



CHAPTER IX

Recommendations

INTRODUCTION

This chapter describes the recommended operational changes for Red Apple Transit. Service changes have been identified for the shorter term (2011-2015) and the longer term (2016 and beyond).

Shorter-term recommendations are those that are budget-neutral, implementable without any additional funding or with negligible additional funding. Within the short term, additional stops and route restructuring are recommended.

Longer-term recommendations are those expected to be accomplished after 2015. These recommendations generally involve budget increases. The budget increases involve both operational and capital investments. On the capital side, new transfer locations are recommended—some being a simple installation of bus shelters, and others involving construction of bus turn-around areas with driver relief stations. On the operating side, a long-term commitment will be needed because new services, once offered to the customer, would be difficult to withdraw or reverse.

Chapter X, on implementation, provides additional details including proposed phasing, financing, and other changes necessary to pursue the long-range recommendations.

ADDITIONAL FARMINGTON STOPS

Bus stop locations and their typical quarter-mile walk access areas were analyzed within the City of Farmington. A number of public comments were also received about long walk distances between stops. It is recommended that Red Apple Transit pursue one or both of the following two courses of action:

- **Flag Stop Requests** – Red Apple Transit could honor customer/passenger requests for stops in between published stops. Red Apple would honor these requests only from passengers already onboard the buses,

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not from people walking on the street between stops. This allows the driver discretion to choose drop-off locations which support the courteous and efficient operation of the buses in the flow of traffic, and which offer the customer a safe location for alighting.

- **Add Signed Bus Stops** – Red Apple Transit should evaluate the installation of new bus stop signs, without shelters. The goal is to add stops such that the distance from one stop to the next is generally one-quarter to one-third of a mile, but no more than one-half mile, in segments of routes where development exists. Installation of a signpost is estimated at \$250 per sign installed. The purpose of sign-only installations is to test the viability of the stop, in terms of ridership, before making any additional investments. To remain within existing budget and schedule, it is only recommended that stops along existing streets be added. Deviations or stops requiring even minimal additional route mileage could require additional vehicles and budget.

Figure IX-1 shows the approximate location of proposed stops, based on the distance criteria described above. If all the proposed stops were implemented, the number of new stops, by route, would be:

- Red Route: 6
- Green Route: 6
- Regional Route: 2













ADDITIONAL REGIONAL STOPS

On the Regional Routes, it is recommended that one or two stops be added to each regional route as described below. These should follow the general policy choice—either flag stop or sign-post stop—as for Farmington, but without the half-mile minimum. Regional routes function best with much wider spacing of stops to maintain speeds and efficient travel times between regional destinations. Figure IX-2 shows the proposed regional stops.

- Tiger Route
 - Add one stop at or near Foothills Drive/Pinion Hills Drive and Main Street on each side of the road.
 - Add one stop on each side of the road in the vicinity of the Spencerville Fire Station at Roads 3263/3275 and Highway 516.
- Bobcat Route
 - Add one stop, each side of the road, at US 64/Wildhorse Drive.
 - Add one stop, each side of the road, in the vicinity of US 64/Road 5099 which is near several mobile home parks and several employers.

- Bronco Route
 - Old Kirtland Highway/Road 6100/Highway 489 between Road 6299 and Road 6400, if desired by the Community of Kirtland. This stop is a short-term possibility with a longer-term goal of having a stop further west at the Fruitland Post Office. This short-term change would require re-routing the Bronco Route onto Road 6100.

Figure IX-1
Approximate Location of Proposed Stops

-  Additional Proposed Stops
-  Transfer Point
-  Express Stops
-  Green Stops
-  Red Stops
-  Express Line
-  Green Line
-  Red Line
-  Roads
-  Quarter Mile Buffer of Proposed Stops
-  Quarter Mile Buffer of Stops
-  Quarter Mile Buffer of Routes

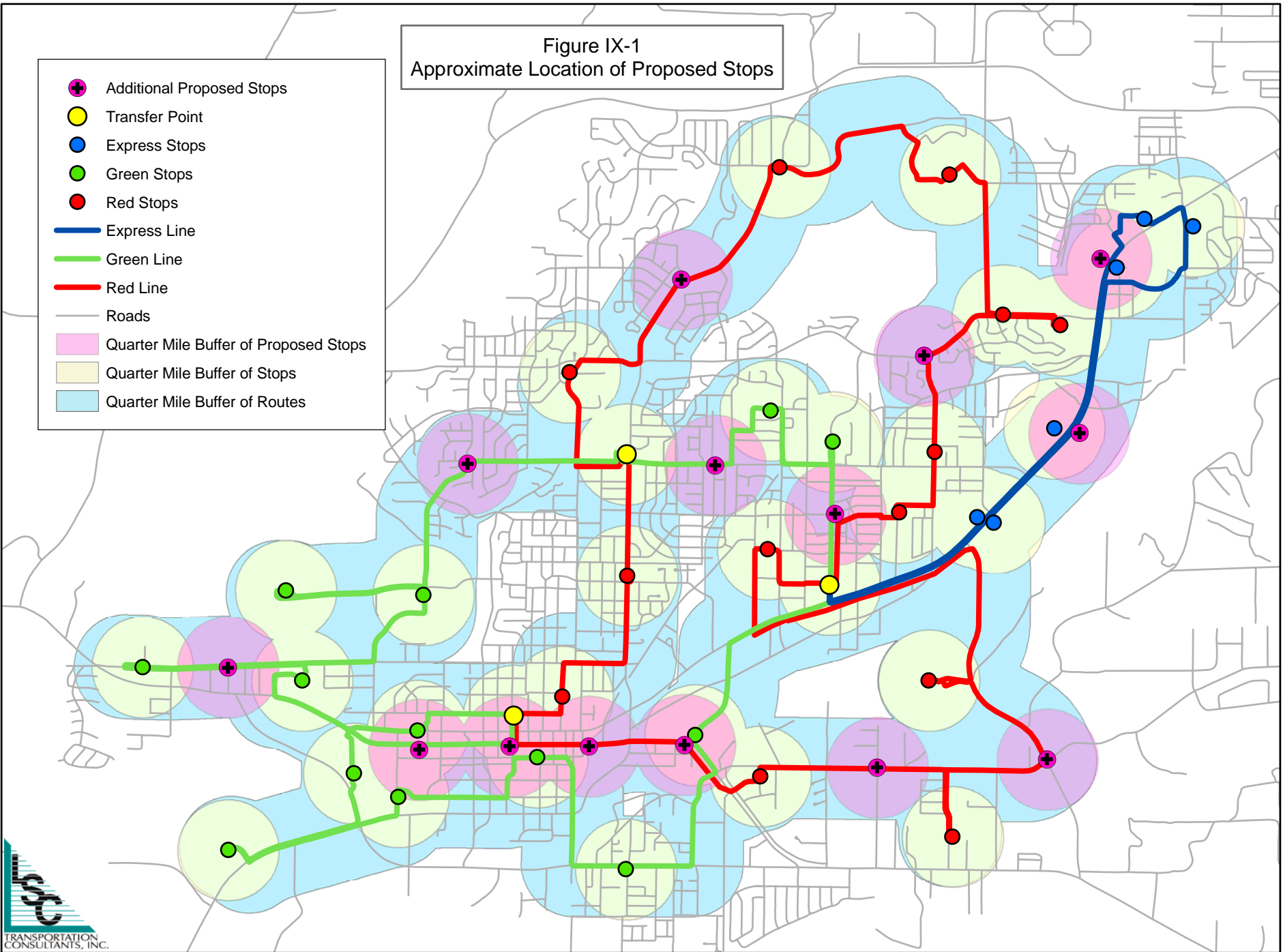
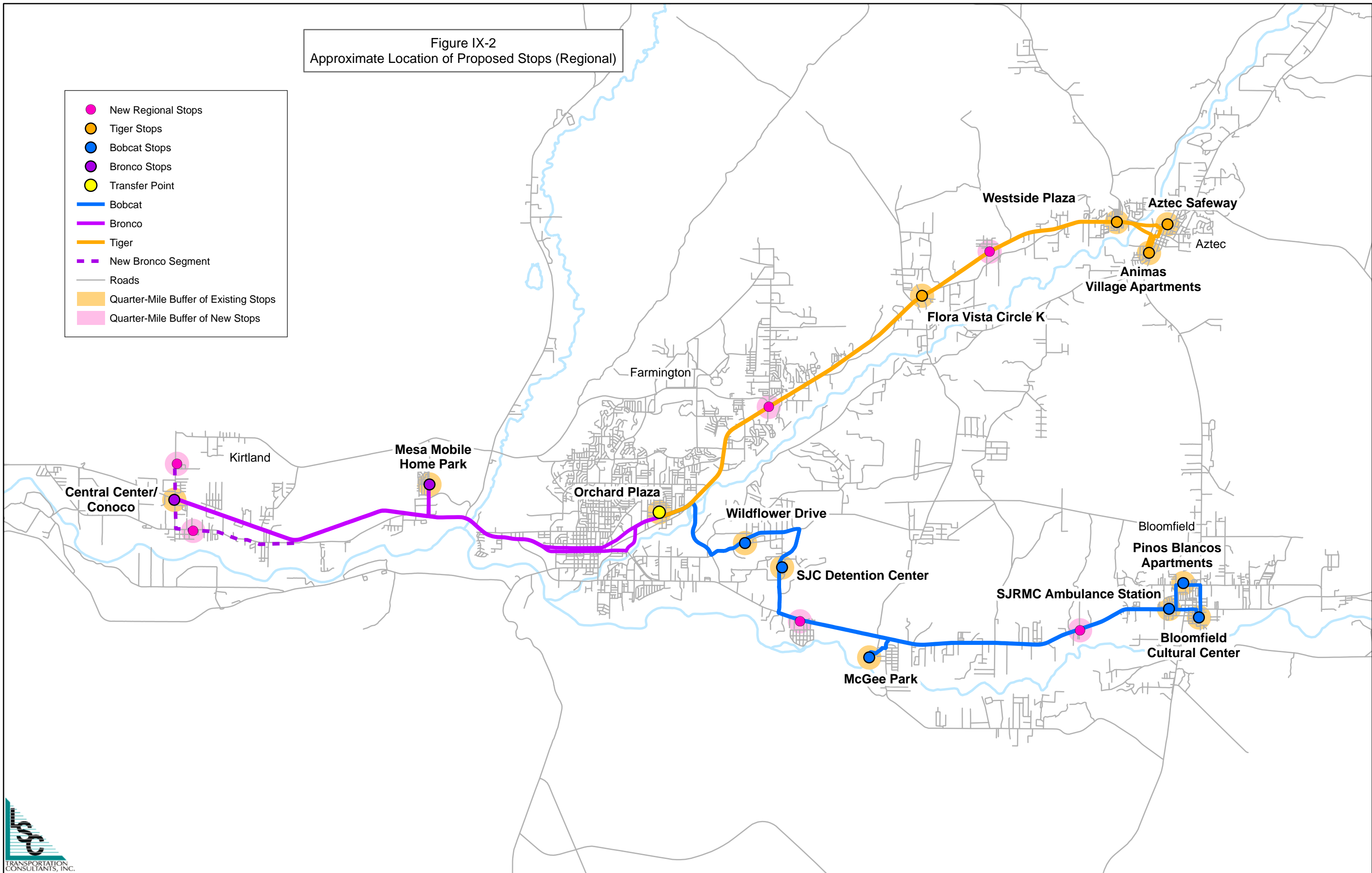


Figure IX-2
Approximate Location of Proposed Stops (Regional)

- New Regional Stops
- Tiger Stops
- Bobcat Stops
- Bronco Stops
- Transfer Point
- Bobcat
- Bronco
- Tiger
- - - New Bronco Segment
- Roads
- Quarter-Mile Buffer of Existing Stops
- Quarter-Mile Buffer of New Stops



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ROUTE RESTRUCTURING

Figure IX-3 shows a regional picture of the current routes, with Red and Green loop routes and a linear Express route in Farmington. Regional Bobcat, Bronco, and Tiger routes provide peak service three times a day.

Figure IX-4 shows the proposed route structure, arrived at after consideration of different route configurations at a conceptual level, route level, and system level. The main advantages of the proposed route structure are as follows:

- Extension of all-day service northeast to Flora Vista.
- Extension of all-day service southeast to McGee Park.
- Extension of all-day service west to Troy King Road.
- More transfer points to increase connections throughout the region.
- Linear routes which minimize travel time.
- Bi-directional service on all routes, serving both sides of the road.
- More stops along all routes (adapted from short-term recommendations).
- New regional route between Bloomfield and Aztec.
- Shift of Kirtland Bronco route to serve Road 6100.
- Extension of Kirtland Bronco route to San Juan College West campus.
- Improved ridership.
- The airport stop is an end-of-route stop, rather than a mid-route stop, which is more operationally efficient and reduces out-of-direction travel for many passengers who do not have an airport destination.
- Consolidates public investment in transfer hubs onto public property.
- Adds several stops not currently available with the existing system.

The main challenges of the proposed route structure are as follows:

- Increased complexity of the system for users and transit managers.
- All routes initially operate at 60-minute frequencies which will negatively affect some passengers who now have a 30-minute frequency.
- Different from today, so a transition strategy will be important.
- Several stops are no longer served or have less frequent service (see page IX-13).
- The airport will require a transfer from more origins in Farmington.

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Figure IX-3
Existing Route Structure

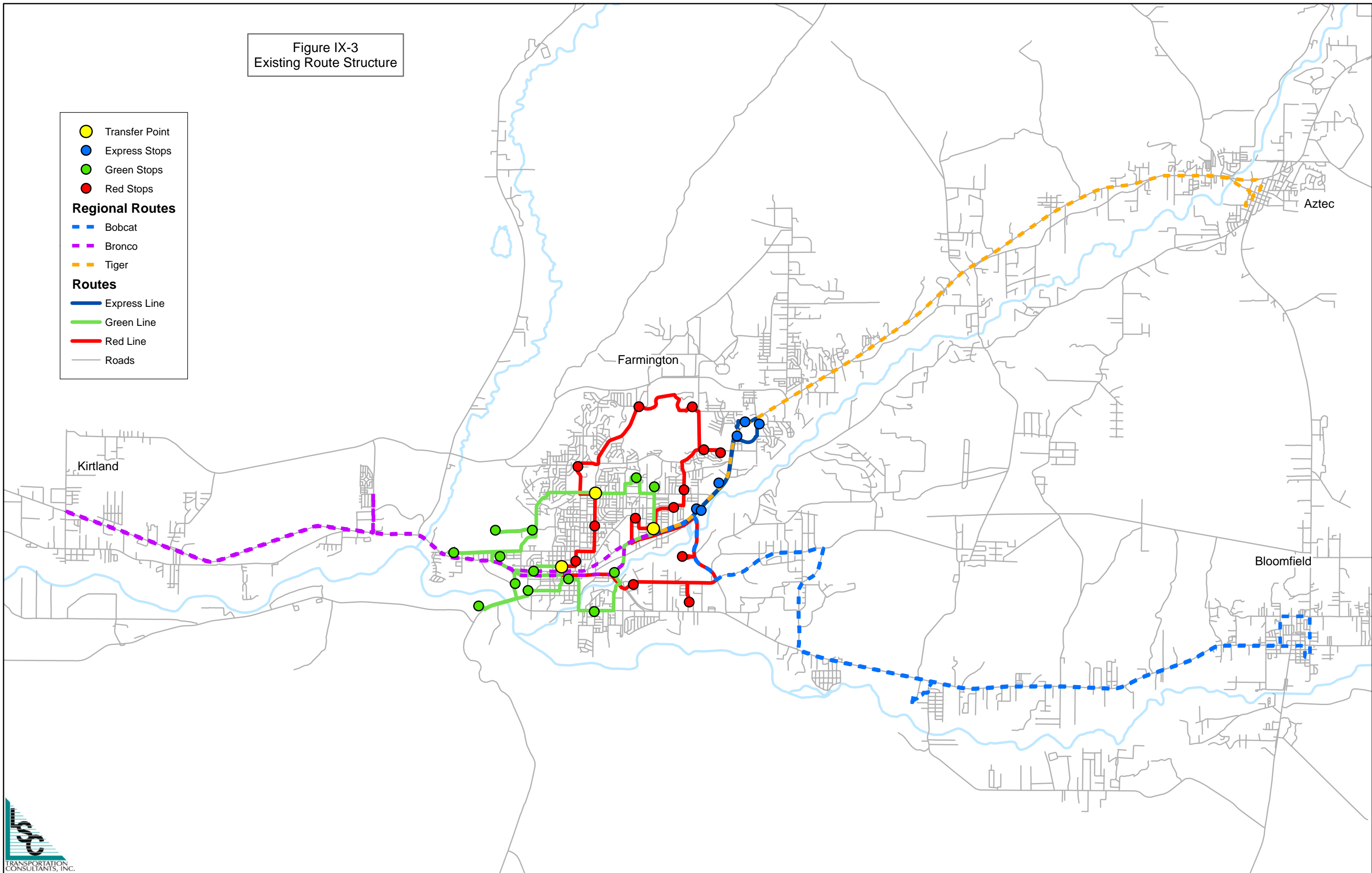
- Transfer Point
- Express Stops
- Green Stops
- Red Stops

Regional Routes

- Bobcat
- Bronco
- Tiger

Routes

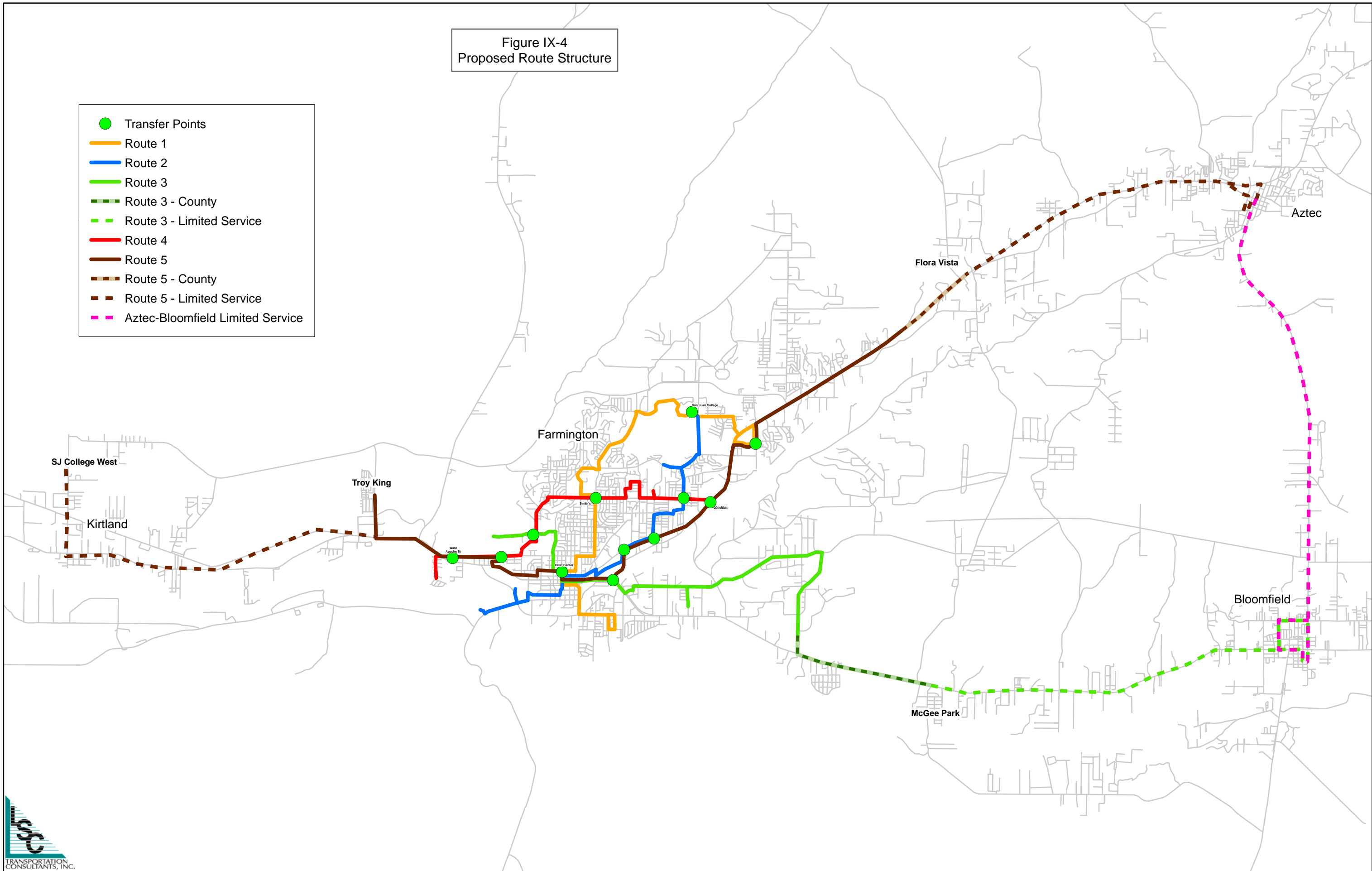
- Express Line
- Green Line
- Red Line
- Roads



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Figure IX-4
Proposed Route Structure

- Transfer Points
- Route 1
- Route 2
- Route 3
- - - Route 3 - County
- - - Route 3 - Limited Service
- Route 4
- Route 5
- - - Route 5 - County
- - - Route 5 - Limited Service
- - - Aztec-Bloomfield Limited Service



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Stop Changes

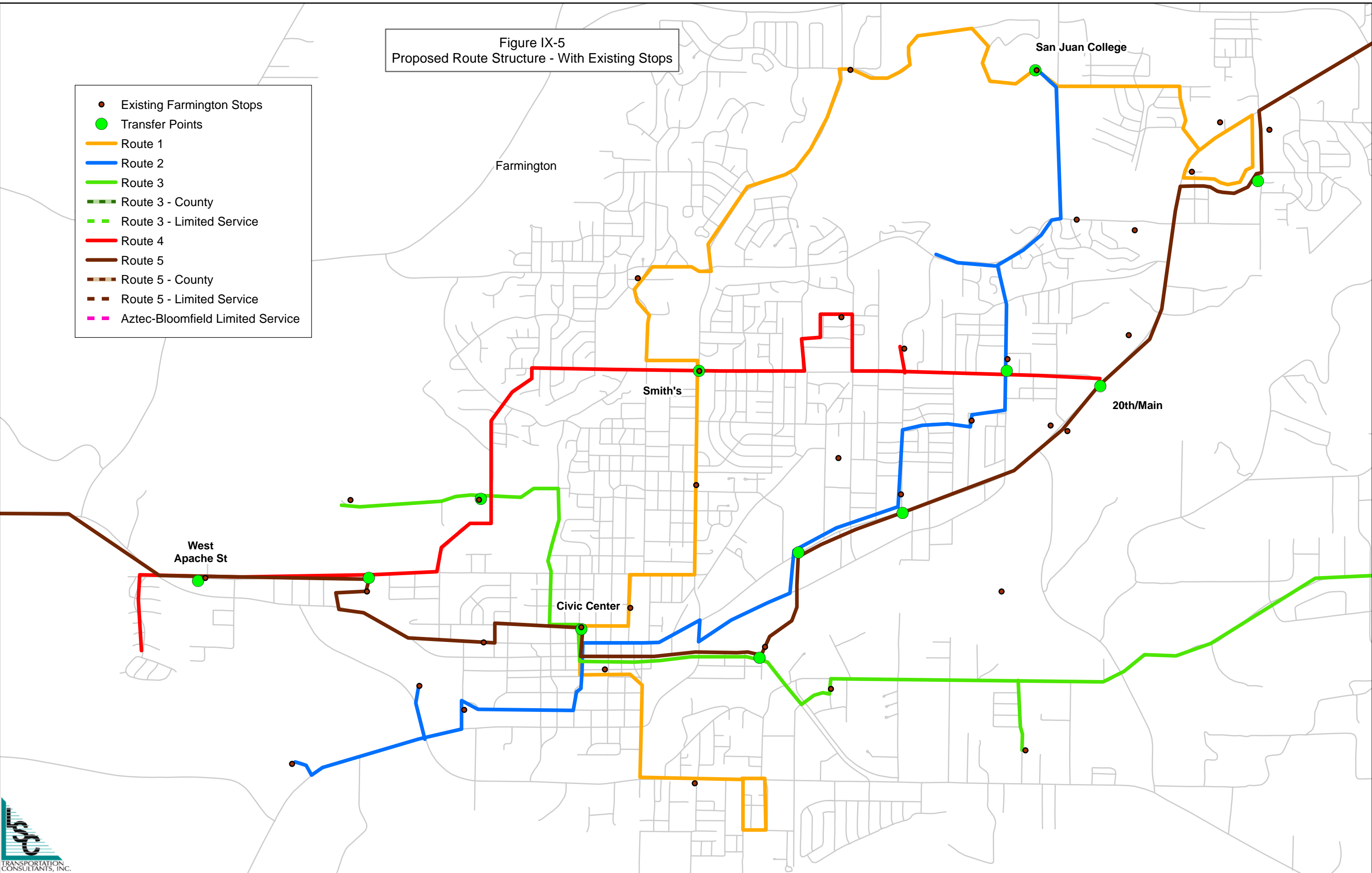
Figure IX-5 shows the overlay of the new route structure with the existing stops. Most stops in Farmington are retained, with the few changes noted in Table IX-1 below. Other stops are added, based on the previously-discussed short-term recommendations. The short-term stops are carried over to the longer-term route system, both for Farmington Routes and for Regional Routes.

Table IX-1 List of Farmington Stop Changes with the Proposed Routes	
Stops No Longer Served	Stops Added
Municipal Operations Center/Animas Park* Ricketts Park/Aquatic Center Orchard Plaza (parking lot) SJ Learning Center	30 th /Farmington Medical Complex Sycamore Community/Recreation Center Orchard Plaza/Farmington/Main (on-street) Westland Park Neighborhood Beckland Hills Neighborhood
<i>*Note: The Municipal Operations Center would be served at pull-out in the morning, pull-in in the evening, and during the day by shift change/vehicle changes only. Source: LSC, 2010.</i>	

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Figure IX-5
Proposed Route Structure - With Existing Stops

- Existing Farmington Stops
- Transfer Points
- Route 1
- Route 2
- Route 3
- Route 3 - County
- Route 3 - Limited Service
- Route 4
- Route 5
- Route 5 - County
- Route 5 - Limited Service
- Aztec-Bloomfield Limited Service



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Hubs

Table IX-2 shows the 13 locations where the proposed routes will intersect, offering transfer opportunities. Also shown are the numbers of buses expected to be at these locations at the same time. From that, the total curb capacity needed to accommodate the buses is estimated.

Table IX-2 Proposed System Transfer Stops and Hubs													
	San Juan Coll.	Animas Valley Mall	20 th / Main	20 th / Hutton	20 th / Butler	Munic./ Navajo	Main/ Scott	B'dwy/ Scott	Main/ Fmtn.	Civic Ctr.	Walmart West	Amer- ican Plaza*	West Apache
Routes Served	2	2	2	2	2	2	2	2	2	4	2	2-3	2
Buses at One Time	2	2	2	2	2	2	2	2	2	4	2	2-3	2
Buses per Hour	4	4	4	4	4	4	4	4	4	8	4	4-5	4
Curb Capacity Needed	80-100'	80-100'	80-100'	80-100'	80-100'	80-100'	80-100'	80-100'	80-100'	160-200'	80-100'	160-250	80-100'
Shelters Needed	2	2	2	2	2	2	2	2	2-4	4	2	2	2
<p><i>*Note: American Plaza is proposed to have one Farmington route (Blue Route) and meets with Navajo Nation Transit Route 7. Depending on the final routing of the Brown Route, there may be a second Farmington route (third total route) that would meet at this location.</i></p> <p><i>Source: LSC, 2010.</i></p>													

Proposed System Cost and Ridership

The existing system, with regional routes, requires eight peak vehicles, including three vehicles on regional routes and five vehicles on the local Farmington routes. It operates at a cost of roughly \$785,000 per year. The proposed base system also requires eight peak vehicles and operates at a cost of roughly \$785,000 per year. Table IX-3 shows how vehicles and costs are allocated for the proposed service plan. Table IX-3 shows the *potential* need for one additional half-time vehicle based on changes to the number of stops and vehicle speeds (see Chapter X).

The existing system ridership is currently at 130,000 to 140,000 per year. The proposed base system is estimated to attract up to 169,275 riders per year, or 175,985 with the new Aztec-Bloomfield route included. In total, the proposed restructured system is expected to cost the same and attract 25 percent more riders.

**Table IX-3
Proposed Service**

Alternative	New Route Color On Map	Description (West to East)	Vehicles Required	Projected Annual Riders	Daily Revenue-Miles	Daily Revenue-Hours	Annual Revenue-Miles	Annual Revenue-Hours	Annual Operating Cost	Riders/Hour	Riders/Mile	Cost/Rider
Route 1	Yellow	Sycamore Community Center, Civic Center, SJ College, Animas Valley Mall	1.5	56,425	208	16.5	63,410	5,033	\$154,804	11.2	0.9	\$2.74
Route 2	Blue	Ojo Court, Civic Center, Main/Farmington, 20th/Hutton, 30th/Farmington, SJ College	1.5	34,770	181	16.5	55,223	5,033	\$150,944	6.9	0.6	\$4.34
Route 3	Green Short	Airport, Civic Center, Southside River, Wildflower, McGee Park	1	10,860	183	11	55,760	3,355	\$109,562	3.2	0.2	\$10.09
	Green Full	Farmington Bloomfield	1	5,000	116	4.5	35,411	1,373	\$50,762	3.6	0.1	\$10.15
Route 4	Red	West Apache, Municipal/Navajo, 20th/Butler, 20th/Hutton, 20th/Main	1	43,005	145	11	44,353	3,355	\$104,184	12.8	1.0	\$2.42
Route 5	Brown Short	Troy King Road, West Apache St., Civic Center, 20th/Main, Animas Valley Mall, Flora Vista	1.5	16,215	288	16.5	87,968	5,033	\$166,384	3.2	0.2	\$10.26
	Brown Full	Farmington Aztec	1	3,000	168	3	51,167	915	\$46,835	3.3	0.1	\$15.61
Base System	Subtotal		8.5	169,275	1,289	79	393,291	24,095	\$783,475	7.0	0.4	\$4.63
Aztec-Bloomfield Peak	Magenta	Aztec - Bloomfield	1	6,710	50	3	15,250	915	\$29,901	7.3	0.4	\$4.46
TOTAL			9.5	175,985	1,339	82	408,541	25,010	\$813,375	7.0	0.4	\$4.62

Source: LSC, 2010.