Most areas of Imperial County with a high transit score, primarily the cities of Brawley, Calexico and El Centro and immediately surrounding areas, are covered by IV Transit service. Urban areas around Imperial and El Centro appear to be well-served, according to this analysis. It should be kept in mind that sometimes an entire analysis zone (i.e., census tract) may receive a certain score, when in reality only a portion of that tract exhibits the attributes determining that score (and in most cases that portion of the tract where there is population is served by IV Transit). The “unserved” areas are as follows:

- Some parts of Brawley, specifically the northern, southern and eastern areas away from the center of town. These areas are currently served by the Brawley Dial-a-Ride (demand response service), which is available to the general public and could connect riders to the fixed routes. However, the previously proposed Gold Line circulator service would serve these areas in the future in a similar fashion as the Blue and Green Lines operate currently in El Centro. The Gold Line would provide a timed transfer with the fixed routes in downtown Brawley.

- Some parts of Calexico are not currently served by IV Transit fixed routes. As with Brawley, a circulator service (the Orange Line) has previously been proposed for Calexico, which would likely serve some or all of these areas. Currently, elderly and disabled passengers in these areas are served by the Calexico Dial-a-Ride. Non-elderly/disabled passengers do not currently have access to IV Transit service in these areas; however, private operator Calexico Transit System provides two loop routes serving parts of these areas.

- A portion of Winterhaven shows a relatively high transit score in an area that is not covered by existing transit service. This small agricultural region presents a challenge for IV Transit, as it is sparsely populated, distant from the economic and population center of the county, and likely tied more closely economically and socially to nearby Yuma, Arizona.
Land Use Data

This section discusses land use in Imperial County in regard to IV Transit’s fixed route service. A land use map was obtained from Imperial County’s Planning & Development Services website and was overlaid with IV Transit fixed routes. This map is shown in Figure 4-6 below. All of the urban areas are served by fixed route service with the exception of Salton City/Salton Sea Beach, which is for the most part sparsely populated and is served by the West Shores Dial-a-Ride two days per week. Fixed route service provides a web connecting the urban areas at the core of the agricultural region (irrigated area) at the center of the county. “Community areas” at Bombay Beach and Ocotillo are served by lifeline services, as is part of the small agricultural area near Winterhaven. The remainder of the county consists of open space and/or military uses. A small agricultural/community area at the northeast corner of the county likely does not warrant service.

Figure 4-6: IV Transit Fixed Route Service vs. Land Use

Sources: Imperial County Department of Planning & Development Services and ICTC
Trip Generator Data

This section looks at trip generators, including services, employment and schools, that are or are not served by the existing IV Transit fixed route network. Border crossings are also taken into account as generators, as many people cross into Imperial County from Mexico to access jobs and/or shopping.

ICTC’s goals and objectives have prioritized generators that should be served by transit as follows:

1) **Health Centers** – Institutions consisting of hospitals, clinics, rehabilitation centers, mental health centers and nursing homes

2) **Social Service/Government Centers** – Public agencies, government centers, community facilities and recreational complexes

3) **Educational Facilities** – Colleges, universities, vocational schools and secondary (middle and high) schools

4) **Employers** - Employers or concentrations of employers, such as businesses or industrial parks

d. **Commercial Centers** – Economic development such as commercial centers, retail and entertainment destinations.

Figure 4-7 shows IV Transit fixed route service with regard to major generators in the county. Buffers are shown to depict the “service area”, which is considered to be within ½ mile of a fixed route or within ¾ mile of a deviated route. Most major generators, including high schools, colleges and universities, major shopping destinations, government and social services offices, senior centers, hospitals and major employers are served.
Figure 4-7: IV Transit Fixed Route Service vs. Generators

Source: ICTC
The following generators are not served by existing fixed route service:

- The Calipatria and Centinela State Prisons are not served by fixed route transit; however, both facilities require guards to provide their own transportation, in case of emergency at the prison facility.
- Walmart in Brawley is not directly served by fixed-route transit; however, fixed-route service operates nearby and a stop will be added on the proposed Gold Line circulator.
- CalEnergy, located northwest of Calipatria
- Ormat Technologies, south of Heber

**Key Findings for Fixed Route Congruency Analysis**

Overall, IV Transit fixed route service effectively serves its market – more service is provided where demand is higher, while less service is provided where demand is lower. There are essentially two classes of routes: local and express routes serving the more dense, urbanized primary corridor zone, including service to Imperial Valley College, and less frequent routes operating smaller vehicles to the surrounding rural areas. The smallest communities, which tend to also be the most distant from El Centro, receive the least amount of service – but are still served ensuring mobility for their residents. Some overall findings from this analysis include:

- **Brawley** is currently only partially served by fixed route service, with the outlying areas served by the Brawley Dial-a-Ride demand response service (available to the general public). Many of these areas will likely be served if the proposed Gold Line circulator is implemented, at which time the Dial-a-Ride service would no longer need to serve the general public (as it would then represent a duplication in service).

- **The Walmart in Brawley** is one major generator that is not directly served by a fixed route. Again, this will likely be remedied if the Gold Line circulator is implemented.

- **Calexico** is only partially served by IV Transit fixed routes. Unlike Brawley, the Calexico Dial-a-Ride service is available only to senior/disabled passengers; however, the proposed Orange Line circulator would likely connect many of these currently un-served areas into the IV Transit fixed route network. Some neighborhoods that are not currently served by IV Transit fixed routes have access to service by private operator Calexico Transit System.

- **Crowded conditions on IV Transit routes** that serve Calexico suggest that there may be more demand for service both within Calexico and between Calexico and other primary corridor destinations.
4.1.3 Fixed Route Peer Analysis

This section presents a peer group and trend analysis, comparing Imperial Valley Transit’s fixed route system to similar systems. Data for the peer analysis was obtained from 2009 National Transit Database (NTD) reports in order to maximize consistency in reporting from agency to agency. Follow-up telephone interviews were also conducted in order to obtain more detailed information regarding fleet ownership.

Peer Group Selection

Three California peer systems were selected for this analysis, based on geography and system characteristics. Smaller transit systems across the state were considered, with a preference given to those serving multi-nodal communities, generally those containing several small urban centers surrounded by larger rural areas. Criteria used in selecting peer organizations also included annual unlinked trips (ridership), fleet size and ownership. As many smaller transit agencies do not report to NTD, finding appropriately-sized peers for which data is available was a key challenge in peer selection. Agencies that do not complete annual NTD reporting (are not included in the database) were eliminated, including Siskiyou County/Yreka’s STAGE, the Mendocino Transit Authority, Barstow Area Transit and the Morongo Basin Transit Authority. The following systems were selected for use in the peer analysis:

- Merced County Transit, The Bus (Merced, California)
- Kings County Area Public Transit Agency, KART (Hanford, California)
- Redding Area Bus Authority, RABA (Redding, California)
System Indicator Development

This section provides an overview of the peer systems and analysis. Table 4-6 below shows key characteristics of each of the peer systems, including service area population, revenue miles and hours, peak vehicles, expenses, revenues and ridership.

Table 4-6: Peer Group Summary

<table>
<thead>
<tr>
<th>System</th>
<th>Service Area Population</th>
<th>Vehicle Revenue Miles</th>
<th>Vehicle Revenue Hours</th>
<th>Peak Vehicles</th>
<th>Operating Expenses</th>
<th>Farebox Revenue</th>
<th>Unlinked Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperial Valley Transit, IV Transit (El Centro, CA)</td>
<td>164,421</td>
<td>650,054</td>
<td>31,958</td>
<td>14</td>
<td>$3,472,547</td>
<td>$481,058</td>
<td>556,433</td>
</tr>
<tr>
<td>Merced County Transit, The Bus (Merced, CA)</td>
<td>120,000</td>
<td>1,466,624</td>
<td>81,414</td>
<td>26</td>
<td>$5,508,909</td>
<td>$809,039</td>
<td>1,189,281</td>
</tr>
<tr>
<td>Kings County Area Public Transit Agency, KART (Hanford, CA)</td>
<td>51,965</td>
<td>756,514</td>
<td>57,384</td>
<td>16</td>
<td>$2,890,988</td>
<td>$595,659</td>
<td>911,059</td>
</tr>
<tr>
<td>Redding Area Bus Authority, RABA (Redding, CA)</td>
<td>117,478</td>
<td>690,704</td>
<td>41,535</td>
<td>12</td>
<td>$3,369,619</td>
<td>$594,396</td>
<td>821,731</td>
</tr>
</tbody>
</table>

Source: 2009 National Transit Database

The peer analysis compares IV Transit’s fixed route system with the fixed route systems of each of the peer organizations. The following indicators were used to compare the performance of IV Transit service with peers:

- System size indicators - these include overall size and performance of the IV Transit fixed route services in relation to peer systems. Indicators include service area population, revenue miles and hours, peak vehicles and ridership (unlinked trips).

- Cost and operational efficiency indicators - these indicators measure the resources expended compared to the amount of service produced, addressing how well the expenditures made on labor, fuel and supplies are used as compared to other systems. Indicators include cost per revenue mile and cost per revenue hour.

- Cost and operational effectiveness indicators - these indicators measure the service provided based on the resources expended. Indicators include cost per passenger and farebox recovery.

- Service effectiveness indicators - these indicators measure transit consumption based on service output. Indicators include passengers per revenue mile and passengers per revenue hour.
Each indicator is presented as follows:

<table>
<thead>
<tr>
<th>Peer Group Performance</th>
<th>Best Value</th>
<th>Worst Value</th>
<th>Average Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV Transit Performance</td>
<td>Value</td>
<td>Percent Difference (from peer group average)</td>
<td>Rank Within Group (where “1” is best)</td>
</tr>
</tbody>
</table>

Peer Group and Trend Analysis

This section evaluates IV Transit’s fixed route service versus that of the peer organizations with regard to each specific indicator mentioned above. Table 4-7 compares IV Transit to its three peers (listed above) in terms of service area population, revenue hours and miles, peak vehicles and unlinked trips (ridership). Overall, IV Transit serves the largest population but operates the fewest revenue hours and miles for the fewest boardings of the peer organizations. IV Transit operates more vehicles in maximum service than one of its peers (i.e., Kings County).

Table 4-7: System Size Indicators

<table>
<thead>
<tr>
<th>Service Area Population</th>
<th>Revenue Hours</th>
<th>Revenue Miles</th>
<th>Peak Vehicles</th>
<th>Unlinked Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greatest</td>
<td>164,421</td>
<td>81,414</td>
<td>1,466,625</td>
<td>26</td>
</tr>
<tr>
<td>Least</td>
<td>51,965</td>
<td>31,958</td>
<td>650,054</td>
<td>12</td>
</tr>
<tr>
<td>Group Average</td>
<td>113,466</td>
<td>53,073</td>
<td>890,974</td>
<td>17</td>
</tr>
<tr>
<td>IV Transit</td>
<td>164,421</td>
<td>31,958</td>
<td>650,054</td>
<td>14</td>
</tr>
<tr>
<td>Difference</td>
<td>+44.9%</td>
<td>-39.8%</td>
<td>-27.0%</td>
<td>-17.8%</td>
</tr>
<tr>
<td>Rank</td>
<td>1 of 4</td>
<td>4 of 4</td>
<td>4 of 4</td>
<td>3 of 4</td>
</tr>
</tbody>
</table>

Source: 2009 National Transit Database

While IV Transit has the most populous service area of the four transit agencies included in this analysis according to the National Transit Database, it is important to consider that each of these agencies effectively serves the population of one county. When county population, rather than service area population, is taken into consideration, Imperial County falls just 10 percent below average for the peer group (based on 2009 American Community Survey estimates), and ranks third out of the four counties.

Cost per revenue mile and cost per revenue hour were both very high for IV Transit, higher than all three peers, reflecting a very high cost of providing transit service in Imperial County. Cost per revenue hour was more than double that of the geographically closest peer, KART. Table 4-8 shows the analysis of cost and operational efficiency indicators.
Table 4-8: Cost and Operational Efficiency Indicators

<table>
<thead>
<tr>
<th></th>
<th>Cost per Revenue Mile</th>
<th>Cost per Revenue Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best</td>
<td>$3.76</td>
<td>$50.38</td>
</tr>
<tr>
<td>Worst</td>
<td>$5.34</td>
<td>$108.66</td>
</tr>
<tr>
<td>Group Average</td>
<td>$4.28</td>
<td>$71.80</td>
</tr>
<tr>
<td>IV Transit</td>
<td>$5.34</td>
<td>$108.66</td>
</tr>
<tr>
<td>Difference</td>
<td>+24.8%</td>
<td>+51.3%</td>
</tr>
<tr>
<td>Rank</td>
<td>4 of 4</td>
<td>4 of 4</td>
</tr>
</tbody>
</table>

Source: 2009 National Transit Database

As with cost and operational efficiency, IV Transit scored last in terms of both cost and operational effectiveness indicators as well, with the highest cost per passenger and lowest farebox recovery ratio of the peer group. This again reflects the high cost of providing transit service in the county.

Table 4-9: Cost and Operational Effectiveness Indicators

<table>
<thead>
<tr>
<th></th>
<th>Cost per Passenger</th>
<th>Farebox Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best</td>
<td>$3.17</td>
<td>20.6%</td>
</tr>
<tr>
<td>Worst</td>
<td>$6.24</td>
<td>13.9%</td>
</tr>
<tr>
<td>Group Average</td>
<td>$4.38</td>
<td>16.3%</td>
</tr>
<tr>
<td>IV Transit</td>
<td>$6.24</td>
<td>13.9%</td>
</tr>
<tr>
<td>Difference</td>
<td>+42.5%</td>
<td>-14.7%</td>
</tr>
<tr>
<td>Rank</td>
<td>4 of 4</td>
<td>4 of 4</td>
</tr>
</tbody>
</table>

Source: 2009 National Transit Database

Service effectiveness indicators show the productivity, or number of passengers per unit of service, of a system’s fixed route network. In terms of passenger per revenue mile, IV Transit ranked third out of the four systems, with 0.9, ahead of The Bus. In terms of passengers per revenue hour, IV Transit ranked second, ahead of The Bus and KART but behind RABA.

Table 4-10: Service Effectiveness Indicators

<table>
<thead>
<tr>
<th></th>
<th>Passengers per Revenue Mile</th>
<th>Passengers per Revenue Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best</td>
<td>1.2</td>
<td>19.8</td>
</tr>
<tr>
<td>Worst</td>
<td>0.8</td>
<td>14.6</td>
</tr>
<tr>
<td>Group Average</td>
<td>1.0</td>
<td>16.4</td>
</tr>
<tr>
<td>IV Transit</td>
<td>0.9</td>
<td>17.4</td>
</tr>
<tr>
<td>Difference</td>
<td>-12.3%</td>
<td>+6.3%</td>
</tr>
<tr>
<td>Rank</td>
<td>3 of 4</td>
<td>2 of 4</td>
</tr>
</tbody>
</table>

Source: 2009 National Transit Database
Table 4-11 shows changes over time for each indicator described above from 2007 to 2009, reflecting trends occurring within IV Transit and peer systems. Data for years prior to 2007 was not available from NTD for all agencies.

Regarding system size, service area population, revenue hours and miles and peak vehicles changed very little from 2007 to 2009 for the peer systems, while population increased slightly (and revenue hours decreased) for IV Transit. Operating expenses increased for each of the four agencies, but slightly below average for IV Transit at 11.4 percent. Ridership and farebox revenue both increased substantially for IV Transit – with 45.3 and 44.4 percent increases, respectively – eclipsing more modest increases for the peer group.

Most agencies experienced increases in cost per mile and cost per hour from 2007 to 2009 (with the exception of KART for which both decreased); however, even given IV Transit’s already higher-than-average cost of providing service, both cost per mile and cost per hour continued to increase more rapidly for IV Transit than for the peer group as a whole.

IV Transit made excellent progress with regard to cost and operational effectiveness. While the agency continues to have the highest cost per passenger and lowest farebox recovery of the peer group, it also showed the most substantial improvement in both from 2007 to 2009. Cost per passenger actually decreased, even while overall operating cost increased, while farebox recovery increased, both reflecting substantial increases in ridership. Some other agencies experienced decreased cost per passenger (KART and RABA) and increased farebox recovery (KART and The Bus), but to a lesser degree than IV Transit.

IV Transit also performed very well in terms of service effectiveness, showing substantial increases in both passengers per revenue hour and passengers per revenue mile from 2007 to 2009. This reflects extensive growth in ridership while revenue miles and hours have remained relatively constant. For the peers, both The Bus and KART showed declining passengers per mile and hour, while RABA showed lesser increases than IV Transit.
Table 4-11: IV Transit and Peer Trends

<table>
<thead>
<tr>
<th></th>
<th>IV Transit</th>
<th>Peer Average</th>
<th>Change</th>
<th>2007</th>
<th>2009</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Population</td>
<td>150,114</td>
<td>164,421</td>
<td>9.5%</td>
<td>115,259</td>
<td>113,466</td>
<td>-1.6%</td>
</tr>
<tr>
<td>Vehicle Revenue Miles</td>
<td>646,601</td>
<td>650,054</td>
<td>0.5%</td>
<td>851,440</td>
<td>890,974</td>
<td>4.6%</td>
</tr>
<tr>
<td>Vehicle Revenue Hours*</td>
<td>38,310</td>
<td>31,958</td>
<td>-16.6%</td>
<td>49,970</td>
<td>53,073</td>
<td>6.2%</td>
</tr>
<tr>
<td>Peak Vehicles</td>
<td>14</td>
<td>14</td>
<td>0%</td>
<td>18</td>
<td>17</td>
<td>-2.9%</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>$3,115,839</td>
<td>$3,472,547</td>
<td>11.4%</td>
<td>$3,394,585</td>
<td>$3,810,516</td>
<td>12.3%</td>
</tr>
<tr>
<td>Farebox Revenue</td>
<td>$333,175</td>
<td>$481,058</td>
<td>44.4%</td>
<td>$513,952</td>
<td>$620,038</td>
<td>20.6%</td>
</tr>
<tr>
<td>Ridership (Unlinked Trips)</td>
<td>382,899</td>
<td>556,433</td>
<td>45.3%</td>
<td>747,109</td>
<td>869,626</td>
<td>16.4%</td>
</tr>
</tbody>
</table>

Cost and Operational Efficiency

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per Revenue Mile</td>
<td>$4.82</td>
<td>$5.34</td>
<td>10.9%</td>
<td>$3.99</td>
<td>$4.28</td>
<td>7.3%</td>
</tr>
<tr>
<td>Cost per Revenue Hour*</td>
<td>$81.33</td>
<td>$108.66</td>
<td>33.6%</td>
<td>$67.93</td>
<td>$71.80</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

Cost and Operational Effectiveness

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per Passenger</td>
<td>$8.14</td>
<td>$6.24</td>
<td>-23.3%</td>
<td>$4.54</td>
<td>$4.38</td>
<td>-3.6%</td>
</tr>
<tr>
<td>Farebox Recovery</td>
<td>10.7%</td>
<td>13.9%</td>
<td>29.6%</td>
<td>15.1%</td>
<td>16.3%</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

Service Effectiveness

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Passengers per Revenue Mile</td>
<td>0.6</td>
<td>0.9</td>
<td>44.5%</td>
<td>0.9</td>
<td>1.0</td>
<td>11.2%</td>
</tr>
<tr>
<td>Passengers per Revenue Hour*</td>
<td>10.0</td>
<td>17.4</td>
<td>74.2%</td>
<td>15.0</td>
<td>16.4</td>
<td>9.6%</td>
</tr>
</tbody>
</table>

Sources: 2007 and 2009 National Transit Database

*2007 revenue hours for IV transit were overstated in the National Transit Database (76,619). That amount was halved for the purpose of this analysis, more closely reflecting data obtained from IV Transit.

Comparative Analysis of Vehicle/Facility Ownership

One important aspect of the differing methods by which public transportation agencies may provide their services is the manner in which those services are operated. Many larger transit agencies “directly operate” their systems; this means that they own all of the system’s assets and the operators are employed directly by the transit agency. In these cases, the transit agency itself is typically a larger and more complex entity than it would otherwise need to be.

However, many other transit systems - including some relatively large agencies - choose instead to “purchase” the transportation services they oversee from transportation operators that may range from non-profit entities to large multi-national corporations. These operations are typically purchased via contracts between the agency and the operator that can vary in terms of their duration.

The Imperial County Transportation Commission (ICTC) - in a manner similar to its peer systems - contracts with operators for both its fixed route and demand responsive services. Throughout the transit industry, demand responsive operations are typically contracted out, even by the largest transit systems. The method of providing fixed route service typically sees more variation throughout the transit industry; nonetheless, even when operations are contracted out, options regarding the manner in which the vehicles utilized in the transit service are owned, serviced and stored are still available. As can be seen in Table 4-12, the ICTC’s fixed route peer systems all contract for the operation of their fixed route service and all also own their own vehicles. Only the ICTC fleet is owned by the contractor (i.e., First Transit).
### Table 4-12: Vehicle Ownership Summary

<table>
<thead>
<tr>
<th>System</th>
<th>Ridership</th>
<th>Directly Operated or Purchased Transportation</th>
<th>Fleet Size by Type of Fuel</th>
<th>Fleet Ownership*</th>
<th>Vehicles Give, Sold, Loaned or Leased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperial Valley Transit (El Centro, CA)</td>
<td>556,433</td>
<td>Purchased Transportation (First Transit)</td>
<td>3 Gasoline 18 Diesel</td>
<td>18 Owned by First Transit</td>
<td>[blank]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 Leased under purchase agreement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merced County Transit, The Bus (Merced, CA)</td>
<td>1,189,281</td>
<td>Purchased Transportation (Laidlaw/First Transit)</td>
<td>11 Gasoline 26 Diesel 13 CNG</td>
<td>50 Owned by MCT</td>
<td>Yes</td>
</tr>
<tr>
<td>Kings County Area Public Transit Agency, KART (Hanford, CA)</td>
<td>911,059</td>
<td>Purchased Transportation (MV Transportation, Inc.)</td>
<td>12 Diesel 10 CNG</td>
<td>22 Owned by KART</td>
<td>Yes</td>
</tr>
<tr>
<td>Redding Area Bus Authority, RABA (Redding, CA)</td>
<td>821,731</td>
<td>Purchased Transportation (Veolia Transportation Services, Inc.)</td>
<td>2 Gasoline 16 Diesel</td>
<td>18 Owned by RABA</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Sources: 2009 National Transit Database and Operators

In this portion of the report, we will compare the vehicle and facility ownership practices of the ICTC’s fixed route peers with the ICTC’s practices, and determine the advantages and disadvantages of each method.

For the purposes of gathering comparative data, the study team contacted staff at the peer fixed route transit agencies. These were as follows:

- At the Redding Area Bus Authority (RABA), the study team spoke with Zach Bonnin.
- At the Kings County Area Public Transit Agency (KART), the study team spoke with Ron Hughes and Viviana Alapisco.
- At Merced County Transit (The Bus), the study team spoke with Marjie Kirn.

**Fleet Ownership**

Every one of the staff members at the fixed route peer systems consistently stated that having their agency own the bus fleet is significantly preferable to having the contractor own the bus fleet. However, quantifying this preference proved very difficult, although the peer system a variety of reasons were given:

- In terms of funding the purchase of the buses, the peers stated that it is relatively “easy” to tap into federal funding programs (e.g., 5307 funding, American Reinvestment and Recovery Act funding, etc.), and that by doing so it is also easier to generate a local
match for fleet needs, as leveraging federal funding allows local funding to purchase a comparatively greater number of buses.

- If the operator owns the buses, the cost of purchasing/depreciation of the vehicles is “built in” to the hourly service cost the operator contracts for. This has the effect of then making the transit agency pay for its capital needs (i.e., the fleet) via its operating costs (i.e., the hourly cost of service provided).

- The cost of a typical transit bus used in fixed route service is currently approximately $460,000, and the cost of the typical demand responsive “cutaway” body-on-chassis conversion vehicle is approximately $70,000. Given that contracts are typically structured over approximately 3 years, if the fleet is owned by the contractor then the costs of amortizing the vehicles will be apparent in the hourly cost.

**Facility Ownership**

Every staff member interviewed at the fixed route peer systems was also consistent in stating that they felt the most important element in keeping the cost per service hour in their contracts low was the fact that they own their own vehicle maintenance and storage facilities. They all indicated that they felt this was more pertinent to lowering their operating costs than owning their own fleet.

Similar to ownership of the buses, if a contractor has to either build, buy or rent a vehicle maintenance and storage facility, then the cost of that facility is typically passed on to the funding agency in the contracted cost for each hour of service. This again has the effect of having the transit agency utilize its operating dollars for capital costs.

The staff at the fixed route peer systems all felt that – when taken together – the advantages of owning both the fleet and the vehicle maintenance and storage facility clearly outweighed any possible disadvantages. The only possible disadvantages cited were the bureaucratic processes necessary to procure funding for the fleet, and to build a facility. However, the advantages are significant, and include:

- Leveraging federal and state levels of funding for capital improvements (i.e., both the fleet and the maintenance/storage facility);
- Lowering the operating cost (i.e., the contracted cost per service hour) as capital expenditures are maintained in their own funding stream;
- Maximizing the number of possible bidders to operate the system, especially with agency ownership of the facility, as more than local firms who already own a facility will bid;
• Giving the transit agency more flexibility at any point in the duration of any contract should it decide that – for whatever reason – the contractor is not performing satisfactorily, thus allowing the agency to more easily engage a new operator;
• Improving the vehicle maintenance and storage facility on an ongoing and regular basis as any improvements made to the facility can be more easily accepted by the community as the facility will be owned by the transit agency.

Transition Issue

Should an agency such as ICTC decide to transition into a contract where the agency owns both its fleet and its maintenance and storage facility, the transition period can be difficult, as the existing contractor and the agency might enter into a “lease/purchase clause” in the contract so that the agency will begin to own its fleet over time. However, during this time, comparative bids between potential operators would be difficult to compare on an “apples-to-apples” basis.

Quantifying the Difference

Overall, as was previously mentioned, the staff members interviewed at the peer systems all felt that while they would support transitioning to a model whereby the ICTC owned both its fleet and its maintenance and storage facility, quantifying the differences between this method and having a contractor own these assets would be difficult without actually soliciting different bids from various operators for the same or similar services.

However, as part of this analysis (and as shown in Table 4-12), it became apparent to the study team that the difference in the cost per revenue hour between Imperial Valley Transit (IVT) and the average of its peers – about $109.00 per revenue hour for IVT as opposed to an average of about $72.00 per revenue hour for the peer group – could at least partially be attributed to the fact that ICTC does not own its own fleet or facility, and thus pays for the contractor’s fleet and facility costs via its operating contract and agreement. Thus, it can safely be stated that at least some portion of this 51 percent difference in the cost per revenue hour between IVT and its fixed route peer group is attributable to the fact that IVT does not own its own fleet or facility.

In addition, several of the staff at the fixed route peers stated that they felt when the fleet ownership and vehicle maintenance and storage facility issues were taken together, an approximate 50 percent difference in operating costs per revenue hour is not inconceivable between a system that owns these assets and one that does not.

While eventually owning its own bus fleet and vehicle maintenance and storage facility may help reduce IVT’s cost per revenue hour, it should be noted that owning these assets cannot guarantee a reduction in this cost category. Nonetheless, the staff members interviewed at the fixed route peer systems all stated that – once a transition phase is completed and the infrastructure assets are owned by the transit agency – they would fully expect to see the costs per revenue hour be reduced and the pool of potential bidders for operating the service
enlarged. This is an important consideration given the financial condition of the Local Transportation Fund (LTF).

Key Findings for Fixed Route Peer Analysis

Compared to its peers, IV Transit faces very high costs to operate service. However, it performs well in terms of the number of passengers per unit of service provided and has shown improvement in several areas. Key findings from the peer analysis include:

- IV Transit provides less service and also serves fewer boarding passengers than agencies in similarly-sized environments.
- IV Transit has substantially increased productivity in terms of both passengers per revenue mile and passengers per revenue hour.
- The cost of providing transit service in Imperial County is much higher than in other counties in California and is increasing at a much faster rate.
- IV Transit has managed to reduce its cost per passenger substantially while increasing farebox recovery, despite the increased cost of providing service. This is largely due to rapid growth in ridership while service levels have remained constant.
- For all three peer systems, the transit agency owns the fleet and maintenance facility used by the operator. This is likely a major contributive factor to IV Transit’s high hourly costs.
4.2 Demand Response Service Evaluation

This section presents an evaluation of Imperial County’s seven demand response services. This is provided in relation to existing service guidelines and selected performance measures. This section examines utilization information in relation to no-show, trip cancellation and trip denial data. It considers comparisons to generally comparable peer systems, and in relation to nationally published rural demand response system criteria. Summary themes are identified, suggesting areas where recommendations can be developed in subsequent stages of the study.

4.2.1 Demand Response Service Areas

Figure 4-8 following depicts the service areas for the Imperial County’s demand response services. These include the following:

- AIM Transit (now IVT Access) - within ¾ mile of IV Transit fixed-routes
- Med-Express – three pick-up points in Imperial County for travel to medical facilities within San Diego County
- Brawley Dial-a-Ride – trips originating and ending within Brawley city limits
- Calexico Dial-a-Ride – trips originating and ending within Calexico city limits
- Imperial Dial-a-Ride – trips originating within Imperial city limits but drop-offs and the return trip may be within El Centro city limits
- El Centro Dial-a-Ride – trips originating and ending within El Centro
- West Shores Dial-a-Ride - trips originating and ending within the Salton Sea area, including Vista del Mar and Torres Martinez.

Notably, not all of this information is readily available to the public, with limited brochures or flyers available with websites that cover only three of the seven services: www.ivtaccess.com covers the IVT Access service (www.aimtransit.org formerly covered AIM Transit and Med-Express), www.brawleydialaride.com covers the Brawley Dial-a-Ride, and information regarding the Calexico Dial-a-Ride can be found at www.calexico.ca.gov. ARC – Imperial Valley’s website mentions its four services, including Med-Express and the Imperial, El Centro and West Shores Dial-a-Rides, but does not provide any information about them. It can be difficult for a new rider or a prospective user of a dial-a-ride service to determine how to access these services, who is eligible, or where they travel, other than by word-of-mouth. Additionally, the websites are all standalone and are not linked to one another, so residents may know about one service, but not be aware that there may be other services available to them.
Figure 4-8: Demand Response Service Areas
4.2.2 Demand Response Performance Analysis by Service

This subsection presents selected contract expectations and performance history for each of the county’s public demand response services.

AIM Transit/IVT Access

AIM Transit, now IVT Access, is the county’s ADA complementary paratransit service, proscribed by contract to serve the ¾ mile corridor around IV Transit routes. Per the contract between ICTC (then IVAG) and AIM Transit’s provider, the contractor is responsible for hiring and training of drivers, the provision of on-site supervisory personnel, the provision and maintenance of vehicles, and all customer service responsibilities including the scheduling and dispatching of trips. Key performance data to be attained is called out in the agreement (and will be discussed subsequently in this chapter), with provisions for liquidated damages if minimum performance standards are not met.

Service Levels Set Forth in the Contract

Summarized here are the levels of service called for by the original agreement. These drive the availability of ADA services and establish the baseline from which the contractor must meet all ADA obligations. Table 4-13 below presents the service level impacts that adjusted upwards in September 2009 to reflect increasing service demand. In June 2010, service levels were adjusted downward to reflect the decreased funding base available to ICTC and its contractors due decreased sales tax revenues impacting the Local Transportation Fund (LTF).

Table 4-13: AIM Transit Contractual Demand Response Service Allocation Levels and Amendments

<table>
<thead>
<tr>
<th>Service Allocation Element</th>
<th>Original Term FY 2006-07</th>
<th>Amendment #1 Sept. 1, 2009</th>
<th>Amendment #2 June 23, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday to Fridays – 6:00 AM-6:00 PM</td>
<td>60 hours/weekday</td>
<td>72 hours/weekday</td>
<td>66 hours/weekday</td>
</tr>
<tr>
<td>Monday to Fridays – 6:00 PM-10:00 PM</td>
<td>8 hours/weekday</td>
<td>16 hours/weekday</td>
<td>8 hours/weekday</td>
</tr>
<tr>
<td>Saturday – 6:00 AM-6:00 PM</td>
<td>24 hours/Saturday</td>
<td>24 hours/Saturday</td>
<td>24 hours/Saturday</td>
</tr>
<tr>
<td>Total Annual Weekdays</td>
<td>252</td>
<td>252</td>
<td>252</td>
</tr>
<tr>
<td>Total Annual Saturdays</td>
<td>52</td>
<td>52</td>
<td>52</td>
</tr>
<tr>
<td>Est. Annual Revenue Service Hours</td>
<td>18,384</td>
<td>20,988</td>
<td>20,988</td>
</tr>
<tr>
<td>Est. Annual Service Miles</td>
<td>300,000</td>
<td>N/A</td>
<td>300,000</td>
</tr>
<tr>
<td>Total Maximum # Buses</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Total Non-operating Holidays</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>
One-Way Passenger Trips

AIM Transit provided approximately 120 rides per day, the largest number among Imperial County demand response systems. Figure 4-9 shows total one-way passenger trips per six-month period over the past five fiscal years. The overall trend in ridership is increasing, from a low of 14,998 trips in the first reporting period below to 17,978 in the latter half of 2009, an increase of 19.8 percent. Some of the variation in trips between six-month periods can be explained by seasonal weather differences and other factors to be explored later in this study.

![Figure 4-9: AIM Transit One-Way Passenger Trips (Six-Month Intervals)](image)

Figure 4-10 shows annual trip rates, increasing steadily between FY 2005-06 and FY 2007-08, dropping slightly during FY 2008-09, and then reaching the highest level to date with the FY 2009-10 total of 36,803 AIM Transit one-way boardings. The FY 2009-10 total represents an increase of 15.6 percent over four years, beginning in FY 2005-06.

![Figure 4-10: AIM Transit One-Way Passenger Trips (Annual)](image)
**Vehicle Miles**

Figure 4-11 below reflects the vehicle mile information provided for the AIM Transit paratransit service, showing slow growth levels in the first eighteen months of this five-year period and then beginning to grow steadily over the next several years. Total miles began dropping after a peak during the first six months of 2008, picking up again in the second half of 2009.

![Figure 4-11: AIM Transit Vehicle Miles (Six-Month Intervals)](image)

Considering annual totals, Figure 4-12 below depicts a similar pattern of slower growth during the first two years of the five year period, increasing to 206,054 in FY 2007-08, dropping slightly in 2008-09, then climbing to 213,293 in 2009-10. This represents 40 percent growth above the FY 2005-06 level of 151,571 miles, reflecting increases in both the quantities of trips provided and in the length of individual trips.

![Figure 4-12: AIM Transit Vehicle Miles (Annual)](image)
Vehicle Hours

The history of AIM Transit’s vehicle hour provision is displayed in Figure 4-13. This reflects, in part, a new orientation to vehicle hours that began with the FY 2006-07 service agreement between ICTC (then IVAG) and ARC-Imperial County, which established specific service levels by day-of-week and time-of-day. That agreement went into effect in October 2006. Vehicle hours immediately began declining, dropping over the subsequent twelve months to approximately 5,900 to 6,000 vehicle hours per six-month period through 2008 and 2009. They climbed again briefly in the first six months of 2009, in part due to the September 2009 contract amendment that increased vehicle hour levels, and were again adjusted downwards by the June 2010 amendment.

Figure 4-13: AIM Transit Vehicle Hours (Six-Month Intervals)

The annual vehicle hour totals, presented in Figure 4-14 below, show lower annual totals in FY 2007-08 and FY 2008-09 of approximately 12,000 annual vehicle hours, climbing slightly during FY 2009-10 to 12,241 hours but not to the 14,000+ hours that were previously provided in FY 2005-06 and FY 2006-07 years.

Figure 4-14: AIM Transit Vehicle Hours (Annual)
**Passengers per Hour (Productivity)**

Figure 4-15 presents the relative productivity of the AIM Transit service by six-month increment over the five-year period from FY 2005-06 through FY 2009-2010. Over this period, productivity generally increased, reaching 3.2 passengers per hour for the most recent six-month period reported.

![Figure 4-15: AIM Transit Passengers per Revenue Hour (Six-Month Intervals)](image)

**Average Cost per Passenger Trip (Cost-Effectiveness)**

In terms of cost-effectiveness of the service, Figure 4-16 below shows AIM Transit’s total cost per trip showing a six-month average declining through mid-2007 to below $18. Cost per trip then rose steadily towards $20 through 2007, 2008 and 2009, jumping to in excess of $22.50 during FY 2009-10. This presumably reflects reduced numbers of riders using the service as hours were reduced as well as impacts to travel patterns caused by the general economic downturn.

![Figure 4-16: AIM Transit Cost per One-Way Passenger Trip (Six-Month Intervals)](image)
**Farebox Recovery Ratio (Cost-Effectiveness)**

A second cost indicator, farebox recovery ratio, reflects the interrelationship of ridership and cost. AIM Transit is required by its contract, as well as by Transportation Development Act (TDA) statue, to attain at least a 10 percent farebox recovery ratio. The program has been well above the minimum standard for most reporting periods over the past five years, but is currently showing a six-month period that falls to 9.6 percent farebox recovery ratio, below the 10 percent standard. This may partially reflect a decrease in ridership.

**Figure 4-17: AIM Transit Farebox Recovery Ratio (Six-Month Intervals)**
Med-Express

One-Way Passenger Trips

Typically serving about 20 rides per day, Figure 4-18 shows Med-Express as a small service with consistent ridership over the past two six-month periods, peaking slightly in the early part of 2009 at almost 2,500 trips per six-month period. The fiscal year totals, presented in Figure 4-19, depict an annual high of 4,800 trips in FY 2005-06, followed by a decline in ridership, then modest increases of 4 percent or less annually.
Vehicle Miles

Vehicle miles traveled by the Med-Express program have been declining since early 2008, reaching a low of 27,000 miles in the first six-months of 2010 (Figure 4-20), with the last full year of vehicle miles reported at 55,488 (Figure 4-21). Given that ridership has been increasing modestly, this downward trend in miles traveled suggests greater efficiencies in scheduling. There may also have been some change at the destination end, in terms of the numbers of destinations or their geographic spread within the greater San Diego area, requiring fewer vehicle miles traveled.

**Figure 4-20: Med-Express Vehicle Miles (Six-Month Intervals)**

**Figure 4-21: Med-Express Vehicle Miles (Annual)**
**Vehicle Hours**

After having been reasonably flat in the early part of the reporting period, Med-Express vehicle hours spiked upwards in early 2009, with heavy levels of use in July and August of that year (Figure 4-22). Year-end annual totals present a modest 4.8 percent increase between FY 2008-09 and FY 2009-10, from 1,616 to 1,694 annual vehicle hours (Figure 4-23).

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**Figure 4-22: Med-Express Vehicle Hours (Six-Month Intervals)**

![Med-Express - Total Vehicle Hours](image)

**Figure 4-23: Med-Express Vehicle Hours (Annual)**

![Med-Express - Annual Vehicle Hours](image)
Passengers per Hour (Productivity)

This performance indicator as a measure of productivity is shown in relation to the contract standard of 3.0 passengers per hour. The Med-Express program has struggled to meet this standard at various points, and is currently just below its minimum level of performance with 2.9 passengers per hour in early 2010.

Figure 4-24: Med-Express Passengers per Vehicle Hour (Six-Month Intervals)

Average Cost per Passenger Trip (Cost-Effectiveness)

Costs per passenger trip for Med-Express have decreased over the past three reporting periods, following high levels early in FY 2007-08 and again in FY 2008-09. The last three reporting cycles have been below or very close to the contract standard for Med-Express of $31.77 per one way passenger trip.

Figure 4-25: Med-Express Cost per One-Way Passenger Trip (Six-Month Intervals)
Farebox Recovery Ratio (Cost-Effectiveness)

This final indicator is of critical importance to maintaining the flow of LTF dollars to the program. ICTC and its partners have established a 20 percent standard and as shown in Figure 4-26 below, Med-Express exceeded this standard in several of the reporting periods and is currently just below that level of rider contribution to overall costs.

Figure 4-26: Med-Express Farebox Recovery Ratio (Six-Month Intervals)
Brawley Dial-a-Ride

Passenger trips, service miles and service hour trends were reported previously. Examined here are historical trends for three fiscal years for three selected indicators of service performance: farebox recovery ratio, cost per trip and passengers per trip.

Cost per Passenger

Brawley Dial-a-Ride’s cost per passenger has increased 7.6 percent over this three-year reporting period from $6.91 in the first reporting period to the current high of $7.44 in the most recent reporting period. There was some decline in cost per passenger late in 2008 and early 2009, possibly mirroring some decrease in revenue hours during those same timeframes.

Figure 4-27: Brawley Dial-a-Ride Cost per One-Way Passenger Trip
**Farebox Recovery Ratio**

Brawley Dial-a-Ride has maintained farebox recovery levels above the TDA minimum 10 percent threshold for each of the reporting period, currently just below its highest level of 12.5 percent, at 12.1 percent for the most recent reporting period.

![Figure 4-28: Brawley Dial-a-Ride Farebox Recovery Ratio](image)

**Passengers per Vehicle Hour**

Brawley Dial-a-Ride shows fairly consistent productivity, in relation to riders per service hour - generally between 4.8 and 5.1 riders per hour. There has been an increase in this indicator over the past two reporting periods, from its low of 4.8 riders per hour in the early part of 2009 when ridership is also likely to have dropped.

![Figure 4-29: Brawley Dial-a-Ride Passengers per Vehicle Hour](image)
Calexico Dial-a-Ride

Passenger trips, service miles and service hour trends were reported previously. Examined here are historical trends for three fiscal years for three selected indicators of service performance: cost per trip, farebox recovery ratio, and passengers per vehicle hour.

Cost per Passenger

Calexico Dial-a-Ride’s cost per passenger has realized some significant changes over this three-year period, climbing to a high of $9.82 in the first half of 2009 and declining somewhat to the most recent rate of $7.83 per one-way trip. This reflects in part decreased ridership in FY 2008-09 which began to climb again in the more recent year.

Figure 4-30: Calexico Dial-a-Ride Cost per Passenger
Farebox Recovery Ratio

Calexico Dial-a-Ride’s farebox recovery history follows its ridership decline and gains picture. For three of the preceding six-month periods, in 2009 and 2009, the system operated below the 10 percent TDA state’s minimum standard. In the most recent reporting period, it has now just above the minimum standard at 10.3 percent.

Figure 4-31: Calexico Dial-a-Ride Farebox Recovery Ratio

![Farebox Recovery Ratio Graph](image)

Passengers per Vehicle Hour

Calexico Dial-a-Ride’s productivity indicator of riders per service hour have remained reasonably constant during this reporting period, despite the fluctuations in ridership. This is in part a result of the reduction in revenue hours that was instituted when the reduced state revenue picture became apparent. Productivity is at its highest point for the three-year period in most recent six-month period, 5.5 passengers per hour.

Figure 4-32: Calexico Dial-a-Ride Passengers per Vehicle Hour

![Passengers per Vehicle Hour Graph](image)
El Centro Dial-a-Ride

Passenger trips, service miles and service hour trends were reported previously. Examined here are historical trends for three fiscal years for three selected indicators of service performance: farebox recovery ratio, cost per trip and passengers per trip.

Cost per Passenger

El Centro Dial-a-Ride's cost per passenger, currently calculated at $7.50 per rider, has come down from a high of $8.03 early in 2008 when ridership was declining and costs were not. This steady decrease in rider per-trip costs reflects both increasing ridership and controlled costs.

Figure 4-33: El Centro Dial-a-Ride Cost per Passenger
**Farebox Recovery Ratio**

El Centro Dial-a-Ride’s farebox recovery experience over these reporting periods has fluctuated, not currently at its 18 percent high levels, currently at 16.5 percent for the most recent reporting period but not at its lowest level seen in the early part of 2008.

**Figure 4-34: El Centro Dial-a-Ride Farebox Recovery Ratio**

<table>
<thead>
<tr>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Farebox Recovery Ratio as % of Total Operating Costs</td>
<td>18.8%</td>
<td>15.5%</td>
<td>16.1%</td>
<td>18.3%</td>
<td>16.5%</td>
<td>16.5%</td>
</tr>
</tbody>
</table>

**Passengers per Vehicle Hour**

El Centro Dial-a-Ride’s productivity of 6.5 trips per hour is at its highest point for this three year reporting period, and well above its 5.1 trips per hour standard. Encouragingly, the program shows a steady increase in productivity through this entire reporting period, despite the difficulties in ridership, revenues and unit costs presented by other indicators.

**Figure 4-35: El Centro Dial-a-Ride Passengers per Vehicle Hour**

<table>
<thead>
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<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Trips Per Vehicle Hour</td>
<td>5.5</td>
<td>5.6</td>
<td>5.7</td>
<td>5.6</td>
<td>6.0</td>
<td>6.5</td>
</tr>
</tbody>
</table>
Imperial Dial-a-Ride

Passenger trips, service miles and service hour trends were reported previously. Examined here are historical trends for three fiscal years for three selected indicators of service performance: farebox recovery ratio, cost per trip and passengers per trip.

Cost per Passenger

Imperial Dial-a-Ride’s cost per passenger at $7.83 is down from its 2008 highs when most of the other transit services were grappling with declining ridership and decreased fare revenues. This per passenger cost is however almost 40 percent above the $5.61 per rider cost of the earliest reporting period and suggests some concern about growth in expenses that is not sufficiently offset by recovering ridership levels.

Figure 4-36: Imperial Dial-a-Ride Cost per Passenger

![Figure 4-36: Imperial Dial-a-Ride Cost per Passenger](image-url)
Farebox Recovery Ratio

Imperial Dial-a-Ride’s farebox recovery ratio at 10.3 percent for the most recent reporting period is just over the TDA minimum 10 percent standard for demand response programs and shows some recovery over prior reporting periods where it fell below that standard. It is, however, at considerable distance from the 17 percent level of fares to expenses presented in the earliest reporting period, late in 2007.

![Figure 4-37: Imperial Dial-a-Ride Farebox Recovery Ratio](image)

Passengers per Vehicle Hour

Imperial Dial-a-Ride’s productivity of 5.5 trips per hour is well above its standard of 4.3 trips per hour and shows recent history of increasing productivity levels. That said, the service has shown fairly constant productivity levels of over 5 trips per hour with the exception of the first half of 2009 when it reached a low of 4.3.

![Figure 4-38: Imperial Dial-a-Ride Passengers per Vehicle Hour](image)
West Shores Dial-a-Ride

Passenger trips, service miles and service hour trends were reported previously. Examined here are historical trends for three fiscal years for three selected indicators of service performance: farebox recovery ratio, cost per trip and passengers per trip.

Cost per Passenger

West Shores Dial-a-Ride’s cost per passenger at $38.40 has declined from its high of $42.07, but it is well above its standard of $19.63. As has been noted elsewhere this program grapples with modest ridership and high operating costs which are reflected in its high cost per trip.

Figure 4-39: West Shores Dial-a-Ride Cost per Passenger

![Cost per Passenger Chart]

- West Shores Dial-a-Ride Cost per One-Way Passenger Trip
  FY 2007-08 through FY 2009-10, Six-Month Intervals

<table>
<thead>
<tr>
<th>Month</th>
<th>Cost Per One-Way Passenger Trip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul-Dec 2007</td>
<td>$24.05</td>
</tr>
<tr>
<td>Jan-Jun 2008</td>
<td>$22.61</td>
</tr>
<tr>
<td>Jul-Dec 2008</td>
<td>$26.14</td>
</tr>
<tr>
<td>Jan-Jun 2009</td>
<td>$40.55</td>
</tr>
<tr>
<td>Jul-Dec 2009</td>
<td>$42.07</td>
</tr>
<tr>
<td>Jan-Jun 2010</td>
<td>$38.40</td>
</tr>
</tbody>
</table>

Standard = $19.63
### Farebox Recovery Ratio

West Shores Dial-a-Ride’s farebox recovery ratio of 5.2 percent for the most recent reporting period is well below the TDA minimum 10 percent standard for demand response programs. It has not achieved the minimum during this three year reporting period.

![Figure 4-40: West Shores Dial-a-Ride Farebox Recovery Ratio](image)

### Passengers per Vehicle Hour

West Shores Dial-a-Ride’s productivity of 3.0, a level that it has reached but not exceeded in the past three years, is well below the current productivity standard of 5.0 trips per hour and is reflective of the other issues of this modestly utilized service.

![Figure 4-41: West Shores Dial-a-Ride Passengers per Vehicle Hour](image)
4.2.3 Analysis of Selected Demand Response Utilization Indicators

No-Show and Trip Cancellation Rates

Passengers’ use of the demand response services, in terms of frequency of cancellation and no-show trips, as well as the rates of trip denials are important utilization indicators.

- **For trip cancellations**, if these are made sufficiently far in advance, they have little impact on the vehicle routing process and its efficiencies. If cancellations are made late, say within three hours or after the vehicle tour has been prepared and given to the driver, these will impact the efficiency of scheduling.

- **For no-show trips**, where the vehicle arrives at the door and the passenger is not there or has determined that they cannot make the trip, these do result in wasted resources. Vehicle revenue time has been expended but a passenger has not boarded. Sometimes no-shows happen when the vehicle is late and the rider secures alternate transportation. While some no-shows are unavoidable, patterns of no-show and high rates of no-show trips are not desirable.

- **For trip denials**, significant numbers or denials at particular times of day or days of the week point to capacity issues. There may be insufficient vehicle resources to meet the presenting trip demand. In the case of ADA complementary paratransit services, the courts have ruled that essentially no denials are allowable. But for the community-level demand response programs, some denials are likely and acceptable but also may suggest where the service demand is exceeding capacity.

The data reported in the figures following represents total cancellation, no-show and trip denial information as provided by the providers in their regular reporting to ICTC. It does not delineate days or times when these issues present and further analysis would be necessary to explore that.

National research done on *Practices of No-Show and Late Cancellation Policies for ADA Paratransit*, published as TCRP Synthesis 60 (2005), explores in considerable detail the experiences of various transit agencies in setting and enforcing policies around no-shows and late cancellations. The report does not establish standards but reports experiences of various properties in reducing rates of missed trips. No-show rates were identified by some interviewed properties as in excess of 5 percent of trips booked, these reduced to between 1.5 percent to 2 percent of trips booked, by various practices. Trip cancellation rates were not identified individually, but one larger ADA complementary paratransit operator had policies in place to keep the overall combined no-show/late cancellation rate at approximately 3 percent of all trips booked. Trip denials, as noted above, are not acceptable for ADA complementary paratransit but are useful management tools for other demand response providers not governed by ADA regulations.
Figure 3-35 following presents available FY 2009-10 no-show and cancellation information for the seven demand response providers. The large light blue bar and the large percentages there reflect the proportion of trips completed, from the 100 percent total of trip bookings. The dark blue bars represent no-shows, as a percentage of total bookings and the medium blue bars represent cancellations. The data provided make no distinction as to whether the cancels recorded are advance cancels, which should not represent scheduling problems or late cancels which usually lead to some scheduling inefficiencies.

For purposes of analysis, a combined rate of no-show and trip cancellation in excess of 5 percent can be proposed as a working standard, based loosely upon the TCRP Synthesis #60 reported experiences. Notably though, that report focused almost exclusively on ADA complementary paratransit programs. Figure 4-42 indicates that Calexico Dial-A-Ride, El Centro, Imperial and West Shores Dial-A-Ride are all within the range of 5 percent for a combined no-show and cancellation percentage.

Figure 4-42: Imperial County Demand Response No-Shows and Cancellations

Med-Express has comparatively high rates of no-shows (7.1 percent) and cancellations (10.1 percent), combined at 18.8 percent. To some extent, this is predictable for a service where people are ill when the trip reservation is made and their condition changes, either worsening or getting better, possibly making the trip unnecessary. These high rates do suggest the importance of looking at reservation practices of individuals to determine whether there is any evidence of abuse. Also, it may be that the reservation window of up to two weeks in advance is too far and shortening that window could lead to reduced no-shows and cancellations.
AIM Transit with, 3.1 percent reported no-shows and 2.9 percent cancellations (a 6 percent combined total), may benefit from a review of its policies and procedures with regard to passengers’ use of the service. TCRP Synthesis #60 is a specific review of ADA-related policies and practices from around the country for ADA operators. Instituting these, in a number of variations, has resulted in decreased no-shows and late cancellations, reducing instances of wasted resources.

Brawley Dial-a-Ride rates of 5 percent cancellations and 7.7 percent no-shows (a combined rate of 12.7 percent), are also comparatively high. This may suggest some problems with capacity or on-time performance and individuals finding alternative rides, not waiting for the dial-a-ride service to arrive.

Calexico, El Centro, Imperial and West Shores Dial-a-Rides all appear to have reasonable rates of cancellations and no-shows, but will benefit from continuing to monitor and by reviewing both the practice and the implementation of stated no-show policies with riders.

Trip Denial Rates

Denied trips are reported to ICTC by five of the seven demand response providers. This data is particularly important for AIM Transit, as the county’s ADA complementary paratransit program and for which trip denials have been very tightly circumscribed by ADA regulation and court decision. Table 4-14 following presents the reported trip denial experience for the five reporting providers.

Notably, AIM Transit is reporting zero denials in terms of “request date booked.” The service was able to book all requested trips for the date requested, with the exceptions identified below that: four trips where the pick-up time could not be booked and five trips where a re-negotiated date or time could not be arrived at with the caller. The total reported 28 denials, with several of these reflecting non-eligible riders or trip requests, represented 0.1 percent as a percentage of total trips provided.

Med-Express has the highest trip denial rate of the responding providers and this is appropriate. This non-emergency medical transportation is limited in quantity and days of service available. It is a discretionary service that Imperial County chooses to provide and to fund but it will not be able to handle all trip requests given the potential demand, the dispersion of destinations to which riders may potentially need to travel and the real spatial and temporal limits that exist for this four-day-per-week inter-county service.

West Shores Dial-a-Ride trip denials of note were for trips on days when this service is not in operation. Under the most current contract amendment, the West Shores Dial-a-Ride operates only on Tuesdays and Thursdays.
For the overall experience of the five responding providers, the reported 362 trips represented 0.2 percent of the 147,603 demand responsive trips provided in Imperial County during FY 2009-10. The largest category of denied trip was for same-day service requests (46.4 percent), clearly a desirable and important need of riders but one that cannot always be filled by demand response providers, given trip manifests that are already full with advance reservation trip requests.

Table 4-14: Imperial County Demand Response Trip Denials

<table>
<thead>
<tr>
<th>FY 2009/10 Trip Denials</th>
<th>Aim Transit</th>
<th>Med-Express</th>
<th>Brawley DAR</th>
<th>Calexico DAR</th>
<th>El Centro DAR</th>
<th>Imperial DAR</th>
<th>West Shores DAR</th>
<th>Total Denials</th>
<th>% of Total Denials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same Day Trip Request</td>
<td>12</td>
<td>0</td>
<td>118</td>
<td>26</td>
<td>12</td>
<td>168</td>
<td></td>
<td></td>
<td>46.4%</td>
</tr>
<tr>
<td>Request Date Booked</td>
<td>0</td>
<td>110</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>111</td>
<td></td>
<td></td>
<td>30.7%</td>
</tr>
<tr>
<td>Request P/U Time Booked</td>
<td>4</td>
<td>0</td>
<td>16</td>
<td>6</td>
<td>1</td>
<td>27</td>
<td></td>
<td></td>
<td>7.5%</td>
</tr>
<tr>
<td>Does Not Qualify</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>18</td>
<td>0</td>
<td>27</td>
<td></td>
<td></td>
<td>7.5%</td>
</tr>
<tr>
<td>Out of Window/ Non Service Day</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>19</td>
<td>19</td>
<td></td>
<td></td>
<td>5.2%</td>
</tr>
<tr>
<td>Cannot Renegotiate Date or Time</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td></td>
<td></td>
<td>1.4%</td>
</tr>
<tr>
<td>Request Return Time Booked</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
<td>0.6%</td>
</tr>
<tr>
<td>P/U Address Out of Corridor</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
<td>0.6%</td>
</tr>
<tr>
<td>Destination Outside Corridor</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td>0.3%</td>
</tr>
<tr>
<td><strong>Total Denials</strong></td>
<td><strong>28</strong></td>
<td><strong>110</strong></td>
<td><strong>0</strong></td>
<td><strong>0</strong></td>
<td><strong>141</strong></td>
<td><strong>51</strong></td>
<td><strong>32</strong></td>
<td><strong>362</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Aim Transit</th>
<th>Med-Express</th>
<th>Brawley DAR</th>
<th>Calexico DAR</th>
<th>El Centro DAR</th>
<th>Imperial DAR</th>
<th>West Shores DAR</th>
<th>Total DAR Trips Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Trips Provided</td>
<td>36,803</td>
<td>4,374</td>
<td>28,575</td>
<td>41,601</td>
<td>26,022</td>
<td>8,016</td>
<td>2,212</td>
<td>147,603</td>
</tr>
<tr>
<td>Total Denials All Types</td>
<td>28</td>
<td>110</td>
<td>N/A</td>
<td>N/A</td>
<td>141</td>
<td>51</td>
<td>32</td>
<td>362</td>
</tr>
<tr>
<td>Denials as a Percent of Total Trips</td>
<td>0.1%</td>
<td>2.5%</td>
<td>N/A</td>
<td>N/A</td>
<td>0.5%</td>
<td>0.6%</td>
<td>1.4%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>
4.2.4 Demand Response Peer Analysis

As noted at other points in this SRTP process, several types of demand responsive programs operate within Imperial County, making it complicated to present peer comparisons. The discussion in Chapter 1 reported on nationally published rural services’ performance: TCRP Report #136 Guidebook for Rural Demand-Response Transportation. This report provided some context for examining Imperial County’s various demand responsive systems, notably a typology for considering the types of services operated. The three categories of this typology, and the assignment of Imperial County dial-a-rides, are as follows:

1. Primarily Single-Municipality Systems: Brawley, Calexico, El Centro, Imperial, West Shores Dial-a-Rides
2. Primarily Single-County Systems: AIM Transit (now IVT Access)
3. Primarily Multi-County Systems: Med-Express

To assess Imperial County’s programs in relation to the performance ranges reported in TCRP Report #136, a series of modified box plots\(^3\) are presented contrasting Imperial County’s providers’ response with these national norms. Three charts follow:

- Operating Cost per Vehicle Hour
- Operating Cost per Passenger Trip
- Passengers per Vehicle Hour

Each chart presents the typology of the three system types and the TCRP reported minimum, median and maximum values for cost per vehicle hour, cost per passenger trip and passengers per revenue hour. This provides a means for assessing whether performance is low, medium or high in relation to these values. The TCRP values are drawn a report published in 2007 and reflecting 2006 NTD datasets. Although this information is approximately two years older than the Fiscal Year 2009-10 data represented for the Imperial Valley services, these remain viable comparisons in that in many cases, services are at or within reach of the median values.

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\(^3\) Box plots are a statistical presentation tool used to depict an array of data points in relation to minimum, median and maximum values or, as in the case of traditional box plots, to depict where the values of interest stand in relation to quartile distributions. The traditional box around the middle quartiles and whiskers depicting the minimum and maximum values were not included here in order to simplify the visual presentation of these seven Imperial County services within the TCRP Report #136 typology.
Cost per Revenue Hour

Analysis of the seven services’ FY 2009-10 operating cost per revenue hour is presented in Figure 4-43 following, reflecting the full cost of operations against total revenue hours provided. This is a measure of the overall cost-effectiveness of the program.

For the municipal services, the fist bar to the left shows that the five services operating generally within a single municipal area are mostly clustered above the median. Brawley Dial-a-Ride, at $39.01 per revenue hour, is closest to the NTD median of $34.33 for this service type. Calexico Dial-a-Ride, at $43.13, and El Centro Dial-a-Ride, at $46.40, are similarly close. Imperial Dial-a-Ride, at $59.54, is the highest in this sub-grouping, more than $25 dollars per hour above the median value or over 70 percent higher than the median and yet still below the maximum NTD reported value in TCRP Report #136 for this group of providers.

Clearly the municipal service outlier here is the West Shores Dial-a-Ride cost of $110.83, more than 200 percent above the median value and $35 above the maximum value. This high cost per hour presumably reflects the deadhead costs that must be built into the overall rates to cover costs of extending dial-a-ride service out to the Salton Sea communities.

For the county services, only AIM Transit (now IVT Access) is categorized as a county service, going beyond the municipal boundaries to a variety of destinations within the county. AIM Transit, at $67.89, is below the NTD maximum value of $79.92.

For the multi-county services, the last bar to the right, only Med Express is categorized as serving multiple counties, with its service into San Diego County medical facilities for Imperial County residents. This service is above the NTD maximum value of $61.75, at $84.51.

Notably, of all three indicators reported in this sub-section, these revenue vehicle hour costs are probably most adversely compared to the Report #136 values which reflected 2007 dollars. Nonetheless, all of the municipal dial-a-rides, with the exception of West Shores, appear to be within reasonable operating costs per revenue hours. The two services operating around the county and between Imperial and San Diego Counties are high, AIM Transit somewhat below the maximum value for its type and Med Express somewhat above the maximum value for its type. Given 2009/2010 dollars, these higher values may not be out-of-line.
Figure 4-43: Peer Analysis Cost per Vehicle Hour

Imperial County Dial-A-Ride Systems
FY 2009/10 Operating Cost per Vehicle Hour Contrasted with TCRP Report # 136 Rural Demand Response Performance

Note: TCRP Report 136, 2007 Rural NTD data analysis for Demand Response only systems.
Operating Cost per Passenger Trip

Figure 4-44 presents the cost per trip analysis of TCRP Report #136 norms for the seven Imperial County Dial-a-Ride programs. Analysis of operating cost per passenger trip reflects full program costs in relation to FY 2009-10 one-way passenger trips provided and depicts the cost efficiency of the systems, relating the costs of the service hours available to the number of passengers boarded.

For the municipal services, again, the West Shores service is at the highest level, at $40.38 per passenger trip just above the NTD maximum value of $38.42. As with its operating cost per hour placement on the preceding Figure 3-36, this points to a high-cost, low cost-effectiveness rated service.

Imperial Dial-a-Ride, at $14.48 per passenger trip, is in a position consistent with that of its operating cost per hour, somewhat above the NTD median value of $9.07. Again the three other cities are clustered, in this case below the median, with Calexico at $8.04, El Centro at $7.47 and Brawley Dial-a-Ride at the lowest cost of $7.29 per passenger boarding, below the NTD median of $8.07 per passenger trip. These programs are running cost-effective services, compared to somewhat aged NTD cost information, running near or below the median.

For the countywide service, AIM Transit at $22.58 is almost $10 above the NTD median per trip cost of $13.36. It is however well below the NTD maximum of $68.14 per trip cost and therefore seems reasonably well positioned as a cost for services within a large county and comparing 2007 cost data to FY 2009-10 experience.

For multi-county service, Med-Express at $32.73 is between the median and the maximum values. Again, this likely reflects, in part the length of its trips from Imperial County into and around San Diego County as well as the older cost data. It appears to be a reasonable cost, although still an expensive service on a unit cost basis.
Figure 4-44: Peer Analysis Cost per Passenger Trip

Imperial County Dial-A-Ride Systems
FY 2009/10 Operating Cost per Passenger Trip Contrasted with TCRP Report #136 Rural Demand Response Performance

Note: TCRP Report 136, 2007 Rural NTD data analysis for Demand Response only systems.
Passengers per Revenue Hour

Figure 4-45 presents the final performance measure contrasting Imperial County demand responsive services with the TCRP Report #136 national norms, passengers per hour. Passengers per hour is a productivity measure relating the quantities of service available to the numbers of riders using the service. As this indicator does not directly involve cost, it is not impacted by the 2007 age of the national data.

For the municipal dial-a-rides, the services in El Centro at 6.2 riders per hour, Calexico at 5.36 and Brawley at 5.35 are all operating above the median NTD value of 4.10, providing more passenger trips per hour than those in the national sample's mid-range for this type of service. Such measures of five and six riders per hour, for community dial-a-ride services, is very good performance.

Of these municipal services, the West Shores Dial-a-Ride’s productivity is the lowest of the group, at 2.74 passengers per hour. Coupled with its placement at the highest levels, at or above the NTD maximum values for cost per hour and cost per trip, these indicators suggest that the current service configuration is not working.

For the county-wide dial-a-ride, AIM Transit’s measure of 3.01 passengers per hour, just below the NTD median of 3.13 passengers per hour is very good. Notably AIM Transit, now IVT Access, is an ADA complementary paratransit program and must comply with all the attendant federal regulations. Many ADA complementary paratransit programs struggle to achieve productivities of 1.5 to 2.0 passengers per hour. AIM Transit has shown increasing productivity levels over the five-year period reported earlier in this section, although it dropped just below 3.0 in the 2009 calendar year.

The multi-county service, Med-Express, at 2.58 passengers per hour falls just below the NTD median value of 2.91. Its historical productivity experience, as reported earlier in this subsection, is somewhat uneven, dropping to a little above two passengers per hour at several points in the past few years, though at 3.1 and 2.9 for other six-month periods. These data point to the complexities of efficient scheduling of long-distance, non-emergency medical trips where the volume and geographic dispersion of trips is changeable and difficult to predict.
Figure 4-45: Peer Analysis Trips per Vehicle Hour

Imperial County Dial-A-Ride Systems
FY 2009/10 Passenger Trips per Vehicle Hour Contrasted with TCRP Report #136 Rural Demand Response Performance

Note: TCRP Report 136, 2007 Rural NTD data analysis for Demand Response only
4.2.5 Summary of Demand Response Service Performance

Demand response performance is summarized in Table 4-15 for the seven systems against the four primary indicators discussed earlier in this chapter.

<table>
<thead>
<tr>
<th>Imperial County Demand Response Programs</th>
<th>FY 2009-10 Actual Performance</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Productivity</td>
<td>Cost per Passenger Trip</td>
<td>Cost per Revenue Hour</td>
<td>Farebox Recovery</td>
</tr>
<tr>
<td></td>
<td>Passengers per Hour</td>
<td>$22.67</td>
<td>$67.89</td>
<td>9.6%</td>
</tr>
<tr>
<td>AIM Transit</td>
<td>3.2</td>
<td>$22.67</td>
<td>$67.89</td>
<td>9.6%</td>
</tr>
<tr>
<td>Med-Express</td>
<td>2.9</td>
<td>$31.77</td>
<td>$84.51</td>
<td>19.7%</td>
</tr>
<tr>
<td>Brawley Dial-a-Ride</td>
<td>5.5</td>
<td>$7.44</td>
<td>$39.01</td>
<td>12.1%</td>
</tr>
<tr>
<td>Calexico Dial-a-Ride</td>
<td>5.5</td>
<td>$7.83</td>
<td>$43.13</td>
<td>10.3%</td>
</tr>
<tr>
<td>El Centro Dial-a-Ride</td>
<td>6.5</td>
<td>$7.50</td>
<td>$46.40</td>
<td>16.5%</td>
</tr>
<tr>
<td>Imperial Dial-a-Ride</td>
<td>5.5</td>
<td>$7.83</td>
<td>$59.54</td>
<td>10.3%</td>
</tr>
<tr>
<td>West Shores Dial-a-Ride</td>
<td>3.0</td>
<td>$38.40</td>
<td>$110.83</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

In terms of productivity, the Med-Express service is the least productive, with 2.9 passengers per hour, consistent with the long distances this non-emergency medical transportation service travels between Imperial County and medical destinations in San Diego County. Given this, it is notable that Med-Express’s productivity is not lower, suggesting it gains some efficiency through the careful routing of trips. AIM Transit (now IVT Access), the ADA complementary paratransit service, exceeds three passengers per hour, achieving a reasonable level of productivity for this type of service. AIM Transit/IVT Access serves what are often long trips, working within the ¾ mile corridors of the IV Transit fixed route network. The Brawley, Calexico and Imperial Dial-a-Rides are all hitting a very respectable level of 5.5 riders per hour. El Centro Dial-a-Ride’s 6.5 riders per hour presumably reflects both the density of trips scheduled and their relatively short distances within the city limits. The West Shores Dial-a-Ride, like AIM Transit and Med-Express, carries only 3.0 passengers per hour, reflecting the long distances of these trips as well as the modest ridership levels it attains.

In terms of cost per passenger, the West Shores Dial-a-Ride has the highest unit cost, $38.40, which is also a measure of its comparatively low ridership against the number of hours of revenue service and its overall operating costs. Med-Express, at $31.77 per passenger, reflects its long-distance trips into San Diego County; however, its cost per passenger is below that of 2007 and 2008 levels, reflecting both decreases in operating costs as well as increased cost efficiency (particularly given a nearly five percent increase in vehicle service hours during FY 2009-10). The Brawley, Calexico, El Centro and Imperial Dial-a-Ride costs per passenger are all
clustered between $7.44 and $7.83, with Brawley reporting the lowest cost per passenger of all seven demand response programs.

In terms of cost per revenue hour, similar patterns are depicted. Again, the Brawley Dial-a-Ride has the lowest cost per revenue hour while the other municipal dial-a-rides fall generally within a range, although a much wider range than for cost per passenger. Calexico Dial-a-Ride at $43.13 per revenue hour and El Centro Dial-a-Ride at $46.40 per revenue hour are reasonably close to Brawley’s $39.01 per revenue hour. The Imperial Dial-a-Ride has the highest unit cost among this group, at $59.54 per revenue hour. AIM Transit (now IVT Access) at $67.89 and Med-Express at $84.51 per revenue hour presumably reflect the performance standards with which the ADA complementary paratransit program and an inter-county regional dial-a-ride must conform. The $110 per hour commanded by the West Shores Dial-a-Ride is extremely high, particularly given that efforts to minimize deadheads have been reported by out-stationing the vehicle.

In terms of farebox recovery ratio, AIM Transit (now IVT Access) is hovering just below the state TDA-required minimum farebox recovery at 9.3 percent—efforts must be made to improve this. The West Shores Dial-a-Ride, at 5.2 percent farebox recovery, shows clearly that this service is not working effectively in its current configuration. All other services are exceeding the 10 percent minimum standard for demand response services and for rural transportation programs. Notably, the Med-Express service is reporting the highest farebox recovery ratio at 19.7 percent, reflecting a currently effective fare structure of $15 and $30 round trip fares for differing ridership groups and a $7 fare for accompanying attendants.
4.2.6 Key Findings for Demand Response Services

The analyses reported here raise various issues that will be subsequently addressed through the SRTP’s recommendations. Among the general observations to be made are the following:

- Service guidelines vary considerably from operator to operator for similar services; there is also often a great amount of variation between contract standards and actual performance. ICTC has contractually established standards for the AIM Transit/IVT Access, Med-Express and West Shores services. The municipalities are not proactive in setting or monitoring standards for their contracted services (including the Brawley, Calexico, El Centro and Imperial Dial-a-Rides), and have not identified standards within their contract documents although there are references to ICTC-established standards. There will be value to reviewing demand response standards, considering establishing some common expectations countywide, as well as some variation by type of demand response service provided—e.g., ADA complementary paratransit versus inter-county non-emergency medical versus community-level general public dial-a-ride.

- Reporting between the demand response providers, the municipalities and ICTC has improved considerably over prior periods as much of the data presented was provided to the consultants through the ICTC offices. That said, there may be some additional reporting detail that would be of value to the operators to maintain, for example tracking information on late cancellations and additional detail on no-show trips.

- Reporting of vehicle hours and vehicle miles in the materials provided to the consultant team on behalf of these demand response providers did not clearly delineate revenue service from overall service, with the latter including deadhead. That said, most of the demand responsive contracts included a definition of the reimbursable hourly rate, referring to “vehicle service hours” or “revenue service hours” and excluding deadhead hours (i.e., the travel to and from the first stop and after the last stop). This is presumably being clarified by ICTC’s triennial performance auditor in relation to utilization of these definitions in actual practice.

- Information regarding each demand response service should be easily available to the public, both online and in print. Currently, only a few of the demand response systems operating in Imperial County have electronic—or even print—materials available. These materials should include both fare and eligibility information, such as how seniors/disabled persons can become ADA certified. All information should be provided in both English and Spanish (as it currently is on www.ivtaccess.com) and should include contact information—for example, a telephone number—for more information, as well as instructions on how to book at trip.
Service configuration and service design issues are noted in a couple of instances.

- The West Shores service is operating at high costs with low productivity and difficulty meeting the farebox recovery standard, suggesting that alternative ways of meeting these very modest levels of demand are indicated. Replacement of the existing demand response service with a weekly fixed route lifeline service is one option for maintaining transit access in the area.

- The Imperial and El Centro Dial-a-Ride services include some overlap—passengers on the Imperial Dial-a-Ride are often transported within and around El Centro. It is possible that some coordinated or consolidated service for these two programs could result in cost savings.

- The Brawley Dial-a-Ride's high productivity combined with high rates of no-shows and cancellations suggest capacity issues. It may be worthwhile to review this service to determine whether it should be converted to a senior/disabled persons-only service.

- The Imperial Dial-a-Ride had recently come close to falling below the state's 10 percent minimum farebox recovery, suggesting fare increases or other operational changes may be needed. Similarly, the Calexico Dial-a-Ride has been above, below and at the state's 10 percent minimum farebox standard, which may suggest additional actions are required for it as well.
5.0 RECOMMENDATIONS

This document describes the recommendations made for the ICTC-sponsored fixed route and demand response transit services based on the data and analysis presented in the previous chapters. The recommendations are designed for implementation over the next five years, with some scheduled for the near term (during the first year or two), others for the mid-term (during the second and third years of the planning horizon) and others for a longer term (during the final four to five years of the planning horizon).

This chapter provides an assessment of needs and opportunities and initial concepts, followed by several recommendations for Imperial County’s transit system. Included in this chapter are an in-depth description of the service recommendations with fixed route and demand response operating plans, followed by capital plan recommendations, a financial plan (focusing on operating cost and funding components), and an implementation plan covering the next five years.
5.1 Needs and Opportunities Statement

This section examines the results of the service evaluation, presented in the previous chapter, and determines some specific needs and opportunities for the ICTC-sponsored transit services in terms of how they may address the results of the service evaluation. These needs and opportunities are then used to help develop and shape the Short Range Transit Plan recommendations to be implemented over a five-year period from 2012 to 2016.

5.1.1 Summary of Key Points

Fixed Routes

This section provides a brief summary of key points from the service evaluation. These points provide the basis for the recommendations that follow. The recommendations will seek to address the following needs and opportunities:

- Routes 100/150, 50/200, 600/650 and IVC Express-Calexico represent the core of the system, serving the primary north-south corridor between Brawley and Calexico. These services carry nearly 90 percent of passengers using the system.

- Routes with lower ridership represent policy decisions to provide and promote mobility for other residents of the region.

- Circulator routes provide improved circulation within urban areas, allowing for the streamlining of other routes, and thus providing decreased headways and promoting an increased number of trips on the primary corridor routes through timed connections. These routes also reduce the need for general public dial-a-ride services in certain urban areas.

- The Direct and IVC Express services perform extremely well in terms of productivity and cost effectiveness.

- Brawley is partially served by fixed route service, with the remainder of the city relying on general public dial-a-ride service. Additionally, the Walmart in Brawley is a major generator that is currently not directly served by a fixed route.

- Calexico is partially served by ICTC-sponsored fixed route services, and dial-a-ride service is only available to senior and disabled passengers. However, some neighborhoods that are not currently served by IV Transit fixed routes have access to service by a private operator (i.e., Calexico Transit System).
• IV Transit performs well in terms of the number of passengers per unit of service provided and has shown improvement in several areas. Specifically, fixed routes serving Calexico have very high productivity and a propensity for overcrowding.

• IV Transit provides less overall service and serves fewer passengers than agencies in similarly-sized environments. This may be due in part to operating costs that are higher than those of its peer services.

• The cost of providing fixed-route transit service in Imperial County (e.g., IV Transit) is higher than in other counties in California and is increasing at a faster rate.

• Unlike all of its peer systems, the ICTC does not own the IV Transit fleet and the maintenance facility used by the operator; these factors are the most likely major contributors to IV Transit’s relatively high hourly operating costs.

• IV Transit has managed to reduce its cost per passenger substantially while increasing farebox recovery, despite the increased cost of providing service. This is largely due to rapid growth in ridership while service levels have remained constant.

• IV Transit has substantially increased productivity in terms of both passengers per revenue mile and passengers per revenue hour.

**Demand Response Services**

Similar to the fixed routes, this section provides a brief summary of key points from the service evaluation for the demand response services, and these points provide the basis for the recommendations that follow. It is important to note that demand response services in Imperial County are provided in a significantly different manner than the fixed route services, with both an Americans with Disabilities Act-mandated complementary demand response service (i.e., IVT Access), as well as several other services in various communities providing demand response service to a variety of eligible client groups.

• The revision of several demand responsive performance standards should be given consideration, given the variability among the current standards between operators and the difficulty for many operators to meet some of the standards.

• Public information on demand response services, while improving on the Internet during the period in which this study is taking place, still requires consistent attention and focus.

• Continued attention to demand response service reporting is important. Concerns regarding the definitions of reporting data points continue; also important is the value
of routine reporting of operational facets that can contribute to cost-effective demand response services.

- The potential revision of the demand responsive standards would be included in the various contract documents for the demand responsive services. However, although the demand responsive standards and guidelines are tools which can help measure system performance, they should be modified only if the discrepancies between the guidelines and the actual performance are consistently and significantly different, and without disregarding the intent of the standard.

- Historically, the coordination of demand responsive services has been limited and happened somewhat informally, typically as an initiative of one or more of the several contractors. Recently, the pursuit of a more coordinated paradigm for the provision of demand responsive service is being pursued. Although the opportunities for the actual coordination or consolidation of services may be somewhat limited (i.e., there is limited contiguous, overlapping or clearly duplicative service, with the exception of the Imperial and El Centro Dial-a-Rides), the pursuit of a more coordinated service delivery model may likely provide efficiencies in other aspects of the system. For example, it is likely that the coordinated dispatching of trips amongst the various dial-a-rides would provide some efficiencies, as would the coordination of various “back office” functions such as procurement, maintenance, et cetera.

- Given mixed use of the Section 5310 capital program by the demand response programs operating in Imperial County, a countywide program for demand response capital replacement to better utilize the advantageous local match of the 5310 program’s most recent cycle should be considered.

- The West Shores Dial-a-Ride’s high operating costs and low productivity points to the importance of developing a more cost-effective solution to providing lifeline transportation service to this area of the county in the long term.

- Imperial Dial-a-Ride and El Centro Dial-a-Ride have some overlapping service areas and may benefit from coordinated or consolidated service delivery.

- Brawley Dial-a-Ride’s high rates of cancellation and no-show trips suggests possible capacity problems, with riders locating alternative rides possibly due to late service or other issues around how riders use the service.

- Historically – and particularly prior to the recent efforts to pursue a more coordinated service delivery model – costs have continued to increase with regards to the provision of demand responsive services under the countywide Americans with Disabilities Act
(ADA) complementary paratransit program (i.e., formerly known as AIM Transit and now known as IVT Access). This points to the importance of pursuing demand management and growth management strategies, so as to contain the increase in costs as much as practically possible. Such strategies include functional certification (where the need for ADA eligibility is tested and verified by the paratransit operator, without sole reliance on the client’s physician for the certification) or conditional eligibility (where clients may be eligible for demand response service only if certain conditions are met - for example, if the temperature exceeds a certain threshold).
5.1.2 Strengths and Opportunities

This section discusses opportunities for both the fixed route and demand response transit services in Imperial County, including improvements to the existing route and fare structures, the relationship of the demand response to fixed route services, service frequency and span, and other issues. It identifies strengths, weaknesses, duplications and unmet needs given the existing transit service. Possible service types are named, followed by some initial concept plans that will be further refined in the subsequent recommendations section.

Fixed Routes

IV Transit’s route structure is generally strong, focusing on providing service to the primary corridor area (spanning Calexico, Heber, El Centro, Imperial, IVC and Brawley), where a majority of trips are taken. Additional service is provided to outlying areas on a less frequent basis, supported by policy decisions regarding overall mobility within the county. Deviated “lifeline” service, operating one day per week, extends mobility to many rural communities throughout the county.

The fare structure is simple and logical with lower fares for local routes and higher fares for premium (“express” or “Direct”) services, with seniors, disabled persons and students eligible for discounted fares (for students on IVC Express routes only). These discounts are available all day, and not solely during the during the peak periods (as required by the FTA for seniors/disabled people). One drawback to the current fare policy is the lack of free transfers between the circulators and main line routes, which may discourage some passengers from making trips that involve transferring between the different service types—this may ultimately be limiting ridership on the circulators, the main line routes, or both.

Some areas lacking fixed route service—namely portions of Brawley—are served by a general public demand response service, or dial-a-ride instead. However, portions of Imperial are not served by fixed route transit (and demand response transit service is available only to senior/disabled passengers) and much of Brawley is only served by the general public Brawley Dial-a-Ride. While Routes 100/150 and IVC Express-Calexico follow a terminal loop serving part of Calexico, a large proportion of the city is not served by IV Transit fixed routes. With the Calexico Dial-a-Ride limited to senior/disabled passengers, this means that much of the city is not accessible to the general public via IV Transit. (However, parts of Calexico are served by private operator Calexico Transit Service, but this operator requires a separate fare.)

Transfer terminals are either available or under construction in each of the major cities (El Centro, Calexico, Brawley, Imperial) and at the Imperial Valley College. Timed transfers are available between the intercity routes and Blue and Green Line circulators at IV Transit’s main transfer terminal in El Centro, located at 14th and State Streets (soon to be moved to a new location at 7th and State Streets). If implemented, timed transfers would be available between new circulator routes and existing intercity routes at the transfer terminals in Brawley, Imperial
and Calexico—currently, such transfers are available between dial-a-ride services and intercity routes at these locations for some passengers.

With regard to frequency and span of service, IV Transit currently operates fixed route service six days per week with a maximum frequency of every 70 minutes. Service on Saturdays is less frequent than that operated on weekdays, and is more limited in span (i.e., the hours during which service is offered). There is currently no Sunday service. Both the public outreach process conducted as part of this study and the Unmet Needs process have shown that numerous passengers have requested an increase in the span of service for Saturday, as well as for the introduction of Sunday service. Additionally, crowding on some routes indicates a demand for increased frequency—likely to every 60 minutes on the busiest routes.

Generally, service in Imperial County covers the urban areas of the county as well as most major generators and employers. The introduction of circulator services in the cities will help in better serving the major generators in those locations—such as the Walmart in Brawley; additionally, some new development that is proposed for the county is located near existing routes, where a stop could be added—such as the proposed Manzanita Casino in Calexico.

Information regarding the fixed routes is provided in bilingual format to the public via a website (www.ivtransit.com) and in booklet form (Rider's Guide). Currently, these materials leave out the Blue and Green Lines (which have separate fliers), but are scheduled to include those in the future—the website is scheduled to undergo renovation. No system map is provided to the public and bus stop signage design varies somewhat depending on location—generally, no route, schedule or contact information is provided at bus stops.

Currently, different operators are responsible for the fixed route services and the numerous demand response services in the county, with the municipalities adding an additional layer of oversight to local dial-a-ride services. In addition, the circulators operate under a separate contract from the other fixed routes. This leads to some level of complication in both public information and regarding operations—information is spread across several websites, and the fare system is not fully integrated (e.g., there are free transfers between most fixed routes but not between fixed routes and circulators). There is also some overlap in service between the fixed routes and dial-a-ride programs that likely should be shifted to the fixed routes where possible (not to mention the overlap between the ADA paratransit service and dial-a-ride services, as mentioned in the subsequent demand response strengths and opportunities). The SRTP provides an opportunity to improve public information and consider better coordination between operators/services.
Demand Response Services

Imperial County’s demand responsive services have evolved to meet varying rider needs and serve most of the county’s populated areas. The three types of services that exist reflect differentiated service structures responsive to need: 1) regional trip-making for ADA-certified persons who cannot use IV Transit fixed routes; 2) a regional non-emergency medical service that travels into the next county; and 3) five community-level dial-a-rides providing intra-city trips for individuals who need curb-to-curb service. This service structure, evolving to address both local and regional trip requirements, is a solid service design and – in the case of the non-emergency service – reflects creative achievement. Many counties strive without success to construct the type of non-emergency medical service represented by Med-Express.

All services except the West Shores Dial-a-Ride are achieving the mandatory Transportation Development Act (TDA) minimum farebox recovery standards, with the Med-Express returning the highest level (i.e., almost a 20 percent farebox return). However, the relationship between contractual standards (where these are stated) and actual performance is weak for most of the municipal operators. Other important types of performance, such as productivity, are not addressed in any of the contracts.

Although trip consolidation may not always be possible due to the geographical separation of some of the dial-a-ride programs, consolidation of the demand response services may provide other opportunities for coordination and the realization of efficiencies that are beyond these service area issues, including functions such as administration, maintenance and dispatch.
5.2 Recommendations Overview

This section outlines recommendations for ICTC-sponsored transit services in Imperial County, including the fixed routes (IV Transit) and demand response services (IVT Access, Med-Express and the five dial-a-ride services—Brawley, Calexico, El Centro, Imperial and West Shores). Recommendations span five different time periods: Phase One recommendations are intended for implementation within one or two years of adoption of the SRTP, Phase Two recommendations are intended for implementation in two or three years and Phase Three recommendations are intended for implementation in three to five years. Additional proposals are slated for potential further study in Future Phases/Feasibility Studies, to be implemented after the five-year scope of the SRTP. Additionally, a few ideas are proposed for possible inclusion in a future version of Imperial County's 20-Year Transit Vision, pending additional growth of population, transit service and the availability of funding within the county.

Following the recommendations, a capital plan is outlined that would take into account the recommended operating changes and their impact on the number of vehicles required to provide service. A financial plan is also presented, summarizing operating and capital costs and revenues for the next five years. Finally, an implementation summary is presented showing each phase and its associated impacts.

One of the Phase One proposals involves the re-numbering of IV Transit’s fixed route system. For the sake of simplicity, this numbering system is outlined below and will be utilized for the remainder of this document. With the exception of the circulator routes, the scheme is directionally based, with routes ending in “1” serving areas south of El Centro, “2” serving areas north of El Centro, “3” serving areas east of El Centro, and “4” serving areas west of El Centro. Routes that skip El Centro and/or do not fit into any of the above categories use numbers ending in “0”.

Intercity routes, which form the basic spine of the IV Transit system in the Primary and Secondary Corridor Zones, are designated with single-digit numbers. Circulators retain their current nomenclature (colors), but for internal reporting purposes would comprise Routes 10 through 15. IVC Express routes, which operate express service between Calexico and IVC and between Brawley, Westmorland, Calipatria, Niland and IVC, utilize numbers in the 20 series and are designated Route 21 (IVC-Calexico) and Route 22 (IVC-Niland). Lifeline routes, which operate one round-trip per week, utilize numbers in the 30 series and are designated 32 through 34 (e.g., Brawley-Bombay Beach, El Centro-Winterhaven and El Centro-Ocotillo, respectively). Direct routes, which travel “directly” between two points (with no intermediate stops), utilize numbers in the 40 series, with Route 40 operating between Brawley and Calexico; the proposed Route 43 would operate between El Centro and Winterhaven/Yuma. Finally, “Fast” routes, which provide limited-stop service, would utilize numbers in the 50 series, with Route

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51 proposed to operate between El Centro and Calexico, and Route 52 currently operating from Brawley to El Centro with service proposed for the reverse direction.

The proposed route nomenclature, including current and proposed routes (in all proposed implementation phases), is shown in Table 5-1 below.

<table>
<thead>
<tr>
<th>Table 5-1: Proposed Route Nomenclature</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Route Type</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>Intercity Routes</strong></td>
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<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Circulators</strong> – retain current nomenclature</td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>IVC Express Routes</strong> (“2x”)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Lifeline Routes</strong> – when operating as a separate route (“3x”)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Direct (Nonstop) Routes</strong> (“4x”)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Fast (Limited-Stop) Routes</strong> (“5x”)</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

5.3 Fixed Route Recommendations

Following are the recommendations emanating from the SRTP process for IV Transit’s fixed route system. Phases One, Two and Three (i.e., each representing years 1 to 2, 2 to 3 and 4 to 5, respectively) are included in the following capital, financial and implementation plans, while the Future Phases and Long-Term Transit Vision recommendations are presented in a more general sense, with further study recommended.

The proposed fixed route system, reflecting the implementation of all Phase One, Two and Three recommendations, is shown in Figures 5-1 (for the weekday system), 5-2 (for the Saturday system) and 5-3 (for the Sunday system) on the following pages. Estimated order-of-magnitude ridership changes are included for service improvements for which a change in ridership is anticipated. All cost estimates are based on FY 2010-11 fully-allocated costs (operation, vehicles, fuel and marketing) of $119.24 for regular fixed routes and $86.25 for circulators. All recommendations are provided with goal of reducing IV Transit’s pulse to 60-minutes—this includes modifications to existing Routes 1-3 and the Blue and Green Lines in order to allow for 60-minute headways or timed transfers with routes operating every 60 minutes, and new circulators (and the Purple Line) are proposed to have 60-minute cycle times.
Figure 5-1: Proposed Weekday System
Figure 5-2: Proposed Saturday System
5.3.1 Phase One (1 to 2 Years)

Expansion of Saturday Service on Routes 1 and 2

- Estimated Cost of Improvement (annual) $217,016
- Estimated Change in Ridership (annual) 17,204
- Estimated Change in Revenue Hours (annual) 1,820

One of ICTC’s top priorities for near-term service improvement is the expansion of Saturday service. In Phase One, Saturday service on Routes 1 and 2 (between Calexico and Niland) would be expanded to match the frequency of weekday service. Additionally, Saturday service would be implemented on Direct Route 40 between Brawley and Calexico. Further expansion of Saturday service is planned for Phases Two and Three. In Phase One, 35 additional hours of service would be operated each Saturday. The increased cost of the service would be $4,174 per Saturday, or $217,016 annually. Table 5-2 shows the revenue hours and cost of the proposed increases to Saturday service.

<table>
<thead>
<tr>
<th>Route</th>
<th>Current Revenue Hours</th>
<th>Current Cost</th>
<th>Phase One Revenue Hours</th>
<th>Phase One Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercity Route 1 (El Centro-Calexico)</td>
<td>13</td>
<td>$1,550</td>
<td>26</td>
<td>$3,100</td>
</tr>
<tr>
<td>Intercity Route 2 (El Centro-Niland)</td>
<td>22</td>
<td>$2,623</td>
<td>38</td>
<td>$4,531</td>
</tr>
<tr>
<td>Intercity Route 3 (El Centro-Holtville)</td>
<td>5</td>
<td>$596</td>
<td>5</td>
<td>$596</td>
</tr>
<tr>
<td>Intercity Route 4 (El Centro-Seeley)</td>
<td>3</td>
<td>$358</td>
<td>3</td>
<td>$358</td>
</tr>
<tr>
<td>Direct Route 40 (Brawley-Calexico)</td>
<td>0</td>
<td>$0</td>
<td>6</td>
<td>$715</td>
</tr>
<tr>
<td><strong>Saturday Total</strong></td>
<td><strong>43</strong></td>
<td><strong>$5,127</strong></td>
<td><strong>78</strong></td>
<td><strong>$9,301</strong></td>
</tr>
<tr>
<td><strong>Annual Total</strong> (52 Saturdays)</td>
<td><strong>2,236</strong></td>
<td><strong>$266,621</strong></td>
<td><strong>4,056</strong></td>
<td><strong>$483,637</strong></td>
</tr>
</tbody>
</table>

*Estimated based on public timetables, assuming cost per hour of $119.24 (FY 2010-11 average).*

Introduction of Sunday Service

- Estimated Cost of Improvement (annual) $173,613
- Estimated Change in Ridership (annual) 14,032
- Estimated Change in Revenue Hours (annual) 1,456

In addition to an increase in Saturday service, limited Sunday service is also proposed, in accordance with comments made during the public involvement phase of the SRTP and the Unmet Needs process, as well as the long-term goals and vision of ICTC. On Sundays, a base level of service would operate on Routes 1 and 2 in the Primary Corridor Zone (between
Calexico and Brawley), with the same frequency as currently operates on Saturdays. With 43 revenue hours added per Sunday, the increased cost of service would be $3,339 per Sunday, or $173,613 annually. Table 5-3 below shows the revenue hours and cost of the proposed Sunday service.

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase One Revenue Hours</th>
<th>Phase One Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercity Route 1 (El Centro-Calexico)</td>
<td>13</td>
<td>$1,550</td>
</tr>
<tr>
<td>Intercity Route 2 (El Centro-Niland)</td>
<td>15</td>
<td>$1,789</td>
</tr>
<tr>
<td><strong>Sunday Total</strong></td>
<td><strong>28</strong></td>
<td><strong>$3,339</strong></td>
</tr>
<tr>
<td><strong>Annual Total (52 Sundays)</strong></td>
<td><strong>1,456</strong></td>
<td><strong>$173,613</strong></td>
</tr>
</tbody>
</table>

Estimated based on public timetables, assuming cost per hour of $119.24 (FY 2010-11 average).

Implementation of Brawley Circulator

- Estimated Cost of Improvement (annual) $285,919
- Estimated Change in Ridership (annual) 9,997
- Estimated Change in Revenue Hours (annual) 3,315

In accordance with both the goals and objectives of this SRTP process – as well as with the Imperial County 20-Year Transit Vision - it is recommended that circulators eventually be implemented in Brawley, Calexico and Imperial. The study team concurs with the views laid out in the Imperial County 20-Year Transit Vision; additionally, the operation of circulator services will allow for greater transit coverage within the major cities as well as allow for the eventual streamlining of the primary Intercity Routes so as to allow them to operate trunk line services more frequently.

It is proposed for the next circulator to be implemented in Brawley (the proposed Gold Line) in Phase One. This circulator would supplement the intercity service on Routes 2, providing improved service coverage for fixed-route transit in the City of Brawley, with access to a greater number of destinations and residents. The route should be timed to connect with the intercity routes as closely as possible, in a manner similar to how the Blue and Green Lines currently meet the bus pulse in El Centro. In Brawley, the circulator would connect with Intercity Route 2, Direct Route 40, Fast Route 52 and the IVC Express Route 22 at the planned transfer point at South Plaza Street and C Street. The precise alignment of the Gold Line will be determined in a separate Circulator Study planned by the ICTC. The route should be designed to operate on a

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60-minute headway so as to meet the 60-minute pulse proposed for the Intercity Routes in Phase Three. In the short-term, an additional 10 minutes will be available for layover as the current headway on the Intercity Routes is 70 minutes. When 60-minute headways are implemented on the Intercity Routes, the layover on the Gold Line will simply be reduced by 10 minutes in order to achieve a 60-minute cycle time.

Service would operate from 6:00AM to 7:00PM Monday through Friday, the same hours as the Green and Blue Lines currently operate. The approximate total cost for implementing the new Gold Line would be $1,121 per weekday, or $285,919 annually. The revenue hours and cost of service for the Gold Line is shown in Table 5-4 below. Implementation of the Gold Line will allow for the straightening of Route 2 through Brawley, which would provide some cost savings that would be used to offset the cost of implementing the Gold Line.

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase One Revenue Hours</th>
<th>Phase One Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold Line Circulator (Brawley)</td>
<td>13</td>
<td>$1,121</td>
</tr>
<tr>
<td><strong>Annual Total (255 weekdays)</strong></td>
<td><strong>3,315</strong></td>
<td><strong>$285,919</strong></td>
</tr>
</tbody>
</table>

Estimated based on public timetables, assuming cost per hour of $86.25 (FY 2010-11 average).

Implementation of Imperial Circulator

- Estimated Cost of Improvement (annual) $285,919
- Estimated Change in Ridership (annual) 7,574
- Estimated Change in Revenue Hours (annual) 3,315

In addition to the Gold Line in Brawley, it is proposed that a new circulator is also implemented in Imperial (the proposed Red Line) during Phase One. This circulator would supplement the existing service on Routes 2 and 3, increasing fixed-route service to cover most of the City of Imperial. The Red Line should be timed to connect with the intercity routes as closely as possible, in a manner similar to how the Blue and Green Lines currently meet the bus pulse in El Centro. The Red Line would operate the same hours and days as the other circulators (6:00AM to 7:00PM Monday through Friday), connecting the proposed transfer terminal in Imperial with housing, shopping and employers throughout the city, and would have connections with Intercity Route 2, Fast Route 52, and potentially Intercity Route 3 and the Blue and Green Lines. The precise alignment of the Red Line will be determined in a separate Circulator Study planned by the ICTC. As with the Gold Line, the Red Line should be designed to operate on a 60-minute headway so as to meet the 60-minute pulse proposed for the Intercity Routes in Phase Three.
The approximate total cost for implementing the Red Line would be $1,121 per weekday, or $285,919 annually. The revenue hours and cost of service is shown in Table 5-5 below.

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase One Revenue Hours</th>
<th>Phase One Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Line Circulator (Imperial)</td>
<td>13</td>
<td>$1,121</td>
</tr>
<tr>
<td><strong>Annual Total (255 weekdays)</strong></td>
<td><strong>3,315</strong></td>
<td><strong>$285,919</strong></td>
</tr>
</tbody>
</table>

*Estimated based on public timetables, assuming cost per hour of $86.25 (FY 2010-11 average).*

Realignment of Route 2 in Brawley

- Estimated Cost of Improvement (annual) NO ADDITIONAL COST
- Estimated Change in Ridership (annual) NO ADDITIONAL RIDERSHIP
- Estimated Change in Revenue Hours (annual) NO ADDITIONAL HOURS

In concert with the implementation of the Brawley Circulator, Route 2 can be re-aligned through the City of Brawley, as service east of Imperial Avenue will be covered by the new Gold Line. This realignment will shorten Route 2 so that 60-minute headways will be possible, in preparation for reducing the system’s pulse to 60 minutes in Phase Three of this plan. As not all routes will have headways reduced to 60 minutes in Phase One, initially the re-alignment of Route 2 will provide for additional layover time in order to continue meeting the pulse in El Centro every 70 minutes. Once realignments to Routes 1 and 3 have been implemented in Phase 3 reducing headways on those routes to 60 minutes, Route 2 can begin operating every 60 minutes.

This adjustment would save 1.7 miles in each direction, or 8 minutes at an average speed of 12 miles per hour. Additionally, with the relocation of the Brawley Transfer Terminal to South Plaza Street, Route 2 trips that short-turn in Brawley would save 2.4 miles in each direction due to the combined elimination of service east of Imperial Avenue and a truncation of the short-turn to the new Transfer terminal, saving approximately 12 minutes given an average speed of 12 miles per hour. Any savings from this route adjustment will be used to offset the cost of Brawley’s Gold Line circulator.

Figure 5-4 shows the proposed route realignments for Route 2.

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6 Currently, Routes 1 through 4 and the Blue and Green Lines converge at the transfer terminal in El Centro every 70 minutes, facilitating transfers between routes. This convergence is known as a “pulse”. Phase Three of this plan includes a recommendation to reduce the pulse from every 70 minutes to every 60 minutes, thus over the course of this plan the running time of each route (in this instance, Route 2) is reduced to allow for this future change.
Figure 5-4: Proposed Route 2 Realignment
Continue Use of “Shadow Buses” on Calexico Routes

- Estimated Cost of Improvement (annual) NO ADDITIONAL COST
- Estimated Change in Ridership (annual) NO ADDITIONAL RIDERSHIP
- Estimated Change in Revenue Hours (annual) NO ADDITIONAL HOURS

Currently, “shadow buses” (or “second sections” in the operating schedule) are used on the Calexico routes (Intercity Route 1 and IVC Express Route 21) at times when crowding is anticipated to be a problem. These two routes often exceed the scheduled vehicle capacity, particularly during certain times of the year (such as at the beginning of the semester at IVC), and without “shadow buses” some passengers would be left waiting at the curb. Continued provision of the “shadow buses” will provide a foundation for the service increases on these routes proposed for Phase Two, but ensuring that ridership demand can continue to grow without the constraint of space onboard a single vehicle (per trip). This recommendation does not represent a change in cost, ridership or hours to the current system, although if ridership continues to grow additional “shadow bus” trips may be required.

Fare Increase

A fare increase has already been proposed\textsuperscript{7} for IV Transit for July 1, 2012 or July 1, 2013. It is recommended that this increase be implemented to help offset IV Transit’s operating costs. In future fare discussions, other factors that should be considered include:

- Free transfers between the Intercity Routes and the existing and proposed circulators to encourage trips that include both services. With the implementation of the circulators and the eventual alignment modifications to the Intercity Routes, some one seat rides will require a transfer between the two route types.

- A review of charging a premium fare for requesting route deviations.

An increase in the one-zone base fare from $0.75 to $1.00 (33 percent) and an increase in the regional base fare from $1.00 to $1.25 (25 percent) could decrease annual ridership by approximately 26,500 riders (3.9 percent); however, the decrease in ridership in response to the fare increase would likely be offset by the steady year-over-year ridership growth of the system.

Route Numbering

The proposed route nomenclature change (described previously) is recommended for implementation within Phase One in order to minimize passenger confusion when other service changes take place.

\textsuperscript{7} Fare increases were proposed in the \textit{Public Transit Services Fare Analysis} completed by Nelson\textbackslash Nygaard in June 2008.
Public Information

Information regarding all of the transit services provided by ICTC should be available both on the Internet and in a hard-copy format (such as the current Rider’s Guide). While these materials already exist, we recommend that both the website (which is currently being updated) and the Rider’s Guide include all information currently provided (routes, route maps, schedules, fare and rider information, et cetera) and the following:

- System map
- Information regarding circulators that is in line with what is provided for other routes
- Clear information on “Lifeline” routes in the bus book

Signage and Branding

All of the vehicles used on the fixed routes in the IV Transit system - including any smaller vehicles used on the circulators - should be “branded” with the same logos and paint schemes so as to more clearly identify the transit system and give all of the disparate elements of the system a more cohesive identity. This will also further the sense that the IV Transit system is a county-wide system.

For the same reasons, the design of bus stop signs should be standardized throughout the county, so that riders can always consistently identify a bus stop even if they are in an area they do not normally travel in. It is recommended that one standard bus stop sign be used; its elements should include the following:

- the system name or logo (IV Transit);
- a clear indication that the sign designates a bus stop;
- contact information (phone number and/or Internet address); and
- the routes serving the stop

The route numbers may be best shown using stickers, in order to provide flexibility for future service adjustments. In addition, if some type of real-time information text message system is implemented in the future that allows riders to know how much time remains until the next bus arrives at that stop, then a unique stop number should also be included on the bus stop sign.

Three examples of bus stop signs are shown in Figure 5-5, from the Lehigh and Northampton Transportation Authority (LANTa); San Diego Metropolitan Transit System, and Greater Bridgeport Transit (GBT).
Finally, it is also recommended that ICTC pursue a pilot program for providing Quick Response Codes (QR Codes) on bus stop signs along Intercity Routes 1 and 2, whereby passengers may scan the code with their smart phones or mobile devices and obtain real-time bus arrival and departure information.

**Bus Stop Specification Handbook**

It is recommended that ICTC pursue development of a bus stop specification and design handbook for local agencies. This policy development would include a formal memorandum of understanding (or a similar document) regarding duties and responsibilities of each agency and municipality regarding bus stop location, installation and maintenance. Such a handbook is integral to the development of the proposed circulators, so that the municipally-sponsored services maintain uniform signage with and are seen as a part of the overall “seamless” IV Transit system. This handbook should include bus stop sign specifications as described in the previous recommendation.
### 5.3.2 Phase Two (2 to 3 years)

Expansion of Saturday Service on Routes 3 and 4

- Estimated Cost of Improvement from Phase One (annual) $56,503
- Estimated Change in Ridership from Phase One (annual) 1,513
- Estimated Change in Revenue Hours from Phase One (annual) 520

In a continuation of both one of ICTC’s top priorities, as well as responding to the desires voiced in the Unmet Needs process, Saturday service is proposed for additional expansion in the Secondary Service Zone in Phase Two. In Phase Two, Saturday service would operate on a weekday span and frequency on Routes 1, 2, 3 and 4 as well as Direct Route 40. From Phase One, this would include the expansion of Routes 3 and 4 to meet the weekday span and frequency. Each Saturday, 7 additional hours of service would be operated in addition to the Phase One service. The increased cost of the service would be $834 per Saturday, or $43,404 annually. Table 5-6 shows the revenue hours and cost of the proposed increases to Saturday service.

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase One Revenue Hours</th>
<th>Phase One Cost</th>
<th>Phase Two Revenue Hours</th>
<th>Phase Two Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercity Route 1</td>
<td>26</td>
<td>$3,100</td>
<td>26</td>
<td>$3,100</td>
</tr>
<tr>
<td>(El Centro-Calexico)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercity Route 2</td>
<td>38</td>
<td>$4,531</td>
<td>38</td>
<td>$4,531</td>
</tr>
<tr>
<td>(El Centro-Niland)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercity Route 3</td>
<td>5</td>
<td>$596</td>
<td>10</td>
<td>$1,192</td>
</tr>
<tr>
<td>(El Centro-Holtville)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercity Route 4</td>
<td>3</td>
<td>$358</td>
<td>5</td>
<td>$596</td>
</tr>
<tr>
<td>(El Centro-Seeley)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Route 40</td>
<td>6</td>
<td>$715</td>
<td>6</td>
<td>$715</td>
</tr>
<tr>
<td>(Brawley-Calexico)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saturday Total</td>
<td>78</td>
<td>$9,301</td>
<td>85</td>
<td>$10,135</td>
</tr>
<tr>
<td>Annual Total (52 Saturdays)</td>
<td>4,056</td>
<td>$483,637</td>
<td>4,420</td>
<td>$527,041</td>
</tr>
</tbody>
</table>

Estimated based on public timetables, assuming cost per hour of $119.24 (FY 2010-11 average) for all routes except the circulators, for which $86.25 (FY 2010-11 average) was used.
Addressing Capacity Issues on Calexico Routes

- Estimated Cost of Improvement (annual) $182,437 (minus the current cost of “shadow buses”)
- Estimated Change in Ridership (annual) 24,317
- Estimated Change in Revenue Hours (annual) 1,530 (minus the current hours of “shadow buses”)

Phase One includes the continued use of “shadow buses” on Intercity Route 1 and IVC Express Route 21. In Phase Two, it is recommended that these vehicles are incorporated into the route network on a daily basis, providing additional service on IVC Express Route 21 during the peak periods. Shadow buses should continue to be used on Intercity Route 1 as needed (these will be incorporated into a new route in Phase Three). In Phase Two, three additional round-trips should be provided per day on IVC Express Route 21. If possible, these trips should be interlined with IVC Express Route 22 (IVC-Niland), providing an additional express service option to passengers traveling between Calexico and points north of El Centro. Table 5-7 below outlines revenue hours and cost for the additional service on IVC Express Route 21.

Table 5-7: Revenue Hours and Cost for Additional Service on IVC Express Route 21

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase One Revenue Hours</th>
<th>Phase One Cost</th>
<th>Phase Two Revenue Hours</th>
<th>Phase Two Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVC Express Route 21</td>
<td>6</td>
<td>$715</td>
<td>12</td>
<td>$1,431</td>
</tr>
<tr>
<td>(IVC-Calexico)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Total</td>
<td>1,530</td>
<td>$182,437</td>
<td>3,060</td>
<td>$364,874</td>
</tr>
<tr>
<td>(255 Weekdays)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Estimated based on public timetables, assuming cost per hour of $119.24 (FY 2010-11 average).

Calexico Intermodal Transfer Terminal

An Intermodal Transfer Terminal is currently being planned for Calexico, to be located on First Street at Mary Avenue. This terminal should be served by ICTC’s routes in order to provide transfer opportunities between ICTC’s routes (including Intercity Route 1, IVC Express Route 21, Direct Route 40 and the Orange Line), intra-city, for-profit operators, and long-distance intercity services such as those provided by Greyhound. In the long-term, coordination with services provided by Mexican carriers may also be desirable.
Bi-Directional Service on El Centro-Brawley Fast Route 52

- Estimated Cost of Improvement (annual) $15,203
- Estimated Change in Ridership (annual) 1,785
- Estimated Change in Revenue Hours (annual) 127

Currently, one limited-stop trip operates each morning from Brawley to El Centro with a stop in Imperial. It is recommended that a return trip be provided from El Centro to Brawley during the afternoon. Table 5-8 shows revenue hours and cost for this expanded service.

Table 5-8: Revenue Hours and Cost for Round-Trip Service on Fast Route 52

<table>
<thead>
<tr>
<th>Route</th>
<th>Current Revenue Hours</th>
<th>Current Cost</th>
<th>Phase Two Revenue Hours</th>
<th>Phase Two Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast Route 52 (El Centro-Brawley)</td>
<td>0.5</td>
<td>$60</td>
<td>1</td>
<td>$119</td>
</tr>
<tr>
<td>Annual Total (255 Weekdays)</td>
<td>128</td>
<td>$15,203</td>
<td>255</td>
<td>$30,406</td>
</tr>
</tbody>
</table>

Estimated based on public timetables, assuming cost per hour of $119.24.
5.3.3 Phase Three (4 to 5 years)

Implementation of Calexico Circulator (Weekdays)

- Estimated Cost of Improvement (annual) $285,919
- Estimated Change in Ridership (annual) 15,218
- Estimated Change in Revenue Hours (annual) 3,315

In addition to the circulators proposed for Phase One, there is an additional circulator route proposed for Phase Three. In accordance with both the goals and objectives of the SRTP as well as with the views laid out in the Imperial County Transit Vision, the Orange Line circulator is proposed for Calexico, with connections available with Intercity Route 1, IVC Express Route 21, Direct Route 40 and Fast Route 51 (proposed for this phase as well and described subsequently) at the transfer point at 3rd Street and Paulin Avenue (or at the proposed Calexico Intermodal Transfer Terminal). The precise alignments of the circulator will be determined in a separate Circulator Study planned by ICTC. As with the Gold and Red Lines, this route should be designed to operate on a 60-minute headway in order to meet the proposed 60-minute pulse for the Intercity Routes.

Table 5-9 shows the revenue hours and cost for the Orange Line. This table shows the proposed hours and cost for weekday service—Saturday service on all circulators is also proposed for Phase Three, but this cost and hours are included separately as a part of the expansion of Saturday Service.

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase Three Revenue Hours</th>
<th>Phase Three Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange Line Circulator</td>
<td>13</td>
<td>$1,121</td>
</tr>
<tr>
<td>(Calexico)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Total (255 Weekdays)</td>
<td>3,315</td>
<td>$285,919</td>
</tr>
</tbody>
</table>

*Estimated based on public timetables, assuming cost per hour $86.25 (FY 2010-11 average).*

Implementation of Imperial-IVC-El Centro Connector (Weekdays)

- Estimated Cost of Improvement (annual) $285,919
- Estimated Change in Ridership (annual) 5,891
- Estimated Change in Revenue Hours (annual) 3,315

In addition to the circulators as proposed in the Imperial County Transit Vision, one additional route is proposed to enhance local circulation. The Purple Line Connector is proposed to connect downtown Imperial (at the proposed transfer terminal) with downtown El Centro (at the new transfer terminal) and IVC. This bus route would provide connections between the three...
transfer locations and function to tie the Imperial and El Centro circulator systems together, as well as provide additional service between IVC, downtown El Centro, and the growing City of Imperial. The proposed Purple Line Connector is a new proposal and was not previously mentioned in the *Imperial County Transit Vision*. This route would also serve some of the bus stops removed from Route 3 during its alignment modification (described subsequently). The Purple Line Connector should be designed to operate on a 60-minute headway in order to meet the proposed 60-minute pulse for the Intercity Routes in El Centro.

Table 5-10 shows the revenue hours and cost for the Purple Line on weekdays—Saturday hours and cost are included in the subsequent section, which discusses the expansion of circulator service to Saturdays. Figure 5-6 shows routing for the Purple Line connector (which would cover stops no longer served by Intercity Route 3 following the realignment proposed for it as part of this phase).

<table>
<thead>
<tr>
<th>Route</th>
<th>Revenue Hours</th>
<th>Phase Three Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purple Line Connector</td>
<td>13</td>
<td>$1,121</td>
</tr>
<tr>
<td>Annual Total (255 Weekdays)</td>
<td>3,315</td>
<td>$285,919</td>
</tr>
</tbody>
</table>

*Estimated based on public timetables, assuming cost per hour $86.25 (FY 2010-11 average).*
Implementation of Saturday Service on Circulators

- Estimated Cost of Improvement (annual) $215,280
- Estimated Change in Ridership (annual) 4,978
- Estimated Change in Revenue Hours (annual) 2,496

In Phases One and Two, Saturday service is proposed for expansion on Intercity Routes 1, 2, 3 and 4 and for introduction on Direct Route 40. In Phase Three, the circulators and the Purple Line Connector are also proposed for introduction on Saturdays, for the eight hour period from 10:00AM to 6:00PM to provide local circulation in Brawley, Calexico, El Centro and Imperial, as some local circulation provided by the current intercity routes would have been removed due to route realignment. Each Saturday, 48 additional hours of service would be operated. The increased cost of the service would be $4,140 per Saturday, or $215,280 annually. Table 5-11 shows the revenue hours and cost of the proposed increases to Saturday service.

Table 5-11: Proposed Saturday Service Increase – Hours and Cost Phase Three

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase Two Revenue Hours</th>
<th>Phase Two Cost</th>
<th>Phase Three Revenue Hours</th>
<th>Phase Three Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercity Route 1</td>
<td>26</td>
<td>$3,100</td>
<td>26</td>
<td>$3,100</td>
</tr>
<tr>
<td>Intercity Route 2</td>
<td>38</td>
<td>$4,531</td>
<td>38</td>
<td>$4,531</td>
</tr>
<tr>
<td>Intercity Route 3</td>
<td>10</td>
<td>$1,192</td>
<td>10</td>
<td>$1,192</td>
</tr>
<tr>
<td>Intercity Route 4</td>
<td>5</td>
<td>$596</td>
<td>5</td>
<td>$596</td>
</tr>
<tr>
<td>Direct Route 40</td>
<td>6</td>
<td>$715</td>
<td>6</td>
<td>$715</td>
</tr>
<tr>
<td>Blue Line Circulator</td>
<td>0</td>
<td>$0</td>
<td>8</td>
<td>$690</td>
</tr>
<tr>
<td>Green Line Circulator</td>
<td>0</td>
<td>$0</td>
<td>8</td>
<td>$690</td>
</tr>
<tr>
<td>Gold Line Circulator</td>
<td>0</td>
<td>$0</td>
<td>8</td>
<td>$690</td>
</tr>
<tr>
<td>Red Line Circulator</td>
<td>0</td>
<td>$0</td>
<td>8</td>
<td>$690</td>
</tr>
<tr>
<td>Orange Line Circulator</td>
<td>0</td>
<td>$0</td>
<td>8</td>
<td>$690</td>
</tr>
<tr>
<td>Purple Line Connector</td>
<td>0</td>
<td>$0</td>
<td>8</td>
<td>$690</td>
</tr>
<tr>
<td><strong>Saturday Total</strong></td>
<td><strong>85</strong></td>
<td><strong>$10,135</strong></td>
<td><strong>133</strong></td>
<td><strong>$14,275</strong></td>
</tr>
<tr>
<td><strong>Annual Total</strong></td>
<td><strong>4,420</strong></td>
<td><strong>$527,041</strong></td>
<td><strong>6,916</strong></td>
<td><strong>$742,321</strong></td>
</tr>
</tbody>
</table>

*Estimated based on public timetables, assuming cost per hour of $119.24 (FY 2010-11 average) for all routes except the circulators, for which $86.25 (FY 2010-11 average) was used.*
Continue to Address Capacity Issues on Calexico Routes

- Estimated Cost of Improvement (annual) $243,250 (minus the current cost of “shadow buses”)
- Estimated Change in Ridership (annual) 54,943
- Estimated Change in Revenue Hours (annual) 2,040 (minus the current hours of “shadow buses”)

Phases One and Two continued the use of “shadow buses” on Intercity Route 1 and IVC Express Route 21. In Phase Two, these vehicles were incorporated into the expansion of IVC Express Route 21, and maintained as needed on Intercity Route 1. In this phase, it is recommended that these vehicles are no longer incorporated into Intercity Route 1, but rather become the new Fast Route 51. This route would provide a weekday-only, peak period limited-stop service between El Centro and Calexico. This service would operate via California Route 111, Interstate 8 and California Route 86, stopping at the Calexico Transfer Terminal, the proposed Manzanita Casino, the Imperial Valley Mall, and the El Centro Transfer Terminal. The additional stops at the casino and the mall would differentiate the service from private operator Numero Uno’s express service, which operates nonstop between Calexico and El Centro.

It is recommended to add two round-trips during the morning peak, and two during the evening peak—these trips would depart the Calexico and El Centro Transfer Terminals half-way between Route 1 departures (providing alternating local and limited-stop services between the two locations). The new service would provide 2,040 additional revenue hours of service per year and cost $243,250 annually, minus the existing cost of providing the “shadow buses”. Table 5-12 below outlines revenue hours and cost for the additional service on the new service on Fast Route 51. Figure 5-7 following shows the proposed Fast Route 51.

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase Three Revenue Hours</th>
<th>Phase Three Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast Route 51 (El Centro-Calexico)</td>
<td>8</td>
<td>$954</td>
</tr>
<tr>
<td>Annual Total (255 Weekdays)</td>
<td>2,040</td>
<td>$243,250</td>
</tr>
</tbody>
</table>

Estimated based on public timetables, assuming cost per hour of $119.24.
Figure 5-7: Proposed Fast Route 51
Realignments of Routes 1 and 3 to Improve Frequency and Reduce Circuitousness

- Estimated Cost of Improvement (annual) NO ADDITIONAL COST
- Estimated Change in Ridership (annual) NO ADDITIONAL RIDERSHIP
- Estimated Change in Revenue Hours (annual) NO ADDITIONAL HOURS

Currently, the most frequent services—Routes 1 and 2 and the Blue and Green Lines—operate on 70-minute headways. In order to encourage additional ridership, address some of the crowding issue on Route 1, and to simplify the timetable (i.e., easing use/understanding of the system by passengers and potential passengers) by providing clock-face headways, it is recommended that the headways on these routes (as well as on all circulators) be reduced to 60 minutes. To do so requires some modest route realignments on Routes 1, 2 and 3 (as well as adjustments to the Blue and Green Lines, which are addressed in a separate recommendation), which have the added benefit of reducing trip times for many passengers. Other circulators are proposed for their design to meet a 60-minute pulse.

Implementation of the route realignments is dependent upon implementation of the proposed circulators, which would serve most or all of the stops eliminated from the intercity routes. The realignments should allow reduction in headways to 60 minutes, speeding up travel times for passengers on the intercity routes as well as allowing for up to two additional trips throughout the day at no additional operating cost. It is intended that there would be a free transfer between intercity routes and circulators, as some current one-seat rides will now require transfers between the two route types.

Realignment of Route 2 is proposed for Phase One, concurrent with implementation of the Brawley Circulator. Proposed route realignments for Routes 1 and 3 to allow for 60-minute headways include the following:

- **Route 1** – Remove the distribution loop within the City of Calexico, which will be covered by the Orange Line Circulator. Instead, Route 1 would operate closed-door, express service south of Cole Road, serving only the Calexico Transfer Terminal on Third Street at Paulin Avenue (or the Calexico Intermodal Transfer Terminal on First Street at Mary Avenue, when complete). This adjustment would cut 2.6 miles from the route (round-trip), saving approximately 13 minutes (assuming a 12 miles per hour average speed in the urban area) from the round-trip operating time (cycle time). Additional time may be saved due to closed-door service allowing for higher speeds.

- **Route 3** – Re-route service between IVC and North Imperial Avenue via Aten Road—the areas formerly served along Gillett Street, Main Street, 3rd Street and Villa Avenue could be served by the proposed Purple Line Connector. The neighborhoods south of Cross Road/Aten Road could be served by the proposed Red Line Circulator, by stops along Aten Road on the realigned Route 3, and/or by potential route deviation (by request
only) on Route 3 diverting southbound on Cross Road, eastbound on Bernardi Street, northbound on Cedro Avenue, westbound on De Paoli Street, and northbound on Cross Road, returning to Aten Road. This realignment would save 4.6 miles in each direction, or approximately 11 minutes at an average speed of 22 miles per hour (the average speed of the existing route). Realignment of Route 3 would allow some additional time for the provision of deviated service along the route.

Figure 5-8 shows the proposed route realignments for Routes 1 and 3.
Adjust Blue/Green Lines to Meet 60-Minute Pulse and Serve Social Security Office

- Estimated Cost of Improvement (annual) NO ADDITIONAL COST
- Estimated Change in Ridership (annual) 510
- Estimated Change in Revenue Hours (annual) NO ADDITIONAL HOURS

In order to meet the proposed 60-minute (rather than the current 70-minute) “transfer pulse” in El Centro, the Blue and Green Lines will require adjusting. This should be incorporated into the ICTC’s proposed Circulator Study and implemented concurrently with fixed-route realignments and implementation of the Orange and Purple Lines.

In addition, the Social Security Administration’s El Centro office is scheduled to move during late 2012 or early 2013, at which time the Blue and Green Line circulators would require modest adjustments in order to continue to serve the agency. This may be the ideal time to reduce cycle times and headways to 60 minutes.
5.3.4 Future Phases/Feasibility Studies (5+ Years)

Expansion of Winterhaven Route

Winterhaven, home of the Quechan Tribe at the Fort Yuma Indian Reservation, is located approximately 60 miles east of El Centro, just north of Yuma, Arizona. Winterhaven is located across the Colorado River from Yuma, which had a population of 93,064 in the 2010 U.S. Census, and is more economically and culturally linked to Yuma, although it is associated with the county seat of Imperial County in El Centro. Currently, Winterhaven is served by once-weekly lifeline service between Winterhaven and El Centro, operated as an extension of the Route 3 service to Holtville.

In a recent study conducted by the Southern California Association of Governments in 2008 (Winterhaven/Quechan Reservation Rural Connector study), as well as a follow-up study that was conducted in 2011, additional service was proposed to connect Yuma and El Centro. In addition, the recently completed Short Range Transit Plan for Yuma included an extension of Yuma County Area Transit’s Red Route 1 - Central Yuma Circulator across the state line to serve a stop at Winterhaven Drive and Railroad Avenue in Winterhaven. This service was extended on January 9, 2012 on a trial basis using federal funding. Timed transfers are available between this service and the El Centro-Winterhaven service.

In addition, the Quechan Tribe has received a federal grant to provide twice-weekly bus service between Winterhaven and El Centro—essentially doubling the frequency of the existing Winterhaven service. If this funding source is available, ICTC could operate this service as Route 33 El Centro-Winterhaven, via Interstate 8 (rather than via Holtville) in order to minimize travel time. For ICTC to operate the service would require a financial commitment from the affected communities, such as the Quechan Tribe.

Revision of Circulators to Improve Performance/Serve New Generators

It is recommended to continue to review the performance of all circulators, ensuring they remain up-to-date in serving the major generators of each urban area. In particular, the Blue and Green Lines, implemented prior to the introduction of any other circulators, may warrant some minor adjustments or revision in order to ensure they are performing at the highest level possible.

Pursue Cross-Border Coordination with Mexicali

Construction of the planned Calexico Intermodal Transfer Terminal would present the opportunity for coordination with transit services provided in Mexico (both intercity services and local Mexicali services). This facility should be integrated into ICTC’s transit network in order to provide more seamless cross-border transportation options.
Use of intelligent transportation measures (i.e., Global Positioning Systems/Automatic Vehicle Locator systems)

In the long-term, ICTC may want to consider outfitting vehicles with automatic vehicle locator (AVL) systems in order to enhance its ability to collect ridership and running time data. Such systems would also allow for the implementation of real-time bus travel time information, which passengers could access via telephone, the Internet, or smart phone applications.

Pursue Vehicle and Facility Ownership by ICTC

In the long-term, it is recommended that ICTC pursue ownership of all vehicles and facilities utilized by ICTC-sponsored transit services. This would have numerous impacts:

- Vehicle and facility costs would be shifted to the capital budget, rather than being incorporated into the rate paid to the contractor for the operation of the service. This would reduce the hourly operating cost and allow for the use of additional funding streams for the capital program.

- Fleet and facility ownership by ICTC would likely increase competition between contractors bidding to operate ICTC services, as contractors would not be required to provide vehicles or a maintenance facility themselves. This increased competition would further reduce the hourly rate paid for contractors to operate service.
5.3.5 Long-Term Transit Vision Concepts

In November 2000, the Imperial Valley Association of Governments (since replaced by ICTC) completed the Imperial County Transit Vision, a long-range transit plan intended to guide future efforts at transit planning in the county over the following 20-year period. The following concepts are intended for consideration for inclusion in any future transit vision for the county.

California Route 111 Corridor Limited-Stop Service

Currently, several different services operate along California Route 111 between Calexico and Brawley, including IVC Express Routes 21 and 22 and Direct Route 40 as well as portions of several other routes. In the long-term, these services could be incorporated into one limited-stop service in the California Route 111 corridor (i.e., Fast Route 50), simplifying the service pattern and de-segmenting the markets for these routes (i.e., a passenger traveling between Calexico and Brawley would not be limited to Direct Route 40 trips, but would be able to utilize any trip traveling in the corridor). There could be several options for service: 1) some trips could be extended to Niland, providing more rapid service throughout the entire north-south spine, or 2) some trips (during the peak period) could continue to skip IVC, providing rapid service between Brawley and Calexico. Stops could include the Calexico Transfer Terminal, the proposed Manzanita Casino, IVC, and the Brawley Transfer Terminal. Timed transfers should be available with the circulators where possible - this feature would be most critical for the Purple Line at IVC, where passengers on Direct Route 40 could connect and reach downtown El Centro and Imperial.

Additional Review of Fare Structure and Pricing

As operating costs increase year-over-year, additional review of the fare structure and pricing may be desirable in order to maintain mandated farebox recovery ratios.

Review of Existing Border Crossings and Opportunities for Transit

Imperial County is bordered by Mexico to the south, with the City of Mexicali – and the nearly 1 million people in the city and its surrounding communities – located directly across the border from Calexico. Border crossings are available between downtown Calexico and Mexicali (via California Route 111), east of Calexico (via California Route 7), and near Winterhaven between Andrade and Los Algodones (via California Route 186). Currently, IV Transit serves the border crossing in downtown Calexico, which serves as a significant ridership generator. Future opportunities may exist not only to improve the connection between IV Transit and transit operators across the border, but to serve one or both of the other border crossings as well.
5.4 Demand Response Recommendations

This section summarizes recommendations for the demand-response services in Imperial County. These are broken down into similar time-frames as for the fixed route services, but with a slight variation: Phase One remains the same (1 to 2 years), but Phase Two (2 to 5 years) essentially combines Phases Two and Three as presented in the fixed route recommendations. Future phases/feasibility studies (5+ years) and ideas to be included as part of the county’s long-term transit vision remain as they do in the fixed route recommendations. Demand response recommendations are summarized below and presented in further detail in the following section.

- Convene a Paratransit Technical Advisory Group to consider coordinated demand response service issues. These are suggested to include:
  - Interest in standardizing some or all performance indicators
  - Interest in standardizing selected rider policies, such as fares, trip reservation practices and waiting-time standards
  - Interest in standardized information tools and/or a common information portal

- Continue to pursue a more coordinated program for the provision of demand responsive service. Although the opportunities for the actual coordination or geographic consolidation of services may be somewhat limited, the pursuit of a more coordinated service delivery model may likely provide efficiencies in other aspects of the system (e.g., in functions such as procurement, maintenance, various administrative efforts, et cetera).

- Continuing attention to definition of terms on reporting demand response service operating statistics, specifically with regard to revenue service hours and miles versus deadhead service hours and miles.

- At the time of the next contracting cycle(s), review the agreements’ performance language and develop appropriate clauses that promote contractor efforts to improve productivity and cost-efficiencies.

- Review service alternatives for the West Shores area, anticipating the retirement of the existing service. For example, consider exploring partnership opportunities for a small mileage-reimbursement program for residents living beyond the reach of IV Transit services.

- Review opportunities for Brawley operational changes to help reduce no-show and cancellation rates, including additional rider education about penalties of successive no-
shows, as well as fixed-route service expansion to help reduce demand for dial-a-ride services.

- Explore interest in a coordinated/consolidated dial-a-ride service for the cities of Imperial and El Centro.

- Examine the costs and benefits of consolidated trip dispatching and a common trip scheduling platform to determine whether there are realizable savings in the vehicle service hours and vehicle deployment schedules that could offset the costs of the installation and training.

- Monitor special grant and discretionary grant opportunities and consider developing a Mobility Management capability to address ADA demand management opportunities. As previously mentioned, this will help contain demand responsive costs as much as practically possible. Such strategies include functional certification (where the need for ADA eligibility is tested and verified by the paratransit operator, without sole reliance on the client’s physician for the certification) or conditional eligibility (where clients may be eligible for demand response service only if certain conditions are met - for example, if the temperature exceeds a certain threshold).
5.4.1 Phase One (1 to 2 Years)

Expansion of IVT Access Weekend Service

The recommendations for the fixed route services called for additional service during the weekend. Specifically, in fixed route Phase 1, additional IVT Access hours on Saturdays would be needed to provide ADA complementary service (i.e., within ¾ mile) for the earlier start and the later finish on the north-south spine (i.e., only between Calexico and Niland).

On Sundays, new IVT Access hours in Phase 1 would be needed to provide ADA complementary service along the north-south spine, but on Sundays only between Calexico and Brawley.

Demand Response Performance Standards

The SRTP process has reported extensively on the performance standards in use by ICTC to assess and monitor its public transit providers. As noted previously, for the demand response programs ICTC directly administers, these standards and performance indicators are written into the contracts—specifically for IVT Access, MedExpress and the West Shores Dial-a-Ride.

For the municipal services, standards are more indirectly expressed in their contracts—in terms of number of trips per day or total costs. ICTC has developed various standards and monitors these in the context of the monthly and quarterly reporting received on behalf of the various services.

Table 5-13 presents a summary of the most recent year’s actual performance, a three-year historical average and the assigned standard for four performance indicators. The columns in yellow represent the three-year averages for each of the four indicators. The FY 2009-10 actual performance and the three-year average provide a means of quickly seeing how well these programs are doing in relation to the existing standards.
The existing process has individualized standards for each of the programs and, although these are typically reflective of actual experience, they are sometimes not. The potential revision of these standards could continue by considering each demand response service individually, with service indicators varying for each operator. There is, however, some value in moving towards a county-wide set of standards by type of program, facilitating a comparative sense of performance. Three program types are represented on Table 3-13: the regional ADA service, Med-Express (which is the regional non-emergency medical transportation - or NEMT - service) and the five community-based dial-a-ride services. Common standards for the municipal services would not be unreasonable, while differing standards for the regional services may have merit.

Establishing performance measures by demand responsive program type can be done on a consensus basis, informed by historical experience and in light of current environmental conditions. Although certain guidelines might appear to be universally applicable, possible standardized performance indicators would need to be informed by - and tempered by - external conditions that each operator or operators collectively might face. (For example, the system-wide reduction in service hours of 7.2 percent, as a response to the decline in Local Transportation Fund monies, was likely expected to impact the volume of passenger trips provided, with implications for passenger-based performance indicators. However, in fact there were some desired increases in productivity and undesirable increases in cost-per-passenger for certain services, with ridership down overall by 4.9 percent in FY 2009-10.)

One potential approach to a unified performance standards program for the measures presented in Table 5-13 is shown below in Table 5-14. This approach would also function as a method to monitor performance as mandated by the Transportation Development Act (TDA). Notably, ICTC uses its performance standards as “guidelines”, without any type of penalty for performance below standard. To move this process forward, municipal representatives of the

### Table 5-13: Demand Response Programs – Actual Performance vs. Existing Standards

<table>
<thead>
<tr>
<th>Imperial County</th>
<th>Productivity</th>
<th>Cost Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Response Programs</td>
<td>Actual Performance, Three-Year History and Existing Standards by Operator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Passengers/Hour</td>
<td>Cost/Passenger Trip</td>
</tr>
<tr>
<td></td>
<td>FY 09-10</td>
<td>Three-year Average</td>
</tr>
<tr>
<td>Regional ADA Complementary Paratransit Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIM Transit</td>
<td>3.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Regional NEMT Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Med-Express</td>
<td>2.9</td>
<td>2.5</td>
</tr>
<tr>
<td>Community-Based Dial-a-Ride Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brawley Dial-a-Ride</td>
<td>5.5</td>
<td>5.2</td>
</tr>
<tr>
<td>Calexico Dial-a-Ride</td>
<td>5.5</td>
<td>5.1</td>
</tr>
<tr>
<td>El Centro Dial-a-Ride</td>
<td>6.5</td>
<td>5.8</td>
</tr>
<tr>
<td>Imperial Dial-a-Ride</td>
<td>5.3</td>
<td>5.1</td>
</tr>
<tr>
<td>West Shores Dial-a-Ride</td>
<td>3.0</td>
<td>2.7</td>
</tr>
</tbody>
</table>
various demand responsive services could be invited to discuss both the standards selected and the particular performance goals against which their programs might be assessed. Other measures that could be considered relevant to demand responsive services could include cost per revenue mile, percentage of “no-shows”, percentage of cancellations and trip denials.

### Table 5-14: Potential Imperial County Demand Responsive Standards – Performance Indicator Program

<table>
<thead>
<tr>
<th>Indicators:</th>
<th>Regional Services: ADA</th>
<th>Regional Services: NEMT</th>
<th>Community-level services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passengers per revenue hour</td>
<td>2.0</td>
<td>3.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Cost per revenue hour</td>
<td>$62.00</td>
<td>$85.00</td>
<td>$45.00</td>
</tr>
<tr>
<td>Cost per passenger</td>
<td>$22.00</td>
<td>$32.00</td>
<td>$7.50</td>
</tr>
<tr>
<td>Farebox recovery ratio</td>
<td>10%</td>
<td>20%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Notably, with regard to the farebox recovery ratio, the standard of 10 percent minimum fare to operating cost ratio is set by the California Transportation Development Act (TDA) as the standard for demand responsive programs. For the regional medical service, having a higher threshold is appropriate given the long distances of these trips and the necessary higher passenger fare to offset its higher operating costs.

**Including Contract Clauses to Promote Productivity by Contractors**

In the contracts for IVT Access and Med-Express, both passenger-per-hour and passenger-per-day standards are included, but there is no language in the contracts – nor in the city agreements – for contract incentives or penalties to encourage improved contractor performance. In the next cycle of service agreements, it would be valuable to review the performance expectations set forth within these documents and include industry best practice performance clauses.

**Public Information and Standardizing Common Policies**

Continued efforts to improve available public information are warranted, even with the increasing web presences of the county’s transportation programs, including the dial-a-ride services. Key public information attributes and elements related to demand responsive services can include, but are not limited to:

- Information available in English and Spanish
- Basic rider eligibility information
- Service area maps for each dial-a-ride program
- Operating parameters of fares, days and hours of service
- Method and procedures around reserving a trip, including when to make a reservation and when to expect the vehicle to arrive (e.g., wait-time window)
- What to do when a trip must be cancelled
- What to expect when a rider consistently cancels or “no-shows” a trip

Related to providing information to the public, there is value in developing standardized service policies and procedures, such that members of the public might expect a common approach to trip scheduling and reservations processes. Where the ADA-certified riders may sometimes take community-level dial-a-ride services, or where any of these riders might take the regional NEMT service (i.e., Med-Express), there is some ease-of-use in standardized procedures for riders.

Discussion of standardizing policies could include discussion of fares, exploring where a common fare structure might be appropriate. The Med-Express fares will remain in their own category as regional inter-county trips: fares range from $15.00 to $30.00 round-trip, based upon the rider type. ADA fares are established in relation to the regulatory prescription of no more than twice the fixed-route base fare.

Standardized fare policy is most relevant to the community-based dial-a-ride programs. These fares currently vary from $0.50 in Imperial to $1.00 in Calexico and $1.50 in El Centro and Brawley ($1.75 for Imperial to El Centro trips). The West Shores higher fare of $2.00 per passenger trip relates to the high costs of this isolated area’s service. The ADA fares, starting at $1.50 and $2.00 and going to $3.00 for longer trips, run parallel to several of the community dial-a-ride fares. There is value in greater differentiation, maintaining community-level demand response fares at rates higher than the fixed-routes but less than the regional ADA services, to encourage riders to use the least expensive, most cost-effective transportation possible.

In any case, it is advisable to represent clearly to the public—through easily accessible URL addresses—the policies and procedures of local demand responsive programs.

**Demand Response Program Reporting**

The triennial audit processes may return recommendations regarding the definitions of terms, such as how the individual operators are distinguishing between revenue service and deadhead services. Such language should be carried forward into future operating contracts in order to ensure clarity.

Other reporting elements that reflect upon operations include reporting no shows and trip cancellations, as well as trip denials. These are valuable to continue as each provides additional insight into the performance of these programs and can suggest areas to focus on improving performance.
Countywide Program for Demand Response Vehicle Procurement

Imperial County's demand response services are eligible to secure funds for vehicle replacement through the FTA Section 5310 program. Administered by Caltrans, this is a statewide competitive program to provide vehicles and vehicle-related equipment for services that predominately serve persons with disabilities and older persons. Within the County, operators have taken advantage of grant opportunities and purchased vehicles for use in Brawley, El Centro, Imperial and the West Shores Dial-a-Rides as well as Med-Express.

In Caltrans' most recent funding cycle, there was no match requirement for successful applicants. The usual match requirement was met by Toll Credits, at Caltrans' behest, and no cash match was required of the awardees. Under other circumstances, the standard match for the California 5310 program is 88.7 percent federal match and 11.3 percent local cash match. In either scenario, this is highly advantageous and clearly to the benefit of individual programs currently utilizing TDA or local Measure funds to purchase vehicles. An estimated 16 vehicles are used in peak service for demand responsive services (i.e., for all services combined). Routine replacement of these vehicles in a manner that maximizes Federal funding is highly desirable.

Retirement of West Shores Dial-a-Ride

The demonstrated poor productivity and high costs of service for West Shores Dial-a-Ride points to the need for alternatives. Demand for trips may have been higher previously, but the current West Shores residents' ability to utilize dial-a-ride services sufficiently to attain minimum fare-box and passengers-per-hour markers appears to be declining. It is recommended in the short-term that this service is suspended.

Addressing Higher No-Show and Cancellation Rates for Brawley Dial-a-Ride

As noted previously in the SRTP, the Brawley Dial-a-Ride program is operating at very cost-effective levels: low cost per trip, lower cost per revenue hour and reasonable levels of productivity. However, it also reports higher-than-desirable no-show and cancellation rates, totaling 12.7 percent combined for FY 2009-10, including a 5 percent cancellation rate and a 7.7 percent no-show rate. Particularly for the no-shows, this represents resources deployed but not utilized by passengers. Reducing no-show rates as well as late cancellations will improve system productivity. A starting goal of getting the combined rate under 10 percent is a place to begin, with even lower levels of no-show and cancellation desirable in the future.

Coordinating and/or Consolidating the El Centro and Imperial Dial-a-Ride Services

As was previously mentioned, although the opportunities for the actual coordination or consolidation of services may be somewhat limited (i.e., there is limited contiguous, overlapping or clearly duplicative service, with the exception of the Imperial and El Centro Dial-a-Rides), the pursuit of a more coordinated service delivery model may likely provide
efficiencies in other aspects of the system. For example, it is likely that the coordinated dispatching of trips amongst the various dial-a-rides would provide some efficiencies, as would the coordination of various “back office” functions such as procurement, maintenance, et cetera.

Although trip consolidation may not always be possible due to the geographical separation of some of the dial-a-ride programs, consolidation of these other demand response service functions may provide other opportunities for coordination and the realization of efficiencies that are beyond these geographic service area issues.

Nonetheless, there may be some value in formally joining the El Centro and Imperial Dial-a-Ride services, as their service areas overlap and presumably efficiencies in trip scheduling can be achieved with a combined fleet. Functionally, this may already be happening to a certain extent given that both cities’ programs are operated by the same contractor. There is probably the greatest benefit to residents of Imperial, given that the cross-jurisdictional trips are most likely to be persons living in Imperial wanting to travel to and from El Centro, and possibly increasing with the almost doubling of the town’s population in the 2010 census. There is likely less demand for dial-a-ride trips in the reverse (i.e., El Centro residents wishing to travel to and from Imperial). Nonetheless, it is conceivable there could be some administrative cost-savings in operating a single program for these two communities, with proportionate shares paid by each city.

In terms of revenue hours, El Centro is operating just over twice as many hours annually (4,189 versus 1,950 for FY 2009-10) and achieving a 17 percent farebox recovery ratio. Imperial is attaining lower, but respectable, 14 percent farebox recovery ratio. Of the 34,000 one-way trips carried in FY 2009-10, almost 75 percent were made in El Centro and 25 percent originated and/or ended in the City of Imperial. Performance standards for a combined service would have to be considered, in light of historical operating experience.
5.4.2 Phase Two (2 to 5 years)
Promoting IVT Access Demand Management Strategies

The ADA paratransit program is historically the most expensive of the county’s demand response services and will be higher in the years ahead, with its new operating contract and ever increasing expectations about the delivery of Americans with Disabilities Act (ADA) complementary paratransit service. In many areas of the country, transit operators are instituting various strategies to ensure that riders use the least expensive transit service that will meet their needs. Such strategies are many; a few can include:

- Encouraging fixed-route use with free fares for ADA certified riders
- Providing travel training of various types (group, individual and passive, trip planner tools) to promote use of fixed-routes
- Promoting universal access by ensuring clear path-of-access and installing curb cuts, bus benches and other stop shelters at destinations highly used by ADA services

ICTC could encourage these and other strategies, possibly funded through New Freedom grant funding, to provide a focal point for activities geared to expanding riders’ understanding of their mobility choices and thereby offsetting increasing ADA paratransit budget requirements.
5.4.3 Future Phases/Feasibility Studies (5+ Years)

West Shores Dial-a-Ride Service Alternatives

In response to the current poor productivity and high costs of the West Shores Dial-a-Ride service, it is recommended in the short-term to terminate the service in its entirety. However, in the longer-term it may be feasible to develop a replacement for the service in the form of a mileage reimbursement program, if a local administrator can be found.

A mileage-reimbursement volunteer-driver program alternative envisions something similar to Riverside County’s TRIP - Transportation Reimbursement and Information Program and San Bernardino County’s TREP - Transportation Reimbursement Escort Program. In both counties, the programs operate with a mix of local and federal funding sources (local sales tax and LTF funds; New Freedom and Older American Act funds). The programs provide for the mileage reimbursement that is paid, in arrears, to accepted program participants. Largely for older persons and persons with disabilities, these individuals are responsible for locating their own drivers and are provided with modest funds to reimburse volunteer drivers that each participant locates for themselves. Monthly reimbursements to an individual are typically capped at $150.00 to $250.00, depending upon individual travel requirements. The mileage reimbursement rate is well below the IRS rate, between $0.25 and $0.40 cents per mile.

In San Bernardino County, the program is administered by the County’s Department of Aging and Adult Services. In Riverside County, the program is administered by a non-profit organization affiliated with and housed at the County Office on Aging. These are lifeline services with modest per-trip costs. Riverside’s TRIP program averages a little more than $5.00 per one-way passenger trip. ICTC would need to locate a partner with whom (or through whom) to operate such a program in Imperial County. These programs have been most effective when tightly connected to human service delivery systems.

In addition to the West Shores service, this concept may possibly also be pursued in the long-term future as an alternative to ICTC’s other lifeline services (Bombay Beach, Ocotillo and/or Winterhaven).

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8 Riverside County’s TRIP Program: [www.livingpartnership.org/Transportation.htm](http://www.livingpartnership.org/Transportation.htm)
5.4.4 Long-Term Transit Vision Concepts

As with long-term transit vision concepts included for the fixed routes, the following concept is intended for consideration for inclusion in a future transit vision for the county.

Examine Cost-Benefit of Consolidated Trip Scheduling Function for Demand Response Programs

Because these services are small, the consolidation of the five city and two regional services into a single dispatch center might reduce dispatcher personnel expenses. To the extent that local supervisors are still needed, there might not be savings to be realized in reducing the administrative and dispatch personnel by a centralized capability. However, it is possible that some modest savings in revenue vehicle hours could be realized through a common dispatch function. For example, where the IVT Access service could carry some non-ADA trips on a space-available basis this could both improve productivity for that program and possibly relieve capacity issues on the local dial-a-rides. Whether that also translated into decreasing vehicle revenue hours is a separate question.

To assess this further, some analysis of origin and destination addresses by time-of-day and day-of-week could inform an understanding of current trip-making and suggest the potential for cost-savings through consolidated dispatch. There are at least three software providers currently providing smaller-scale dispatch products: Trapeze, StratGen, and RouteMatch. To the extent that an appropriately-scaled system could reduce trip length by working all the dial-a-ride vehicles as one fleet, this could translate to reduced vehicle service hours and cost-savings. However, the small number of vehicles located within each community may limit the opportunities for efficiencies. Additionally, there are mixed system results reported when co-mingling ADA riders and non-ADA riders, with national research reporting that one effect is to bring all riders up to the standards of ADA services, thereby increasing system costs (i.e., as reported in TCRP Report 143 - Resource Guide for Commingling ADA and Non-ADA Paratransit Riders).
### 5.5 Capital Plan

The following is the five-year plan for ICTC’s additional capital needs given the implementation of the SRTP. This plan is broken down into fixed route and demand response capital plans; due to the nature of the recommendations, the fixed routes are divided into Phases (i.e., One, Two and Three, in line with the recommended implementation plan) and the demand response service capital needs are broken out for each year (five years).

#### 5.5.1 Fixed Routes

The fixed route capital plan includes the procurement schedule for any additional vehicles over the five-year life of the SRTP (i.e., meaning buses that would be required over- and above the current fleet replacement plans, which are presently not administered by ICTC), as well as additional capital expenditures proscribed by the SRTP that are beyond those already in earmarked or in progress. Expenditures are included for Phase One (1 to 2 years), Phase Two (2 to 3 years) and Phase Three (4 to 5 years). Once again, it should be noted that the vehicles included are for expansion of the service—the capital plan does not specify whether these will be purchased by ICTC or the contractor responsible for the operation of bus service. The fixed route capital plan is shown in Table 5-15 below.

<table>
<thead>
<tr>
<th>Capital Expense Item</th>
<th>Unit Cost</th>
<th>Phase One</th>
<th>Phase Two</th>
<th>Phase Three</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Units</td>
<td>Cost</td>
<td>Units</td>
<td>Cost</td>
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<tr>
<td>40-foot Vehicles</td>
<td>$475,000</td>
<td>-</td>
<td>$0</td>
<td>1</td>
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<tr>
<td>Small Transit Vehicles</td>
<td>$60,000</td>
<td>2</td>
<td>$120,000</td>
<td>-</td>
<td>$0</td>
</tr>
<tr>
<td>Information Cases</td>
<td>$207</td>
<td>117</td>
<td>$24,219</td>
<td>-</td>
<td>$0</td>
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<tr>
<td>Schedules</td>
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<td>117</td>
<td>$380</td>
<td>117</td>
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<tr>
<td>System Maps for Shelters</td>
<td>$22</td>
<td>41</td>
<td>$902</td>
<td>41</td>
<td>$902</td>
</tr>
<tr>
<td>Marketing Campaign and Materials (new map, schedules, etc.)</td>
<td>$10,000</td>
<td>-</td>
<td>$0</td>
<td>-</td>
<td>$0</td>
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<tr>
<td></td>
<td></td>
<td>Total</td>
<td>$145,501</td>
<td>$476,282</td>
<td>$596,282</td>
</tr>
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</table>

It should be noted that fleet ownership would have a large impact on the capital plan in the long-term. If the contractor continues to own the fleet, operating costs will continue to increase from current levels. However, if ICTC owns the fleet (and leases it to the contractor), operating costs will likely decrease while capital costs will increase. However, it should be kept in mind that different funding sources are available for operating versus capital costs.
5.5.2 Demand Response Services

As was previously mentioned, the recommendation is offered that ICTC work closely with its city partners to develop combined 5310 vehicle grant applications. The annual cycle has generally been announced in December or January for a spring application deadline, with grant development workshops held in January and February to assist prospective applicants. A combined application would save the considerable effort of preparing multiple grant applications and would likely represent a stronger, more coordinated and therefore more competitive proposal. Match requirements would have to be determined based upon Caltrans match policies for the next 5310 cycle.

Following, in Table 5-16, is the proposed capital program for the Imperial County demand response services for the next five years. The Capital Plan has been prepared to provide for adequate replacement of demand response vehicles and procurement of dispatching software and vehicle locators. Vehicle replacement pricing was based on current rates for vehicles comparable in size to those in active service. This plan replaces 21 total vehicles over the next five years, and includes a cost scenario that utilizes FTA §5310 for Elderly Persons and Persons with Disabilities transportation funding to significantly reduce capital expenditures. Dispatching software and Intelligent Transportation Systems are eligible capital expenses under FTA §5310 as stated in the Federal Register {FTA C 9070.1F Page III-5-48} and should be pursued for procurements in this plan, where appropriate within the funding limits of the grant. It should be noted that the way in which the various future scenarios described in this SRTP (e.g., additional consolidation and coordination with a private operator, more uniform reporting standards, etc.) play out, as well as any possible future changes in funding programs (e.g., the proposed federal “Senior Transportation and Mobility Improvement Act”) may alter some of these projections.

Table 5-16: Estimated SRTP Demand Response Capital Plan

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Software and Equipment</strong></td>
<td></td>
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<tr>
<td>Trapeze/ Strategem/ Routematch</td>
<td>$75,000</td>
<td>$75,000</td>
<td>$75,000</td>
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<td>Vehicle Locators</td>
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<td>$30,000</td>
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<td><strong>Vehicle Replacements</strong></td>
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<tr>
<td>IVT Access</td>
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<td>$210,000</td>
<td>$140,000</td>
<td>$560,000</td>
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<tr>
<td>Med-Express</td>
<td>$90,000</td>
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<td>$90,000</td>
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<tr>
<td>Brawley DAR</td>
<td>$270,000</td>
<td>$70,000</td>
<td>$140,000</td>
<td></td>
<td>$480,000</td>
<td>$480,000</td>
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<td>Calexico DAR</td>
<td></td>
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<td></td>
<td>$90,000</td>
<td>$90,000</td>
<td>$180,000</td>
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<tr>
<td>El Centro DAR</td>
<td>$90,000</td>
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<td></td>
<td></td>
<td></td>
<td>$180,000</td>
</tr>
<tr>
<td>Imperial DAR</td>
<td>$90,000</td>
<td>$90,000</td>
<td></td>
<td></td>
<td></td>
<td>$180,000</td>
</tr>
<tr>
<td><strong>Total Capital Cost</strong></td>
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<td>$210,000</td>
<td>$140,000</td>
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<td>$420,518</td>
<td>$61,971</td>
<td>$451,503</td>
<td>$416,091</td>
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<td>Capital Cost after FTA 5310 Contribution</td>
<td>$129,483</td>
<td>$8,029</td>
<td>$58,497</td>
<td>$53,909</td>
<td>$38,998</td>
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5.6 Financial Plan

This section includes the estimated fixed route and demand response financial operating plans, which include operating expenses reflecting the previously described service plans. The financial plan also incorporates changes in farebox revenues due to fare increases and impacts of service changes on ridership.

5.6.1 Fixed Routes

The financial plan for the fixed routes uses the operating costs included in the recommendations section of this report, which are based on FY 2010-11 hourly rates of $119.24 for regular routes and $86.25 for circulators, the most detailed figures available for this metric. Fare revenues were determined utilizing the average fare and based on ridership projections, which in turn were developed utilizing order-of-magnitude elasticity changes in route productivity based on service changes and fare increases. In addition, the average fare was increased in year one by 29.15 percent to reflect the proposed fare increase.

All projections build upon baseline costs from FY 2011-12. In contrast to the other sections of the SRTP – where costs are presented in constant current-year dollars – the costs in this fixed route financial plan are assumed to increase at a rate of approximately 1.5 percent annually.

Table 5-17 summarizes the estimated fixed route financial plan for the five years of the SRTP.

<table>
<thead>
<tr>
<th></th>
<th>Current (FY 2011-12)</th>
<th>Year One (FY 2012-13)</th>
<th>Year Two (FY 2013-14)</th>
<th>Year Three (FY 2014-15)</th>
<th>Year Four (FY 2015-16)</th>
<th>Year Five (FY 2016-17)</th>
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<td>$633,046</td>
<td>$682,826</td>
<td>$851,229</td>
<td>$851,229</td>
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<td>Subsidy Required</td>
<td>$3,479,210</td>
<td>$4,671,138</td>
<td>$4,750,700</td>
<td>$5,033,567</td>
<td>$6,043,099</td>
<td>$6,146,514</td>
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<td>$375,000</td>
<td>$375,000</td>
<td>$375,000</td>
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<td>FTA Section 5307</td>
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<td>$1,186,800</td>
<td>$1,232,800</td>
<td>$1,232,800</td>
<td>$1,280,800</td>
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<td>$1,527,662</td>
<td>$1,550,577</td>
<td>$1,573,836</td>
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<td>Total Federal, State and Local Funding</td>
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<td>$1,661,239</td>
<td>$1,875,190</td>
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*Current year operating costs based on hourly rates FY 2010-11 Transit Finance Plan; operating costs may be overstated.
5.6.2 Demand Response Services

Two service plans are presented for the operation of the existing demand-responsive programs, as currently configured. (The additional demand response costs required as a concurrent part of the anticipated weekend service expansion of the IV Transit system are presented in the subsequent section in Tables 5-23 and 5-24.)

Scenario One, presented in Table 5-18, is derived from the projected expenditures and revenues from the 2011-12 ICTC Overall Work Plan and Budget, published in July 2011. This table assumes a 1.5 percent annual increase for program cost and all revenue streams as well as retirement of the West Shores Dial-a-Ride service at the end of this fiscal year.

Scenario Two, presented in Table 5-19, is also derived from the projected expenditures and revenues from the 2011-12 ICTC Overall Work Plan and Budget, published in July 2011. This table also assumes a 1.5 percent increase in program costs and a 1.5 percent increase in FTA 5307 funding for IVT Access, and fare revenue for all systems. However, with this scenario, STA and LTA funding contributions are held steady over the course of the operating plan. Also with Scenario Two, the LTF funding assumes an increase of 1.5 percent in addition to what is needed to replace the loss of funding from holding the STA funding steady for IVT Access, and LTA funding steady for the municipal dial-a-rides. Similar to Scenario One, this scenario also assumes that the West Shores program is retired at the end of this fiscal year.
Table 5-18: Estimated Demand Response Financial Plan – Scenario One

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<td>$378,134</td>
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<tr>
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<td>$18,747</td>
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<td>West Shores DAR</td>
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Cost and revenue data for all services are derived from Table 5 of the ICTC 2011-12 Overall Work Plan and Budget.
Table 5-19: Estimated Demand Response Financial Plan – Scenario Two

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<td>$378,134</td>
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<tr>
<td>Imperial DAR</td>
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<td>$187,471</td>
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**REVENUE**

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<tbody>
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<td>$240,295</td>
<td>$234,311</td>
<td>$237,825</td>
<td>$241,393</td>
<td>$245,014</td>
<td>$248,689</td>
</tr>
<tr>
<td>Demand Response Total Revenues</td>
<td>$2,576,105</td>
<td>$2,518,855</td>
<td>$2,556,638</td>
<td>$2,594,988</td>
<td>$2,633,913</td>
<td>$2,673,421</td>
</tr>
</tbody>
</table>

Cost and revenue data for all services are derived from Table 5 of the ICTC 2011-12 Overall Work Plan and Budget.
5.7 Implementation Schedule and Impacts

This section provides a summary of the operating changes proposed in the SRTP for each phase of the five-year period as outlined in the plan, including Phases One, Two and Three for the fixed routes and Phases One and Two for the demand response services.

5.7.1 Fixed Routes

Tables 5-20 through 5-22 outline the proposals and cost impacts associated with each for Phases One, Two and Three of the fixed route plan implementation. Costs are based on FY 2010-11 operating costs and are in constant current dollars (i.e., they do not reflect cost increases due to inflation, changing fuel costs or increases in contract rates), and therefore do not exactly match the dollar values presented in Table 5-17.

<table>
<thead>
<tr>
<th>Route</th>
<th>Current Annual Operating Cost</th>
<th>Phase One Change(s)</th>
<th>Phase One Annual Cost Change</th>
<th>Phase One Annual Operating Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 1</td>
<td>$871,167</td>
<td>Expansion of Saturday service; Implementation of Sunday service</td>
<td>$241,819</td>
<td>$1,112,986</td>
</tr>
<tr>
<td>Route 2</td>
<td>$1,291,846</td>
<td>Expansion of Saturday service; Implementation of Sunday service; Realignment</td>
<td>$328,625</td>
<td>$1,620,472</td>
</tr>
<tr>
<td>Route 3</td>
<td>$335,064</td>
<td>Implement route deviation</td>
<td>$0</td>
<td>$335,064</td>
</tr>
<tr>
<td>Route 4</td>
<td>$170,632</td>
<td>Publicize route deviation</td>
<td>$0</td>
<td>$170,632</td>
</tr>
<tr>
<td>Route 21</td>
<td>$182,437</td>
<td>None</td>
<td>$0</td>
<td>$182,437</td>
</tr>
<tr>
<td>Route 22</td>
<td>$152,031</td>
<td>None</td>
<td>$0</td>
<td>$152,031</td>
</tr>
<tr>
<td>Route 32</td>
<td>$91,219</td>
<td>None</td>
<td>$0</td>
<td>$91,219</td>
</tr>
<tr>
<td>Route 33</td>
<td>$121,625</td>
<td>None</td>
<td>$0</td>
<td>$121,625</td>
</tr>
<tr>
<td>Route 34</td>
<td>$60,812</td>
<td>None</td>
<td>$0</td>
<td>$60,812</td>
</tr>
<tr>
<td>Route 40</td>
<td>$182,437</td>
<td>Introduction of Saturday service</td>
<td>$37,203</td>
<td>$219,640</td>
</tr>
<tr>
<td>Route 51</td>
<td>$0</td>
<td>None</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Route 52</td>
<td>$15,203</td>
<td>None</td>
<td>$0</td>
<td>$15,203</td>
</tr>
<tr>
<td>Blue Line</td>
<td>$285,919</td>
<td>None</td>
<td>$0</td>
<td>$285,919</td>
</tr>
<tr>
<td>Green Line</td>
<td>$285,919</td>
<td>None</td>
<td>$0</td>
<td>$285,919</td>
</tr>
<tr>
<td>Gold Line</td>
<td>$0</td>
<td>Implement weekday service</td>
<td>$285,919</td>
<td>$285,919</td>
</tr>
<tr>
<td>Red Line</td>
<td>$0</td>
<td>Implement weekday service</td>
<td>$285,919</td>
<td>$285,919</td>
</tr>
<tr>
<td>Orange Line</td>
<td>$0</td>
<td>None</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Purple Line</td>
<td>$0</td>
<td>None</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$4,046,312</strong></td>
<td></td>
<td><strong>$1,179,485</strong></td>
<td><strong>$5,225,797</strong></td>
</tr>
</tbody>
</table>
Table 5-21: Estimated Fixed Route Implementation Impacts – Phase Two

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase One Annual Operating Cost</th>
<th>Phase Two Change(s)</th>
<th>Phase Two Annual Cost Change</th>
<th>Phase Two Annual Operating Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 1</td>
<td>$1,112,986</td>
<td>None</td>
<td>$0</td>
<td>$1,112,986</td>
</tr>
<tr>
<td>Route 2</td>
<td>$1,620,472</td>
<td>None</td>
<td>$0</td>
<td>$1,620,472</td>
</tr>
<tr>
<td>Route 3</td>
<td>$335,064</td>
<td>Expansion of Saturday service</td>
<td>$31,002</td>
<td>$366,067</td>
</tr>
<tr>
<td>Route 4</td>
<td>$170,632</td>
<td>Expansion of Saturday service</td>
<td>$12,401</td>
<td>$183,033</td>
</tr>
<tr>
<td>Route 21</td>
<td>$182,437</td>
<td>Additional weekday service</td>
<td>$182,437</td>
<td>$364,874</td>
</tr>
<tr>
<td>Route 22</td>
<td>$152,031</td>
<td>None</td>
<td>$0</td>
<td>$152,031</td>
</tr>
<tr>
<td>Route 32</td>
<td>$91,219</td>
<td>None</td>
<td>$0</td>
<td>$91,219</td>
</tr>
<tr>
<td>Route 33</td>
<td>$121,625</td>
<td>None</td>
<td>$0</td>
<td>$121,625</td>
</tr>
<tr>
<td>Route 34</td>
<td>$60,812</td>
<td>None</td>
<td>$0</td>
<td>$60,812</td>
</tr>
<tr>
<td>Route 40</td>
<td>$219,640</td>
<td>None</td>
<td>$0</td>
<td>$219,640</td>
</tr>
<tr>
<td>Route 51</td>
<td>$0</td>
<td>None</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Route 52</td>
<td>$15,203</td>
<td>Bi-directional weekday service</td>
<td>$15,203</td>
<td>$30,406</td>
</tr>
<tr>
<td>Blue Line</td>
<td>$285,919</td>
<td>None</td>
<td>$0</td>
<td>$285,919</td>
</tr>
<tr>
<td>Green Line</td>
<td>$285,919</td>
<td>None</td>
<td>$0</td>
<td>$285,919</td>
</tr>
<tr>
<td>Gold Line</td>
<td>$285,919</td>
<td>None</td>
<td>$0</td>
<td>$285,919</td>
</tr>
<tr>
<td>Red Line</td>
<td>$285,919</td>
<td>None</td>
<td>$0</td>
<td>$285,919</td>
</tr>
<tr>
<td>Orange Line</td>
<td>$0</td>
<td>None</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Purple Line</td>
<td>$0</td>
<td>None</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$5,225,797</strong></td>
<td></td>
<td><strong>$241,044</strong></td>
<td><strong>$5,466,840</strong></td>
</tr>
</tbody>
</table>
### Table 5-22: Estimated Fixed Route Implementation Impacts – Phase Three

<table>
<thead>
<tr>
<th>Route</th>
<th>Phase Two Annual Operating Cost</th>
<th>Phase Three Change(s)</th>
<th>Phase Three Annual Cost Change</th>
<th>Phase Three Annual Operating Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 1</td>
<td>$1,112,986</td>
<td>Realignment</td>
<td>$0</td>
<td>$1,112,986</td>
</tr>
<tr>
<td>Route 2</td>
<td>$1,620,472</td>
<td>None</td>
<td>$0</td>
<td>$1,620,472</td>
</tr>
<tr>
<td>Route 3</td>
<td>$366,067</td>
<td>Realignment</td>
<td>$0</td>
<td>$366,067</td>
</tr>
<tr>
<td>Route 4</td>
<td>$183,033</td>
<td>None</td>
<td>$0</td>
<td>$183,033</td>
</tr>
<tr>
<td>Route 21</td>
<td>$364,874</td>
<td>None</td>
<td>$0</td>
<td>$364,874</td>
</tr>
<tr>
<td>Route 22</td>
<td>$152,031</td>
<td>None</td>
<td>$0</td>
<td>$152,031</td>
</tr>
<tr>
<td>Route 32</td>
<td>$91,219</td>
<td>None</td>
<td>$0</td>
<td>$91,219</td>
</tr>
<tr>
<td>Route 33</td>
<td>$121,625</td>
<td>None</td>
<td>$0</td>
<td>$121,625</td>
</tr>
<tr>
<td>Route 34</td>
<td>$60,812</td>
<td>None</td>
<td>$0</td>
<td>$60,812</td>
</tr>
<tr>
<td>Route 40</td>
<td>$219,640</td>
<td>None</td>
<td>$0</td>
<td>$219,640</td>
</tr>
<tr>
<td>Route 51</td>
<td>$0</td>
<td>Introduction</td>
<td>$243,250</td>
<td>$321,799</td>
</tr>
<tr>
<td>Route 52</td>
<td>$30,406</td>
<td>None</td>
<td>$0</td>
<td>$30,406</td>
</tr>
<tr>
<td>Blue Line</td>
<td>$285,919</td>
<td>60 minute headways; Introduction of Saturday service</td>
<td>$35,880</td>
<td>$321,799</td>
</tr>
<tr>
<td>Green Line</td>
<td>$285,919</td>
<td>60 minute headways; Introduction of Saturday service</td>
<td>$35,880</td>
<td>$321,799</td>
</tr>
<tr>
<td>Gold Line</td>
<td>$285,919</td>
<td>Introduction of Saturday service</td>
<td>$35,880</td>
<td>$321,799</td>
</tr>
<tr>
<td>Red Line</td>
<td>$285,919</td>
<td>Introduction of Saturday service</td>
<td>$35,880</td>
<td>$321,799</td>
</tr>
<tr>
<td>Orange Line</td>
<td>$0</td>
<td>Introduction of weekday and Saturday service</td>
<td>$321,799</td>
<td>$321,799</td>
</tr>
<tr>
<td>Purple Line</td>
<td>$0</td>
<td>Introduction of weekday and Saturday service</td>
<td>$321,799</td>
<td>$321,799</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$5,466,840</strong></td>
<td></td>
<td><strong>$1,030,367</strong></td>
<td><strong>$6,497,208</strong></td>
</tr>
</tbody>
</table>
5.7.2 Demand Response Services

The following activities are recommended for each phase in terms of the demand response services:

**Phase One (1 to 2 years)**

- Expansion of IVT Access weekend service
- Retire West Shores Dial-a-Ride
- Convene city working group to discuss common performance standards
- Implement revised performance standards for demand response services in concert with next contract cycles
- Add penalty and incentive clauses to demand response contracts in next contract cycles
- Provide improved public information and communication of common service policies
- Implement countywide program for demand response vehicle procurement
- Address high no-show and cancellation rates for Brawley Dial-a-Ride in conjunction with implementation of Gold Line circulator service in Brawley
- Monitor New Freedom grant opportunities to initiate IVT Access demand management strategies
- Complete further analysis of trip-making activity to determine cost-benefit of consolidated dispatch function
- Coordinate and/or consolidate El Centro and Imperial Dial-a-Rides in conjunction with implementation of Red Line Circulator and Purple Line Connector

**Phase Two (3 to 5 years)**

- Promote IVT Access demand management strategies

Tables 5-23 and 5-24, in accordance with ADA regulations, outlines the cost impacts to the IVT Access service as a result of the recommended service changes and expansion by phase to the IV Transit fixed-route system. (As in the previous section, Scenario One assumes a 1.5 percent annual increase for program cost and all revenue streams, while with Scenario Two STA and LTA funding contributions are held steady over the course of the operating plan. Also with Scenario Two, the LTF funding assumes an increase of 1.5 percent in addition to what is needed to replace the loss of funding from holding the STA funding steady for IVT Access, and LTA funding steady for the municipal dial- a-rides.)

The cost change of $164,508 in FY 2012-13 is based on the number of increased revenue hours associated with the proposed service changes and expansions multiplied by the revenue cost per hour. This calculation uses $82.09 as the average revenue cost per hour based upon the first five months of operations in FY 2011-12.

The recommended system changes represent an increase of 520 annual service hours to accommodate the early morning and late night expansion of Saturday service and 1,484 annual...
service hours for implementation of Sunday service. This assumes 10 additional revenue hours for expanded Saturday service hours and 28 revenue hours per day for new Sunday service.

The annual operating cost base year figures are derived from the FY 2011-12 Overall Workplan IVT Access budget of $1,175,994. Each year's annual operating cost is increased by 1.5 percent to accommodate inflation plus the impact of the phase one recommended system changes.

Table 5-23: Demand Response Implementation Impacts, Scenario 1

<table>
<thead>
<tr>
<th>Recommended Phase</th>
<th>Fiscal Year</th>
<th>Annual Operating Cost (Base)</th>
<th>System Change(s)</th>
<th>Cost Change</th>
<th>Operating Cost (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVT Access Phase One</td>
<td>FY 2012-13</td>
<td>$1,193,634</td>
<td>Expansion of Saturday service hours in Primary Corridor; Implementation of Sunday Service</td>
<td>$164,508</td>
<td>$1,358,142</td>
</tr>
<tr>
<td>IVT Access Phase Two</td>
<td>FY 2014-15</td>
<td>$1,378,514</td>
<td>Expansion of Saturday service in Secondary Service Zone; No impact to ADA service</td>
<td>$0</td>
<td>$1,378,514</td>
</tr>
<tr>
<td>IVT Access Phase Three</td>
<td>FY 2016-17</td>
<td>$1,441,483</td>
<td>Realignment of the fixed-route town circulators; No impact to ADA service</td>
<td>$0</td>
<td>$1,441,483</td>
</tr>
</tbody>
</table>

Table 5-24: Demand Response Implementation Impacts, Scenario 2

<table>
<thead>
<tr>
<th>Recommended Phase</th>
<th>Fiscal Year</th>
<th>Annual Operating Cost (Base)</th>
<th>System Change(s)</th>
<th>Cost Change</th>
<th>Operating Cost (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVT Access Phase One</td>
<td>FY 2012-13</td>
<td>$1,193,634</td>
<td>Expansion of Saturday service hours in Primary Corridor; Implementation of Sunday Service</td>
<td>$164,508</td>
<td>$1,358,142</td>
</tr>
<tr>
<td>IVT Access Phase Two</td>
<td>FY 2014-15</td>
<td>$1,399,192</td>
<td>Expansion of Saturday service in Secondary Service Zone; No impact to ADA service</td>
<td>$0</td>
<td>$1,399,192</td>
</tr>
<tr>
<td>IVT Access Phase Three</td>
<td>FY 2016-17</td>
<td>$1,441,483</td>
<td>Realignment of the fixed-route town circulators; No impact to ADA service</td>
<td>$0</td>
<td>$1,441,483</td>
</tr>
</tbody>
</table>
APPENDIX A: STAKEHOLDER INTERVIEWS, DISCUSSION QUESTIONS AND KEY POINTS

Discussion Questions

- What do you think of ICTC service?
- What are your opinions of ICTC buses and other vehicles?
- What are your views of ICTC management and marketing?
- What is the image of ICTC within Imperial County?
- Do the various transit services (Imperial Valley Transit, dial-a-ride services, and other transit service) interface well?
- What do you think the role of public transportation should be in Imperial County?
- Are there any public transportation needs or issues that you would like us to take a closer look at?
- What are the strengths and weaknesses of public transportation in Imperial County?
- Is there anything else you would like the project team to keep in mind as we move forward?

Key Comments Made

- Passengers generally seem to be happy with service, but would like to see more routes
- Some passengers have expressed an interest in a monthly pass
- The on-board perception to passengers of efficiency might be improved by assigning one driver to each route (rather than having drivers change buses mid-route)
- Some members of the public have indicated that they are confused about ICTC service options (fixed-route buses, dial-a-rides, etc.)
- There is a need for Sunday service, but noted that increasing frequency of Monday through Saturday service is also important
- Bus stops should be better maintained (mentioned specifically were those in downtown El Centro)
- ICTC is doing a good job with service, particularly in light of budget constraints
- People are looking for transit options to replace commuting by car because of gas prices, so can ICTC focus on both transit-dependent and choice riders?
- More information is needed on bus schedules, fares, and how to use the system
- Bus stops need more shade, water, benches, and information on service
- Can IVT, Numero Uno, and Calexico Transit coordinate schedules and arrange for transfers between systems?
- Many patients of medical facilities depend heavily on public transportation, especially dial-a-ride
  - Some patients tell health care providers that they can’t make appointments on certain days at certain times because of lack of transit service (especially North County residents); however, this may be a result of lack of understanding about the system and transportation options
The Imperial County Transportation Commission (ICTC) FY 2010–2011 Short Range Transit Plan

- Students want more express routes to Imperial Valley College
- There is a need for a route between Imperial Valley College and San Diego State Calexico campus to support coordinated 4-year program scheduled to launch in 2012
- Many questions were raised by stakeholders regarding how dial-a-rides work and how to determine one's eligibility
- Some stakeholders mentioned that a comprehensive information source for all public transportation options within Imperial County would be helpful
  - Examples raised included a centralized website and a “frequently asked questions document” that could be posted in public locations, such as medical facilities, libraries, colleges, etc.
- Need to be able to schedule same day pick-ups and drop-offs for medical facility patients
- Patients ask hospital staff when and where the bus stops and some hospital staff don’t have the information the patient needs
- Bus schedules (and stop times) should be posted at bus stops
- How does one qualify for senior discount?
- How does one qualify for disability discount?
- Many passengers would like an express line from El Centro to Imperial Valley College
- Buses get hot and crowded in summer
- Health care providers need specific information regarding how to use system that they can provide to their patients
  - Once patients start using the system they get comfortable quickly, but often medical facility personnel does not have adequate information to provide guidance to patients
- Need a hotline number for people to call with questions about how to use the system
- Need better coordination between services (dial-a-ride, fixed route buses, etc.)
- Elderly/disabled can’t walk 3-4 blocks between bus stop and their destination
- Need service to get discharged patients home in a timely manner (often, patients that get discharged in the middle of the day have to wait several hours for family members to be able to pick them up)
  - 24-hour on-call van
  - Consider cost-sharing between medical facilities and ICTC
- “Bus Books” need to be in more places so that it is easier for the public to get them
- ICTC’s image could be improved through more education/marketing regarding the benefits of public transportation, transportation options and service information
  - Currently, it seems that system is largely used by transit-dependent; additional marketing/education could bring in more choice riders
- Consider a carpool program with Yuma to serve commuting population
- Consider vanpools to serve large employers
- Is dial-a-ride open to the general public?
- Consider large “snowbird” population in planning
- Can temporary winter residents in recreational vehicle parks and mobile home parks use public transportation to access services, such as grocery stores, etc.?
- Does ICTC work with planning department to make sure transit is considered in approving new development?
  - Better coordination is needed between planning departments and ICTC
  - When new development is approved, consider how many vehicles it will bring and how to promote public transportation
- ICTC should coordinate with Yuma Metropolitan Planning Organization
- Buses should run later, especially in the summer when it is too hot to do much during the day
- Many public transportation users come from Mexicali so resources are spread thin
- Passengers appreciate increase in bus frequency
- Buses need more bike racks
- Buses need more wheelchair spots
  - Sometimes wheelchair users have to wait for the next bus because the wheelchair spots are occupied
APPENDIX B: BUS STOP WORKSHOPS, DISCUSSION QUESTIONS AND KEY POINTS

Discussion Questions

- What aspects of bus service are working well?
- How could bus service be improved?
- Are there service issues that need a closer look? (e.g., senior service, disabled service, transportation to evening or weekend work shifts)
  - Does bus service start early enough in the morning for you and run late enough into the evening?
  - Does weekend service work out ok for you?
  - Can you get everywhere you’d like to go on the bus?
  - Do you make your connections ok?

Key Comments Made

- Overall, service functions very well and riders are happy; some riders see need for more frequent and/or timely service
- Interest in “express” or “direct” service on some routes
  - Calexico – El Centro
  - Calexico – Brawley
  - Calexico – Imperial Valley College
- Many people would like to see Sunday service and/or more Saturday service
- Need for fare/route/schedule information at bus stops and Bus Book could be easier to read
- Buses that do not run on-time (early or late) inconvenience people that need to make it to/from work or school or medical appointments
- Need for more buses serving IVC, particularly to/from Calexico
  - Sometimes morning buses are so full they have to pass up passengers waiting at stops
  - Most buses are on-time, but buses to/from IVC tend to be late
  - Some would like to see more buses that line up better with class start and end times
- Some trips between cities take too long because buses route through neighborhoods before heading to next city on route
- Some would like to see cleaner bus stops with benches and more shade
- Many people are happy with route coverage in general, but would like to see more frequent service
About AECOM

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VI. ACTION CALENDAR

B. CONGESTION MITIGATION & AIR QUALITY PROGRAM (CMAQ) CALL FOR PROJECTS, FY 2012-13 TO FY 2015-16
February 15, 2012

Sedalia Sanders, Chairperson
Imperial County Transportation Commission
1405 N. Imperial Ave Suite 1
El Centro, CA 92243

SUBJECT: Congestion Mitigation and Air Quality (CMAQ) Call for Projects
FY 2012-13 to FY 2015-16

Dear Commission Members:

ICTC staff were notified of Congestion Mitigation and Air Quality (CMAQ) funding revenue estimates by staff at the Southern California Association of Governments (SCAG). A review of our currently programmed projects, against the revenue estimates indicates that CMAQ funding is anticipated to be available for the region.

Approximately $7.3 million may be available over a four year period. There has not been any federal legislation to date that apportions this funding; however SCAG staff has recommended that the subregions proceed with a call for projects in anticipation of future funding legislation.

Therefore, ICTC staff recommends that a competitive call for projects be conducted for member agencies under the local program guidelines approved by ICTC and used previously in 2005 and 2008. The attachment summarizes the revenue estimates, the eligibility criteria under the CMAQ program, the proposed schedule, the selection criteria and a draft application.

ICTC staff met with the ICTC Technical Advisory Committee on January 26, 2012. The TAC’s recommendation is to proceed with a Call for Projects, using the local program guidelines utilized previously and listing the open and closing dates of February 27th through April 13th, 2012.

The Technical Advisory Committee and ICTC Management Committee forward this item to the ICTC Commission for review and approval:

1. Direct staff to open a competitive call for projects for member agencies for estimated RSTP funds, effective February 27th, 2011 through April 13th, 2012.
2. Direct staff to convene an evaluation committee to score and rank the projects

3. Direct staff to return with a list of recommended projects for approval

Sincerely yours,

MARK BAZA
Executive Director

BY: [Signature]

Kathi Williams
Senior Transit Planner

Attachment

MB/ksw/ds
Congestion Mitigation & Air Quality (CMAQ) Program

SAFETEA-LU
CALL FOR PROJECTS
APPLICATION PACKET

JANUARY 2012 Call For Projects - DRAFT
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The purpose of the Congestion Mitigation and Air Quality (CMAQ) program is to fund transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards (NAAQS). Funding can be expended on projects to reduce ozone precursor emissions (including nitrogen oxides (NOx) and volatile organic compounds (VOC)), carbon monoxide (CO), and particulate matter (PM) emissions.

In 1990, Congress amended the Clean Air Act (CAA) to accelerate efforts to attain the NAAQS. The amendments required further reductions in the amount of permissible tailpipe emissions, initiated more stringent control measures in nonattainment areas, and provided for a stronger linkage between transportation and air quality planning. In 1991, Congress adopted the Intermodel Surface Transportation Efficiency Act (ISTEA). This law authorized the CMAQ program to provide funding for surface transportation and related projects that contribute to air quality improvements and congestion mitigation. The CAA amendments, ISTEA and the CMAQ program were intended to focus transportation planning toward a more inclusive, environmentally-sensitive, and multimodal approach to addressing transportation problems.

The CMAQ Program enable communities to increase public awareness regarding the link between transportation and air quality, fund technological application to improve transportation systems, or increase transit services, as a few examples. Most of the CMAQ project categories include a wide variety of measures to decrease vehicle emissions. Policy considerations exclude highway maintenance and reconstruction projects because these activities preserve existing levels of service and are unlikely to contribute to further improvements in air quality.

Overview

ICTC, acting in its role as the Regional Transportation Planning Agency (RTPA), in the process of programming the future federal transportation revenues that will come to the ICTC Region. CMAQ funds are reimbursable federal aid funds, subject to the requirements of Title 23, United States code. Eligible costs for funds include preliminary engineering, right-of-way acquisition, capital code, and constructions costs association with an eligible activity.

Once projects have been approved by the ICTC, they must be included in the Federal Transportation Improvement Program (FTIP) prior to reimbursement of federal funding. Due to the time and effort required to process federal-aid funds, these projects should be included in the FTIP in a timely manner in order to ensure sufficient time for project delivery.

**Tentative Timeline**

The tentative schedule for the “Call for Projects” and related Federal Transportation Improvement Programming and Air Quality Conformity Determination processes are as follows.

- **January 26, 2012**  Technical Advisory Committee recommendation of CMAQ Program
- **February 22, 2012** ICTC Commission approval of CMAQ Cycle Program
- **February 27, 2012**  “Call for Projects” Process Begins
- **April 13, 2012**  **Project submittals due**
- **April 16, 2012**  CMAQ Scoring Committee
- **April 26, 2012**  Scored Projects Presented to TAC.
- **May 9, 2012**  Management Committee Project Approvals and Recommendation
- **May 23, 2012**  Imperial County Transportation Commission Project Approvals
- **June 5, 2012**  Submittal of Projects to SCAG, Caltrans and FHWA
SAFETEA-LU Interim Guidance

In addition to the current eligibility and CMAQ guidance, SAFETEA-LU included provisions for CMAQ eligible projects. The following is from FHWA “Interim Guidance on SAFETEA-LU Provisions that Affect Planning, Environment, and Air Quality” dated September 2, 2005:

Section 1808 – Addition to CMAQ-Eligible Projects

- Provides continued eligibility to use CMAQ funds in former one-hour ozone areas which are required to prepare maintenance plans.
- Reinforces the eligibility of projects that contribute to attainment or maintenance.
- Specifies the eligibility of advanced truck stop electrification, interoperable emergency communications equipment, and transportation systems management and operations projects that mitigate congestion and improve air quality.
- Calls for priority to be given to funding diesel retrofit projects and other cost-effective CMAQ strategies that improve air quality.
ELIGIBLE PROJECTS

The guidance for project eligibility is currently based on FHWA memo “Guidance on the Congestion Mitigation and Air Quality Improvements (CMAQ) Program under the Transportation Equity Act of the 21st Century (TEA – 21)" dated April 28, 1999. The following is a summary of that guidance.

All projects and programs eligible for CMAQ funds must come from a conforming transportation plan and TIP, and be consistent with the conformity provisions contained in section 176(C) of the Clear Air Act (CAA) and the Transportation Conformity Rule. Projects need to be included in TIPs or state-wide transportation improvement projects developed by MPOs or States respectively, under the metropolitan or statewide planning regulations. Projects also need to complete the National Environmental Policy Act (NEPA) requirements and meet basic eligibility requirements for funding under titles 23 and 49 of the United States Code.

In cases where specific guidance is not provided, the following should guide CMAQ eligibility decisions.

**Capital Investment:** CMAQ funds should be used for establishment of new or expanded transportation projects and programs to help reduce emissions. In many cases this is likely to be capital investment in transportation infrastructure or establishment of a new demand management strategy or other program.

**Operating Assistance:** There are several general conditions which must be met in order for any type of operating assistance to be eligible under the CMAQ program.

- In extending the use of CMAQ funds to operating assistance, the intent is to help start up viable new transportation services which can demonstrate air quality benefits and eventually will be able to cover their costs to the maximum extent possible. Other established funding sources should supplement and ultimately supplant the use of CMAQ funds for operating assistance.
- Operating assistance includes all costs related to ongoing provision of new transportation services including, but not limited to, labor, administrative costs and maintenance.
- When using CMAQ funds for operating assistance, local share requirements still apply.
- Operating assistance is limited to new transit services and new or expanded transportation demand management strategies.
- Operating assistance under the CMAQ program is limited to 3 years, except as noted elsewhere in this guidance.

**Emission Reductions:** Projects funded under the CMAQ program must be expected to result in tangible reductions in CO, ozone precursor emissions, or PM-10 pollution. This can be demonstrated by the assessment of anticipated emission reductions that is required under this guidance for most projects. The FHWA and FTA strongly encourage State and local governments to use CMAQ funds for their primary purpose which is to assist nonattainment and maintenance areas to reduce transportation-related emissions.

**Public Good:** CMAQ funded projects should be for the good of the general public.

**Eligible Activities and Projects**

Eligibility information on activities and projects and program areas is provided below, together with any restrictions. All possible requests for CMAQ funding are not covered; this section provides particular cases where guidance can be given and rules of thumb applied to assist decisions regarding CMAQ eligibility.
1. **Transportation Activities in an Approved SIP or Maintenance Plan**

Transportation activities in approved SIPs and maintenance plans are likely to be eligible activities and, if so, must be given the highest priority for CMAQ funding. Their air quality benefits will generally have already been documented. If not, such documentation is necessary before CMAQ funding can be approved. Further, the transportation improvement must contribute to the specific emission reductions necessary to bring the area into attainment.

2. **TCMs (Transportation Control Measures)**

The TCMs included in 42 U.S.C. §7408(f)(1) are the kinds of projects intended by the TEA-21 for CMAQ funding, and generally satisfy the eligibility criteria. As above, and consistent with the statute, air quality benefits for TCMs must be determined and documented before a project can be considered eligible. One CAA TCM, xvi - programs to encourage removal of pre-1980 vehicles, is specifically excluded from the CMAQ program by the TEA-21 legislation. Eligible TCMs are listed below as they appear in 42 U.S.C. §7408 (f)(1).

1. Programs for improved public transit
2. Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or HOV
3. Employer-based transportation management plans, including incentives
4. Trip-reduction ordinances
5. Traffic flow improvement programs that achieve emission reductions
6. Fringe and transportation corridor parking facilities serving multiple-occupancy vehicle programs or transit service
7. Programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use
8. Programs for the provision of all forms of high-occupancy, shared-ride services
9. Programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place
10. Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas
11. Programs to control extended idling of vehicles
12. Reducing emissions from extreme cold-start conditions (newly eligible)
13. Employer-sponsored programs to permit flexible work schedules
14. Programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for SOV travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity
15. Programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior
16. Programs to encourage remove of pre-1980 vehicles (EXCLUDED FROM ELIGIBILITY)

3. **Alternative Fuels**

The purchase of publicly-owned, alternative fuel vehicles is eligible for CMAQ funding. Since all alternative fueled vehicles are not necessarily good for air quality, proposals for alternative fuel conversion should be coordinated with the State air agency and be aimed primarily at air quality improvement. As with all CMAQ proposals, it must be demonstrated that the proposed switch to alternative fuels is effective in reducing the specific pollutant(s) causing the air quality violation.

Fleet conversions no longer need to be specifically identified or included in the SIP or maintenance plan in order to be eligible for CMAQ funding. Consideration of such projects should be coordinated with air quality agencies prior to selection for funding under the CMAQ program. This coordination will ensure that such projects are consistent with SIP strategies to attain the NAAQS or in maintenance plans to ensure
continued maintenance of the NAAQS. The establishment of publicly-owned, on-site fueling facilities and other infrastructure needed to fuel alternative-fuel vehicles are also eligible expenses. If privately-owned fueling stations are in place and are reasonably accessible and convenient, then CMAQ funds may not be used to construct or operate publicly-owned fueling stations except under a public-private partnership. Such an activity would interfere with private enterprise, and needlessly use transportation/air quality funds for services duplicated in the area.

3. Traffic Flow Improvements

The metropolitan planning provisions of TEA-21 (23 U.S.C. §134(i)(3) and 49 U.S.C. §5305) require that the metropolitan planning process in all Transportation Management Areas (metropolitan areas of 200,000 or more in population) include a congestion management system.

Projects to develop, establish, and implement the congestion management system for both highway and transit facilities, whether under the provisions of 23 U.S.C. §134 or under a State's own procedures, remain eligible for CMAQ funds where it can be demonstrated that such use is likely to reduce transportation-related emissions.

In addition to traffic signal modernization, coordination, or synchronization projects designed to improve traffic flow within a corridor or throughout an area like a central business district, Intelligent Transportation Systems (ITS), traffic management and traveler information systems can be effective in reducing traffic congestion, enhancing transit bus performance and improving air quality. The following have the greatest potential for improving air quality:

- Regional multi-modal traveler information systems
- Traffic signal control systems
- Freeway management systems
- Transit management systems
- Incident management programs
- Electronic fare payment systems
- Electronic toll collection systems

While interconnected traffic signal control systems and freeway management systems have been recognized for their air quality improvement benefits, other user services like electronic fare and toll collection systems can be useful in reducing or eliminating air quality "hot spots". Individually, these core infrastructure elements can reduce emissions and therefore qualify for CMAQ funding. However, when linked together in a system, their benefits are likely to be greater.

Agencies seeking to implement ITS projects must demonstrate consistency with the National ITS Architecture. This is address in separate guidance. Operating expenses for traffic flow improvements are eligible for CMAQ funding where they can be shown to: 1) have air quality benefits, 2) the expenses are incurred from new or additional services, and 3) previous funding mechanisms, such as fares or fees for services, are not displaced.

Since CMAQ-funded projects should contribute to the attainment or maintenance of a NAAQS, it must be found that these operating costs are necessary for the overall system to contribute to attainment or maintenance of an ambient air quality standard. It is reasonable to assume that, after several years, a transportation service may no longer be considered to be an air quality improvement project, but that it has become a part of the existing transportation network. Hence, FHWA and FTA field offices are advised to use the consultation process with EPA to make a determination that operating assistance for traffic management systems, traveler information systems and other ITS projects or programs, beyond the initial 3-year period of eligibility, will assist in the attainment or maintenance of an air quality standard (also see operating assistance eligibility discussion earlier in this guidance).

4. Transit Projects

Improved public transit is one of the TCMs identified in section 108(f)(1)(A) of the CAA. However, not all transit improvements are eligible under the CMAQ program. The general guideline for determining
eligibility is whether an increase in transit ridership can reasonably be expected to result from the project. As with all CMAQ-funded projects, this must be supported by a quantified estimate of the emissions effects due to the project.

**Facilities:** New transit facilities are eligible if they are associated with new or enhanced mass transit service. If the project is rehabilitation, reconstruction, or maintenance of an existing facility, it is not eligible since there would be no change in emissions caused by the project. Other FTA grant programs can be used for upgrading existing facilities.

**Vehicles:** Acquisition of new transit vehicles (bus, rail, van) to expand the fleet are eligible. New vehicles acquired as replacements for existing fleet vehicles are also eligible; however, diesel-powered replacement vehicles will have minimal impact on attaining the ozone, PM, and CO standards. For these projects in particular, emissions effects must be documented so that they can be arrayed with other CMAQ proposals and allow informed decisions on the best use of available funds.

**Operating Assistance:** CMAQ funding can be used to support the start-up of new transit services. In order to be eligible, the service must be a discrete new addition to the system so that operating costs can be easily identified. Operating assistance is for a maximum of 3 years, after which other sources of funding must be used if the service is to be continued.

**Fare subsidies:** CMAQ funds may be used to subsidize regular transit fares, but only if the reduced or free fare is part of an overall program for preventing exceedances of a national air quality standard during periods of high pollutant levels. Examples include metropolitan areas that have implemented voluntary mobile source emission reduction programs which promote a range of measures individuals can take to reduce ozone-forming emissions. “Ozone-action” programs, designed to avoid exceedances when ozone concentrations are high, are bolstered by more permanent measures aimed at discouraging SOV driving. Refer to section 12 for additional discussion of fare/fee subsidies.

5. **Bicycle and Pedestrian Facilities and Programs**

Bicycle and pedestrian facilities and programs are included as a TCM in section 108(f)(1)(A) of the CAA. Included as eligible projects are:
- Construction of bicycle and pedestrian facilities;
- Non-construction projects related to safe bicycle use; and
- Establishment and funding of State bicycle/pedestrian coordinator positions, as established in the ISTEA, for promoting and facilitating the increased use of nonmotorized modes of transportation. This includes public education, promotional, and safety programs for using such facilities.

6. **Travel Demand Management**

Travel demand management encompasses a diverse set of activities ranging from traditional carpool and vanpool programs to more innovative parking management and road pricing measures. Many of these measures are specifically referenced in the legislation creating the CMAQ program. Travel demand management projects meeting the basic eligibility requirements of the FHWA and FTA funding programs are eligible for CMAQ funding. Eligible activities include: market research and planning in support of travel demand management (TDM) implementation; traffic calming measures; capital expenses required to implement TDM measures; operating assistance to administer and manage TDM programs for up to 3 years; as well as marketing and public education efforts to support and bolster TDM measures.

Experience to date suggests that new transportation service has the greatest chance of success if offered along with complementary measures which discourage SOV use, such as parking restrictions or differential parking fees. Several provisions in TEA-21 require metropolitan areas to consider TDM measures in the planning process and this guidance seeks to encourage their development and implementation.
With respect to traffic calming measures, such projects should be examined on a case-by-case basis to assess eligibility. Not all traffic calming measures will lead to reduced emissions and States and MPOs should analyze these projects in the local context in which they would be implemented.

7. Outreach and Rideshare Activities

Outreach activities, such as public education on transportation and air quality, advertising of transportation alternatives to SOV travel, and technical assistance to employers or other outreach activities relating to promoting non-SOV travel options have been, and continue to be, eligible for CMAQ funds. Such outreach activities may be funded under the CMAQ program for an indefinite period. Outreach activities differ fundamentally from the establishment of transportation services. They are communication services that are critical to successful implementation of transportation measures and may equally affect new and existing transit, shared ride, I/M, traffic management and control, bicycle and pedestrian, and other transportation services. As such, they are intended to continue reaching new audiences each time they are implemented, and restrictions on the length of time they may be funded seems contrary to one of the program's goals of effecting behavioral changes to reduce transportation emissions.

Marketing Programs: Marketing programs to increase use of transportation alternatives to SOV travel and public education campaigns involving the linkage between transportation and air quality are eligible operating expenses. Transit "stores" selling fare media and dispensing route and schedule information which occupy leased space are also eligible. In addition, programs to promote the recently enacted Tax Code10 change related to commute benefits are eligible for CMAQ funding.

Carpooling and Vanpooling: Carpool and vanpool programs include computer matching of individuals seeking to carpool and employer outreach to establish rideshare programs and meet CAA requirements. These activities, even if they are part of an existing rideshare program, are eligible for CMAQ funding. New or expanded rideshare programs, such as new locations for matching services, upgrades for computer matching software, etc. are also eligible and may be funded for an indefinite period of time for both carpool and vanpool services.

The implementation of a vanpool operation entails purchasing or leasing vehicles and providing a transportation service. Therefore, proposals for vanpool activities such as these must be for new or expanded service to be eligible and are subject to the 3-year limitation on operating costs.

Under the CMAQ program, the purchase price of a publicly-owned vehicle for a vanpool service does not have to be paid back to the Federal Government. Requiring payback would place an additional constraint to wider implementation and usage of vanpool programs. Nonetheless, CMAQ funds should not be used to buy or lease vans that would be in direct competition with and impede private sector initiatives. Consistent with the statewide and metropolitan planning regulation, States and MPOs should consult with the private sector prior to using CMAQ funds to purchase vans, and if local private firms have definite plans to provide adequate vanpool service, CMAQ funds should not be used to supplant that service.

Transportation Management Associations: Transportation Management Associations (TMAs) are comprised of groups of individuals, firms or employers who organize to address the transportation issues in their immediate locale. The CMAQ funds may be used for the establishment of TMAs provided that the TMA performs a specified purpose in the project agreement that will be part of any air quality improvement strategy. The TMAs can play a useful role in brokering transportation services to private employers, and CMAQ funds may be used to contract with TMAs for this purpose. Eligible costs include coordinating and marketing rideshare programs, providing shuttle services, developing parking management programs, etc. Eligible expenses for reimbursement of associated TMA start-up costs are limited to 3 years.

8. Telecommuting

The DOT supports the establishment of telecommuting programs. Planning, technical and feasibility studies, training, coordination, marketing and promotion are eligible activities under CMAQ. Physical
establishment or construction of telecommuting centers, computer and office equipment purchases and related activities are not eligible.

9. Fare/Fee Subsidy Programs

The CMAQ program allows funding for user fare or fee subsidies in order to encourage greater use of alternative travel modes (e.g., carpool, vanpool, transit, bicycling and walking). This policy has been established to encourage areas to take a more comprehensive approach— including both supply and demand measures—in reducing transportation emissions.

Transit Services: CMAQ funds can be used to subsidize transit fares only if the reduced fare is offered as a component of a comprehensive, targeted program to reduce SOV use during episodes of high pollutant concentrations. (Also see Transit Project eligibility section.)

Other Demand Management Strategies: CMAQ funds can be used to subsidize fares or fees for vanpools, shuttle services, flat-fare taxi programs and other demand management strategies. Examples of how the fare/fee subsidy might be used include: a program subsidizing empty seats during the formation of a new vanpool; reduced fares for shuttle services within a defined area, such as a flat-fare taxi program; or providing financial incentives for carpooling, bicycling, and walking in conjunction with a commuter choice or other program such as those described under Outreach and Rideshare Activities above. Other components of fare/fee subsidy programs include public information and marketing of non-SOV alternatives, parking management measures, employer-based commuter choice programs, and better coordination of existing transportation services. Fare/fee subsidies under the CMAQ program are intended as short-term incentives. As with operating assistance, there is a maximum 3-year time limit.

10. Intermodal Freight

The CMAQ funds have been, and continue to be, used for improved intermodal freight facilities where air quality benefits can be shown. Capital improvements as well as operating assistance meeting the conditions of this guidance are eligible.

11. Planning and Project Development Activities

Project development activities that lead to construction of facilities or new services and programs with air quality benefits, such as preliminary engineering or project planning studies are eligible. This includes studies for the preparation of environmental or NEPA documents and related transportation/air quality project development activities. Project development studies directly related to a TCM are also eligible. In the event that air quality monitoring is necessary to determine the air quality impacts of a proposed project which is eligible for CMAQ funding, the costs of that monitoring are also eligible. As is the case with all CMAQ funded activities, all projects proposed for funding must be included in the MPO Plan and TIP and must meet the metropolitan planning requirements.

General planning activities, such as economic or demographic studies, that do not directly propose or support a transportation/air quality project or are too far removed from project development to ensure any emission reductions are not eligible for funding. Funding for preparation of NEPA or other environmental documents that are not related to a transportation project to improve air quality is also ineligible. Such activities should be funded with other appropriate title 23 or title 49 FTA funds.

Region- or area-wide air quality monitoring is not eligible because such projects do not themselves yield air quality improvements nor do they lead directly to projects that would yield air quality benefits. Air quality monitoring is normally a State air quality agency responsibility which is funded under section 105 of the CAA. If the MPO or State chooses, air quality monitoring could also be funded as a transportation planning activity and appropriate title 23 funds used.

12. I/M Eligibility

Emission I/M programs and related activities show strong potential for improving air quality and are cost-effective uses of CMAQ funds. Recognizing this, construction of facilities and purchase of equipment for
I/M stations are eligible for CMAQ funds. Projects necessary for the development of these I/M programs and one-time start-up activities, such as updating quality assurance software or developing a mechanic training curriculum, are also eligible activities. Operating expenses are eligible for CMAQ funding subject to the general conditions applying to all new transportation services. Specifically, the I/M program must constitute new or additional efforts; existing funding (including inspection fees) should not be displaced, and operating expenses are only eligible for 3 years. Funds under the CMAQ program may be used for the establishment of I/M programs at publicly-owned I/M facilities. Publicly-owned I/M facilities may be constructed, equipment may be purchased, and the facility operated for up to 3 years with CMAQ funds, provided that the conditions covering operations described above are met.

The establishment of I/M programs at privately-owned stations, such as service stations that own the equipment and conduct emission test-and-repair services, can only be funded under the CMAQ program under the provisions covering "public-private partnerships" contained in this guidance. However, if the State relies on private stations, State or local administrative costs for the planning and promotion of the State's I/M program may be funded under the CMAQ program.

The establishment of "portable" I/M programs is also eligible under the CMAQ program, provided that they are public services, contribute to emission reductions and do not conflict with statutory I/M requirements or EPA implementing regulations. Like all CMAQ-funded projects, these programs must meet any relevant NEPA requirements and must be included in the area's plan and TIP before they can be funded.

13. Magnetic Levitation Transportation Technology Deployment Programs

CMAQ funds may be used to fund a portion of the full project costs (including planning, engineering, and construction) pursuant to section 1218 - Magnetic Levitation Transportation Technology Deployment Program of TEA-21 and in accordance with the provisions of section 1218.

14. Experimental Pilot Projects

States and local areas have long experimented with various types of transportation services--and different means of employing them--in an effort to better meet the travel needs of their constituents. These "experimental" projects may not meet the precise eligibility criteria for Federal and State funding programs, but they may show promise in meeting the intended public purpose of those programs in an innovative way. The FHWA and FTA have supported this approach in the past and funded some of these projects as demonstrations to determine their benefits and costs.

The CMAQ provisions of TEA-21 allow experimentation provided that the project or program can reasonably be defined as a "transportation" project and that emission reductions can reasonably be expected "through reductions in vehicle miles traveled (VMT), fuel consumption or through other factors." This guidance encourages States and MPOs to creatively address their transportation/air quality problems and to experiment with new services, innovative financing arrangements, public-private partnerships and complementary approaches that constitute comprehensive strategies to reduce emissions through transportation programs. The CMAQ program can be used to support a well conceived project even if the proposal may not otherwise meet the eligibility criteria of this guidance. Proposals submitted for funding under this provision should show promise in reducing transportation emissions in nonattainment or maintenance areas and should have the concurrence of the MPO, State transportation agency and the FHWA/FTA. Such proposals must also be coordinated with EPA and State/local air quality agencies.

While the CMAQ provisions of TEA-21 were written broadly to encourage an innovative approach, the principles of sound program management must still be followed. Under this approach, there will likely be proposals for funding with which transportation agencies have little experience. As such, before-and-after studies are required to determine the actual project impacts on the transportation network (measured in VMT or trips reduced, or other appropriate measure) and on air quality (emissions reduced). An assessment of the project's benefits should be forwarded to FHWA or FTA documenting the immediate impacts as well as a projection of the project's long-term benefits.
All projects funded under this section should be explicitly identified in the annual report of CMAQ activities as required under section IX of this guidance. In future years, when before-and-after studies are complete, a summary of the actual project benefits should also be included in the annual report. The amount obligated for proposals made pursuant to this section should not exceed 25 percent of a State’s yearly CMAQ apportionment.

Projects Not Eligible for CMAQ Funding

As was the case under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), certain projects may not be funded under the CMAQ program under any circumstances. Activities which are legislatively prohibited, including scrappage programs and highway capacity expansion projects, may not be funded under the CMAQ program. Similarly, rehabilitation and maintenance activities, as noted below, show no potential to make further progress in achieving the air quality standards and may not be funded under the CMAQ program. Program funds may also not be used for projects which are outside of nonattainment or maintenance area boundaries except in cases where the project is located in close proximity to the nonattainment or maintenance area and the benefits will be realized primarily within the nonattainment or maintenance area boundaries. (Note: The use of CMAQ funds under the flexibility provisions discussed in Section V are an exception). Public-private partnerships involving the implementation of statutorily mandated measures (e.g., phase-in of alternatively fueled fleets) may not be funded with CMAQ funds. Finally, projects not meeting the specific eligibility requirements under titles 23 or 49 of the United States Code may also not be funded under this provision.

Highway and Transit Maintenance and Reconstruction Projects

Routine maintenance projects are not eligible for CMAQ funding. Routine maintenance and rehabilitation on existing facilities maintains the existing levels of highway and transit service, and therefore maintains existing ambient air quality levels. Thus, no progress is made toward achieving the NAAQS. Rehabilitation projects only serve to bring existing facilities back to acceptable levels of service. Other funding sources, like the STP and FTA’s Section 5307 program, exist for reconstruction, rehabilitation and maintenance activities. Replacement-in-kind of track or other equipment, reconstruction of bridges, stations and other facilities, and repaving or repairing roads are also ineligible for CMAQ funding.

Additional Restrictions/Non-Eligible Activities

- General planning activities, even for conformity or implementation plan revisions, are not eligible for CMAQ funds. Preparation of NEPA or other environmental documents that are not related to a transportation project to improve air quality are ineligible.
- Routine maintenance projects are ineligible. Routine maintenance and rehabilitation on existing facilities maintains the existing levels of highway and transit service and, therefore, maintains existing ambient air quality levels rather than improving them.
- Funding for a project which will result in the construction of new capacity (general purpose through lanes) available to single-occupant vehicles unless the project consists of a high-occupancy vehicle facility available to single-occupant vehicles only at other than peak travel times.
- Planning activities/model enhancements required for conformity findings.
- Preparation of Transportation Improvement Programs and plan development.
- Air quality monitoring systems.
- TEA-21 prohibits the use of funds for non-governmental partnerships on projects that are required under the Clean Air Act, the Energy Polity Act, or other federal laws.
The funding from FY 2012/2013 through FY 2015/2016 are the projected fund amounts to be used for the 2012 CMAQ call for projects. Actual fund amounts may vary depending on federal legislative outcomes.

*Approximately $7,300,000 will be utilized from 2012/2013 to 2015/2016 for this cycle’s call for projects.*
CMAQ SCORING CRITERIA

General Intent: The CMAQ Program provides funding for transportation projects or programs that will reduce transportation-related emissions. The ICTC CMAQ Program is aimed toward providing a balanced program of transportation projects that will improve our air quality. Major emphasis is placed upon projects that support alternative modes of transportation; provide new technologies/improvements geared toward providing a more efficient and safer transportation system.

Through this call for projects, ICTC has a goal of programming $7,300,000 million in CMAQ funds to projects that can obligate funds for fiscal years 2012/2013 - $1,825,000, 2013/2014 – $1,825,000, 2014/2015 - $1,825,000, and 2015/2016 – $1,825,000.

2012 CMAQ Call for Projects – Funding and Category Description

<table>
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<th>Project Category</th>
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<td>$1,825,000</td>
</tr>
<tr>
<td>Pedestrians / Bicycle</td>
<td>10%</td>
<td>$730,000</td>
</tr>
<tr>
<td>PM-10 Reduction</td>
<td>25%</td>
<td>$1,825,000</td>
</tr>
<tr>
<td>Total</td>
<td>100.00%</td>
<td>$7,300,000</td>
</tr>
</tbody>
</table>

These amounts represent the estimated final apportionment of CMAQ funds the Imperial County Transportation Commission is eligible to receive. Projects selected by the CMAQ Program Scoring Committee are to be based upon ICTC adopted criteria.

<table>
<thead>
<tr>
<th>up to 20-points</th>
<th>Congestion Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Has impact on congestion and increases service capacity and/or reliability.</td>
</tr>
<tr>
<td>up to 10-points</td>
<td>Trip Reduction</td>
</tr>
<tr>
<td></td>
<td>Reduces vehicle trips and/or vehicle miles traveled.</td>
</tr>
<tr>
<td>up to 20-points</td>
<td>Air Pollutant Emissions Reduction</td>
</tr>
<tr>
<td></td>
<td>Incorporates transportation control measure, reduces emissions of volatile organic compounds, nitrogen oxides, and/or particulate matter.</td>
</tr>
<tr>
<td>up to 30-points</td>
<td>Cost-Effectiveness</td>
</tr>
<tr>
<td></td>
<td>Air pollutant emissions reduction divided by annualized project cost.</td>
</tr>
<tr>
<td>up to 10-points</td>
<td>Project Readiness</td>
</tr>
<tr>
<td></td>
<td>Project schedules should be fully identified in the project submittal with target dates including, proposed capital purchase(s), identification of in-kind match source and readiness for capital purchases.</td>
</tr>
<tr>
<td>up to 10-points</td>
<td>Factors of Overriding Concern</td>
</tr>
<tr>
<td></td>
<td>Consider factors of overriding concern, including, but not limited to promotes energy conservation, improves quality of life, leverage other funds, etc.</td>
</tr>
</tbody>
</table>

100 TOTAL POINTS AVAILABLE
## CMAQ SCORING CRITERIA DESCRIPTION

### CONGESTION RELIEF

#### TRANSIT

**HIGH Impact:** Significantly reduces transit vehicle crowding, increases service capacity significantly, Transportation Control Measure, increases service reliability significantly. Interconnect or fare coordination project, bus turnouts at major intersections, intermodal facility accommodating major transfers, reduces travel time.

**MEDIUM Impact:** Increases service reliability in a minor capacity, interconnect or fare coordination project, general bus turnouts, intermodal facility accommodating major transfers.

**LOW Impact:** Increases passenger comfort or convenience, bike racks.

#### ROADS

**HIGH impact:** Transportation Control Measure, signal coordination of multiple (>3) signals, gap closure projects, Traffic Operations System, left turn pockets, other intersection improvements, and traffic flow improvements.

**MEDIUM impact:** signal coordination, park and ride lots.

**LOW impact:** New signals where none currently exists and is warranted by volume or delay, ramp metering with HOV bypasses (when shown not to adversely affect surface streets).

#### BICYCLE/PEDESTRIAN

**HIGH impact:** Transportation Control Measure, facility that will primarily serve commuters and/or school sites, sidewalks where none exist.

**MEDIUM impact:** Public educational, promotional, and safety programs that promote and facilitate increased use of non-motorized modes of transportation.

**LOW impact:** Mixed use bicycle/pedestrian facility (recreation & commuter), usable sidewalk segments including upgrades and new installations and signage.

### TRIP REDUCTION

Projects will be evaluated on a relative basis, (i.e. how they compare to each other).

- **Significantly reduces vehicle trips and VMT.**
- **Reduces vehicle trips and VMT somewhat.**
- **Does not reduce vehicle trips or VMT.**
- **Increases vehicle trips and VMT (-5 rating).**
AIR POLLUTANT EMISSIONS REDUCTION  

Projects will be evaluated on a relative basis: (i.e., how they compare to each other) based on the submitted air pollutant reductions of volatile organic compounds, oxides of nitrogen, and/or particulate matter.

COST-EFFECTIVENESS  

Projects will be evaluated on a relative basis (i.e., how they compare to each other).

PROJECT READINESS  

Project schedules should be fully identified in the project submittal with target dates including, proposed capital purchase(s), identification of in-kind match source and readiness for capital purchases.

FACTORS OF OVERRIDING CONCERN  

The Evaluation Committee may use this category to consider factors of overriding concern. Examples may include, but are not limited to: promotes energy conservation, improves quality of life, identification of match source, acceptable project delivery schedule, timely use of funding, regional benefit, etc.
Project Category:

Priority #: ____ of ____

Detailed Project Description (Purpose of Project/Scope of Work):

Warrant Study (Submit calculations as attachment):

Route # or Name:

Postmile/Project Limits/Length:

Air Pollution Reduction:

Cost-Effectiveness (Submit calculations as attachment):

Average Daily Traffic Volume (ADT):

Accident Rate:

Photo of Facility/Project (Please Attach):

Air Quality Screening Criteria Code:

Construction (Vehicle Purchase) Award Date:

ROW Acquisition Date:

PROJECT DELIVERY SCHEDULE

<table>
<thead>
<tr>
<th>Work Phase</th>
<th>Fund Type</th>
<th>FY 11-12</th>
<th>FY 12-13</th>
<th>FY 13-14</th>
<th>FY 14-15</th>
<th>FY 15-16</th>
<th>Fund Total</th>
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<tbody>
<tr>
<td>PE</td>
<td>CMAQ−88.53%</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>PE</td>
<td>Local Match</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROW</td>
<td>CMAQ−88.53%</td>
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<td></td>
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<td></td>
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<tr>
<td>ROW</td>
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<tr>
<td>CONST</td>
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<td></td>
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<tr>
<td>CONST</td>
<td>Local Match</td>
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</tr>
<tr>
<td>TOTALS</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
CMAQ PROJECT SUBMITTAL INSTRUCTIONS

Step #1 (Agency): Indicate the name of your Jurisdiction or Agency.

Step #2 (Project Category): The proposing agency should choose one (1) of the following categories that best fits the projects: Transit Improvements, Alternative Fuel / Diesel Retrofits (Non-Transit), Traffic Flow Improvements, Pedestrians / Bicycle, PM-10 Reduction, Miscellaneous

Step #3 (Priority #): The proposing agency should rank the projects that are submitted in accordance with their own priorities.

Step #4 (Detailed Project Description): Describe the type of vehicle that you propose to scrap and the vehicle you propose to buy with sufficient detail so that the Scoring Committee can understand the purpose and extent of your project, to include but not limited, year, make, model, year of engine (if different from year of vehicle), and fuel type.

Step #5 (Warrant Study): If project is a traffic signal project, include “Warrant Study” to include level of service and traffic volumes (on each leg).

Step #6 (Route # or Name): List the name of the road or highway if applicable.

Step #7 (Project Location/ Length): Indicate the length of the facility (road, highway, bikeway, etc.) measured in miles including tenths of a mile. If postmiles are available, indicate postmile limits if applicable. Indicate the nearest cross-street at each end of the travelway. (Example: Belmont Avenue between Clovis and Temperance Avenues)

Step #8 (Air Pollution Reduction): Utilizing the ARB “Methods to Find the Cost-Effectiveness of Funding Air Quality Projects (pages 4-10)” Guidelines, you must calculate the kilograms per day of VOC, NOx, and PM10 pollutants that will be eliminated if the project is implemented. Using this guide, you will also determine the cost effectiveness of the project measured in total cost per pound of pollutants reduced.

Step #9 (Cost-Effectiveness): Average Daily Traffic Volume on a road facility, or equivalent volume levels for transit/bicycle/pedestrian facilities if applicable.

Step #10 (ADT): Accidents divided by millions of vehicle miles. For traffic signal or bridge, use accidents divided by millions of vehicles. Would need number of accidents over past three years.

Step #11 (Accident Rate): Photos should be included.

Step #12 (Photo of Facility/Project): Please select the applicable “air quality screening” code from the attached list.

Step #13 (Air Quality Screening): Please identify the anticipated vehicle purchase date.

Step #14 (Award Date): Please identify the anticipated right-of-way acquisition date if applicable.
Step # 16 (Project Delivery): Please program the specific work phase and dollar amount into the appropriate Fiscal Year.

Please note that the MINIMUM local match is 11.47%. Agencies may provide a higher percentage match, if possible.

CODES (for Fund Type and Work Phase):

FUND TYPE:
- CMAQ: Congestion Mitigation & Air Quality
- Local: Local Agency Funds

WORK PHASE:
- PE: Preliminary Engineering/Development
- ROW: Right-of-Way Acquisition
- CONST: Construction
SAMPLE TRANSIT PURCHASE SUBMITTAL FORM
City of xxxxx
Agency

Priority #: 1 of 1

Project Category: Transit Improvements

Project Description: Transit Van Purchase

Purchase of 2 Compressed Natural Gas Modified Vans. To expand existing IVT Transit System in order to provide greater levels of service and meet the present and future transportation needs of the County. Major air quality benefits include reduction of ozone, carbon monoxide, and particulate by using “clean air vans.”

Warrant Study: N/A

Route # or Name: N/A (FCRTA Sub-Systems)

Postmile Limits/Length: N/A

Air Pollution Reduction: Kilograms Per Day Reduced

ROG = 0.37
NOX = 0.50

Cost Effectiveness: $25.00/lb. reduced

(See attached calculations)

Average Daily Traffic Volume (ADT): N/A

Accident Rate: Accident rates should decrease as a result of a decrease in miles traveled.

Photo of Facility/Project (Optional-Please Attach): Information regarding the proposed buses is attached.

Air Quality Screening Criteria Code: 4.02

Proposed Purchase Award Date: 12-1-07

ROW Acquisition Date: N/A

PROJECT DELIVERY SCHEDULE

<table>
<thead>
<tr>
<th>Work Phase</th>
<th>Fund Type</th>
<th>FY 11-12</th>
<th>FY 12-13</th>
<th>FY 13-14</th>
<th>FY 14-15</th>
<th>FY 15-16</th>
<th>Fund Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE</td>
<td>CMAQ–88.53%</td>
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<td>531.2</td>
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<td>ROW</td>
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<td>600.0</td>
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</tbody>
</table>
Priority #: 3 of 4

Project Category: Traffic Flow Improvements

Project Description: Replace existing four-way stop control at the intersection of Ashlan and Van Ness Avenues with a traffic signal to reduce delay, congestion, and air pollution.

Warrant Study: See attached study.

Route # or Name: Intersection of Ashlan and Van Ness Avenues.

Postmile Limits/Length: N/A

Air Pollution Reduction: Kilograms Per Day Reduced
    ROG = 0.37
    NOX = 0.50

Cost Effectiveness: $50.00 per pound reduced

Average Daily Traffic Volume (ADT): Ashlan ADT is 18,688 (1999) and Van Ness ADT is 2,510 (1999)

Accident Rate: There have been 23 accidents over the last five years at this intersection for an accident rate of 0.85 accidents per million vehicle miles.

Photo of Facility/Project (Optional-Please Attach): Photographs of the intersection are attached.

Air Quality Screening Criteria Code: 3.06

Construction Award Date: January 2007

ROW Acquisition Date: N/A

PROJECT DELIVERY SCHEDULE

<table>
<thead>
<tr>
<th>Work Phase</th>
<th>Fund Type</th>
<th>FY 06-07</th>
<th>FY 07-08</th>
<th>FY 08-09</th>
<th>FY 09-10</th>
<th>FY 10-11</th>
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</thead>
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<td>13.3</td>
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<tr>
<td>PE</td>
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<td>1.7</td>
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<td>180.0</td>
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<td>180.0</td>
</tr>
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</table>
AIR QUALITY SCREENING CRITERIA

1.00 SAFETY PROGRAMS
1.01 Railroad/Highway Crossing
1.02 Hazard Elimination Program
1.03 Safer non Federal-aid system roads
1.04 Shoulder improvements
1.05 Increasing sight distance
1.06 Safety Improvement Program
1.07 Traffic control devices and operating assistance other than signalization projects
1.08 Railroad/highway crossing warning devices
1.09 Guardrail, median barriers, crash cushions
1.10 Pavement resurfacing and/or rehabilitation
1.11 Pavement marking demonstration
1.12 Emergency Relief (23 U.S.C. 125)
1.13 Fencing
1.14 Skid treatments
1.15 Safety roadside rest areas
1.16 Adding medians
1.17 Truck climbing lanes outside the urbanized area
1.18 Lighting improvements
1.19 Widening narrow pavements or reconstructing bridges (no additional travel lanes)
1.20 Emergency truck pullovers

2.00 MASS TRANSIT
2.01 Operating assistance to transit agencies
2.02 Purchase of support vehicles
2.03 Rehabilitation of transit vehicles
2.04 Purchase of office, shop and operating equipment for existing facilities
2.05 Purchase of operating equipment for vehicles (e.g. radios, fareboxes, lifts, etc.)
2.06 Construction or renovation of power, signal, and communications systems
2.07 Construction of small passenger shelters and information kiosks
2.08 Reconstruction or renovation of transit buildings and structures
2.09 Rehabilitation or reconstruction of track structures, track, and trackbed in existing right-of-way
2.10 Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of fleet
2.11 Construction of new bus, rail storage/maintenance facilities categorically excluded (23 CFR 771)

3.00 AIR QUALITY
3.01 Continuation of ride-sharing and van-pooling promotion activities at current levels
3.02 Bicycle and pedestrian facilities

4.00 LANDSCAPING/SIGNS
4.01 Specific activities which do not involve or lead directly to construction
4.05 Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action
4.06 Noise attenuation
4.07 Emergency or hardship advance land acquisitions [23 CFR 712.204(d)]
4.08 Acquisition of scenic easements
4.09 Plantings, landscape, etc.
4.10 Sign removal
4.11 Directional and informational signs
4.12 Transportation enhancement activities (excepting rehabilitation and operation of historic buildings, structures, or facilities).

4.13 Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational or capacity increase.

5.00 OTHER
5.01 Intersection channelization projects
5.02 Intersection signalization projects at individual intersections
5.03 Changes in vertical and horizontal alignment
5.04 Interchange reconfiguration projects
5.05 Truck size and weight inspection stations
5.06 Bus terminals and transfer points
5.07 Traffic signal synchronization
Approval of AB 1012 requires that both State and Federal funds be used in a “timely” manner. In order to avoid losing any Federal or State funds to our Region, the “use it or lose it” requirements of AB 1012 place local governmental agencies in a position that they must be able to deliver their projects on time as proposed and as programmed within the Federal Transportation Improvement Program (FTIP).

Since the issue of “project delivery” is so important, the CMAQ Scoring Committee may take into consideration as a part of a project’s “factors of overriding concern” evaluation score (10-points), local agency’s ability to deliver projects timely (i.e. past performance/current ability to deliver projects rapidly).

Each agency must be able to assure that their project(s) can be delivered timely. Therefore, each application MUST be submitted with provided forms and accompanied by a formal Council/Board Resolution stating that each project will meet project delivery schedules and that staff be directed to insure that projects are delivered timely. The attached “Sample” Resolution has been prepared as a guide for helping prepare the required resolution(s).
SAMPLE COUNCIL/BOARD RESOLUTION

BEFORE THE
(NAME OF CITY/COUNTY/DISTRICT COUNCIL/BOARD)
RESOLUTION NO. 2006-__

In the Matter of:

ICTC CMAQ FUNDING

RESOLUTION SUPPORTING Project Delivery Schedules and timely use of funding

WHEREAS, AB 1012 has been enacted into State Law in part to provide for the “timely use” of State and Federal funding; and

WHEREAS, the (City/County) is able to apply for and receive Federal and State funding under the SAFETEA-LU; and

WHEREAS, the (City/County/District) desires to ensure that its projects are delivered in a timely manner to preclude the IVAG Region from losing those funds for non-delivery; and

WHEREAS, it is understood by the (City/County) that failure for not meeting project delivery dates for any phase of a project may jeopardize federal or state funding to the Region; and

NOW THEREFORE BE IT RESOLVED, that the (Council/Board) hereby agrees to ensure that all project delivery deadlines for all project phases will be met or exceeded.

BE IT FURTHER RESOLVED, that failure to meet project delivery deadlines may be deemed as sufficient cause for the Imperial Valley Association of Governments Policy Board to terminate an agency’s project and reprogram Federal/State funds as deemed necessary.

BE IT FURTHER RESOLVED, that the (City/County/District) (Council/Board) does direct its management and engineering staffs to ensure all SAFETEA-LU projects are carried out in a timely manner as per the requirements of AB 1012 and the directive of the (City/County/District) (Council/Board).

THE FOREGOING RESOLUTION was passed and adopted by the (Council/Board) on January/February ____, 2006.

AYES: Signed: __________________________
NOES: Mayor, City of (------)
ABSTAIN: Chair, Board of (------)
ABSENT Chair, (----) Board
ATTEST: 

I hereby certify that the foregoing is a true copy of a resolution of the (Council/Board) duly adopted at a regular meeting thereof held on the ______ day of January/February 2006.

Signed: ______________________________

(-------------------, City/County Clerk)
CMAQ PROGRAM SCORING COMMITTEE REPRESENTATIVES

1. Air Pollution Control District
2. Imperial County Transportation Commission
3. Caltrans – District 11
4. Each city will have the choice to include 1 TAC member on the review panel.
   ***The city representative will not score his or her respective cities project but will be available to answer any questions regarding the projects posed by the scoring committee.
For further information on eligible projects, submittal of applications or other questions related to the CMAQ program, please contact David Salgado @ (760) 592-4494

Please submit all applications by 5:00 p.m. on Monday, March 26, 2012 via mail or deliver all correspondence to:

Imperial County Transportation Commission
1405 N. Imperial Ave., Suite 1
El Centro, CA 92243
Attention: David Salgado, Transportation Planner
VI. ACTION CALENDAR

C. APPOINTMENT OF AN ALTERNATE TO THE SANDAG BORDERS COMMITTEE
February 15, 2012

Sedalia Sanders, Chairperson
Imperial County Transportation Commission
1405 N. Imperial Ave., Suite 1
El Centro, CA 92243

SUBJECT: Appointment of an alternate to the SANDAG Borders Committee

Dear Members of the Commission:

The San Diego Association of Governments (SANDAG) Borders Committee has requested that an alternate elected representative from the Imperial County region be appointed to serve as a voting member on their Borders Committee, in the event that John Renison, County of Imperial Supervisor, District 1, is unable to attend the meetings.

The Borders Committee provides a forum for coordinating planning activities that impact the borders of the San Diego region with the counties of Orange, Riverside and Imperial; and The Republic of Mexico as well as tribal nations in San Diego County. The preparation and implementation of SANDAG’s Bi-national, Interregional, and Tribal Liaison Planning programs are included under this purview. Borders Committee meetings are held on the fourth Friday of each month from 12:30 to 2:30 p.m.

It is recommended that the ICTC Commission take the following actions:

1. Appoint an elected representative to serve on SANDAG’s Borders Committee as an alternate voting member as the Imperial County and ICTC Representative.

Sincerely yours,

MARK BAZA
Executive Director

CITIES OF BRAWLEY, CALEXICO, CALIPATRIA, EL CENTRO, HOLTVILLE, IMPERIAL, WESTMORLAND, IMPERIAL IRRIGATION DISTRICT AND COUNTY OF IMPERIAL