



**CITY OF ELK GROVE
CITY COUNCIL STAFF REPORT**

AGENDA TITLE: Consider adoption of the Comprehensive Operational Analysis (COA) of the City's local and commuter transit service (e-tran) for Fiscal Years 2018 to 2022, and direct staff to pursue the implementation of the 7.6% service reduction scenario as identified in the COA on Service Implementation

MEETING DATE: April 12, 2017

PREPARED BY: Jean Foletta, Transit System Manager
Mike Costa, Senior Transit Planner

DEPARTMENT HEAD: Robert Murdoch, Public Works Director /
City Engineer

RECOMMENDED ACTION:

Staff recommends that the City Council adopt a resolution adopting the Comprehensive Operational Analysis (COA) of the City's local and commuter service (e-tran) for Fiscal Years 2018 to 2022, and direct staff to pursue the implementation of the 7.6% service reduction scenario as identified in the COA.

BACKGROUND INFORMATION:

In July 2014, the City was awarded a competitive grant from the California Department of Transportation (Caltrans) Sustainable Communities Transportation Planning Grant Program to conduct a COA of the City's local and commuter transit services. On June 24, 2015, the City Council awarded the COA contract to IBI Group.

The COA is an implementation blueprint for proposed e-tran fixed route service improvements during the next five years, Fiscal Years (FY) 2018 through 2022. The COA is the first comprehensive assessment of the e-tran fixed route system since the City assumed responsibility for the service from the Sacramento Regional Transit District (RT) in 2005.

The study process has culminated in local and commuter route restructuring proposals that are consistent with public feedback received during extensive outreach and facilitation efforts with the public and key regional stakeholders. The plan identifies three service scenarios that correspond with financial plans that consider the elimination of annual contributions from the City's General Fund, and two fare increases in FY 2018 and FY 2022, during the five year period.

COA OVERVIEW:

The first four chapters of the COA present background information as follows:

- **Chapter 1 Introduction and Chapter 2 Market Analysis-** Describes the COA context and process; and provides a market analysis based on key community demographic and land use characteristics.
- **Chapter 3 Survey Research/Stakeholder Consultation-** Documents the extensive outreach process conducted for the study, including two public workshops, multiple interviews with various agencies, and a community survey that received over 400 responses.
- **Chapter 4 Review of E-tran Existing Fixed Route Transit Services-** Provides a comprehensive evaluation of existing local and commuter fixed route transit services, including operational performance and opportunities for service enhancements.

The fifth chapter provides three options for service modifications, while the sixth chapter discusses the financial impacts of each scenario.

- **Chapter 5 Planned Improvements – Service Plan-** Describes recommended system concepts, service design guidelines, and performance metrics for a redesigned local route network and enhanced commuter routes. The plan would redesign the fixed route system as a grid network consistent with the underlying street network. The more efficient grid transit network that covers Elk Grove neighborhoods and destinations will be served by local and commuter routes functioning together as an integrated system.

E-tran operated approximately 59,000 annual revenue hours in FY 2016. The COA presents three levels of service (LOS) scenarios supporting the proposed route network configuration. The scenarios were created in

conjunction with corresponding financial tables to demonstrate various LOS while further eliminating the City's annual General Fund contribution to cover overhead costs associated with the transit system's operations. Chapter 5 identifies the COA's three LOS scenarios as follows:

- Base Scenario - LOS consistent with Fiscal Year 2016-17 budget projections and relatively similar to FY 2015-16 actual revenue hours,
- 7.6% Reduction Scenario – the base scenario's revenue hours are reduced by 7.6%, and
- 10% Reduction Scenario – the base scenario's revenue hours are reduced by 10%.

Reduction in service hours for the 7.6% and 10% scenarios are achieved primarily by reducing the proposed reverse commute trips in the base scenario from 22 trips to eight trips, eliminating all fixed route service on Sundays, and reducing the commuter service by two trips. No reductions to the Paratransit service are proposed for Sundays. E-van service will still be provided on Sundays. It is important to note that while the 7.6% reduction results in fewer commuter revenue hours and trips than the base scenario, it is an increase in commuter services compared to the current service level.

The 7.6% reduction scenario also includes additional revenue hours on the Route 150, to allow the service to operate from 8:30 p.m. to 10:30 p.m., Monday-Friday, as previously requested by Council. The 10% scenario does not include this additional service. The Route 150 is the trunk route running along Big Horn Boulevard from Cosumnes River College (CRC) to Kammerer Road. Proposed LOS and service frequencies for the three scenarios are summarized in Table 1 (see next page):

Table 1: COA Level of Service (LOS) Scenarios

	FY 2016 Existing System	Base Scenario	7.6% Reduction Scenario	10% Reduction Scenario
Annual Revenue Hours				
Local	38,660	34,283	34,178	32,661
Commuter	20,353	25,603	21,151	21,151
Total	59,013	59,886	55,329	53,812
Local Frequency (in minutes)				
Peak Weekday	30 - 60	30 - 60	30 - 60	30 - 60
Midday Weekday	30 - 120	30 - 120	30 - 120	30 - 120
Evening Weekday	30 - 60	30 - 120	30 - 120	30 - 120
Saturday	80	60 - 120 (4 routes)	60 - 120 (4 routes)	60 - 120 (4 routes)
Sunday	80	60 - 120	No service	No service
Commuter Frequency (in daily trips)				
Peak Direction	67	68	66	66
Reverse Direction	6	22	8	8
Service Span				
Local Weekday	5:52 am – 11:00 pm (16.9 hours)	6:00 am – 8:30 pm (14.5 hours)	6:00 am – 10:30 pm (only Route 150 would operate past 8:30 pm) (16.5 hours)	6:00 am – 8:30 pm (14.5 hours)
Local Saturday	7:15 am – 11:10 am 1:15 pm - 6:10 pm	6:00 am – 7:00 pm (13 hours)	6:00 am – 7:00 pm (13 hours)	6:00 am – 7:00 pm (13 hours)

Local Sunday	7:15 am - 11:10 am 1:15 pm - 6:10 pm	7:00 am - 6:00 pm (11 hours)	No Service	No Service
Commuter	5:20 am – 8:40 pm 3:10 pm – 6:55 pm	5:30 am – 8:45 am 3:30 pm – 7:00 pm	5:30 am – 8:45 am 3:30 pm – 7:00 pm	5:30 am – 8:45 am 3:30 pm – 7:00 pm

Performance metrics are also proposed in this chapter to guide future improvements as additional revenues for e-tran become available, or conversely, to determine reductions to local service span and frequency if further budget cuts are required.

- **Chapter 6 Financial Plan** – Chapter 6 presents a five-year financial, operating, and capital plan with discussion of fare policy considerations, and recommended fare structure and rates for each of the three COA service scenarios identified in Chapter 5. The City’s demand response revenue/expenses are not directly reflected in the financial plans. However, certain revenue sources are reduced based on assumed demand response expenses and capital needs within the FY 2018 – 2022 period that the financial plan considers.

For each of the COA’s service scenarios, there are several common operating revenue assumptions, as well as common fare policy revenue assumptions. Common revenue assumptions are discussed for Transit’s primary sources of operating revenue - Transportation Development Act (TDA) Local Transportation Funds (LTF), State Transit Assistance Funds (STA), and Low Carbon Transit Operation Program (LCTOP) funds.

In addition, the common fare policy assumptions include increases of 22% for local fares and 44% for commuter services cash fares in January 2018, and an increase of 9% and 23% to the local and commuter basic cash fares, respectively, in July 2020. These fare increases consider other regional operators’ fare policies and pricing, and the price for premium commuter services offered. Additionally, the fare increases are necessary in order to maintain future farebox recovery at, or above, 20% (required for operators in urbanized areas), and address operating cost increases. Should the City not be able to

achieve the required farebox recovery, there could be a risk to future funding amounts pursuant to the TDA requirements.

Each of the COA's three service scenarios further considers common capital revenues and expenses. The proposed network restructuring plan identified by the COA requires a total of 46 buses for fixed route service, consisting of 38 for peak period service and eight spares. This plan allows for an overall reduction of nine buses from the fixed route fleet, resulting in capital cost savings of approximately \$5.4 million from the current network's capital replacement plan. In addition, park-ride facility improvements are identified in FY 2020, as well as bus stop improvements related to the beginning of a bus rapid transit service (BRT) in FY 2022. Common federal funding sources, such as the Congestion Mitigation Air Quality (CMAQ), FTA Section 5339, and FTA Section 5309 funding programs are anticipated to cover most of these capital expenses.

Aside from the common revenue, fare policy, and capital expense assumptions, each of the COA's three service scenario have revenue and expense assumption, which result in unique revenue to expense projections for the five year financial program. Table 2, shown on the next page, identifies an overall summary of the revenue and expense assumptions and projections for each of the COA's LOS scenarios, covering fiscal years 2018 through 2022. It is important to note that overall expenses are adjusted upward annually to account for inflation, and reflect consistency with the City's operations and maintenance annual contractual rate increases. Additionally, while historically the City's General Fund has provided revenue to cover overhead costs, the COA's five year financial plan removes all General Fund revenue contributions to the annual budget beginning in FY 2018. Should General Fund contributions be considered during FY 2018 through FY 2020, the cumulative surplus or deficit for each of the COA scenario's financial plans would be different.

Table 2: Comparison Summary of the Three COA LOS Scenarios' Financial Plans

	Base Scenario	7.6% Reduction Scenario	10% Reduction Scenario
FTA Section 5307 Revenue Assumptions	Increases annually by 2% from FY 2018	Increases annually by 1% from FY 2018	Remains flat in FYs 2018-2020, increases by 1% in FYs 2021 and 2022
Cumulative Ridership Assumptions for FYs 2018 – 2022*	Overall ridership increases by 5%	Overall ridership increases by 1%	Overall ridership decreases by -4%
Cumulative Fare Revenue Increase for FYs 2018 – 2022**	63% increase	57% increase	49% increase
Cumulative Operating Expense Percentage Increase for FYs 2018 – 2022***	19% increase	10% increase	7% increase
Five Year Cumulative Surplus/Deficit****	\$3,509,237 deficit	\$395,396 deficit	\$392,601 surplus

*Assumed from base year (FY 2017) ridership end of year projection

**Assumed from base year (FY 2017) end of year fare revenue projection of \$1.28 million

***Assumed from base year (FY 2017) end of year operating expense projection of \$8.21 million

****Assumes no General Fund Contributions to cover overhead expenses

Assumptions utilized in each of these scenarios are based on staff's conservative forecasts for future revenues and expenses, as well as anticipated capital needs. Should any of these assumptions change, in particular state or federal funding sources, as well as future capital replacement needs, significant changes would occur to the five year cumulative surplus/deficit identified for each COA service scenario.

FISCAL IMPACT:

As identified in Chapter 6 of the attached COA document (Attachment 2), and Table 2, above, each of the COA's proposed service scenarios have different cumulative revenue and expense impacts to the transit budget. Additionally, each of the COA scenarios identified cumulative five year surplus/deficit has a significant impact on Transit's overall fund balance.

Transit’s current fund balance is approximately negative \$6.71 million. Table 3 identifies the anticipated fiscal impacts to Transit’s ending fund balance in FY 2022 for each of the COA’s service scenarios. This tables highlights what Transit’s fund balance would look like assuming no General Fund contributions annually, and what the fund balance would look like if annual contributions from the City’s General fund are made to cover the City’s overhead costs incorporated into Transit’s annual operating expenses.

Table 3: Comparison of the Three COA Service Scenario Impacts to Transit’s Fund Balance

	Base Scenario	7.6% Reduction Scenario	10% Reduction Scenario
Current Anticipated General Fund Ending Balance in FY 2017	-\$6,714,661	-\$6,714,661	-\$6,714,661
Cumulative Surplus/Deficit for FYs 2018 - 2022	-\$3,509,237	-\$395,396	\$392,601
Ending Fund Balance in FY 2022 without General Fund Contribution	-\$10,223,897	-\$7,110,057	-\$6,322,059
Total Assumed Cumulative General Fund Contribution Amount for FYs 2018-2022*	\$4,433,895	\$4,433,895	\$4,433,895
Ending Fund Balance in FY 2022 with General Fund Contribution	-\$5,790,002	-\$2,676,162	-\$1,888,164

*Assumed Cumulative General Fund Contribution Amount is determined by the addition of the cumulative annual overhead costs that are factored into Transit’s annual operating expenses. This calculation is based on historical General Fund contribution amounts, with an annual percentage increase of two percent based on inflationary assumptions.

STAFF RECOMMENDATION:

While the 10% reduction scenario is the only COA scenario that identifies a cumulative surplus of revenues to expenses in the five year financial plan, staff recommends that the 7.6% reduction scenario be implemented. The 7.6% reduction scenario assumes a decrease in revenue hours, which will lead to a more closely balanced budget without General Fund contributions. Any additional reductions in service could lead to a greater than expected ridership decrease, which would further jeopardize anticipated fare revenues and some state and federal operating revenue sources.

Should Council direct staff to implement the 7.6% reduction scenario, staff would immediately begin implementation tasks with the expectation that service changes would become effective on October 29, 2017.

OTHER CONSIDERATIONS:

Implementation of the recommended COA scenario will require nine fewer buses in revenue service. By October 2017, the City will be required to retire a total of five buses due to the expiration of their Compressed Natural Gas (CNG) tanks. Transit is in the process of ordering four new buses to replace these retiring buses. However, staff does not believe that these buses will be delivered before the end of October. Should the COA not be implemented by October 29, there would not be a sufficient number of buses to maintain an adequate spare ratio during current peak service requirements, which could jeopardize current service levels. Staff would also consider leasing buses from another transit operator, such as Sacramento Regional Transit District (RT), in order to maintain existing service levels until the City's new replacement buses are placed into service.

While preparing this report, staff learned that the State is considering legislation that could potentially provide an additional \$1 million annually to transit. However, the uncertainty of the FTA operating and capital revenues, which currently account for between approximately \$1-3 million of transit's annual revenues still is unclear. In consideration of this information, staff continues to recommend implementation of the 7.6% reduction scenario. Staff will continue to monitor changes to State and Federal funding, and will bring back updates and service recommendations to Council accordingly.

ATTACHMENTS:

1. Resolution
2. Comprehensive Operational Analysis

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ELK GROVE
ADOPTING THE COMPREHENSIVE OPERATIONAL ANALYSIS (COA) OF THE
CITY'S LOCAL AND COMMUTER SERVICE (E-TRAN) FOR FISCAL YEARS 2018–
2022, AND DIRECTING STAFF TO PURSUE THE IMPLEMENTATION OF THE 7.6%
SERVICE REDUCTION SCENARIO AS IDENTIFIED IN THE COA**

WHEREAS, the City of Elk Grove was awarded a Sustainable Communities Transportation Planning Grant from the California Department of Transportation (Caltrans) to conduct a Comprehensive Operational Analysis (COA) for the City's local and commuter transit service (e-tran); and

WHEREAS, the COA is an implementation blueprint for proposed e-tran fixed route service improvements during Fiscal Years (FY) 2018-2022; and

WHEREAS, the COA identifies and defines three service scenarios for implementation: base scenario, 7.6% reduction scenario, and 10% reduction scenario; and

WHEREAS, the three service scenarios are supported by corresponding financial plans, which all include proposed local and commuter fare increases in FY 2018 and 2021, and remove General Fund contributions to Transit's annual budget; and

WHEREAS, the 7.6% reduction scenario will lead to a more closely balanced transit budget without General Fund contributions, while retaining service levels for Elk Grove residents.

NOW, THEREFORE BE IT RESOLVED that the City Council of the City of Elk Grove adopts the COA of the City's local and commuter service for Fiscal Years 2018-2022; and

BE IT FURTHER RESOLVED that the City Council of Elk Grove directs staff to pursue the implementation of the 7.6% reduction scenario, as identified in the COA.

PASSED AND ADOPTED by the City Council of the City of Elk Grove this 12th day of April 2017.

STEVE LY, MAYOR of the
CITY OF ELK GROVE

ATTEST:

APPROVED AS TO FORM:

JASON LINDGREN, CITY CLERK

JONATHAN P. HOBBS,
CITY ATTORNEY



COMPREHENSIVE OPERATIONAL ANALYSIS

AN ACTION PLAN TO GUIDE THE IMPLEMENTATION OF TRANSIT SERVICE
IMPROVEMENTS OVER THE NEXT FIVE YEARS



CITY OF
ELK GROVE

APRIL 12, 2017



Table of Contents

Table of Contents.....	i
EXECUTIVE SUMMARY	1
1.0 INTRODUCTION	11
1.1 Study Process.....	12
2.0 MARKET ANALYSIS	13
2.1 Major Employers	13
2.2 Demographics.....	14
2.3 Journey to Work	16
2.4 Growth and Development	16
3.0 SURVEY RESEARCH/STAKEHOLDER CONSULTATION.....	17
3.1 Community Survey.....	17
4.0 REVIEW OF E-TRAN EXISTING FIXED ROUTE TRANSIT SERVICES.....	19
4.1 Overview of Existing E-tran Services.....	19
4.2 Peer Review.....	22
4.3 E-tran Service Evaluation: Findings and Conclusions	27
5.0 PLANNED IMPROVEMENTS – SERVICE PLAN.....	29
5.1 Introduction.....	29
5.2 System Concept	29
5.3 Service Design Guidelines.....	31
5.3.1 Network Design	31
5.3.2 Local Routes	31
5.3.3 Commuter Routes	32
5.4 Performance Measurement	32
5.4.1 Service-Related Performance Metrics	33
5.5 Recommended Local Network.....	35
5.5.1 Primary North-South Transit Corridor - Big Horn Boulevard	37
5.5.2 Local Grid Routes.....	39
5.5.3 Local Service Span and Frequency	48
5.6 Incremental Service Improvements.....	49
5.7 Recommended Commuter Network.....	50

5.7.1 Peak and Reverse Direction Capacity 51

5.8 Improve Park-Ride Access 53

5.9 Downtown Sacramento Routing 55

5.10 Regional Connectivity..... 56

6.0 FINANCIAL PLAN.....58

6.1 Common Operating Revenues 58

6.2 Common Fare Policy Considerations 61

6.3 Common Capital Revenues and Expenses 65

6.4 COA Service Plan Scenarios' Operating Revenues and Expenses Comparison..... 72

Appendix A: Community Survey Results

Appendix B: Workshop Presentation Material

Appendix C: Peer Review

Appendix D: Detailed Local and Commuter Route Analysis

EXECUTIVE SUMMARY

The City of Elk Grove Transit (e-tran) Comprehensive Operational Analysis (COA) is an implementation blueprint for proposed e-tran service improvements during the next 5 years. The COA was commissioned as the first comprehensive assessment of the e-tran services since the City assumed responsibility for the system from the Sacramento Regional Transit District (RT) in 2005. As the City continues to grow, it is anticipated that community expectations will rise for e-tran to meet the mobility needs of its residents, businesses and institutions. Among the key objectives of the study:

- Improve the efficiency and productivity of e-tran services;
- Anticipate land use and community development directions occurring in the City and design system improvements to address them;
- Identify and prioritize short-range investment in vehicles and facilities required to support the enhanced transit system; and
- Ensure seamless connectivity between e-tran and other bus and light rail transit (LRT) services operating in the Sacramento region.

The study process has culminated in local and commuter route restructuring proposals that are consistent with anticipated population and employment growth in the City, as well as the needs of transit-dependent riders and changing attitudes of the general population toward transit as a mobility choice. The COA's service plan maximizes the performance of existing services while responding to additional community mobility needs. The focus of the COA's recommendations concentrate service on strong routes in order to provide a foundation for increasing ridership and more fare revenue generation, while also preserving service in areas with lower ridership potential.

Most importantly, the service plan responds to key issues identified by e-tran customers and other stakeholders to create a system that will be more attractive to new riders in the years to come. The study process has included a great deal of outreach and facilitation with the public and key regional stakeholders. The service plan reflects input received from a variety of activities, including two public workshops, multiple interviews with several agencies, and a community survey.

The COA final report is presented in six chapters.

CHAPTER 1 - INTRODUCTION AND CHAPTER 2 - MARKET ANALYSIS

Chapters 1 and 2 describe the COA context and process; and provide a market analysis based on key community demographic and land use characteristics.

CHAPTER 3 - SURVEY RESEARCH/STAKEHOLDER CONSULTATION

Chapter 3 documents the extensive outreach process conducted for the study, including two public workshops, multiple interviews with various agencies, and a community survey that

received over 400 responses. It is important to note that the consensus among those who participated in the public workshops, which were conducted in August 2016, was supportive of the proposed changes, and favorable comments were received regarding the recommended service plan. However, there were concerns expressed regarding the potential decisions to reduce the level of local transit services during the midday and weekend service periods.

CHAPTER 4 – REVIEW OF E-TRAN EXISTING FIXED ROUTE TRANSIT SERVICES

Chapter 4 provides a comprehensive evaluation of existing local and commuter fixed-route transit services, including operational performance and opportunities for enhancements. E-tran currently provides nine local routes, eight commuter routes to Sacramento, two commuter routes to Rancho Cordova, and two reverse commute routes from Sacramento and Rancho Cordova. Key findings and conclusions based on the evaluation of local and commuter route performance are summarized in the following paragraphs. The evaluation included the review of key operating data (ridership, number of revenue hours, schedules and headways). Individual route performance by service type is presented in Appendix D.

Local Network

- The local system is underperforming in terms of ridership and productivity. In FY 2015, local service generated an average of 13.6 boardings per revenue hour, 13% below the City's performance target (16 per hour) and one-third below the more common industry standard minimum productivity threshold of 20 boardings per revenue hour among mid-sized western cities. Only one regular route (154) generates more than 20 or more boardings per hour.
- Cosumnes River College (CRC) is the dominant boarding and alighting location in the system, suggesting that half or more off all local trips are to destinations beyond the City limits. This indicates that the existing route network does not adequately accommodate local travel patterns.
- The route network is overly complicated. Some alignments are circuitous or contain excessive one-way segments. Weekend alignments are substantially different from weekday alignments. This contributes to poor productivity on Saturday and Sunday.
- Local and commuter routes and schedules are not coordinated; resulting in longer wait times for local customers.
- Existing routes are inconsistent with school boundaries, resulting in the need for three extra routes that operate on school days only. School route schedules (151,152,153) should be integrated into the regular route network.

- Current routes and schedules are not designed to ensure schedule reliability and compliance with California Wage Order 9.

Commuter Network

- Commuter routes are generally well-utilized. Eleven existing routes collectively average 69% occupancy, with individual routes ranging from 97% (Route 153) to 7% (Route 91) of available seats occupied.
- Generally, commuter routes spend too much time on arterial streets where relatively few customers board. Alignments should be shortened to a maximum of 5 miles and 15 minutes of scheduled running time on arterial segments.
- Peak periods are too narrowly defined. Schedules should be expanded to provide morning arrivals between 6:45 am – 9:00 am; afternoon departures from 3:45 pm – 6:00 pm.
- Ridership patterns indicate that up to 75% of morning customers board commuter routes at a park-ride lot rather than at bus stops along the routes. Park-ride lot improvements are key to expanding commuter service capacity. Recommendations include two new facilities, and expansion or other physical improvements at existing lots.
- There is a need to plan for park-ride lots at future station sites in the Big Horn Boulevard transit corridor at Bruceville, Laguna Boulevard, Elk Grove Boulevard, Whitelock Parkway and Bilby Road.

CHAPTER 5 PLANNED IMPROVEMENTS – SERVICE PLAN

Chapter 5 describes recommended system concept, service design guidelines, and performance metrics for a redesigned local route network and enhanced commuter routes. The plan would redesign the fixed route system as a grid network consistent with the underlying street network that makes Elk Grove a relatively convenient and efficient place to drive. The more efficient grid transit network covering Elk Grove neighborhoods and destinations will be served by local and commuter routes functioning together as an integrated system. Looking ahead to the next five years and beyond, the network should not need to change significantly from year to year unless there is a dramatic change in transit funding. Short-term stability of the route network will give customers and others a better opportunity to comprehend and use e-tran service following implementation of restructuring.

System level of service (LOS), which is expressed as the total annual revenue service hours must be scalable to available transit budgets from year to year. E-tran operated approximately 59,000 revenue vehicle hours in FY 2016. Transit system operating costs may be calibrated to annual budgets by adjusting the days, hours, and service frequencies that individual routes are operating.

Consistent with the City executive management staff's guidance, this report presents three LOS service scenario options. The base scenario represents service levels (total revenue hours) relatively unchanged from FY 2016. A 7.6% reduction scenario and a 10% reduction scenario have also been prepared. The 7.6% and 10% reduction scenarios are established should the City need to reduce future transit spending, and would be achieved through selective reduction of proposed reverse commute trips in the base scenario, weekend and weeknight service on local routes, based on ridership and productivity expectations. Performance metrics are proposed to guide future improvements as additional revenues for e-tran become available, or conversely, reductions to local service span and frequency if further budget cuts are required.

Implementation of the new system design follows three steps:

1. Restructure the local route network around a new express route with a north-south alignment extending between the CRC campus LRT station and the planned business district located near Hwy 99 and Kammerer Road primarily via Big Horn Boulevard. This is intended to lay the foundation for further consideration of an enhanced transit service corridor envisioned in the 2003 General Plan. An enhanced transit service corridor may take the form of express bus, bus rapid transit or ultimately light rail transit service.
2. Implement five (5) additional local routes to provide east-west coverage along developed segments of Calvine Road, Sheldon Road, Bond Road-Laguna Boulevard, W Big Horn Boulevard, Elk Grove Boulevard, and Whitelock Parkway; and north-south coverage on segments of Elk Grove Florin Road, S Big Horn Boulevard, Bruceville Road, Franklin Boulevard, and Harbour Point Drive. This forms a grid network primarily on arterial streets with routes both intersecting the Big Horn corridor, and also running parallel to it.
3. Overlay seven (7) commuter routes on local alignments within Elk Grove with peak period service directly to Downtown Sacramento via I-5 and Hwy 99. These commuter routes would maintain and enhance peak-period service capacity between Elk Grove and Sacramento, and focus on serving an improved network of park and ride lots. The alignment of the commuter service routes results in reduced travel times within the city limits and further utilizes a downtown realignment with all routes operating in the same network.

In addition to design guidelines, the City also needs a way to monitor transit system performance using a compilation of key indicators, measures, targets and standards consistent with transit industry best practices and local requirements. The adopted Fiscal Year 2014-2020 Short Range Transit Plan (SRTP) contains several operational policies and performance standards that should be brought forward and calibrated to current conditions in the updated document. These standards focus on service reliability in terms of on-time performance, incidence of road calls and wheelchair lift failures, and ridership performance targets. Specific ridership targets are:

- *Local Routes* - 41,000 monthly boardings averaging 16 boardings per service hour; and
- *Commuter Routes* - 41,000 monthly boardings averaging 26 boardings per service hour.

The SRTP recommended consideration and adoption of additional performance standards such as:

- Spacing criteria for adding, removing or relocating bus stops along a route;
- Ridership performance, including minimum productivity thresholds to identify underperforming routes or segments requiring restructuring or discontinuation; and
- On-board loading conditions, including minimum and maximum occupancy thresholds relative to seating capacity.

Key performance indicators for e-tran fixed route services are summarized in Table ES-1. These metrics provide the basis for service evaluation and most directly influence proposed changes to the LOS operated on individual routes at various times of the service day. Most transit systems monitor key performance indicators on an ongoing basis and report results monthly or quarterly. Some agencies report results to customers via the Internet or their agency's website.

Several additional performance indicators are suggested to improve upon the existing static monthly ridership target and relatively low productivity threshold cited in the existing SRTP. Proposed performance indicators and associated measures and short-range targets for e-tran fixed route services are summarized in Exhibit ES-1. These metrics provide the basis for service evaluation for the COA's service plan.

Exhibit ES-1. Key Performance Measurement Criteria

Category	Key Performance Indicator	Measure	FY 2022 Target
Service availability	Span	Days / Hours	Wkdy/Sat - 17 hours Sunday - 15 hours
	Coverage	Percent residents within 0.33 mile	90%
	Frequency	Route Headways	30 minutes or better
Service delivery	Productivity	Passengers per revenue hour	20 average 10 (new < 2 yrs)
	Loading Condition	Percent of seated capacity	Local: 125% Commuter: 100%
Financial performance	Cost Effectiveness	Farebox recovery (% of total operating cost)	20%

Local Network Redesign: The network changes from the presently configured radial network (*i.e.*, all routes terminate at the CRC campus) to a grid network. The grid is constructed around the future Big Horn Boulevard rapid transit corridor running between the CRC campus LRT station and the planned commercial development area near the Hwy 99 interchange at Kammerer Road. Additional local routes operate parallel to crosstown routes with transfer

connections to the Big Horn transit corridor. These routes are composed primarily of arterial street segments running east-west and north-south across the City. It is important to note that restructuring local service into a grid format may impact some customers who currently have a one-seat ride to the CRC campus.

Local Service Span and Frequency: Because the local system is designed as a network, all routes will operate the same days and hours. Except for Route 156, the proposed span is comparable to, or longer than, existing schedules. The proposed service plan initially was developed on a budget-neutral basis with frequencies presented as the “base scenario”. The impact on local service frequencies of a potential 7.6% or 10% budget reduction scenario is identified in a subsequent section, below.

Incremental Service Improvements: The proposed service plan is fully scalable to facilitate the efficient implementation of upgrades to local route frequencies and operating hours when future funding levels permit; and also, to add commuter capacity when necessary to meet adopted onboard loading condition targets. Potential service upgrades that could occur within the short-range horizon of this COA are discussed in Section 5.6.

Commuter Network: Proposed commuter routes are closely aligned with local routes to simplify the transit network and increase the visibility of e-tran service by concentrating more service on arterial and collector streets. Merging local and commuter route alignments within Elk Grove will provide e-tran commuters with expanded travel options beyond the peak periods during which commuter buses will continue to access Downtown Sacramento directly. Consolidation of 12 existing commuter routes into nine routes is proposed. Fewer commuter routes translate into more robust schedules by modifying or eliminating five marginal routes that currently operate one or two trips per peak period - 66, 70, 90, 91 and the Purple Route. Purple Route customers with mobility limitations will be accommodated on other proposed commuter routes.

Improve Park-Ride Access: The five-year plan includes provisions to both expand the level of commuter service available at e-tran park-ride lots, and upgrade existing facilities. Section 5.8 provides a development blueprint for constructing new facilities, improving existing facilities, and phasing out the use of minor park-ride lots that lack sufficient capacity or proximate access to a freeway interchange.

Downtown Sacramento Routing: A common two-way alignment through Downtown Sacramento is recommended for all proposed commuter routes. The alignment is intended to balance customer walking distances to destinations in the downtown core with shorter wait times, and expedited bus travel on less congested streets in the downtown core. A singular alignment has potential to improve service quality for customers, while also reducing capital costs through higher vehicle productivity. It is important to note that the proposed alignment presented is dependent on the travel patterns of other transit agencies and is subject to further coordination with the City of Sacramento in regards to travel patterns associated with the Golden 1 Events Center.

Regional Connectivity: The service plan urges the further integration of e-tran with the regional transit system, including all-day connectivity to both the Blue Line at the CRC campus station, and the Gold Line at Butterfield station.

System Resource Requirements: Exhibit ES-3 presents the three COA service scenario options for the proposed first-year operation of the fixed route system. The service plan was developed with LOS consistent with actuals from FY 2016 operations.

Exhibit ES-2. COA Level of Service (LOS) Scenarios

	FY 2016 Existing System	Base Scenario	7.6% Reduction Scenario	10% Reduction Scenario
Annual Revenue Hours				
Local	38,660	34,283	34,178	32,661
Commuter	20,353	25,603	21,151	21,151
Total	59,013	59,886	55,329	53,812
Local Frequency (in minutes)				
Peak Weekday	30 - 60	30 - 60	30 - 60	30 - 60
Midday Weekday	30 - 120	30 - 120	30 - 120	30 - 120
Evening Weekday	30 - 60	30 - 120	30 - 120	30 - 120
Saturday	80	60 - 120 (4 routes)	60 - 120 (4 routes)	60 - 120 (4 routes)
Sunday	80	60 - 120	No service	No service
Commuter Frequency (in daily trips)				
Peak Direction	67	68	66	66
Reverse Direction	6	22	8	8

Service Span				
Local Weekday	5:52 am – 11:00 pm (16.9 hours)	6:00 am – 8:30 pm (14.5 hours)	6:00 am – 10:30 pm (only Route 150 would operate past 8:30 pm) (16.5 hours)	6:00 am – 8:30 pm (14.5 hours)
Local Saturday	7:15 am – 11:10 am 1:15 pm - 6:10 pm	6:00 am – 7:00 pm (13 hours)	6:00 am – 7:00 pm (13 hours)	6:00 am – 7:00 pm (13 hours)
Local Sunday	7:15 am - 11:10 am 1:15 pm - 6:10 pm	7:00 am - 6:00 pm (11 hours)	No Service	No Service
Commuter	5:20 am – 8:40 pm 3:10 pm – 6:55 pm	5:30 am – 8:45 am 3:30 pm – 7:00 pm	5:30 am – 8:45 am 3:30 pm – 7:00 pm	5:30 am – 8:45 am 3:30 pm – 7:00 pm

CHAPTER 6 – FINANCIAL PLAN

Chapter 6 presents a five-year financial operating and capital plan with discussion of fare policy considerations, recommended fare structure and rates, and a five-year financial and capital plan for each of the three COA service scenarios identified in Chapter 5. The financial plan is prepared to ensure there is sufficient funding available for the proposed fixed route service, and the development, maintenance, and replacement of capital assets. The City’s demand response revenue/expenses are not directly reflected in the financial plans; however, certain revenue sources are reduced based on assumed demand response expenses and capital needs within the FY 2018 – 2022 period that the financial plan considers. This plan will be used to further assist the City with preparing the 10-year capital and operations plan concurrent with the Sacramento Area Council of Government (SACOG) Transportation Development Act (TDA) claim process.

For each of the COA’s service scenarios, there are several common operating revenue assumptions, as well as common fare policy revenue assumptions. Common revenue assumptions are discussed for Transit’s primary sources of operating revenue, TDA Local Transportation Funds (LTF), State Transit Assistance Funds (STA), and Low Carbon Transit

Operation Program (LCTOP) funds. In addition, the common fare policy assumptions include fare increases to both the local and commuter services in FY 2018, a 22% and 44% increase to the basic cash fare respectively, and an increase of 9% and 23% to the local and commuter basic cash fares, respectively, in FY 2021. These fare increases consider other regional operators' fare policies and pricing, commuter premium services offered, as well as adjust to maintain future farebox recovery and address inflationary operating cost increases.

Each of the COA's three service scenarios further consider common capital revenues and expenses. The proposed network restructuring plan identified by the COA requires a total of 46 buses for fixed route service, consisting of 38 for peak period service and eight (8) spares. This plan allows for an overall reduction of nine (9) buses from the fixed route fleet, resulting in capital cost savings of approximately \$5.4 million from the current network's capital replacement plan. In addition, park-ride facility improvements are identified in FY 2020, as well as bus stop improvements related to the beginning of a bus rapid transit service (BRT) in FY 2022. Common federal funding sources, such as the Congestion Mitigation Air Quality (CMAQ), FTA Section 5339, and FTA Section 5309 funding programs are anticipated to cover most of these capital expenses.

Aside from the common revenue, fare policy, and capital expense assumptions, each of the COA's three service scenario have some unique revenue and expense assumption, which result in unique revenue to expense projections for the five year financial program. Exhibit ES-3, shown on the next page, identifies an overall summary of the revenue and expense assumptions and projections for each of the COA's LOS scenarios, covering FYs 2018 through 2022. It is important to note that overall expenses are adjusted upward annually to account for inflation, and reflect consistency with the City's operations and maintenance annual contractual rate increases. Additionally, while historically the City's General Fund has provided some revenue to cover overhead costs, the COA's five year financial plan removes General Fund revenue contributions to the annual budget beginning in FY 2018. Should General Fund contributions be considered during FY 2018 through FY 2020, the overall surplus or deficit for each COA scenario's financial plans would be different.

Exhibit ES-3. Comparison Summary of the Three COA LOS Scenarios' Financial Plans

	Base Scenario	7.6% Reduction Scenario	10% Reduction Scenario
FTA Section 5307 Revenue Assumptions	Increases annually by 2% from FY 2018	Increases annually by 1% from FY 2018	Remains flat in FYs 2018-2020, increases by 1% in FYs 2021 and 2022
Cumulative Ridership Assumptions for FYs 2018 – 2022*	Overall ridership increase by 5%	Overall ridership increase by 1%	Overall ridership decrease by -4%
Cumulative Fare Revenue Increase Percentage for FYs 2018 – 2022**	63% increase	57% increase	49% increase
Cumulative Operating Expense Percentage Increase for FYs 2018 – 2022***	19% increase	10% increase	7% increase
Five Year Cumulative Surplus/Deficit ****	\$3,509,237 deficit	\$395,396 deficit	\$392,601 surplus

*Assumed from base year (FY 2017) ridership end of year projection

**Assumed from base year (FY 2017) end of year fare revenue projection of \$1.28 million

***Assumed from base year (FY 2017) end of year operating expense projection of \$8.21 million

****Assumes no General Fund Contributions to cover overhead expenses

As indicated in Chapter 6, while the 10% reduction scenario is the only COA scenario that identifies a cumulative surplus of revenues to expenses in the five year financial plan, staff is recommending that the 7.6% reduction scenario be implemented. The 7.6% reduction scenario assumes a decrease in revenue hours, which will lead to a more closely balanced budget without General Fund contributions. Any additional reductions in service could lead to a greater than expected ridership decrease, which would further jeopardize anticipated fare revenues and some state and federal operating revenue sources. It is important to note that the assumptions utilized in each of these scenarios are based on staff's conservative forecasts for future revenues and expenses, as well as anticipated capital needs. Should any of these assumptions change, in particular state or federal funding sources, as well as future capital replacement needs, significant changes would occur to the five year cumulative surplus/deficit identified for each COA service scenario.

1.0 INTRODUCTION

The Comprehensive Transit Analysis, also known as the COA is an action plan to guide the implementation of transit service improvements over the next 5 years. A COA of the City's local and commuter transit routes is important in order to improve the efficiency of service within the City, address future anticipated land use development and transportation investments, and enhance connectivity to regional light rail and bus services. The COA has specifically addressed how the City's transit system will connect to the light rail service at CRC, which opened in September 2015, and serve the proposed future land use development in the City's Southeast Policy Area. Overall, the analysis has culminated in recommendations for local and commuter route revisions that would address future population growth and transit demand, transit-dependent needs, connectivity to regional transit service, and anticipated financial revenue and transit investment opportunities.

Key elements of the COA study approach included:

- Problem identification – an evaluation of the performance of existing e-tran local and commuter services;
- Identification of the City's unmet mobility needs;
- Identification of key local and regional origins and destinations;
- Identification of the critical markets in the study area;
- Address the type and level of transit service justified for the study area as well as future service requirements and financial resources (including LRT connectivity); and
- Address community input.

The COA study process has included a great deal of outreach and facilitation with the public and key regional stakeholders. The alternative service scenarios described below, reflect input received from a variety of activities, including two public workshops, multiple interviews with various agencies, and a community survey that received over 400 responses.

Further, these service scenarios were presented at two public workshops held on August 29, 2016. A copy of the presentation material is included as Appendix A. Service enhancements, as described herein and presented to the public, were designed to reflect previous comments such as the following:

- A “desire for a more user-friendly service”;
- Some of the alignments of the commuter services are too long; and
- A concern that any restructuring will result in “an elimination or reduction of commuter services to downtown Sacramento due to the newly operational LRT service to CRC.

The consensus at the August public workshops was one of support, and favorable comments were received regarding the recommended approach. However, there was some

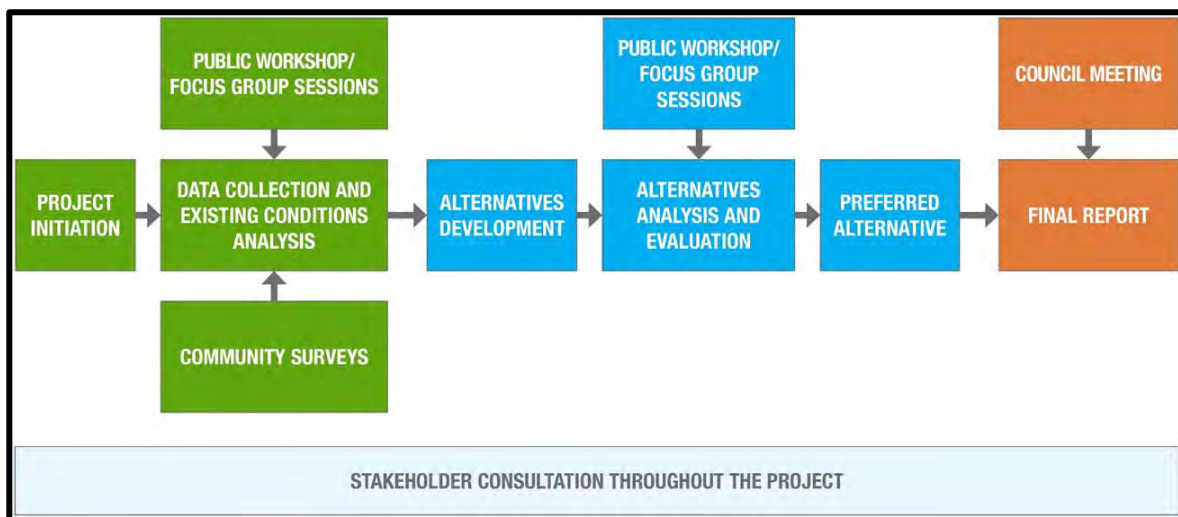
concern expressed regarding the potential decisions to reduce the level of local transit services for midday.

COA outcomes provide the foundation (recommended service restructuring) for a plan to guide the implementation of transit service improvements over the next 5 year period. This plan will enhance the efficiency and effectiveness of e-tran's existing transit services while responding to the changing demands for transit throughout the service area. As the population grows and demographics shift, it is important to reshape transit service to respond to new and changing transit demands. It is also important for transit service improvements to be implemented in a fiscally responsible (and financially sustainable) manner. This plan maximizes the performance of existing services while responding to additional community mobility needs. The focus of the recommendations is to enhance service, incorporate more efficient corridors to increase system ridership and generate more fare revenue, in addition to maintaining appropriate transit service in lower potential ridership areas. The recommendations respond to key issues identified by passengers and the community to create a system that is more attractive to riders.

1.1 Study Process

The COA study began in May 2015, with a comprehensive data collection effort including historical operating and financial data, ancillary reports and a robust stakeholder and community outreach, and survey research effort. Key elements of the work plan are illustrated in Exhibit 1-1. The findings from the data collection and public outreach efforts provided the key inputs for an analysis of market and performance trends. This analysis was the basis of the Existing Service Evaluation report which identified key findings and strategies to improve e-trans' transit network. These findings and strategies were used to develop the service recommendations in the draft Service Plan Working Paper (October 2016).

Exhibit 1-1. COA Work Plan

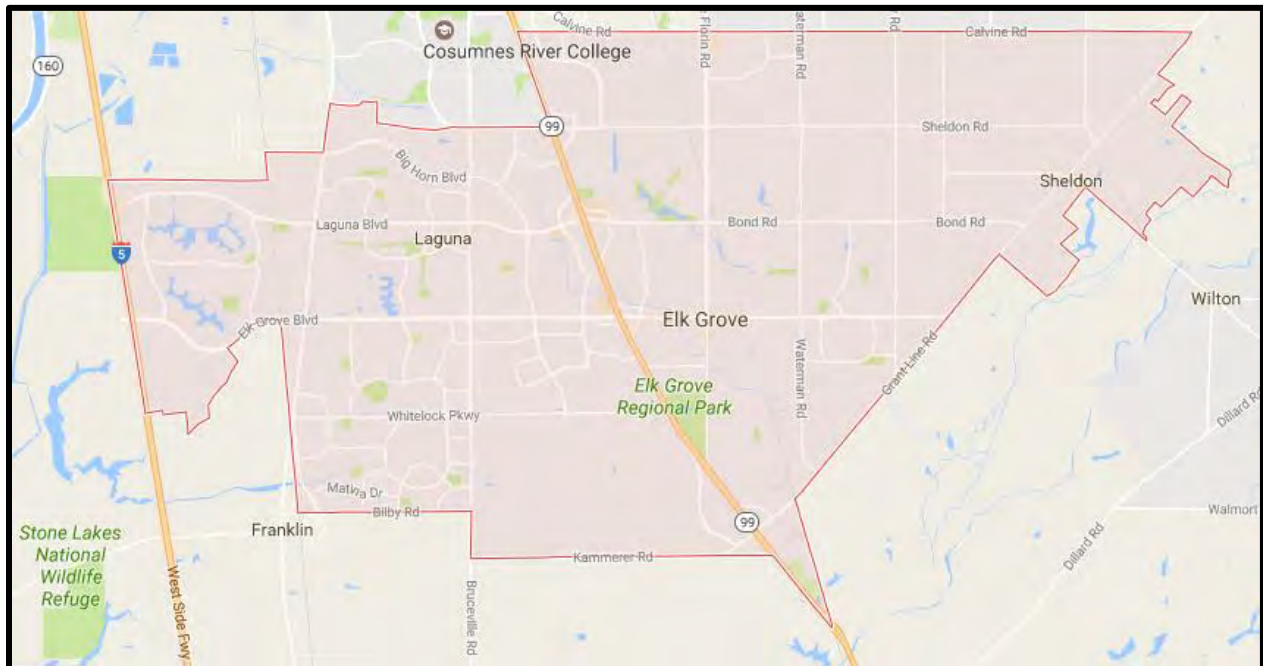


2.0 MARKET ANALYSIS

Elk Grove is the second largest city in Sacramento County, California, located just south of the state capital of Sacramento. It is part of the Sacramento–Arden-Arcade–Roseville Metropolitan Statistical Area. As of July 1, 2016, the population of the city was estimated at 162,995 persons. The City was incorporated on July 1, 2000 and was the fastest growing city in the U.S. in 2004-2005.

Exhibit 2-1 shows the primary study area, the City of Elk Grove within the shaded boundary, and CRC to the north of the City’s boundary. The City is bordered on the west by Interstate 5 (I-5) and is crossed by State Route 99 (SR 99). Major transportation corridors in the City include Laguna Boulevard/Bond Road and Elk Grove Boulevard (east-west streets), and Franklin Boulevard, Bruceville Road, Elk Grove-Florin Road and Waterman Road (north-south streets). The western and central parts of Elk Grove have experienced significant growth and urbanization in recent years. The eastern portion of the City retains the rural character that once typified the entire community.

Exhibit 2-1. Elk Grove Study Area



2.1 Major Employers

While many local residents commute to Sacramento for work, Elk Grove has a significant employment base with several large work sites and retail shopping plazas, medical centers and schools. The largest work site in the City is the Apple campus with over 1,800 workers on Laguna Boulevard east of I-5. The next largest is the State Department of Corrections and

Rehabilitation campus with about 1,500 employees on Longleaf Drive between Big Horn Boulevard and Laguna Springs Drive. Key concentrations of retail and service employment are located in the vicinity of SR 99 Freeway interchanges at Calvine Road, Bond Road, and Elk Grove Boulevard, and at Calvine Road and Elk Grove Florin Road. Kaiser Permanente has two locations on Big Horn Boulevard and Promenade Parkway.

2.2 Demographics

The Elk Grove area experienced rapid growth between 2000 and 2010, from 72,685 persons pre-incorporation to 153,015 persons in 2010. Recent Department of Finance figures estimated Elk Grove's population at 162,995 on July 1, 2016. Elk Grove is projected to have a population approaching 176,000 in 2020.

As prepared by SACOG, Exhibit 2-2 presents a detailed community demographic profile, including "Potential Transit Market" measures in the final section. In addition to the number of youth and older adults of the population, measures of vehicle availability, poverty and disability may indicate demand for public transit. The youth and older adult populations and potential transit measures, reflect populations who may be less likely to have access to an automobile (possibly because of affordability or disability), and/or may not have a driver's license (possibly because of age).

Exhibit 2-2. Elk Grove Community Demographic Profile

Characteristic	Number	%	Six-County SACOG Region
General Characteristics¹			
Total Population	153,015	100%	2,316,019
19 years and younger	50,622	33.1%	28.2%
20 to 54 years	74,635	48.8%	48.3%
55 years and older	27,758	18.1%	23.5%
Median Age	34.3		
Total Households	47,927	100%	843,411
Average Household Size	3.179		
Race/Ethnicity¹			
White/Caucasian	58,305	38.1%	55.6%
Asian	39,479	25.8%	11.6%
Hispanic/Latino	27,581	18.0%	20.7%
Black/African American	16,462	10.8%	6.7%
Two or more races	8,600	5.6%	3.9%
Some other race	2,588	1.7%	1.5%
Income²			
Median household income	\$79,457		
Per capita income	\$29,164		

Characteristic	Number	%	Six-County SACOG Region
Means of Transportation to Work (workers ages 16+)²			
Drove alone (car, truck, or van)	49,630	76.2%	75.2%
Carpooled	8,891	13.7%	12.3%
Worked at home	3,264	5.0%	5.2%
Walked	599	0.9%	2.1%
Public transportation	1,926	3.0%	2.6%
Other means	796	1.2%	2.7%
Educational Attainment (population ages 25 +)²			
Less than 9 th grade	4,870	5.7%	6.3%
Less than high school (no diploma)	4,305	5.0%	7.3%
High school graduate	14,917	17.4%	22.3%
Some college (no diploma)	32,980	38.5%	35.0%
Associates degree or higher	28,509	33.3%	29.0%
Potential Transit Market²			
One vehicle available per household	10,167	22.9%	31.8%
Zero vehicles available per household	1,215	2.7%	6.3%
Non-white population	94,710	61.9%	44.4%
Individuals below the poverty line		8.0%	12.8%
Families below the poverty line		6.3%	
Youth 19 and under	50,622	33.1%	28.2%
Seniors 65 and older	12,744	8.3%	12.0%
Persons with a disability	14,993	10.2%	12.6%

SOURCE: ¹2010 CENSUS; ²2006-2010 ACS

Salient household, economic and social characteristics include:

- Elk Grove is made up largely of families with young children (33.1% of population is 19 years and younger)
- 18.1% of the population is age 55+ (compared to 23.5% for the region)
- 2.7% of households have no vehicle available (compared to 6.3% of the region)
- 8% of individuals and 6.3% of households are below the federal poverty level
- 10.2% of the population have a disability of some kind although it is not known if this impacts on an individual's mobility

The demand for public transit is typically driven by the number of youth, older adults, lack of vehicle availability, affordability (percent of population below the poverty level) and/or disability. Except for the number of youth, all of the aforementioned potential transit market indicators in the City are below regional averages. Nonetheless, these demographic and socio-economic

characteristics suggest that a sizable portion of the City’s population who are dependent on e-tran.

2.3 Journey to Work

Elk Grove experiences a net worker outflow with a greater number of workers leaving the area for employment than coming into it. Approximately 47,000 workers leave the City for employment and 19,000 workers come to the City for employment. Exhibit 2-3 illustrates the worker flows.

Exhibit 2-3. Elk Grove Work Flows (2010)

Employed in area	24,581
Employed in area and live in area	5,782
<i>Worker inflow</i>	<i>18,799</i>
Live in area	52,797
Live in area and employed in area	5,782
<i>Worker outflow</i>	<i>47,015</i>
<i>Net Worker Flow</i>	<i>(28,216)</i>

SOURCE: ON-THE-MAP DATA – INFLOW/OUTFLOW OF WORKERS – ALL JOBS 2010 U.S.CENSUS BUREAU

2.4 Growth and Development

The City has a number of developments in the planning stages, currently under construction or recently completed that may have an impact on transit demand. The largest anticipated growth area is in the southern portion of the City, between Whitelock Parkway and Kammerer Road, from Bruceville Road to SR-99. Further, there are a number of smaller developments with high trip generation (such as medical facilities and shopping destinations) that are also being planned throughout the City.

The City is currently updating its General Plan – laying out the community vision for the City’s future. The update will address future growth and development, with the inclusion of complementing economic vitality, land use and circulation elements contained within the General Plan. The *Comprehensive Transit Analysis* (or COA) considered the future direction of growth and development in advancing a scalable approach to a recommended local and commuter transit network.

3.0 SURVEY RESEARCH/STAKEHOLDER CONSULTATION

The COA study process has included a great deal of outreach and facilitation with the public and key regional stakeholders. The alternative service scenarios and recommended service plan (presented in Chapter 5), reflect input received from a variety of activities, including two public workshops, multiple interviews with various agencies, and a community survey that received over 400 responses.

Transit survey results are presented in Appendix A. Public workshop/outreach presentation material is presented in Appendix B.

3.1 Community Survey

As a part of the initial planning process, a community survey was conducted to better understand the transit needs of the community. The survey provided information on travel behavior, quality of service, and user demographics. The survey also provided an opportunity for the community to express their concerns and make recommendations to improve transit services.

The survey was administered on-line via Survey Monkey accessed through a link from the City's home page. To ensure maximum participation, surveys were made available to the community for an approximately six-week period, beginning on October 1, 2015 and concluding on November 11, 2015. Notification of the web-based survey was made to the public via the City of Elk Grove's website as well as electronic newsletters and rider alerts. Additionally, a member of the City's staff administered a modified shorter version of the survey at a local public event.

The community survey consisted of seven questions targeted to solicit feedback from community members on their preferred transportation mode choice, typical trip destinations by mode, opinions on the quality of transit service provided by e-tran, recommendations on potential improvements to transit service, and individual demographic data.

Results from the survey were reviewed as a part of the comprehensive analysis and served as important input for the development of service enhancements.

Key observations from the survey results. Survey participants were generally satisfied with the quality of e-tran services. Most respondents expressed that the fares were reasonable and generally felt safe on the buses. Despite overall satisfaction with the quality of service, respondents did identify several areas for improvement. The following are some of the key observations from the survey results including the comments:

- The majority of respondents were regular Commuter Service customers that use the service for work purposes. Conversely, 60% of Local Service customers use e-tran for non-work purposes.
- The most common reason why survey respondents did not use e-tran services was because the buses do not go close enough to where they want to travel to and from. Infrequent service and a feeling that a trip takes too long, were also recurrently mentioned.

- The survey revealed that the most desired transit service improvement was a mobile app for real-time information followed by a desire for more frequent bus service. Third was the desire for later night service.
- Most unfavorable comments focused on:
 - An apprehension with using LRT (citing safety and security concerns as well as increasing commute times);
 - Concerns of the prospect of eliminating e-tran Commuter Service (indicating they would rather drive than use LRT); and
 - Quality of e-tran service deteriorating because of missed runs and accusations of this being intentional to encourage the use of LRT.

4.0 REVIEW OF E-TRAN EXISTING FIXED ROUTE TRANSIT SERVICES

4.1 Overview of Existing E-tran Services

Prior to 2005, public transit in Elk Grove was provided by RT. These services were provided under a contract that was set to expire in June 2004. In 2003, the City decided to create its own transit system to replace the services being provided by RT. Elk Grove's new "e-tran" system started operating on January 2, 2005, and replaced Sacramento RT routes 52, 53, 57, 59, 60, and 66. Initial routes were essentially unchanged when e-tran took over providing service. Since separating from RT, e-tran has added several commuter and local routes, and made significant service changes.

E-tran currently provides nine local routes, eight commuter routes to Sacramento, two commuter routes to Rancho Cordova, and two reverse commute routes from Sacramento and Rancho Cordova. Exhibit 4-1 illustrates the e-tran system map.

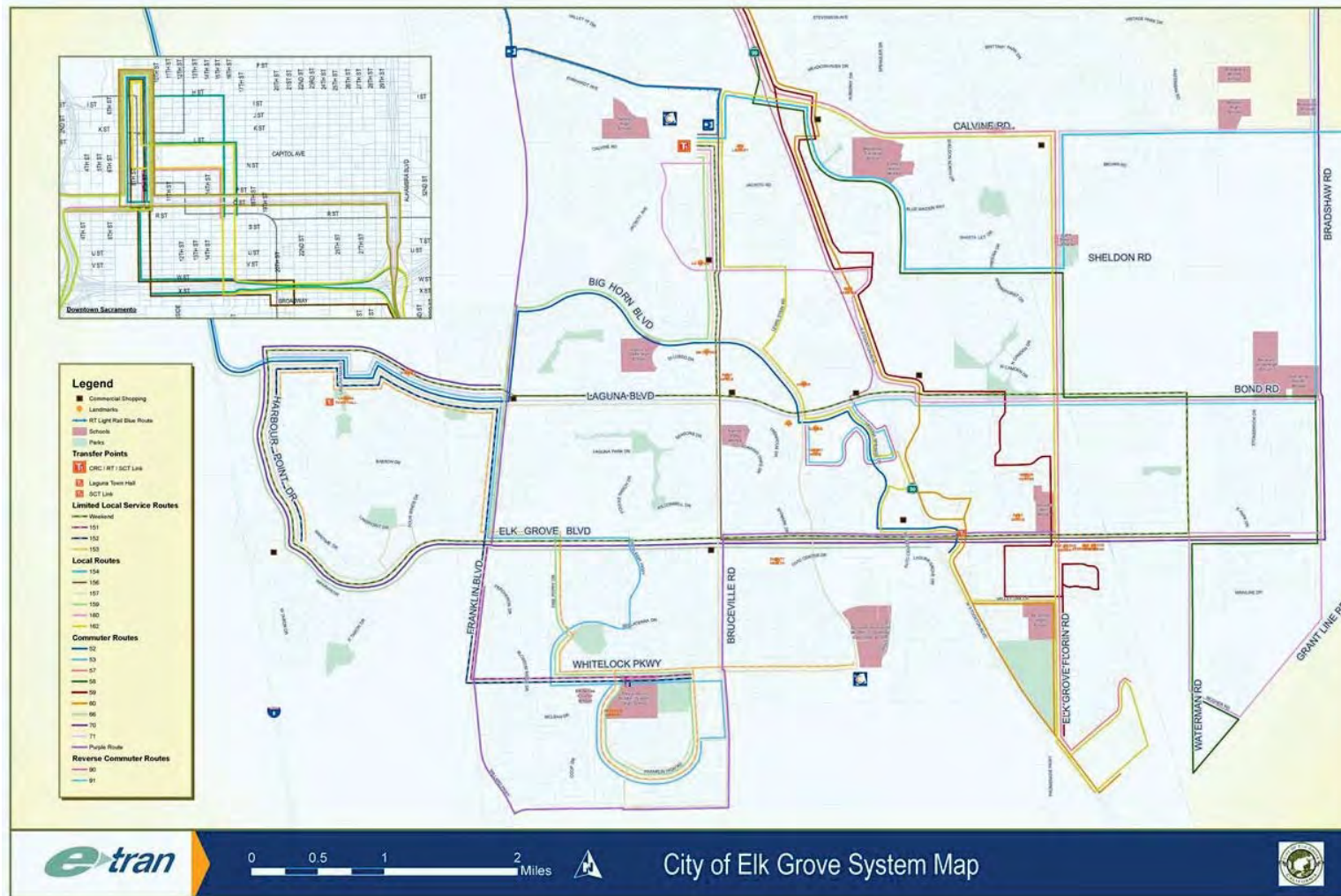
With the Phase 2 extension of the Blue Line from Meadowview to CRC which opened in September 2015, the regional LRT network is now within a mile of the northwest corner of the City, and within five miles of most Elk Grove residents. The project includes a 2,700-space park-ride lot at CRC.

Service Hours:

- Local e-tran service operates Monday to Friday from 5:30 AM to 10:30 PM.
- Commuter service operates Monday to Friday from 5:00 AM to 6:55 PM.
- The weekend shuttle operates from 10:00 AM to 5:00 PM on Saturday and Sunday.
- The City of Elk Grove does not offer transit services on federal holidays.

Commuter routes offer between one and eight peak direction trips, depending on the route. Local routes operate at varying frequencies, with routes that run as often as every half hour to routes that run once every two hours. Routes 151, 152, and 153 operate on school days only and are timed around morning and afternoon school bell times.

Exhibit 4-1. Existing E-tran System Map



Fare Structure: Exhibit 4-2 presents existing e-tran fare types and prices. Currently e-tran charges \$2.25 for a basic single-ride ticket, which can be used on either the local system or commuter routes. Transfers, issued only when boarding buses, cost \$0.50 and are valid for 120 minutes. Transfers may only be used once and must be surrendered to the bus operator upon boarding another e-tran vehicle or at the end of the time limit. There is no stated policy as to whether transfers may be used to complete a round trip. The transfer policy may be discouraging to local riders who, while preferring a one-seat ride between origin and destination, actually pay more for a two-seat ride. Moreover, e-tran transfers are not accepted by RT, YoloBus, Yuba/Sutter Transit, El Dorado Transit, or Roseville Transit. Elk Grove’s participation in the regional Connect Card collaborative is a key step with fare policy and revenue sharing implication for Elk Grove as well as its partners.

Exhibit 4-2. E-tran Fare Structure

Type of Fare Media	Basic	Senior (62+)/ Disabled/ Medicare	Student/Youth (ages 5-18)
Single Ride	\$2.25	\$1.10	\$1.10
Transfer	\$0.50	\$0.25	\$0.25
Daily Pass	\$6.00	\$3.00	\$3.00
10-Ride Pass	\$22.50	\$11.00	\$11.00
Unrestricted (commuter) 31-day pass	\$100.00	\$50.00	\$50.00
Local (only) 31-day pass – good on reverse commute service	\$80.00	\$40.00	\$40.00
Route Deviation Request (<i>only available on routes 160 and 162 for seniors, persons with disabilities, and e-van Eligibility Card holders; ¾ mile limit</i>)	-	\$0.50	-

E-tran is the only transit system in the region that charges the same price for a local, single-ride ticket as for a commuter, single-ride ticket. When compared to other transit operators that offer commuter service, e-tran fares are much less expensive. Exhibit 4-3 provides a comparison of commuter fares in the region.

Exhibit 4-3. Regional Commuter Fare Prices

Agency	Basic Single Ride	Monthly Pass	Monthly Pass Discount
e-tran	\$2.25	\$100.00	+\$0.25 per ride
Yolobus Express	\$3.25*	\$110.00	-\$0.25 per ride
Roseville Transit	\$3.25 - \$4.50 (resident discount)	\$110.00 - \$155.00	-\$0.50 – \$0.63 per ride
Yuba-Sutter Transit	\$4.00	\$128.00	-\$0.80 per ride
South County Transit	\$4.00	\$120.00	-\$1.00 per ride
Placer Commuter Express	\$4.25 - \$5.75 (zone-based)	\$131.25 - \$178.50	-\$0.97 - \$1.29 per ride
El Dorado Transit	\$5.00	\$180.00	-\$0.50 per ride

*Note: Yolobus offers some "commuter" routes for the basic \$2.00 fare, but the express commuter routes have a \$1.00 premium.

4.2 Peer Review

To compare e-tran performance relative to peers, a select number of transit agencies were identified for review. Transit agencies were divided into three groups – agencies with local services only, agencies with both local and commuter services, and an agency with experience operating light rail (Valley Metro – Phoenix). Local service only agencies were the Central Contra Costa Transit Authority, Petaluma Transit, CityBus (Santa Rosa), and City Coach (Vacaville). Local and commuter service agencies were the Golden Gate Transit (Marin County), Solano County Transit, and the Western Contra Costa Transit Authority.

Results of the peer review are presented in Appendix C.

Information reviewed in this process included:

- Service area population and geography;
- An overview of route structure, coverage, service levels, and service standards;
- Passenger trips and service hours per capita;
- Unit operating costs and performance levels;

- Revenues - average fares and farebox recovery;
- Innovative services and other strategies that have been implemented to generate additional ridership and revenue; and
- Fleet and operator information.

Data was obtained from the National Transportation Database (NTD) for FY2014. Summary data is presented in Exhibits 4-4, 4-5 and 4-6. Key observations include:

- E-tran has lower per capita ridership on the fixed-route (and ADA) services compared to agencies that operate local services only;
- E-tran has the lowest boardings per revenue hour and revenue mile of agencies providing only local services with the exception of boardings per revenue hour for bus services;
- E-tran has the second highest local bus service costs per boarding (and the highest operating costs per boarding for ADA paratransit) among agencies providing local services only;
- E-tran has the highest ADA paratransit operating cost per revenue hour among agencies providing local services only;
- E-tran has the lowest farebox recoveries for bus (and ADA paratransit) among agencies providing local services only;
- E-tran receives the highest proportion of fares from commuter services among agencies that provide commuter services;
- E-tran has the highest boardings per revenue hour for its commuter services among agencies that provide commuter services;
- E-tran has the highest commuter operating costs per revenue hour and revenue mile among agencies that provide commuter services.

Valley Metro (Phoenix, AZ) LRT experience offers ideas on how BRT and LRT were introduced to a community.

- Valley Metro alleviated public concerns of replacing a bus with light rail due to the improved service their light rail provided. Additionally, farebox recovery is twice that for the Central Phoenix line at 40% compared to only 20% for the previous Red Line bus;
- Valley Metro introduced a BRT Light system to connect with new light rail stations;
- Valley Metro managed to eliminate and restructure duplicative services to better connect new services while maintaining frequency;
- Valley Metro implemented an aggressive public outreach scheme to work with people who were skeptical about the impacts to traffic due to the construction

- schedule of their light rail extension. They attribute this approach to winning over the public; and
- Valley Metro's light rail projects provided many quantifiable economic and land use benefits, including increased density of housing and jobs around transit stops \$90 million in public/private investment in central Mesa and an estimated \$8.2 billion in public/private development has occurred around stations areas since 2005.

Exhibit 4-4. Unlinked Passenger Trips, Revenue Hours, and Revenue Miles

Agency	Commuter	Bus	ADA	Total	Commuter (Per Capita)	Bus (Per Capita)	ADA (Per Capita)	Commuter	Bus	ADA	Total	Commuter	Bus	ADA	Total
	Unlinked Passenger Trips							Total No. Revenue Hours				Total No. Revenue Miles			
<i>Local Services Only</i>															
CCCTA	-	3,328,558	158,664	3,487,222	-	6.45	0.31	-	222,600	74,400	297,000	-	2,421,100	1,218,800	3,639,900
City Coach	-	511,000	12,000	523,000	-	5.49	0.13	-	37,200	5,300	42,500	-	517,400	55,300	572,700
Petaluma Transit	-	359,520	25,411	384,931	-	6.10	0.43	-	17,100	9,100	26,200	-	227,200	80,800	308,000
CityBus	-	2,338,000	41,000	2,379,000	-	13.85	0.24	-	81,000	21,100	102,100	-	958,200	280,100	1,238,300
<i>Local + Commuter Services</i>															
Golden Gate Transit	-	6,384,779	9,720	6,394,499	-	7.35	0.01	-	314,800	9,600	324,400	-	4,946,400	225,900	5,172,300
WestCAT	229,165	1,082,745	44,579	1,356,489	2.41	11.41	0.47	12,100	66,800	14,500	93,400	364,700	1,137,100	209,400	1,711,200
SolTrans	672,262	765,884	34,467	1,472,613	2.87	3.27	0.15	39,300	43,200	15,400	97,900	1,026,400	531,400	201,800	1,759,600
e-tran	508,345	519,067	16,494	1,043,906	3.26	3.33	0.11	19,300	34,800	8,900	63,000	361,800	528,500	142,800	1,033,100

Exhibit 4-5. Boardings and Operating Costs per Revenue Hour and Mile

Agency	Boardings per Revenue Hour			Boardings per Revenue Mile			Operating Cost per Boarding (\$)			Operating Cost per Revenue Hour (\$)			Operating Cost per Revenue Mile (\$)		
	Commuter	Bus	ADA	Commuter	Bus	ADA	Commuter	Bus	ADA	Commuter	Bus	ADA	Commuter	Bus	ADA
<i>Local Services Only</i>															
CCCTA	-	14.95	2.13	-	1.37	0.13	-	8.28	32.97	-	123.84	70.31	-	11.39	4.29
City Coach	-	13.74	2.26	-	0.99	0.22	-	3.15	30.84	-	43.28	69.84	-	3.11	6.69
Petaluma Transit	-	21.02	2.79	-	1.58	0.31	-	3.78	34.16	-	79.44	95.38	-	5.98	10.74
CityBus	-	28.86	1.94	-	2.44	0.15	-	4.26	29.82	-	122.92	57.94	-	10.39	4.36
<i>Local + Commuter Services</i>															
Golden Gate Transit	-	20.28	1.01	-	1.29	0.04	-	11.26	121.97	-	228.45	123.50	-	14.54	5.25
WestCAT	18.9	16.21	3.07	0.63	0.95	0.21	6.18	5.64	31.70	116.98	91.47	97.46	3.88	5.37	6.75
SolTrans	17.1	17.73	2.24	0.65	1.44	0.17	7.47	6.01	45.95	127.85	106.50	102.83	4.90	8.66	7.85
e-tran	26.34	14.92	1.85	1.41	0.98	0.12	5.56	8.00	81.42	146.33	119.28	150.90	7.81	7.85	9.40

Exhibit 4-6. Operating Costs, Fare Revenue Farebox Recovery Ratio

Agency	Operating Cost (\$)				Fare Revenue (\$)				Farebox Recovery Ratio			
	Commuter	Bus	ADA	Total	Commuter	Bus	ADA	Total	Commuter	Bus	ADA	System-Wide
<i>Local Services Only</i>												
CCCTA	-	27,566,494	5,230,924	32,797,418	-	4,484,134	620,967	5,105,101	-	0.16	0.12	0.16
City Coach	-	1,609,941	370,128	1,980,069	-	363,706	24,423	388,129	-	0.23	0.07	0.20
Petaluma Transit	-	1,358,402	867,961	2,226,363	-	218,933	53,738	272,671	-	0.16	0.06	0.12
CityBus	-	9,956,226	1,222,598	11,178,824	-	1,991,523	125,431	2,116,954	-	0.20	0.10	0.19
<i>Local + Commuter Services</i>												
Golden Gate Transit	-	71,915,516	1,185,575	73,101,091	-	17,157,663	84,022	17,241,685	-	0.24	0.07	0.24
WestCAT	1,415,476	6,110,210	1,413,099	8,938,785	953,054	1,061,568	61,850	2,076,472	0.67	0.17	0.04	0.23
SolTrans	5,024,514	4,600,993	1,583,647	11,209,154	2,260,611	1,615,326	75,551	3,951,488	0.45	0.35	0.05	0.35
e-tran	2,824,093	4,150,907	1,343,006	8,318,006	1,107,756	442,578	33,287	1,583,621	0.39	0.11	0.02	0.19

4.3 E-tran Service Evaluation: Findings and Conclusions

The following presents findings and conclusions based on the evaluation of local and commuter route performance. The evaluation included the review of key operating data (ridership, number of revenue hours, schedules and headways). Individual route performance by service type is presented in Appendix D.

4.3.1 Local Network

- The local system is underperforming in terms of ridership and productivity. In FY 2015, local service generated an average of 13.6 boardings per revenue hour, 13% below the City's performance target (16 per hour) and one-third below the more common industry standard minimum productivity threshold of 20 boardings per revenue hour among mid-sized western cities. Only one regular route (154) generates more than 20 or more boardings per hour.
- Network functionality is limited - two routes (156, 157) generate more than half of all local ridership.
- Some alignments are circuitous or contain excessive one-way segments.
- Weekend alignments are substantially different from weekday alignments. This contributes to poor productivity on Saturday (8.2 boardings per hour) and Sunday (4.4 boardings per hour).
- CRC is the dominant boarding and alighting location, indicating that more than half of all local trips are to places outside the City of Elk Grove.
- Local route frequencies are too low to attract significantly more general purpose local trips.
- Local and commuter schedules are not integrated; resulting in lower effective frequencies on arterial segments.
- Existing routes are inconsistent with school boundaries.
- School route schedules (151,152,153) should be integrated into the regular route network.
- Current schedules are not constructed within cycles that would ensure schedule reliability, adequate recovery times, and Wage Order 9 compliance (guaranteeing meal and rest breaks).

4.3.2 Commuter Network

- Service is well-utilized. Eleven routes average 70.4% of seated capacity; range from 96.6% (Route 153) to 7.2% (Route 91).
- The four routes (52, 53, 66, Purple) operating via I-5 average over 80% of seated capacity.

- The four routes (57 – 60) operating via Hwy 99 average 76.5% of seated capacity.
- Two routes operating via Bradshaw Road to Butterfield LRT average 46.9% of seated capacity.
- Two reverse direction routes operating from Butterfield LRT average 8.3% of seated capacity.
- Generally, commuter routes spend too much time on arterial streets where relatively few customers board. Alignments should be shortened to a maximum 5 miles and 15 minutes of scheduled running time on arterial segments.
- Peak periods are too narrowly defined. Schedules should be expanded to provide morning arrivals between 6:45 am – 9:00 am; afternoon departures from 3:45 pm – 6:00 pm.
- Ridership patterns indicate that a majority of existing customers board commuter routes at a park-ride lot. Park-ride lot improvements are key to expanding commuter service capacity.
- Hwy 99 lots at Calvine and Sheldon are sufficient for the short term – *i.e.*, within 3 minutes of a freeway interchange; and capacity over 100 spaces, near retail commercial development.
- Explore consolidation of smaller park-ride locations (50 or fewer spaces) along the Hwy 99 and I-5 corridors.
- Need to plan for park-ride lots at future LRT station sites in the Big Horn Boulevard corridor at Bruceville, Laguna Boulevard, Elk Grove Boulevard, Whitelock Parkway and Bilby Road.

5.0 PLANNED IMPROVEMENTS – SERVICE PLAN

5.1 Introduction

A fresh perspective toward transit system development during the next five years is recommended. As the City continues to grow and evolve from a pre-incorporation bedroom community into a full-service city, it can be anticipated that community expectations for e-tran to meet a larger share of the mobility needs of its residents, businesses and institutions will rise. The City's 2003 General Plan, which currently is undergoing a comprehensive revision, recognized Elk Grove's growing place in the Sacramento region and the role of public transit in facilitating job access.:

“Policy CI.7 - The City shall encourage an approach to public transit service in Elk Grove which will provide the opportunity for workers living in other areas of Sacramento County to use all forms of public transit—including bus rapid transit and light rail—to travel to jobs in Elk Grove, as well as for Elk Grove workers to use public transit to commute to jobs outside the city.”

This chapter presents an overview of the System Concept (Section 5.2); Service Design Guidelines (Section 5.3); Performance Metrics (Section 5.4); the Recommended Local Network (Section 5.5); the Recommended Commuter Network (Section 5.6); and System Resource Requirements (Section 5.7).

5.2 System Concept

The proposed system concept replaces an incremental approach to e-tran system development taken since the separation from RT. The plan would redesign the e-tran fixed route system as a grid network consistent with the underlying street network that makes Elk Grove generally a convenient and efficient place to drive. A key purpose for the grid is to provide e-tran customers with better transit travel options applying the same criteria (*i.e.*, travel path, distance and time) that Elk Grove motorists use to navigate in their personal vehicles. The local transit network should be an integral part of the regional transit network in much the same way as the local street network interconnects seamlessly with the street networks of neighboring jurisdictions.

The system concept is purposefully budget-neutral (including annual General Fund contributions) to ensure a stable route network for the foreseeable future that current and new transit riders can easily understand and come to depend on. The new network generally covers the same Elk Grove neighborhoods and destinations served by the existing network; however, local and commuter routes function together as an integrated system to simplify the network and to improve headways within the City. Looking ahead, the network should not need to change significantly from year to year unless there is a dramatic change in transit funding. This does not mean to say that the network should not expand in response to major new land development as planned for the south side of the City.

The e-tran system LOS is expressed as the total annual revenue service hours (excluding deadhead hours), and is fully scalable to adjust to available budgets from year to year. E-tran provided approximately 59,000 annual revenue hours during FY 2016. Transit system operating costs may be calibrated to annual budgets by adjusting the days, hours, and service frequencies that individual routes are in service. Consistent with the City executive staff's guidance, this report presents three (3) LOS scenarios supporting the COA service plan. The COA's three service scenarios were created in conjunction with corresponding financial tables to demonstrate various LOS options, while reducing the annual general fund contribution to transit.

Section 5.5 presents the COA's three LOS scenarios:

- Base Scenario – LOS is consistent with Fiscal Year 2016-2017 budget projections and relatively similar to FY 2015-16 actual revenue hours,
- 7.6% Reduction Scenario – the base scenario's revenue hours are reduced by 7.6%, and
- 10% Reduction Scenario – the base scenario's revenue hours are reduced by 10%

Performance metrics are proposed to guide future improvements as additional revenues for e-tran become available, or conversely, reductions to local service span and frequency if further budget cuts are required.

Implementation of the new system design follows three steps:

1. Restructure the local route network around a north-south rapid transit alignment consisting primarily of Big Horn Boulevard between the Cosumnes River College (CRC) campus light rail transit (LRT) station and the planned business park located near Hwy 99 and Kammerer Road. This is intended to lay the foundation for an enhanced transit service corridor envisioned in the City's 2003 General Plan. Enhanced transit service development would take an evolutionary path from initially a local-commuter combination service as proposed, to BRT implemented in stages as capital funding permits, and eventually to LRT or other "next-generation" mode.
2. Implement six (6) additional local routes that provide east-west coverage along developed segments of Calvine Road, Sheldon Road, Bond Road-Laguna Boulevard, W Big Horn Boulevard, Elk Grove Boulevard, and Whitelock Parkway; and north-south coverage on segments of Elk Grove Florin Road, S Big Horn Boulevard, Bruceville Road, Franklin Boulevard, and Harbour Point Drive. This forms a grid network comprised of mostly arterial streets with routes both intersecting and running parallel to the Big Horn transit corridor.
3. Overlay seven (7) commuter routes on local alignments within Elk Grove during peak hours that continue directly to Downtown Sacramento via I-5 and Hwy 99, and connect to the Butterfield LRT station in Rancho Cordova. These commuter routes would

maintain and enhance peak-period service capacity between Elk Grove and Sacramento, focus on serving an improved network of park and ride lots (resulting in reduced travel times with the city limits and a downtown realignment resulting in all routes operating in the same network.

5.3 Service Design Guidelines

Translating the recommended system concept into service on the street requires a set of service design guidelines. These include guidelines are applicable to the network and to local and commuter routes individually.

5.3.1 Network Design

1. Simplification of the presently complicated e-tran route network is recommended with consolidation of nine (9) existing local routes into six (7) proposed routes.
2. Establish a common set of alignments within the City boundaries for local and commuter routes to make it easier and more convenient for customers to access the system.
3. Local routes should adhere to the same alignments on weekdays and weekends, again for purposes of simplifying the network for e-tran customers.
4. Absorb existing school Routes 151-153 (currently operating on limited schedules) into regular routes serving Franklin High, Toby Johnson Middle School, Cosumnes Oaks High, and Pinkerton Middle School with all-day connections to residential neighborhoods including the East Franklin, Whitelock and Stonelake subdivisions.
5. Integrate e-tran into a seamless regional transit network:
 - a. Maintain and enhance peak period commuter service to Downtown Sacramento.
 - b. Expand off-peak and weekend local connections to the Blue Line LRT at CRC station, and to the Gold Line LRT at Butterfield station.

5.3.2 Local Routes

1. Redraw the local route network to fit the City's grid street network:
 - a. Primary north-south line on Big Horn Boulevard;
 - b. East-west lines on Calvine, Sheldon, Laguna Boulevard, Elk Grove Boulevard; and
 - c. North-south lines on Elk Grove Florin, Big Horn, Bruceville, Franklin & Harbour Point.
2. Simplify / rationalize route alignments:
 - a. Straighter, more direct lines with fewer turns and deviations.
 - b. Bi-linear – coverage using two-way service on a single street through an area rather than one-way loop around it.

- c. Operate on arterial and selected collector streets only. Use of subdivision streets impacts travel times and alignment circuitry.
3. Route alignments must be scalable to accommodate planned future frequency improvements

5.3.3 Commuter Routes

1. Overlay commuter routes on local route alignments. Schedule commuter trips in between local trips to improve frequency on local segments. This design will provide commuters with the option of traveling during fringe peak and off-peak hours as needed, using local e-tran service connecting to/from the Blue Line. It also will reduce wait times for many local customers
2. Limit local pickup area (non-freeway route segment) travel time to 15 minutes or less from the beginning of the line to the last stop within Elk Grove.
3. Rationalize use of the I-5 and Hwy 99 freeways for access to Downtown Sacramento:
 - a. Neighborhoods west of Big Horn feed into the I-5 Freeway
 - b. Neighborhoods east of Big Horn feed into Hwy 99
4. Expand park-ride capacity to accommodate enhanced frequencies (i.e., 10-15 minutes at major park-ride lots.
5. Consolidate all routes onto a single bi-linear alignment through Downtown Sacramento running between the I-5 and I-80 Freeways.

5.4 Performance Measurement

Evaluating transit system performance is important to ensure that e-tran is accountable to customers, and that the City is an effective steward of federal, state, and local funds. Transit performance monitoring is a valuable planning tool in the review of route structure, service effectiveness, efficiencies and the equitability of transit service.

Transit industry performance measurement best practices are reflected in two key documents: *TCRP Report 88: A Guidebook for Developing a Transit Performance-Measurement System*; and the *Report on California Transit Performance Measures* prepared for Caltrans by the Mineta Institute. TCRP Report 88 identifies over 400 transit performance measures divided into seven categories:

1. Service Availability measures the quantity of transit access based on when (i.e., span), where (i.e., coverage and stop location), and how often (i.e., frequency) transit services are available. Ridership per capita also measures service availability as an outcome.
2. Service Delivery measures the quality of customers' day-to-day transit travel experience in terms of service reliability, comfort and convenience. Key indicators of utilization include ridership productivity and loading condition. These measure dynamic conditions that require continual monitoring and frequent reporting on a monthly or quarterly basis.

3. Safety/Security measures accidents, crimes and incidents involving customers, employees, or the public. Examples of performance measures include accident rates per 100,000 miles, injury accidents per passenger miles, and quantity of safety devices and personnel. These are dynamic measures of preferred outcomes that warrant continual monitoring and quarterly reporting.
4. Community Impact measures quality-of-life impacts on service area communities in terms of access to employment, economic growth and productivity, personal mobility and finances, pollution reduction, and equitable distribution of transit service. These are primarily preferred outcomes that are attainable over a multi-year timeframe.
5. Maintenance measures the safety, reliability and condition of revenue vehicles in terms of average fleet age and mileage, road calls per 100,000 miles, conformance to scheduled maintenance inspections, among others. These are dynamic measures of preferred outcomes that warrant continual monitoring and quarterly reporting.
6. Financial Performance measures how efficiently resources are deployed to meet travel demand within budgetary constraints. Key performance measures include net cost per revenue hour and per customer boarding applied to individual routes, and farebox recovery applied to the system.
7. Agency Administration measures organizational efficiency in terms of employee productivity (e.g., vehicle miles per employee), employee relations, and the percentage of the total operating budget consumed by general and administrative (G&A) expenses. These are dynamic measures of preferred outcomes that warrant ongoing monitoring and annual reporting.

5.4.1 Service-Related Performance Metrics

Service-related performance metrics draw primarily from three categories of the seven described in TCRP Report 88: Service availability; service delivery; and financial performance. When considered in context of the best practices outlined above, it is evident that e-tran's existing performance measurement parameters and tools need to be expanded beyond those contained in the adopted Fiscal Year 2014-2020 Short Range Transit Plan (S RTP).

The S RTP contains a partial set of performance-related indicators, measures and targets focusing on total ridership and ridership productivity:

- Local Routes - 41,000 monthly boardings averaging 16 boardings per service hour. Assuming approximately 37,000 revenue hours (FY 2015), these indicators yield an annual ridership range target between 492,000 and 592,000 boardings per year. Actual local ridership was about 506,000 in FY 2015.
- Commuter Routes - 41,000 monthly boardings averaging 26 boardings per service hour. Assuming approximately 21,000 revenue hours (FY 2015), these indicators yield an annual ridership range target between 492,000 and 546,000 boardings per year. Actual commuter ridership was about 508,000 in FY 2015.

Beyond these basic targets, the SRTP more generally recommended consideration and adoption of additional service-related performance metrics, including: minimum productivity thresholds to identify underperforming routes or segments requiring restructuring or discontinuation; and maximum occupancy thresholds to manage on-board loading conditions relative to vehicle seating capacity.

Several additional performance indicators are suggested to improve upon the existing static monthly ridership target and relatively low productivity threshold cited in the existing SRTP. Proposed performance indicators and associated measures and short-range targets for e-tran fixed route services are summarized in Exhibit 5-1. These metrics provide the basis for service evaluation.

Exhibit 5-1. Key Performance Measurement Criteria

Category	Key Performance Indicator	Measure	FY 2022 Target
Service availability	Span	Days / Hours	Wkdy/Sat - 17 hours Sunday - 15 hours
	Coverage	Percent residents within 0.33 mile	90%
	Frequency	Route Headways	30 minutes or better
Service delivery	Productivity	Passengers per revenue hour	20 average 10 (new < 2 yrs)
	Loading Condition	Percent of seated capacity	Local: 125% Commuter: 100%
Financial performance	Cost Effectiveness	Farebox recovery (% of total operating cost)	20%

Individual e-tran commuter or local routes found to be performing at or below the minimum performance standards of 20% farebox recovery ratio will be closely monitored at a more detailed trip by trip level. Poorly performing routes could be considered for service reductions and the reassignment of revenue hours to routes where additional hours are needed to solve capacity or on-time performance issues, or for the implementation of new services.

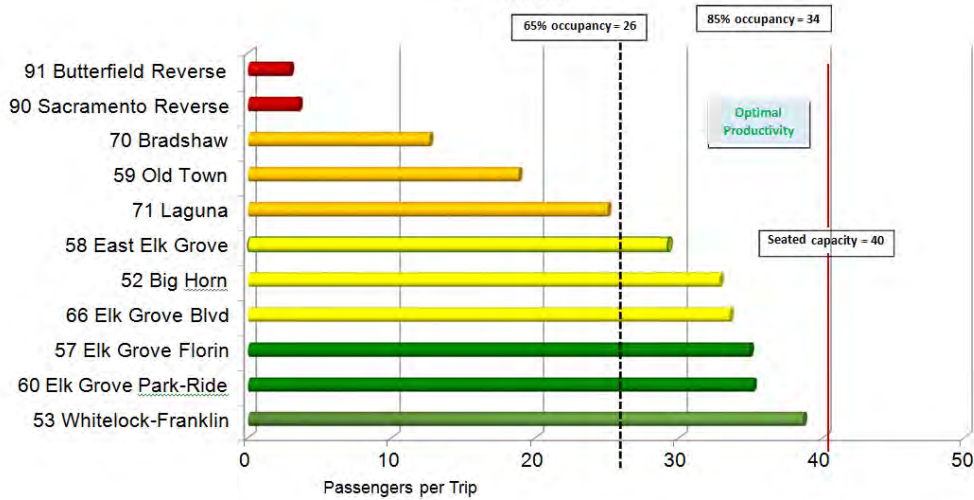
Exhibit 5-2, below, illustrates an example of a performance metrics system to evaluate route efficiencies.

- Green lines represent routes that are performing at or above performance criteria.
- Yellow lines represent routes that should be monitored.
- Red lines represent routes that are in jeopardy of being eliminated.

Exhibit 5-2. Performance Based Metric Evaluation Example

E-Tran Commuter Route Productivity

Customer Boardings per One-way Trip
FY 2015

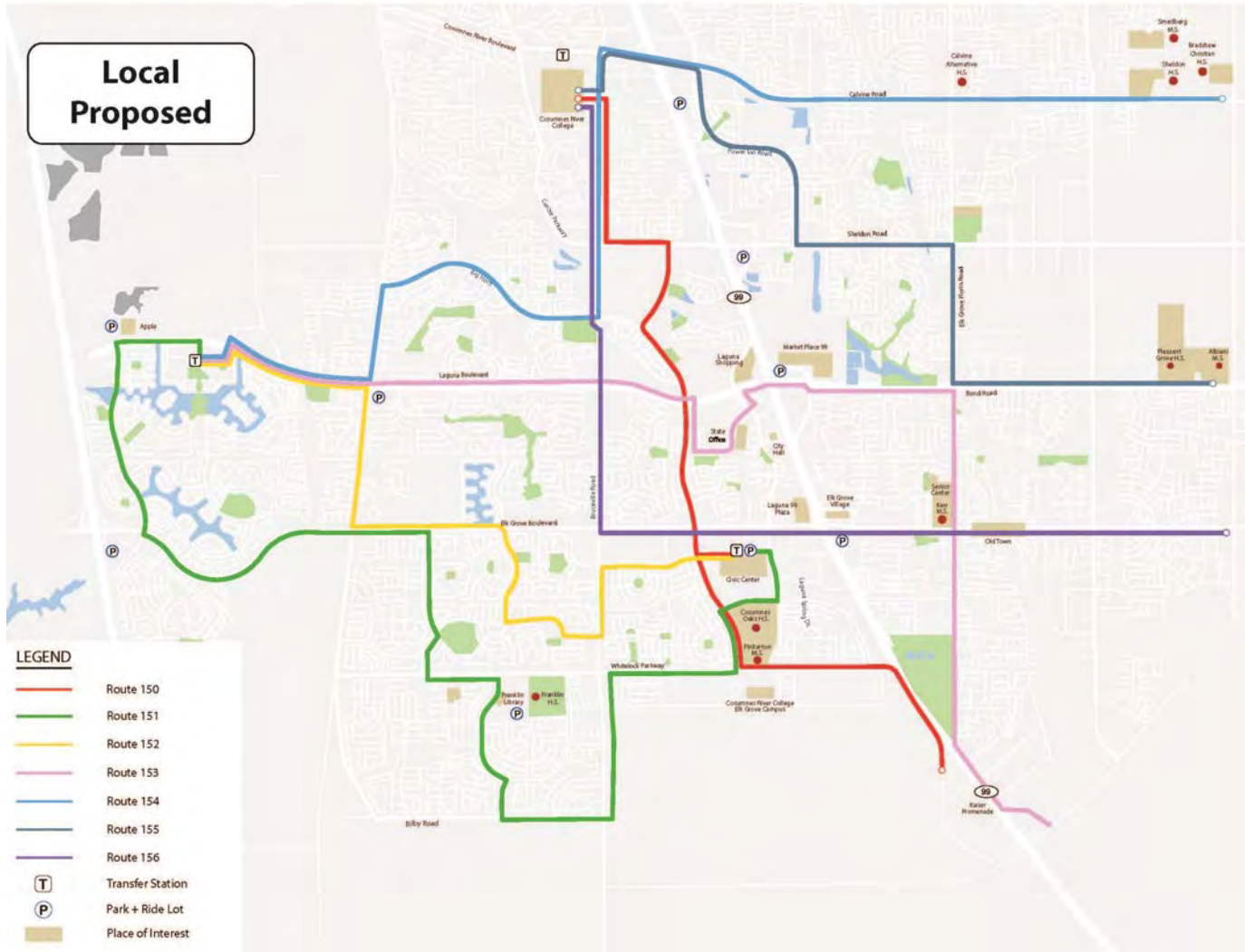


New services would be introduced on a pilot project basis to determine if there is sufficient threshold of ridership to meet the minimum efficiency performance standards.

5.5 Recommended Local Network

Shown in Exhibit 5-3, the proposed local route network reflects a shift from the currently configured radial network (*i.e.*, all routes terminate at the CRC campus) to a grid network. The grid is constructed around a primary north-south corridor running between the CRC campus and planned commercial development near the Hwy 99 interchange at Kammerer Road. Additional local routes operate direct crosstown service and transfer connections to the primary transit corridor. These routes are composed primarily of arterial street segments running east-west and north-south across the City. Key terminal points include the CRC campus, Laguna West, and the new Civic Center. It is important to note that restructuring local service into a grid format could impact some customers who currently have a one-seat ride to the CRC campus; but, would not potentially need to transfer on the proposed local network.

Exhibit 5-3. Proposed Local Route Network



5.5.1 Primary North-South Transit Corridor - Big Horn Boulevard

The City's 2003 General Plan supports development of enhanced transit service along a north-south alignment through Elk Grove:

- Policy CI.8 - The City shall encourage the extension of bus rapid transit and/or light rail service to the planned office and retail areas north of Kammerer Road and west of Hwy 99.
- Policy CI.9 - Light rail service in Elk Grove should be designed to serve major employment centers and the regional mall at Kammerer Road/Hwy 99. The City of Elk Grove encourages the development of light rail which will bring workers and shoppers to Elk Grove, while also serving as part of a coordinated, regional transportation network.

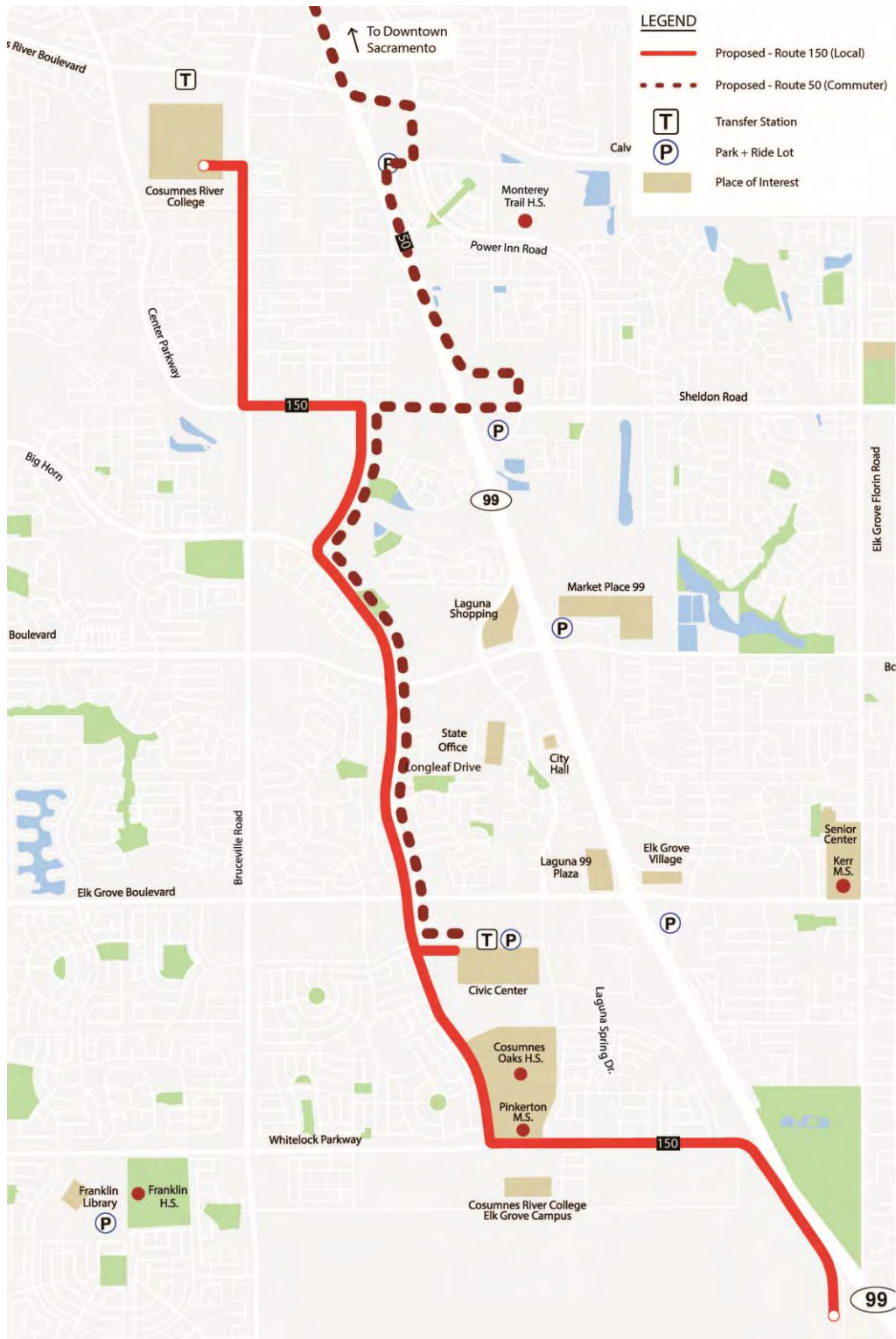
The five-year service plan incorporates new commuter and local routes along Big Horn Boulevard to lay the foundation for a potential major transit investment in the future such as Bus Rapid Transit (BRT) service. Shown in Exhibit 5-4, Routes 50 and 150 share a common alignment on Big Horn Boulevard between the proposed Civic Center Drive park-ride lot and Lewis Stein Road; and continue on Lewis Stein to Sheldon Road.

Local Route 150 operates between the CRC Blue Line station and Kaiser Promenade Medical Center via Big Horn Boulevard serving the Civic Center. It is assumed that this route will be extended farther south to the proposed development on Kammerer Road or Grant Line Road when warranted by future conditions. As planned, Route 150 operates every 30 minutes on weekdays between 6:00 am and 8:30 pm; and hourly on Saturdays (6:00 am – 7:00 pm) and Sundays (7:00 am – 6:00 pm).

Commuter Route 50 overlays the local alignment with four morning and four afternoon peak direction trips between Civic Center Drive and Calvine Road; and operates directly between Downtown Sacramento and central Elk Grove via Hwy 99. As planned, Route 50 trips are scheduled between local Route 150 trips to provide 15-minute peak frequency on key local segments.

It is envisioned that bus service on Big Horn Boulevard will transition toward BRT in stages; with incremental improvements designed to expedite bus travel speeds such as using signage and traffic enforcement; limited bus stops; off-board fare collection; and expedited bus flow at intersections (e.g., signal preemption, queue jumps).

Exhibit 5-4. Routes 50/150 – Big Horn Boulevard Corridor



5.5.2 Local Grid Routes

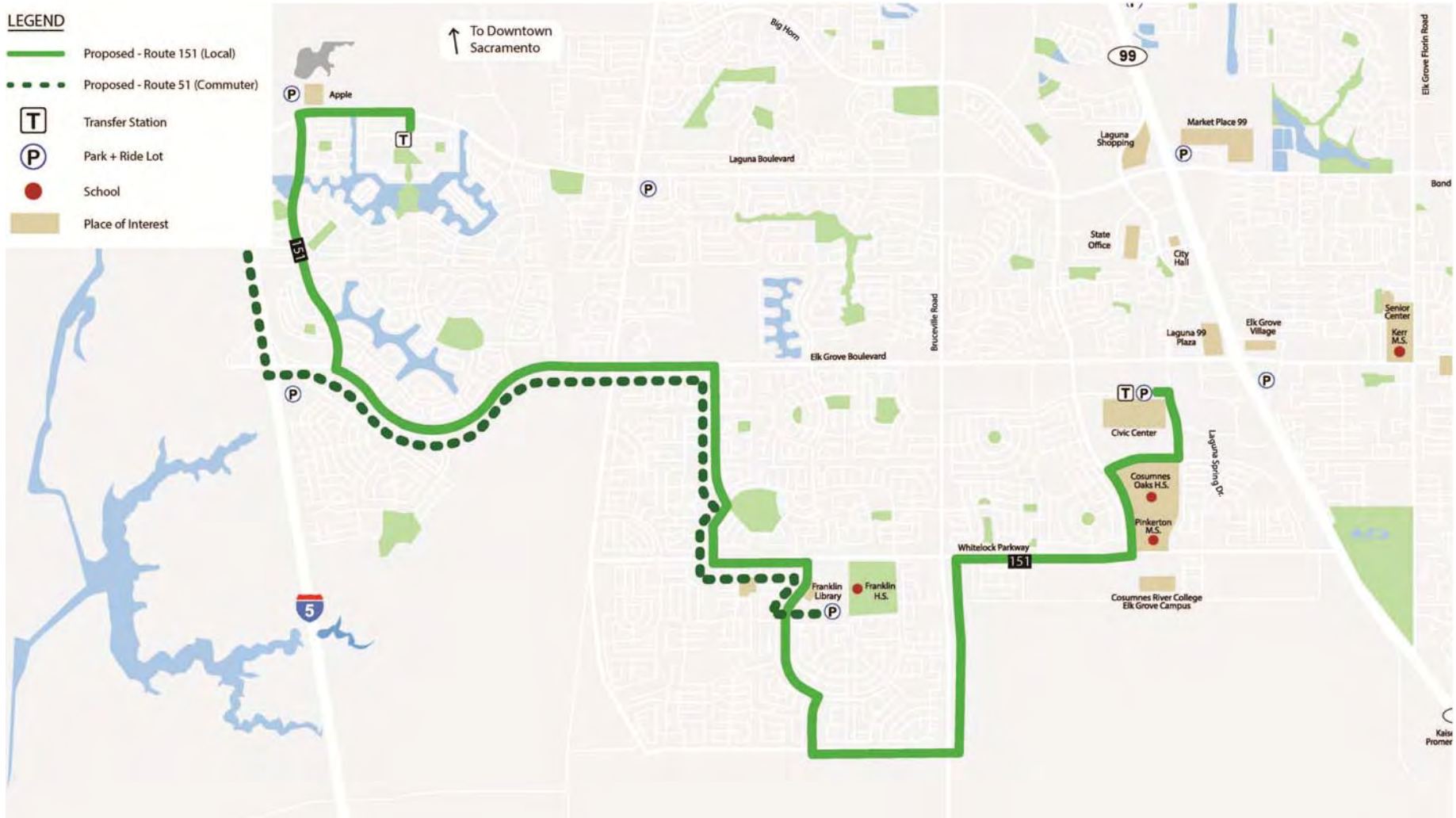
In addition to Route 150, six additional routes complete the proposed local network. As described in Exhibit 5-5 and displayed in Exhibit 5-3 these routes form a grid with service on key east-west and north-south streets. These routes are described briefly in the following paragraphs.

Exhibit 5-5. Proposed Local Route Network Coverage

Route	East-West Coverage	North-South Coverage
150 Big Horn	Whitelock – Promenade to Big Horn	Promenade; Big Horn; Lewis Stein; Bruceville
151 Franklin	Whitelock Pkwy; Laguna Blvd	Harbour Point Dr.
152 Cresleigh	Elk Grove Blvd – Cresleigh to Franklin	Franklin – Laguna to Elk Grove Blvd
153 Elk Grove Florin	Bond-Laguna between Apple & Elk Grove Florin	Elk Grove Florin between Bond & Grant Line
154 Calvine/ Big Horn West	Calvine – Bradshaw to Bruceville Big Horn – Bruceville to Franklin	Bruceville - Calvine to Sheldon Franklin – Big Horn to Laguna Blvd
155 Power Inn	Sheldon - Power Inn to Elk Grove Florin	Power Inn- Calvine to Sheldon Elk Grove Florin - Sheldon to Bond
156 Old Town	Elk Grove Blvd - Bruceville to Clarke Farms	Bruceville -CRC to Elk Grove Blvd

Local 151 Franklin replaces portions of existing routes 157, 159, and school routes 151-153. Key trip generators along the route include: Elk Grove Civic Center; Cosumnes Oaks High School; Elizabeth Pinkerton Middle School; Franklin High School; Toby Johnson Middle School, Franklin Library; Raleys / Safeway; Apple Computer; and Laguna Town Center. Proposed commuter Route 51 overlays the local alignment and continues to Downtown Sacramento via I-5 with stops at two (2) park-ride lots: Harbour Point and Franklin High Road. Routes 51/151 are displayed in Exhibit 5-6.

Exhibit 5-6. Routes 51/151 Franklin



Local 152 Cresleigh fills gaps in the east-west grid, and replaces school routes 151-153. Key trip generators include: Elk Grove Civic Center; Franklin High School; Toby Johnson Middle School, Laguna Creek Town Center; Raleys / Safeway; Apple Computer; and Laguna Town Center. Proposed commuter Route 52 overlays the local alignment and continues to Downtown Sacramento via I-5 with stops at three (3) park-ride lots: Civic Center; Laguna Creek Town Center; and Laguna West (Apple). Routes 52/152 are displayed in Exhibit 5-7.

Local 153 Elk Grove Florin replaces portions of existing routes 157 and 162. Key trip generators include: Elk Grove High School; Joseph Kerr Middle School; Old Town, Senior Center; Marketplace 99; Longleaf Drive office building; Laguna; Crossroads; Laguna Creek Town Center; Apple Computer; and Laguna West Town Hall. Proposed commuter Route 53 overlays the local alignment on Elk Grove Florin Road, and continues to Downtown Sacramento via Hwy 99 with stops at two (2) park-ride lots: Elk Grove Boulevard (Caltrans) and Marketplace 99. Routes 53/153 are displayed in Exhibit 5-8.

Exhibit 5-7. Routes 52/152 – Cresleigh

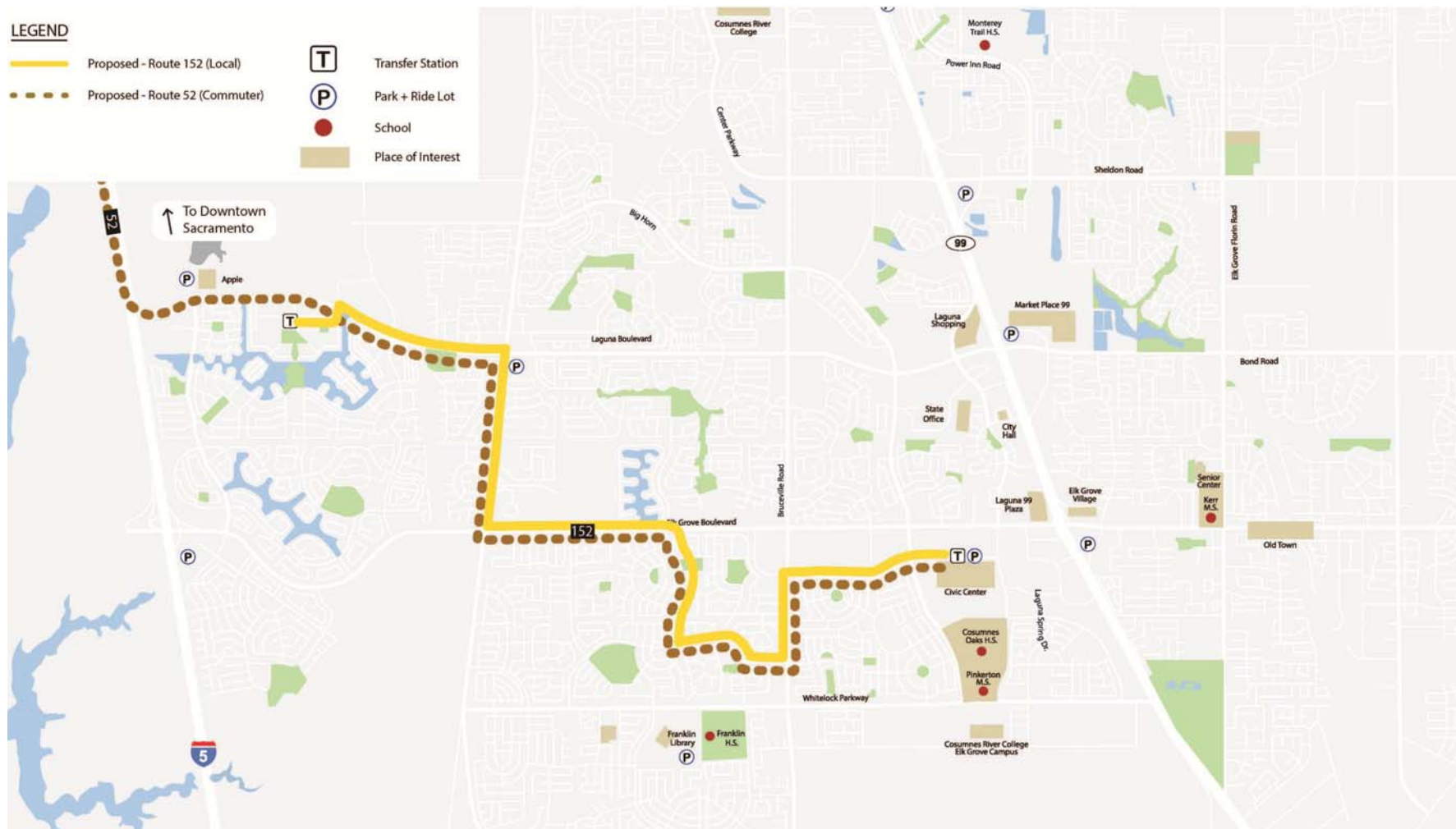
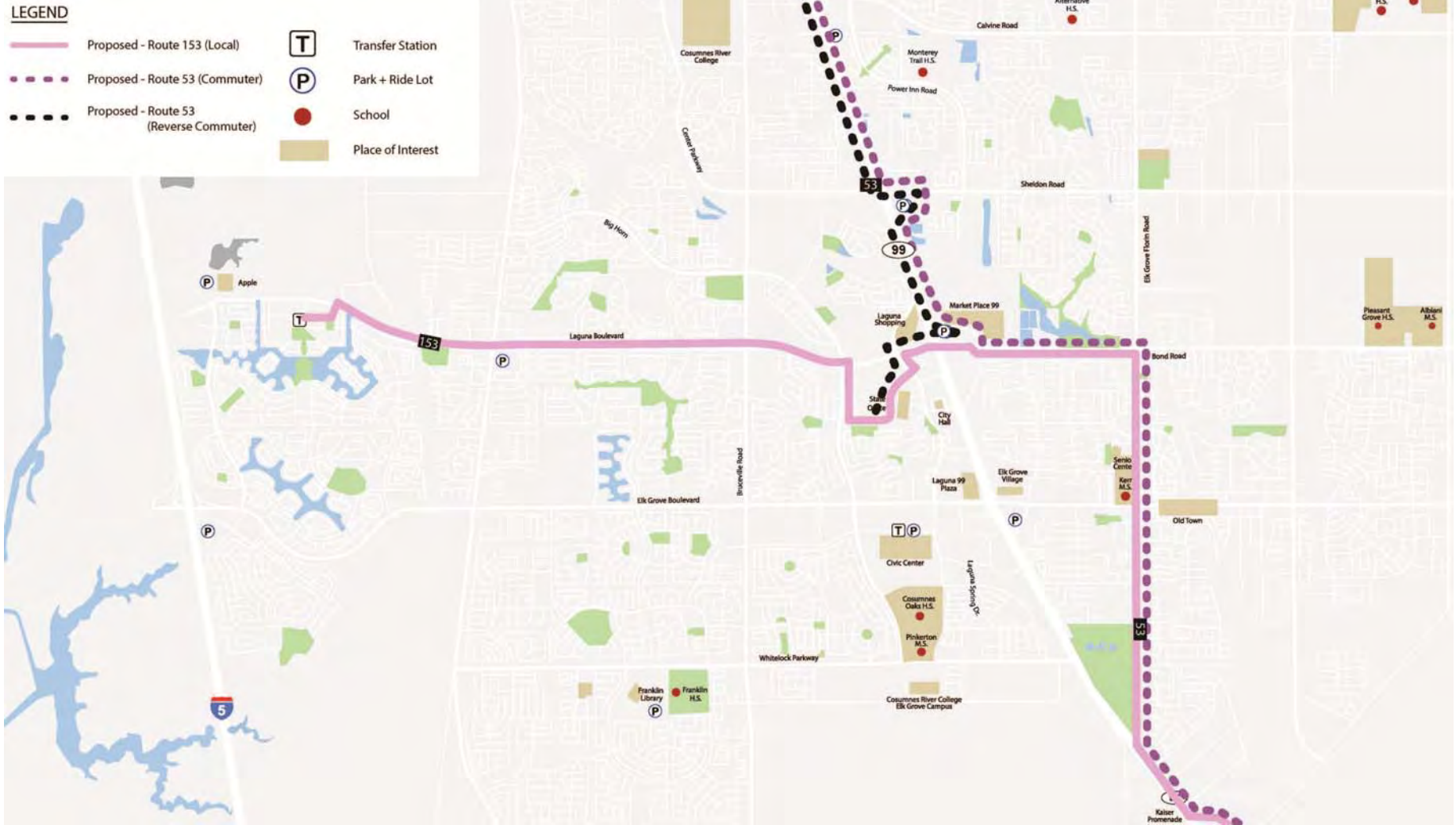




Exhibit 5-8. Routes 53/153 – Elk Grove-Florin



Local 154 Calvine/Big Horn forms a new east-west crosstown route across north Elk Grove between Bradshaw Road and Apple Computer. It replaces portions of routes 154, 159 & 162; and installs new local service on Big Horn Boulevard West where existing commuter service (currently Route 52) has been successful in generating ridership west of Bruceville Road. Key trip generators along the proposed alignment include: Sheldon High School; Smedberg Middle School; Bradford Christian; Bel Air Village; Calvine Alternative High School; CRC / RT Blue Line station; Laguna Creek High School; Edward Harris Middle School; Laguna Creek Town Center; Apple Computer; and Laguna Town Hall.

Two commuter routes are paired with local Route 154. Route 54 Calvine overlays the local alignment on Calvine Road between Bradshaw and Power Inn Road, and continues to Downtown Sacramento via I-5 with stops at two (2) park-ride lots: Laguna Creek Town Center and Laguna West (Apple). Route 57 overlays the local alignment west of Bruceville Road, and continues to Downtown Sacramento via Hwy 99 with stops at two (2) park-ride lots: Bel Air Village and Calvine-Geneva Point. Routes 54/57/154 are displayed in Exhibit 5-9.

Local 155 Power Inn replaces portions of existing routes 154 and 160 with a southeast-to-northwest alignment serving the developed areas on the east side of the City. Key trip generators along the proposed alignment include: Pleasant Grove High School; Katherine Albiani Middle School; Bond Plaza; SaveMart Creekside Plaza; Lowes; Monterey Trail High School, Edward Harris Middle School and the CRC / Blue Line station. Proposed commuter Route 55 overlays the local alignment and continues to Downtown Sacramento via Hwy 99 with a stop at the Calvine-Geneva Point park-ride lot. Routes 55/155 are displayed in Exhibit 5-10.

Local 156 Old Town continues on its present alignment using Elk Grove Boulevard and Bruceville Road. Key trip generators along the alignment include: Waterman Plaza; Old Town historic district; Public Library; Joseph Kerr Middle School; Laguna 99 Shopping Plaza; Elk Grove Civic Center; Harriett Eddy Middle School; Laguna Crossroads Shopping Center; Wackford Community & Aquatic Complex; and the CRC campus and Blue Line station. Proposed commuter Route 56 overlays the local alignment on Elk Grove Boulevard east of Hwy 99, and continues to Downtown Sacramento via Hwy 99 with stops at two park-ride lots: Elk Grove Boulevard (Caltrans) and Marketplace 99. Routes 56/156 are displayed in Exhibit 5-11.

Exhibit 5-9: Routes 54, 57, 154 – Calvine – Big Horn West

LEGEND

- Proposed - Route 154 (Local)
- Proposed - Route 54 (Commuter)
- Proposed - Route 57 (Commuter)
- Transfer Station
- Park + Ride Lot
- School
- Place of Interest

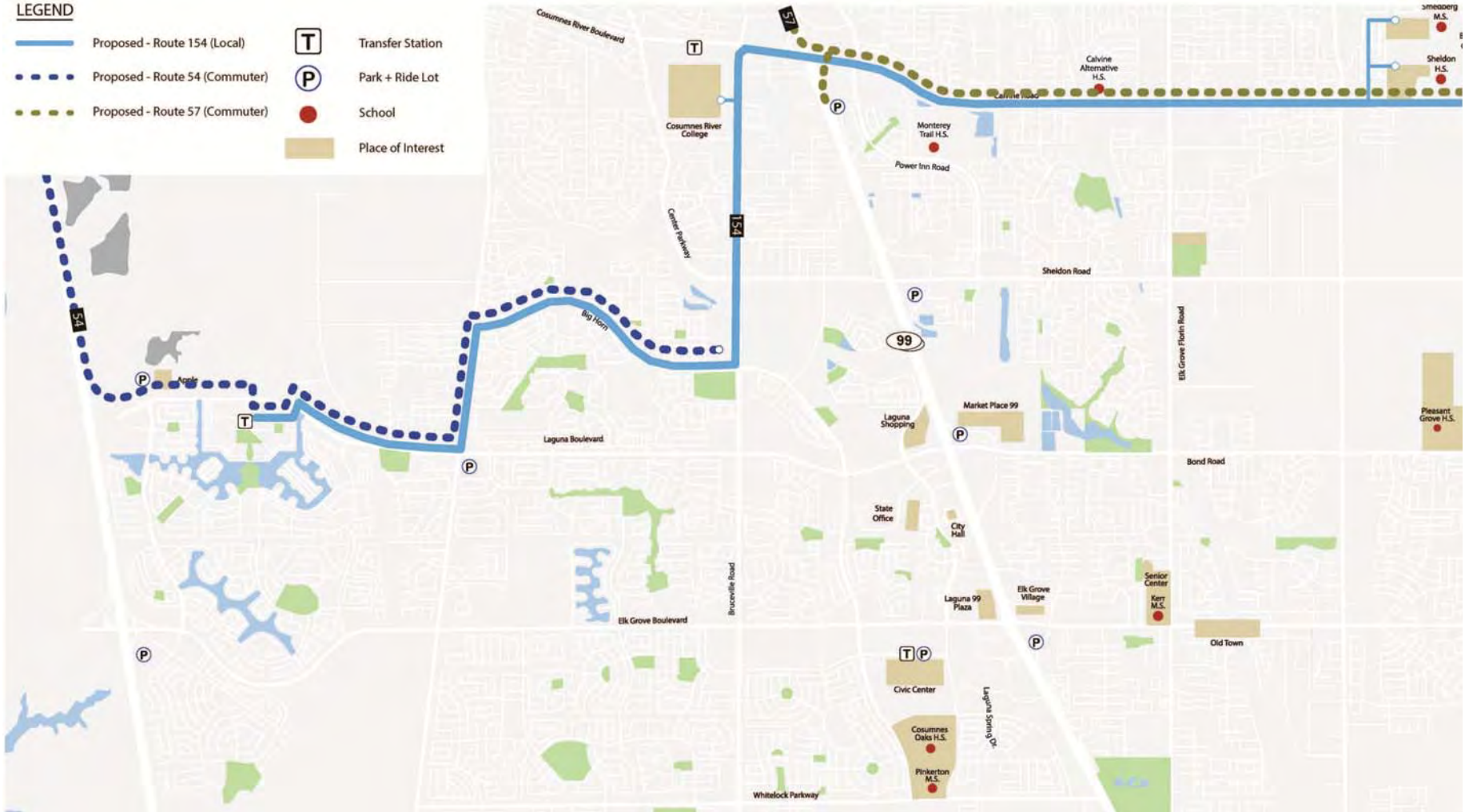


Exhibit 5-10. Routes 55/155 Bond – Sheldon – Power Inn

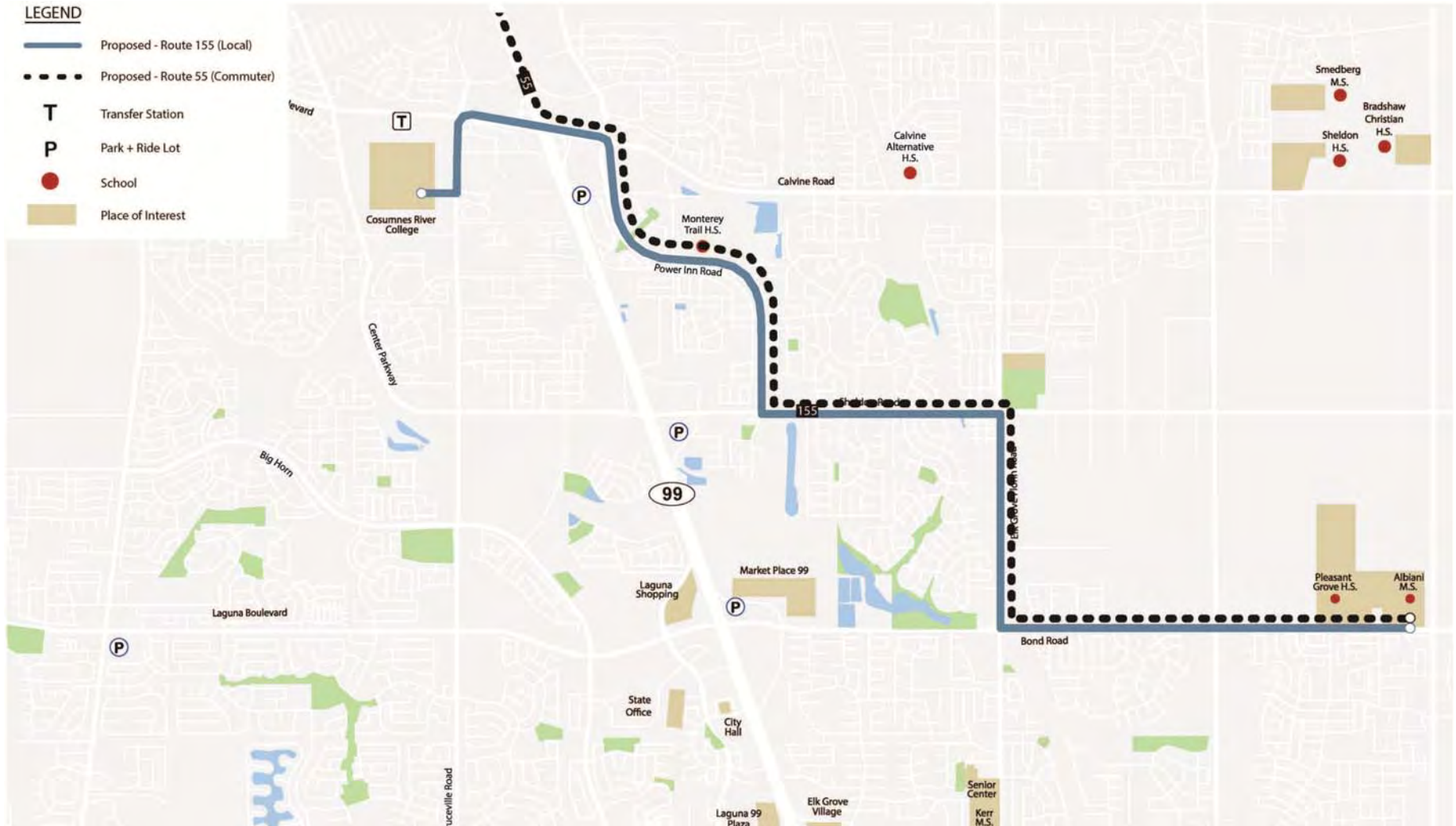
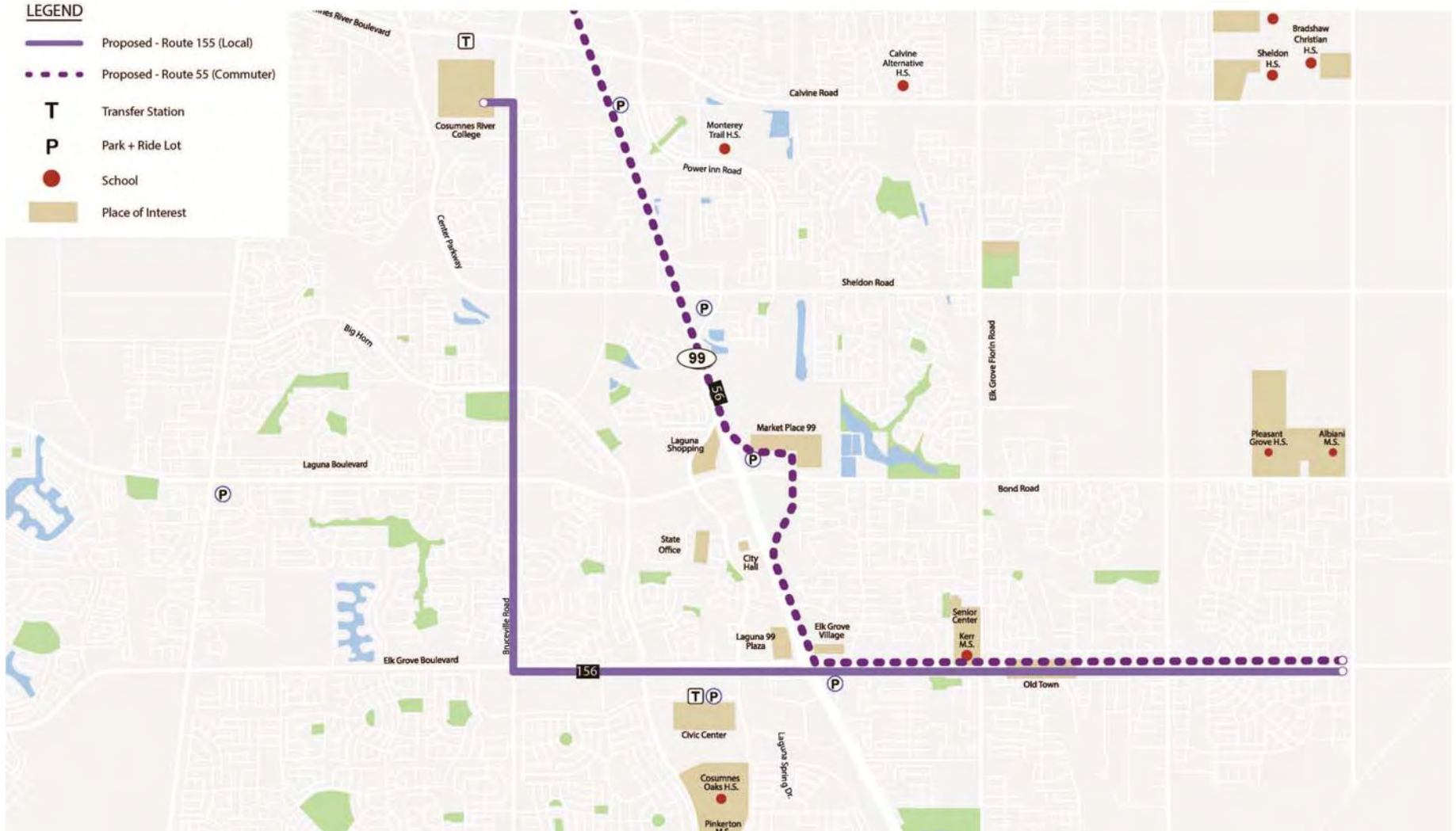




Exhibit 5-11. Routes 56/156 – Old Town



5.5.3 Local Service Span and Frequency

Because the local system is designed as a network, it is suggested that e-tran operate all routes during the same span for each service day. Except for Route 156, the proposed span is comparable to or longer than existing schedules. Currently, Route 156 operates until 11:00 pm on weeknights. Potential discontinuation of weeknight service after 8:30 pm impacts 25-30 one-way passenger trips per day; including 19 customers on the last four southbound trips departing from the CRC campus; and nine (9) customers aboard the last three northbound trips departing from Old Town.

The average service productivity of the proposed reduction (a reduction of 5.9 revenue hours per day) is 4.7 passengers per service hour, which is substantially below the FY 2022 local system productivity target of 20 boardings per hour (see Section 5.4 Performance Metrics).

Proposed LOS and service frequencies for the COA's three LOS scenarios are summarized in Exhibit 5-12, below.

Exhibit 5-12. COA Service Plan Level of Service (LOS) Options

	FY 2016 Existing System	Base Scenario	7.6% Reduction Scenario	10% Reduction Scenario
Annual Revenue Hours				
Local	38,660	34,283	34,178	32,661
Commuter	20,353	25,603	21,151	21,151
Total	59,013	59,886	55,329	53,812
Local Frequency (in minutes)				
Peak Weekday	30 - 60	30 - 60	30 - 60	30 - 60
Midday Weekday	30 - 120	30 - 120	30 - 120	30 - 120
Evening Weekday	30 - 60	30 - 120	30 - 120	30 - 120
Saturday	80	60 - 120 (4 routes)	60 - 120 (4 routes)	60 - 120 (4 routes)
Sunday	80	60 - 120	No service	No service
Commuter Frequency (in daily trips)				
Peak Direction	67	68	66	66

Reverse Direction	6	22	8	8
Service Span				
Local Weekday	5:52 am – 11:00 pm (16.9 hours)	6:00 am – 8:30 pm (14.5 hours)	6:00 am – 10:30 pm (only Route 150 would operate past 8:30 pm) (16.5 hours)	6:00 am – 8:30 pm (14.5 hours)
Local Saturday	7:15 am – 11:10 am 1:15 pm - 6:10 pm	6:00 am – 7:00 pm (13 hours)	6:00 am – 7:00 pm (13 hours)	6:00 am – 7:00 pm (13 hours)
Local Sunday	7:15 am - 11:10 am 1:15 pm - 6:10 pm	7:00 am - 6:00 pm (11 hours)	No Service	No Service
Commuter	5:20 am – 8:40 pm 3:10 pm – 6:55 pm	5:30 am – 8:45 am 3:30 pm – 7:00 pm	5:30 am – 8:45 am 3:30 pm – 7:00 pm	5:30 am – 8:45 am 3:30 pm – 7:00 pm

5.6 Incremental Service Improvements

The proposed service plan is fully scalable to facilitate the efficient implementation of upgrades to local route frequencies and operating hours when future funding levels permit; and, to add commuter capacity when necessary to meet adopted onboard loading condition targets. Potential service upgrades that could occur within the short-range horizon of this COA are discussed below.

1. Local Network Midday Frequency Improvement

Midday service is defined as weekdays between 9:00 am and 3:00 pm. The base scenario LOS plan currently provides for 30-minute midday service frequency on Route 150 (BRT); 60-minute midday service frequency on local Routes 153, 154 and 156; and 120-minute midday frequency on local Routes 151, 152 and 155.

The incremental operating cost to provide 60-minute midday frequency on all local routes is 3,036 revenue vehicle hours per year, or about \$410,000 before fare revenue, assuming an

average hourly operating cost of \$135 per hour. No additional revenue vehicles are required to improve midday LOS.

2. Full Weekend Service

The service plan costing assumes a recommended 13-hour Saturday service span (6:00 am to 7:00 pm), and an 11-hour Sunday service span (7:00 am to 6:00 pm). The COA's base scenario currently provides for limited weekend service limited to the following:

- Route 150 (BRT) operates a full Saturday and Sunday span with 60-minute frequencies at all times.
Routes 153, 154 and 156 operate a full Saturday and Sunday span with 120-minute frequencies at all times.
- Routes 151, 152 and 155 operate no Saturday or Sunday service.

Upgrade to 120 minutes - The incremental operating cost to provide 120-minute midday frequency on all local routes (150 excepted) is 2,371 revenue vehicle hours per year, or about \$320,000 before fare revenue, assuming an average hourly operating cost of \$135 per revenue hour. No additional revenue vehicles are required to operate weekend service.

Upgrade to 60 minutes - The incremental operating cost to provide 60-minute midday frequency on all local routes (150 included) is 7,113 revenue vehicle hours per year, or about \$960,000 before fare revenue, assuming an average hourly operating cost of \$135 per revenue hour. No additional revenue vehicles are required to operate weekend service. If this LOS is selected, it should be assumed that the midday service upgrade also would be selected. The combined cost of the two service upgrades is 10,149 revenue hours per year, or about \$1,370,000.

3. Extend Route 150 Service Hours from 8:30 p.m. to 10:30 p.m.

The service plan costs assume that the Route 150 will stop service at 8:30 p.m., which is the same time all other local routes end. The incremental operating cost to extend the operating hours on Route 150 is 1,518 vehicle revenue hours per year, or about \$170,000 before fare revenue, assuming an average operating cost of \$135 per revenue hour.

5.7 Recommended Commuter Network

Shown in Exhibit 5-14, the proposed commuter routes closely align with local routes to simplify the transit network and increase the visibility of e-tran service by concentrating more service on particular streets. Merging local and commuter route alignments within Elk Grove will provide e-tran commuters with expanded travel options beyond the peak periods during which commuter buses will continue to access Downtown Sacramento directly. Consolidation of 12 existing commuter routes into nine routes is proposed. These include Routes 50-57 as described in the following pages and proposed Route 71 Laguna serving Butterfield station on the RT Gold Line.

Fewer commuter routes translate into more robust schedules by modifying or eliminating five marginal routes that currently operate one or two trips per peak period - 66, 70, 90, 91 and the

Purple Route. Purple Route customers with mobility limitations will be accommodated on other proposed commuter routes. Proposed commuter schedules generally include four or five trips per peak period, and cover a wider service span to accommodate workers with morning start times between 6:30 am and 9:00 am; and afternoon quit times between 3:30 pm and 6:00 pm.

Shorter local pickup route segments focus resources on trips offering competitive end-to-end commute travel times (*i.e.*, relative to auto travel) averaging less than 60 minutes to Downtown Sacramento. The proposed truncation of local pickup route segments is consistent with customer boarding patterns indicating that most e-tran customers board at park-ride lots and other stops offering relatively quick access to the freeways. Commuter boarding and alighting activity tapers off on local pickup segments as distance from the freeway increases. The data suggests that local pickup segments generally should not exceed 15 minutes of bus travel time within Elk Grove before entering the freeway. Moreover, shorter routes with reduced schedule cycle times could significantly improve vehicle productivity.

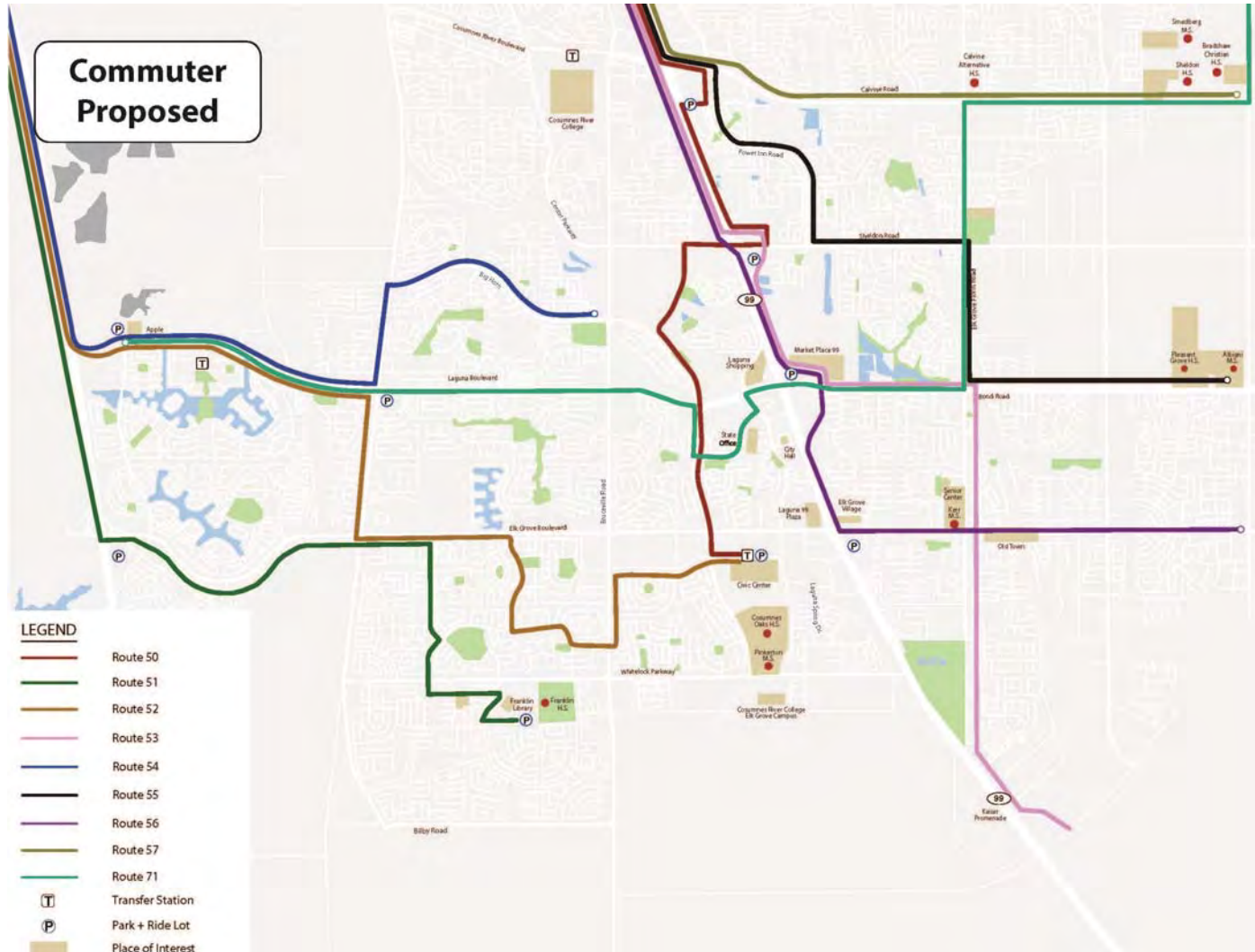
5.7.1 Peak and Reverse Direction Capacity

Given strong utilization of existing e-tran peak direction commuter routes (averaging 70.4% of seated capacity), the five-year service plan maintains and nominally increases current capacity from 67 one-way trips on 12 routes, to 68 trips on 9 routes. Additionally, service quality is enhanced at selected park-ride lots (*e.g.*, Calvine-Geneva Point, Sheldon, Laguna West) with the schedules of two or more routes combined to create high frequency (10-15 minutes) service at these locations during the height of the morning and afternoon peak periods.

A significant expansion of reverse direction service capacity is recommended with currently six daily trips on two routes increasing to potentially 22 trips on four routes to demonstrate the viability of reverse commuter service to locations in Elk Grove including Apple Computer, office buildings on Longleaf Drive, and potentially other locations in south Elk Grove.

Existing Route 90 reverse commute (four trips) between Downtown Sacramento and Longleaf Drive is replaced by proposed Route 53 reverse commute trips. Existing Route 91 reverse commute (two trips) between Butterfield Light Rail Station, the Franchise Tax Board and Longleaf Drive is replaced by proposed Route 71 reverse commute operating four trips. Potentially new service from central Sacramento to Apple could be provided with Route 52 and/or 54 reverse direction service on I-5.

Exhibit 5-13. Proposed Commuter Network

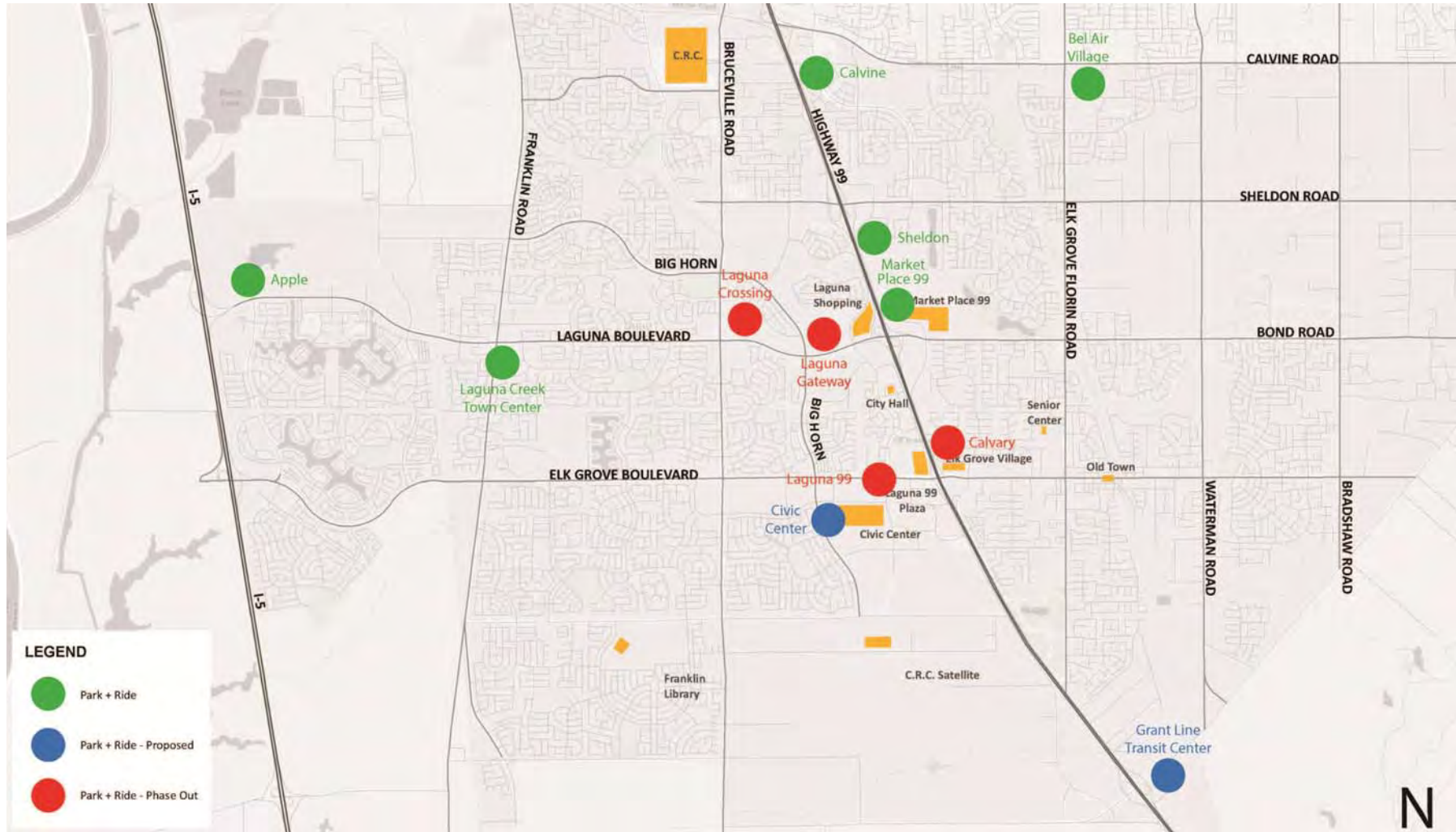


5.8 Improve Park-Ride Access

The five-year plan includes provisions to both expand the level of commuter service available at e-tran park-ride lots, and upgrade existing facilities. Exhibit 5-14, shown on the next page, provides a development blueprint for constructing new facilities, improving existing facilities, and phasing out the use of minor park-ride lots that lack sufficient capacity or proximate access to a freeway interchange. Specific recommendations include:

- Two new park-ride facilities at the planned Elk Grove Civic Center complex and the second close to I-5 at Harbour Point and Laguna Blvd.
- Pending future funding availability, expand parking capacity at key park-ride locations, including a new location at Laguna West/Laguna Town Hall, or a new location in the vicinity of the Hwy 99 interchange at Bond Road, and Bel Air Village at Calvine and Elk Grove Florin Road.
- Phase out use of minor facilities as new capacity is provided at major park-ride lots. Locations include Laguna Crossings, Laguna Gateway, Calvary Christian, Laguna 99, and Lowe's at Power Inn and Calvine Road.
- Pending an available opportunity, work with the California Department of Transportation (Caltrans) to improve or expand the park-ride lots at Calvine-Geneva Point/Highway 99 and Sheldon Road. Since the City does not own this property, improvements to this facility are not included in the COA service plan.

Exhibit 5-14. Proposed Park and Ride Lot Locations



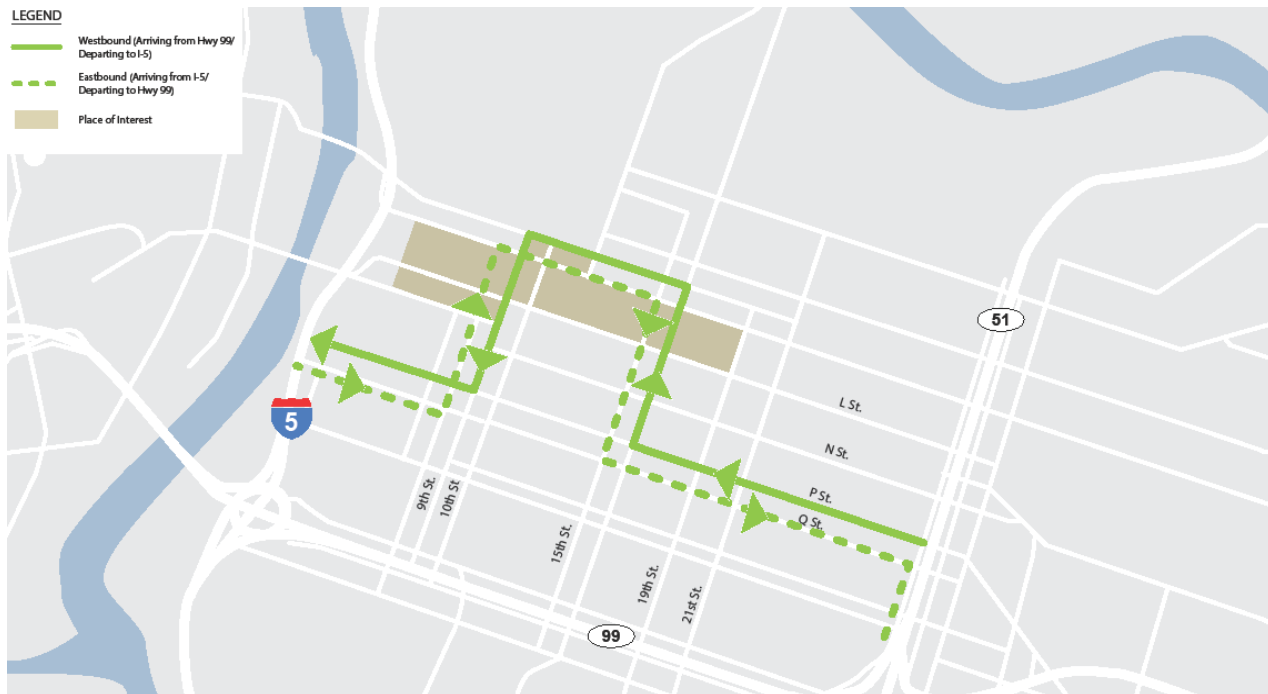
5.9 Downtown Sacramento Routing

Shown in Exhibit 5-15, a common two-way alignment through Downtown Sacramento is recommended for all proposed commuter routes. The alignment is intended to balance customer walking distances to destinations in the downtown core with shorter wait times and expedited bus travel on less congested streets in the downtown core. A singular alignment has potential both to improve service quality for customers, while also reducing capital costs through higher vehicle productivity. It is important to note that the proposed alignment presented in Exhibit 5-14 is dependent on the travel patterns of other transit agencies and is subject to further coordination with the City of Sacramento in regards to travel patterns associated with the Golden 1 Events Center.

From the customer perspective, the benefits of a common alignment include potentially shorter wait times in Downtown Sacramento with a greater choice of routes returning to Elk Grove. Fewer stops also may reduce the cost of implementing dynamic timetable information displays and customer amenities suggested to improve the customer waiting experience for e-tran customers.

From an operational perspective, any significant reduction of commuter schedule cycle times created by shorter local pick up segments within Elk Grove and less circuitous routing in Downtown Sacramento could lead to significant capital cost savings if more commuter buses are able to operate consecutive peak direction trips within the same peak period. Cycle time includes round trip bus travel time plus sufficient recovery time to protect schedule integrity. Currently, nearly all e-tran commuter buses can make just one peak direction trip per peak period; meaning that one bus is required for every scheduled peak direction trip.

Exhibit 5-15. Proposed Downtown Sacramento Route Alignment

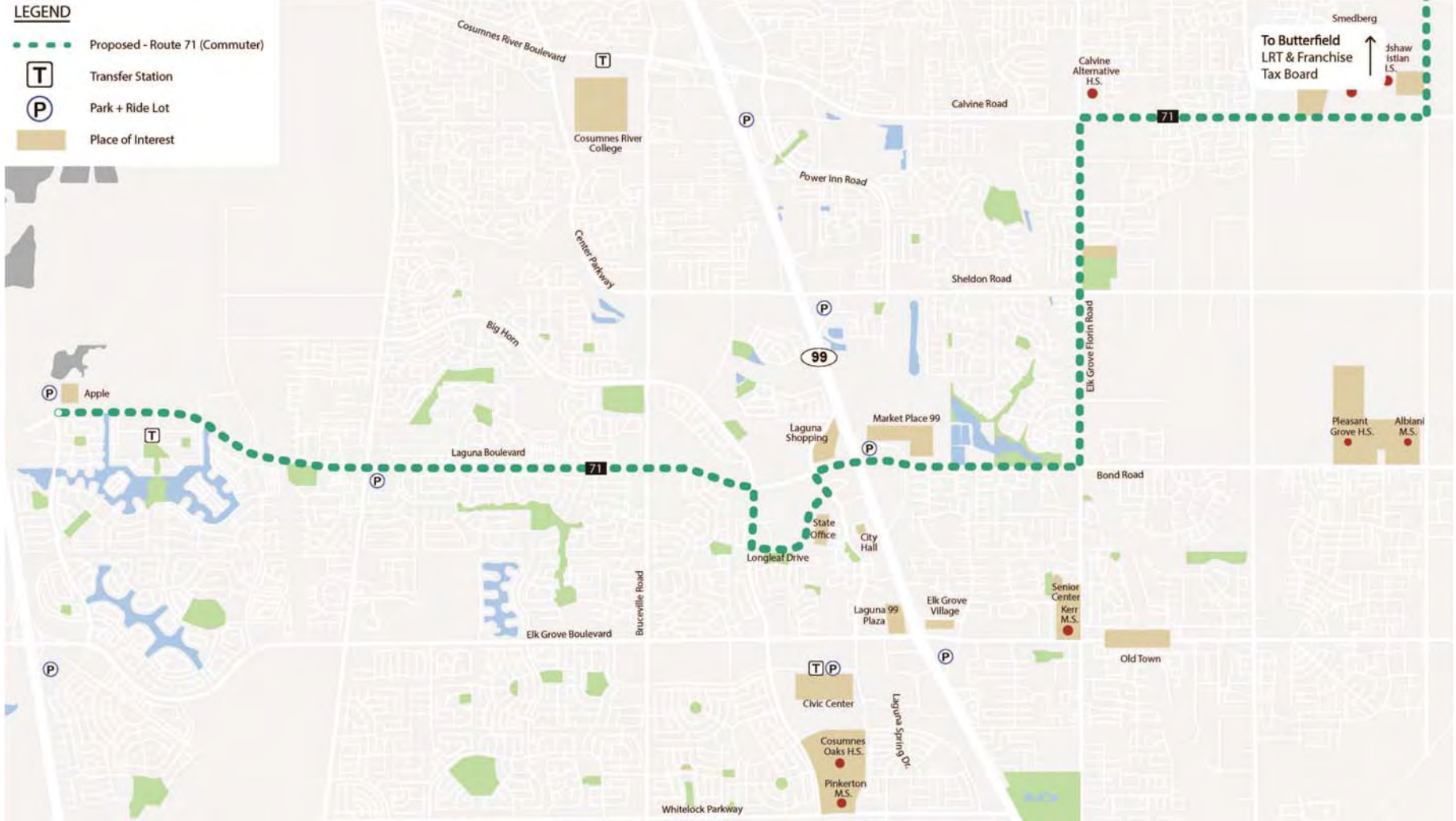


5.10 Regional Connectivity

The service plan urges the further integration of e-tran with the RT system, including all-day connectivity to both the Blue Line at the CRC campus station, and peak connectivity to the Gold Line at Butterfield station. Shown in Exhibit 5-16, proposed regional *Route 71 Laguna/Bradshaw* consolidates resources currently divided between Routes 70 and 71 onto a common alignment in Elk Grove. The singular alignment allows for a longer service span with hourly service running in both directions in the morning from 5:00 am through 9:00 am; and in the afternoon from 2:30 pm until 6:30 pm. Key employment destinations along the proposed alignment include Apple Computer and office buildings along Longleaf Drive in Elk Grove, and the Franchise Tax Board in Sacramento.



Exhibit 5-16. Route 71 – Laguna



6.0 FINANCIAL PLAN

The financial plan for transit operations and the capital program is prepared to ensure that there is sufficient funding for the proposed service, development, maintenance, and replacement of capital assets. This chapter provides a five year financial plan (FYs 2018 – 2022), for the COA’s three possible service plan scenarios:

- Base Scenario – LOS is consistent with Fiscal Year 2016-2017 budget projections and relatively similar to FY 2015-16 actual revenue hours,
- 7.6% Reduction Scenario – the base scenario’s revenue hours are reduced by 7.6%, and
- 10% Reduction Scenario – the base scenario’s revenue hours are reduced by 10%

It is anticipated that the City Council will direct staff to implement one of these scenarios, with the selected scenario’s service anticipated to begin by the end of October 2017. The selected scenario’s five year financial plan will also be used to guide the 10-year capital and operations plan, which the City prepares annually as part of SACOG’s TDA claim process.

The three service plan scenarios share some common funding sources and revenue assumptions, which are used in the establishment of their respective financial plans. These assumptions are conservative in recognition of shifts in general economic conditions that impact actual revenue generation and the competitiveness of discretionary transit grant programs.

It is important to also note that the COA’s financial plans focus on e-tran’s fixed route service revenues and expenses only. All anticipated e-van dial-a-ride farebox revenues and expenses are not directly identified within the financial tables. However, since e-van operating and capital expenses rely on a portion of some of the City’s anticipated annual revenues, some e-tran revenue source estimations have been reduced to account for the anticipated e-van operating and capital expenses that would occur within a specific year of the financial plan. Deducting e-van’s anticipated expenses directly from e-tran’s revenue source estimations ensures that the City does not inaccurately budget fixed-route expenses based on shared revenues that also cover dial-a-ride service expenses.

6.1 Common Operating Revenues

The City relies on a variety of funding sources to operate and sustain its public transit services to the community. Fixed-route services are funded with a combination of local, state and federal funding sources. The following sections briefly describe the common revenue assumptions used in each of the COA’s service scenario financial plans.

Transportation Development Act (TDA) - Local Transportation Funding (LTF)

TDA funds are the largest single source of operating revenue for most public transportation systems in California. The statute intends that LTF is prioritized for transit, especially in

urbanized areas. Available funds must be spent on transit projects to the extent that such projects meet existing needs and fill “unmet transit needs that are reasonable to meet” before any LTF is spent on local streets and roads. The unmet transit needs process, by law, is conducted annually by SACOG. TDA funds can be used for transit capital and/or operations expenditures, and can provide an important source of local match for federal funding.

The LTF revenues are derived from a one-quarter cent sales tax, which is collected by the Board of Equalization, but administered locally through SACOG, which apportions the revenue to local jurisdictions based on population. As previously stated, annual LTF revenues assumed to cover e-tran’s expenses in each year of the financial plan are net revenue, and reduced to account for an amount assumed to pay for e-van operating expenses. The financial plans for each of the COA’s service scenarios assume a common two percent (2%) annual LTF increase from the FY 2017/18 apportionment amount. This increase is assumed based on projected growth in population and sales tax revenues.

State Transit Assistance (STA) Fund

The STA program is a second funding component of TDA. Revenues are derived primarily through the State sales tax on diesel fuel (currently 9.25%) and are allocated by the State Controller. Fifty percent of statewide revenue is allocated by the State based on county population within the jurisdiction of the regional transportation planning agencies, and the remaining fifty percent is allocated based on qualifying revenue such as passenger fares and other local sources by the transit systems. By SACOG policy, the population-based pot is likewise allocated by jurisdictional areas and transit district areas based on population in these areas compared to the population of the SACOG region as a whole. Also, the STA funds that are allocated to SACOG on the basis of regional operator revenues are subsequently allocated to the transit operators.

Historically, the STA has provided a relatively stable source of revenue generally applied toward capital expenditures. Recent state legislation has also adjusted the eligibility criteria for operators to continue using STA for operations. However, in times of economic downturns and to address state fiscal issues, the State Legislature has in past years averaged STA funds during state budget negotiations, resulting in uncertain funding levels. Part of the budget negotiations included a “gas tax swap” involving use of the STA revenues.

In 2011, as a result of the gas tax swap which resulted in a loss in STA revenue generated for transit from the state sales tax on gasoline (which was mostly eliminated), the STA was bolstered by an incremental increase in the diesel sales tax, summarized as follows:

Fiscal Year	Incremental Rate
2011-2012	1.87%
2012-2013	2.17%
2013-2014	1.94%
2014-2015	1.75% (ongoing rate)

Source: Background Paper for Sales Tax on Diesel Funding Proposal, California Transit Association, August 2015

STA revenues have been declining for the past several years due to the lower price of oil relative to when the gas tax swap was enacted by the State Legislature. Thus, it is challenging to determine how future STA revenues may grow. Based on the SACOG FY 2014-15

Comprehensive Annual Financial Report findings, payments to jurisdictions were about \$0.9 million lower than the previous year because of less revenue, which meant less allocated out for the year. The decreased allocation region-wide is attributed to a combination of lower diesel fuel prices and passenger fare revenues. Elk Grove's historic STA allocations reflect this trend:

Fiscal Year	STA Allocation
2012-2013	\$1,073,587
2013-2014	\$904,044
2014-2015	\$886,911

Source: FY 2014-15 SACOG CAFR – State Transit Assistance Fund Statements of Revenues, Expenditures and Changes in Fund Balance

Given the uncertainty of future STA revenues, the City is not assuming any STA growth in the COA financial plans higher than the FY 2017-18 allocation amount of \$690,884. This conservative approach keeps annual STA revenues flat within each COA scenario from FY 2018 through 2022. Additionally, required capital match amounts for both anticipated e-tran and e-van vehicle replacements during FYs 2018-2022, have been subtracted from the annual STA revenue amounts to create a net STA revenue amount available for covering e-tran's fixed route operating expenses. Elk Grove will continue to dedicate STA revenues to cover capital needs first, before utilizing the funds to cover operational expenses.

Cap-and-Trade Program – Low Carbon Transit Operations Program (LCTOP)

California Air Resources Board's Cap-and-Trade Program provides relatively new funding for transit that is part of the Transit, Affordable Housing, and Sustainable Communities Program established by the California Legislature in 2014, by Senate Bill 862 (SB 862). One funding source is the Low Carbon Transit Operations Program (LCTOP) that was created to provide operating and capital assistance for transit agencies to reduce greenhouse gas emissions and improve mobility, with an emphasis on serving disadvantaged communities. Eligible LCTOP projects support new or expanded bus or rail services, expand intermodal transit facilities, and may include equipment acquisition, fueling, maintenance and other costs to operate those services or facilities, with each project reducing greenhouse gas emissions. Beginning in FY 2015-16, SB 862 continuously appropriates five percent of the annual auction proceeds in the Greenhouse Gas Reduction Fund for LCTOP.

The City anticipates receiving LCTOP annually within the next five years due to the current legislation that provides on-going funding to help grow the Transit, Affordable Housing, and Sustainable Communities Program and its funding sources. Within each of the COA service scenarios' financial forecasts, LCTOP funds are budgeted at a flat amount of \$81,000. This is a very conservative approach that is based on the FY 2018 LCTOP allocation amount of \$81,494, which was provided to the City during the preparation of this document. This forecast also accounts for uncertainty in how quickly LCTOP allocations will grow in future years based on past growth trends.

FTA Section 5307 Urbanized Area Formula Program

The FTA's Section 5307 program provides urbanized areas with funding assistance for transit capital, operating and limited transportation-related planning expenses. As an operator in the Sacramento Urbanized Area (UZA), the largest source of on-going FTA funding Elk Grove receives comes through the Section 5307 program. Eligible activities include planning, engineering design and evaluation of transit projects; capital investments in bus and bus-related activities; crime prevention and security equipment; construction of maintenance and passenger facilities; and capital investments in existing fixed guideway systems. All preventive maintenance and some Americans with Disabilities Act complementary paratransit service costs are considered capital costs.

Some of the changes to the FTA Section 5307 program under the FAST Act of interest to the City of Elk Grove include:

- The ability to use up to 20% of the Section 5307 allocation (previously 10%) for the operation of paratransit service, if certain conditions are met;
- Recipients must maintain equipment and facilities in accordance with an adopted transit asset management plan;
- Recipients are no longer required to expend at least one percent (1%) of their funding for associated transit improvements. However, recipients are still required to submit an annual report listing projects that were carried out in the preceding fiscal year;
- Grantee may use up to 0.5 percent of their Section 5307 allocation on Workforce Development activities.

Historically, the City has used FTA Section 5307 to fund ADA operations, fixed route operations and preventive maintenance expenses. Each of the COA's service scenarios assumes that the City will continue to receive an annual amount of FTA Section 5307 program funding to cover eligible fixed-route operating and preventive maintenance expenses. However, the annual funding amount changes within each COA service scenario, is due primarily to an anticipated effect that the reduction of revenue hours and ridership will have on lowering the annual apportionment amount. The specific assumptions for Section 5307 funding will be discussed in further detail as part of the narrative prepared for each of the COA scenarios' financial tables later in this chapter.

Farebox Revenues

Farebox revenues will be generated within each COA service scenario's financial programs. However, given the difference in proposed revenue hours and projected ridership in each service scenario, farebox revenue assumptions will be discussed in further detail as part of the narrative prepared for each of the COA financial tables later in this chapter.

6.2 Common Fare Policy Considerations

Fare revenue estimates are predicated on pricing fare policy objectives and strategies, rate structure, and fare collection procedures described in this section. The following fare policy considerations are equally applicable to all of the financial plans prepared for each of the COA

service scenarios. An overall objective of the COA's financial plans is to maintain and incrementally increase cost recovery above the TDA-defined minimum threshold of 20%.

Current fares for e-tran local and commuter bus service are summarized in Exhibit 6-3, below. Discount fares apply to senior citizens, persons with disabilities, Medicare recipients, and active military personnel.

Exhibit 6-3. E-tran Fixed Route Fare Structure, FY 2017

Fare Type	Full Fare	Discount Fare
Cash Fare	\$2.25	\$1.10
Transfer	\$0.50	\$0.25
Route Deviation	\$0.50	\$0.50
Day Pass	\$6.00	\$3.00
10-ride Pass	\$22.50	\$11.00
Commuter Monthly Pass	\$100.00	\$50.00
Local Monthly Pass	\$80.00	\$40.00
Children under 5	\$0.00	\$0.00

Significant changes to current fare policy elements are suggested in conjunction with the proposed service plan. In addition to meeting or exceeding a 20% minimum farebox recovery threshold, other aspects of the recommended fare policy are discussed in the following paragraphs.

- Strategic re-pricing – A new fare structure should be built around pricing principles common to the marketplace; including value, convenience, equity, and relationship to cost. Relative pricing of e-tran cash fares and pre-paid fare instruments should provide customers with payment options that enhance convenience and are equitable for all patron segments.
- Premium fares for premium service – The relationship between price and value derived from a product or service is well-established in the marketplace. Currently e-tran fares are the same for local and commuter service, although commuters receive a significantly greater value than local riders. Commuters make longer transit trips, receive greater subsidy in terms of net cost per hour of service and higher capital costs, receive more consideration in service design and scheduling issues, and avoid parking costs in Downtown Sacramento. Most multi-modal transit systems have fare policies recognizing commuter express bus as premium service, and accordingly charge higher fares for these services relative to underlying local service.
- Regional fare in context – E-tran fares should be rational for customers who use both e-tran and RT to travel outside of the City of Elk Grove. RT increased the price of a cash

fare/single ride ticket to \$2.75 in July 2016, compared to \$2.25 for e-tran commuter service. The relationship between these fares is contrary to common transit industry practice in key respects: first, by charging more for a two-seat ride requiring a transfer between vehicles compared to a more convenient one-seat ride; second, by charging more for off-peak travel than for peak period travel; and third, by charging more to discourage travel on service with abundant available capacity.

- Equitable transfer policy – Transit industry best practices trend toward elimination of separate transfer charges between routes in the same service category, as well as simplification of the rules governing the availability and use of transfers. Historical practice of charging for transfers is no longer regarded as consistent with today’s market expectations that customers should not have to pay as much for an indirect trip requiring a transfer as for a more convenient direct trip. For example, US airline industry pricing policies commonly demand a higher fare for direct flights and lower fares for less direct travel requiring a transfer at a hub airport. The City should adopt a transfer policy similar to RT, which provides no transfer privileges with the base fare. RT customers who require a second vehicle to complete a one-way trip have the option to purchase a day pass priced at 2.5 times the one-way cash fare if they plan to make a round trip, or monthly pass priced at 40 times the cash fare also if they are daily riders.
- Cost of service – While profitability is not a direct consideration in public enterprise, there is an equity basis for reflecting the relative cost of producing a product or service in the price charged to consume it. This applies to e-tran in terms of pricing local vs. commuter services, and also pricing peak vs. off-peak period services. The City’s transit fare policy should recognize the higher capital and operating costs of providing commuter service compared to local service.
- Simplified fare collection - Transit pricing should use incentives to encourage the use of pre-paid fare instruments and achieve other outcomes such as improved revenue security, simplified fare collection and processing, fewer fare disputes among customers and front-line operating employees, reduced dwell times to accommodate onboard cash transactions, and rewards for customer loyalty. Onboard fare collection and processing is a significant cost function. Generally, cash fare transactions are more likely to require driver enforcement and increase potential for unfavorable customer experience. The City has the continuing obligation to ensure secure handing of revenues from the farebox to the bank, as well as for accounting and reconciliation. Industry best practice continues to trend away from onboard cash fare transactions in favor of electronic or conventional pre-paid fare media purchased “upstream” prior to boarding the bus.

The Connect Card regional fare, tap-card payment system, which is anticipated to rollout in the Summer 2017, will help mitigate concerns with current fare payment methods.

- Implement moderate increases at regular intervals – The City’s transit fare policy should reflect the cyclical nature of farebox recovery with planned fare increases having moderate impact (e.g., 10% or less) occurring at regular intervals (e.g., every fourth

year). The transit revenue cycle is predictable to the extent that farebox recovery improves during the first and second years following a general fare increase, and declines in subsequent years as annual operating costs rise with inflation while the average fare remains flat. The proposed financial plan assumes fare adjustments in FY 2018 (January 2018) and FY 2021 (July 2020) to maintain fixed route system cost recovery at, or above, 20%.

To meet the objective of maintaining a 20% farebox recovery, the average fare for local service will need to rise from \$1.30 in FY 2017 to \$1.66 in FY 2021; and the average fare for commuter service will also need to rise from \$1.75 in FY 2017 to \$3.09 in FY 2021. The proposed FY 2018 fare structure is summarized in Exhibit 6-4, below.

Exhibit 6-4. Proposed E-tran Fixed Route Fare Structure, FY 2018

Fare Type	Full Fare	Discount Fare
<u>Local Routes</u>		
Cash	\$2.75	\$1.35
Local Transfer	None	\$0.00
Local Day Pass	\$7.00	\$3.50
10-ride Ticket	\$27.50	\$13.50
Monthly Pass – Local only	\$98.00	\$49.00
Child under 5	--	free
<u>Commuter Routes</u>		
Cash	\$3.25	\$1.60
Day Pass	\$9.00	\$4.50
Monthly Pass	\$144.00	\$72.00

Local Fares - The existing \$2.25 cash fare is proposed to be increased by 22% to \$2.75. Additionally, discontinuation of the local transfer is recommended. The full fare Day Pass is suggested to be increase from \$6.00 to \$7.00. The monthly pass is suggested to increase from \$80.00 to \$98.00.

Commuter Fares - Significant increases in commuter cash fares and pass prices are recommended to establish premium pricing and to correct relative pricing of travel to Downtown Sacramento via e-tran commuter bus and the RT Blue Line light rail service. The recommended Commuter pricing is consistent with other regional transit agencies operating commuter as detailed in Exhibit 4-3: Regional Commuter Fare Prices. A \$3.25 cash fare is proposed, reflecting a 44% increase over the current fare of \$2.25. A \$9.00 Day Pass and \$144.00 Monthly Pass are further proposed.

Fare Collection Issues - The service plan creates a new fare collection concern by consolidating local and commuter services onto common route alignments within Elk Grove. Local and

commuter customers boarding inbound trips on these segments will be subject to different fares. A suggested approach is to charge all boarding customers who pay with cash the higher commute fare, and issue a fare credit to local riders alighting in Elk Grove. Fare payment should be self-enforcing among Day Pass users, since a Commuter Day Pass is required for boarding afternoon commute trips returning from Sacramento to Elk Grove.

The proposed FY 2021 fare structure is summarized in Exhibit 6-5. The local cash fare would increase by 9% from \$2.75 to \$3.00. The Day Pass price would increase from \$7.00 to \$7.50. The Monthly Pass would increase from \$98 to \$106. The commuter cash fare would increase by 23% from \$3.25 to \$4.00. The Day Pass price would increase from \$9.00 to \$11.00. The Monthly Pass would increase from \$144 to \$176.

Exhibit 6-5. Proposed E-tran Fixed Route Fare Structure, FY 2021

Fare Type	Full Fare	Discount Fare
<u>Local Routes</u>		
Cash	\$3.00	\$1.50
Local Day Pass	\$7.50	\$3.75
10-ride Ticket	\$30.00	\$15.00
Monthly Pass – Local only	\$106.00	\$53.00
Child under 5	--	Free
<u>Commuter Routes</u>		
Cash	\$4.00	\$2.00
Day Pass	\$11.00	\$5.50
Monthly Pass	\$176.00	\$88.00

6.3 Common Capital Revenues and Expenses

The following section describes the common capital revenue and expense program assumptions that are considered within the financial plans for each COA service scenario. The capital program includes the procurement and refurbishment of buses, development of park and ride facilities, and the beginning implementation of BRT infrastructure. Further details regarding these components are explained in the subsequent narrative.

The COA financial plan’s capital program dictates significant changes to the City’s current 10-year transit capital and operations plan. The largest change involves the need to purchase less replacement buses for the fixed-route fleet between FY 2018 and FY 2022, compared to the City’s current 10-year capital and operations program. This comparison is discussed in further detail, in subsequent section of this chapter. Projected fixed-route system capital revenues and expenses, which are common for each of the COA’s service scenarios, from FY 2018 through FY 2022 are compiled in Exhibit 6-6, shown on the next page.

Exhibit 6-6. Fixed-Route Capital Revenues and Expenses, FY 2017-2022

Revenue Category	Base	Projected				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
TDA-LTF	\$0	\$0	\$0	\$0	\$0	\$0
TDA-STA	\$272,077	\$117,000	\$0	\$320,000	\$320,000	\$490,000
CIP/CFF	\$0	\$0	\$0	\$500,000	\$0	\$30,000
FTA Section 5307	\$0	\$0	\$0	\$0	\$0	\$0
FTA Section 5309	\$0	\$0	\$0	\$0	\$0	\$800,000
Proposition 1B - PTMISEA	\$0	\$0	\$0	\$0	\$0	\$0
Proposition 1B - CalOES	\$0	\$0	\$0	\$0	\$0	\$0
Other Funds (Cap and Trade-LCTOP)	\$0	\$0	\$0	\$0	\$0	\$0
SACOG Discretionary-CMAQ, FTA 5339	\$2,100,000	\$468,000	\$0	\$1,280,000	\$1,280,000	\$1,280,000
Total Revenue	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000
Expense Category						
FR Capital Expenses	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000
Subtotal, Capital	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000
Annual Surplus / Deficit	\$0	\$0	\$0	\$0	\$0	\$0
Transfers In/Out	\$0	\$0	\$0	\$0	\$0	\$0
Annual Balance	\$0	\$0	\$0	\$0	\$0	\$0

State Transit Assistance (STA) Fund

As previously identified, STA funds are used to match federal funding utilized for the purchase of transit capital. Total annual STA revenues are assumed to remain flat and used to offset both operations and capital costs. The five-year capital budget for each of the COA service scenarios assumes approximately \$690,884 annually in STA funds to support the City's full transit service, including match for demand response and fixed route capital purchases. STA capital match for demand response vehicle replacement, and for fixed route vehicle replacements and refurbishments, is deducted from the annual amount to reflect the net STA revenue available for fixed route operating expenses.

Capital Improvement Program / Capital Facilities Fee

The COA's capital program assumes \$530,000 over the five year forecast to support two projects through the CIP/CFF: the development of a the Harbour Point Park and Ride Lot (\$500,000), and a partial capital match (\$30,000) for bus stop improvements related to the beginning implementation of a BRT service.

Proposition 1B Transportation Bond Program

Proposition 1B includes two grant funding programs - the Public Transportation Modernization, Improvement, and Service Enhancement Account Program (PTMISEA), and transit system safety, security, and disaster response projects (TSSDRA). The City has received funding from Proposition 1B programs for the past several years. However, the final appropriation of program funds was made in the FY 2014-15 State Budget. The City no longer can expect any future PTMISEA funding for capital purchases, as the City spent the last allocation of FYs 2015 and 2016 funding on a bus purchase project, and the purchase/installation of video surveillance equipment into the City's fleet. Additionally, the TSSDRA program has ended with a last allocation of funding in FY 2016/17. The City historically has used this funding for purchasing

equipment to enhance the safety and security of the City's fixed-route transit fleet, which included funding for the City Corporation Yard's parking lot lighting, surveillance equipment and fencing, as well as onboard bus stop announcement and mobile radio equipment.

Federal Transit Administration (FTA) Formula and Discretionary Grant Funds

The FTA provides financial and technical assistance to local public transit systems in the form of formula-based and discretionary grants. A Memorandum of Understanding (MOU) was entered into between SACOG and member agencies including the City of Elk Grove in 2015, which allows for an Earned Share Sub-allocation process of FTA formula and discretionary grant funds. The intent of the MOU is to:

1. Maintain flexibility in funding to allow large projects to receive adequate funding in the required years;
2. Support implementation of a performance-based approach to transportation decision-making;
3. Foster economies of scale through assistance in the coordination of funding for mutually beneficial capital projects, including shared transit facilities and bus purchase contracts;
4. Provide for coordinated planning and foster coordinated services; and,
5. Apply federal transit dollars to implement transit priorities identified in the SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS).

The Sacramento Urbanized Area (UZA) transit operators, in collaboration with SACOG, developed a performance/service measure based on a competitive process that identifies projects to be funded with federal formula funds. This methodology was approved in December 2013, and is phased in over a 4-year period. The sub-allocation methodology is composed of two parts: "Service Based Earned Share" and the "Discretionary Share."

The Service Based Earned Share involves the allocation of 88% of the Sacramento UZA funds based on transit system service data derived from the National Transit Database (NTD). Service and performance data indicators used are vehicle revenue miles, vehicle revenue hours, population, and unlinked passenger trips. Population is based on the 2010 US Census data. The discretionary share distributes the remaining 12% of the Sacramento UZA funds based on a regional competition for projects. This process involves a Call for Projects, in which transit operators are asked to identify and submit project applications.

The most recent development concerning the provision of federal transportation funding support has been the passage of the Fixing America's Surface Transportation Act (FAST Act), signed into law by President Obama on December 4, 2015. The FAST Act is the first law enacted in more than a decade that provides long-term funding certainty for transportation. In FY 2016, the FTA had a funding allocation of \$11.79 billion that it dispersed to states and other recipients through a combination of formula and discretionary grants. Retroactively, effective on October 1, 2015, the FAST Act authorized transit program funding for five years through September 30, 2020.

FTA Section 5309 Capital Investment Grants

The FTA Section 5309 Program is FTA's primary grant program for funding major transit capital investments such as heavy rail, commuter rail, light rail, streetcars, and bus rapid transit. Unlike the formula grant programs, the FTA Section 5309 program is discretionary and requires a multi-phase process based on statutory criteria evaluating project justification and local financial commitment. The COA financial plans for each service scenario assume a \$800,000 funding allocation in FY 2022 for bus stop improvements related to a potential BRT service.

SACOG Discretionary Capital Funding – CMAQ and FTA 5339:

City transit staff apply for these discretionary funding sources through SACOG. A description of these discretionary programs is provided below. Revenues from these funding programs are assumed in each of the COA's three service scenarios.

Congestion Mitigation and Air Quality Program (CMAQ)

The CMAQ program was implemented to support surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief to help meet the requirements of the Clean Air Act. Administered by the Federal Highway Administration (FHWA), the CMAQ program has been reauthorized under every successive Transportation Bill up to and including the FAST Act in 2015. FAST provides from \$2.3 to almost \$2.5 billion in CMAQ funding annually from 2016 through 2020. The SACOG 2015/18 MTIP shows a regional CMAQ allocation of between \$19.2 million and \$28.7 million annually. Based on the annual projection and expenditure plan in the City's FY 2017 TDA claim, \$2.1 million in CMAQ grant funding has been flexed to the FTA Section 5307 program for bus purchases. The City should continue pursuing this funding source for capital projects. Each of the COA's financial plans assume that the City will receive some CMAQ funds within the five year program for capital replacement and refurbishment needs.

FTA Section 5339 Bus and Bus Facilities and No and Low Emission Program

The FTA Section 5339 Bus and Bus Facilities Program provides federal resources to States and designated recipients to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities. Funding is provided through formula allocations and competitive grants. A sub-program provides competitive grants for bus and bus facility projects that support low and zero-emission vehicles.

Eligible recipients include designated recipients that operate fixed route bus service or that allocate funding to fixed route bus operators; and State or local governmental entities that operate fixed route bus service that are eligible to receive direct grants under the FTA Section 5307 program. The SACOG 2015/18 MTIP showed a regional FTA Section 5339 allocation of

\$2.68 million in FY 2015 and \$730,000 in FY 2018. The City has secured FTA 5339 revenue for vehicle replacement in FY 2018 for fixed route and demand response services. This revenue is also assumed to be pursued for bus replacement and refurbishment in FYs 2020 through 2022. In addition, this funding source is used for demand response vehicle replacement.

Capital Expenses

Actual and projected capital expenses from FY 2017 through FY 2022 are compiled in Exhibit 6-7, below. This table summarizes the fixed route capital asset acquisitions and priorities of the financial plan, which are based on the City's 10-Year Capital and Operations Plan and the COA service plans. This capital financial plan is applicable to all three of the COA's service scenarios.

Exhibit 6-7. Fixed Route Capital Project Expenditures, FY 2017-2022

Asset Category	Base FY 2017	Projected				
		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenue Vehicles	\$2,372,077	\$585,000	\$0	\$1,600,000	\$1,600,000	\$1,600,000
Park-Ride Facilities	\$0	\$0	\$0	\$500,000	\$0	\$0
Maintenance Buildings	\$0	\$0	\$0	\$0	\$0	\$0
Fare Collection Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Communications Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Security Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Bus Stop Improvements / BRT	\$0	\$0	\$0	\$0	\$0	\$1,000,000
Total FR Capital Expenses	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000

Revenue Vehicles

Under the current e-tran local and commuter network, a total of 65 fixed route vehicles are required to maintain service, consisting of 55 for peak (morning and evening) service and 10 spares. Peak service requirements are met using 46 standard heavy-duty buses designated for fixed route service and nine (9) small light-duty buses purchased for the dial-a-ride program. The City's 10-year capital plan for the fixed route fleet identifies 55 standard heavy-duty buses total, including 46 deployed in peak service and nine (9) spares.

The proposed network restructuring plan and each of the LOS service scenarios for the COA require a total of 46 total buses, consisting of 38 for peak period service and eight (8) spares. Each of the COA's service scenarios allows for a reduction of nine (9) buses from the fixed route fleet, resulting in a capital cost savings of approximately \$5.4 million from the current system's capital replacement plan.

The City's current 10-year fixed route transit fleet management plan identifies planned purchases of 18 replacement buses between FY 2018 and FY 2022:

- Two (2) standard heavy duty (40') buses in FY 2018
- Three (3) standard heavy duty (35') buses in FY 2019
- Two (2) standard heavy duty (35') buses in FY 2020
- Four (4) standard heavy duty (40') buses in FY 2021
- Seven (7) standard heavy duty (40') buses in FY 2022.

The reduced fleet size required for network restructuring and each of the COA's service scenarios now only requires that the City acquire twelve (12) replacement buses between FY 2018 and FY 2022 at an estimated cost of \$7.2 million.

While not included in the five year period considered by this financial plan, the City's 10-year transit capital plan identifies the need to replace seven additional buses in FY 2023. This results in a total of 16 buses that will require replacement or refurbishment between FY 2020 and FY 2023.

Given the difficulty of obtaining large-scale capital funding for bus replacement needs in any given fiscal year, the City should consider smaller purchases replacing up to two (2) buses, and refurbishing up to two (2) buses annually from FY 2020 through FY 2023.

In consideration of this factor, the COA's financial plan for each service scenario includes a total of six buses to be purchased and six buses to be refurbished during FY 2020 through FY 2022, at a cost of \$4.8 million:

- Replace two (2) standard heavy duty (40') buses, and refurbish two (2) standard heavy duty (40') buses in FY 2020
- Replace two (2) standard heavy duty (40') buses, and refurbish two (2) standard heavy duty (40') buses in FY 2021
- Replace two (2) standard heavy duty (40') buses, and refurbish two (2) standard heavy duty (40') buses in FY 2022

It is noted that vehicle savings assume the currently proposed COA service scenarios and network configurations. Any future service improvements affecting peak period service, such as local service frequency improvements or trips added to commuter schedules, could diminish this savings as more vehicles may be required to maintain peak service levels. Incremental service improvements are discussed in this chapter.

Park-Ride Facilities

The recommended service plan emphasizes key park-ride lots to provide customer access to the commuter network (see Section 5.2). The following projects are included in the capital projects summary in Exhibit 6-7.

Harbour Point Park-Ride Lot - Development of a new park-ride lot near the I-5 interchange at Elk Grove Boulevard is recommended in FY 2020. This project is part of the City's Capital Improvement Program (CIP). The facility should provide up to 75

spaces initially to accommodate the proposed COA service plan scenarios, and would allow for future lot expansion up to 200 spaces. The initial cost estimate for construction of this lot is \$500,000, which will be paid for through the CIP grant program.

Other Park-Ride Lot Expansions and Considerations not in COA's Financial Plans

Improvements to or construction of additional park-ride facilities should be considered if other funding becomes available.

Laguna West Lot Expansion - This existing facility contains 73 paved parking spaces located at the northeast corner of Laguna Boulevard and Harbour Point Drive, and accessible from Kausen Drive. The lot is located within close proximity to Apple Computer and the I-5 Laguna Boulevard interchange; and utilized fully on weekdays with overflow commuters regularly parking nearby at Laguna Main Street and Vaux Avenue. Ideally, capacity should be increased to 150 spaces to accommodate the proposed COA service plan scenarios. The City's staff believes that leasing adjacent parking spaces from Apple Computer is not an option. Should additional funding become available, a site selection study is recommended in order to identify short-range expansion, and longer-term development, alternatives for a single facility containing 150 paved parking spaces with capacity for further expansion. The City estimates that this study would cost approximately \$250,000.

Highway 99 & Laguna Park-Ride Lot – A study is recommended to analyze the consolidation of multiple smaller lots along Laguna Boulevard, west of the Highway 99 interchange, into a single facility containing 125 paved spaces to accommodate the proposed COA service scenario plans, and allow for future expansion. This study should focus on available properties within the vicinity of Marketplace 99 and the Highway 99 interchange. It is estimated that the study would cost approximately \$250,000.

Civic Center Park-Ride Lot – The COA's service plan configuration accommodates existing plans to develop a park-ride facility within the new Elk Grove Civic Center. The facility initially is anticipated to provide 75 paved spaces to accommodate all of the COA's proposed service scenarios, and allow for future lot expansion. This project is funded separately from the transit capital plan presented in the COA's financial tables because it is assumed as part of the larger Civic Center project's costs.

Sheldon Facility Upgrades – While the City does not own this park-ride facility, safety and security enhancements are recommended at the existing Sheldon park-ride lot. This facility provides approximately 150 parking spaces in proximity to the Highway 99 interchange. However, many e-tran customers had expressed safety and security concerns at this location during the COA's outreach process. The City believes that improvements made to this lot, such as the installation of video surveillance systems, lighting, perimeter fencing, paving, restriping, signage and landscaping, would lead to a greater utilization of the lot's currently available capacity. The City can work with the

California Department of Transportation (Caltrans), which owns the lot, to make possible improvements in the future.

BRT Corridor Enhancements

The current 10-year capital plan includes \$1.0 million in FY 2022 for first-phase BRT corridor enhancements. Priority projects are yet to be determined, but could include: bus stop improvements, traffic flow improvements, customer information technologies, and branding. The City should undertake a corridor study to identify and prioritize projects consistent with the Institute for Transportation & Development Policy (ITDP) definition, standards and scorecard for BRT development.

6.4 COA Service Plan Scenarios' Operating Revenues and Expenses Comparison

The following sections provide a comparison of the operating revenues and expenses unique to each of the three COA service scenarios. Supporting tables with revenue and expense assumptions are identified for each scenario, as well as a summary table, comparing the five year operating and capital revenues and expenses for each COA service scenario.

Base Scenario

As shown in Exhibit 6-8, below, the COA's base scenario assumes 59,886 total revenue hours for both local and commuter service combined. A small annual ridership increase is anticipated in this scenario, which considers the impact of two proposed fare increases to both the local and commuter services in FY 2018 (January 2018) and FY 2021 (July 2020). Overall, fixed route fare revenue is projected to increase by approximately 63%, from \$1.28 million in FY 2017, to \$2.09 million in FY 2022. Given the proposed fare increases and ridership assumptions in this scenario, the anticipated annual farebox recovery for the fixed route system combined remains relatively close to the 20% farebox recovery target as defined by the TDA's requirements for the City's transit operations.

In addition to the fare revenue projections, the total operating expenses for the fixed route local and commuter services are assumed to increase annually as well. Under the base scenario, annual operating expenses are projected to increase by approximately 19%, from \$8.21 million in FY 2017, to \$9.78 million in FY 2022. Currently, the City utilizes a third-party contractor to provide both the operations and maintenance of the City's bus services and fleet. The increase of total operating expenses is directly equated from the total revenue hours assumed for this scenario multiplied by the total cost per revenue hour, which increase annually to account for inflation based on the rates established in the City's existing operations and maintenance contract.

Exhibit 6-8. Fixed Route Revenues and Expenses, FY 2017-2022 Base Scenario

	Base	Projected				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Total Operating Expenses						
Local Fixed Route (MB)	\$5,351,963	\$4,879,429	\$5,025,811	\$5,226,844	\$5,409,783	\$5,599,126
Commuter Fixed Route (CB)	\$2,860,460	\$3,644,271	\$3,753,599	\$3,903,743	\$4,040,374	\$4,181,787
Total	\$8,212,423	\$8,523,699	\$8,779,410	\$9,130,587	\$9,450,157	\$9,780,913
Fare Revenue ¹						
Local Fixed Route (MB)	\$569,240	\$666,011	\$672,671	\$679,398	\$747,949	\$762,908
Commuter Fixed Route (CB)	\$712,740	\$1,026,346	\$1,036,609	\$1,046,975	\$1,300,657	\$1,326,671
Total	\$1,281,980	\$1,692,357	\$1,709,280	\$1,726,373	\$2,048,606	\$2,089,579
Net Operating Expenses						
Local Fixed Route (MB)	\$4,782,723	\$4,213,418	\$4,353,140	\$4,547,446	\$4,661,834	\$4,836,218
Commuter Fixed Route (CB)	\$2,147,720	\$2,617,925	\$2,716,990	\$2,856,768	\$2,739,716	\$2,855,116
Total	\$6,930,443	\$6,831,343	\$7,070,130	\$7,404,214	\$7,401,551	\$7,691,334
Farebox Recovery						
Local Fixed Route (MB)	10.6%	13.6%	13.4%	13.0%	13.8%	13.6%
Commuter Fixed Route (CB)	24.9%	28.2%	27.6%	26.8%	32.2%	31.7%
Total	15.6%	19.9%	19.5%	18.9%	21.7%	21.4%
Revenue Hours						
Local Fixed Route (MB)	38,730	34,282	34,282	34,282	34,282	34,282
Commuter Fixed Route (CB)	20,700	25,604	25,604	25,604	25,604	25,604
Total	59,430	59,886	59,886	59,886	59,886	59,886
Total Cost per Revenue Hour						
Local Fixed Route (MB)	\$138.19	\$142.33	\$146.60	\$152.47	\$157.80	\$163.33
Commuter Fixed Route (CB)	\$138.19	\$142.33	\$146.60	\$152.47	\$157.80	\$163.33
Total	\$138.19	\$142.33	\$146.60	\$152.47	\$157.80	\$163.33
Annual inflation rate (cost per hour)	3.0%	3.0%	3.0%	4.0%	3.5%	3.5%
Ridership - Annual Customer Boardings						
Local Fixed Route (MB)	437,266	437,266	441,639	446,055	450,516	459,526
Commuter Fixed Route (CB)	408,012	408,012	412,092	416,213	420,375	428,783
Total	845,278	845,278	853,731	862,268	870,891	888,309
Percent change - Local	-	0.0%	1.0%	1.0%	1.0%	2.0%
Percent change - Commuter	-	0.0%	1.0%	1.0%	1.0%	2.0%
Net Cost (Subsidy) per Customer Boarding						
Local Fixed Route (MB)	\$10.94	\$9.64	\$9.86	\$10.19	\$10.35	\$10.52
Commuter Fixed Route (CB)	\$5.26	\$6.42	\$6.59	\$6.86	\$6.52	\$6.66
Total	\$8.20	\$8.08	\$8.28	\$8.59	\$8.50	\$8.66
Average Fare						
Local Fixed Route (MB)	\$1.30	\$1.52	\$1.52	\$1.52	\$1.66	\$1.66
Commuter Fixed Route (CB)	\$1.75	\$2.52	\$2.52	\$2.52	\$3.09	\$3.09
Fixed Route System Average	\$1.52	\$2.00	\$2.00	\$2.00	\$2.35	\$2.35

Notes:

1 - Assumes fare increases in January 2018 (FY 18) & July 2020 (FY 21)

The following Exhibit 6-9, identifies an overall summary of the projected revenues and expenses for e-tran's fixed route operations and capital needs in the base scenario. This summary identifies an annual surplus/deficit that does not assume the utilization of any General Funds from the City to pay for transit operating or capital expenses.

Exhibit 6-9. E-tran Annual Revenues and Expenses, FY 2017-2022 – Base Scenario

Revenue Category	Base	Projected				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
FR Fare Revenue	\$1,281,980	\$1,692,357	\$1,709,280	\$1,726,373	\$2,048,606	\$2,089,579
Subtotal, Fare Revenue	\$1,281,980	\$1,692,357	\$1,709,280	\$1,726,373	\$2,048,606	\$2,089,579
General Fund Contribution	\$835,304	\$0	\$0	\$0	\$0	\$0
TDA-LTF	\$4,582,147	\$4,885,622	\$4,910,768	\$4,975,748	\$5,049,189	\$5,123,201
TDA-STA	\$479,396	\$477,884	\$594,884	\$370,884	\$370,884	\$200,884
CIP/CFF	\$0	\$0	\$0	\$500,000	\$0	\$30,000
FTA Section 5307	\$1,140,079	\$1,301,084	\$1,327,106	\$1,353,648	\$1,380,721	\$1,408,335
FTA Section 5309	\$0	\$0	\$0	\$0	\$0	\$800,000
Proposition 1B - PTMISEA	\$0	\$0	\$0	\$0	\$0	\$0
Proposition 1B - CalOES	\$0	\$0	\$0	\$0	\$0	\$0
Non-transportation	\$0	\$0	\$0	\$0	\$0	\$0
Other Funds (Cap and Trade-LCTOP)	\$173,992	\$81,494	\$81,000	\$81,000	\$81,000	\$81,000
SACOG Discretionary-CMAQ, FTA 5339	\$2,100,000	\$468,000	\$0	\$1,280,000	\$1,280,000	\$1,280,000
Total Revenue	\$10,592,899	\$8,906,440	\$8,623,038	\$10,287,653	\$10,210,400	\$11,012,999
Expense Category						
FR Operating Expenses	\$7,377,119	\$7,671,689	\$7,910,360	\$8,244,155	\$8,545,997	\$8,858,670
Total City Overhead Cost*	\$835,304	\$852,010	\$869,050	\$886,431	\$904,160	\$922,243
Subtotal, Operating	\$8,212,423	\$8,523,699	\$8,779,410	\$9,130,587	\$9,450,157	\$9,780,913
FR Capital Expenses	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000
Subtotal, Capital	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000
Total FR Capital & Operating Expenses	\$10,584,500	\$9,108,699	\$8,779,410	\$11,230,587	\$11,050,157	\$12,380,913
Annual Surplus / Deficit	\$8,398	-\$202,259	-\$156,373	-\$942,934	-\$839,757	-\$1,367,914

In addition to the previously discussed common assumptions for annual LTF, STA, LCTOP, SACOG Discretionary – CMAQ, FTA 5339, and FTA Section 5309 funding sources, the COA's base scenario assumes a growth in FTA Section 5307 funds, at a rate of 2% each year from the estimated FY 2018 formula allocation amount. This is a conservative estimate based on past annual growth trends for this federal funding source.

It is important to note that the City has historically contributed an amount of funding to transit from the City's General Fund that is equivalent to the City's total overhead costs included within the annual fixed route operating expenses. While a General Fund contribution is identified in FY 2017, which reflects the amount originally adopted in the City's Transit budget, this contribution is not assumed in FYs 2018 – 2022. Should the City decide to contribute General Funds to e-tran's annual operations budget for the purposes of covering the projected overhead costs, the annual surplus/deficit identified in the COA's base scenario may change to reflect a more sustainable budget. In addition, the larger deficits currently projected in FYs 2020 through 2022 are reflective of the anticipated capital bus replacement and refurbishment needs, as well as the beginning establishment of a bus rapid transit system. Should these capital needs change, the projected deficits in FYs 2020 – 2022 could be significantly reduced. Assuming no General Funds are contributed to cover the fixed route operating expenses, the overall net deficit of revenues to expenses in the COA's base scenario for FYs 2018 – 2022, is \$3,509,237.

7.6% Reduction Scenario

As shown in Exhibit 6-10, below, this scenario assumes a reduction of 3,557 hours from the base scenario, for a total amount of 55,329 revenue hours for both local and commuter services combined.

Exhibit 6-10. Fixed Route Revenues and Expenses, FY 2017-2022

7.6% Reduction Scenario

	Base	Projected				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Total Operating Expenses						
Local Fixed Route (MB)	\$5,351,963	\$4,864,626	\$5,010,565	\$5,210,987	\$5,393,372	\$5,582,140
Commuter Fixed Route (CB)	\$2,860,460	\$3,010,466	\$3,100,780	\$3,224,811	\$3,337,680	\$3,454,498
Total	\$8,212,423	\$7,875,092	\$8,111,345	\$8,435,799	\$8,731,052	\$9,036,638
Fare Revenue ¹						
Local Fixed Route (MB)	\$569,240	\$659,351	\$659,351	\$665,944	\$725,879	\$733,138
Commuter Fixed Route (CB)	\$712,740	\$1,016,082	\$1,016,082	\$1,026,243	\$1,262,279	\$1,274,902
Total	\$1,281,980	\$1,675,433	\$1,675,433	\$1,692,187	\$1,988,158	\$2,008,040
Net Operating Expenses						
Local Fixed Route (MB)	\$4,782,723	\$4,205,275	\$4,351,214	\$4,545,043	\$4,667,493	\$4,849,002
Commuter Fixed Route (CB)	\$2,147,720	\$1,994,384	\$2,084,698	\$2,198,568	\$2,075,400	\$2,179,596
Total	\$6,930,443	\$6,199,659	\$6,435,912	\$6,743,611	\$6,742,893	\$7,028,598
Farebox Recovery						
Local Fixed Route (MB)	10.6%	13.6%	13.2%	12.8%	13.5%	13.1%
Commuter Fixed Route (CB)	24.9%	33.8%	32.8%	31.8%	37.8%	36.9%
Total	15.6%	21.3%	20.7%	20.1%	22.8%	22.2%
Revenue Hours						
Local Fixed Route (MB)	38,730	34,178	34,178	34,178	34,178	34,178
Commuter Fixed Route (CB)	20,700	21,151	21,151	21,151	21,151	21,151
Total	59,430	55,329	55,329	55,329	55,329	55,329
Total Cost per Revenue Hour						
Local Fixed Route (MB)	\$138.19	\$142.33	\$146.60	\$152.47	\$157.80	\$163.33
Commuter Fixed Route (CB)	\$138.19	\$142.33	\$146.60	\$152.47	\$157.80	\$163.33
Total	\$138.19	\$142.33	\$146.60	\$152.47	\$157.80	\$163.33
Annual inflation rate (cost per hour)	3.0%	3.0%	3.0%	4.0%	3.5%	3.5%
Ridership - Annual Customer Boardings						
Local Fixed Route (MB)	437,266	432,893	432,893	437,222	437,222	441,594
Commuter Fixed Route (CB)	408,012	403,932	403,932	407,971	407,971	412,051
Total	845,278	836,825	836,825	845,193	845,193	853,645
Percent change - Local	-	-1.0%	0.0%	1.0%	0.0%	1.0%
Percent change - Commuter	-	-1.0%	0.0%	1.0%	0.0%	1.0%
Net Cost (Subsidy) per Customer Boarding						
Local Fixed Route (MB)	\$10.94	\$9.71	\$10.05	\$10.40	\$10.68	\$10.98
Commuter Fixed Route (CB)	\$5.26	\$4.94	\$5.16	\$5.39	\$5.09	\$5.29
Total	\$8.20	\$7.41	\$7.69	\$7.98	\$7.98	\$8.23
Average Fare						
Local Fixed Route (MB)	\$1.30	\$1.52	\$1.52	\$1.52	\$1.66	\$1.66
Commuter Fixed Route (CB)	\$1.75	\$2.52	\$2.52	\$2.52	\$3.09	\$3.09
Fixed Route System Average	\$1.52	\$2.00	\$2.00	\$2.00	\$2.35	\$2.35

Notes:

1 - Assumes fare increases in July 2017 (FY 18) & July 2020 (FY 21)

The COA's 7.6% reduction scenario assumes an initial decrease in annual ridership, which considers the impact of both the reduced service hours and the two proposed fare increases to both the local and commuter services in FY 2018 and FY 2021. Fixed route fare revenue is projected to increase by approximately 57%, from \$1.28 million in FY 2017, to \$2.01 million in FY 2022, which is lower than the base scenario due primarily to the impact associated with lower ridership projections. However, the anticipated farebox recovery in each fiscal year for the combined fixed route system remains above the 20% farebox recovery target as defined by the TDA's requirements for the City's transit operations.

In addition to the fare revenue projections, the total operating expenses for the fixed route local and commuter services are also assumed to increase annually. Under the 7.6% reduction scenario, annual operating expenses are projected to increase by approximately 10%, from \$8.21 million in FY 2017, to \$9.04 million in FY 2022, which is lower than the base scenario primarily because of lower anticipated costs to operate the system due to the reduction of revenue hours. However, as discussed in the base scenario, the assumed annual increase of total operating expenses still considers the annual rate of increase identified in the City's existing operations and maintenance contract.

Exhibit 6-11, identifies an overall summary of the projected budget revenues and expenses for e-tran's fixed route operations and capital needs, based on the assumptions established in the 7.6% reduction scenario. Similar to the base scenario, the surplus/deficit that is identified in this summary does not assume the utilization of any General Funds from the City to pay for operating or capital expenses.

Exhibit 6-11. E-tran Annual Revenues and Expenses, FY 2017-2022 – 7.6% Reduction Scenario

Revenue Category	Base FY 2017	FY 2018	FY 2019	Projected FY 2020	FY 2021	FY 2022
FR Fare Revenue	\$1,281,980	\$1,675,433	\$1,675,433	\$1,692,187	\$1,988,158	\$2,008,040
Subtotal, Fare Revenue	\$1,281,980	\$1,675,433	\$1,675,433	\$1,692,187	\$1,988,158	\$2,008,040
General Fund Contribution	\$835,304	\$0	\$0	\$0	\$0	\$0
TDA-LTF	\$4,582,147	\$4,885,622	\$4,910,768	\$4,975,748	\$5,049,189	\$5,123,201
TDA-STA	\$479,396	\$477,884	\$594,884	\$370,884	\$370,884	\$200,884
CIP/CFF	\$0	\$0	\$0	\$500,000	\$0	\$30,000
FTA Section 5307	\$1,140,079	\$1,301,084	\$1,314,095	\$1,327,236	\$1,340,508	\$1,353,913
FTA Section 5309	\$0	\$0	\$0	\$0	\$0	\$800,000
Proposition 1B - PTMISEA	\$0	\$0	\$0	\$0	\$0	\$0
Proposition 1B - CalOES	\$0	\$0	\$0	\$0	\$0	\$0
Non-transportation	\$0	\$0	\$0	\$0	\$0	\$0
Other Funds (Cap and Trade-LCTOP)	\$173,992	\$81,494	\$81,000	\$81,000	\$81,000	\$81,000
SACOG Discretionary-CMAQ, FTA 5339	\$2,100,000	\$468,000	\$0	\$1,280,000	\$1,280,000	\$1,280,000
Total Revenue	\$10,592,899	\$8,889,517	\$8,576,180	\$10,227,055	\$10,109,739	\$10,877,038
Expense Category						
FR Operating Expenses	\$7,377,119	\$7,023,082	\$7,242,294	\$7,549,367	\$7,826,892	\$8,114,395
Total City Overhead Cost*	\$835,304	\$852,010	\$869,050	\$886,431	\$904,160	\$922,243
Subtotal, Operating	\$8,212,423	\$7,875,092	\$8,111,345	\$8,435,799	\$8,731,052	\$9,036,638
FR Capital Expenses	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000
Subtotal, Capital	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000
Total FR Capital & Operating Expenses	\$10,584,500	\$8,460,092	\$8,111,345	\$10,535,799	\$10,331,052	\$11,636,638
Annual Surplus / Deficit	\$8,398	\$429,425	\$464,835	-\$308,743	-\$221,312	-\$759,600

In addition to the previously discussed common assumptions for annual LTF, STA, LCTOP, SACOG Discretionary – CMAQ, FTA 5339, and FTA Section 5309 funding sources, the COA's 7.6% reduction scenario assumes a 1% annual growth rate for FTA Section 5307 funds from the estimated FY 2018 formula allocation amount. This growth rate is assumed to be slightly lower than the projected growth rate in the base scenario due mainly to the potential impact that lower operating costs and ridership have on the formula distribution of the funds to the City.

As previously mentioned, a General Fund contribution to cover the City's overhead costs is not assumed in FYs 2018 – 2022. Should the City decide to contribute General Funds to e-tran's annual operations budget for the purposes of covering the projected overhead cost, the annual surplus/deficit identified in the COA's base scenario may change to reflect a more sustainable budget. The 7.6% reduction scenario results in an overall net deficit of revenues to expenses for FYs 2018 – 2022, in the amount of \$395,396. This deficit is much smaller than the deficit identified in the base scenario, with some surpluses shown in years where capital needs are not as prominent.

The 7.6% reduction scenario represents a much more sustainable approach for the COA's five year service plan. Should the City contribute any General Funds to cover overhead costs, as historically practiced, the overall deficit could be eliminated completely in this scenario. Staff recommends this scenario as the most feasible approach to implementing the COA's proposed services.

10% Reduction Scenario

This scenario assumes a reduction of 6,075 hours from the base scenario, for a total amount of 53,811 revenue hours for both local and commuter services combined. As shown in Exhibit 6-12, below, the COA's 10% reduction scenario assumes a larger overall decrease in annual ridership, which considers the impact of both greater reduced service hours and the two proposed fare increases to both the local and commuter services in FY 2018 and FY 2021. Fixed route fare revenue is projected to increase by approximately 49%, from \$1.28 million in FY 2017, to \$1.91 million in FY 2022, which is lower than the base and 7.6% reduction scenarios due primarily to the impact associated with lower ridership projections. Like the 7.6% reduction scenario, the anticipated annual farebox recovery for the combined fixed route system remains above the 20% in this scenario.

In addition to the fare revenue projections, the total operating expenses for the fixed route local and commuter services are assumed to increase annually as well. Under the 10% reduction scenario, annual operating expenses are projected to increase by approximately 7%, from \$8.21 million in FY 2017, to \$8.79 million in FY 2022. This increase is lower than the base and 7.6% reduction scenarios primarily because of the lower costs to operate the system due to the greater number of revenue hours reduced in this scenario. This scenario further assumes the same annual increase of total operating expenses based on the annual rate of increase identified in the City's existing operations and maintenance contract.

Exhibit 6-12. Fixed Route Revenues and Expenses, FY 2017-2022
10% Reduction Scenario

	Base	Projected				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Total Operating Expenses						
Local Fixed Route (MB)	\$5,351,963	\$4,648,566	\$4,788,023	\$4,979,544	\$5,153,828	\$5,334,212
Commuter Fixed Route (CB)	\$2,860,460	\$3,010,466	\$3,100,780	\$3,224,811	\$3,337,680	\$3,454,498
Total	\$8,212,423	\$7,659,032	\$7,888,803	\$8,204,355	\$8,491,507	\$8,788,710
Fare Revenue ¹						
Local Fixed Route (MB)	\$569,240	\$652,691	\$646,164	\$646,164	\$697,275	\$697,275
Commuter Fixed Route (CB)	\$712,740	\$1,005,819	\$995,761	\$995,761	\$1,212,538	\$1,212,538
Total	\$1,281,980	\$1,658,510	\$1,641,924	\$1,641,924	\$1,909,813	\$1,909,813
Net Operating Expenses						
Local Fixed Route (MB)	\$4,782,723	\$3,995,875	\$4,141,859	\$4,333,380	\$4,456,553	\$4,636,937
Commuter Fixed Route (CB)	\$2,147,720	\$2,004,647	\$2,105,019	\$2,229,050	\$2,125,142	\$2,241,961
Total	\$6,930,443	\$6,000,522	\$6,246,878	\$6,562,431	\$6,581,694	\$6,878,897
Farebox Recovery						
Local Fixed Route (MB)	10.6%	14.0%	13.5%	13.0%	13.5%	13.1%
Commuter Fixed Route (CB)	24.9%	33.4%	32.1%	30.9%	36.3%	35.1%
Total	15.6%	21.7%	20.8%	20.0%	22.5%	21.7%
Revenue Hours						
Local Fixed Route (MB)	38,730	32,660	32,660	32,660	32,660	32,660
Commuter Fixed Route (CB)	20,700	21,151	21,151	21,151	21,151	21,151
Total	59,430	53,811	53,811	53,811	53,811	53,811
Total Cost per Revenue Hour						
Local Fixed Route (MB)	\$138.19	\$142.33	\$146.60	\$152.47	\$157.80	\$163.33
Commuter Fixed Route (CB)	\$138.19	\$142.33	\$146.60	\$152.47	\$157.80	\$163.33
Total	\$138.19	\$142.33	\$146.60	\$152.47	\$157.80	\$163.33
Annual inflation rate (cost per hour)	3.0%	3.0%	3.0%	4.0%	3.5%	3.5%
Ridership - Annual Customer Boardings						
Local Fixed Route (MB)	437,266	428,521	424,235	424,235	419,993	419,993
Commuter Fixed Route (CB)	408,012	399,852	395,853	395,853	391,895	391,895
Total	845,278	828,372	820,089	820,089	811,888	811,888
Percent change - Local	-	-2.0%	-1.0%	0.0%	-1.0%	0.0%
Percent change - Commuter	-	-2.0%	-1.0%	0.0%	-1.0%	0.0%
Net Cost (Subsidy) per Customer Boarding						
Local Fixed Route (MB)	\$10.94	\$9.32	\$9.76	\$10.21	\$10.61	\$11.04
Commuter Fixed Route (CB)	\$5.26	\$5.01	\$5.32	\$5.63	\$5.42	\$5.72
Total	\$8.20	\$7.24	\$7.62	\$8.00	\$8.11	\$8.47
Average Fare						
Local Fixed Route (MB)	\$1.30	\$1.52	\$1.52	\$1.52	\$1.66	\$1.66
Commuter Fixed Route (CB)	\$1.75	\$2.52	\$2.52	\$2.52	\$3.09	\$3.09
Fixed Route System Average	\$1.52	\$2.00	\$2.00	\$2.00	\$2.35	\$2.35

Notes:

1 - Assumes fare increases in July 2017 (FY 18) & July 2020 (FY 21)

The following Exhibit 6-13, identifies an overall summary of the projected budget revenues and expenses for e-tran's fixed route operations and capital needs, based on the assumptions established in the 10% reduction scenario. As identified in the base and 7.6% reduction

scenarios, the annual surplus/deficit that is identified in this summary does not assume the utilization of any General Funds from the City to pay for operating or capital expenses.

Exhibit 6-13. E-tran Annual Revenues and Expenses, FY 2017-2022 – 10% Reduction Scenario

Revenue Category	Base FY 2017	FY 2018	FY 2019	Projected FY 2020	FY 2021	FY 2022
FR Fare Revenue	\$1,281,980	\$1,658,510	\$1,641,924	\$1,641,924	\$1,909,813	\$1,909,813
Subtotal, Fare Revenue	\$1,281,980	\$1,658,510	\$1,641,924	\$1,641,924	\$1,909,813	\$1,909,813
General Fund Contribution	\$835,304	\$0	\$0	\$0	\$0	\$0
TDA-LTF	\$4,582,147	\$4,885,622	\$4,910,768	\$4,975,748	\$5,049,189	\$5,123,201
TDA-STA	\$479,396	\$477,884	\$594,884	\$370,884	\$370,884	\$200,884
CIP/CFF	\$0	\$0	\$0	\$500,000	\$0	\$30,000
FTA Section 5307	\$1,140,079	\$1,301,084	\$1,301,084	\$1,301,084	\$1,314,095	\$1,327,236
FTA Section 5309	\$0	\$0	\$0	\$0	\$0	\$800,000
Proposition 1B - PTMISEA	\$0	\$0	\$0	\$0	\$0	\$0
Proposition 1B - CalOES	\$0	\$0	\$0	\$0	\$0	\$0
Non-transportation	\$0	\$0	\$0	\$0	\$0	\$0
Other Funds (Cap and Trade-LCTOP)	\$173,992	\$81,494	\$81,000	\$81,000	\$81,000	\$81,000
SACOG Discretionary-CMAQ, FTA 5339	\$2,100,000	\$468,000	\$0	\$1,280,000	\$1,280,000	\$1,280,000
Total Revenue	\$10,592,899	\$8,872,593	\$8,529,660	\$10,150,641	\$10,004,981	\$10,752,134
Expense Category						
FR Operating Expenses	\$7,377,119	\$6,807,022	\$7,019,753	\$7,317,924	\$7,587,347	\$7,866,467
Total City Overhead Cost*	\$835,304	\$852,010	\$869,050	\$886,431	\$904,160	\$922,243
Subtotal, Operating	\$8,212,423	\$7,659,032	\$7,888,803	\$8,204,355	\$8,491,507	\$8,788,710
FR Capital Expenses	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000
Subtotal, Capital	\$2,372,077	\$585,000	\$0	\$2,100,000	\$1,600,000	\$2,600,000
Total FR Capital & Operating Expenses	\$10,584,500	\$8,244,032	\$7,888,803	\$10,304,355	\$10,091,507	\$11,388,710
Annual Surplus / Deficit	\$8,398	\$628,561	\$640,857	-\$153,714	-\$86,527	-\$636,576

In addition to the previously discussed common assumptions for annual LTF, STA, LCTOP, SACOG Discretionary – CMAQ, FTA 5339, and FTA Section 5309 funding sources, the COA's 10% reduction scenario assumes a 0% annual growth in FTA Section 5307 funds from the estimated FY 2018 formula allocation amount in FYs 2019 and 2020. However an increase in FTA Section 5307 funding is assumed in FY 2021 and 2022. This growth rate is assumed due mainly to the potential impact that lower operating costs and ridership has on the formula distribution of the federal funds to the City.

Similar to the base scenario, a General Fund contribution to cover the City's overhead costs is not assumed in FYs 2018 – 2022. However, as indicated in Exhibit 6-11, this 10% reduction scenario results in an overall net surplus of revenues to expenses for FYs 2018 – 2022, in the amount of \$392,601. This is the only COA service scenario that anticipates an overall surplus when compared to the base and 7.6% reduction scenarios. However, given the greater impact of this reduction to potential ridership, staff believes that this scenario is not the most feasible approach to implementing the COA's proposed services, and it has been prepared solely to identify a potential service option that requires no General Funds within the five year plan.

Appendices

Appendix A: Community Survey Results

Appendix B: Workshop Presentation Material

Appendix C: Peer Review

Appendix D: Detailed Local and Commuter Route Analysis

Appendix A: Community Survey Results



TECHNICAL MEMO

Elk Grove Transit Survey Results



Prepared for the City of Elk Grove
by IBI Group

November 13, 2015

Contents

1	Introduction	1
1.1	Overview.....	1
1.2	Report Objective.....	1
2	Survey Methodology	1
3	Survey Results	2
Q1.	Resident of Elk Grove?.....	2
Q.2	Transportation Mode Choice.....	3
Q2 (a).	Quality of Transit Service.....	5
Q2 (b).	Reasons for Not Using e-tran.....	6
Q.3	Suggested Transit Service Improvements.....	7
Q4.	Future Transit Service Usage.....	8
	Demographic Data.....	8
4	Summary	10
4.1	Key Observations.....	10
	Appendix A: Transit Survey	11
	Appendix B: Transit Survey Comments	13

List of Figures

Figure 3.1:	Transportation Mode Choice and Trip Purpose.....	3
Figure 3.2:	Quality of Transit Service.....	5
Figure 3.3:	Reasons for Not Utilizing e-tran.....	6
Figure 3.4:	Suggested Transit Service Improvements.....	7
Figure 3.5:	Future Transit Service Usage.....	8
Figure 3.6:	Demographic Data.....	9

1 Introduction

1.1 Overview

In a continued effort to best meet the transportation needs of residents, visitors, and businesses in Elk Grove, the City has embarked upon a review of the city's public transit services. The review will ultimately determine how public transit may better meet the short-term and longer-term needs of the community including opportunities for transit service connections to the RT's light rail service.

As a part of the initial planning process, a community survey was conducted to better understand the transit needs of the community. The survey was intended to provide information on travel behavior, quality of service, and user demographics. Information collected from the survey will be used to develop the *Comprehensive Operational Analysis* including enhancements to existing local and commuter transit services.

1.2 Report Objective

The purpose of this report is to detail the results of a transit user community survey conducted on behalf of the City of Elk Grove. The survey was administered via SurveyMonkey accessed through a link from the city's home page. This report documents the results and key findings of the survey. Results from the survey will be reviewed as a part of the comprehensive analysis of e-tran services and serve as important input in to the development of service enhancements.

2 Survey Methodology

A community survey was conducted on behalf of the City of Elk Grove to better understand the qualitative aspects of e-tran transit service delivery and the behavioral attributes that impact mode choice. The survey also provided an opportunity for the community to express their concerns and make recommendation to improve transit services.

The survey was administered on-line via SurveyMonkey accessed through a link from the city's home page. To ensure maximum participation, surveys were made available to the community for a close to six week period beginning on Thursday, October 1st until Wednesday, November 11th, 2015. Communication of the web-based survey was made to the general public via the City of Elk Grove's website as well as electronic newsletters.

The community survey consisted of seven questions targeted to solicit feedback from community members on their preferred transportation mode choice, typical trip destinations by mode, opinions on the quality of transit service provided by e-tran, recommendations on potential improvements to transit service, and individual demographic data.

The SurveyMonkey surveying technique providing for a statically valid methodology given that:

1. **Public & anonymous** - It is important that the survey remain in the public domain (rather than a preselected survey population that could have been assigned a survey access "key") and permit anonymous responses.

And we recognize that IP addresses can be traced to a computer but not a person. People who share a computer share an IP address. Additionally, some IP addresses are tied to proxy servers, which means multiple computers can share the same IP address. An organization may have a

single computer that is used to route Internet connections for all of the computers in that organization's computer network. If we were to see multiple responses for the survey with the same IP address, it may be that a single person is responding to your survey multiple times, or it may be that multiple people in an organization are accessing the survey from within that organization's computer network. We would not want to discount either.

2. **Confidence coefficient** - Our survey research methodologies include an analysis considering a confidence level or confidence coefficient. Simply put, say +/- .05 (or 5%) we are 99% confident that the true value of a parameter (survey response) is in our confidence interval. A confidence level accounts for irregularities in survey responses. The desired level of confidence is set by the researcher (not determined by data).

The literature is replete addressing survey methodology and scrutiny including survey bias and individuals completing multiple times and potentially skewing results and the use of confidence levels to address.

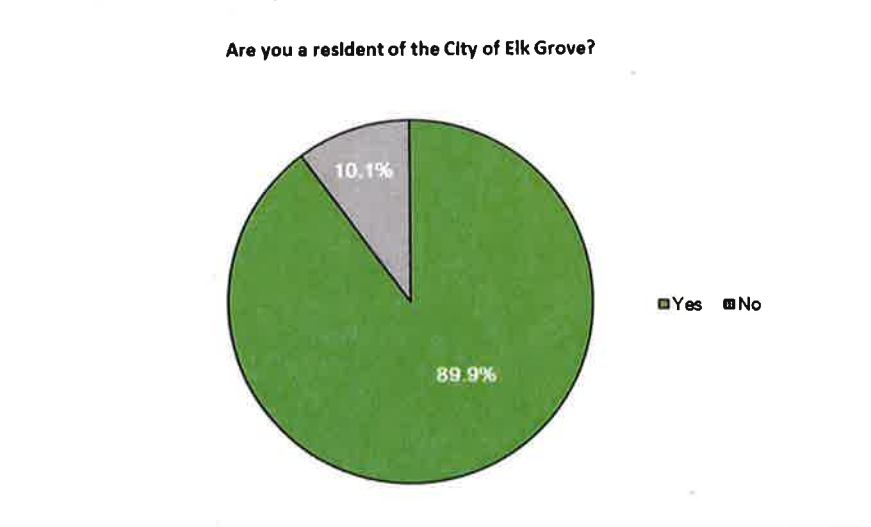
3. **Other research methodologies** – As noted above, the use of confidence intervals not only will provide effective survey data but the order of magnitude will be further validated by other outreach and research methodologies as part of the COA outreach/consultation work plan. Intercept surveys will ensure single/unique responses and public meetings will enable direct dialogue addressing concerns and acceptance of improvement strategies.

3 Survey Results

Four hundred responses were collected during the 42-day survey window ending on Wednesday, November 11th, 2015. Although 400 responses were collected from the survey, it should be noted that not all participants answered every survey question. Questions regarding demographic data such as household income and age of the survey participant were the most commonly skipped survey questions. The following sections detail the results of the survey.

Q1. Resident of Elk Grove?

Close to 90% of survey respondents are residents of the City of Elk Grove.



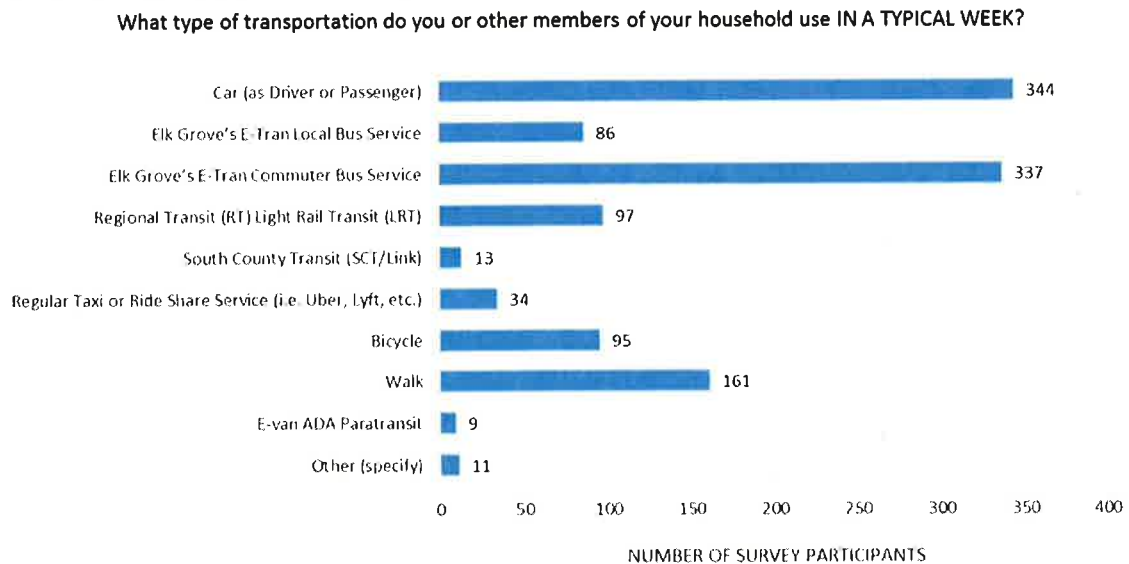
Q.2 Transportation Mode Choice

To better understand the travel behavior of the community, the community survey asked participants to identify which transportation mode they or members of their household utilize in a typical week and for what purpose. The transportation mode choices included: car (as a driver or passenger), e-tran local service, e-tran commuter service, RT's LRT, SCT/Link, taxi or ride share service (i.e. Uber, Lyft, etc.), bicycle, walking, e-van ADA paratransit, or other. Additionally, trip purpose choice options included: work, social/recreational, shopping, doctor/medical, school/education, and other. Survey participants could select more than one mode and more than one trip purpose for this question. 400 survey participants answered this question.

The results of the survey revealed that automobiles were the most frequently used mode of transportation in a typical week (for both survey methods) with 344 of 400 survey participants, identifying this mode choice. Similarly, 337 respondents indicated they use e-tran commuter service. Close to 90% of e-tran commuter trips are for work purposes. 86 respondents indicated they use e-tran local service in a typical week. 38% of e-tran local service trips are for work purposes. 31% of e-tran local service trips are for social, recreational or shopping trips.

Figure 3.1 illustrates the results of the survey question.

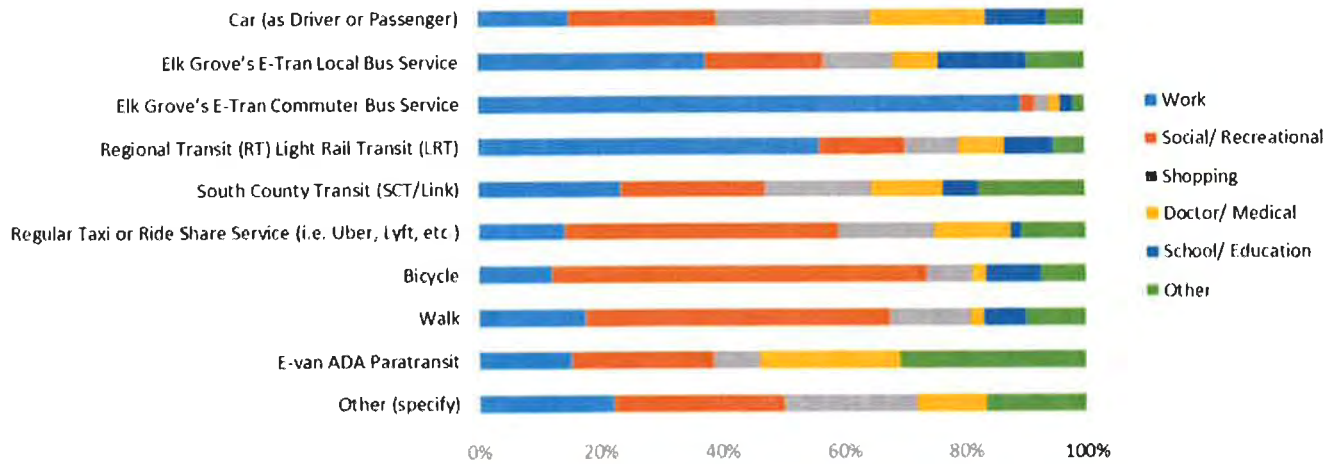
Figure 3.1: Transportation Mode Choice and Trip Purpose



What type of transportation do you or other members of your household use IN A TYPICAL WEEK and for what purpose? Please check ALL that apply.

	Work	Social/ recreational	Shopping	Doctor/ Medical	School/ Education	Other
Car (as Driver or Passenger)	15%	24%	25%	19%	10%	6%
Elk Grove's E-Tran Local Bus Service	38%	19%	12%	7%	15%	10%
Elk Grove's E-Tran Commuter Bus Service	89%	2%	2%	2%	2%	2%
Regional Transit (RT) Light Rail Transit (LRT)	56%	14%	9%	7%	8%	5%
South County Transit (SCT/Link)	24%	24%	18%	12%	6%	18%
Regular Taxi or Ride Share Service (i.e. Uber, Lyft, etc.)	14%	45%	16%	13%	2%	11%
Bicycle	12%	62%	8%	2%	9%	8%
Walk	18%	50%	14%	2%	7%	10%
E-van ADA Paratransit	15%	23%	8%	23%	0%	31%
Other (specify)	22%	28%	22%	11%	0%	17%

What type of transportation do you or other members of your household use IN A TYPICAL WEEK and for what purpose? Please check ALL that apply.



Q2 (a). Quality of Transit Service

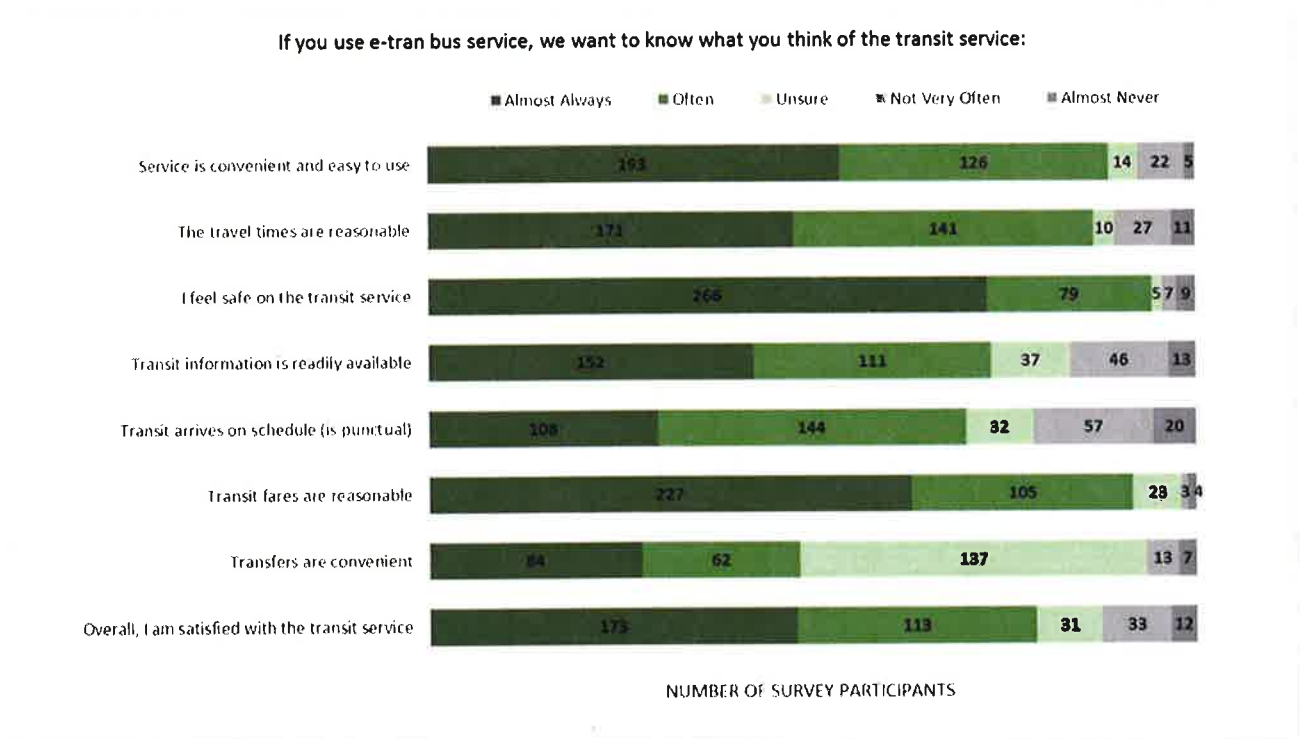
Understanding the qualitative aspects of e-tran service delivery is important in the evaluation of current transit performance. As a part of the process, the survey asked participants to provide feedback on various qualitative factors including:

- Convenience of service
- Transit travel time
- Perceived safety on transit and waiting for transit
- Available transit information
- On-time performance
- Transit fares
- Overall satisfaction of transit service

The results of the survey revealed that e-tran customers were generally satisfied with the overall quality of services. More specifically, the survey results revealed that customers were the most satisfied with safety and transit fares. The area of least satisfaction is that of the convenience of transfers.

Figure 3.2 illustrates the results of the survey regarding the quality of e-tran services.

Figure 3.2: Quality of Transit Service



Q2 (b). Reasons for Not Using e-tran

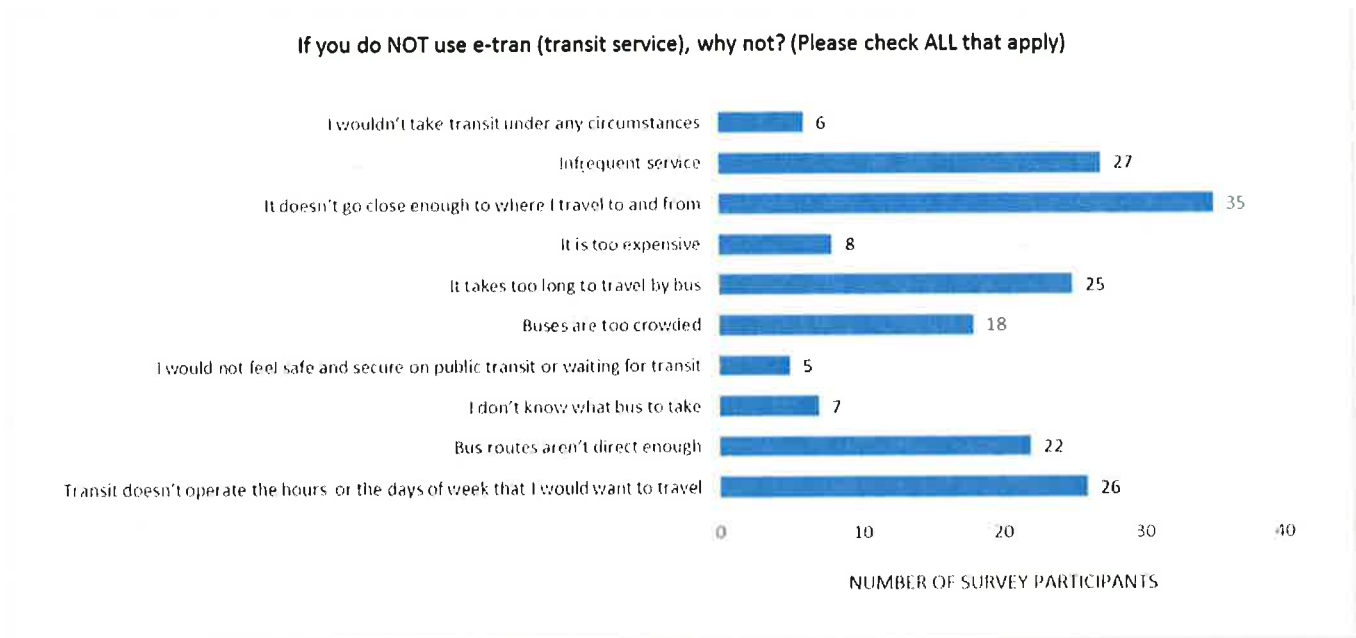
The survey also solicited feedback from participants that did not utilize e-tran services. A list of reasons why an individual chose not to use e-tran was given and participants were asked to select all that applied. The list included options such as a dislike for transit, infrequent service, doesn't go close enough to where travel to and from, too expensive, takes too long, buses are too crowded, do not feel safe, don't know what bus to take, bus routes aren't direct enough, transit doesn't operate the hours of the day or days of the week that want of travel, or other.

It is important to note that only 72 respondents answered this question (328 skipped this question).

Results of the survey revealed that of the given choices, the most common reason why survey respondents did not use e-tran services was because of the buses do not go close enough to where the want to travel to and from. Infrequent service and a feeling that it takes too long where also frequently mentioned.

Figure 3.3 illustrates the results of the survey regarding why survey participants do not use e-tran.

Figure 3.3: Reasons for Not Utilizing e-tran



Q.3 Suggested Transit Service Improvements

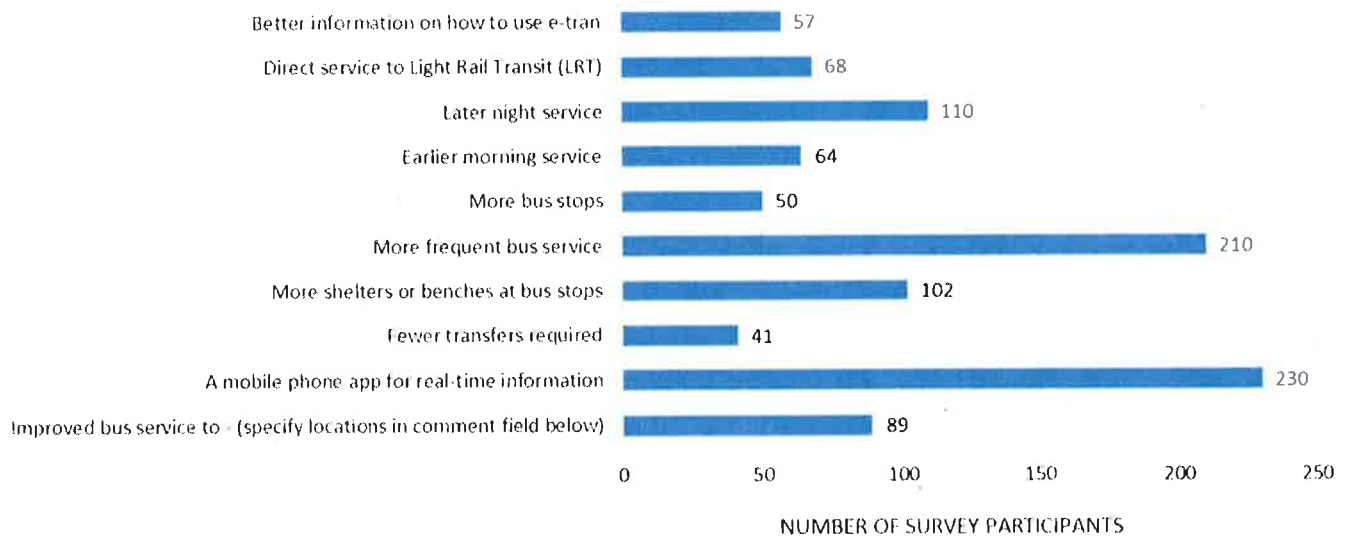
The community survey provided an opportunity for respondents to make their own recommendations on how e-tran could improve its services. The survey provided a list of improvements that participants could choose from, such as improvements in the the information on how to use e-tran, direct service to LRT, later night service, etc. Additionally, the survey also allowed participants to make their own recommendations for improving the transit service.

Results of the survey revealed that the most desired transit service improvement was a mobile app for real-time information followed by a desire for more frequent bus service. Third was the desire for later night service.

Figure 3.4 illustrates the survey results for suggested transit service improvements.

Figure 3.4: Suggested Transit Service Improvements

The types of e-tran service improvements that I would like to see: (Please check ALL that apply)



The types of e-tran service improvements that I would like to see: (Please check ALL that apply)

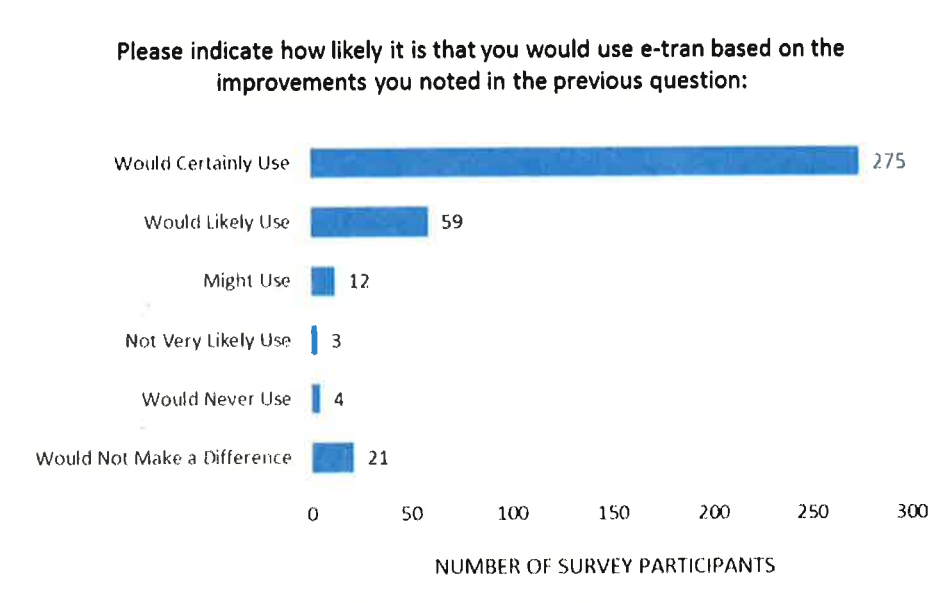
Answer Options	Response Percent	Response Count
Better information on how to use e-tran	15.6%	57
Direct service to Light Rail Transit (LRT)	18.6%	68
Later night service	30.1%	110
Earlier morning service	17.5%	64
More bus stops	13.7%	50
More frequent bus service	57.4%	210
More shelters or benches at bus stops	27.9%	102
Fewer transfers required	11.2%	41
A mobile phone app for real-time	62.8%	230
Improved bus service to - (specify	24.3%	89
Other/Comments (please specify)		155
<i>answered question</i>		366
<i>skipped question</i>		34

Q4. Future Transit Service Usage

In addition soliciting feedback on transit service improvements, survey participants were also asked how likely they would utilize e-tran if the suggested improvements were implemented. This survey question was asked to gage the likelihood of ridership increase with the aforementioned transit service improvements. Results of the survey indicated that most participants (74%) would certainly use e-tran if the suggested improvements were implemented.

Figure 3.5 illustrates the likelihood of ridership increase if the suggested transit improvements were implemented.

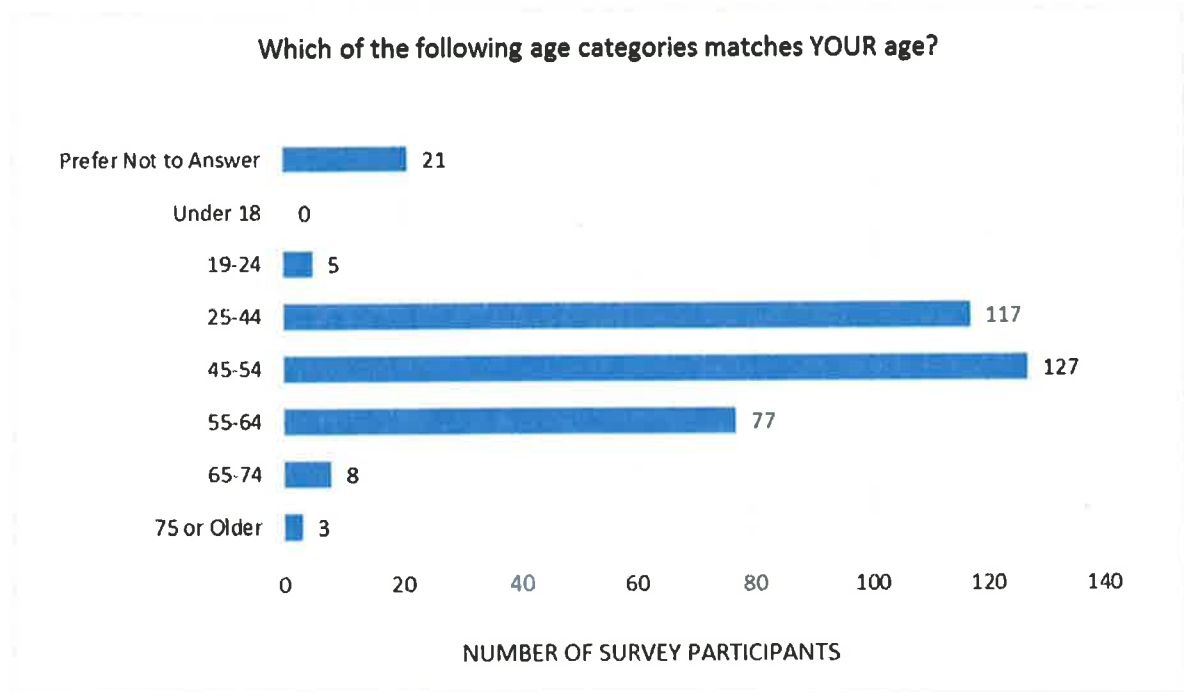
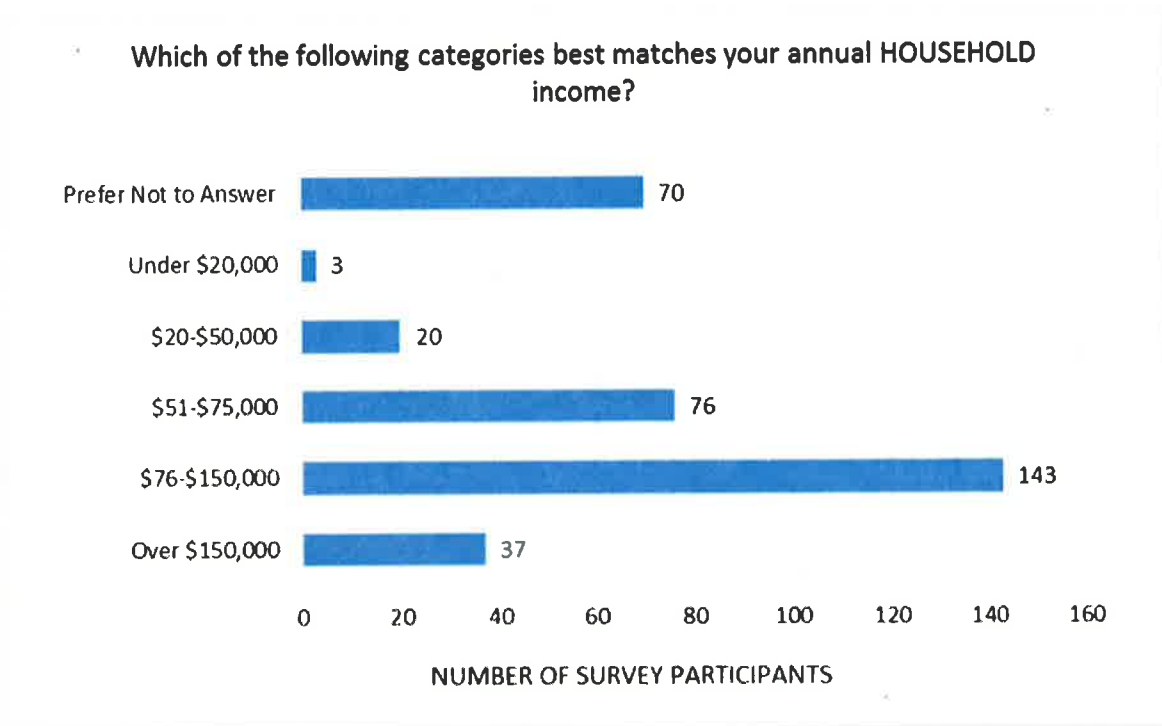
Figure 3.5: Future Transit Service Usage



Demographic Data

To better understand the results of the community survey, the survey solicited demographic data from participants. The survey results indicated that on average, a survey participant lived in a household of 3 people and had 2 cars or SUVs in the household. Additionally, most survey participants reported an average household income of \$76,000-\$150,000, and were between the ages of 25 to 54. Demographic results of the survey are illustrated in Figure 3.6 below.

Figure 3.6: Demographic Data



4 Summary

As a part of developing the Comprehensive Operational Analysis, residents of the City of Elk Grove were asked to participate in a community survey to determine the local needs for improved transit services. The results from this survey provide the City with an initial assessment of local transit needs, which will be developed further through future interactive community meetings scheduled to be held throughout the course of this study. The following section describe the key observations from the survey results.

4.1 Key Observations

Survey participants were generally satisfied with the quality of e-tran services. Most respondents that the fares were reasonable and generally felt safe on the buses. Despite overall satisfaction with the quality of service, respondents did identify a number of areas for improvement. The following are some of the key observations from survey results including the comments:

- The majority of respondents are regular Commuter Service customers and use for work purposes. Conversely, 60% of Local Service customers use e-tran for non-work purposes.
- The most common reason why survey respondents did not use e-tran services was because of the buses do not go close enough to where they want to travel to and from. Infrequent service and a feeling that it takes too long were also frequently mentioned.
- Results of the survey revealed that the most desired transit service improvement was a mobile app for real-time information followed by a desire for more frequent bus service. Third was the desire for later night service.
- Overwhelmingly, the majority of comments dealt with:
 - An apprehension over using LRT (citing safety and security concerns as well as increasing commute times), concerns of the prospect of eliminating e-tran Commuter Service (indicating they would rather drive than use LRT); and
 - Quality of e-tran service deteriorating as a result of missed runs and accusations of this being intentional to encourage the use of LRT.

A list of salient comments from the survey are presented in Appendix B.

Appendix A: Transit Survey



Elk Grove Transit Survey

We Need Your Input!



Please return your completed survey by November 13, 2015 to the box or mail to City of Elk Grove, Transit Dept., 8401 Laguna Palms Way, Elk Grove, CA 95758.

The City of Elk Grove's e-tran provides both local and commuter public transit service. The City is conducting a Comprehensive Transit Analysis that will be used to define the future of transit in our community and this survey is one way we will seek the public's input. We want to know your thoughts on current transit services and areas for improvement that may be important to you and our community.

What you have to say is important in helping to make improvements and plan for the future.
Thank you for your participation.

IN THIS SECTION WE WANT TO KNOW ABOUT YOUR USE OF TRANSIT AND YOUR TRAVEL PATTERNS.

1. Are you a resident of the City of Elk Grove? Yes No

2. What type of transportation do you or other members of your household use in a typical week and for what purpose? Please check all that apply.

	Work	Social / Recreational	Shopping	Doctor / Medical	School/ Education	Other
a. Car (as Driver or Passenger)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Elk Grove's e-tran <u>local</u> bus service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Elk Grove's e-tran <u>commuter</u> bus service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Regional Transit (RT) Light Rail Transit (LRT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. South County Transit (SCT/Link)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Regular Taxi or Ride Share Service (i.e. Uber, Lyft, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Bicycle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Walk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. E-van ADA Paratransit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. a) If you use e-tran bus service, we want to know what you think of the transit service: (if you do not use e-tran bus service, please go to Question 2 b).

	Almost always	Often	Unsure	Not very often	Almost never
a. Service is convenient and easy to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. The travel times are reasonable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. I feel safe on the transit service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Transit information is readily available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Transit arrives on schedule (is punctual)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Transit fares are reasonable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Transfers are convenient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Overall, I am satisfied with the transit service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



2. b) If you do NOT use e-tran (transit service), why not? (Please check all that apply)

- | | | |
|---|--|--|
| <input type="checkbox"/> I wouldn't take transit under any circumstances | <input type="checkbox"/> Buses are too crowded | <input type="checkbox"/> Transit doesn't operate the hours of the day or the days of week that I would want to travel. Specify _____ |
| <input type="checkbox"/> Infrequent service | <input type="checkbox"/> I would not feel safe and secure on public transit or waiting for transit | <input type="checkbox"/> Other (please state) _____ |
| <input type="checkbox"/> It doesn't go close enough to where I travel to and from | <input type="checkbox"/> I don't know what bus to take | |
| <input type="checkbox"/> It is too expensive | <input type="checkbox"/> Bus routes aren't direct enough | |
| <input type="checkbox"/> It takes too long to travel by bus | | |

3. The types of e-tran service improvements that I would like to see: (Please check all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Better information on how to use e-tran | <input type="checkbox"/> More shelters or benches at bus stops |
| <input type="checkbox"/> Direct service to Light Rail Transit (LRT) | <input type="checkbox"/> Fewer transfers required |
| <input type="checkbox"/> Later night service | <input type="checkbox"/> A mobile phone app for real-time information |
| <input type="checkbox"/> Earlier morning service | <input type="checkbox"/> Improved bus service to - specify location(s) _____ |
| <input type="checkbox"/> More bus stops | <input type="checkbox"/> Other (please state) _____ |
| <input type="checkbox"/> More frequent bus service | |

4. Please indicate (✓) how likely it is that you would use e-tran based on the improvements you noted in Question 3 - above:

Based on the improvements noted in Q.3 - above	Would Certainly Use	Would Likely Use	Might Use	Not Very Likely Use	Would Never Use	Would Not Make a Difference
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IN THIS SECTION WE WANT TO KNOW ABOUT YOU AND YOUR HOUSEHOLD. [OPTIONAL]

5. a) How many people live in your household? (b) How many cars or SUVs?

6. Which of the following categories best matches your annual household income?

- Prefer not to answer Under \$20,000 \$20-\$50,000 \$51-\$75,000 \$76-\$150,000 over \$150,000

7. Which of the following age categories matches your age?

- Prefer not to answer Under 18 19-24 25-44 45-54 55-64 65-74 75 or over

COMMENTS

Appendix B: Transit Survey Comments

Elk Grove Transit Survey Other/Comments/Please Specify Responses

The following provides a sampling of (verbatim) comments provided by respondents.

I do not use E-Tran Commuter bus service all the time, but do need it and have found it very convenient and punctual. Would like it to start a bit earlier though.

If Etran provided better service routes then it would be a better option. At this time the etran routes are not convenient. Don't even have a route that drives across town on Elk Grove Blvd.

Take car to new light rail station. ETran does not have a bus that will supporter my travel or times

Suggestion: Recommending to the City of Elk Grove to continue the express bus service for Elk Grove residents working in downtown Sacramento. I don't drive to work because parking is very expensive in downtown plus gas. Monthly pass is the best.

To and From work I always use E-tran but please don't cancel the route. need more route like it was before every 15 mins bus 60 was running.

1. Customer service should be stressed. Some driver are very good at it, but some look, sound and have the body language that says they are just doing a job. 2. If the air conditioning is working, it is usually on so high the riders have jackets on. In winter, the bus is usually so warm that on buses with windows that open, riders open them. 3. The driver usually has the E-tran dispatch radio on and most time the chatter is so loud that it is disturbing, and since the dispatcher and other drivers who are communicating are not expecting their conversations to be broadcast, the conversations, while not inappropriate, are not always professional, well versed, articulate or polished. 4. Instruct drivers to remain professional and ot ride their horn no matter how irritated they are with other divers who may cut them off or do some other poor move. I have seen drivers hit the horn for an extended time, not to warn the other driver, but as retaliation after the fact.

There is no bus service to Sacramento downtown after 8 am, after I drop off kids at school

Midday times available for those working half day or have appointments in town. More direct routes with less stops so commute isn't to long. Driving to light rail from East Elk Grove is faster and you leave later (after 7). Bus would require you being at bus stop before 7 to get downtown by 8.

On 52 & 53, the bypass through Laguna town hall is extremely time consuming. No service during business hours (between morning and afternoon commute hours) is a deal breaker for me. Need a route from Laguna town hall to Franklin light rail that runs at a frequency of 30 minutes or less from 6 am to 8 pm (preferably every 15 minutes during commute hours).

Bus 157 doesn't stop at Franklin High Rd/Bruceville Rd during after school hours.

I appreciate having the commuter routes to downtown Sacramento and have been riding for over 17 years so please retain the commuter routes.

Saturday, Sunday, & Holidays service around elk grove isn't convenient

I take the E-Tran express bus roundtrip to work and I absolutely enjoy traveling to work on the bus as it is very relaxing.

Service needs to be more frequent, operate seven days a week, and need to develop a route along Franklin and Laguna between Franklin Station and Apple Computer making a loop into the Laguna Town Hall Transit Center.

Benches are not comfortable or covered, not enough shade or seating at consumes station.

Bus routes are very circuitous and take very long time and most of the time don't get you to where you want to go.

The commuter buses in the morning are always late, which means I'm late for work. I would rather drive to South Sac & ride RT.

Buses always seem to run late. This is unacceptable. Once in a while is understandable, but the problems seem to occur daily per the emails I receive.

It would be nice to get information on what bus to take for certain locations.

I love to ride the express buses to downtown Sacramento as it is very convenient, faster than when I drive by myself, comfortable, safer, stress free, have peace of mind, and safer/cleaner/ better/cheaper/faster than light rail. If I take the light rail I also have to pay for parking at CRC everyday.

I need to catch the 0543 train out of CRC and etran is not running that early...

Infrequent service makes it impractical for local commuting and makes for long or impossible trips between the hours it is available. The local service is expensive for short trips. Also no cover at many stops. I prefer a long walk when possible to riding the bus.

No direct service from Stonelake to CRC. If the line 157 went to CRC before traveling to Bilby and Bruceville, you would have tons of students traveling. Believe it!

Better bus service and a park and ride spot for riders living in the eastern part of Calvine towards Vineyard (one of the fastest growing areas in the Elk Grove/Sac County area.

I take the #59 or #60. Used to be once in a while the #59 broke down or did not show up. Now one of the buses is a no show daily and the #60 is usually very overcrowded.

Please instruct the bus drivers to demonstrate professionalism at all times. Having loud conversations, playing music on their personal radio for all to endure, and showing up late destroys the quality of service. A female bus driver on morning Route #53 exhibits these shortcomings DAILY.

Specifically, bus 53 is the ONLY one that does not have any bus leaving after 6:30 AM. Why? Many of us work on N street, downtown, and this is our ONLY option. Too many 52 and 60, and 66 ...etc. Why a difference in 53?

Coordinate bus times so that transfers from light rail, at Consumes College, are easy. Provide more bus so not having to wait 1 hour for next bus.

Improved bus service to Franklin light rail. Also need better and more frequent service along Laguna/Bond, Elk Grove Blvd, Bruceville, and Franklin. Commuter routes need to be streamlined to reduce travel time to the freeways.

Better timing. Drivers show up at the stops 5-10 minutes early and do not wait.

Increase service to newer neighborhoods near Franklin and Bilby, including extending Commuter service South along Franklin from Elk Grove Blvd and east on Bilby or Whitelock to Franklin HS in the pm and opposite direction in the am. Add local service along Franklin all the way to Franklin LRT, not always to CRC LRT.

Bus route resumes on the 7th street in downtown Sacramento, but what's the reason for stopping service for the bus stop (route 58 and 52) at 7th and K street? It is very inconvenient. For stopping services at a bus stop, at least provide information on the nearest alternative bus stop so commuters can be prepared and make plans ahead.

Improve service to downtown. Bus needs to run on time in the morning. Some days it would be so pack because an earlier bus didn't run and and posses a safety issue should the bus suddenly stops

Routes 70 and 71 have weird schedules. If you work an 8 hour day, you have to take one in the morning and the other in the evening. And they both have different routes, one on Laguna Blvd, the other on Elk Grove Blvd. I get on Bus 71 at 6:57 AM at Old Creek on Laguna and Bus 70 at 4:40 PM at the Franchise Tax Board, disembarking at Foulkes Ranch at 5:45 PM and biking back up to Old Creek and Laguna.

Frequent daily shuttle service from Old Town Elk Grove to Harbour Point Dr.

I commute by eTran or car, depending on my schedule. The biggest impediment to selection of eTran on a daily basis is whether I can catch a bus that will get me to work when I need to be there and/or if there is an available bus to get me home at a time other than my normal departure time. For commute hours, I urge you to expand service so that buses are available every 15 mins rather than the periodic 30 min waits. Also, drivers need to be sure to keep on schedule. Arriving late is inconvenient but departing early is unacceptable, particularly if it is a 30 min wait between buses or the last one leaving downtown. Beyond that, not sure why I'm seeing so many late buses in the late afternoon - I don't rely on this one for commute but if I did, I probably would stop taking the bus based on a lack of reliability.

I am appreciative that the service exists. Small changes would make the experience so much better.

I work downtown Sacto. With the new Arena going up the public parking are going up! I now pay \$180. per month and the rates will continue to go up. If there was additional times and better parking security I could use the EG Transit!

I have rode the commuter buses from Elk Grove to Downtown Sacramento for 15 years. I walk to the bus stop from my house about 0.4 of mile. The system has been a great resource to me and the other commuter buses. By the time that the 53 or 52 get on the freeway they are always full. With the new connection to light rail the 157 or 159 will give the commuters the option to come home during the middle of the day.

Please instruct the bus drivers to demonstrate professionalism at all times. Having loud conversations, playing music on their personal radio for all to endure, and showing up late destroys the quality of service. A female bus driver on morning Route #53 exhibits these shortcomings DAILY. Again, the bus drivers need to be on time, professional, and courteous.

I am a daily commuter on the 52/53 route, to & from work, I live in the West Laguna Area closest to I-5, these transit services are very convenient, safe, clean, & reasonably priced. I'm asking for you not to eliminate these commuter buses; in fact we are now noticing a decline in some of your daily services. (no shadows, some schedules eliminated, buses running late) with these actions we are now super crowded in the buses, at times creating an unsafe commute. PLEASE BRING BACK THE SHADOWS & THE REGULAR SCHEDULES FOR THE COMMUTERS!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Please DO NOT even contemplate about changing the e-tran schedules with the aim of increasing lightrail ridership. They serve different purposes. E-Tran serves the needs of state-workers very well. Things can improve, for sure, but eliminating its route to downtown is not a good idea at all. Thank you.

I heard E-tran wants to stop commuter service from Elk Grove to Downtown. I hope this does not happen. Currently, I use E-tran to get to work everyday on bus 52. I don't want this to change at all.

I would love to take the light rail to work in downtown, but takes too long!!

As a regular downtown commuter it would be nice to have a late night bus for times when I might want to have dinner downtown or attend an afterwork event instead of having to drive in.

Please do not take away e-tran commuter buses. Having the e-tran buses available gives me an alternative from driving to work in downtown Sacramento. The bus stop and times are convenient. If give the choice to take either light rail or drive to work, I would drive to work.

I would to have a etran bus service to UCDCM. I take light rail, but it's way too long and I have to transfer.

I would NEVER ride eTran if I were forced to transfer to light rail. Light Rail is more expensive, unsafe, dirty, crowded and unreliable. I prefer to use the eTran bus service for my commute because it is used by professionals that are polite, quiet, respectful and non-aggressive. I would drive my own vehicle to work instead of using Light Rail as a connection.

The city needs to remember that public transit is a service to the public. For that reason, transit improvements must be made no matter the cost in order to meet its obligations to the public. Transit must be improved so that it can be a viable mobility option. Transit officials need to stop treating public transport as a commuter service and a charity to the poor and disabled.

Improvements to security from Unruly passengers.

Commuter buses 70 & 71 are very good for Elk Grove residents, please keep these 2 buses going.

E-Tran commuter buses provide safe and convenient transportation that I and many Elk Grove residents enjoy on a daily basis. Light-rail ought to be a supplement, instead of a substitute, to the commuter bus service. I urge the City to continue to improve commuter bus service for the needs for Elk Grove residents.

Transfers on local buses don't work. The timing of when the buses arrive at transfer stops need to be closer together. Drivers need to be aware of transfer scenarios and be more service friendly rather than worrying about being off schedule by a couple of minutes.

Many of the route 60 and 59 buses have been cancelled lately and the notifications don't go out soon enough. Many people ride these routes and our buses are overcrowded and pose a safety issue. Please stop cancelling the 60 and 59 buses!! So many people use them and it is incredibly unsafe to have 30 people packed like sardines in the aisle on the bus ride home!

Add more service from the neighborhoods to Light Rail.

I like e-tran. It's close to home, clean and I normally know the people I am riding with in the morning and evening. But if you miss a bus, it takes a while for another one or with the express, once I am downtown, I am stuck. I have been taking light-rail for the past month, it's closer to my home, I can walk, and it runs every 15 min., but it's dirty and there are all kinds of people on the train. If you want to increase ridership, IT NEEDS TO BE CLEANED UP!! Las Vegas can do it why can't we???

Lately, more and more attempts have been made to eliminate e-tran commuter bus service to downtown Sacramento. As an Elk Grove resident who uses e-tran bus service (bus 52 and 53) to go to work everyday, I'm definitely upset and am very disappointed if this service is discontinued. Having light rail services as another public transportation options for a growing city like Elk Grove is good, but replacing e-tran commuter bus with light rails is definitely NOT okay! Both I-5 and 99 traffics are already very congested and commuter time is getting longer every day. If e-tran commuter service to downtown is eliminated, it's guarantee many of us will be forced to drive personal vehicle because light rails simply can't replace e-tran service in these aspects: safety, cleanliness, and convenience. Let's keep e-tran commuter bus running!!!

Please replace that terrible e-Tran bus system map. It is definitely the most confusing and misleading aspect of the e-Tran information service. The current map STOPS people from using e-Tran; does not encourage them.

Again, commuter busses are needed to improve traffic, air quality and sanity away from the freeways. I think the tax payers who use those busses are worth our cities investment!

Lately, at least 1 or more of the commuter bus routes to downtown Sac is randomly cancelled on a regular basis (2/3 times a week). I get off work at 4pm & catch the 60 P3 getting me to my car around 5pm. Yesterday it was cancelled & I took the 60 P4 which got me to my car around 6pm. I could have taken the 58 Or 59 that came 5/10 mins before the 60 P4, but since those routes make more stops downtown before getting onto the freeway, it would have resulted in the same outcome. Until the townhall meetings were held to discuss the end of the commuter buses to downtown, we did not have this problem anywhere near as often as we do now. If the route schedules changed to reduce the number of routes overall, we could deal with that, but when the routes are randomly cancelled with same day notice, it is very inconvenient and not appreciated. If you are trying to get those who love the Etran service benefit for which we moved to Elk Grove to hate it, your doing a good job of that. Consistency is appreciated. If you keep the commuter service then either reduce the number of routes so we know the bus will be there when you say it will OR keep the current number of routes and show up when you're suppose to.

I love using the e-tran buses for commuter purposes. Lately however, it feels like we're being jerked around with late and/or canceled routes with notifications that are not timely. Last week the 60 P3 picked up late, and we had at least 30 people standing due to the 59 & 57 not showing up. Not a safe or comfortable situation.

Overall, I am pleased with the service Etran provides. I am able to get to work in a timely manner, the buses are clean, and there is a sense of safety on the bus. I strongly hope that Etran service remains as light rail is a much less pleasant means of transportation.

Improvement is needed for the customer service reps who answer the phones.

E-Tran buses are valuable for work commuters and especially for those people who don't have a car and rely on buses to go food shopping or other places. For this past year, the E-tran buses that I have been taking have been sporadic in their arrival and leaving times. In recent months, sometimes, the buses are unpredictable in coming and often it's packed when the buses finally come. Please do not discontinue or diminish the E-tran services without the proper research and plan to ensure that Elk Grove provides the best services for its residents. Light Rail Transit (LRT) can be helpful to travel to

downtown, but is still plagued with problems such as safety concerns and cleanliness. Making LRT accessible to Elk Grove residents doesn't mean that it is the best solution for all of us.

I can ride my bike to the bus, take a 10-15 minute bus ride (#162) to light rail, wait maybe 10 minutes for the train to get to work. BUT if I want to LR home, after getting to the CRC station I wait about 30 minutes for a bus to get there to take me back to my bus stop, then I spend over 40 minutes on that bus to get me to the stop. This isn't convenient when I have a 10 year old latch key kid waiting for me to get off work and get home. Having buses run both ways instead of one way would alleviate this problem. Walking the 5 miles is actually faster than using your bus service, not sure if that is the level of service you want to provide.

Would like more 53 and/or 66 evening routes. I can't work late or grab a bite downtown when I'm using eTran, so sometimes I have to drive instead.

E-Tran commuter service was initially great and reliable. However, since E-Tran's last public meeting, service has declined and Buses have been cancelled resulting in my arriving to work late. If I get fired from work, Elk Grove will collect no taxes from me. I believe that the City of Elk Grove is decreasing E-Tran's reliability to the downtown commuters to get them to use light rail, which saves me no time, is less safe, and when I took it, I missed my transfer bus causing my commute to be 2 hours instead of 1 hour.

RT drivers should stick to the schedule and SHOULD NOT leave earlier than what is indicated on the schedule. Have more cars especially during commute time when there are many people using the RT. Have more security in the train more often.

Express bus service to Franklin Blvd. Light Rail Station.

Wish you would try to coordinate with RT light rail schedule downtown.

Overall good service, feel safe, Drivers are wonderful.

I am extremely glad we did not lose our commuter routes to downtown. I would never take the light rail (due to safety concerns) and hope I will never have to.

Overall I like e-tran but wish they offered more routes and even on the weekend would be nice!!!

I am fine with E-tran and enjoy riding it. I would consider light rail if there was local bus service from the Franklin light rail station.

I would prefer to use public transit, but e-tran drastically pales in comparison to other local transit systems I've used; forcing me to often drive to work and other locations. Often, the bus is late on my morning commuter route and the drivers slowly mosey along the freeway. At least once a week, a bus will simply not show up; and although I'm subscribed to email alerts, the emails don't arrive until 20-30 minutes past the bus' arrival time, which renders the alerts useless. The four stop locations I frequently use are uncovered and have no shelter--making for a miserable experience in the winter. Modifications to these problems would help e-tran gain and retain customers.

I am very satisfied with service, I feel safe at stops, on the busses, and with your drivers. Busses are clean. The 52 is having trouble-not all runs are working causing overcrowding, commuters tardy to their destination, and dissatisfied customers.

Can the public view the survey results in a graphical format before a written analysis can be done by hired professionals or city officials.

Please add the promised local route 165 with service to and from Franklin Light Rail Station along Franklin Blvd. from Laguna & Harbor Point, but loop the line down Harbor Point and into Stonelake. It's a win/win deal. Believe it!

Every six months, you seem to take these surveys and then propose to cut commuter runs to downtown in lieu of going to Light Rail stations. The Light Rail is unsafe, doesn't go to our job sites, and the commute time is so long it is not viable. If you don't want to serve your citizens with commuter bus service, you are forcing us all back into individual car driving. You think the traffic is bad now - wait until we are all back in our cars. And by the way, when I did drive downtown for work, I did my shopping downtown on my way home. You can kiss my shopping dollars goodbye, Elk Grove, if you force me back into my car.

My main concerns with the commute service are that we often get notices that a bus will just not be running at all for a specific route. The text alerts, if they are sent, have been an hour or more late! When this happens, later buses are overcrowded! Afternoon buses are often late--many times due to traffic, which is understandable--but again, text alerts are not sent timely--or at all. We continue to get old buses for the commute routes and there have been numerous occasions when the buses have broken down in the downtown area and on the freeway, causing dangerous situations and long waits for replacement buses.

Lately, the e-tran Commuter bus service has been erratic, and the 60 is always late. But overall the service is excellent and essential. You should be proud that so many people use and like it.

I think E-tran is a needed service. There are many of us who are trying to reduce the number of cars on the freeway, but it is becoming extremely frustrating with almost daily bus cancelations. There is a feeling that e-tran is trying to force riders to light rail by making it inconvenient or unreliable for daily commuting.

Continue to provide express bus service to downtown even though the LRT extension is complete. Park & Ride are at no cost compared to \$1-\$2 parking at LRT stations.

Improving the email alerts and running more buses would be incredibly helpful. I ride the 60, as do many, and some in the mornings and evenings have been cancelled or are very late which makes the bus service inconvenient and more of a nuisance (especially when it makes me late to work).

Thank you. I hope you will consider not stopping the e-tran bus service to downtown.

etran is a valuable service for downtown commuters! I do not have to drive far to park and ride. If eliminated and have to take light rail, I might as well drive into work.

Appendix B: Workshop Presentation Material



COMPREHENSIVE TRANSIT ANALYSIS
Local & Commuter Service

Open House
October 29, 2015

Public Transit in Our Community

Comprehensive Transit Analysis

- To determine how public transit may better meet the short-term and longer-term needs of the community
 - Including opportunities for transit service connections to the RT's light rail service.
- An Action Plan to guide the implementation of transit service improvements over the next 5 to 10+ year period.



Analysis of Potential Service Alternatives

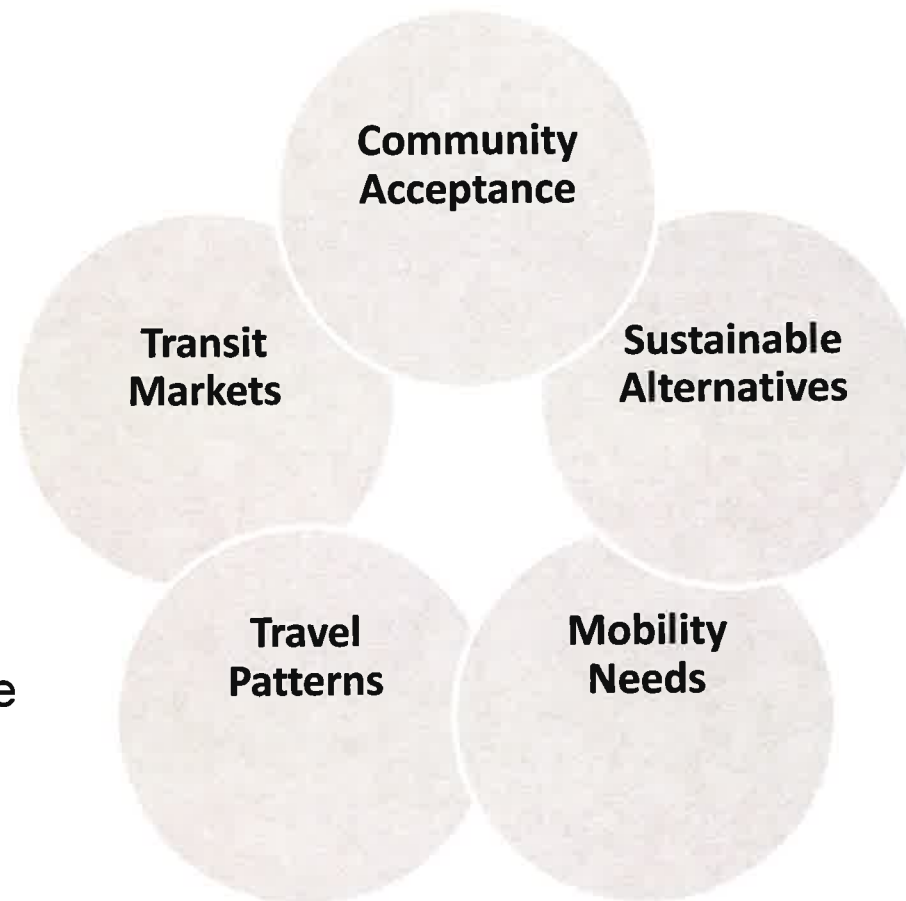
- Bus Rapid Transit (BRT)
- Transfer Hubs
- Fare Changes



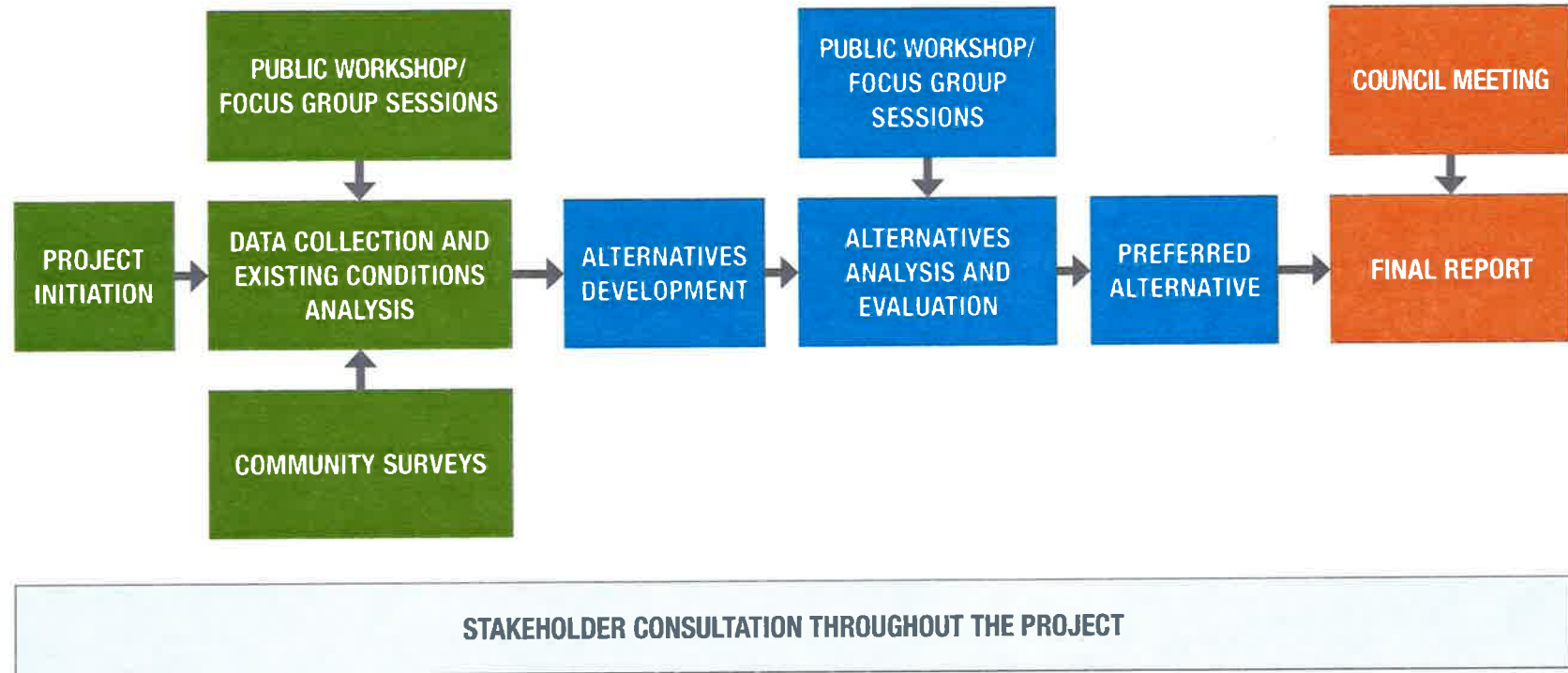
- Route Design?
- Local vs. Regional Service?
- Fare Policy & Rates?
- New premium service (BRT) or more local service?
- Direct express service to downtown or feeder service to Light Rail Transit at CRC?

Project Understanding & Approach – Key Considerations

- Problem identification – what is working and what is not?
- What are the City's unmet mobility needs?
- What are the key local and regional origin & destinations?
- What are the critical markets in the study area?
- What kind of service is justified for the study area? Future service requirements? (including Light Rail Transit connectivity)
- What does the community want?



Workflow



e-tran – Current Operations

ELK GROVE TRANSIT

- **e-tran** is Elk Grove's own bus system.
- Routes are coordinated with RT buses and light rail and South County Transit/Link (SCT/LINK) to areas outside the city.
- Main transfer points are at the Cosumnes River College Light Rail Stations and Laguna Town Hall.
- Services are funded with Transportation Development Act (TDA) and Federal Transit Administration (FTA) funds.

OPERATING PERFORMANCE

- Close to 1 million passengers/year
- \$7.5m annual operating cost

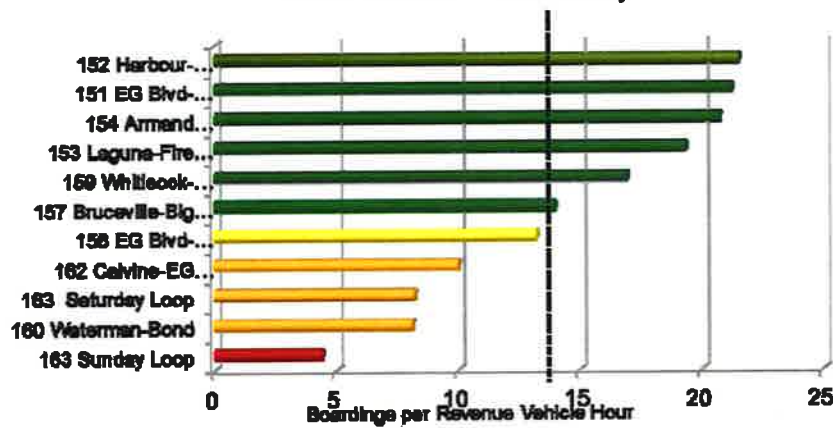
Fare Type	General Public	Senior/Disabled/Medicare/Military	Student
Cash Fare	\$2.25	\$1.10	\$1.10
Transfer	\$0.50	\$0.25	
Daily Pass	\$6.00	\$3.00	\$3.00
10-Ride Pass	\$22.50	\$11.00	\$11.00
Commuter 31-Day Pass (Monthly)	\$100.00	\$50.00	\$50.00
Local 31-Day Pass (Monthly)	\$80.00	\$40.00	\$40.00



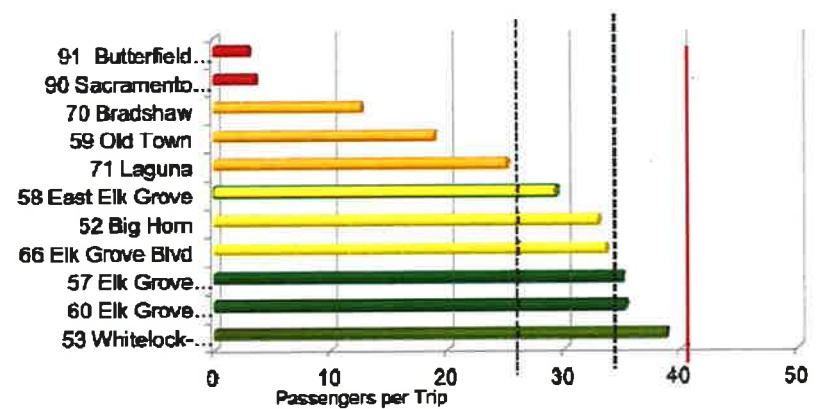
Ridership – Local & Commuter Routes



Local Route Productivity



Commuter Route Productivity



Service Improvements?

What types of *e-tran* service improvements would you like to see?

- Better information on how to use *e-tran*?
- Direct service to Light Rail Transit (LRT) – at CRC?
- Later night service?
- Earlier morning service?
- More bus stops?
- More frequent bus service? Local? Commuter?
- Premium service (Bus Rapid Transit/BRT)?
- More shelters or benches at bus stops?
- Fewer transfers required?
- A mobile phone app for real-time information?
- Improved bus service to (any specific location)?
- Other?

OPPORTUNITIES TO BEST MEET YOUR TRANSIT/MOBILITY NEEDS

WHAT ATTRIBUTES WOULD ENCOURAGE YOU TO USE TRANSIT FOR SOME OF YOUR TRIPS?

- Cost?
- Convenience?
- Travel Time?
- Flexibility?
- Other?



We Need Your Input!

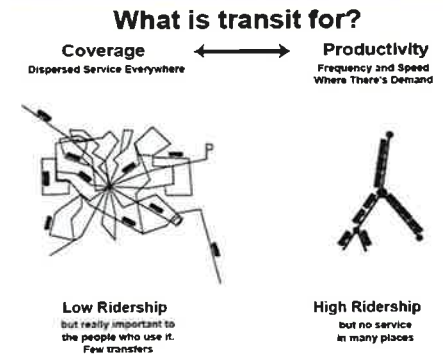
THE ROLE OF PUBLIC TRANSIT IN:

- A. Meeting the transport/mobility requirements of residents, guests and visitors and employees?
- B. Light Rail Transit (LRT) Connectivity?
- C. “Complete streets” initiatives – balancing pedestrian infrastructure with traffic and parking needs?

THOUGHTS ON THE CURRENT DELIVERY OF ELK GROVE *e-tran* PUBLIC TRANSIT SERVICES?

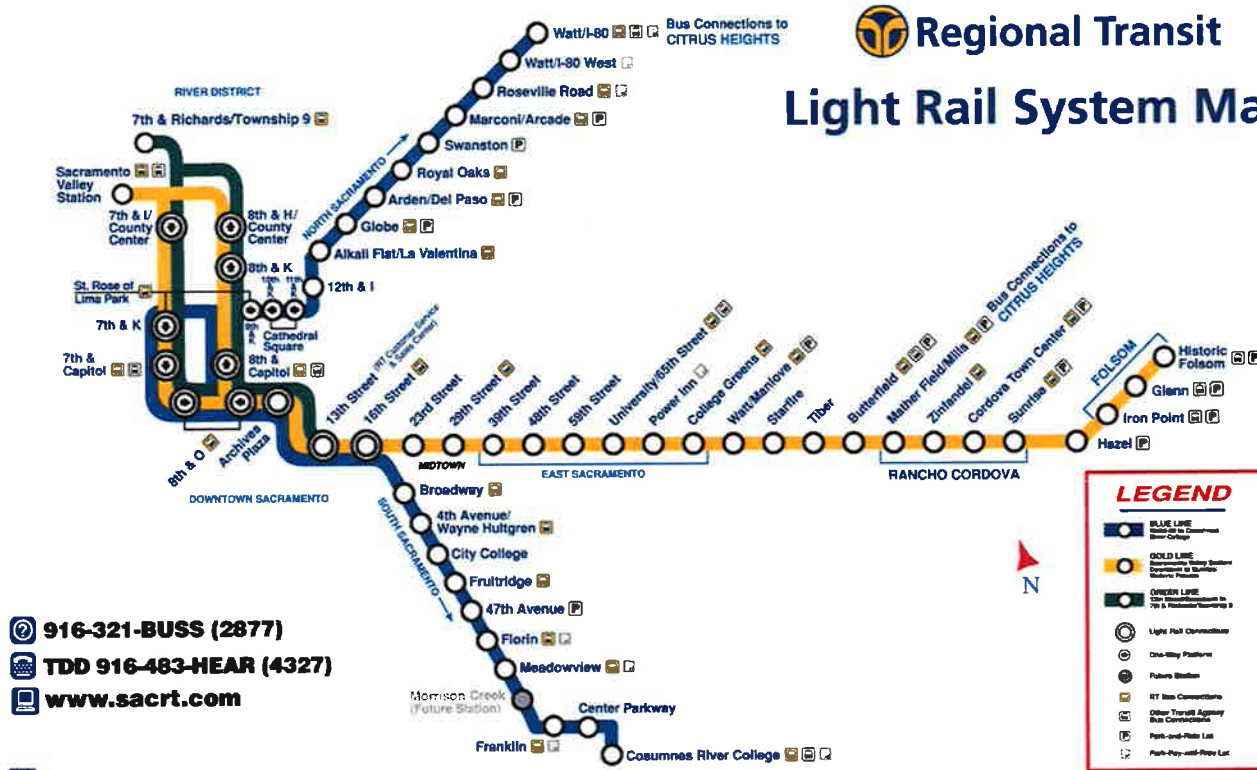
- Problem identification – what is working and what is not?
- What are the City’s unmet mobility needs?
- What are the key local and regional origin and destinations?
- What are the critical markets in the study area?
- What kind of service is justified for the study area? Future service requirements? (including LRT connectivity)

THOUGHTS AND YOUR IDEAS ON SERVICE AND PROGRAM IMPROVEMENT STRATEGIES?



Light Rail Transit

Regional Transit Light Rail System Map



📞 916-321-BUSS (2877)
 📞 TDD 916-483-HEAR (4327)
 🌐 www.sacrt.com

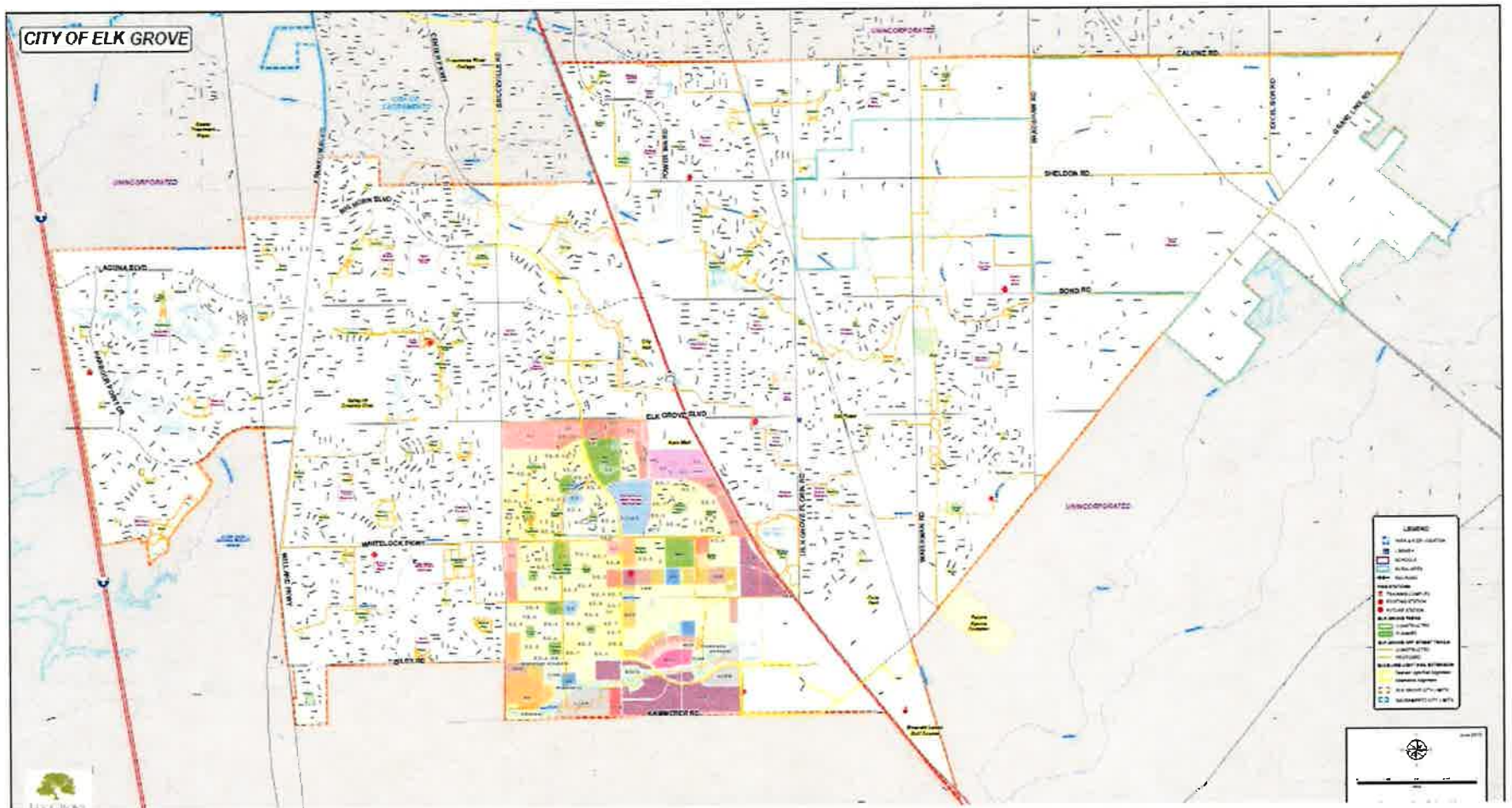
♿ All light rail stations are wheelchair accessible, except 12th & I southbound



Comprehensive Transit Analysis



City of Elk Grove – origins/destinations?





COMPREHENSIVE TRANSIT ANALYSIS
Local & Commuter Service

Workshop



August 29, 2016

Public Transit in Our Community

Comprehensive Transit Analysis

- To determine how public transit may better meet the short-term and longer-term needs of the community
 - Including opportunities for transit service connections to the Sacramento Regional Transit's light rail service.
- An Action Plan to guide the implementation of transit service improvements over the next 5 to 10+ year period.



Analysis of Potential Service Alternatives

- Bus Rapid Transit (BRT)
- Transfer Hubs
- Fare Changes

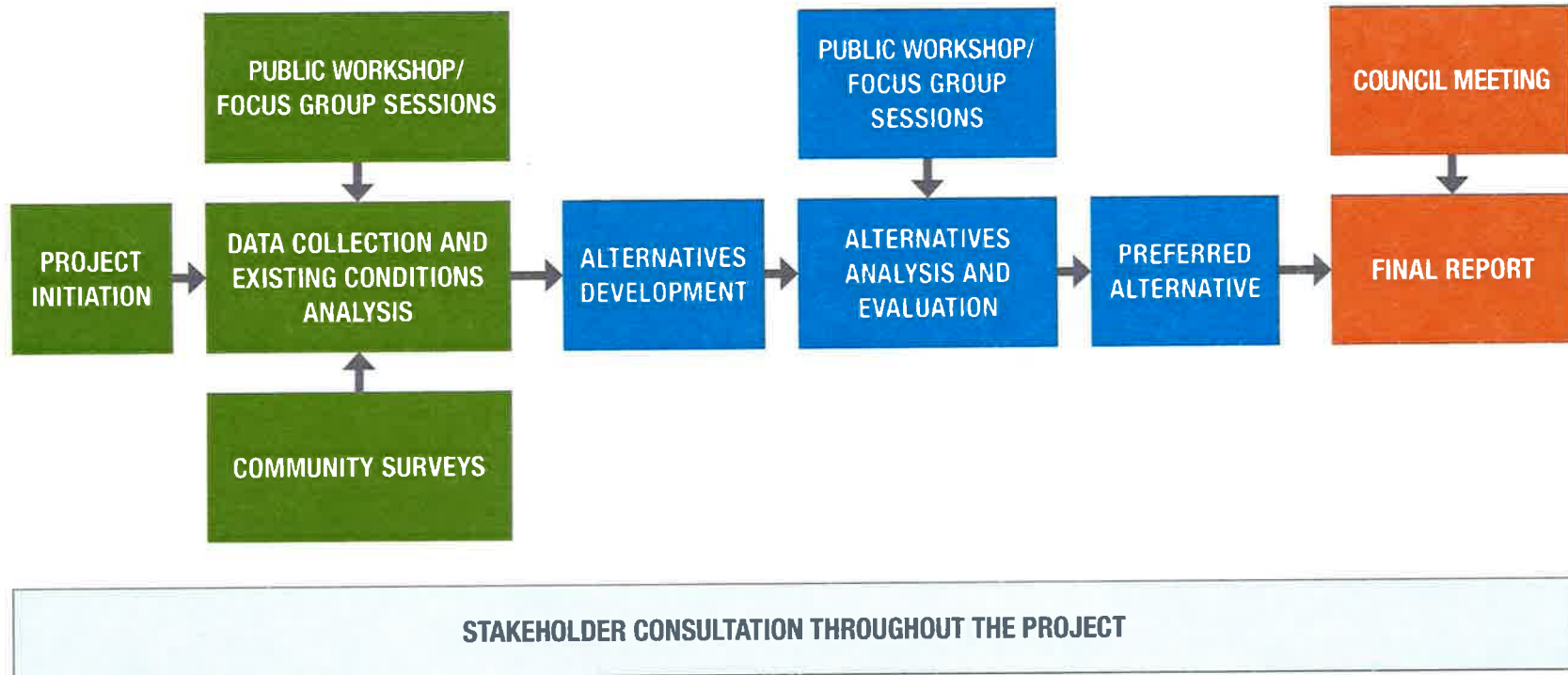


Project Understanding & Approach – Key Considerations

- Problem identification – what is working and what is not?
- What are the City's unmet mobility needs?
- What are the key local and regional origin & destinations?
- What are the critical markets in the study area?
- What kind of service is justified for the study area? Future service requirements? (Including Light Rail Transit [LRT] connectivity.)
- What does the community want?

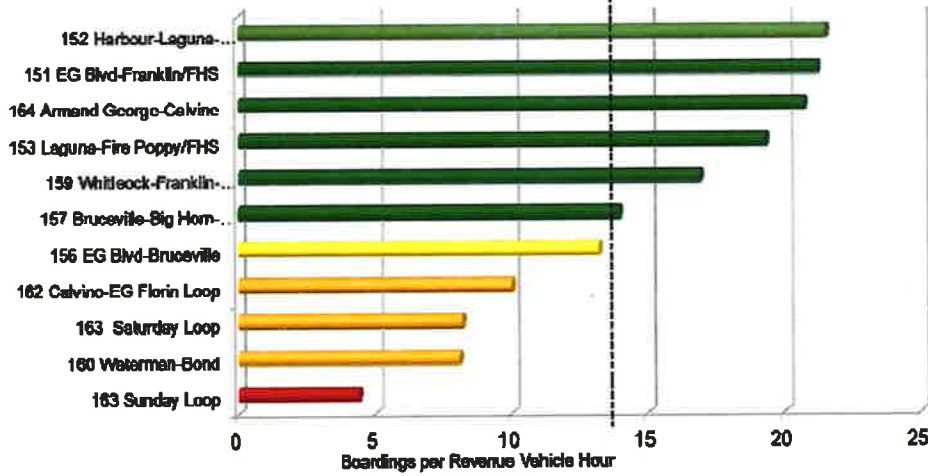


Workflow

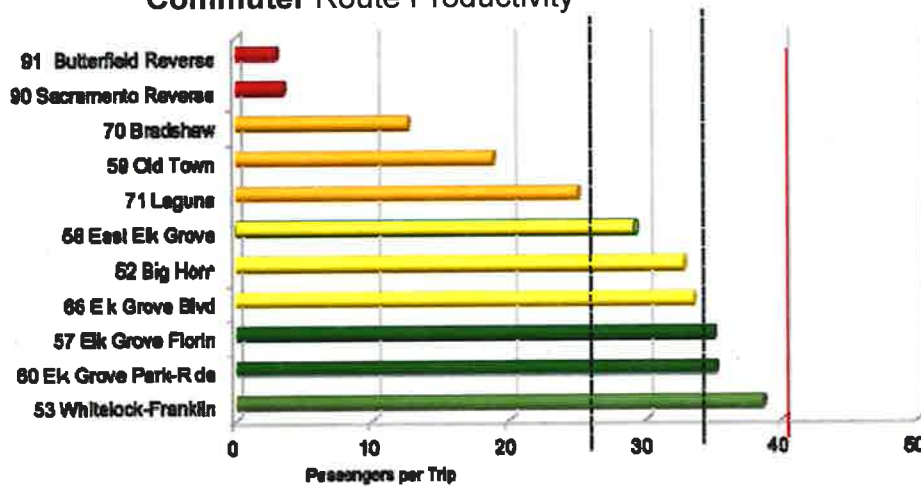


Ridership & Productivity – Local & Commuter Routes

Local Route Productivity



Commuter Route Productivity





Findings and Recommendations



Study Findings – *What is working and what is not?*



Commuter services are well utilized despite design challenges

- Some alignments are too long
- Some end-to-end bus *travel times* are not competitive with private auto
- Most customers board at park-ride lots located near the freeway



Local route network underperforms its potential

- Overly focused on Cosumnes River College as singular destination
- Wandering alignments - *e.g.*, Routes 157, 162
- Low ridership / limited growth alignments - *e.g.*, Routes 160, 162
- Local route alignments are different from commuter route alignments
- School routes (151-153) are different from local route alignments
- Weekend route alignments are different from weekday route alignment

Study Findings – *What are the critical markets in the study area?*



- **Institutions**
 - Elk Grove Civic Center
 - Library / Senior Center
 - CRC campuses
 - Middle & High Schools
- **Employers**
 - Apple Computer
 - State Office complex – Longleaf Drive
 - Retail stores & shopping centers
- **Health Care**
 - Kaiser Permanente – Big Horn / Promenade
 - Sutter / UC Davis
- **Shopping centers**
- **Transportation**
 - Park-ride lots
 - Multi-modal center
- **Regional Connections**
 - CRC Blue Line
 - Butterfield LRT
 - Downtown Sacramento



Study Findings – *What kind of service is justified for Elk Grove?*

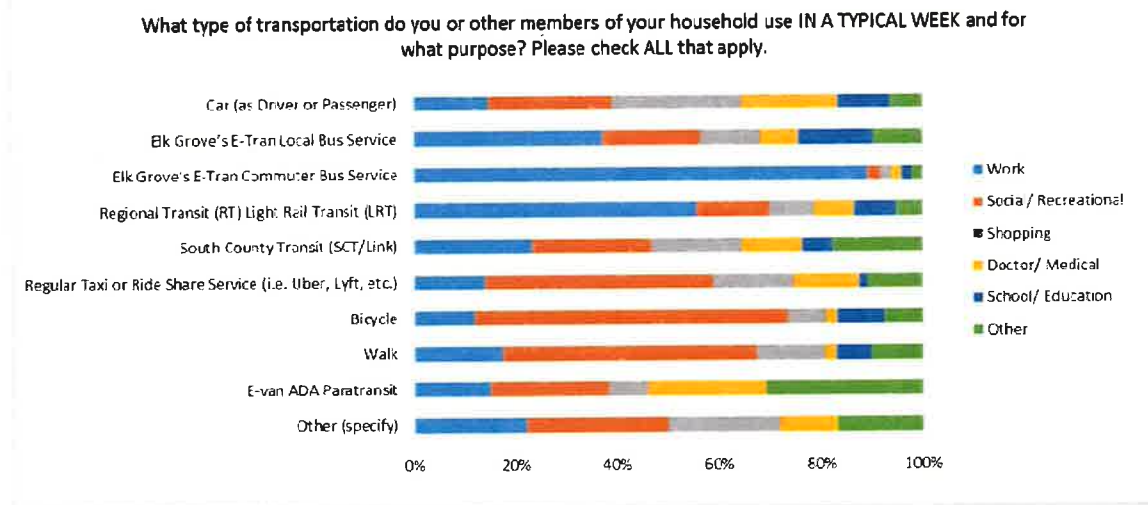
- ✓ **Peak Period Commuter Service to Sacramento**
 - Maintain peak direction current capacity
 - Increase frequency as affordable
 - Increase reverse direction capacity
 - Coordinate non-freeway route segments with local network
 - Concentrate service frequency at expanded park-ride lots

- ✓ **Grid-oriented local fixed route bus network**
 - All-day connections to RT Blue Line
 - BRT extending south through the City
 - City Master Plan recommends Big Horn Blvd
 - East-west lines on Calvine, Sheldon, Laguna Blvd, Elk Grove Blvd
 - North-south lines on Elk Grove Florin, Big Horn, Bruceville, Franklin & Harbour Point.
 - Scalable service span & frequency

- ✓ **Flexibly routed & scheduled service is an interim choice for midday, evening and weekend operations**

Survey Findings * – *What does the community want?*

- ✓ Generally satisfied with the quality of e-tran services.
- ✓ Most respondents felt the fares were reasonable
- ✓ Felt safe on e-tran buses.
- ✓ The majority of respondents are regular Commuter Service customers and use for work purposes.
- ✓ Conversely, 60% of Local Service customers use e-tran for non-work purposes.

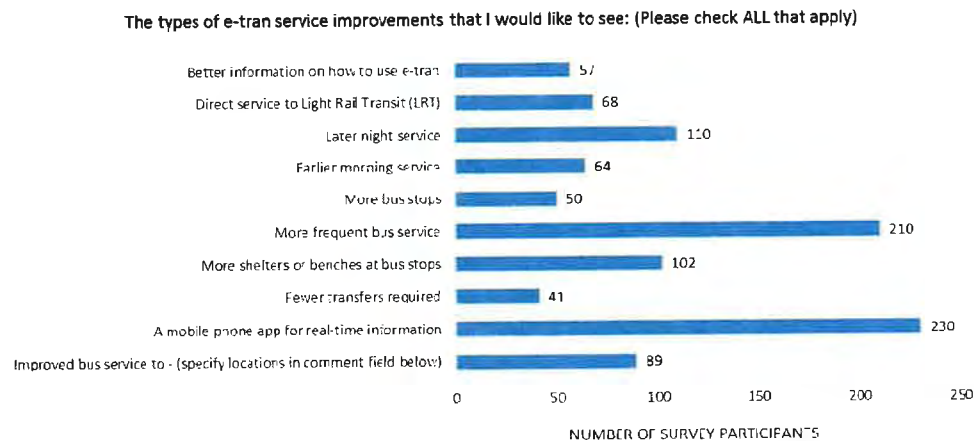


* 400 responses

Administered during 6-week period (Oct. 1st to Nov. 11th, 2015)

Survey Findings – *What does the community want?* [cont.]

- ✓ Most common reason why survey respondents did not use e-tran services was:
 - Buses do not go close enough to where they want to travel to and from.
 - Infrequent service
 - Feeling that riding the bus takes too long.
- ✓ Most desired transit service improvement was a mobile app for real-time information
 - Followed by a desire for more frequent bus service.
 - Third was the desire for later night service.
- ✓ Majority of comments addressed an apprehension over using LRT





Local Service Plan



Local Service Design Objectives

- ✓ Restructure network to be more consistent with Elk Grove's grid street network
- ✓ Simplify / rationalize route alignments
 - Straighter, more direct lines with fewer turns and deviations
 - Bi-linear – two-way service on a single street
- ✓ Integrate e-tran into the multi-modal regional transit network
- ✓ Lay the foundation for future enhanced express or rapid transit on Big Horn Boulevard
- ✓ Short-term focus resources on peak-period service
- ✓ Scalable service design for efficient expansion as demand warrants and resources allow.



Local Service Recommendations



Simplify the route network

- Consolidate nine existing routes into six proposed routes
- Grid design consistent with the City's street network
- Replace free-standing school routes with supplemental capacity on regular routes
- Use the same alignments on weekdays & weekends



Integrate local and regional services

- Facilitate “rubber tire extension” of Blue Line LRT south through Elk Grove
- Big Horn corridor referenced as preferred transit corridor in City's Master Plan
- Local routes operating mostly on arterial streets running east-west & north-south



Operate commuter & local routes on common alignments

- Improves peak frequency on local segments
- Expands midday and evening travel options for e-tran commuters
- Builds system visibility – blend commuter service and all-day local service

Route 50/150 Big Horn



Proposed Route 50 & 150 - Big Horn + Intersecting Routes



Proposal Highlights



Provides a foundation for future rapid transit in preferred corridor



Commuter 50

- Serves Downtown Sacramento via Hwy 99
- Stops at two (2) park-ride lots



Local 150

- Schedules coordinated with Blue Line at CRC station
- Backbone for grid network



Transition toward BRT in stages

- Fewer stops
- Off-board fare collection
- Queue jumps / signal pre-emption



Major stops / transfer points: CRC/Blue

- Line station
- Boulevard
- Parkway
- Sheldon Road Laguna
- Elk Grove Boulevard Lotz
- Whitelock Parkway Multi-modal transit center

Route 51/151 Franklin

Proposal Highlights



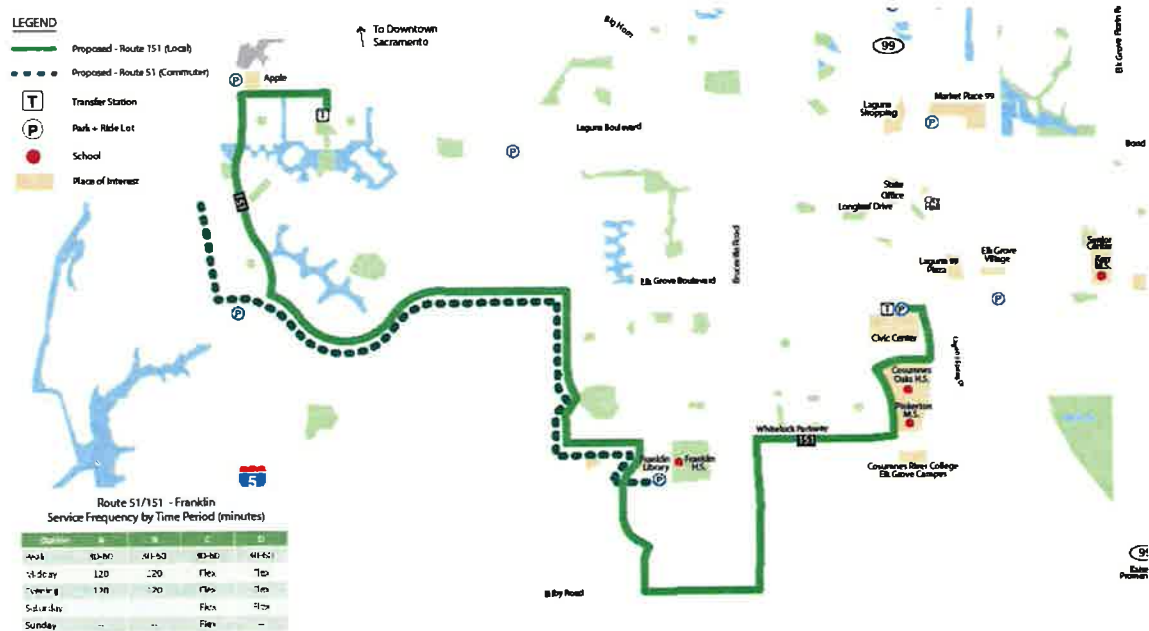
Commuter 51

- serves Downtown Sacramento via I-5
- Stops at two (2) park-ride lots



Local 151

- replaces portions of existing routes 157, 159, and school routes 151-153



Proposed Route 51 & 151 - Franklin



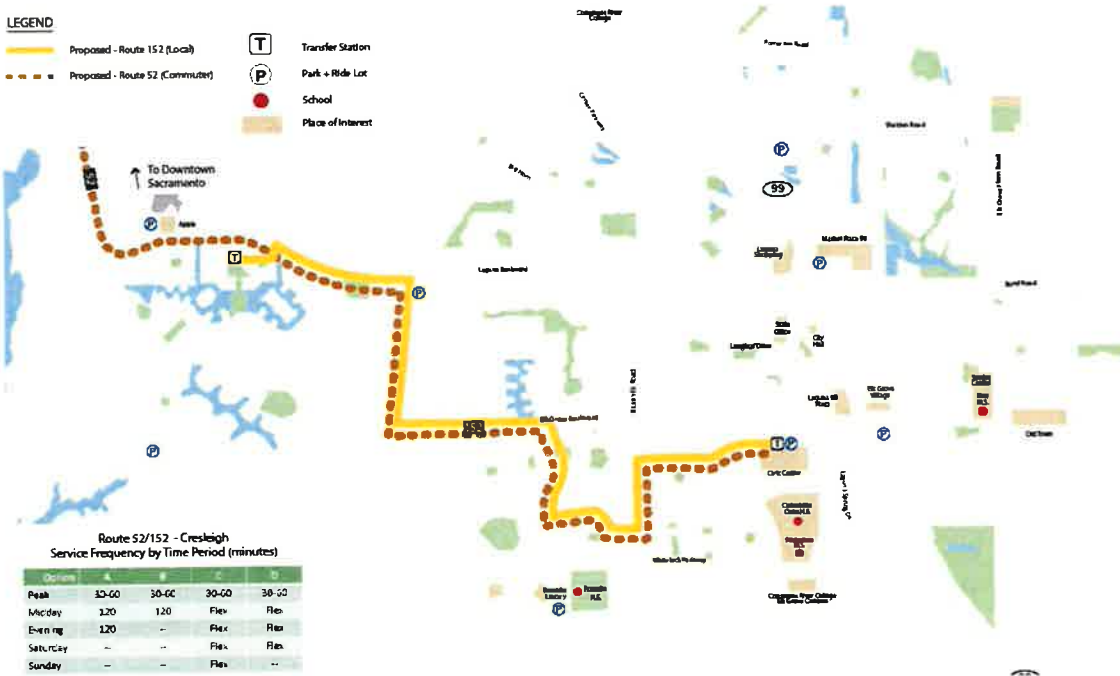
Key trip generators

- Elk Grove Civic Center
- Pinkerton MS
- Library
- Computer
- Cosumnes Oaks HS
- Franklin HS Franklin
- Raleys / Safeway Apple
- Laguna Town Center

Route 52/152 Cresleigh

LEGEND

-  Proposed - Route 152 (Local)
-  Proposed - Route 52 (Commuter)
-  Transfer Station
-  Park + Ride Lot
-  School
-  Place of Interest



Proposed Route 52 & 152 - Cresleigh



Key trip generators

- Elk Grove Civic Center
- Laguna Creek Town Center
- Apple Computer
- Franklin HS
- Raleys / Safeway
- Laguna Town Center

Proposal Highlights



Commuter 52

- serves Downtown Sacramento via I-5
- Stops at three (3) park-ride lots




Local 152


- Fills gaps in the east-west grid
- Replaces school routes 151-153

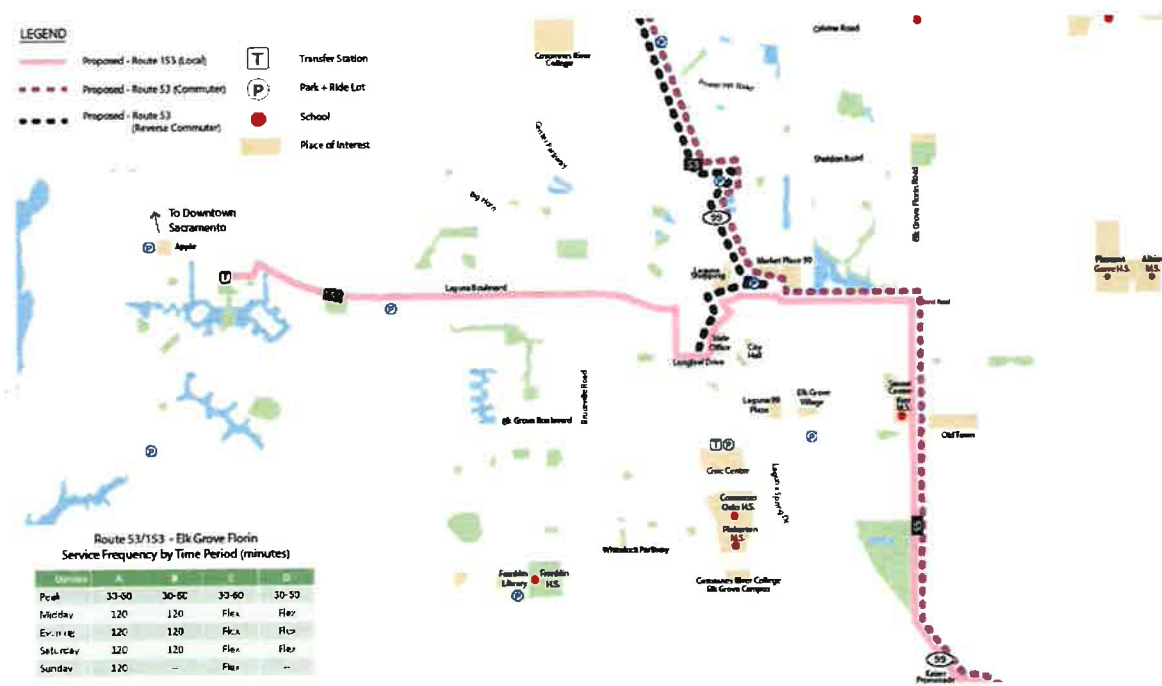


Route 53/153 Elk Grove Florin

Proposal Highlights

-  **Commuter 53**
 - serves Downtown Sacramento via Hwy 99
 - Stops at two (2) park-ride lots

-  **Local 153**
 - replaces portions of existing routes 157 and 162



Route 53/153 - Elk Grove Florin
Service Frequency by Time Period (minutes)

Direction	A	B	C	D
Peak	33-60	30-60	32-60	30-59
Midday	120	120	Flex	Flex
Evening	120	120	Flex	Flex
Saturday	120	120	Flex	Flex
Sunday	120	-	Flex	-



Proposed Route 53 & 153 - Elk Grove Florin



Key trip generators

- Elk Grove HS
- Old Town
- Marketplace 99
- Laguna Crossroads
- Apple Computer
- Kerr MS
- Senior Center
- State Offices – Lingleaf Drive
- Laguna Creek Town Center
- Laguna Town Hall



Route 54/57/154 Calvine / Big Horn West



Proposal Highlights

- Commuter 54**
 - serves Downtown Sacramento via I-5
 - Stops at two (2) park-ride lots
- Commuter 57**
 - serves Downtown Sacramento via Hwy 99
 - Stops at two (2) park-ride lots

Key trip generators

- Sheldon HS
- Bradford Christian
- Calvine Alternative HS
- Laguna Creek HS
- Laguna Creek Town Center
- Laguna Town Hall
- Smedberg MS
- Bel Air Village
- CRC / RT Blue Line station
- Harris MS
- Apple Computer




Local 154


- Forms an east-west crosstown in north Elk Grove
- Replaces portions of routes 159 & 162




Route 55/155 Power Inn

Proposal Highlights

-  **Commuter 55**
 - serves Downtown Sacramento via Hwy 99
 - Stops at one (1) park-ride lot

-  **Local 155**
 - replaces portions of existing routes 154 and 160



-  **Key trip generators**
 - Pleasant Grove HS
 - Bond Plaza
 - Creekside Plaza
 - CRC / Blue Line station
 - Albani MS
 - SaveMart
 - Lowes



Route 56/156 Old Town



Proposal Highlights

- Commuter 56**
 - serves Downtown Sacramento via Hwy 99
 - Stops at three (3) park-ride lots
- Local 156**
 - Continues on present alignment

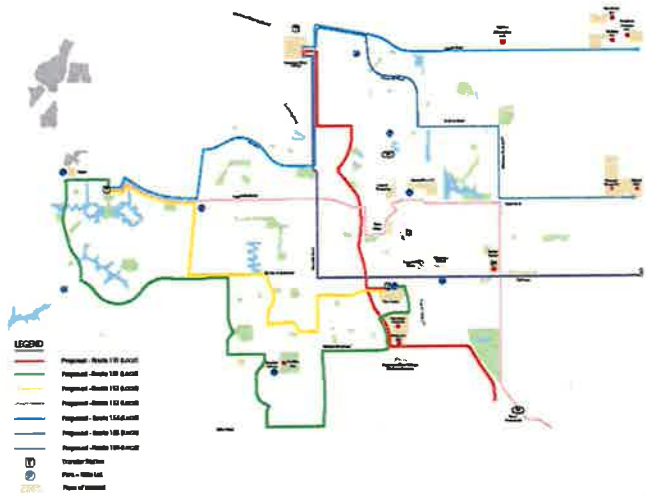
Proposed Route 56 & 156 - Old Town

Key trip generators

- | | |
|--------------------------|-----------------------------------|
| Waterman Plaza | Old Town |
| Public Library | Kerr MS |
| Laguna 99 Shopping Plaza | Elk Grove Civic Center |
| Eddy MS | Laguna Crossroads Shopping Center |
| Aquatics Complex | CRC / RT Blue Line station |



Proposed Local Network



Service Frequency – Options A & B

e-tran Service Plan Options Summary Design Characteristics

	Current System	Option A 2017 LOS	Option B 93% LOS
Annual Revenue Hours			
Local	37,054	31,247	27,320
Commute	19,748	25,604	25,604
Total	57,502	56,850	52,924
Average Frequency- Local (minutes)			
Peak Weekday	30-120	30-60	30-60
Midday Weekday	30-120	30-120	30-120
Evening Weekday		30-120	30-120
Saturday	80	60-120 (4 routes)	60-120 (short day)
Sunday	80	60-120	No service
Service Span			
Local Weekday	5:52 am - 11:00 pm (16.9 hours)	6:00 am - 8:30 pm (14.5 hours)	6:00 am - 8:30 pm (14.5 hours)
Local Saturday	7:15 am-11:10 am 1:15pm-6:10pm	6:00 am - 7:00 pm (13 hours)	8:00 am - 5:00 pm (9 hours)
Local Sunday	7:15 am-11:10 am 1:15pm-6:10pm	7:00 am - 6:00 pm (11 hours)	No service
Commuter Weekday	5:20 am - 8:40 pm 3:10 pm-6:55 pm	5:30 am - 8:45 am 3:30 pm-6:00 pm	5:30 am - 8:45 am 3:30 pm-6:00 pm
Daily Trips (1-way)			
Local Weekday	199	146	139
Local Saturday	10	55	49
Local Sunday	10	39	0
Commuter Weekday	73	90	90



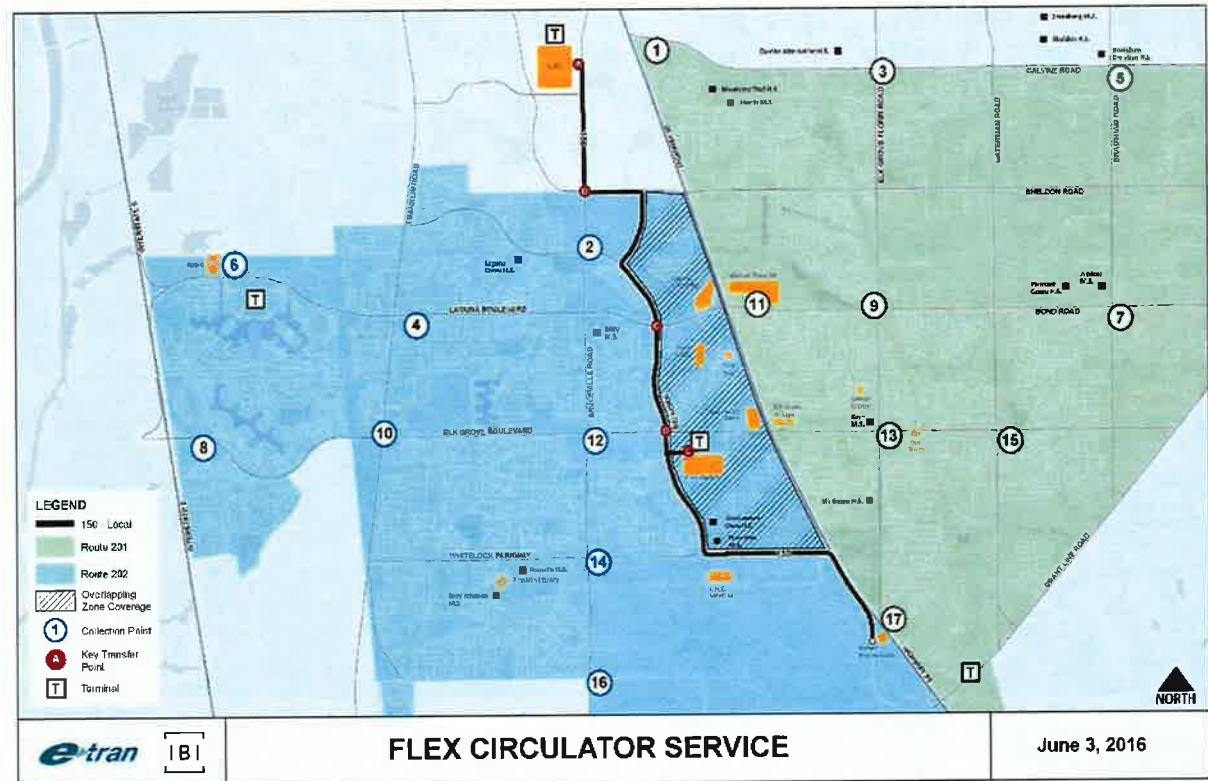
Flexible Circulator Service Option



- ✓ Cost-effective solution for low-demand periods
 - Midday, evenings & weekends
- ✓ Combines fixed route and demand responsive service attributes
- ✓ Dynamic routing and scheduling responds to consumer demand
- ✓ Extends geographic coverage city-wide
- ✓ Reservations required
- ✓ Depends on technology

Service Design

- Two (2) zones
- Designated pick-up locations
- Feeder service to:
 - Big Horn
 - CRC Blue Line
 - future multimodal center





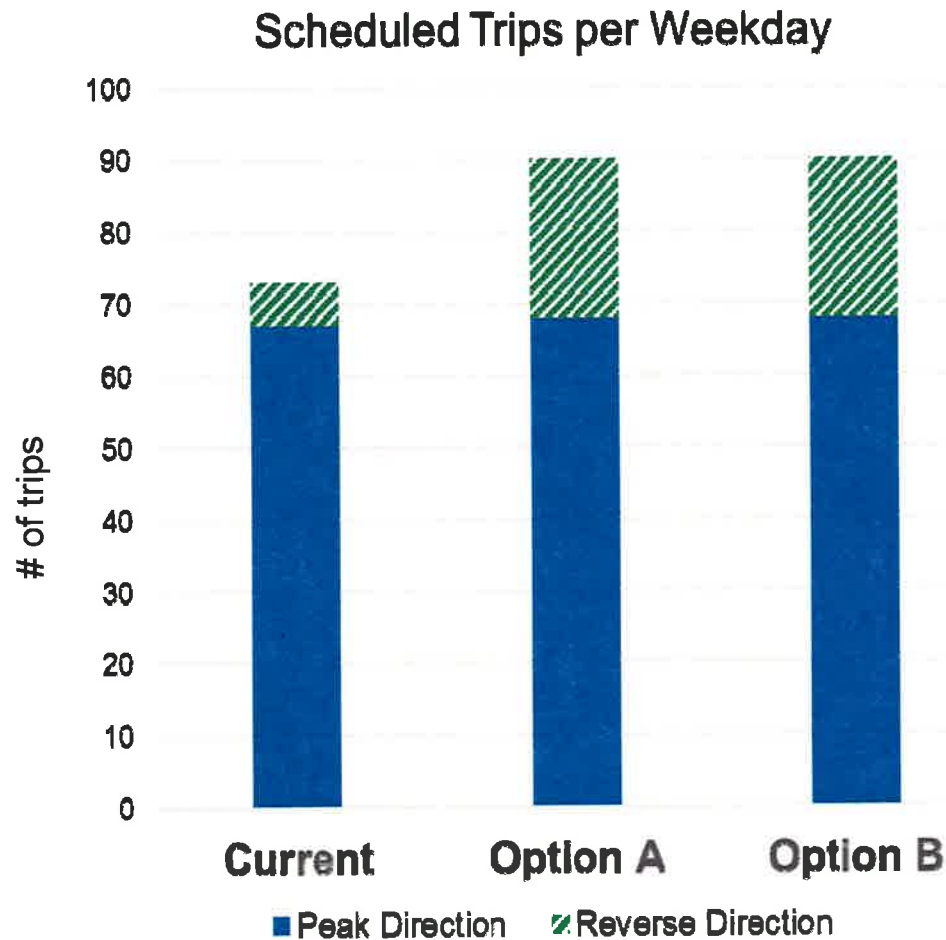
Commuter Service Plan



Commuter Service Design Objectives

- ✓ Maintain current level of service / expand within budget limitations
- ✓ Reshape routes to reflect customer boarding patterns
- ✓ Focus resources on service offering competitive end-to-end travel times (competitive - relative to private auto) to attract more peak direction commuters
- ✓ Improve reverse commute services into Elk Grove (Increase number of trips)
- ✓ Improve capital and operating cost efficiency of commuter service

Expand Commuter Network Capacity








Peak direction capacity

- Modify daily schedule
 - Proposed 68 trips on 9 routes
 - Currently 67 trips on 12 routes
- 1.5% increase in service capacity

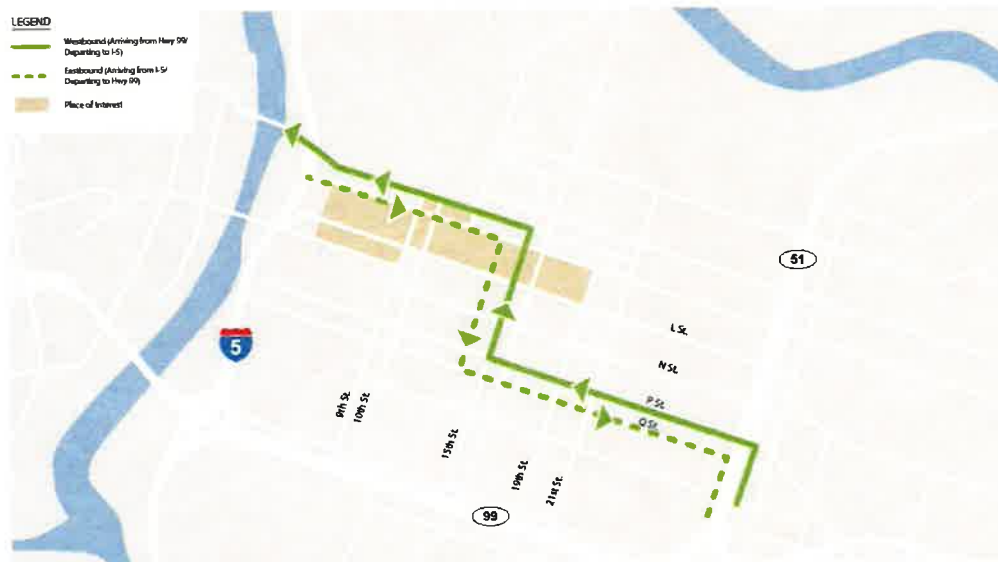
Reverse direction capacity

- Expand daily schedule
 - Proposed 22 trips on 4 routes
 - Currently 6 trips on 2 routes
- Increase service capacity

Commuter Service Recommendations

-  Operate fewer routes with better schedules
 - Minimum of three (3) scheduled trips per peak direction (minimum design standard)
 - Modify or eliminate existing schedules containing 1 or 2 trips per peak period (*i.e.*, Routes 66, 70, 90, 91 and Purple Route)
-  Accommodate ADA-eligible Purple Route customers on regular commuter routes
-  Concentrate high frequency (10-15 minutes) at expanded park-ride lots near I-5 and Hwy 99 freeway interchanges
-  Limit local pickup segments to 15 minutes (maximum) before entering freeway
-  Implement a common two-way route alignment through Downtown Sacramento for all e-tran routes (all commuter trips will share the same bus stops)

Proposed Commuter Service Alignment Downtown Sacramento



Proposed Counter Route Alignment in Downtown Sacramento

Why a common alignment?

- ✓ Reduce bus travel times through Downtown
- ✓ Provide reasonable walking distance for most customers
- ✓ Easier for new customers to find the right bus stop
- ✓ Shorter waiting times for many customers heading to Elk Grove

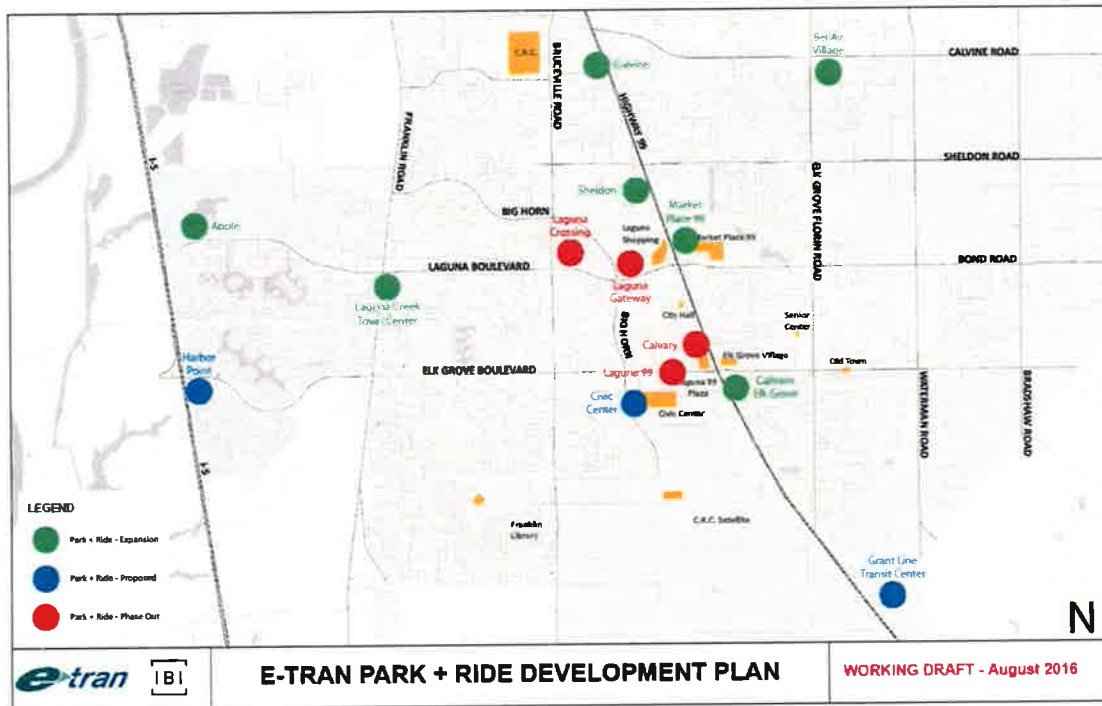
Park-Ride Facilities Plan

Objectives

- Locate park-ride lots near I-5 & Hwy 99 interchanges in Elk Grove
- Expand capacity at key locations to support high frequency service

Recommendations

- Construct new facilities
 - Elk Grove Civic Center
 - Harbour Point / EG Blvd
 - Hwy 99 & Bond/Laguna
- Phase out selected lots
 - Limited parking capacity
 - Farther from freeway



Recommendations

- Pursue a minimum target for system farebox recovery
- Ensure equity across customer fare types (local vs. commuter)
- Strategic Pricing
 - Reduce emphasis on cash
 - Incentivize fare prepayment
 - Review transfer charges and rules for use
 - Consider relationship to regional fares (*Connect Card* – in progress)

Fare Type	General Public	Senior/Disabled/ Medicare/Military	Student
Cash Fare	\$2.25	\$1.10	\$1.10
Transfer	\$0.50	\$0.25	
Daily Pass	\$6.00	\$3.00	\$3.00
10-Ride Pass	\$22.50	\$11.00	\$11.00
Commuter 31-Day Pass (Monthly)	\$100.00	\$50.00	\$50.00
Local 31-Day Pass (Monthly)	\$80.00	\$40.00	\$40.00



COMPREHENSIVE TRANSIT ANALYSIS
Local & Commuter Service

COMMENTS



August 29, 2016

Appendix C: Peer Review



Memo

To: File Date: September 17, 2015
From: Steve Wilks
cc: File No: 38788
Subject: Elk Grove COA – Peer Review

For discussion with project management team. Peer Review – sub-task 2 of work plan: to review and compare the e-tran services to peer transit systems in California and elsewhere. In consort with the City, to identify up to five comparable transit systems for the review of their fixed-route – commuter and local services.

Selection of Peer Agencies:

- List 1: A peer group made up of small suburban agencies that have both local and commute services. This group would be for the standard comparison of volumes and measures.
- List 2: A group of metro or regional services that have opened LRT extensions. This group would be questioned on the how new LRT impacted the bus services provided by the agency. For example did they justify LRT development by setting goals for the reduction in bus revenue hours.

Target to select examples of both systems that continue to run parallel bus service to downtown and those that truncate at LRT stations in or near their service area. Also local & express service modes; comparable service area size or system size; not the regional provider.

List 1 General Peer Group

Combined Local and Commuter

- SolTrans
- Fairfield and Suisun City Transit
- WestCat
- Marin/Golden Gate
- Antelope Valley

Local Only

- LAFTA
- CCCTA
- Vacaville
- Petaluma Transit
- Santa Rosa CityBus

Peer Review – for discussion

List 2 Agencies with Rail Expansion

- Sacramento RT
- Madison County
- TriMet (includes the consideration of impacts on CTRANS in Vancouver)
- Denver
- Salt Lake City
- Edmonton
- Sound Transit Light rail (Seattle area)
- Santa Clara VTA Light Rail
- METRO Light Rail - Phoenix

Attachments - Questionnaires/Interview Guide

1. Local Services Only
2. Commuter & Local Services
3. LRT Strategic Planning



Elk Grove COA Peer Review

Questionnaire for Agencies Providing Local Transit Services Only

General Questions

1. Are your services operated: in-house _____ under a service operating contract _____

2. What modes of public transit do you provide: local fixed route _____
express (full express or limited) _____
flexroute (deviated fixed route) _____
general public dial-a-ride _____
ADA Complementary Paratransit _____

3. Fleet size: Fixed route – total fleet _____ peak bus pull out _____ spare ratio _____
Small bus DAR/Para) – total fleet _____ peak bus pull out _____ spare ratio _____

4. Bus replacement program (bus life cycle): medium/heavy duty buses - # of years _____
Light duty buses - # of years _____

5. Population of service area: Current population _____

6. Size of service area: _____ sq. miles

7. How would respondent best describe service area (urban, suburban or low density rural):

8. What is per capita ridership: public transit _____ ADA Paratransit _____

9. Number of fixed routes _____

10. Fare structure: list cash fares, ticket and pass costs

11. When was the last fare increase: _____ what was percentage increase _____



Service Volume

- 12. Total annual ridership: public transit _____ ADA Paratransit _____

- 13. Total annual operating costs: public transit _____ ADA Paratransit _____

- 14. Total farebox revenues collected: public transit _____ ADA Paratransit _____

- 15. Total revenue hours operated: public transit _____ ADA Paratransit _____

- 16. Total revenue miles operated: public transit _____ ADA Paratransit _____

Service Performance

- 17. Boardings per revenue hour: public transit _____ ADA Paratransit _____

- 18. Boardings per revenue mile: public transit _____ ADA Paratransit _____

- 19. Operating cost per boarding: public transit _____ ADA Paratransit _____

- 20. Operating cost per revenue hour: public transit _____ ADA Paratransit _____

- 21. Operating cost per revenue mile: public transit _____ ADA Paratransit _____

- 22. Average fare collected per boarding: public transit _____ ADA Paratransit _____

- 23. Farebox recovery ratio: _____

General Observations



Elk Grove COA Peer Review

Questionnaire for Agencies Providing Both Local Transit & Commuter Services

General Questions

1. Are your services operated: in-house _____ under a service operating contract _____
2. What local modes of public transit do you provide: local fixed route _____
express (full express or limited) _____
flexroute (deviated fixed route) _____
general public dial-a-ride _____
ADA Complementary Paratransit _____
3. Fleet size: Commuter bus fleet – total fleet _____ peak bus pull out _____ spare ratio _____
Fixed route – total fleet _____ peak bus pull out _____ spare ratio _____
Small bus DAR/Para) – total fleet _____ peak bus pull out _____ spare ratio _____
4. Bus replacement program (bus life cycle): Commuter bus fleet - # of years _____
Local medium/heavy duty buses - # of years _____
Light duty buses - # of years _____
5. Population of local service area: Current population _____
6. Size of local service area: _____ sq. miles
7. How would respondent best describe your local service area (urban, suburban or low density rural):

8. What is per capita ridership: commuter service _____
public transit _____
ADA Paratransit _____
9. Number of commuter routes _____



- 10. Number of local fixed routes _____
- 11. Fare structure: list cash fares, ticket and pass costs for all services
- 12. When was the last fare increase: _____ what was percentage increase _____

Service Volume

- 13. Total annual ridership: commuter service _____
local public transit _____
ADA Paratransit _____

- 14. Total annual operating costs: commuter service _____
local public transit _____
ADA Paratransit _____

- 15. Total farebox revenues collected: commuter service _____
local public transit _____
ADA Paratransit _____

- 16. Total revenue hours operated: commuter service _____
local public transit _____
ADA Paratransit _____

- 17. Total revenue miles operated: commuter service _____
local public transit _____
ADA Paratransit _____

Service Performance

- 18. Boardings per revenue hour: commuter service _____
local public transit _____
ADA Paratransit _____

- 19. Boardings per revenue mile: commuter service _____
local public transit _____
ADA Paratransit _____



20. Operating cost per boarding: commuter service _____
 local public transit _____
 ADA Paratransit _____

21. Operating cost per revenue hour: commuter service _____
 Local public transit _____
 ADA Paratransit _____

22. Operating cost per revenue mile: commuter service _____
 local public transit _____
 ADA Paratransit _____

23. Average fare collected per boarding: commuter service _____
 local public transit _____
 ADA Paratransit _____

24. Farebox recovery ratio: system wide _____
 commuter service _____
 local public transit _____
 ADA Paratransit _____

General Observations



Elk Grove COA Peer Review

Strategic LRT Planning

Interview Guide

Contact Information

1. Transit Agency _____
2. Contact Name and Position _____
3. Contact Information: Telephone # _____
Email address _____
4. Contact Date(s) _____

Initial LRT Planning Process (Prior to Opening)

5. Planned LRT Line Example(s)¹ _____
6. Length of example line: _____
7. Number of stations: _____
8. Projected Ridership: _____
9. Was a reduction in bus revenue hours projected in the justification for or impact analysis of the LRT (new or extension)? _____
10. If yes: How many buses were projected to be taken out of service? _____
How many annual bus revenue hours were projected to be reduced? _____
11. If no: Why was there no anticipation of reduced bus operations?

¹ Use a separate sheet for each example provided per agency.



Post Operational Impacts

- 12. When did the Line go into service? _____
- 13. Annual ridership in first year of operation: _____
- 14. Current ridership (FY 2014/15): _____
- 15. Annual reduction in buses operated: _____
- 16. Annual reduction in bus revenue hours: _____
- 17. Where exiting bus routes paralleling the LRT corridor restructured as local LRT feeders?

- 18. Or, were new feeder routes added? _____
- 19. Did the agency achieve its strategic “bus reduction” goals with the opening of LRT? _____
- 20. If not, explain:

- 21. Was there any negative public reaction to the elimination of bus service as a result of the LRT opening?

_____(y/n)

- 22. If yes, why?

- 23. How did any negative public reaction impact the plan?

Appendix C: Peer Review



Memo

To: Jean Foletta,
Transit System Manager

Date: November 16, 2015

From: Steve Wilks and David Sharfarz

cc:

File No: 38788

Subject: Elk Grove COA – Local & Commuter Routes – Performance/Ridership Analysis

The following presents findings and conclusions based on the August/September evaluation of local and commuter route performance. Individual route performance by service type is presented in the attached *e-tran Local and Commuter Route Ridership Analysis*. It is important to note that transit is currently deploying Automated Passenger Counters (APCs). While the findings and conclusions presented herein present several key areas of challenge, the project management team had agreed to finalize the performance analysis upon receipt of complete current, validated ridership data as generated by the APCs.

Service Evaluation: Findings and Conclusions

I. Local Network Issues

- A. Generally service is not well-utilized. Only one local route (154) meets a minimum productivity threshold of 20 boardings per revenue hour.
- B. Network functionality is limited - two routes (156, 157) generate more than half of all local ridership.
- C. Some alignments are circuitous or contain excessive one-way segments.
- D. Weekend alignments are substantially different from weekday alignments. This contributes to poor productivity on Saturday (8.2 boardings per hour) and Sunday (4.4 boardings per hour).
- E. CRC is the dominant boarding and alighting location, indicating that more than half of all local trips are to places outside the City of Elk Grove.
- F. Local route frequencies are too low to attract significantly more general purpose local trips.

- G. Local and commuter schedules are not integrated; resulting in lower effective frequencies on arterial segments.
- H. Existing routes are inconsistent with school boundaries.
 - School route schedules (151, 152, 153) should be integrated into the regular route network.
- I. Current schedules are not constructed within cycles that would ensure schedule reliability, adequate recovery times, and Wage Order 9 compliance.

II. Commuter Network Issues

- A. Service is mostly well-utilized. Eleven routes average 70.4% of seated capacity; range from 96.6% (Route 153) to 7.2% (Route 91).
 - Three routes operating via I-5 average 85.7% of seated capacity.
 - Four routes operating via Hwy 99 average 76.5% of seated capacity.
 - Two routes operating via Bradshaw Road to Butterfield LRT average 46.9% of seated capacity.
 - Two reverse direction routes operating from Butterfield LRT average 8.3% of seated capacity.
- B. Generally commuter routes spend too much time on arterial streets where relatively few customers board. Alignments should be shortened to a maximum 5 miles and 15 minutes of scheduled running time on arterial segments.
- C. Peak periods are too narrowly defined. Schedules should be expanded to provide morning arrivals between 6:45 am – 9:00 am; afternoon departures from 3:45 pm – 6:00 pm.
- D. Ridership patterns indicate that up to 75% of existing customers board commuter routes at a park-ride lot. Park-ride lot improvements are key to expanding commuter service capacity.
- E. Hwy 99 lots at Calvine and Sheldon are sufficient for the short term – *i.e.*, within 3 minutes of a freeway interchange; and capacity over 100 spaces, near retail commercial development.
- F. Hwy 99 park-ride lots near Bond-Laguna and Elk Grove Road interchanges require consolidation and relocation. Existing lots have insufficient capacity causing increased bus travel times and customer uncertainty.
 - At Bond-Laguna, construct a new park-ride facility containing 200 spaces to replace five existing lots (Marketplace 99, Marketplace 99 South, Laguna Gateway) containing a total of 41 spaces.

- At Elk Grove Road, construct a new park-ride facility containing 200 spaces to replace three existing lots (Caltrans, Calvary Christian Center, Laguna 99) containing a total of 130 spaces.
 - Currently no park-ride capacity at the Kammerer-Grant Line interchange.
- At each of the above locations, site selection should consider the planned LRT extension and other factors.

G. I-5 corridor has insufficient park-ride capacity.

- Apple lot should be expanded - currently 73 spaces. Alternatively, supplemental capacity is needed adjacent to retail development near the I-5 Laguna Boulevard interchange.
- Currently no park-ride capacity adjacent at Elk Grove Road interchange.
- Laguna Creek Town Center park-ride lot should be expanded – currently 15 spaces.
- Need new park-ride capacity near the intersection of Elk Grove Road west of Franklin Boulevard, in proximity to Raleys or new retail shopping development serving the Harbor Pointe and Eliot Ranch subdivisions.

H. Need to plan for park-ride lots at future LRT station sites in the Big Horn Boulevard corridor at Bruceville, Laguna Boulevard, Elk Grove Road, Whitelock Parkway and Bilby Road.

Appendix D: Detailed Local and Commuter Route Analysis



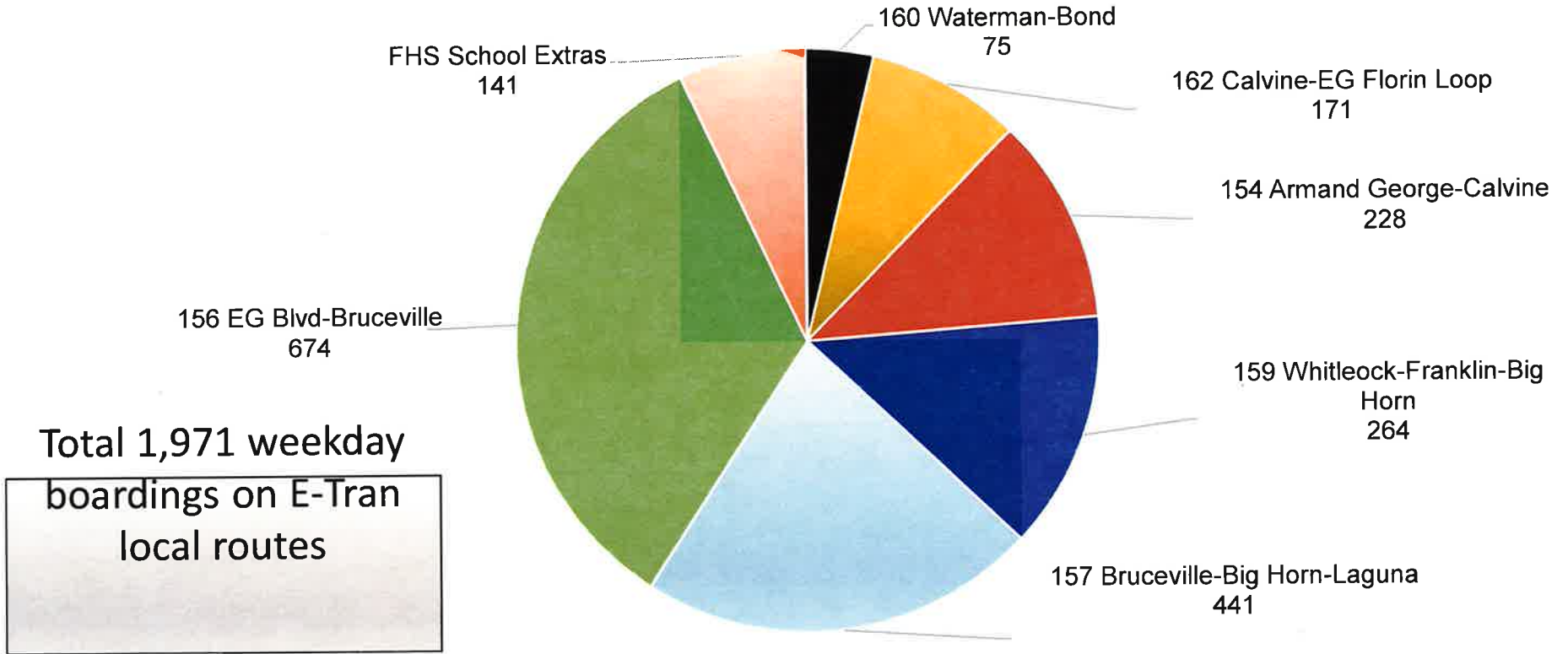
E-Tran Local Routes Ridership Analysis

Draft (work in progress)
September 2015



Prepared for the City of Elk Grove
by IBI Group

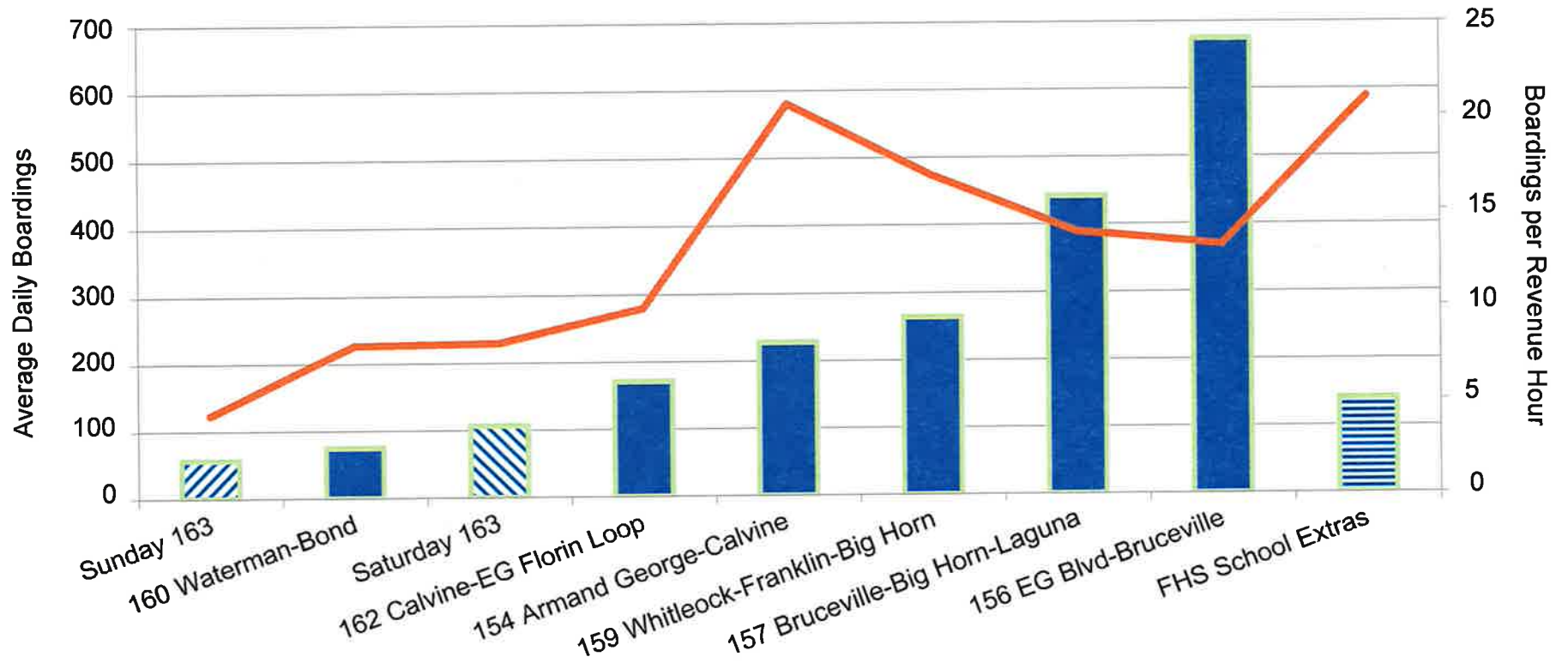
E-Tran Local Routes Weekday Ridership Distribution FY 2015



E-Tran Local Routes

Ridership and Ridership Productivity

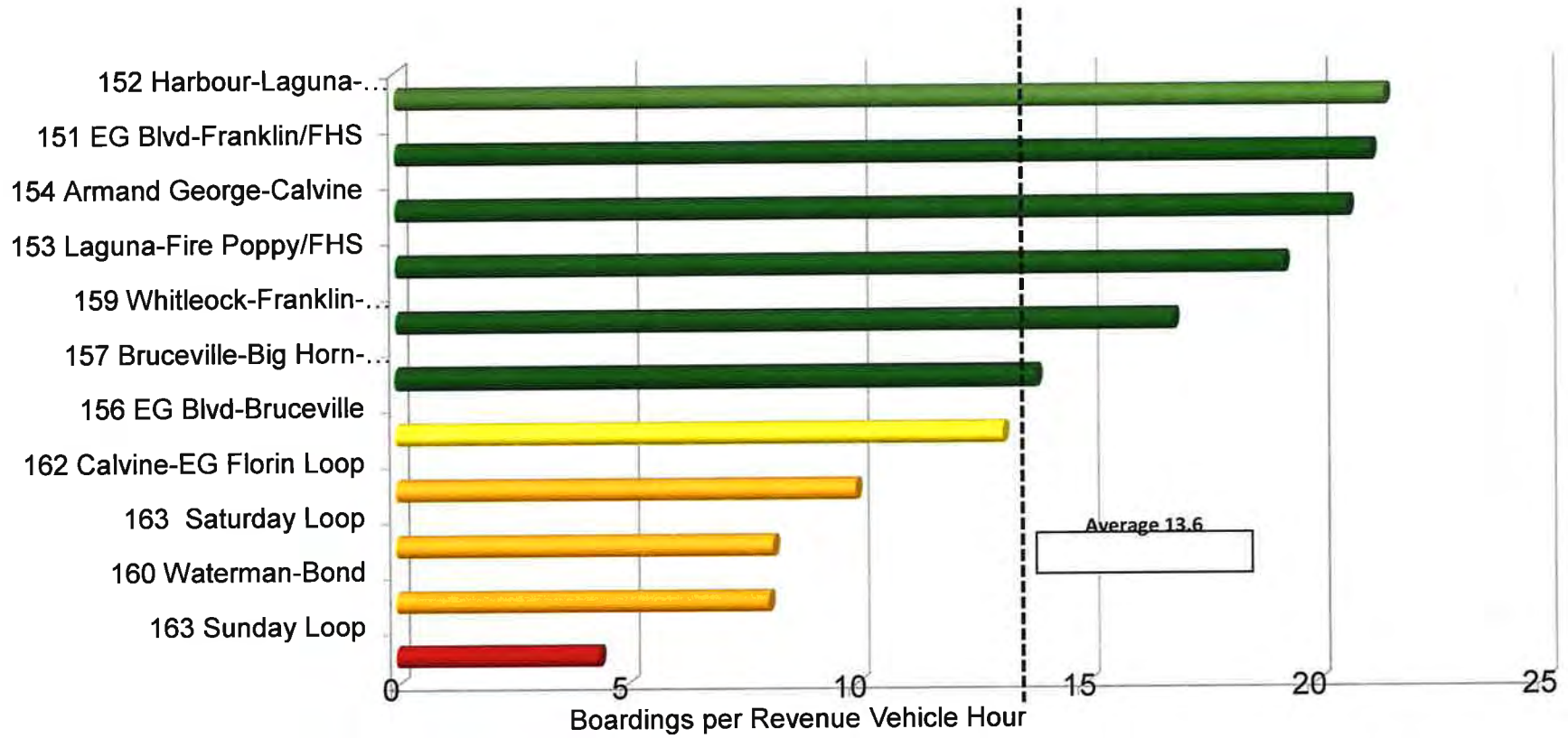
FY 2015



E-Tran Local Route Relative Productivity

Customer Boardings per Revenue Vehicle Hour

FY 2015



Weekday Locals

154 Armand George - Calvine

156 Elk Grove Road - Bruceville






157 Bruceville – Big Horn - Laguna

159 Whitelock – Franklin – Big Horn

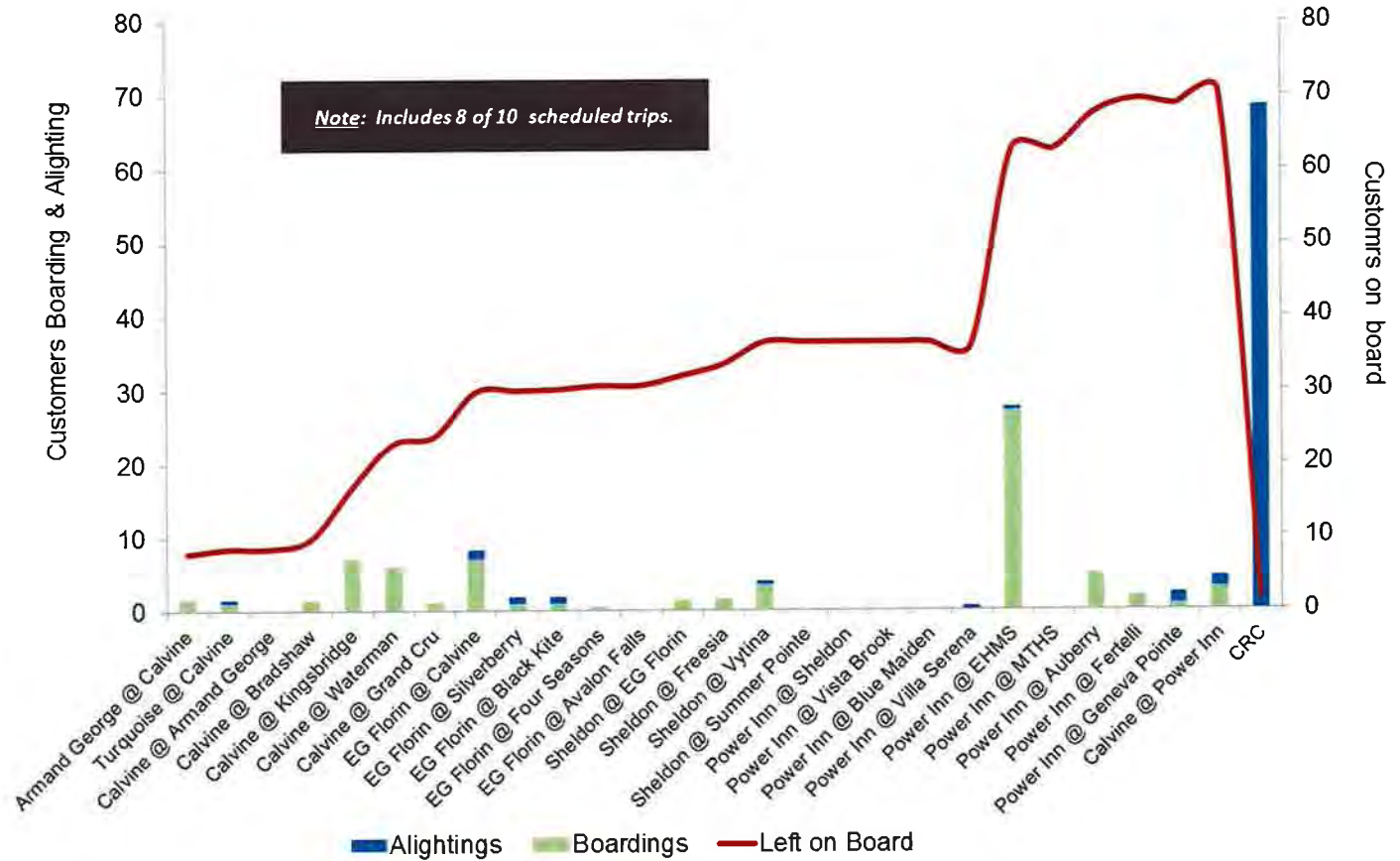
160 Bradshaw - Bond

162 Calvine – Elk Grove Florin Loop

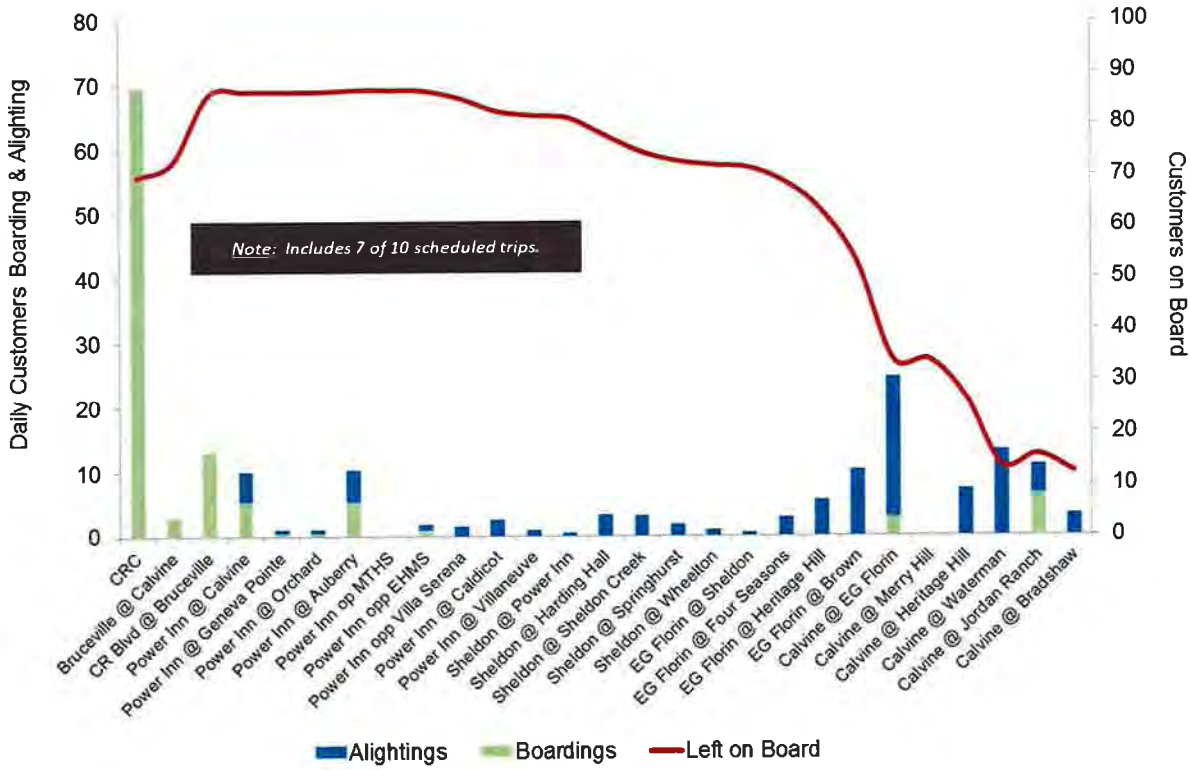
154 Armand George-Calvine FY 2015 Performance

-  228 average daily boardings
-  28.5% of seated capacity
-  20 daily one-way trips
-  21.2 boardings per revenue vehicle hour
-  Service Frequency
 - 60 minutes peak
 - 120 minutes midday



154 Armand George-Calvine - Eastbound






154 Armand George-Calvine - Westbound



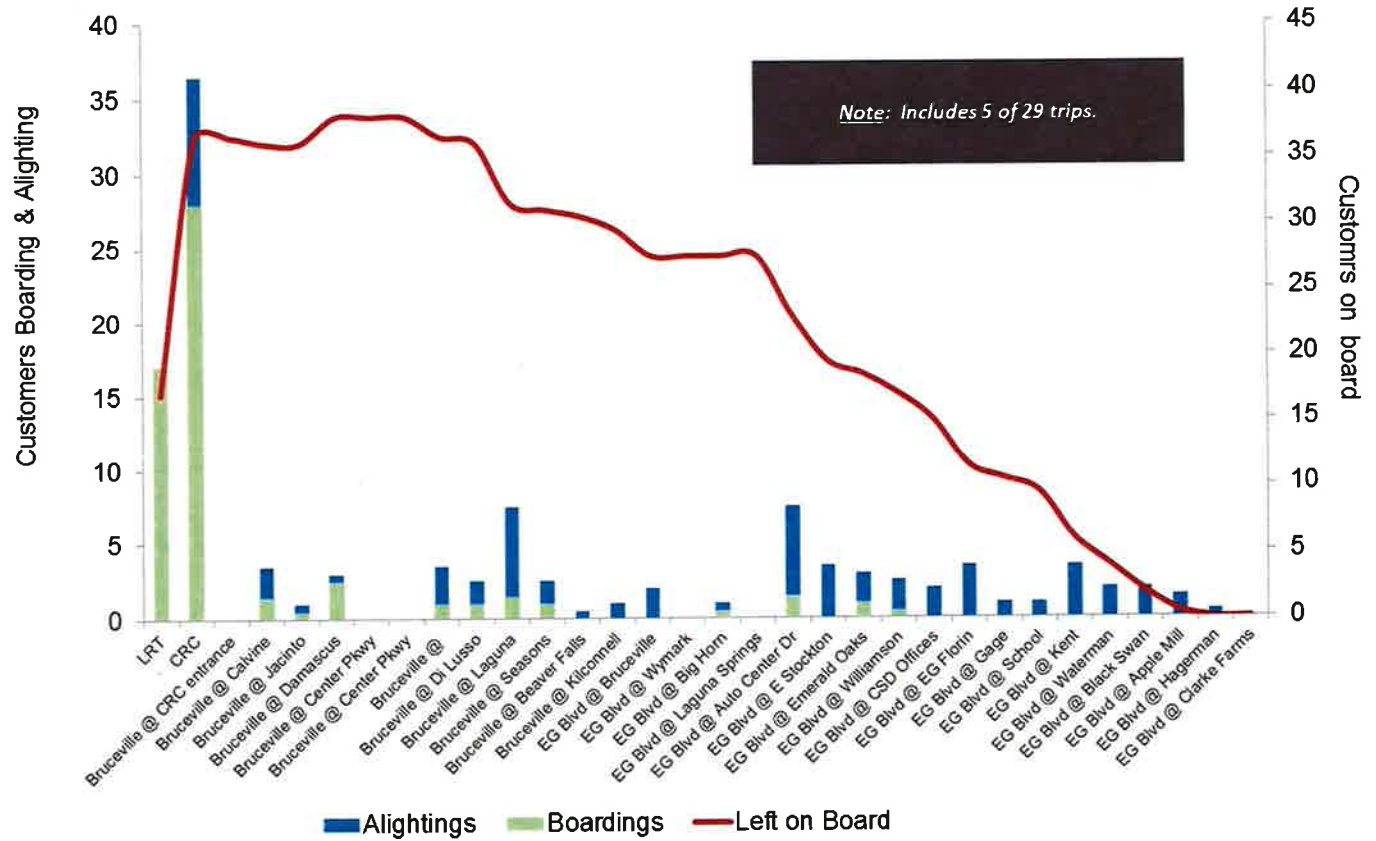
154 Armand George-Calvine Ridership Analysis

-  Most productive local route
-  Major destinations
 - CRC
 - Monterey Trail HS
 - Calvine & Waterman
 - Calvine & EG Florin

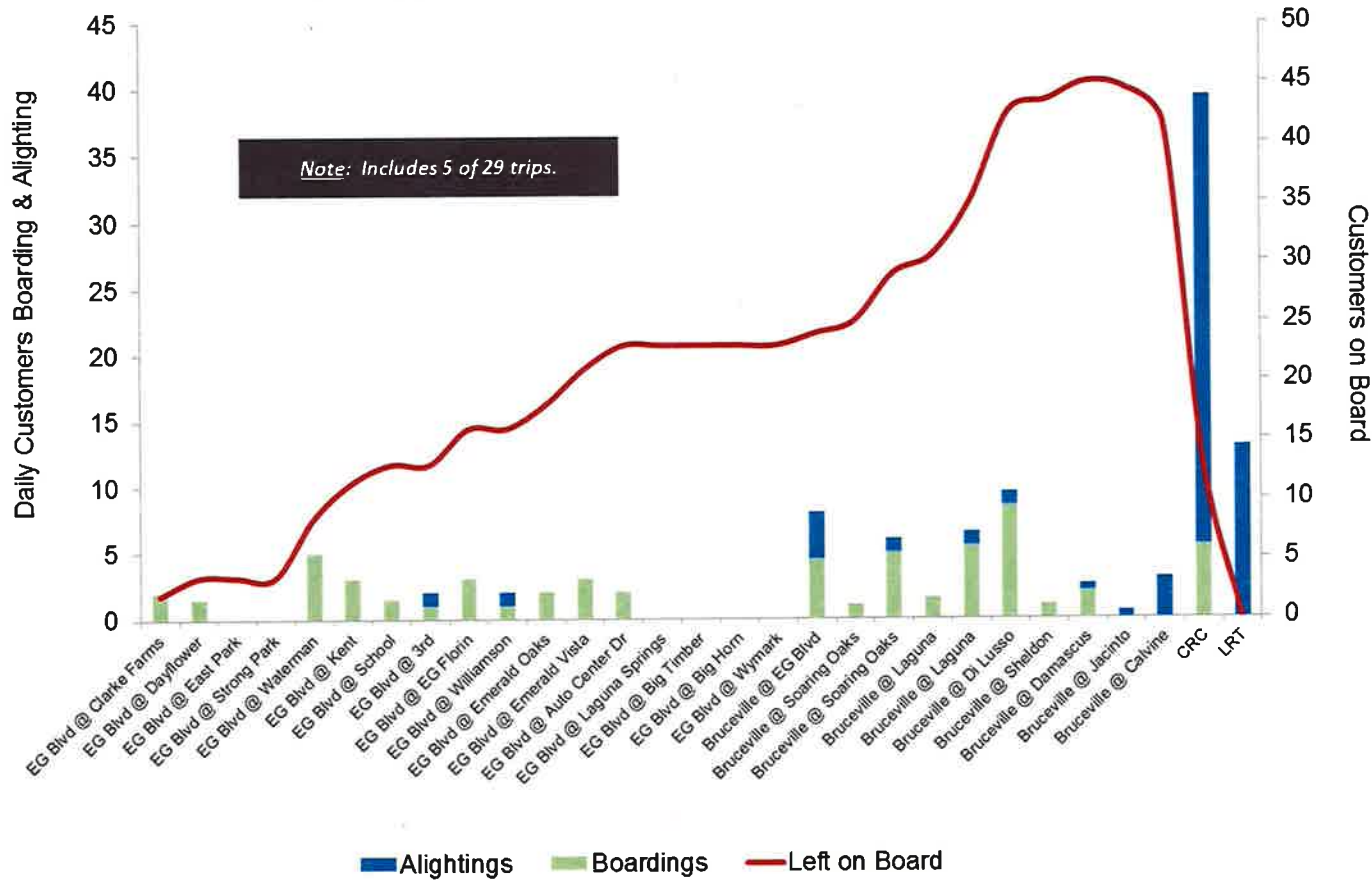
156 EG Road- Bruceville FY 2015 Performance

-  674 average daily boardings
-  29% of seated capacity
-  58 daily one-way trips
-  13.2 boardings per RVH
-  30 minute peak frequency
-  Runs until 10:25 pm

156 Elk Grove Road/Bruceville - Eastbound



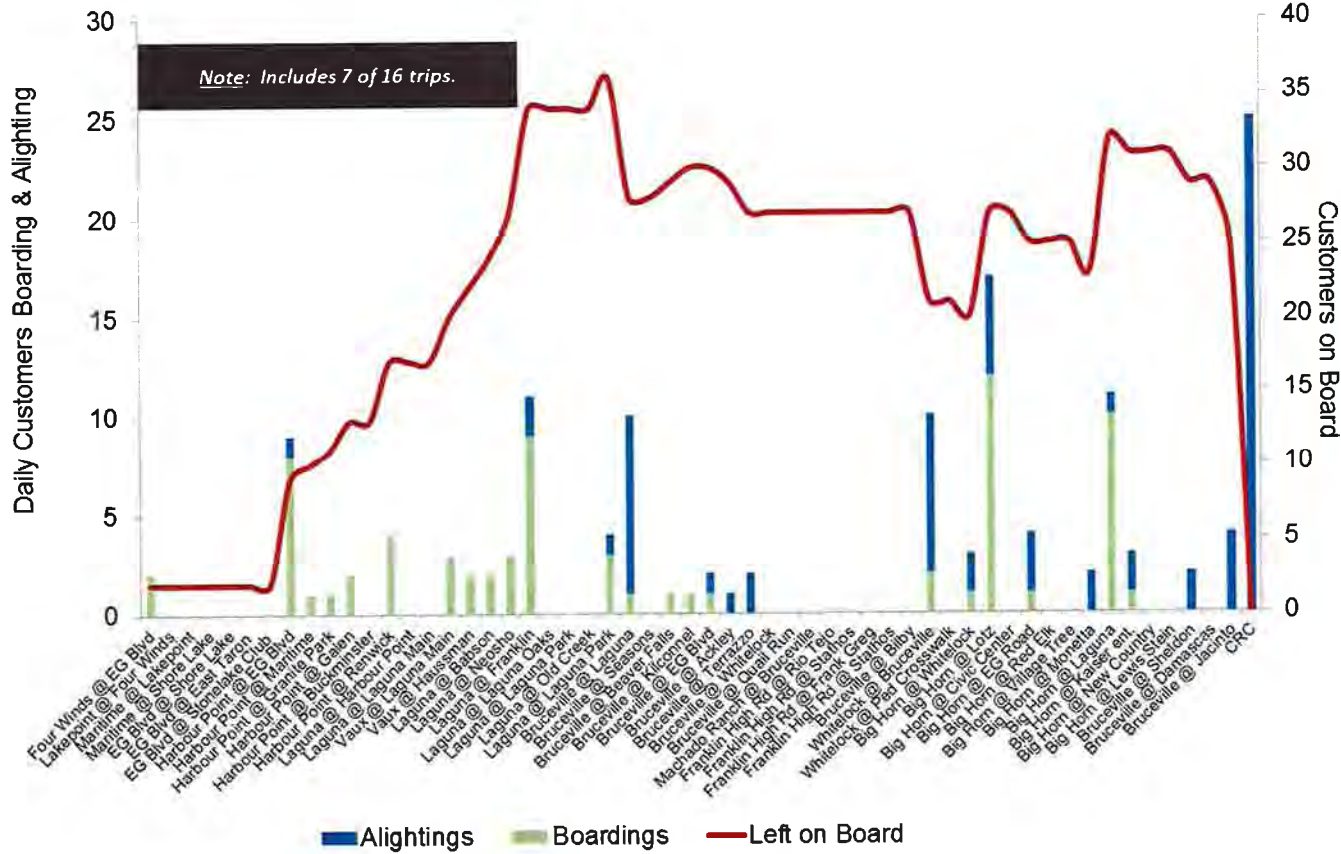
156 Elk Grove Road/Bruceville Westbound




156 EG Road- Bruceville Ridership Analysis

- Highest daily ridership among all E-Tran routes
- Peak trips extend to Meadowview LRT







157 Bruceville/Big Horn/Laguna - Westbound



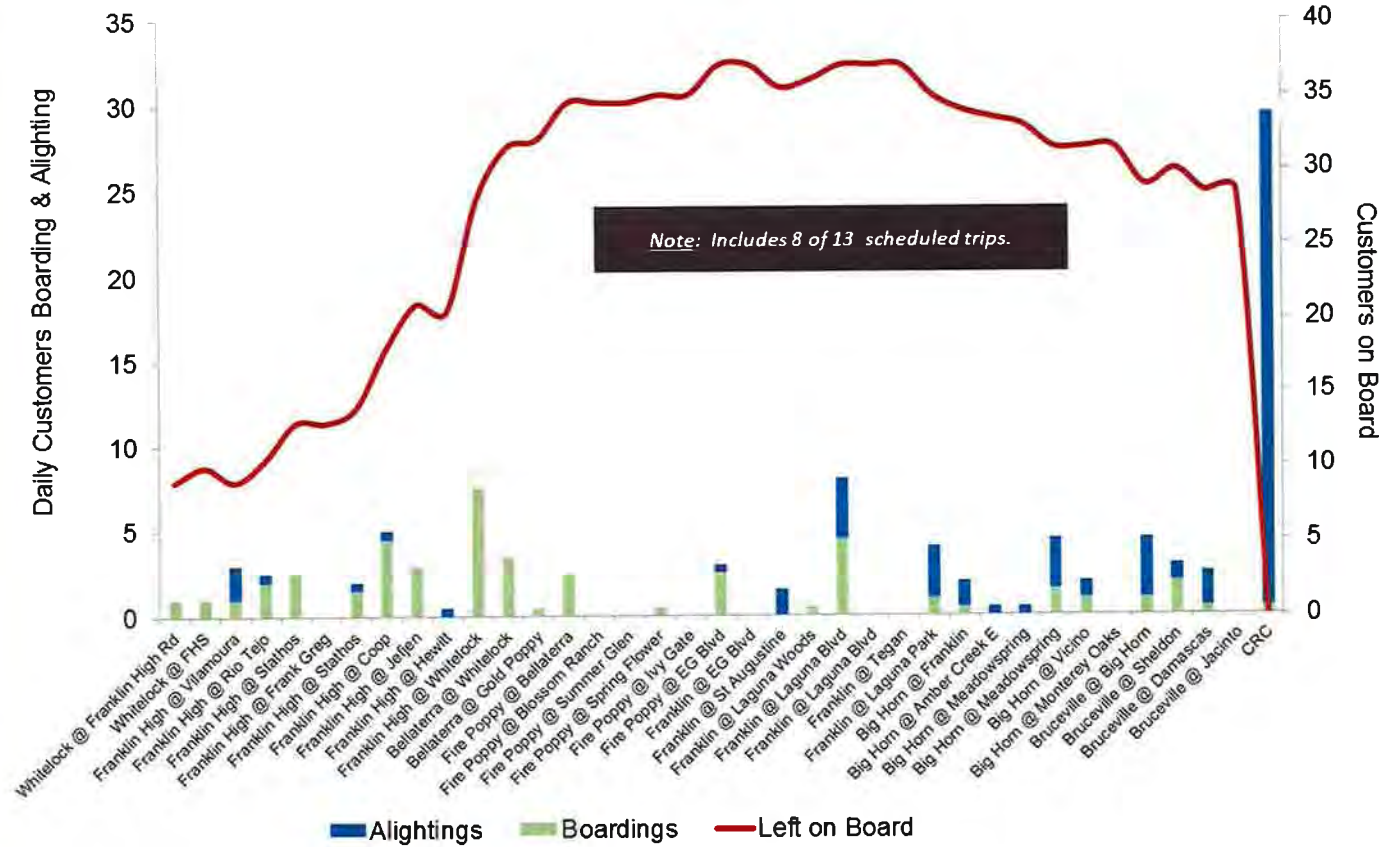
157 Bruceville- Big Horn-Laguna Ridership Analysis

 To be added

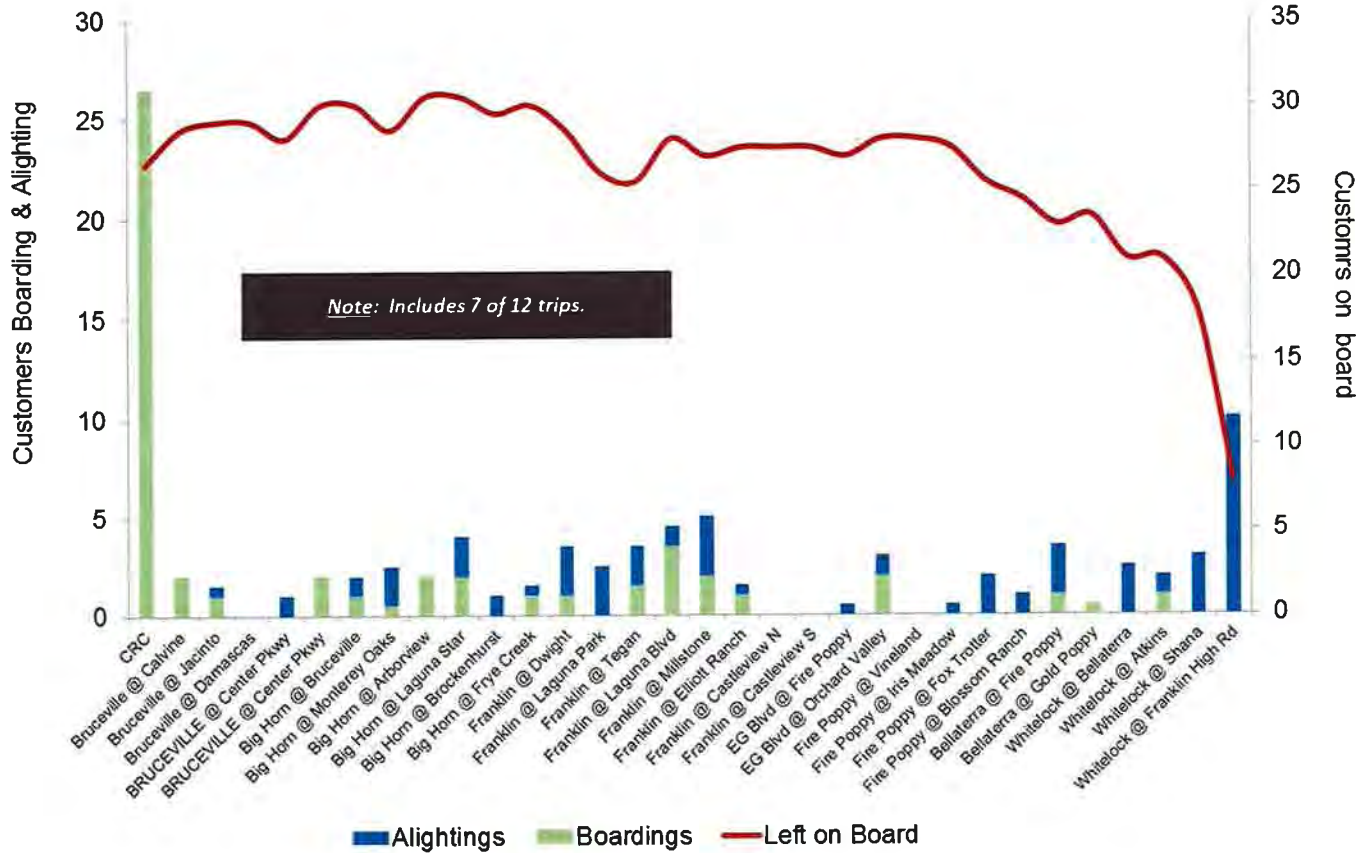
159 Whitelock-Franklin-Big Horn FY 2015 Performance

-  264 average daily boardings
-  26.4% of seated capacity
-  25 daily one-way trips
-  16.9 boardings per RVH
-  Service Frequency
 - 30-75 minutes peak
 - 70-75 minutes midday
-  Runs until 8:04 pm


159 Whitelock-Franklin-Big Horn - Northbound



159 Whitelock-Franklin-Big Horn - Southbound









159 Whitelock-Franklin-Big Horn Ridership Analysis

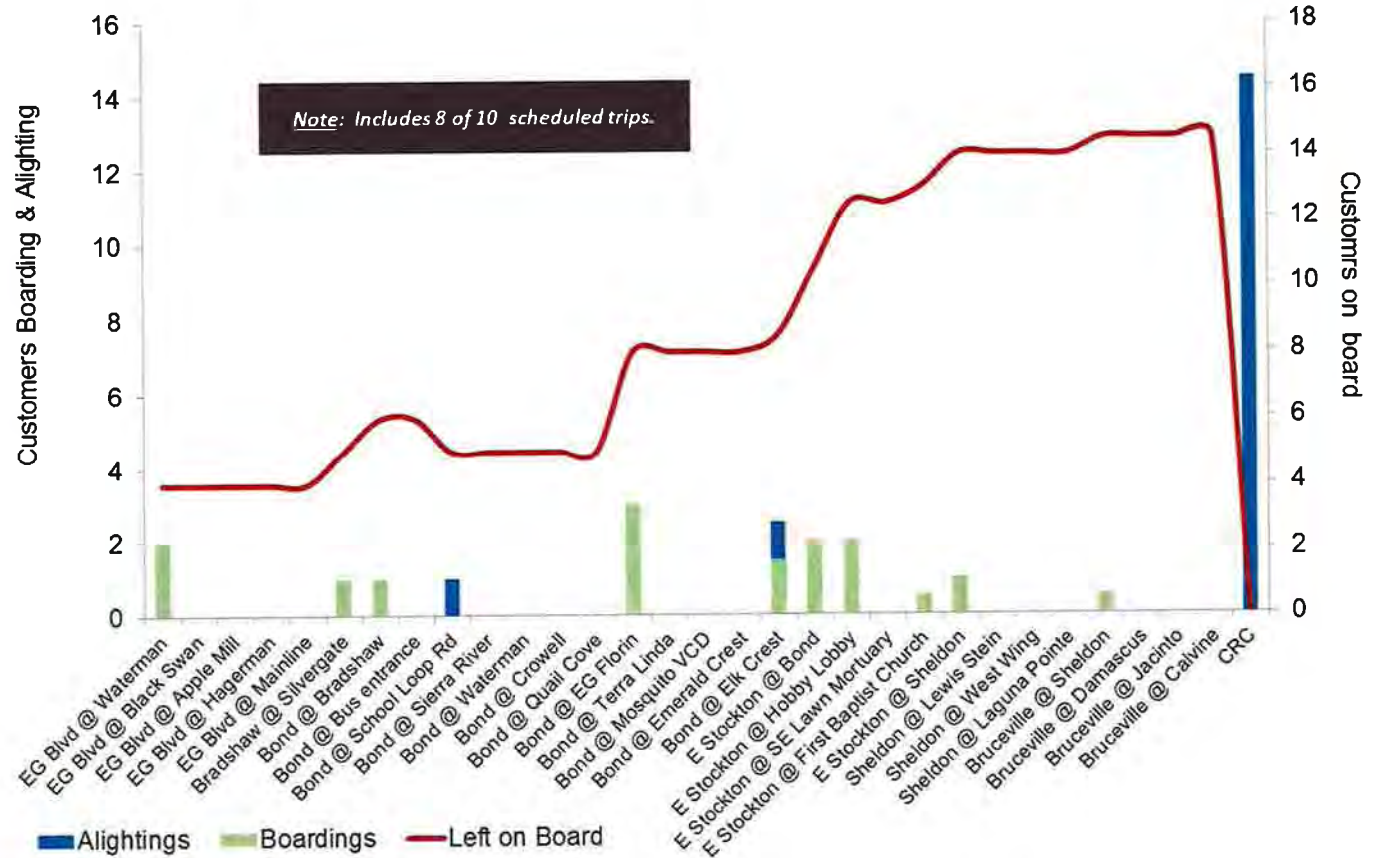
 To be added

160 Bradshaw-Bond

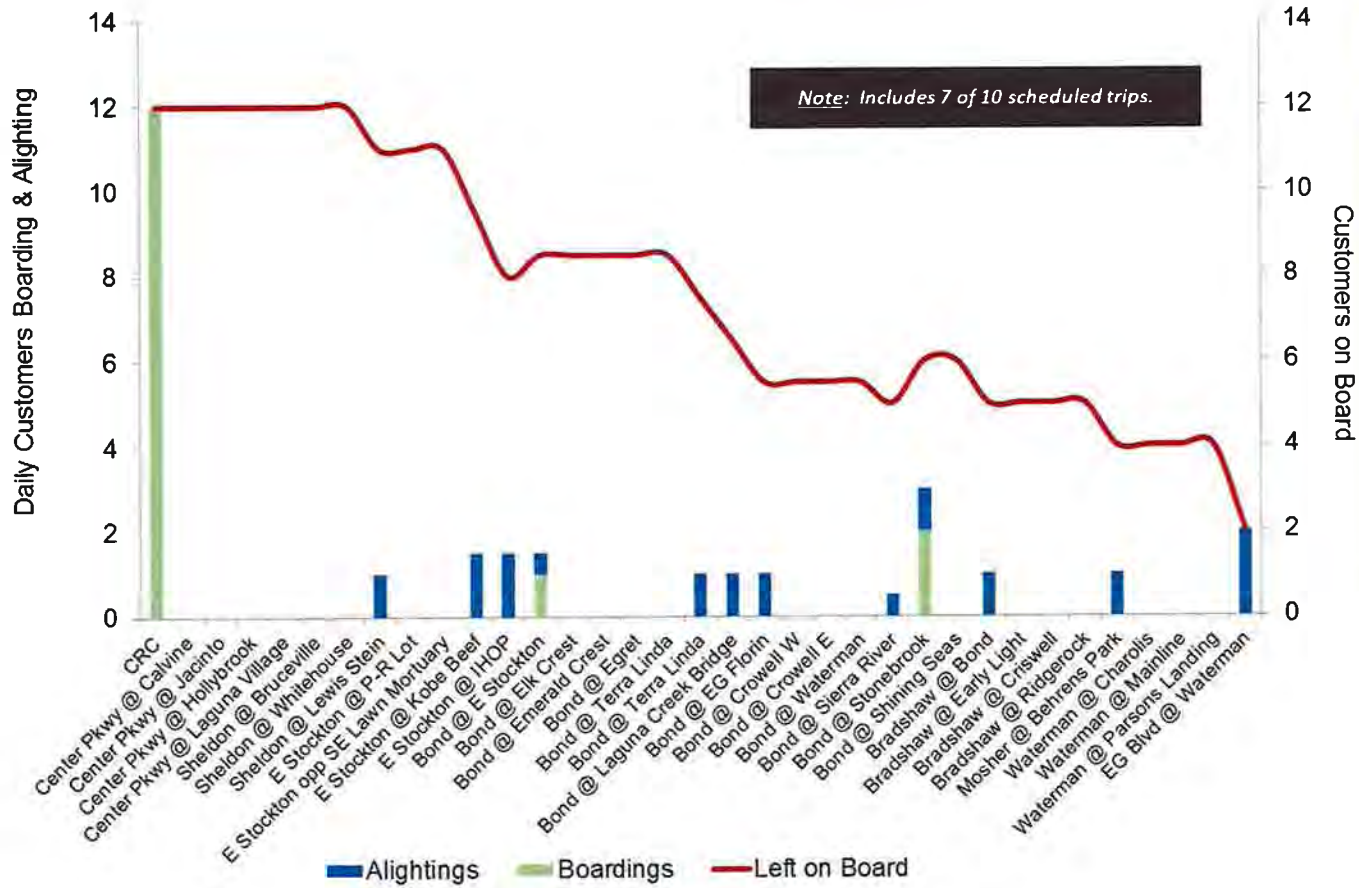
FY 2015 Performance

-  75 average daily boardings
-  9.4% of seated capacity
-  20 daily one-way trips
-  8.1 boardings per RVH
-  Service Frequency
 - 60 minutes peak
 - 120 minutes midday
-  Runs until 6:50 pm

160 Bradshaw-Bond - Northbound







160 Bradshaw-Bond - Southbound



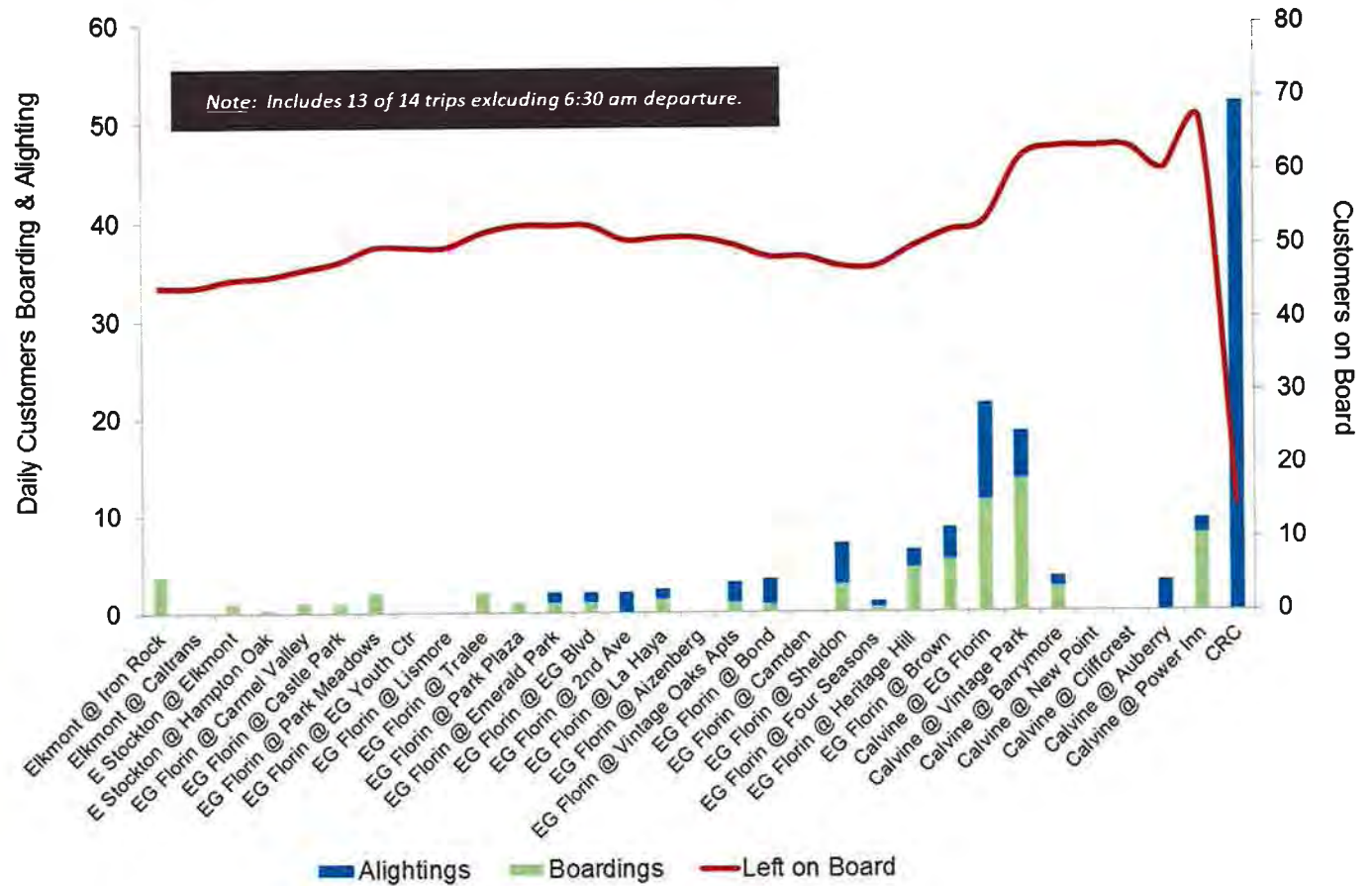
160 Bradshaw-Bond
Ridership Analysis

Lowest ridership / least productive route

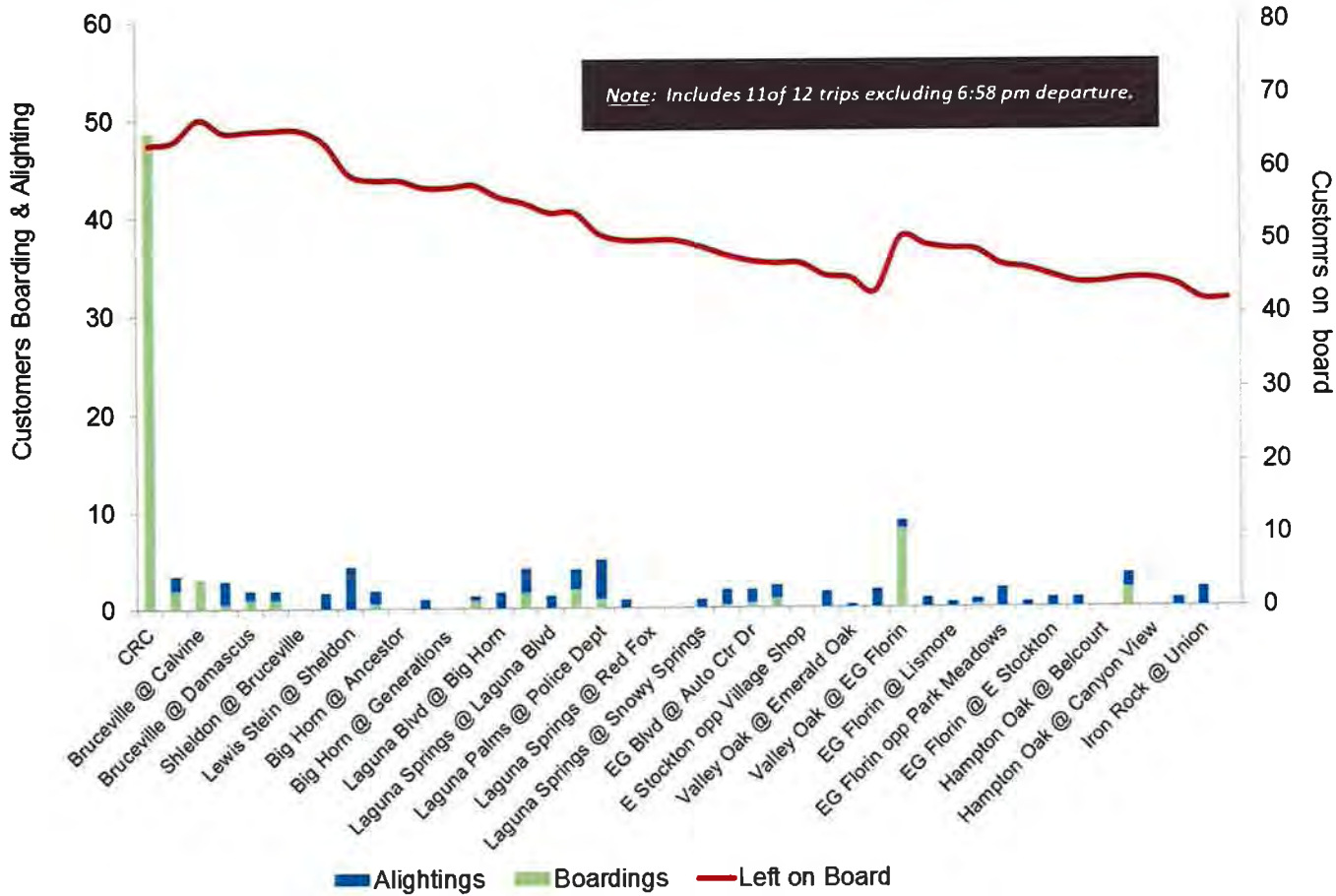
162/162B Calvine-EG Florin Loop FY 2015 Performance

-  171 average daily boardings
-  13.8% of seated capacity
-  31 daily one-way trips
-  10.0 boardings per RVH
-  67 minute frequency peak & midday
-  Runs until 9:24 pm

162 Calvine-EG Florin Loop Northbound



162 Calvin-EG Florin - Southbound



162 Calvin-EG Florin

Ridership Analysis

To be added






Franklin High School Extras

151 Elk Grove Blvd - Franklin

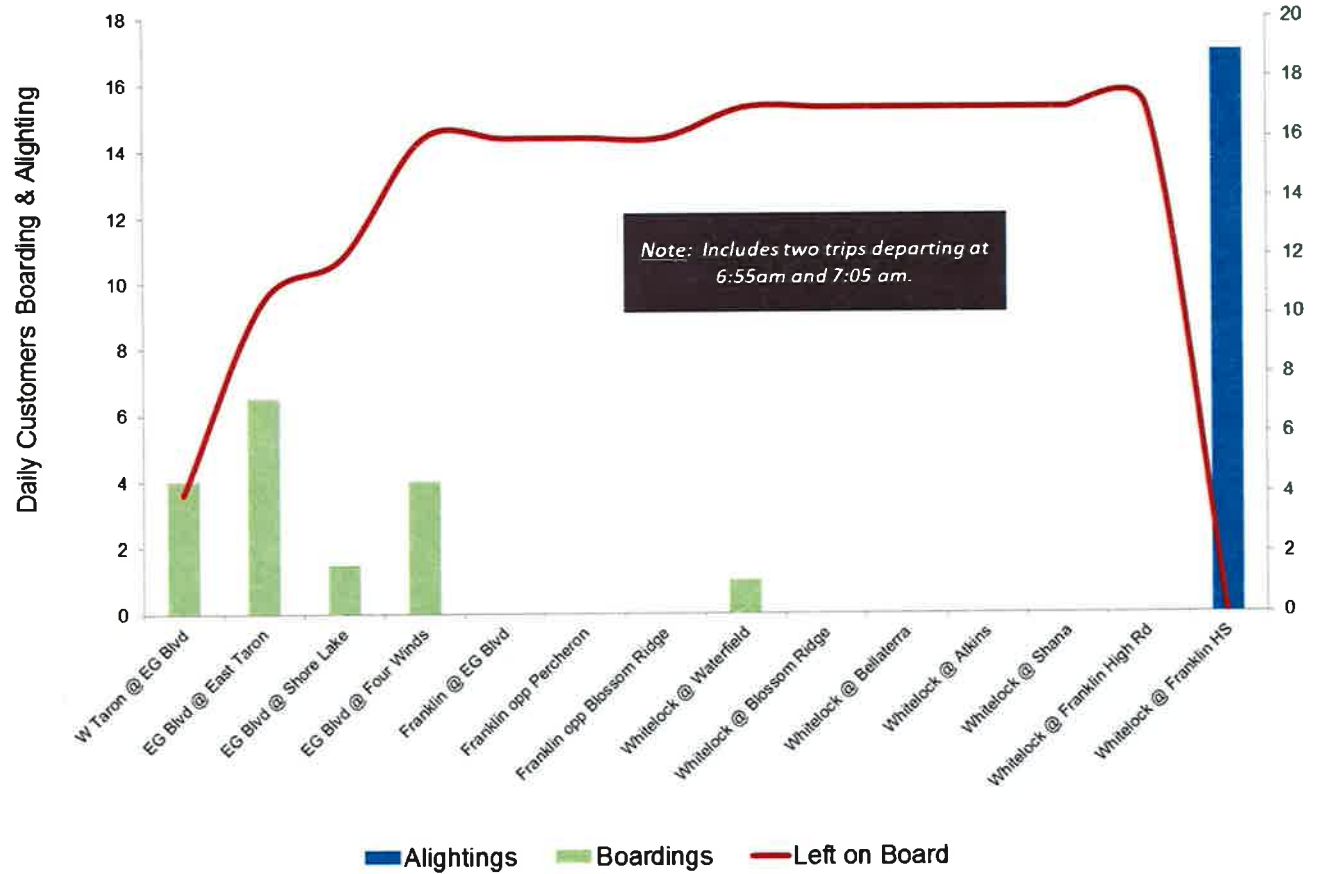
152 Harbour – Laguna - Franklin

153 Harbour – Laguna – Fire Poppy

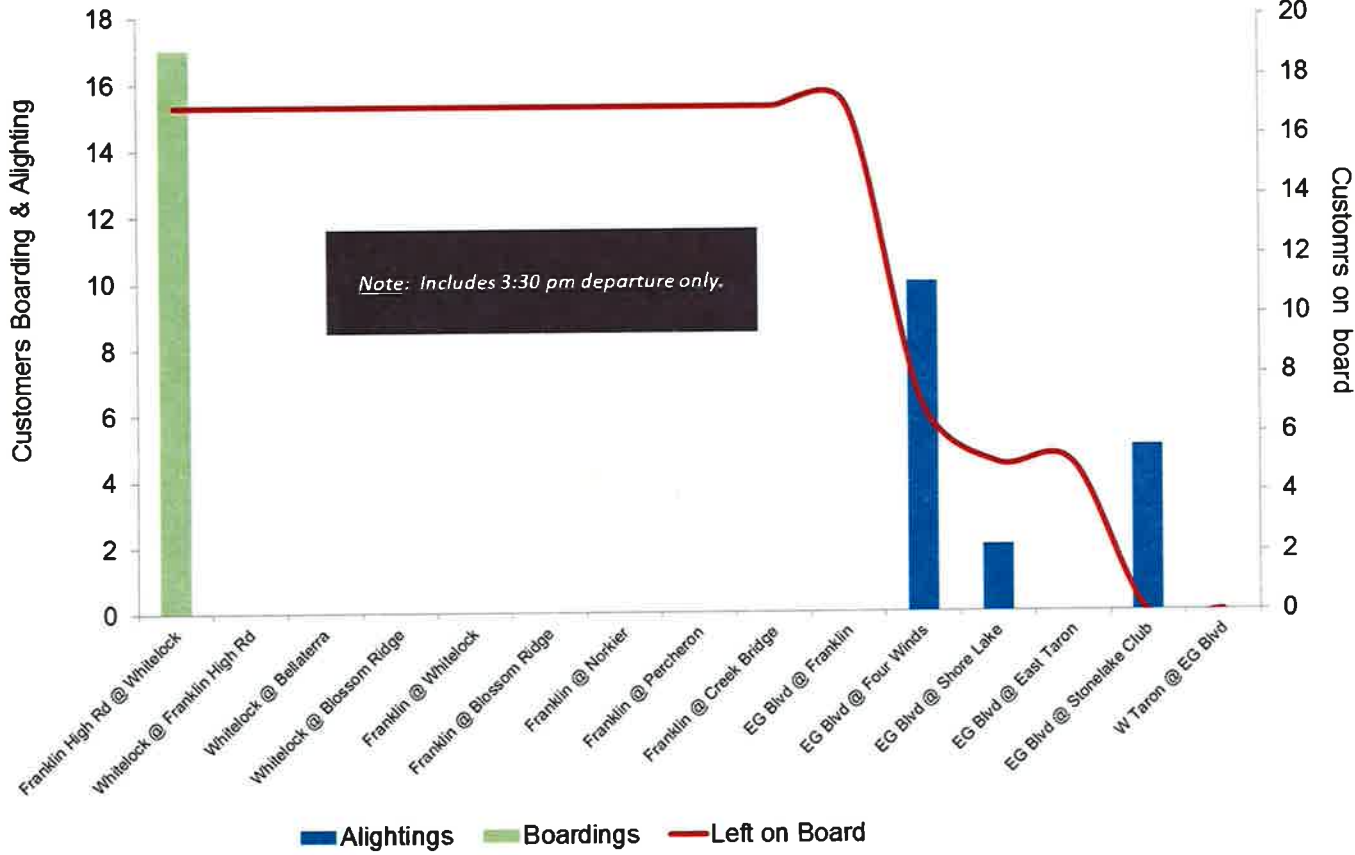
151 EG Blvd- Franklin/FHS FY 2015 Performance

-  52 average daily boardings
-  25.9% of seated capacity
-  5 daily one-way trips
-  21.2 boardings per revenue vehicle hour
-  10-15 minute peak frequency


151 EG Blvd-Franklin/FHS - Morning








151 EG Blvd-Franklin/FHS - Afternoon



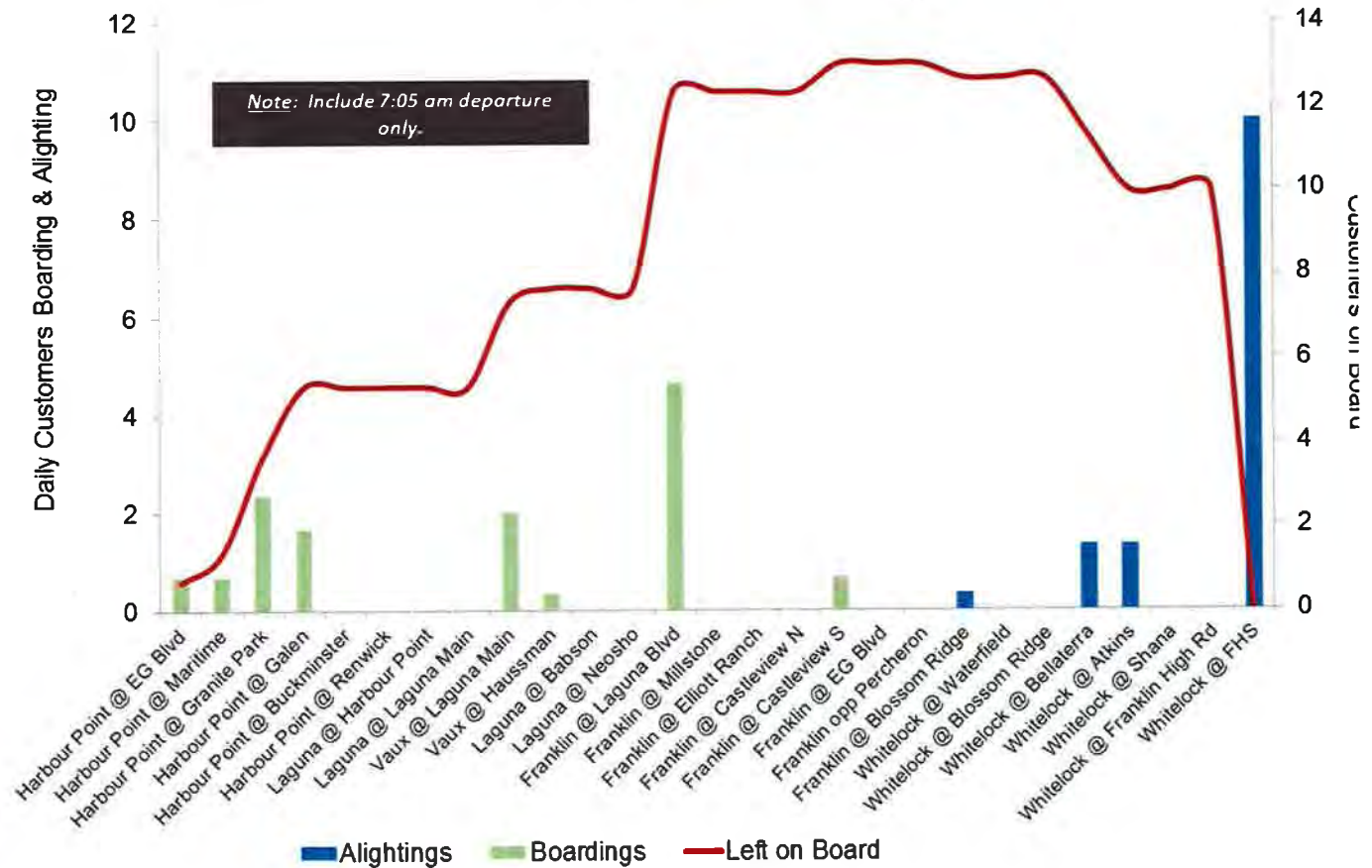
151 EG Blvd-Franklin/FHS Ridership Analysis

 To be added

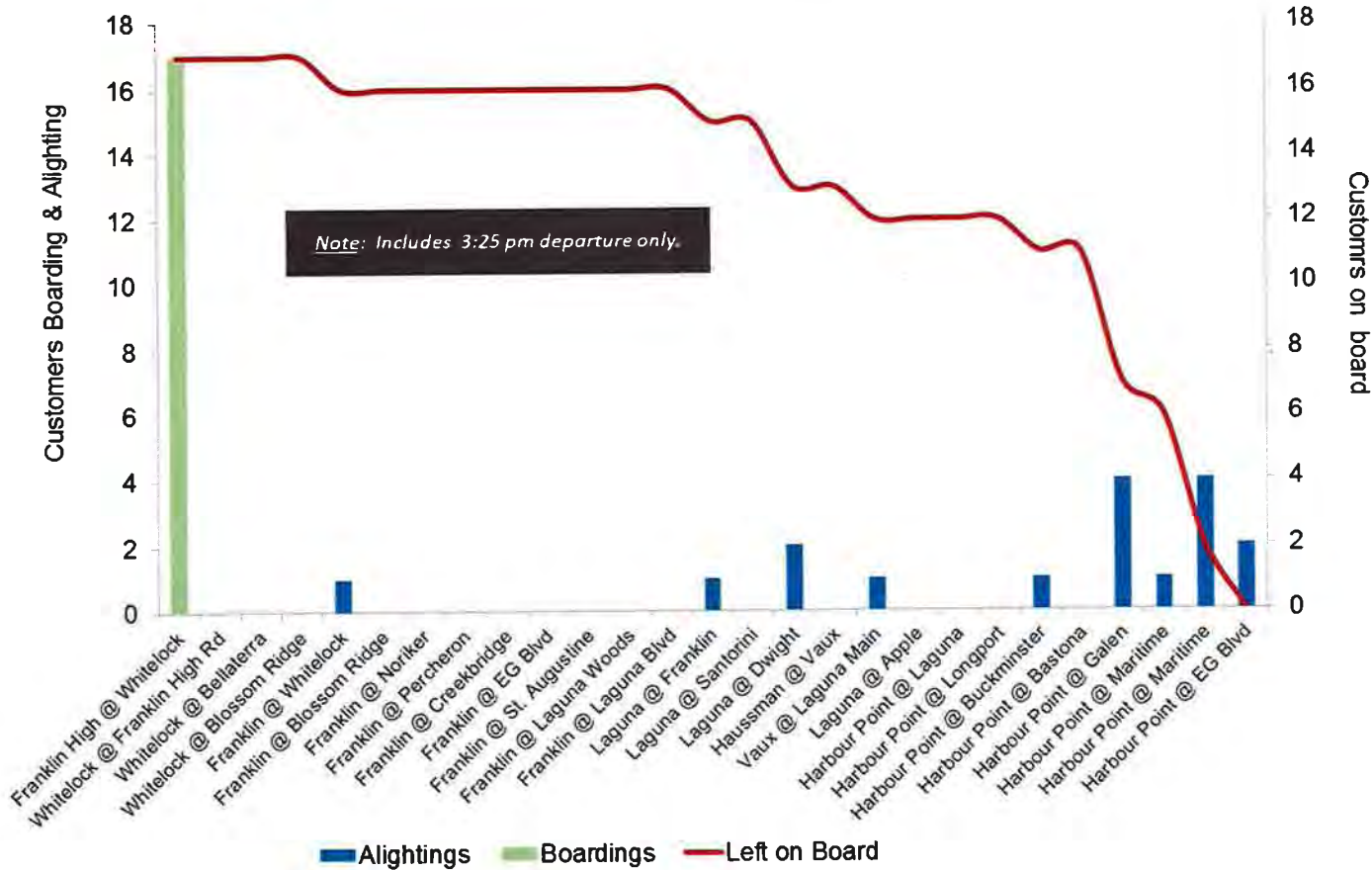
152 Harbour-Laguna-Franklin/FHS FY 2015 Performance

-  60 average daily boardings
-  30.0% of seated capacity
-  5 daily one-way trips
-  21.5 boardings per revenue vehicle hour
-  10-15 minute peak frequency

152 Harbour-Laguna-Franklin to FHS - Morning



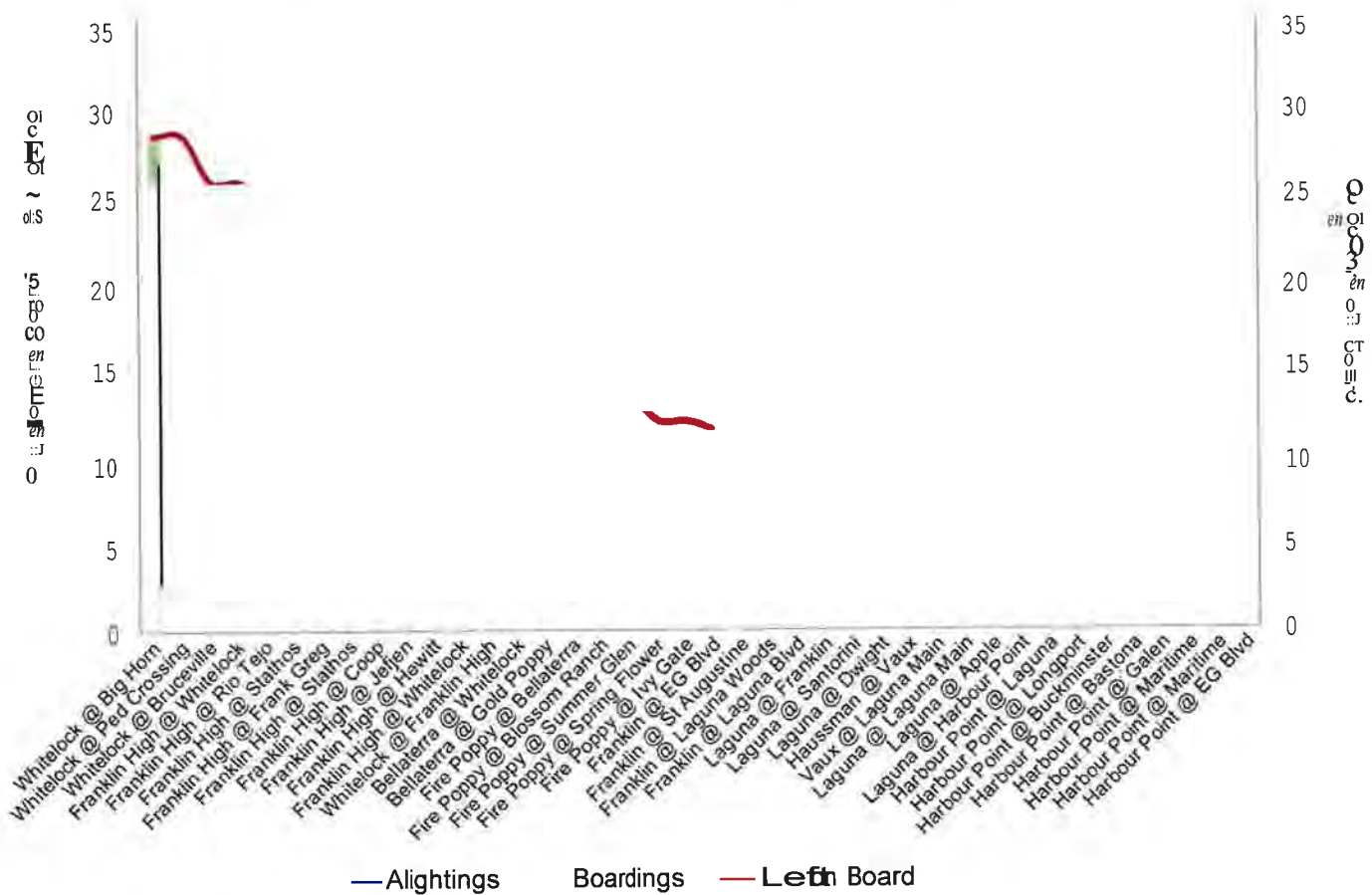
152 FHS to Franklin-Laguna-Harbour - Afternoon



152 Harbour-Laguna-Franklin/FHS Ridership Analysis

 To be added

153 FHS to Fire Poppy-Laguna-Harbour - Afternoon



Weekend Service

163 Shuttle A Counter-clockwise Loop

163 Shuttle B Clockwise Loop

No data available

No data available



E-Tran Commuter Route Analysis

Updated Draft – work in progress
September 2015

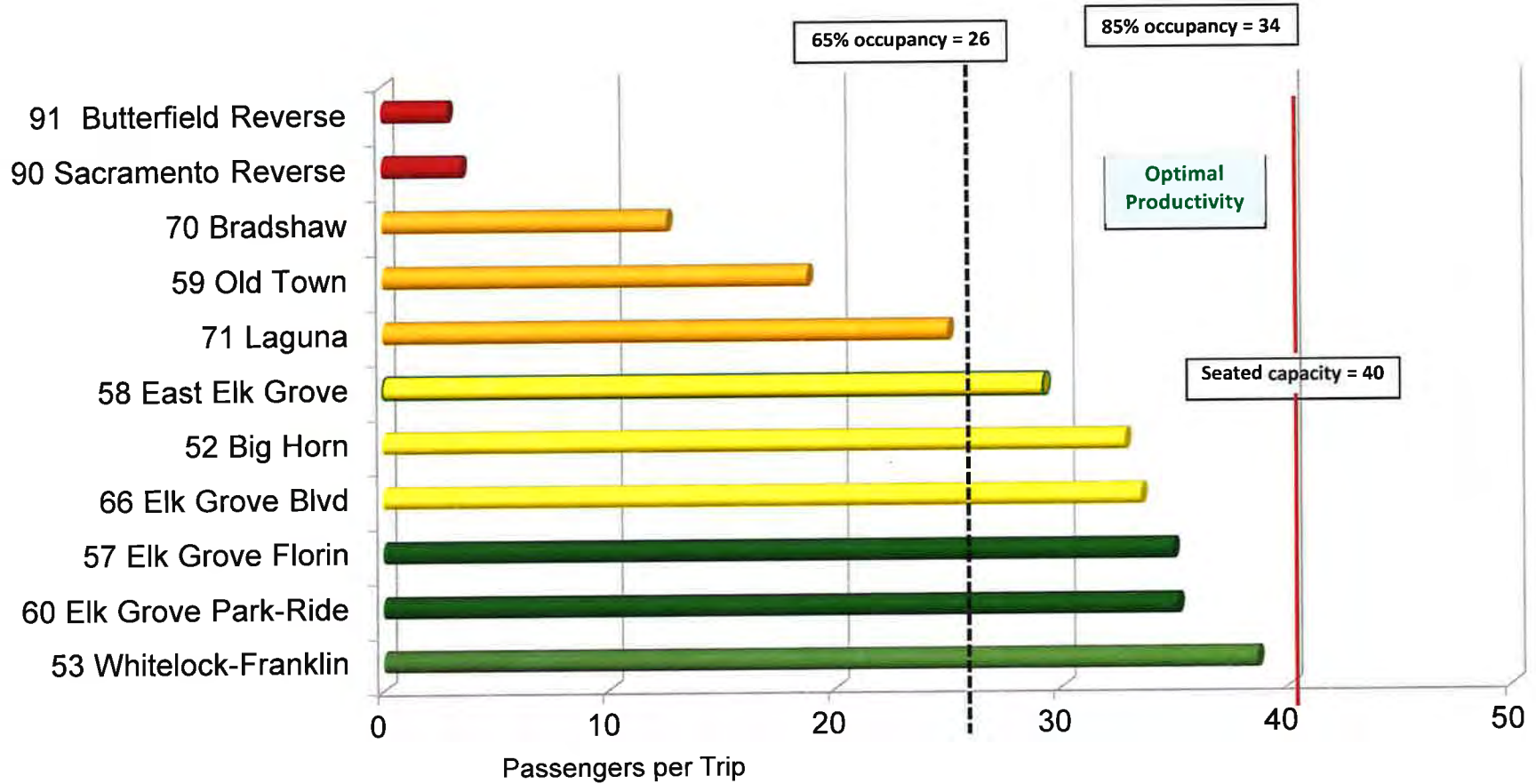


Prepared for the City of Elk Grove
by IBI Group






E-Tran Commuter Route Productivity

Customer Boardings per One-way Trip

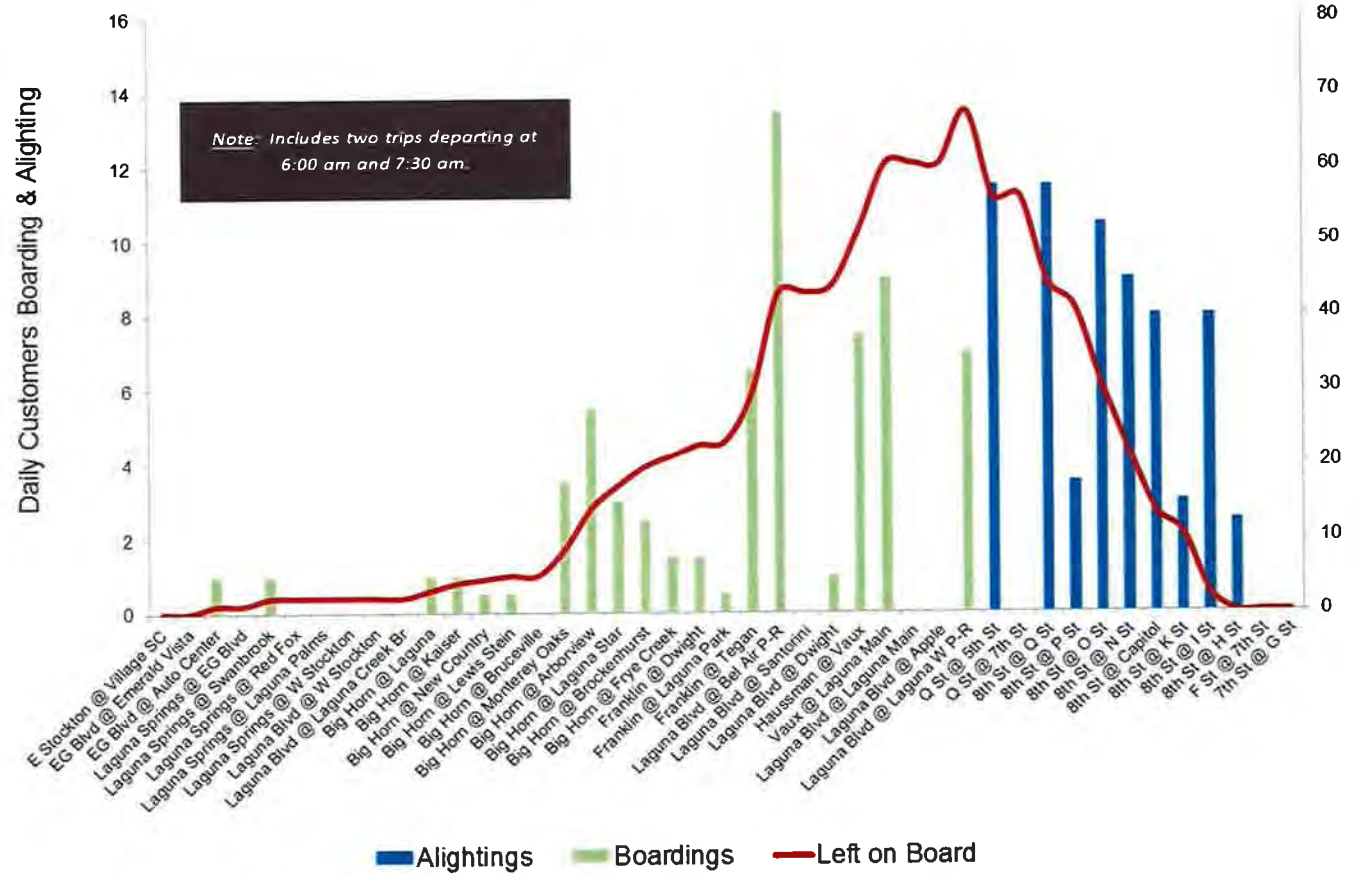
FY 2015

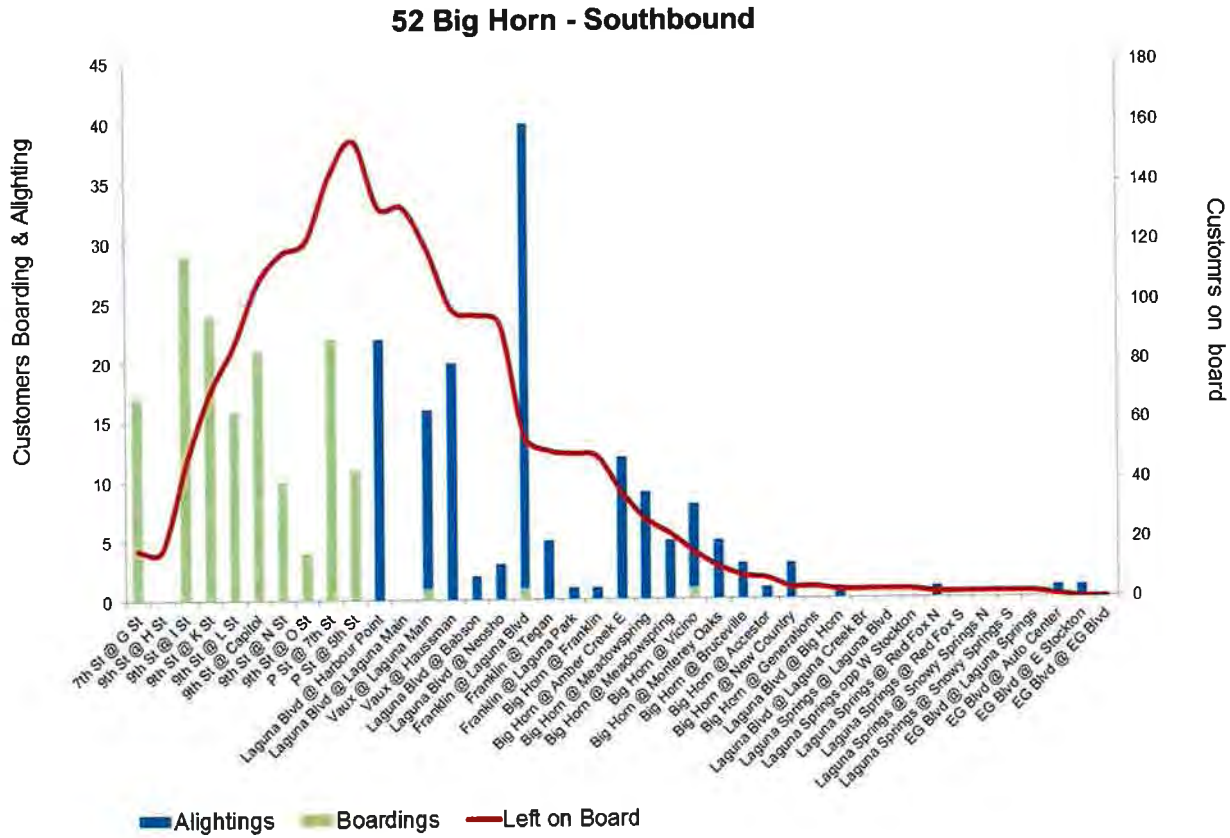


52 Big Horn Express FY 2015 Performance

-  521 average daily boardings
-  82.1% of seated capacity
-  16 daily one-way trips
-  18.3 mph in scheduled service
-  Average 15 minute peak frequency

52 Big Horn - Northbound










52 Big Horn Express Ridership Analysis

- Two-thirds of boardings & alightings occur west of Laguna & Franklin:
 - Laguna West P-R
 - Bel Air P-R
 - Laguna Main transfer point

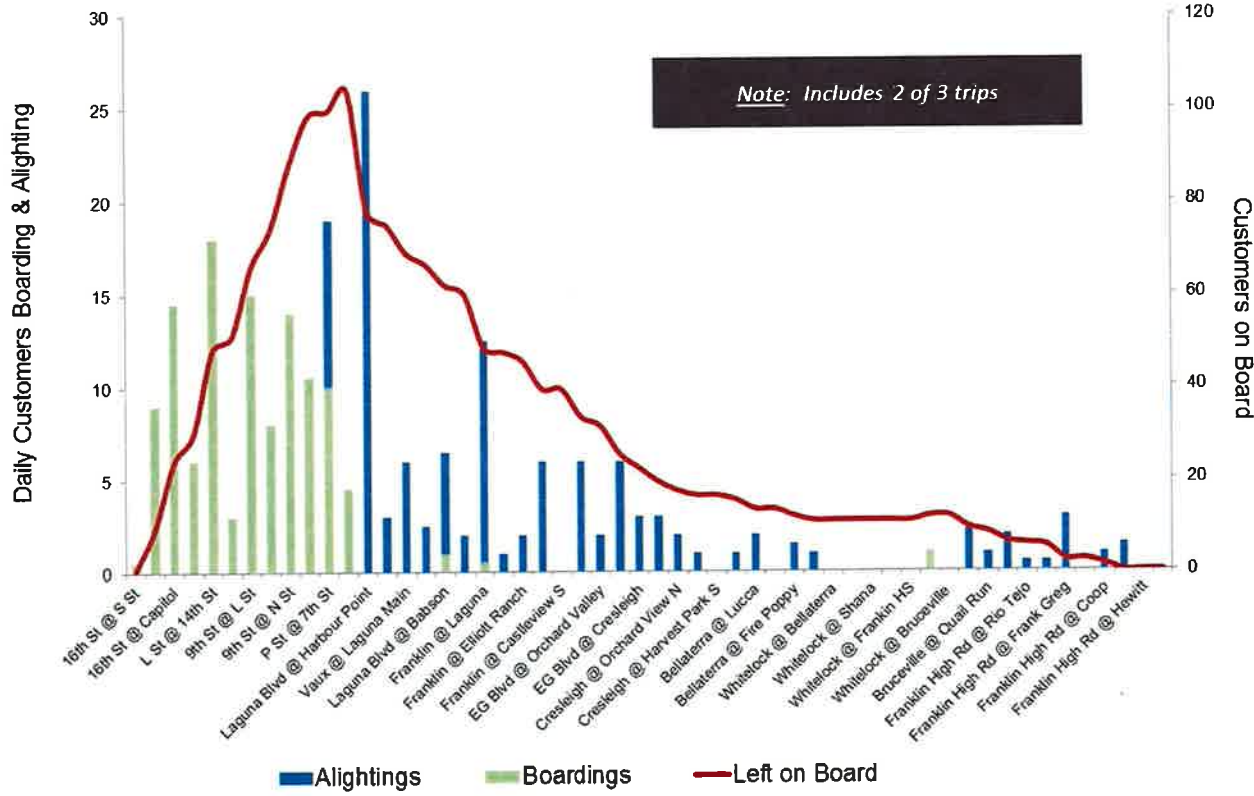
- Fewer than 10 customers board & alight east of Bruceville Road.

53 Whitelock/Franklin Express FY 2015 Performance


-  232 average daily boardings
-  96.6% of seated capacity
-  6 daily one-way trips
-  19.1 mph in scheduled service
-  Variable peak frequency 15-35 minutes


No data available for Route 53
Whitelock/Franklin Express
Northbound

53 Whitelock/Franklin - Southbound








53 Whitelock/Franklin Express Ridership Analysis

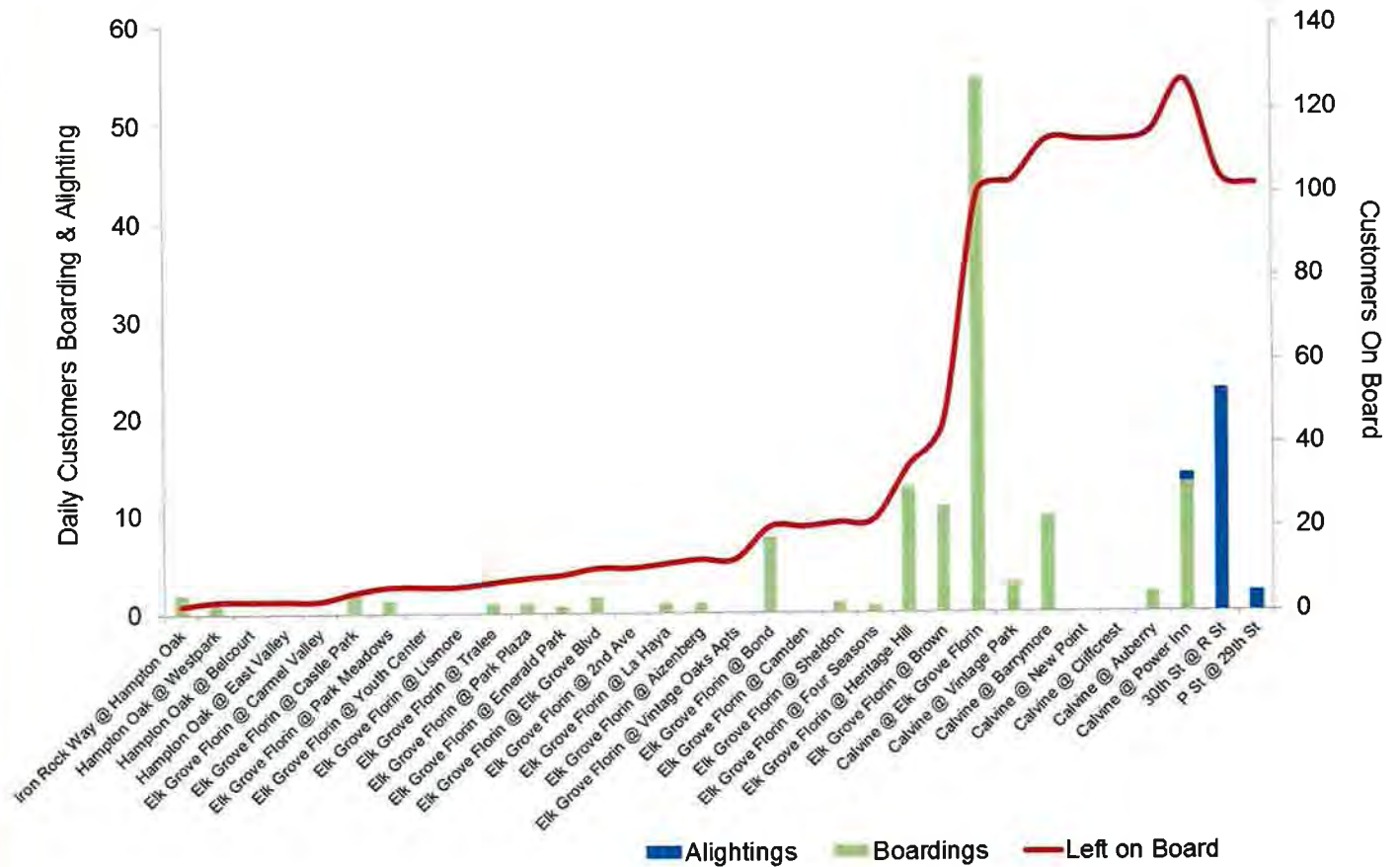
-  63% of boardings & alightings occur west of Laguna & Franklin:
 - Laguna West P-R
 - Bel Air P-R
 - Laguna Main transfer point

-  Fewer than 15 customers board & alight south of Alessandria Drive & Bellaterra Drive

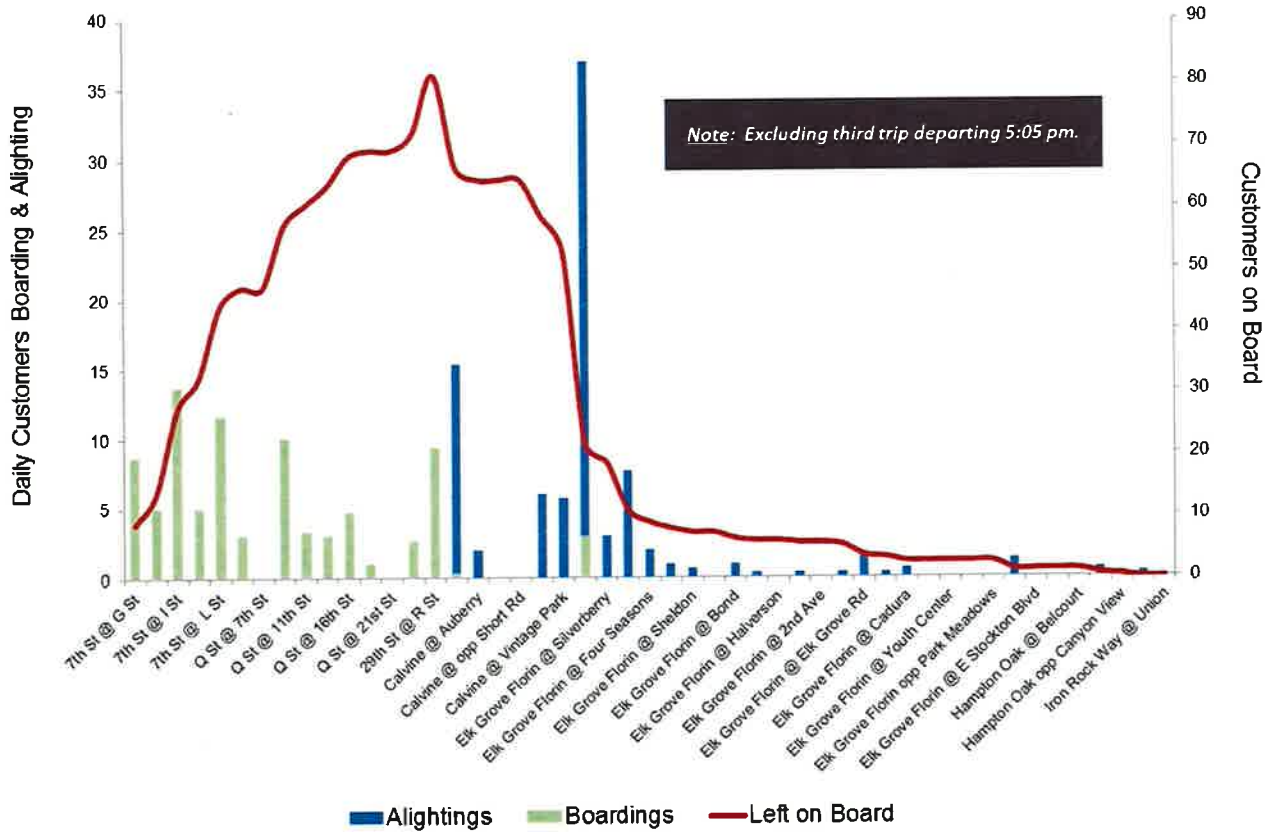
57 Elk Grove Florin Express FY 2015 Performance

-  210 average daily boardings
-  87.3% of seated capacity
-  6 daily one-way trips
-  17.1 mph in scheduled service
-  Variable peak frequency 20-30 minutes



57 Elk Grove Florin Road - Northbound




57 Elk Grove Florin Road - Southbound








57 Elk Grove Florin Express Ridership Analysis

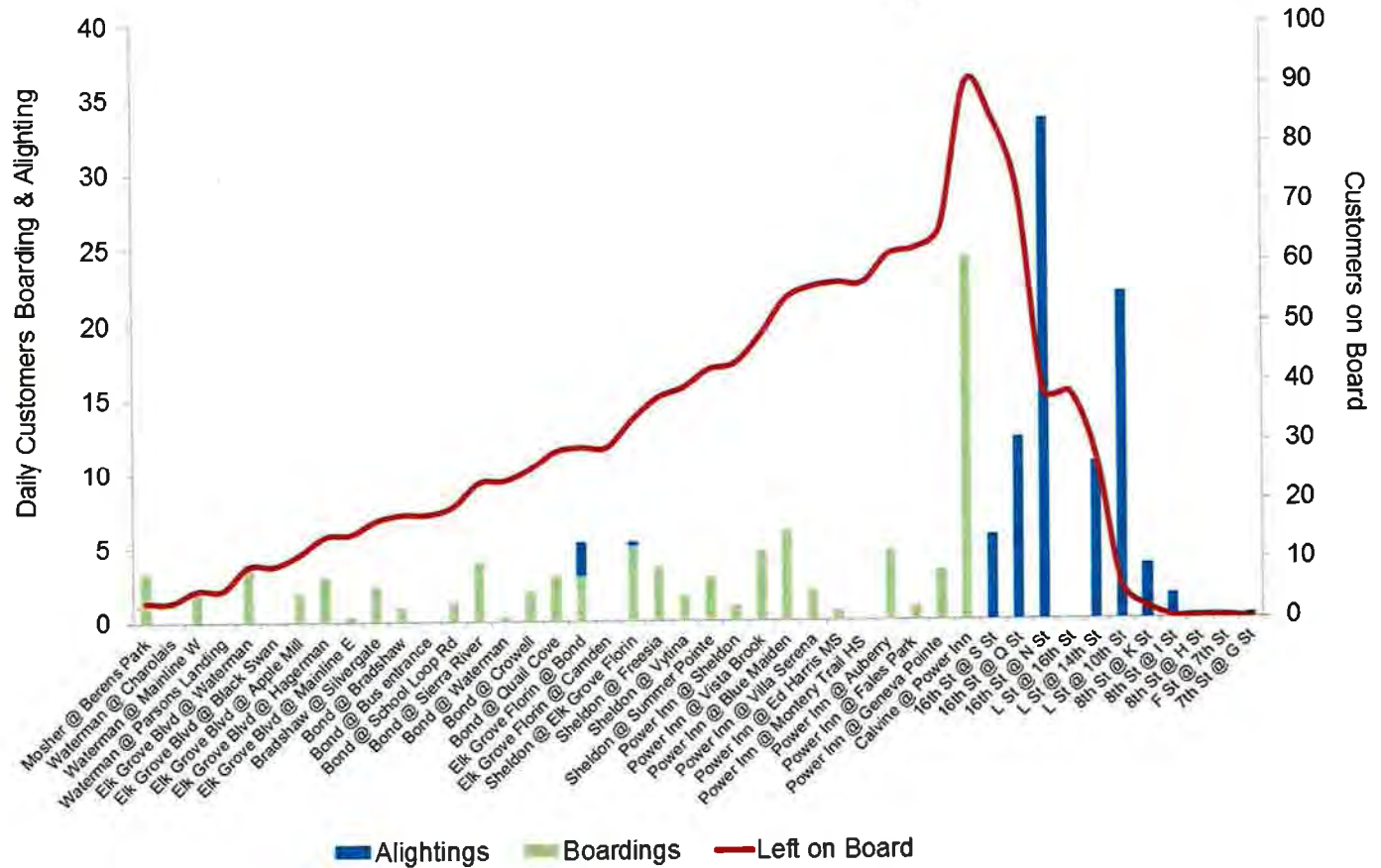
-  55% of boardings & alightings occur at Bealir Air Village and Lowes park-ride lots.
 -  30-35 minute ride to Downtown Sacramento

-  90% of customers board & alight north of Alessandria Drive @ Bellaterra Drive

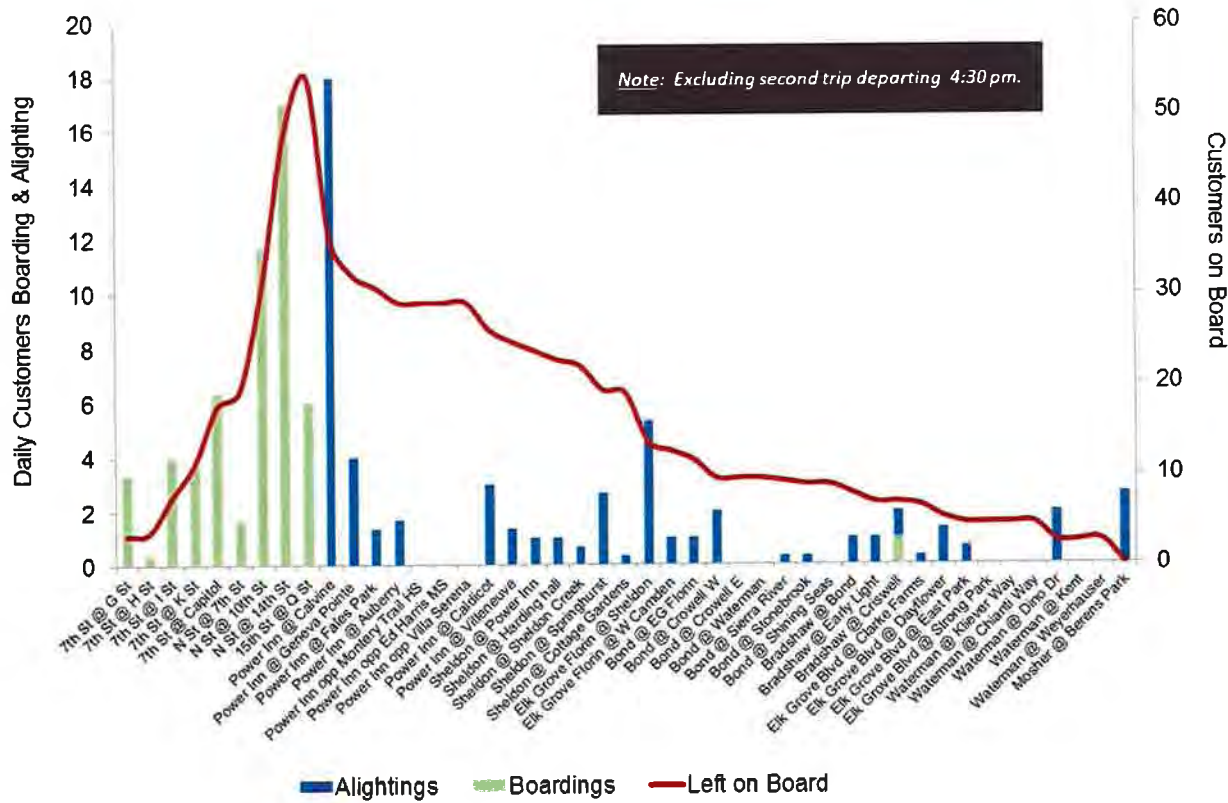
58 East Elk Grove Express FY 2015 Performance

-  175 average daily boardings
-  72.9% of seated capacity used
-  6 daily one-way trips
-  16.7 mph in scheduled service
-  Variable peak frequency 20-55 minutes



58 East Elk Grove - Northbound AM



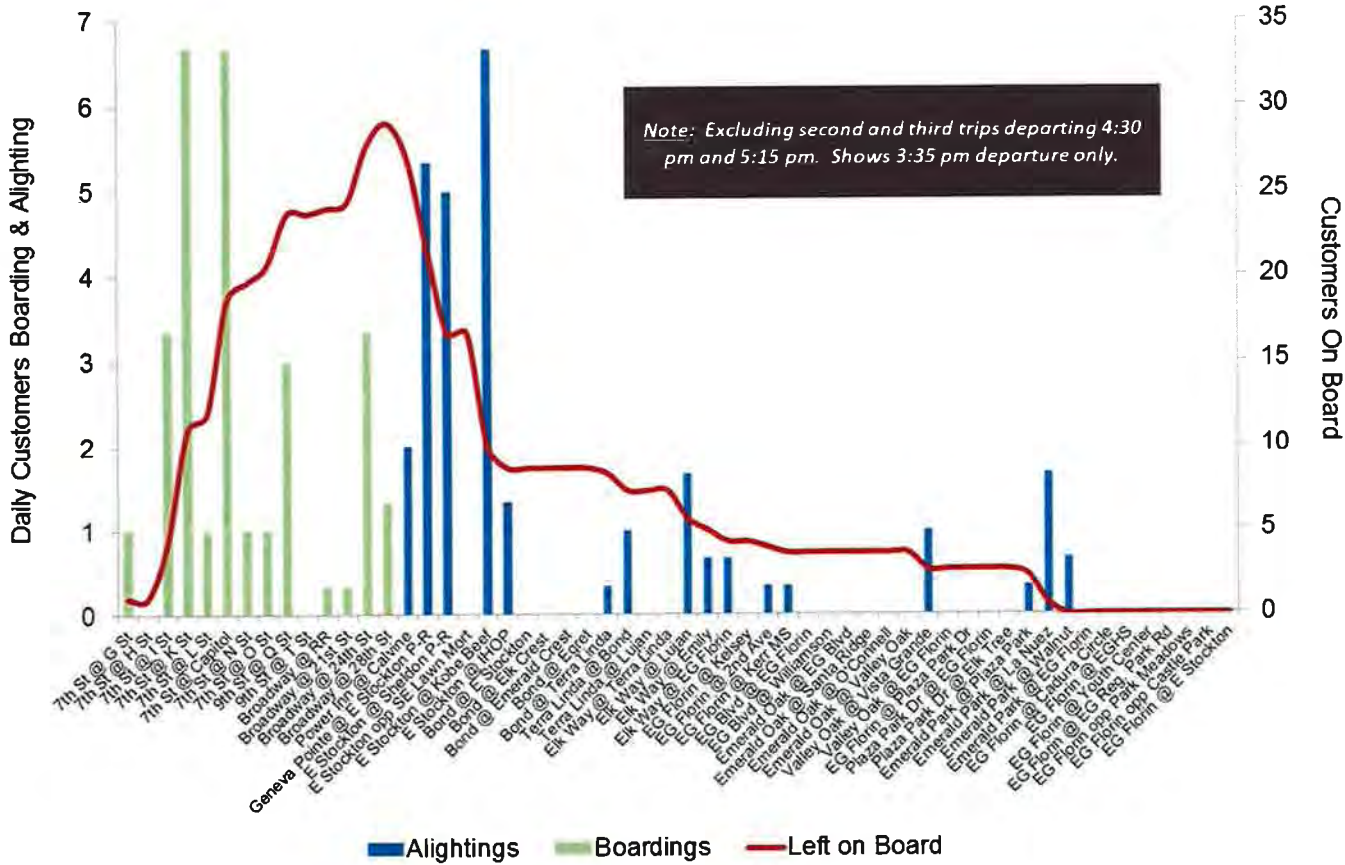
58 East Elk Grove - Southbound





58 East Elk Grove Express Ridership Analysis

-  One-third of boardings & alightings occur at Lowes Park-Ride lot at Calvin Road
 - 30 minute ride to Downtown
-  85% of customers board & alight west of Bond Road @ Bradshaw Road






59 Old Town - Southbound



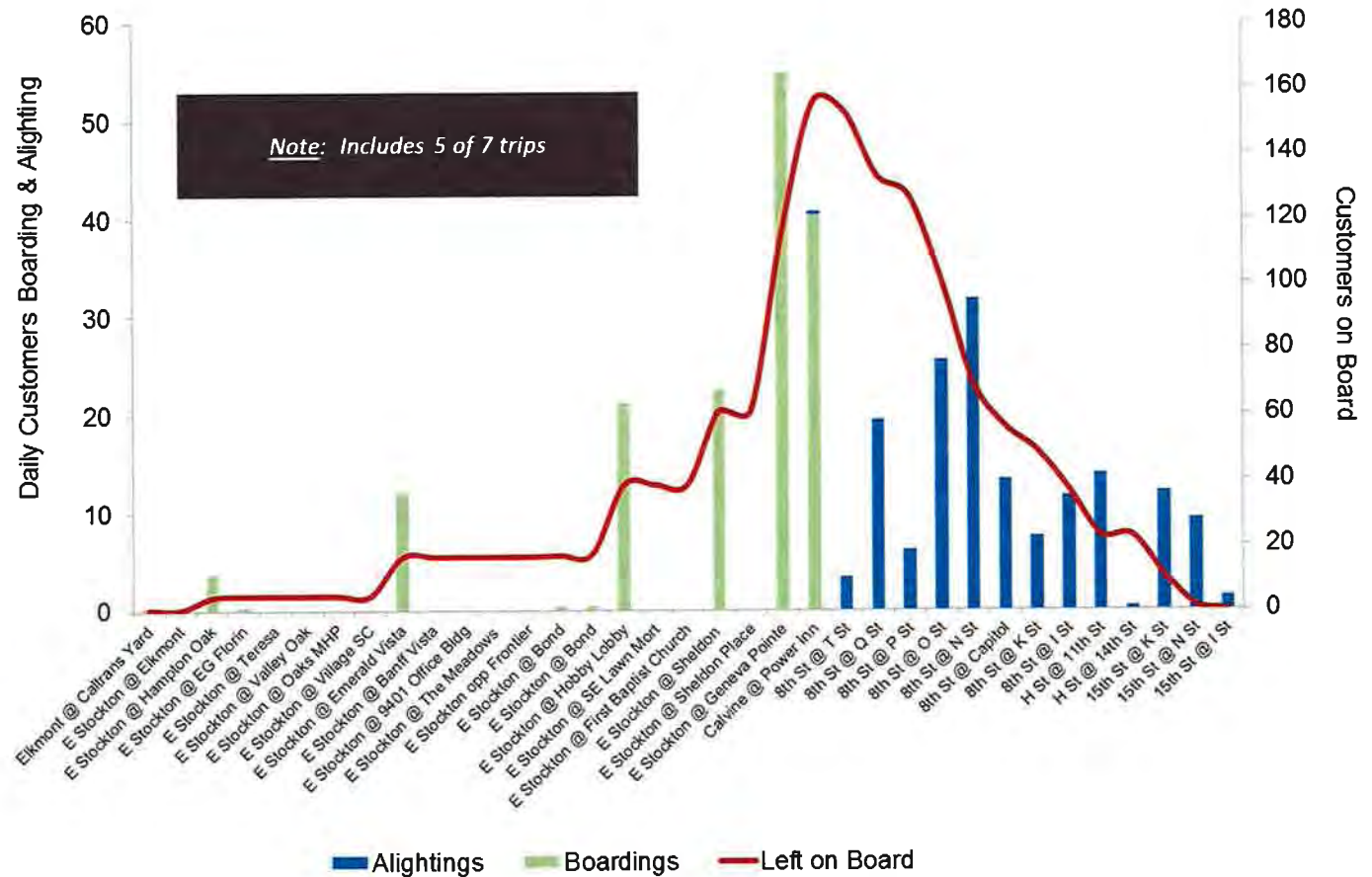
59 Old Town Express Ridership Analysis

-  Half of all boardings & alightings occur at park-ride lots:
 - Marketplace 99 (Bond Road)
 - Caltrans (Sheldon Road)
-  80% of customers board & alight north of Bond Road @ Terra Linda Drive

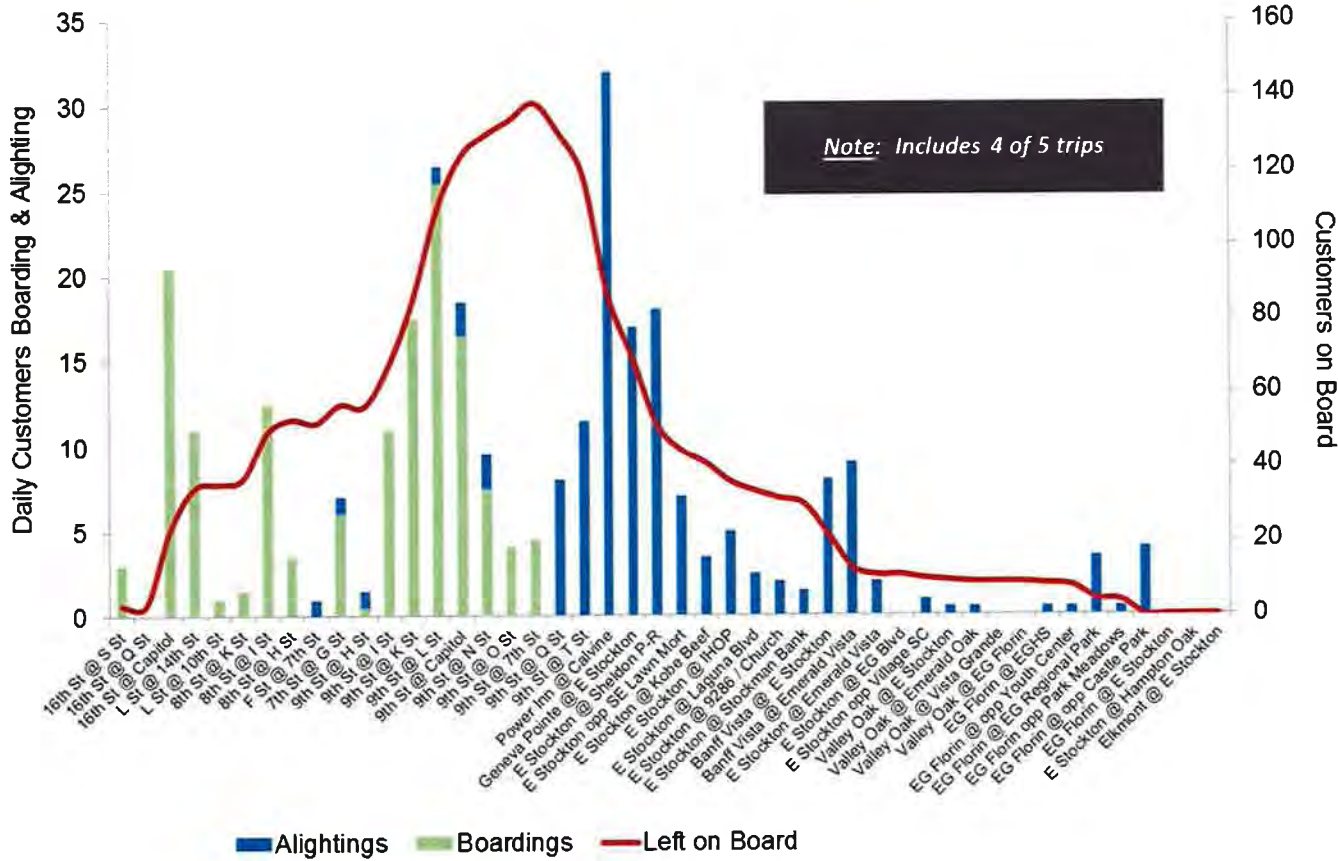
60 Elk Grove Park-Ride Express FY 2015 Performance

-  418 average daily boardings
-  87.7% of seated capacity used
-  12 daily one-way trips
-  18.0 mph in scheduled service
-  Variable peak frequency 15-30 minutes

60 Elk Grove Park-Ride - Northbound



60 Elk Grove Park-Ride - Southbound








60 Elk Grove Park-Ride Express Ridership Analysis

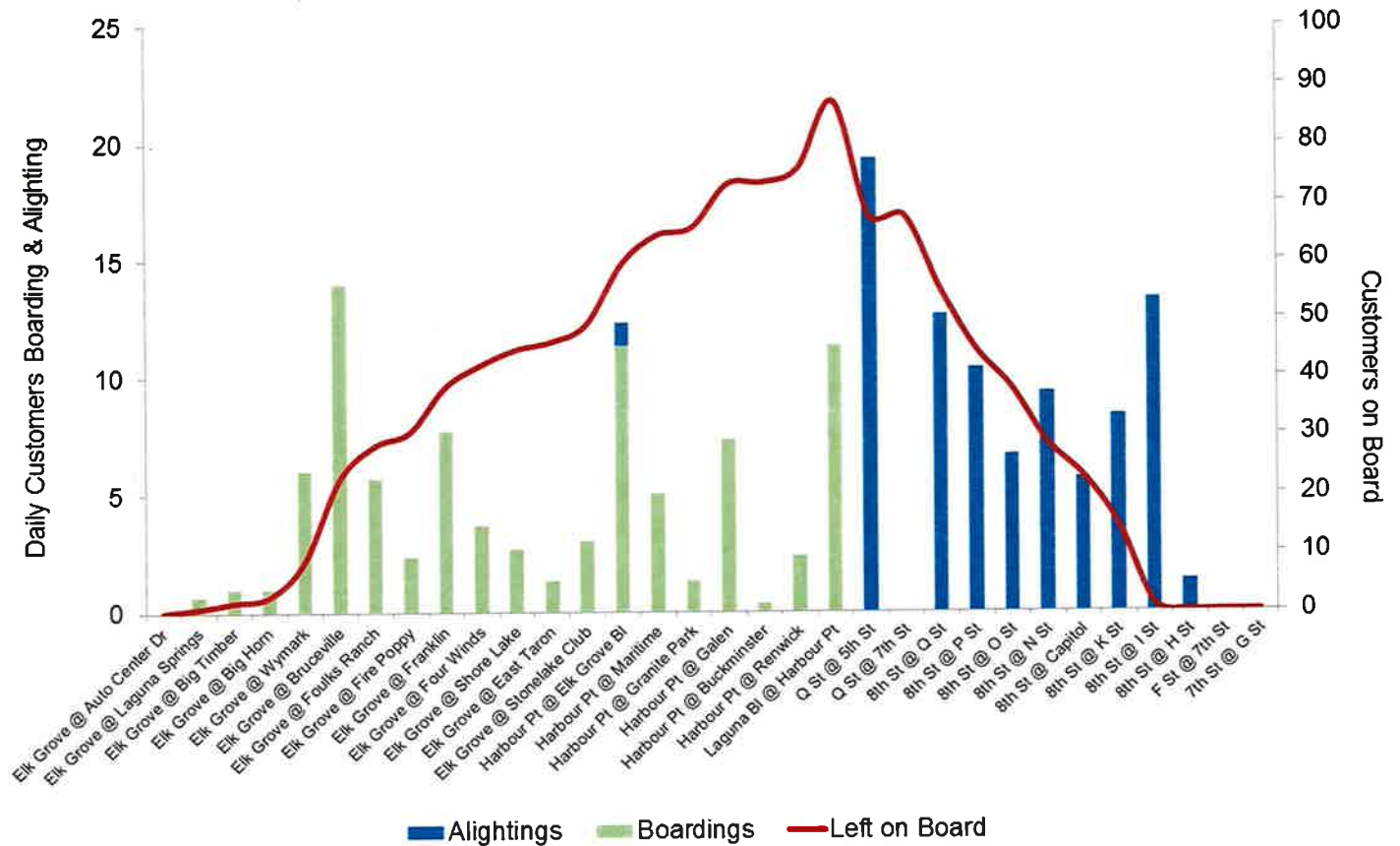
- 76% of all boardings & alightings occur at park-ride lots:
 - Geneva Pointe (Calvine Road)
 - Lowes (Calvine Road)
 - Caltrans (Sheldon Road)
- 89% of customers board & alight north of Bond Road

66 Elk Grove Blvd Express

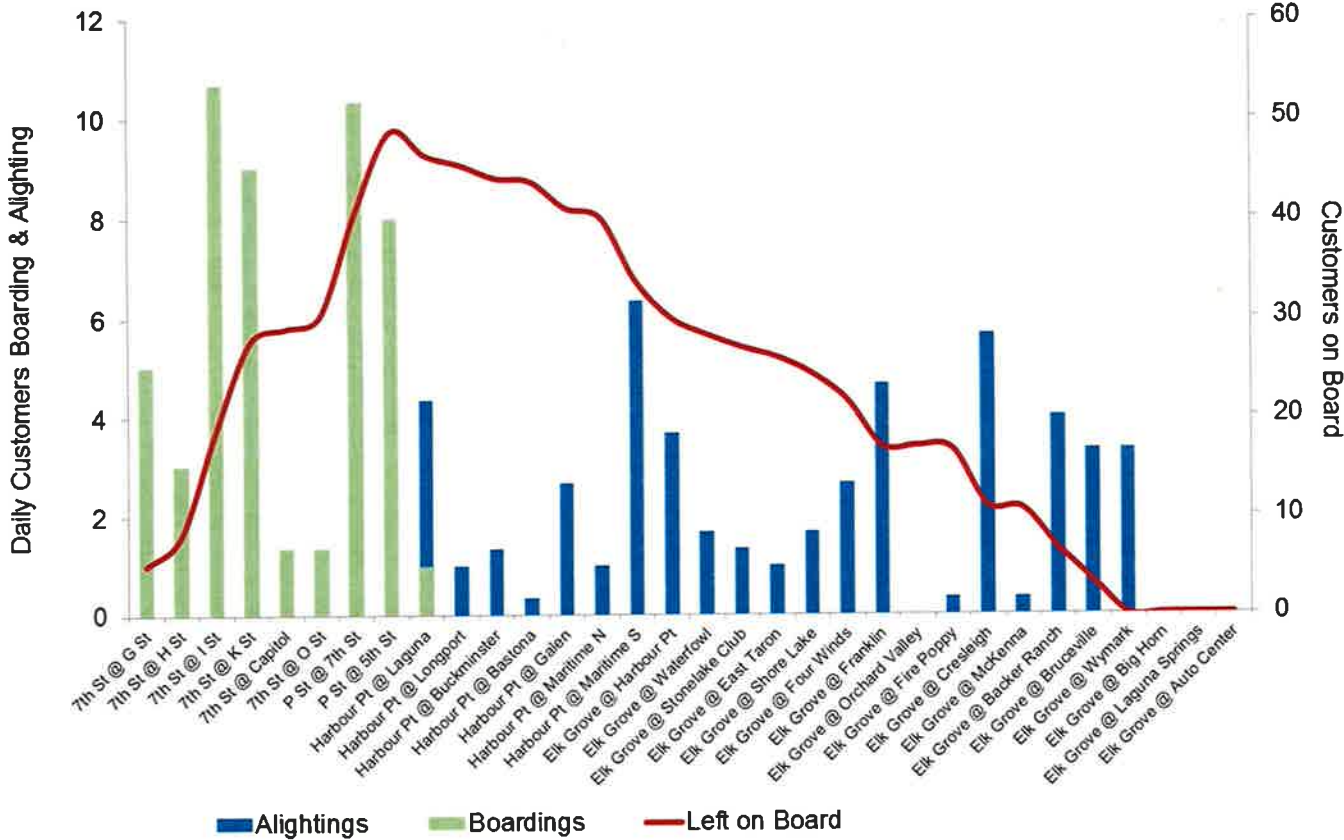
FY 2015 Performance

-  134 average daily boardings
-  83.6% of seated capacity used
-  4 daily one-way trips
-  18.2 mph in scheduled service
-  Variable peak frequency 25-35 minutes

66 Elk Grove Blvd - Northbound








66 Elk Grove Blvd - Southbound



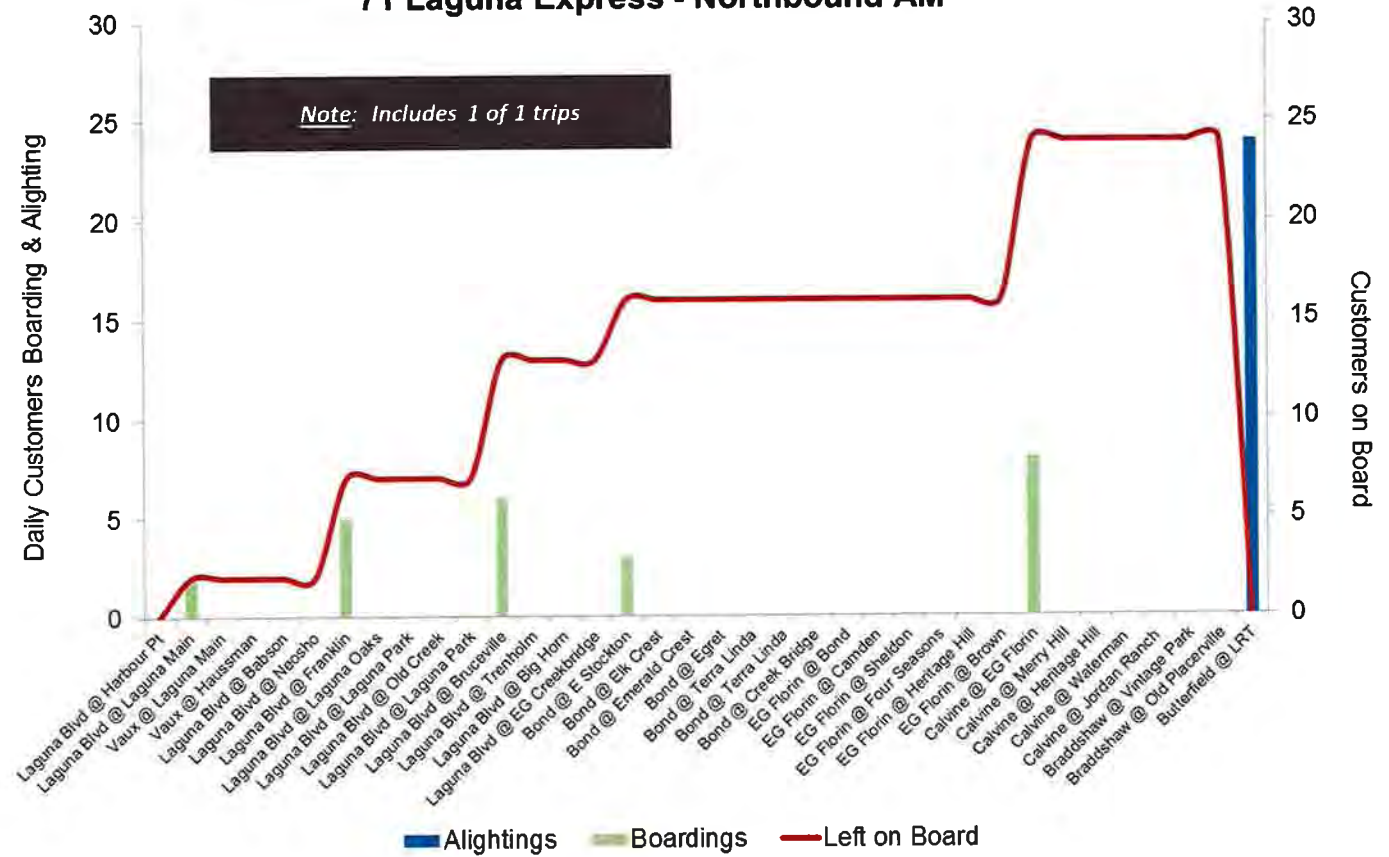
66 Elk Grove Blvd Express Ridership Analysis

- 15% of customers board & alight at Laguna West Park-Ride.
- Significant local boarding & alighting along Harbour Point Drive & Elk Grove Blvd
- Two-thirds of customers board & alight west of Franklin Blvd
- 90% of customers board & alight west of Bruceville Road

71 Laguna Express FY 2015 Performance

-  100 average daily boardings
-  62.5% of seated capacity used
-  5 daily one-way trips
-  20.4 mph in scheduled service
-  Variable peak frequency 60-120 minutes

71 Laguna Express - Northbound AM








No 71 Southbound data available

**71 Laguna Express
Ridership Analysis**

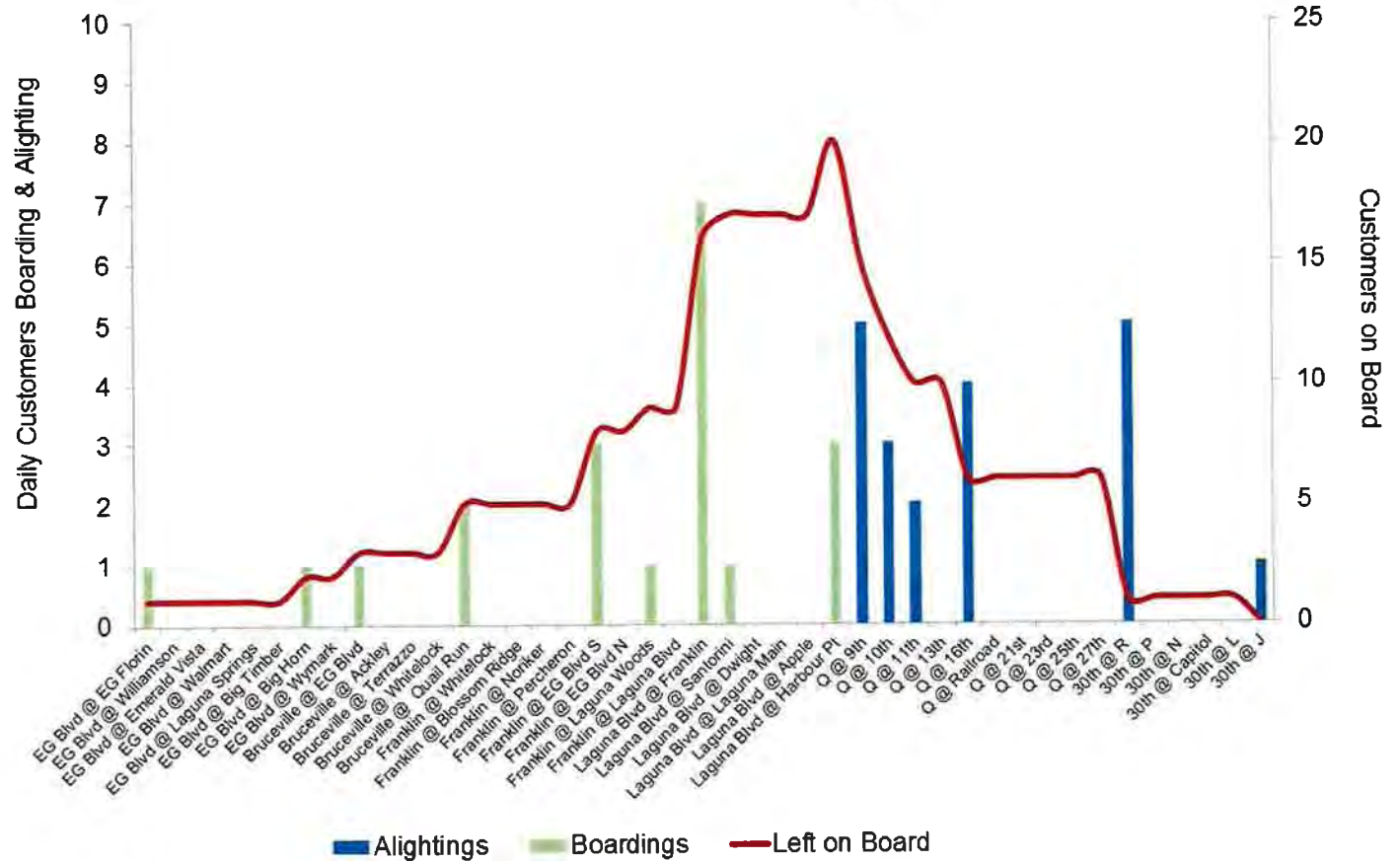
To be added

Purple Route Express

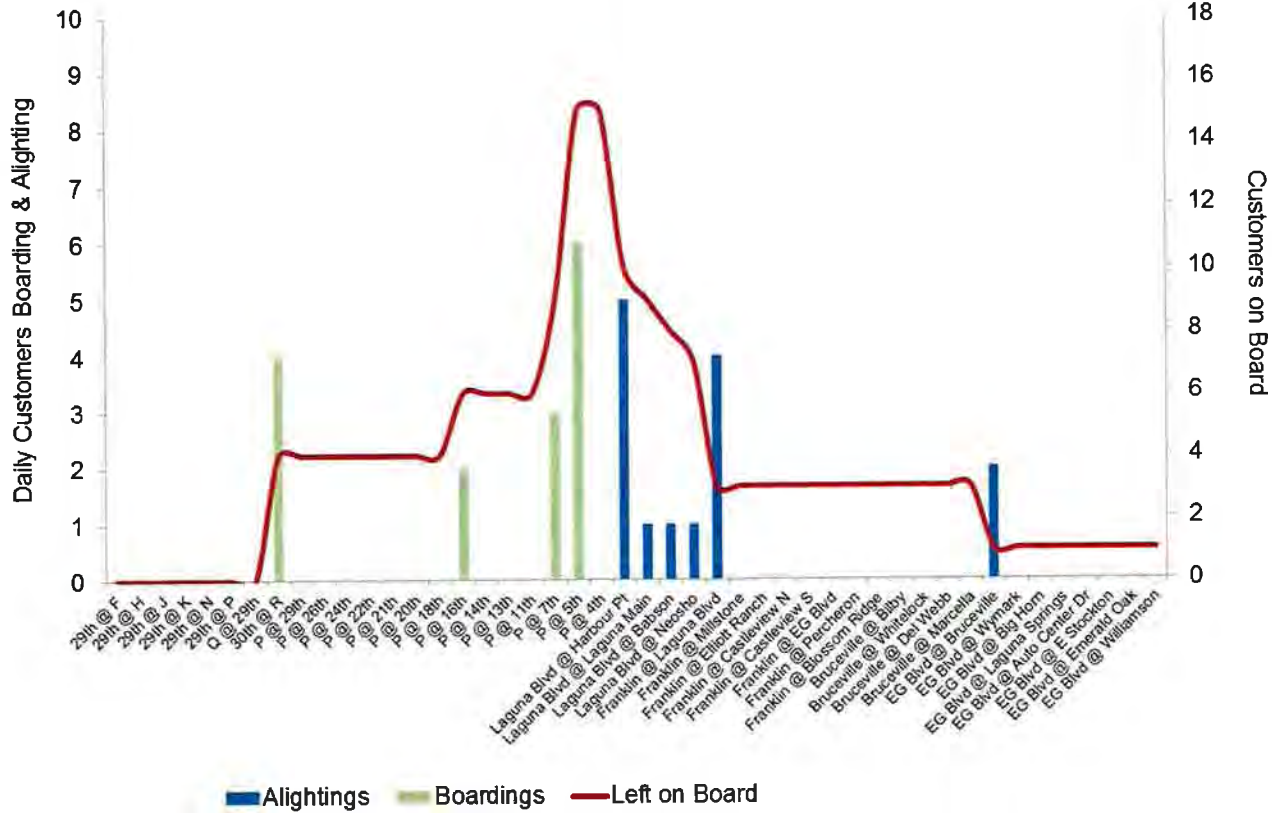
FY 2015 Performance

-  _____ average daily boardings
-  _____ of seated capacity used
-  2 daily one-way trips
-  _____ mph in scheduled service
-  1 trip each peak

Purple Route - Northbound AM



Purple Route - Southbound PM



Purple Route Express Ridership Analysis

75% of PM alightings occur north of Laguna & Franklin Boulevard