



# Transit Division Performance Measurements Report Fiscal Year 2011-12 First Quarter

July 1, 2011 – September 30, 2011



### Introduction

The Orange County Transportation Authority (OCTA) operates a countywide network of local, community, rail-connector, and express bus routes serving over 6,000 bus stops. OCTA also operates federally-mandated paratransit service (ACCESS), a shared-ride program available for people unable to use the regular fixed-route bus service because of functional limitations. Fixed-route bus service, operated by OCTA, is referred to as directly-operated fixed-route service (DOFR) while routes operated under contract are referred to as contracted fixed-route service (CFR). The ACCESS program is a contract operated demand response service mandated by the Americans with Disabilities Act (ADA) that is complementary to the fixed-route service, and predominately accounts for the overall paratransit services operated by OCTA. These three services make up the transit system provided by OCTA and are evaluated by the performance measurements summarized in this report.

This report provides an update on key performance indicators for the Transit Division focusing on areas such as safety, courtesy, and reliability, in addition to measurements commonly used in the transit industry such as ridership, operating data, financial data, and maintenance measurements.

### Performance Measurements

The OCTA Transit Division monitors a multitude of measurements in evaluating the services provided to the public. There are key performance indicators that track transit system safety, courtesy, and reliability standards: preventable vehicle accidents, customer complaints, on-time performance, and miles between road calls. Along with these metrics, industry-standard measurements are tracked to assess OCTA transit operations; these measurements are ridership, passenger fare revenues, operating costs, farebox recovery ratios, and cost per revenue vehicle hour. A description of the performance indicators and the analysis to account for the variances between reporting periods is presented below. Tables and graphs follow the details of each indicator showing the standards or goals for the fiscal year (FY), values for the current and previous FY, and the variance between the statistics as a percentage change. Additionally, where available, a table is included to show a comparison between the current FY first quarter compared to the same quarter of the prior FY.

## Safety: Preventable Vehicle Accidents per 100,000 Miles

Preventable vehicle accidents are counts of incidents concerning physical contact between a vehicle used for public transit and other vehicles, objects, or pedestrians where a coach operator is determined to be at fault. To obtain a standardized measurement, the accident counts are multiplied by 100,000 then divided by the total miles on the vehicles used for public transit. OCTA has established a safety standard of no more than one vehicle accident per 100,000 miles.

The accident frequency rate for DOFR increased by 36.1 percent for the first quarter of the fiscal year as the number of actual accidents increased from 32 to 41 from the previous reporting period while the total fleet miles decreased from about 5.1 million miles to 4.8 million miles. The most common accidents on the DOFR service involved contact with stationary vehicles and fixed objects. In response to the accident increases, training campaigns based on fixed object strikes have been performed and scheduled to help operations address these most common accidents. In addition, a number of activities have been initiated to increase safety awareness. "Safety Blasts" have been initiated at the operating bases, which include posters emphasizing safety messages. The coach operator attrition rate has been impacted due to preventable accidents and safety violations. The Bus Operations Department staff will remain vigilant in monitoring performance in this area. For CFR, the rate of accidents declined by 34.3 percent from the previous reporting period; though the number of actual accidents remained the same from the previous first quarter to the current first quarter at 9, the number of total miles on the vehicles used for the service increased from approximately 750,000 miles to 1.1 million miles. This increase in fleet miles affected the accident rate showing that even with the contractor having a higher level of service, their propensity to acquire safety occurrences decreased improving the measurement. On ACCESS, the contracted program recorded a 12.0 percent rise in the accident rate, however, the actual number of accidents only increased from 17 to 18 from the previous first quarter to the current. It should be noted that although increases were experienced in the rate of preventable vehicle accidents, the transit system as a whole met the safety standard. In addition, OCTA honored 19 coach operators in the first quarter of FY 2011-12 for having 20 or more years with safe driving records; these awards demonstrate OCTA's continuing commitment to safety.

Mode	Standard	FY 2011	FY 2012	Variance %
<b>First Quarter</b>				
DOFR	1.0 per 100,000	0.63	0.85	36.1%
CFR	1.0 per 100,000	1.20	0.79	-34.3%
ACCESS	1.0 per 100,000	0.65	0.72	12.0%

Figure 1 - Safety: Preventable Vehicle Accidents per 100,000 Miles [DOFR]

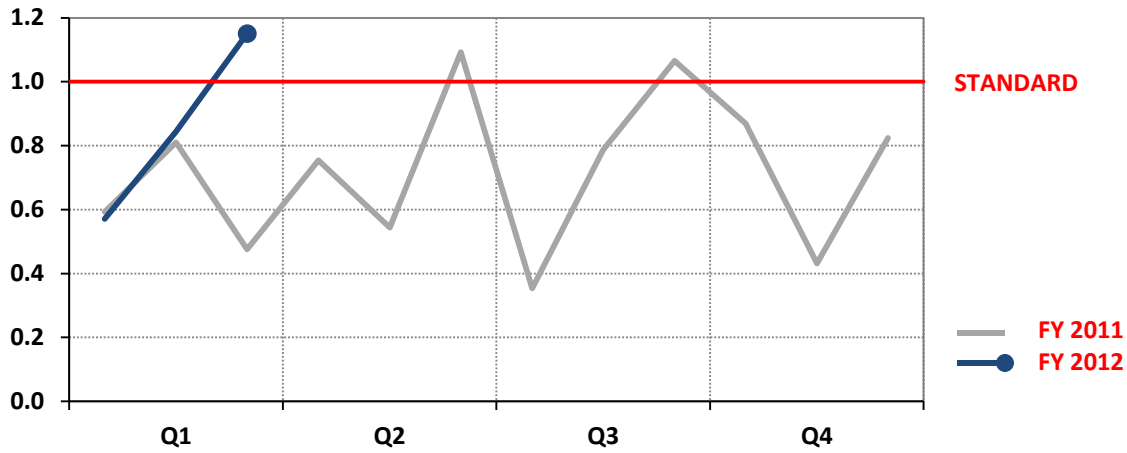


Figure 2 - Safety: Preventable Vehicle Accidents per 100,000 Miles [CFR]

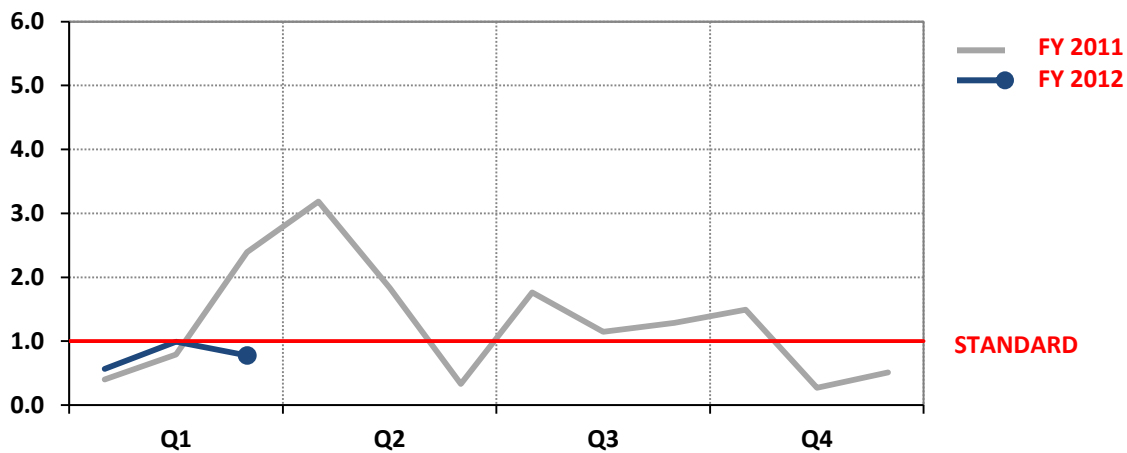
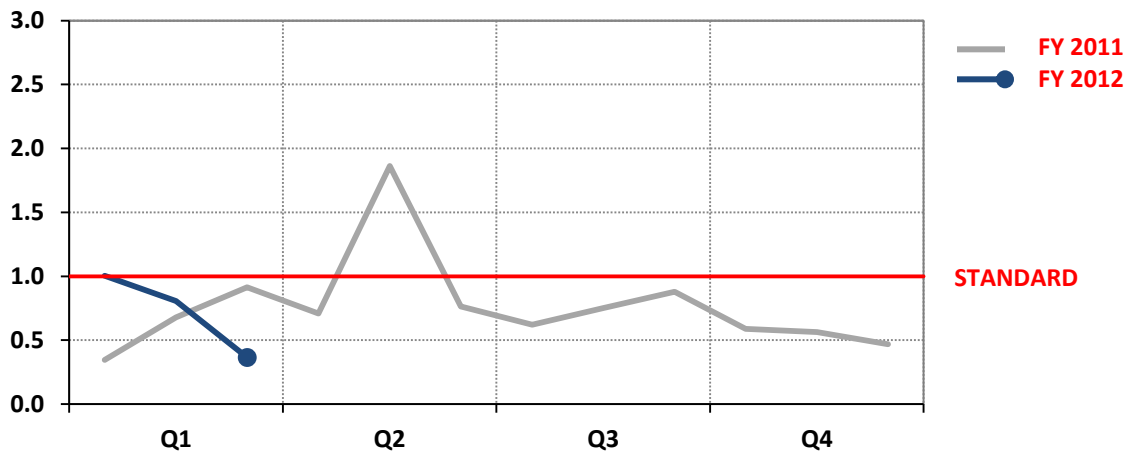


Figure 3 - Safety: Preventable Vehicle Accidents per 100,000 Miles [ACCESS]



## Courtesy: Customer Complaints per Thousands of Passengers

Customer complaints are counts of incidents where a user of public transit is dissatisfied with the service received. For DOFR, the metric is standardized by multiplying the counts by 100,000 then dividing by the total ridership. CFR and ACCESS services do not record over 1,000,000 boardings per month so the statistics are factored by 4,000 and 1,000 respectively then divided by the total ridership. The standards for customer complaints per thousands of passengers are six complaints per 100,000 riders for DOFR, one complaint per 4,000 for CFR boardings, and one complaint per 1,000 customers for ACCESS.

DOFR increased by 20.9 percent in customer complaints per 100,000 boardings as the June 2011 Service Change and an overall increase in ridership may have led to an increase in customer complaints. The most common complaints recorded for DOFR were "Behind or Ahead of the Schedule," "Driver Judgment," "Pass-By," "Driver Discourtesy," and "Fare Dispute." Two training campaigns, one on pass-bys and another one addressing the increase in ridership due to the fall school sessions, were just implemented to address the associated customer service complaints. Scheduling issues are reported by coach operators as well as customers. In the past, OCTA has been able to address late buses by adjusting service frequencies and adding more service. However, budget constraints have virtually eliminated this as a tool to address complaints regarding on-time performance. To better understand if complaints are schedule related or courtesy related this performance measure will be analyzed more thoroughly in the second quarterly report.

The complaints rate for CFR declined by 30.7 percent, despite an increase in ridership and service levels, as the contractor continues to implement a customer relations training campaign.

The ACCESS complaints frequency increased by 34.5 percent for the first quarter. In an effort to increase overall system productivity, the recently implemented service scheduling adjustments have affected performance standards, particularly customer comments, on-time performance, and service delivery failures. The service scheduling adjustments resulted in an overall system productivity of 2.14 passengers per revenue hour, which represents an all-time high for the ACCESS program. This type of improvement results in a reduction in the overall cost per trip, a worthy goal for a service like ACCESS. OCTA and contractor staff continue to closely monitor the effectiveness of this service strategy and evaluate how the improved performance can be sustained without negatively impacting other performance standards.

Mode	Standard	FY 2011	FY 2012	Variance %
<b><i>First Quarter</i></b>				
DOFR	6.0 per 100,000	6.76	8.17	20.9%
CFR	1.0 per 4,000	0.50	0.34	-30.7%
ACCESS	1.0 per 1,000	1.28	1.72	34.5%

Figure 4 - Courtesy: Customer Complaints per 100,000 Passengers [DOFR]

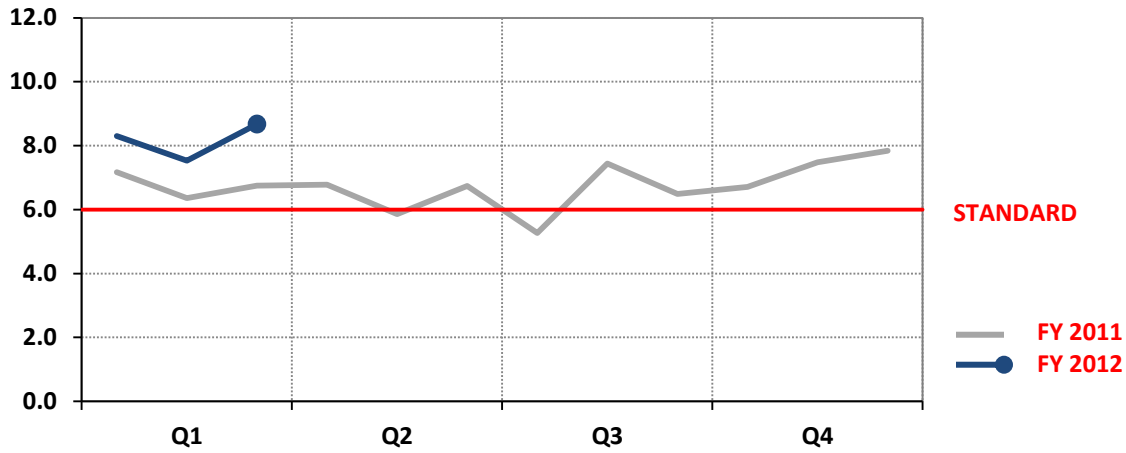


Figure 5 - Courtesy: Customer Complaints per 4,000 Passengers [CFR]

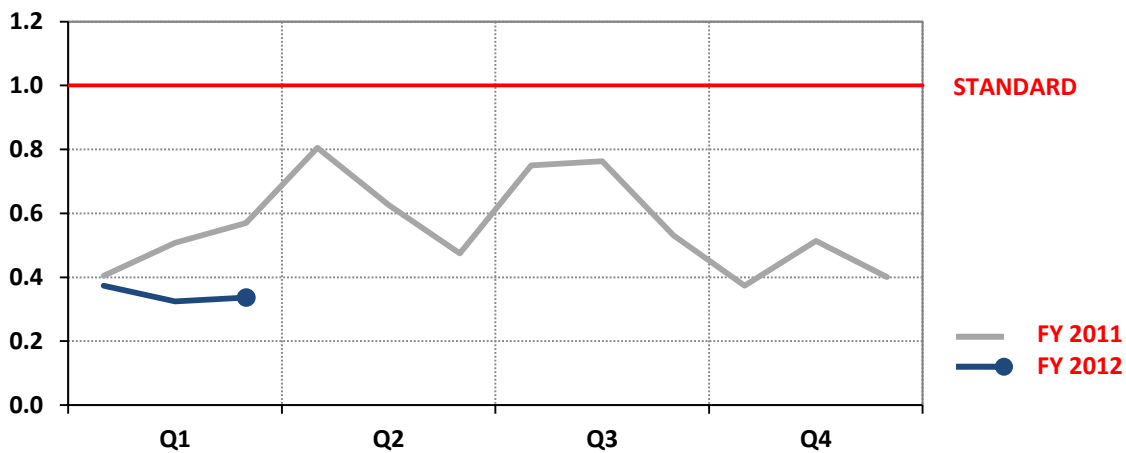
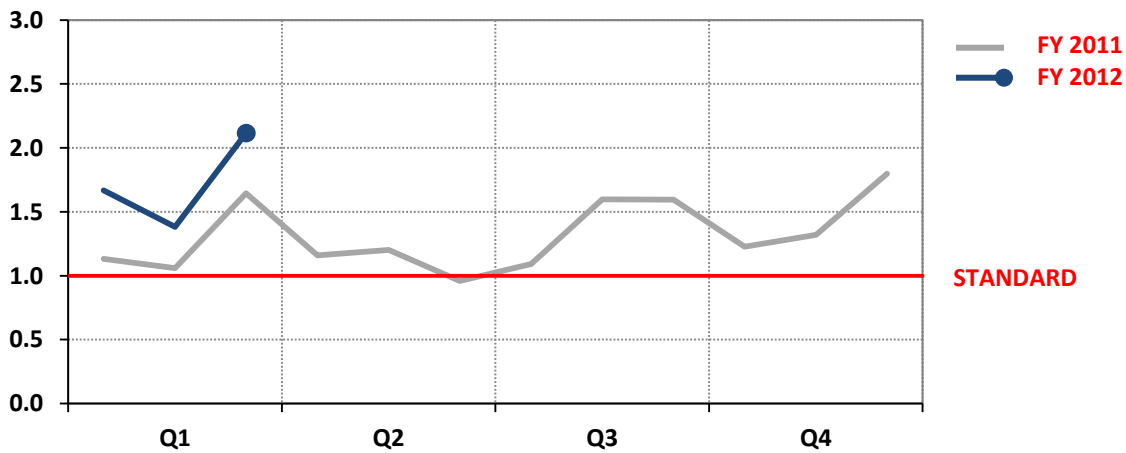


Figure 6 - Courtesy: Customer Complaints per 1,000 Passengers [ACCESS]





## Reliability: On-time Performance

On-time performance (OTP) is a measure of performance evaluating a revenue vehicle's adherence to a planned schedule such as time points on a fixed-route schedule or scheduled pick-up time for transportation on a demand responsive schedule. OCTA utilizes the automated vehicle location system to measure OTP.

The DOFR service showed a slight decline of 0.2 percent in OTP from the same reporting period of last year, but continued to achieve a performance above the standard. On CFR, OTP decreased by 3.5 percent as service levels increased resulting from the transition of routes from DOFR to CFR in June 2011. The ACCESS service also declined by 2.3 percent from the prior year due to the adjustments made to the service scheduling process as previously discussed. Contractor staff continues to actively evaluate possible enhancements to the trip scheduling processes in an effort to improve service delivery and maintain the improvement in service productivity.

Mode	Standard	FY 2011	FY 2012	Variance %
<i>First Quarter</i>				
DOFR	85.0%	89.9%	89.6%	-0.2%
CFR	92.0%	94.7%	91.4%	-3.5%
ACCESS	95.0%	94.6%	92.4%	-2.3%

Figure 7 - Reliability: On-time Performance [DOFR]

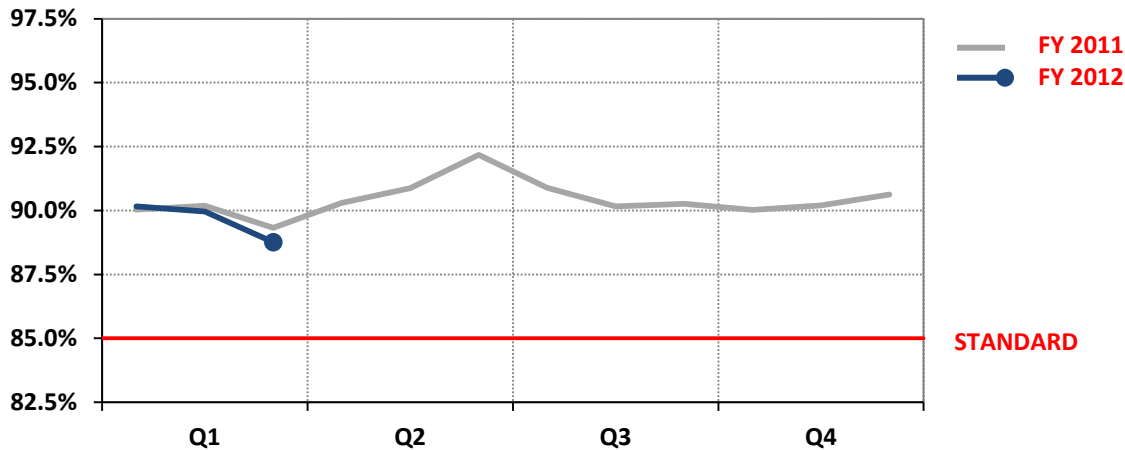


Figure 8 - Reliability: On-time Performance [CFR]

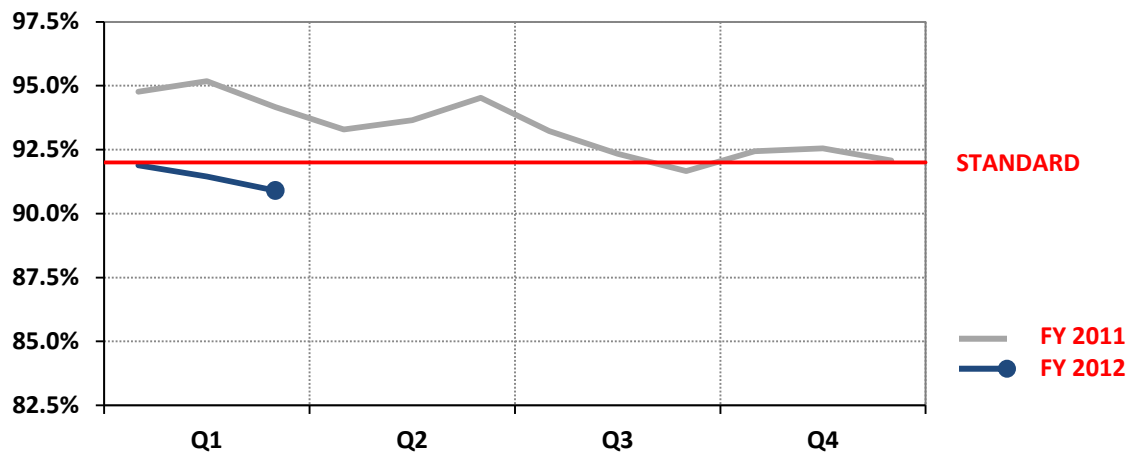
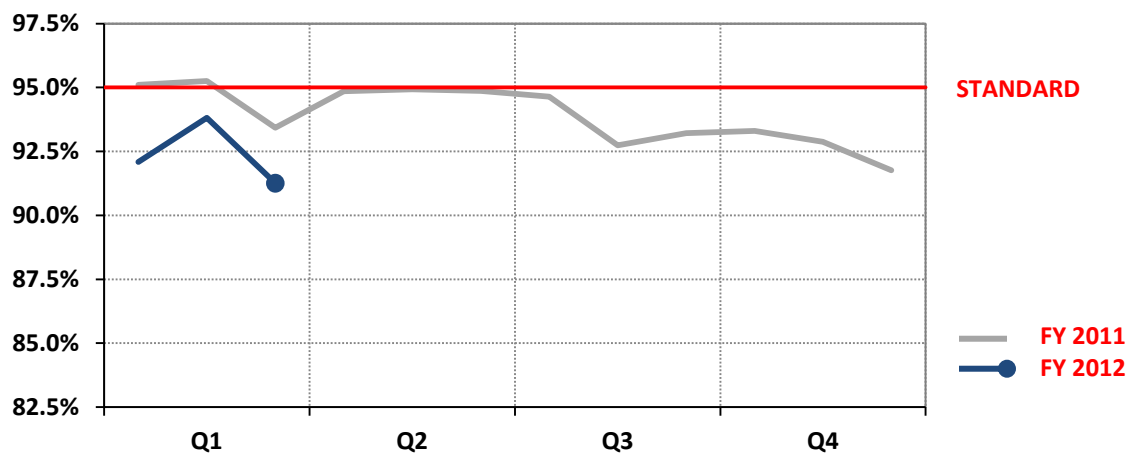


Figure 9 - Reliability: On-time Performance [ACCESS]





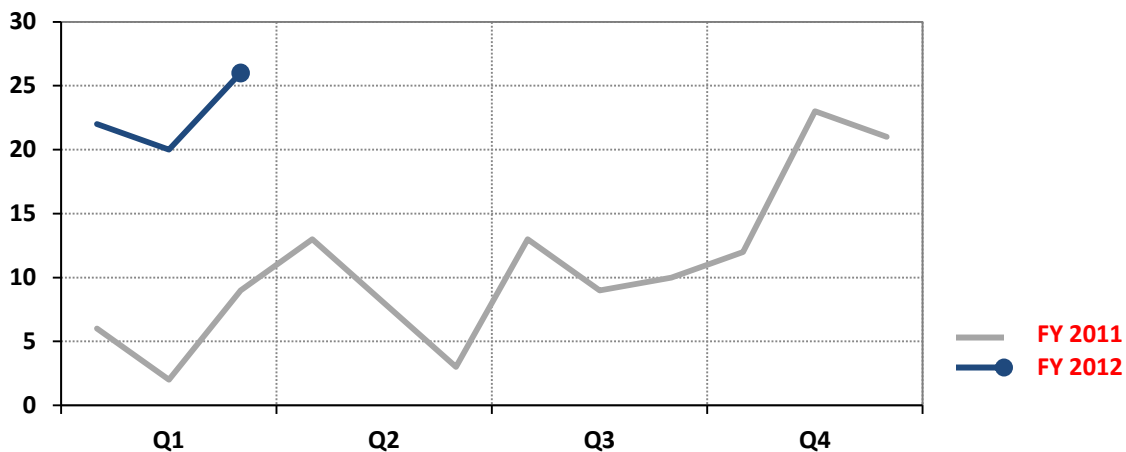
## Reliability: Service Delivery Failure

In addition to OTP, ACCESS measures service delivery failures (SDF) – a unique measurement specific to the program. This indicator is an occurrence when a vehicle does not arrive at the pick-up location until 90 minutes after the conclusion of a 30-minute on-time window.

The number of SDF increased during the first quarter of FY 2011-12 as compared to the same quarter of FY 2010-11. The increase in the number of SDFs was affected by recent revisions to service scheduling. Contractor staff is evaluating possible adjustments to the scheduling processes in an effort to improve this standard while maintaining the improvements in service productivity. Another contributing factor to the higher number of SDFs for the first quarter was a power outage in late August affecting the contractor's operation and impacting several clients.

Mode	Standard	FY 2011	FY 2012	Variance %
<i>First Quarter</i>				
ACCESS	0	17	68	300.0%

Figure 10 - Reliability: Service Delivery Failure [ACCESS]



## Reliability: Miles Between Road Calls

Miles between road calls is a maintenance performance indicator that measures the vehicle miles between mechanical failures of a vehicle used for public transit during revenue service. Road calls may cause a delay in service and necessitate removing the vehicle from service until repairs are made.

For the first quarter, miles between road calls improved by 19.0 percent for DOFR due to two reasons: the maintenance campaign to replace the cooling system for the NABI buses in the previous year continues to contribute toward improved performance, and warranty items/issues on CNG vehicles are proactively inspected and repaired, as mechanics have become more familiar with this equipment and can anticipate when and where mechanical failures are likely to occur. Miles between road calls for CFR decreased by 10.8 percent as the service increased from the prior year, however, it should be noted that a positive trend occurred in the last month of the first quarter. The ACCESS fleet saw a decline of 25.1 percent, which was influenced by the age of the vehicles. OCTA uses a standard replacement schedule to ensure good vehicle reliability. However, due to budget constraints the replacement of almost 20 ACCESS vehicles in the current FY has been deferred. This declining performance indicator is likely related to the advancing age; this will be monitored closely as staff begins to prepare for the development of the FY2012-13 budget. Overall performance remains near, if not well above, the established standards for miles between road calls for the transit system.

Mode	Standard	FY 2011	FY 2012	Variance %
<b>First Quarter</b>				
DOFR	13,000	16,387	19,509	19.0%
CFR	12,000	15,641	13,945	-10.8%
ACCESS	25,000	32,863	24,606	-25.1%

Figure 11 - Reliability: Miles between Road Calls [DOFR]

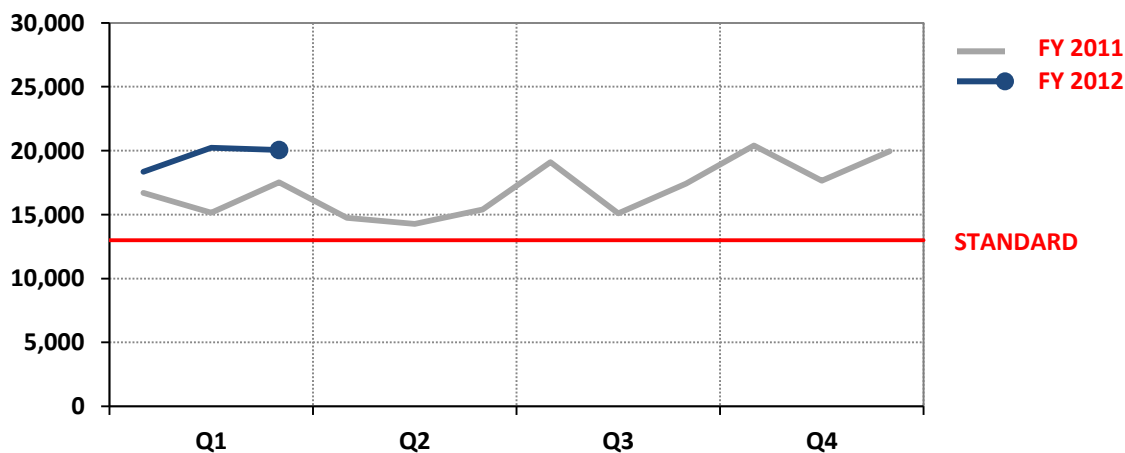


Figure 12 - Reliability: Miles between Road Calls [CFR]

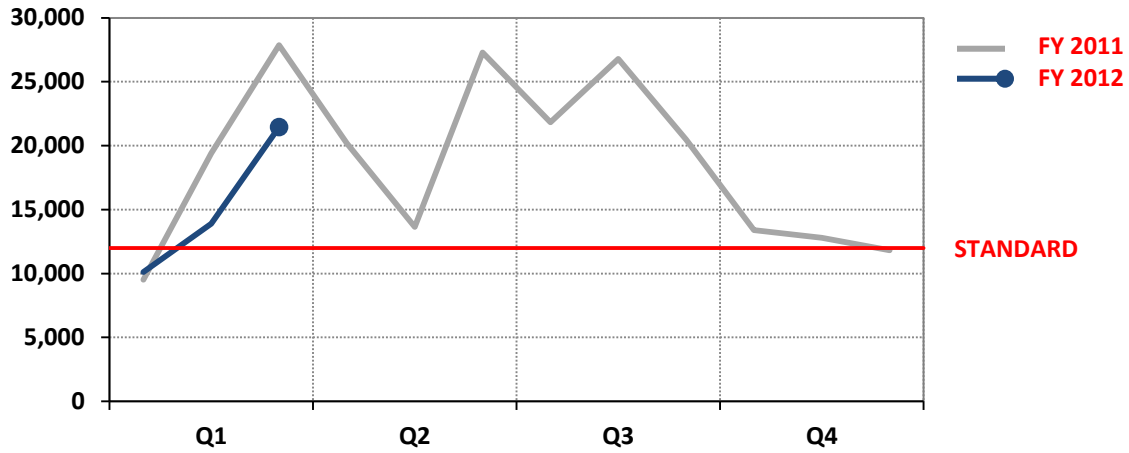
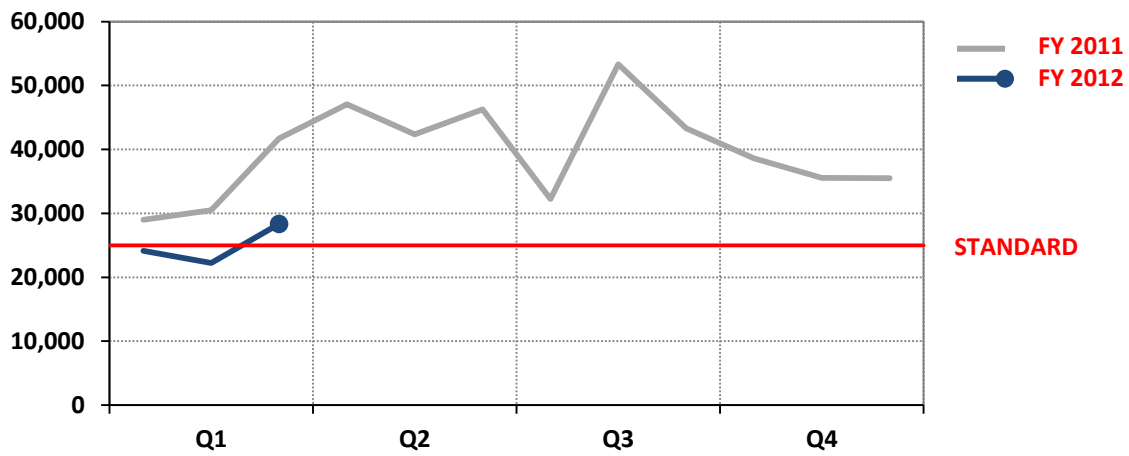


Figure 13 - Reliability: Miles between Road Calls [ACCESS]



## Ridership

Ridership (or boardings) is the number of rides taken by passengers using public transit, and is influenced by the weather, economy, and seasonal variations in demand.

The economic climate continued to have an effect on ridership as boardings for fixed route increased by 3.1 percent from the previous fiscal year. A comparison of the first quarter between the last fiscal year and the current fiscal year showed gas prices to have increased from an average price of \$3.05 per gallon to \$3.69 per gallon which may have enticed riders to return to public transit. Additionally, the unemployment rate in Orange County appears to be improving. By way of review, the average unemployment rate by the end of the first quarter in FY 2010-11 stood at 9.7 percent. By the end of the first quarter in FY 2011-12, unemployment dropped to an average of 9.1 percent. Despite that positive trend, the unemployment rate for Orange County remains high. It is worthwhile to note that this is the second consecutive quarter of positive growth for ridership since it began to decline nearly four years ago.

The ACCESS program declined slightly by 0.4 percent as the month of July 2011 had unusually low ridership; however, the month had one less weekday compared to July 2010 which contributed to the decline in passengers. If the data were normalized for the day-mix between July 2010 and July 2011, the first quarter would have seen a 0.7 percent increase instead. Many of these trips are non-discretionary trips provided for medical appointments or to attend day programs provided to persons with special needs, unlike fixed-route ridership which is more heavily impacted by changes in the local economy, in particular, unemployment.

Mode	Goal	FY 2011	FY 2012	Variance %
<i>First Quarter</i>				
All FR	12,691,659	12,996,907	13,399,449	3.1%
ACCESS	293,554	333,125	331,942	-0.4%

Figure 14 - Ridership [All Fixed Route]

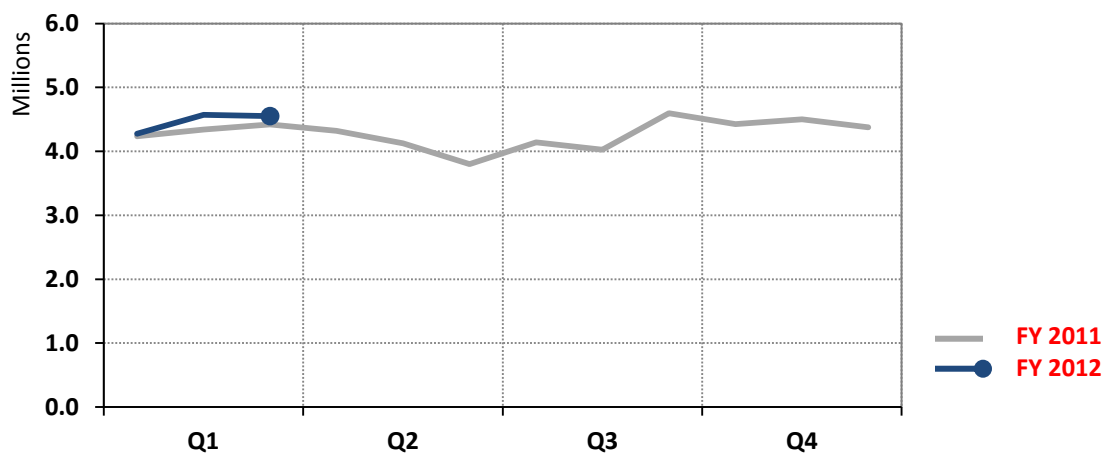
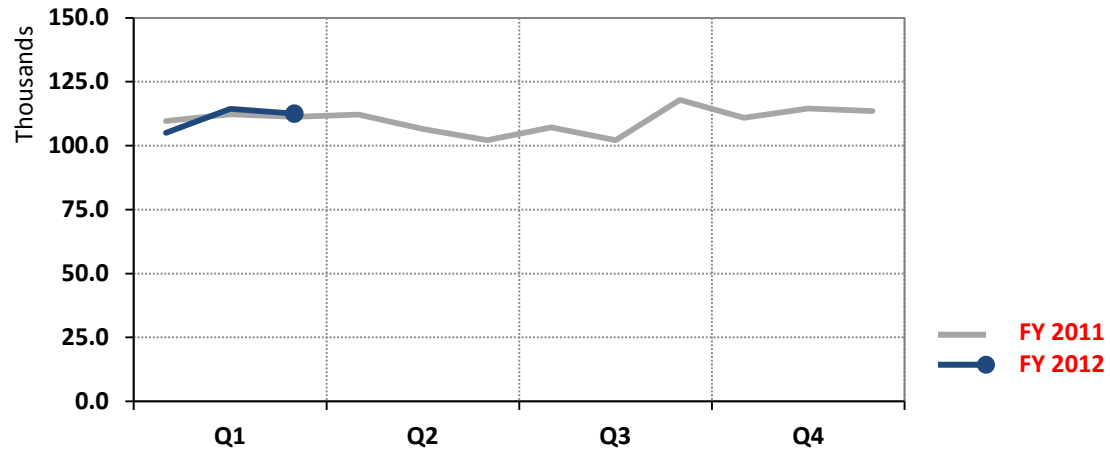


Figure 15 - Ridership [ACCESS]



## Passenger Fare Revenues

Passenger fare revenues are the total revenues derived from the payment of passenger fares which includes cash and pre-paid fares.

The overall fixed-route fare revenues for the first quarter of the fiscal year are 3.2 percent higher than the previous fiscal year due to the increase in overall ridership. On ACCESS, fare revenues increased by 12.8 percent despite the slight decline in ridership as staff has increased activities to address fare evasion, and pre-paid fares increased for the first quarter of FY 2011-12 compared to FY 2010-11 due to the school and workshop schedules restarting during these months. The difference between the quarterly goals and the actual achieved are likely due to cash flow including pass sale receipts not received within the quarterly reporting period.

Mode	Goal	FY 2011	FY 2012	Variance %
<b>First Quarter</b>				
All FR	\$11,578,848	\$10,868,593	\$11,217,364	3.2%
ACCESS	\$1,233,895	\$626,869	\$707,042	12.8%

Figure 16 - Passenger Fare Revenues [All Fixed Route]

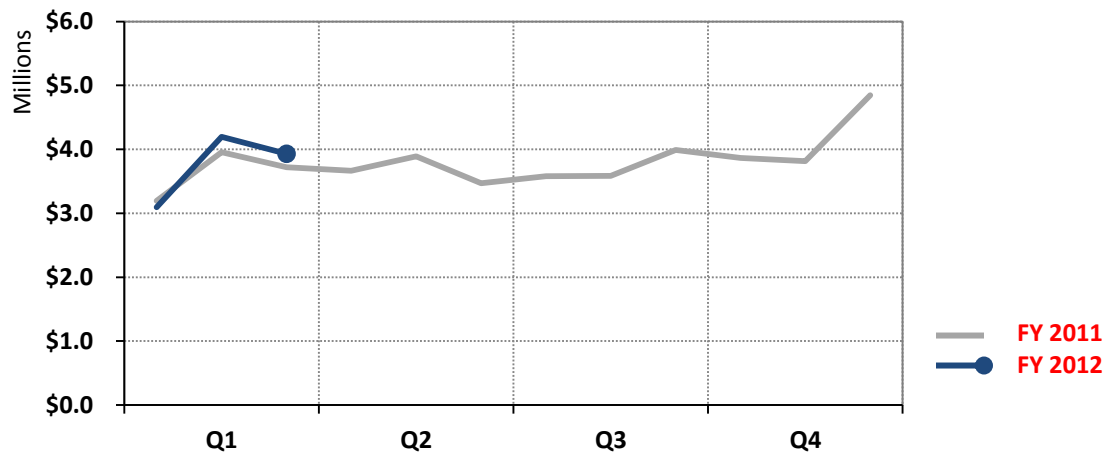
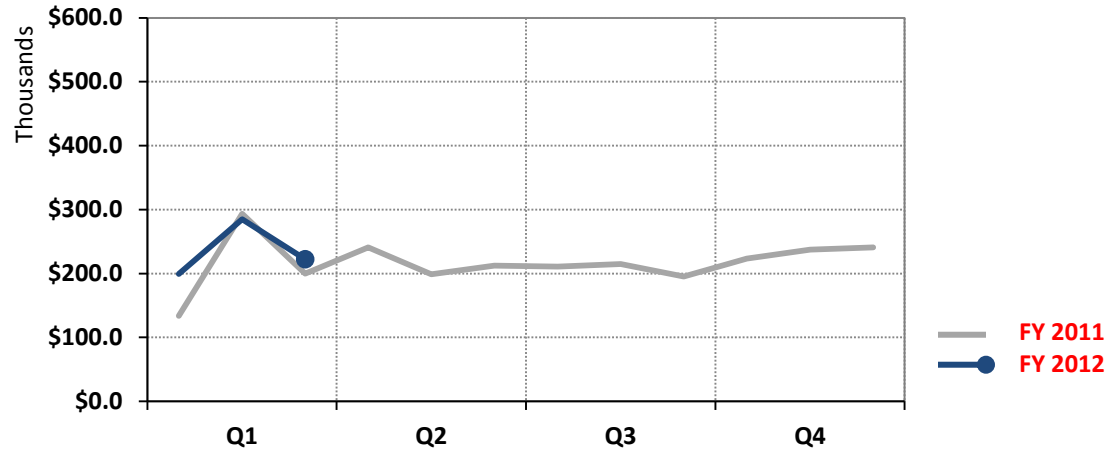


Figure 17 - Passenger Fare Revenues [ACCESS]





## Operating Expenses

Operating costs include the total expenses to operate and maintain the transit system including labor, fuel, maintenance, wages and salaries, employee benefits, taxes, and other costs associated with transit operations.

DOFR continues to achieve lower operating costs experiencing a 6.8 percent decrease in expenses. For CFR, an increase in contract rates for direct costs from \$60.62 per RVH in FY 2010-11 to \$64.32 per RVH in FY 2011-12 (an increase of 6.1 percent), and largely, the significant increase of service that was transitioned from DOFR, contributed to the 79.6 percent rise in operating costs compared to the previous fiscal year. CFR annualized RVHs increased from 26,122 in FY 2010-11 to 51,353 in FY 2011-12, which is an increase of 96.6 percent. If the costs were normalized using the Fiscal Year End 2010-11 CFR fully allocated cost per RVH of \$82.22 and based on the current fiscal year's first quarter RVH, the variance between quarter-to-quarter would have shown a decrease of 6.4 percent (where FY 2010-11 first quarter costs would have been \$4.2 million). On ACCESS, the total expenses increased by 5.8 percent from the previous fiscal year's first quarter as the increase in contract rates for revenue hours rose from \$52.80 in FY 2010-11 to \$54.38 in FY 2011-12.

Mode	Goal	FY 2011	FY 2012	Variance %
<i>First Quarter</i>				
All FR	\$49,366,121	\$44,433,590	\$43,314,205	-2.5%
DOFR	\$44,201,007	\$42,234,231	\$39,363,092	-6.8%
CFR	\$5,165,114	\$2,199,359	\$3,951,113	79.6%
ACCESS	\$14,238,515	\$11,277,466	\$11,928,423	5.8%

Figure 18 - Operating Expenses [DOFR]

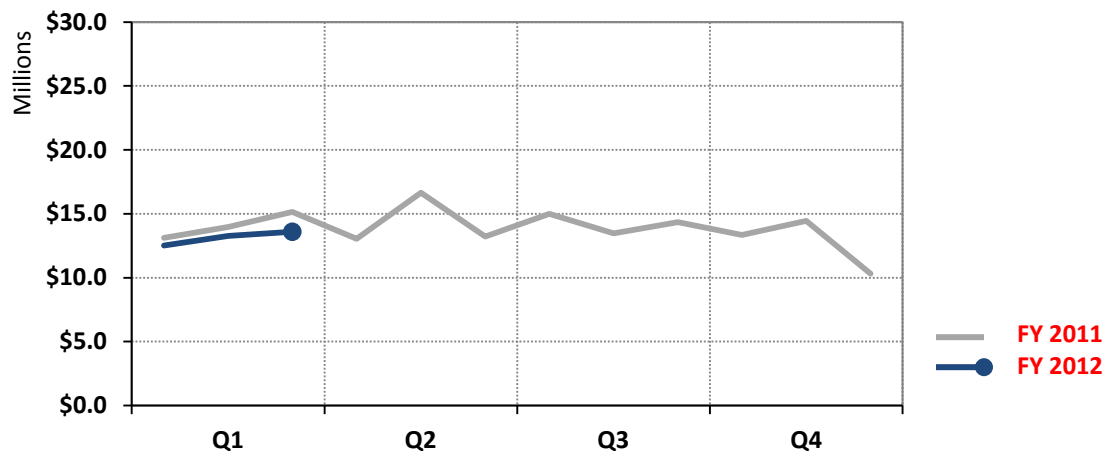


Figure 19 - Operating Expenses [CFR]

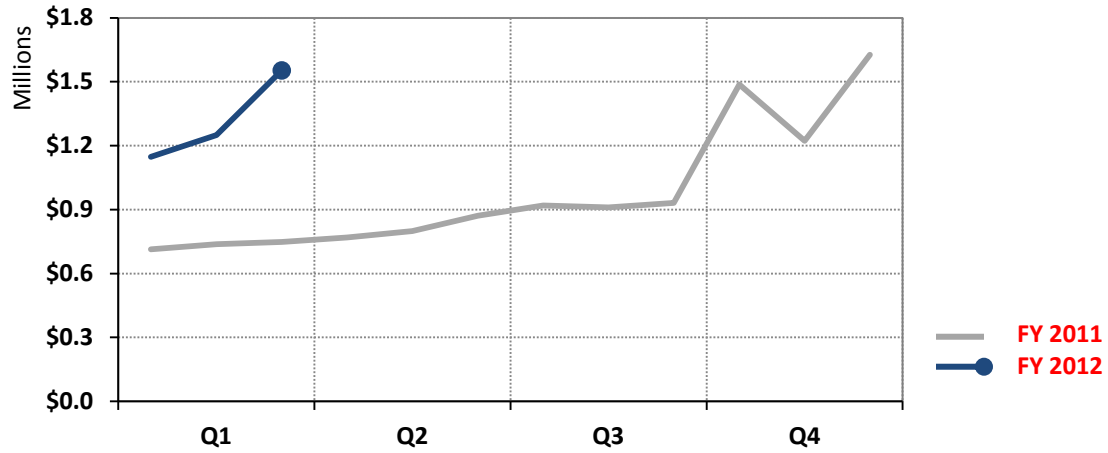
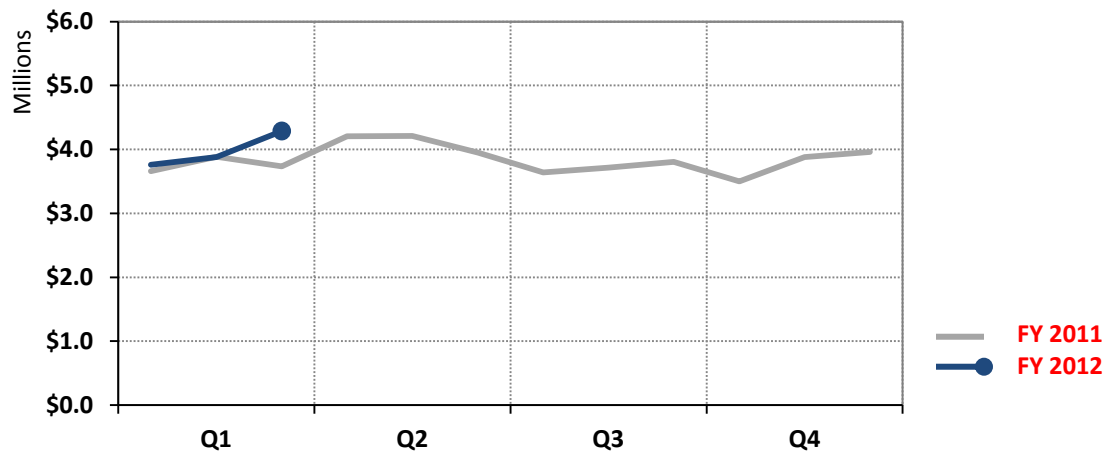


Figure 20 - Operating Expenses [ACCESS]



## Farebox Recovery Ratio

Farebox recovery ratio is a measure of the proportion of operating costs covered by passenger fares; calculated by dividing the farebox revenue by total operating expenses. As part of the budget development process, a goal was established for each of the three modes, as shown in the goals for the charts below. A minimum farebox recovery ratio of 20 percent for all fixed route is required by the Transportation Development Act in order for transit agencies to receive the maximum sales taxes available for public transit purposes.

The farebox recovery ratios for fixed-route bus service increased by 5.9 percent and for ACCESS by 6.6 percent from the first quarter of FY 2010-12 to the first quarter of FY 2011-12. For fixed-route, the overall increase in passenger fare revenues against the lower overall operating expenses helped improve the farebox recovery measurement. On the contracted paratransit program, the increase in fare revenues outpaced the increase in costs allowing for an improvement in farebox recovery.

Mode	Goal	FY 2011	FY 2012	Variance %
<b>First Quarter</b>				
All FR	23.4%	24.5%	25.9%	5.9%
ACCESS	9.8%	5.6%	5.9%	6.6%

Figure 21 - Farebox Recovery Ratio [All Fixed Route]

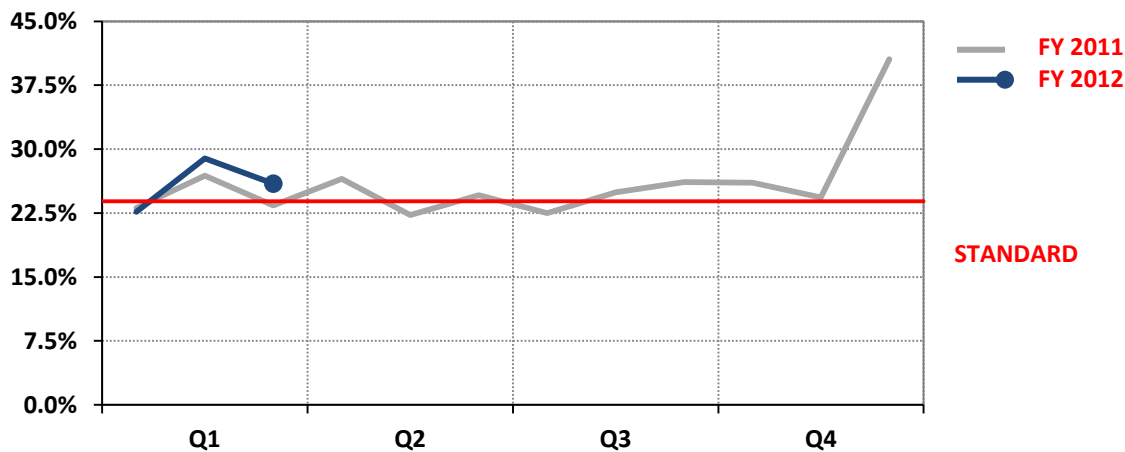
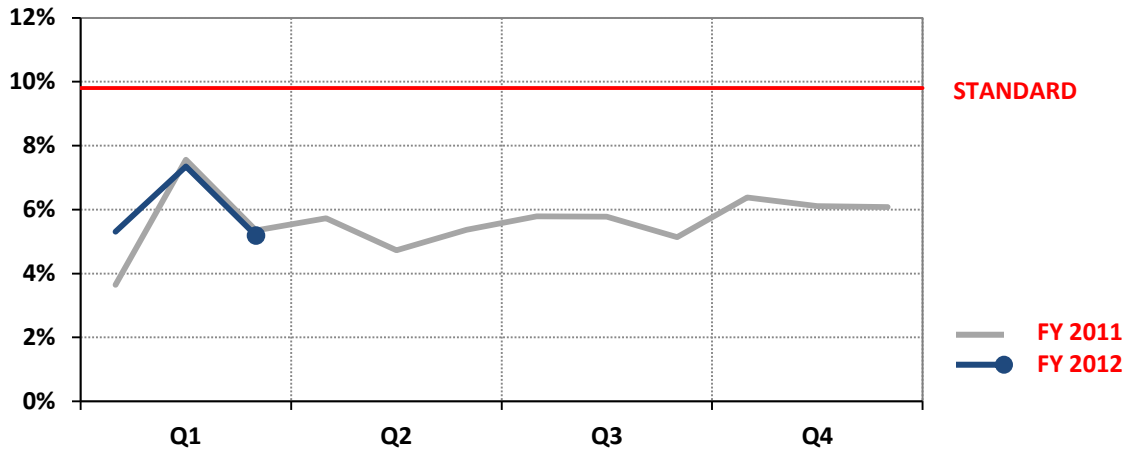


Figure 22 - Farebox Recovery Ratio [ACCESS]



## Cost per Revenue Vehicle Hour

Cost per RVH is one of the many industry standards utilized to measure the cost efficiency of transit service. It is derived by dividing operating expenses by RVH.

DOFR service experienced a slight decrease of 0.7 percent due to the decrease in RVH operated outpacing the decline in operating costs. CFR saw a drop in cost per RVH of 8.6 percent as the opposite occurred where the increase in contracted service outpaced the increase in operating costs. DOFR service decreased from 364,000 RVH in FY 2010-11 to 336,899 RVH in FY 2011-12, or about 7.4 percent. CFR service increased from 26,122 RVH last year to 51,353 RVH this year, a change of 96.6 percent. This shift in the distribution of RVH between DOFR and CFR is consistent with the financial sustainability strategy approved by the Board of Directors to increase the level of contracted fixed route service to 30 percent.

The contracted paratransit program increased by 7.3 percent in the cost per revenue vehicle hour compared to the first quarter of the previous year as the increase in costs against a decrease in revenue hour affected the financial productivity. ACCESS operated 157,750 RVH in the first quarter of last fiscal year decreasing to 155,443 RVH for the first quarter of the current fiscal year. Contractors' cooperation along with the increase in demand response taxi usage continues to provide cost efficiencies as staff continues to monitor and evaluate overall paratransit contract costs. In addition, a successful contract renegotiation between Veolia and OCTA mitigated what would have been an even higher increase in ACCESS costs per RVH as the scheduled, pre-negotiated rates for the direct costs would have increased to \$56.61 per RVH and \$39.00 per subcontracted taxi trip instead of the current rates of \$54.38 per RVH and \$38.61 per taxi trip.

Mode	Goal	FY 2011	FY 2012	Variance %
<i>First Quarter</i>				
DOFR	\$131.75	\$116.84	\$116.03	-0.7%
CFR	\$101.01	\$84.19	\$76.94	-8.6%
ACCESS	\$89.39	\$71.49	\$76.74	7.3%

Figure 23 - Cost per Revenue Vehicle Hour [DOFR]

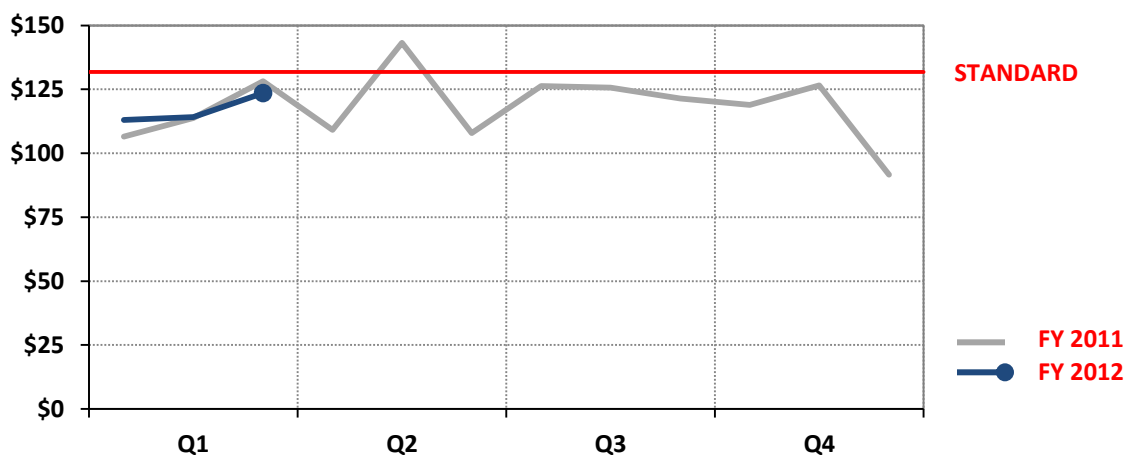


Figure 24 - Cost per Revenue Vehicle Hour [CFR]

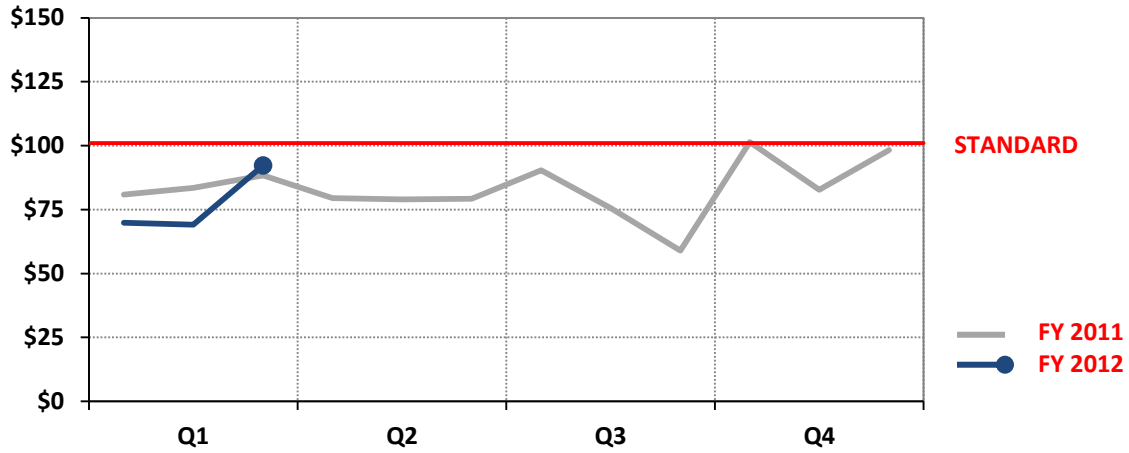
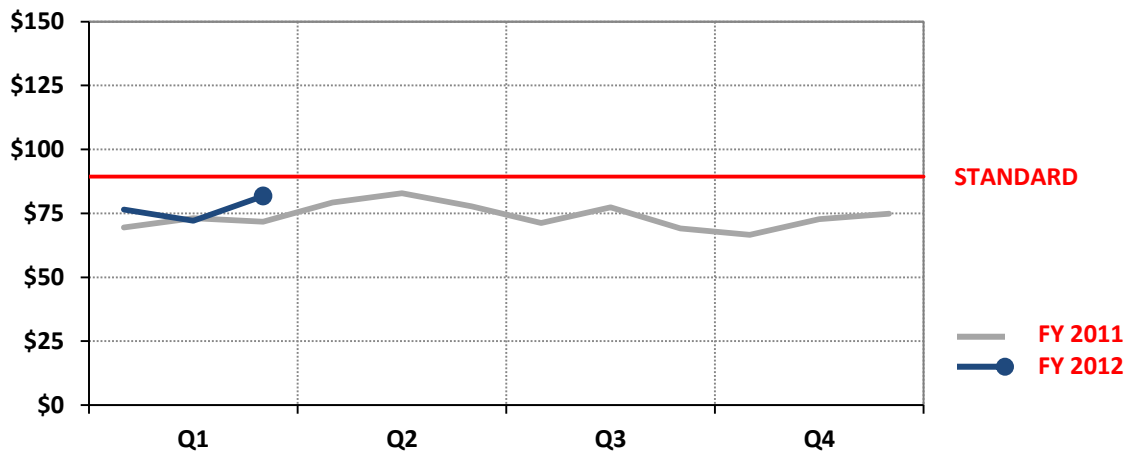


Figure 25 - Cost per Revenue Vehicle Hour [ACCESS]



## **Conclusion**

This report provides an update on the OCTA Transit Division performance measurements for the first quarter of FY 2010-11, compared to the same time period last year. Key performance indicators focus on safety, courtesy and reliability, in addition to measurements commonly used in the transit industry such as ridership, operating data, financial data, and maintenance measurements. In an effort to maintain transparency with the public, these measurements are shared with the public via the Transit dashboard found on the OCTA corporate website. Highlights of performance over the year include the following:

- **Safety:** The accident rate for DFR increased, CFR decreased, and ACCESS increased. However, the transit system as a whole met the safety standard.
- **Courtesy:** Customer complaints increased for DOFR and ACCESS while CFR decreased. Despite an increase in service and ridership, CFR met the goals as DOFR and ACCESS did not.
- **Reliability – OTP:** The transit system fell in on-time performance across the three programs. DOFR service met the standards while the contracted programs did not but were close to their goals.
- **Reliability – SDF:** ACCESS saw an increase in the number of SDFs due to the recent revisions in service scheduling by the contractor.
- **Reliability – Miles between Road Calls:** DOFR continued a positive trend in miles between road calls while CFR and ACCESS experienced declines. Yet the fixed-route system met or exceeded the maintenance standards while ACCESS nearly achieved them.
- **Ridership:** The fixed-route system recorded its second consecutive quarter of positive growth since bus ridership began its decline nearly four years ago. On ACCESS, the program declined slightly due to an uncontrollable day-mix in July 2011 that contributed to unusually low boardings.
- **Passenger Fare Revenues:** Fixed-route fare revenues followed suit in its ridership having increased in comparison to the previous recording period while ACCESS also showed positive trends despite a slight decline in passengers.
- **Operating Expenses:** DOFR experiences a decline in costs while CFR rises in expenses as the transitioning of service from DOFR to CFR affects the costs allocations. ACCESS saw an increase in costs related to the increase in contract rates from the previous fiscal year.
- **Farebox Recovery Ratio:** Due to the increases in passenger fare revenues, both the fixed-route and ACCESS programs saw increased in their farebox recovery ratios.
- **Cost per RVH:** The fixed-route system recorded declines in cost per RVH as the transition of service between DOFR and CFR impacts the cost and revenue hour allocations leading to improvements in the cost efficiency. ACCESS saw a rise in cost per RVH as the increase in the contract rates rose from the previous year.