5.67 3.29	indicat Grade A nand mo indicat Grade M U U U U U U U U U U U U U U U U U U	Recovery 23.3% etric Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3% 9.8% 10.7% 13.8% 10.7% 13.8% 10.7% 13.8% 10.7% 14.5% 9.2% 17.8%	A Grade M U U M M U U U U U U U U U U U M M	Sub \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79 3.79 3.18 2.53 3.30 5.15 2.71	A Grade U U U U M M U U U U U U U U U U U U U
19 Route 1 2 5 10 17 20 21 22 23 24 25 26 27 29 37	32,712 Passengers 37,512 24,740 21,760 29,085 71,730 8,560 14,452 14,278 33,265 14,654 43,098 22,294 28,891 37,129 15,957	Total Hours 1,001 Route Total Hours 1,540 1,453 1,403 1,154 2,706 606 868 773 1,614 586 1,708 976 1,906 1,566 1,045	Total Miles 9,464 19 would be c Total Miles 18,890 19,580 19,164 14,342 38,157 7,699 10,233 9,982 19,401 7,155 21,058 16,255 30,135 20,030 17,314	Passenger Revenue 16,155 andidate based of Passenger Revenue 19,747 12,676 10,581 14,836 39,662 4,398 6,401 6,489 16,963 7,721 22,132 12,442 15,140 21,771 9,077	Total Cost 69,410 on grades but n Total Cost 118,091 116,010 112,685 88,969 220,478 47,163 65,479 60,566 122,744 44,848 131,241 86,025 163,803 122,239 91,912	Pass/Mile 3.46 ot on the def ng Sun Pass/Mile 1.99 1.26 1.14 2.03 1.88 1.11 1.41 1.43 1.71 2.05 2.05 1.37 0.96 1.85 0.92	Grade A inition o Tran Grade U U U U U U U U U U U U U U U U U U U	Pass/Hour 32.68 f High freque Routes Pass/Hour 24.36 17.03 15.51 25.21 26.51 14.13 16.65 18.48 20.61 25.01 25.24 22.85 15.16 23.71 15.26	Per Grade A ncy base Grade M U U U U U U U U U U U U U U U U U U	forn Cosi ed on forn Cosi \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	nance I t/Pass 2.12 the den annce I t/Pass 3.15 4.69 5.18 3.06 3.07 5.51 4.53 4.24 3.06 3.05 3.86 5.67 3.29 5.76	indicat Grade A nand mo indicat Grade M U U U U U U U U U U U U U U U U U U	Recovery 23.3% etric cors Recovery 16.7% 10.9% 9.4% 16.7% 18.0% 9.3% 9.8% 10.7% 13.8% 17.2% 14.5% 9.2% 17.8% 9.9%	A Grade M U U M U U U U U U U U U U U U U U U	Sub \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1.63 2.62 4.18 4.69 2.55 2.52 5.00 4.09 3.79 3.18 2.53 3.30 5.15 2.71 5.19	A Grade U U U M M U U U U U U U U U U U U U U

Appendix E: Performance Indicators and Grades Defined

Performance Indicators:

- 1. Passengers per Mile
- 2. Passengers per Hour
- 3. Fare Box Recovery

Grades Defined:

A = At or above the FTN average. (Above Performance)M = 75% of the FTN average up to the average. (Meets Performance)U = Below 75% of the FTN average. (Under Performance)

- 4. Cost per Passenger
- 5. Subsidy per Passenger

Grades Defined:

A = At or below the FTN average. (Above Performance)M = From 133% of the FTN average down to the average. (Meets Performance)U = Above 133% of the FTN average. (Under Performance)