

To: Operations and Scheduling

Date: 8/25/2017

From: Sean Hedgpeth, Manager of Planning

Reviewed by: R.H.

SUBJECT: Sample DRAFT of Comprehensive Operations Analysis, Route 16

Background:

Last month, County Connection presented two concepts to the Operations and Scheduling Committee (O&S) for service restructure:

1. Increase productivity with current revenue hours
2. Reduce service to address the financial forecast

As part of addressing these two concepts, and our commitment to data driven planning, we have started a Comprehensive Operations Analysis, or COA. This will involve using the technology aboard buses including Automatic Passenger Counters (APCs) and GPS, as well as a look at the operating environment, schedule efficiency, and demographic markets of every bus route.

Attached is a draft COA sample of Route 16, with details such as trip and stop level ridership and an overview of the route. More work is planned on developing the graphics as well as adding additional information such as route level on-time performance and a graphical dashboard of key performance indicators.

Staff expects to complete a COA report for all routes in the next two months. The COA will inform us of how we could make service adjustments without negatively impacting too many current riders. Based on the results from the COA and with feedback from the O&S Committee, staff will prepare service restructure plans with the two concepts in mind. The service restructure proposals will then be presented to the full board and will become the basis for service changes. These service changes will aim to increase efficiency and, if necessary, reduce service based on financial limitations.

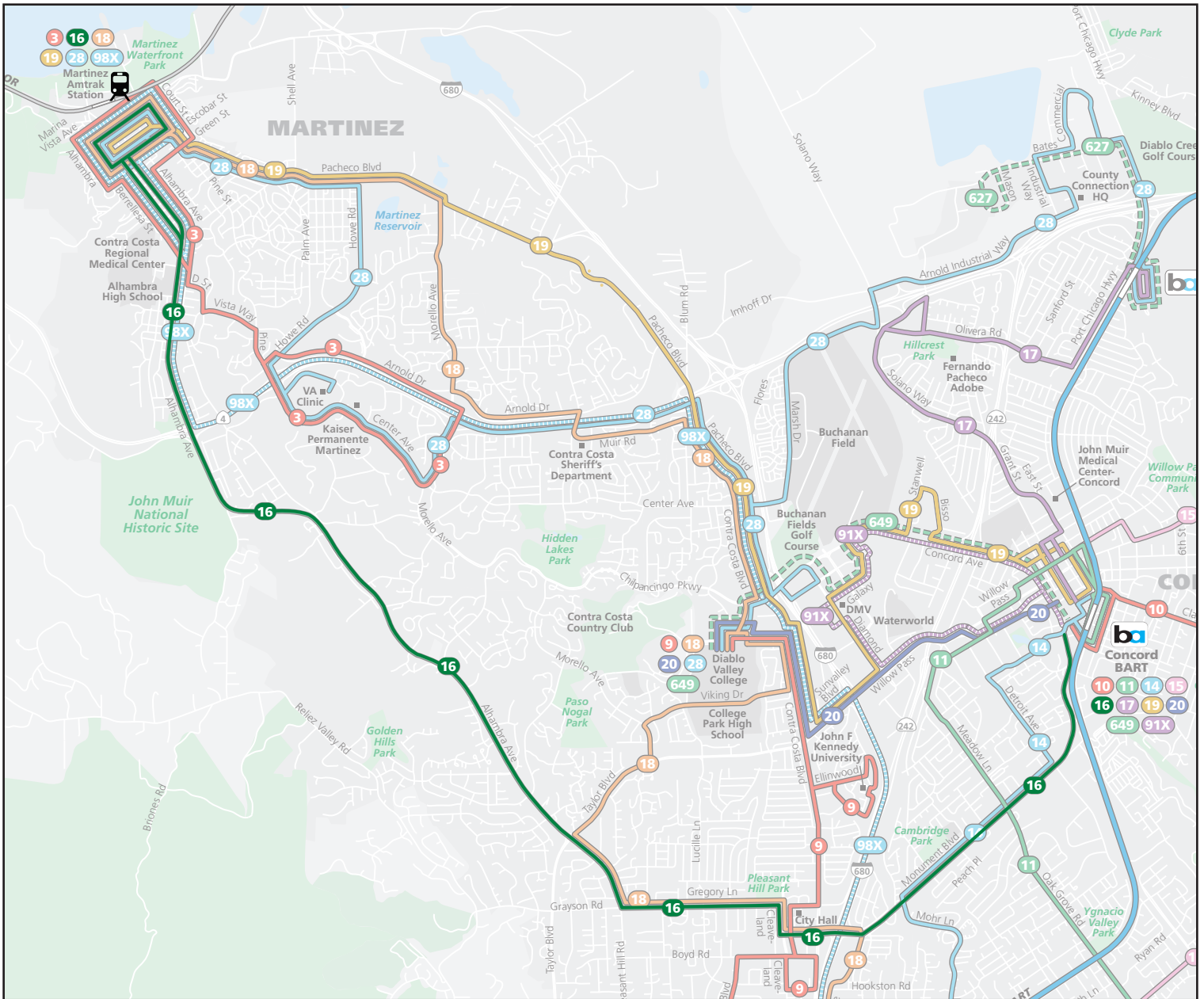
Recommendation:

For information only.

Financial Implications:

To be determined.

Central Contra Costa County Transit Authority Comprehensive Operations Analysis FY16/17



Route 16: Martinez AMTRAK to Concord BART

Monday-Friday, every 40 minutes, 5:15am to 10pm

DRAFT

Route 16: Comprehensive Operations Analysis- Table of Conte

1. **Route Origin and Recent Major Service Changes**
2. **Alignment Statistics and Connections**
3. **Key Performance Indicators**
 - a. **Trends**
 - b. **Efficiency**
4. **Ridership Analysis**
 - a. **Trip Level Ridership by Direction**
 - b. **Stop Level Ridership**
 - c. **Seasonal Ridership**
5. **Demographics by Fare Type**

Route Origin and Recent Major Service Changes

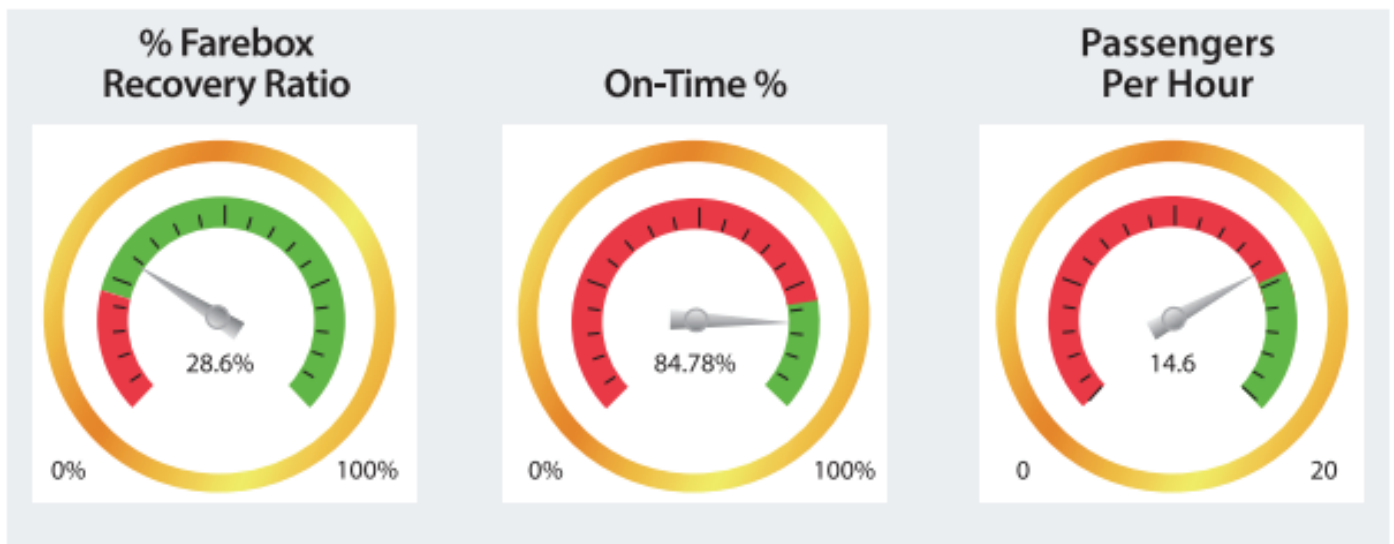
Route 16 was created in 2009 as part of a large service restructuring. Route 16 was born out of Route 116, which followed a similar route to Martinez but served Pleasant Hill BART with no service to the Monument Corridor. Route 16 has been more productive than its predecessor with this new alignment. No major changes have occurred on the route since 2009.

Alignment Statistics and Connections

Route 16’s northern terminus is in Martinez, at the Martinez Amtrak Station. Regional connections to Delta Breeze (200), WestCat (30Z), Amtrak (commuter trains: Capital Corridor and San Joaquin, and once daily Coast Starlight and California Zephyr), as well as other CCCTA routes (3, 18, 19, 28, 98X). The route then takes Alhambra through town sharing the same corridor as Route 3, 98X, 30Z, and 200. It then turns onto Gregory Lane and serves Downtown Pleasant Hill before serving the Monument Corridor. On the Monument Corridor it shares the segment from Mohr to Detroit where it creates a combined frequency of 20 minutes to Concord BART with Route 14 for the Four Corners area. The last segment continues down Monument to Concord BART, with connections to the Pittsburg Bay Point BART line, Delta Breeze 201, as well as CCCTA routes 10, 11, 14, 15, 17, 19, 20, and 91X.

Route 16 Alignment Statistics			
Length	22.1 miles	Miles Per Hour Scheduled	16.7
Number of Stops	42 Northbound	Number of Turns	NB: 5R,6L
	43 Southbound		SB: 4R, 4L
Distance Between Stops	0.24 Miles	Road Network	90% 35 MPH
	0.26 NB	4 lane arterial	Over 90%
	0.22 SB	2 lane local streets	About 10%

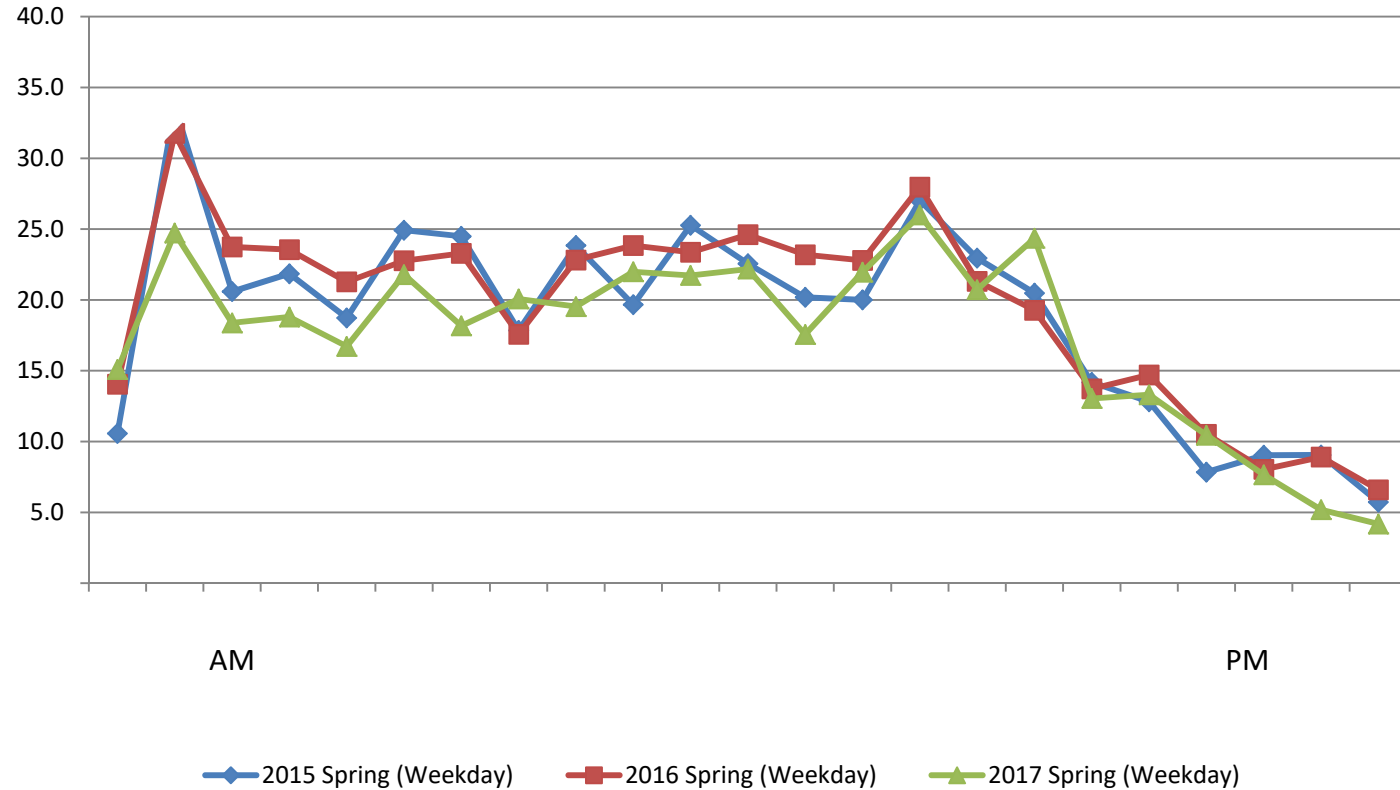
Key Performance Indicator Dashboard



This is a placeholder image of what a route dashboard could look like (not Route 16 numbers). There will also be a trend analysis to show how the KPIs change over the years.

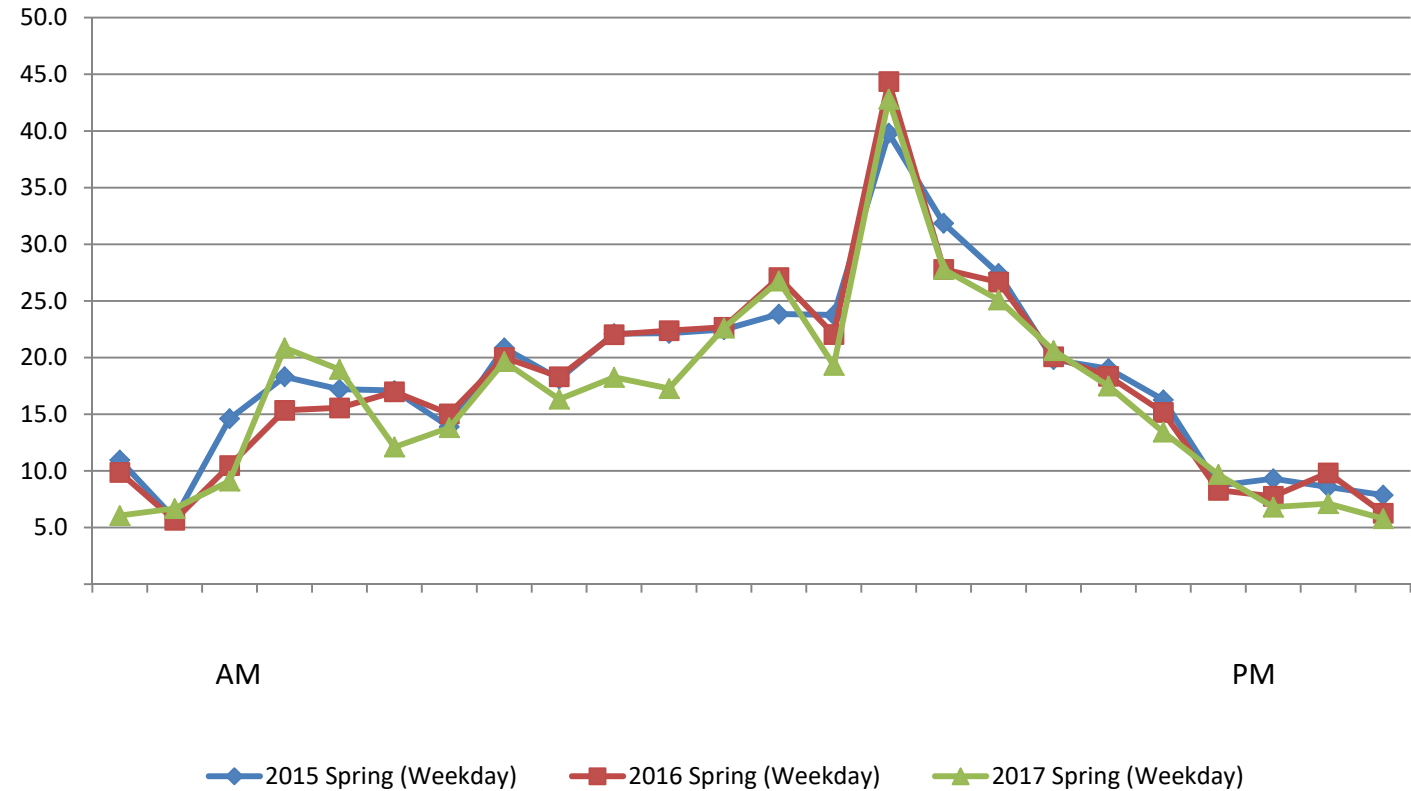
Route 16 (to Martinez) Trip Level Ridership (Spring 2015-Spring 2017)

Sum of	Column Labels		
	2015 Spring (Weekday)	2016 Spring (Weekday)	2017 Spring (Weekday)
6:28:00 AM	10.6	14.1	15.1
7:08:00 AM	33.7	31.8	24.7
7:48:00 AM	20.6	23.7	18.4
8:28:00 AM	21.9	23.6	18.8
9:08:00 AM	18.7	21.3	16.7
9:48:00 AM	24.9	22.8	21.8
10:28:00 AM	24.5	23.3	18.2
11:08:00 AM	17.9	17.6	20.1
11:48:00 AM	23.8	22.8	19.5
12:28:00 PM	19.7	23.8	22.0
1:08:00 PM	25.3	23.4	21.7
1:48:00 PM	22.6	24.6	22.2
2:28:00 PM	20.2	23.2	17.6
3:08:00 PM	20.0	22.8	22.0
3:48:00 PM	27.0	28.0	26.0
4:28:00 PM	23.0	21.3	20.7
5:08:00 PM	20.5	19.3	24.4
5:48:00 PM	14.2	13.7	13.0
6:28:00 PM	12.8	14.7	13.3
7:08:00 PM	7.8	10.5	10.5
7:48:00 PM	9.0	8.0	7.7
8:28:00 PM	9.1	8.9	5.2
9:18:00 PM	5.7	6.6	4.2
Grand Total	433.3	449.7	403.6

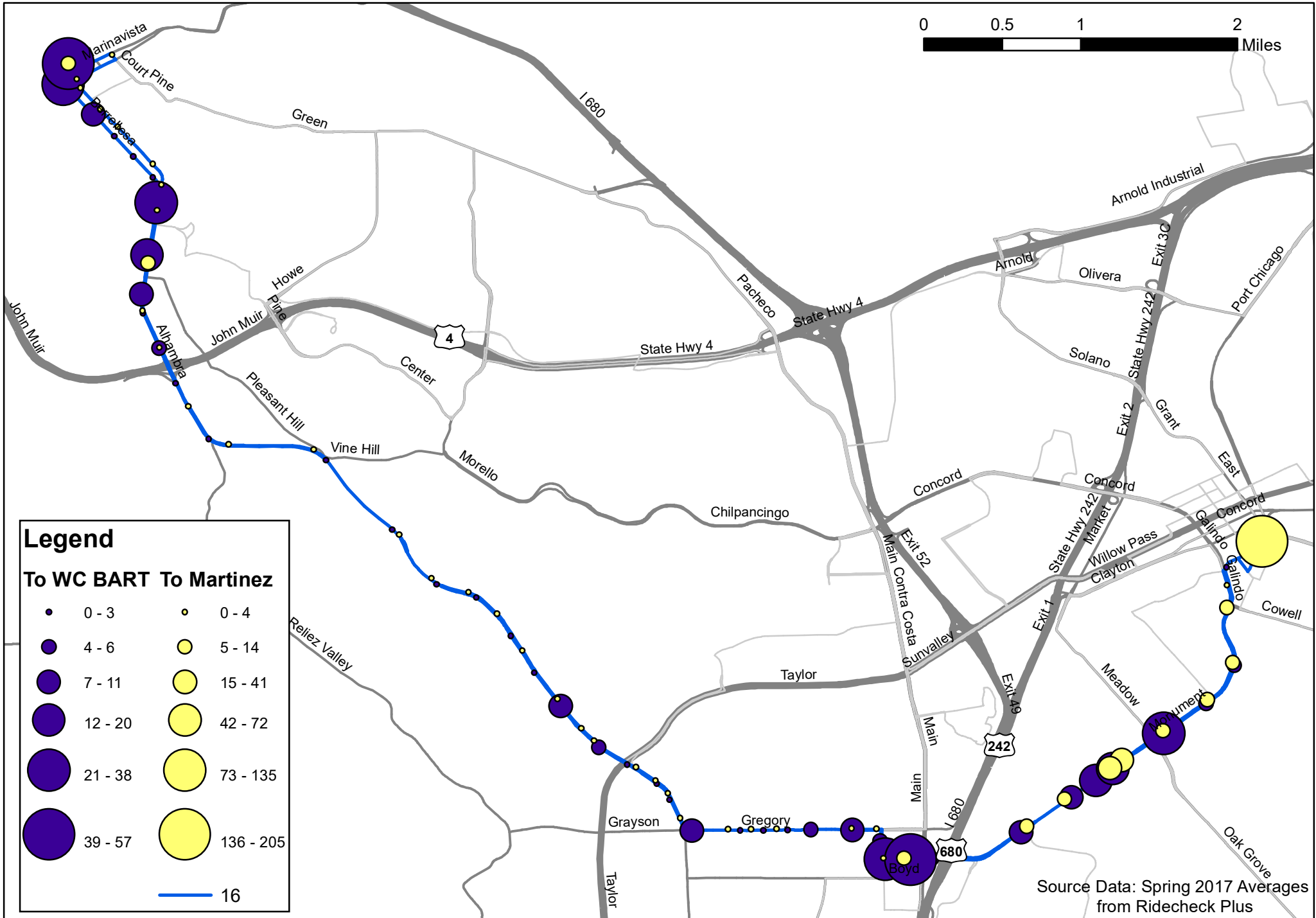


Route 16 (to Walnut Creek BART) Trip Level Ridership (Spring 2015-Spring 2017)

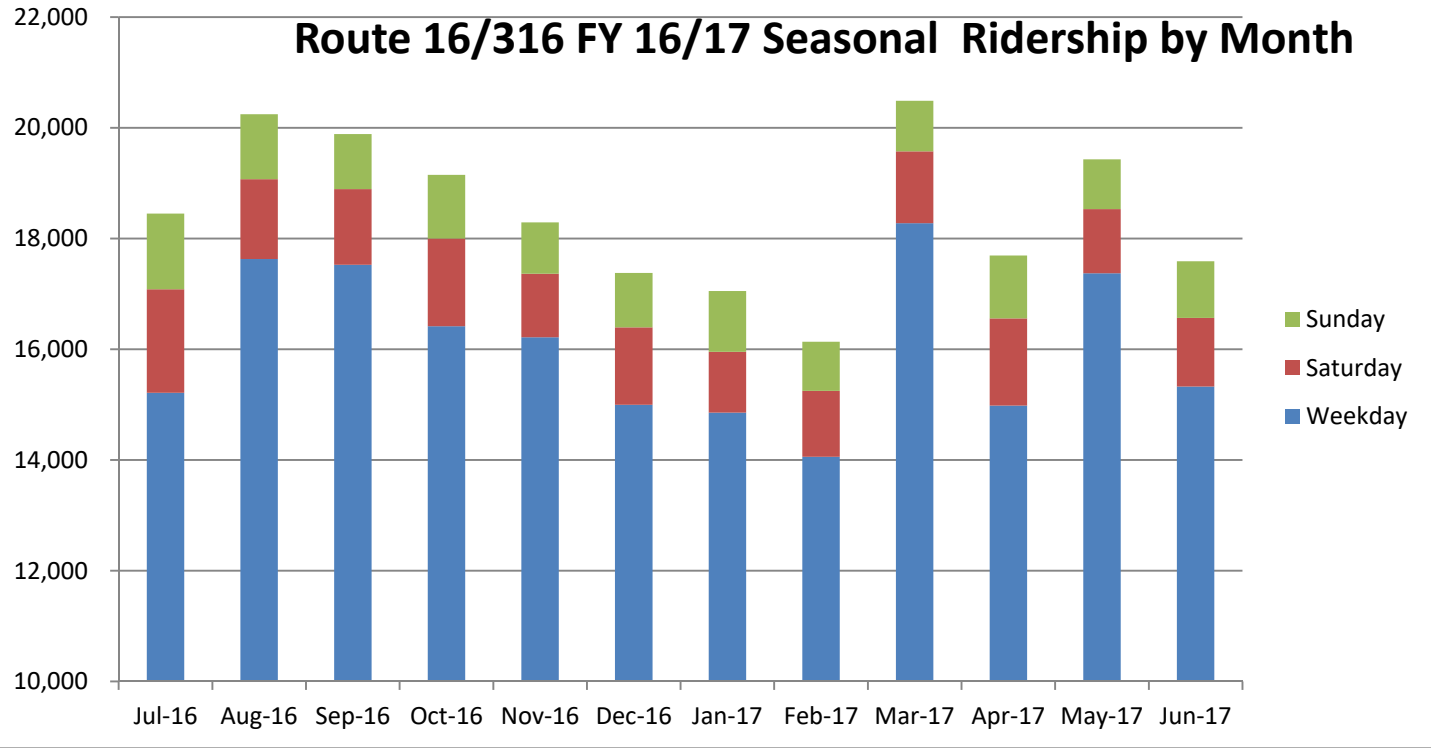
Sum of PASSENGERS_ON	Column Labels		
Trip Start Time	2015 Spring (Weekday)	2016 Spring (Weekday)	2017 Spring (Weekday)
5:22:00 AM	11.0	9.9	6.1
5:40:00 AM	5.8	5.7	6.7
6:20:00 AM	14.6	10.5	9.1
6:55:00 AM	18.3	15.3	20.9
7:40:00 AM	17.2	15.6	19.0
8:20:00 AM	17.1	17.0	12.1
9:00:00 AM	13.9	15.0	13.8
9:40:00 AM	20.9	20.0	19.7
10:20:00 AM	18.1	18.3	16.3
11:00:00 AM	22.1	22.0	18.3
11:40:00 AM	22.1	22.4	17.3
12:20:00 PM	22.5	22.7	22.6
1:00:00 PM	23.8	27.1	26.8
1:40:00 PM	23.8	22.0	19.3
2:20:00 PM	39.8	44.4	42.8
3:00:00 PM	31.9	27.8	27.8
3:40:00 PM	27.4	26.7	25.1
4:20:00 PM	19.8	20.1	20.6
5:00:00 PM	19.0	18.4	17.5
5:40:00 PM	16.3	15.2	13.4
6:20:00 PM	8.7	8.3	9.7
7:00:00 PM	9.3	7.8	6.8
7:40:00 PM	8.6	9.8	7.1
8:25:00 PM	7.9	6.3	5.8
Grand Total	439.8	428.0	404.4



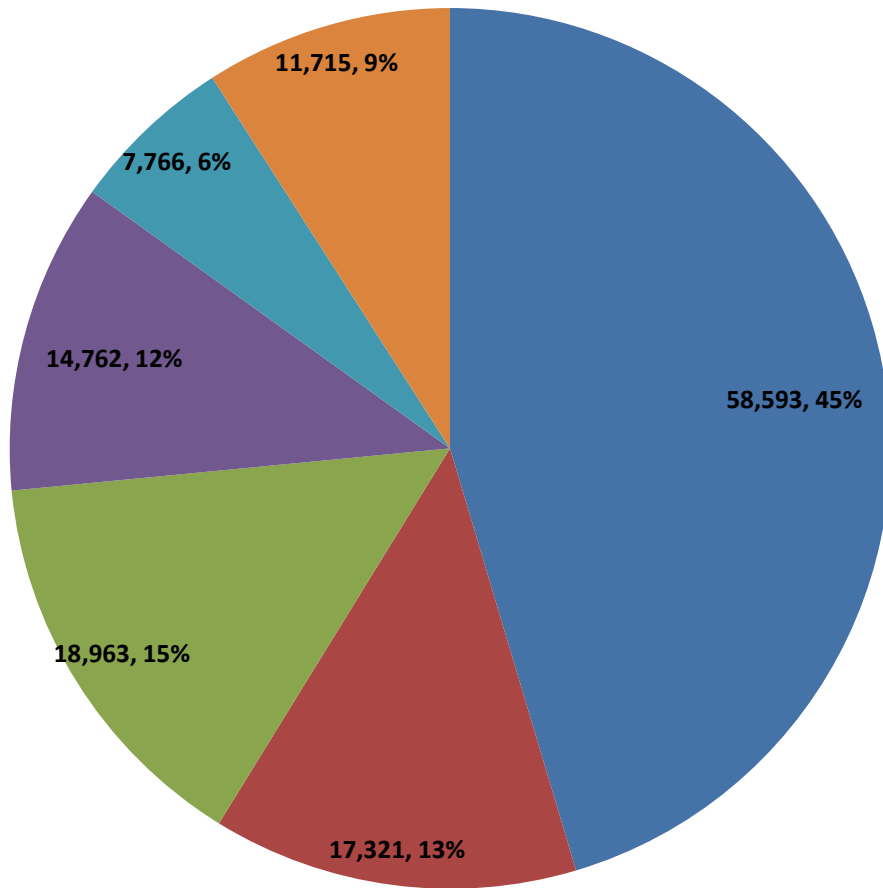
Route 16 Average Weekday Boardings by Stop



Route 16/316 FY 16/17 Seasonal Ridership by Month



Route 16 FY16/17 Fare Demographics



- Adult Cash/ Transfers
- Senior Cash/ Transfers/ Punch
- Clipper
- Adult Punch/ Monthly Pass
- BART
- Free/other