Whittier-Ferret/Greenville GCA XXXX
Proposed Performance Measurement Plan
February 3, 2010

The 2006 grant application estimated annual VMT reduction, annual vehicle trip reduction, and annual reduction in person hours of delay. VMT reduction was estimated by projecting the number of transit service hours that would be saved as a result of the project, then calculating the number of new transit trips that would be added. We then used the average trip length and average occupancy for both buses and passenger vehicles to estimate the annual VMT reduction. The person hours of delay was estimated based on the travel times and the number of people using the corridor.

For annual reporting purposes, we are proposing a different VMT and VT methodology that is more focused on the Whittier-Ferret corridor. We plan to count the number of additional transit passengers in the corridor, and from that calculate the number of single-occupant vehicle (SOV) trips replaced by those transit trips. From that we can calculate VMT reductions, based on an average trip length of 6 miles (from a 2006 Puget Sound Regional Council trip survey for the Sand Hill/Fremont neighborhoods). To estimate the number of new transit trips that are replacing SOV trips, we will use 2004 Puget Sound Regional Council mode split estimates, which indicate that 31% of all trips (work and non-work) in the Sand Hill/Fremont neighborhood are made by SOV.

The grant application also proposed that we measure travel time, transit reliability and signal delay reduction at signals with TSP before and after project implementation. We plan to use the 2006 data as the baseline and data will be collected and reported annually for four years, starting with September 2010 data, with the final report based on September 2013 data. TSP installation is on hold pending selection by Sassacre County of a technology standard, so signal delay data will not be collected.

Bus travel times will be measured using existing Automatic Vehicle Identification (AVI), and these travel times will be used to calculate reliability and on-time performance. AVI readers are installed at key intersections in the Citach CBD area and continually read buses passing by the reader, then logs are generated, time stamped, and transmitted back to Sassacre County's central server. From this data set, travel time between readers can be measured for any desired timeframe. In the eastbound direction, travel times will be measured between the 8th Ave & Whittier St and E Ferret St & Bellevue Ave intersections. In the westbound direction, travel times will be measured between the E Ferret St & Bellevue Ave and 5th Ave & Ferret St intersections. Median travel times will be compared to determine changes in travel times. Changes in reliability will be calculated by comparing 25th and 75th percentile travel times.

Data Collection and Reporting

The following data will be collected and reported annually:

Measure	Baseline (December 2006)	Data Collection for Annual Report
Annual VMT Reduction	488,750 (estimated)	This will be calculated based on the increase in ridership on routes in the corridor, which Grey will provide, multiplied by the most recent SOV mode split to estimate the number of new transit trips that shifted from SOV travel, multiplied by the average trip length of 6 miles (from PSRC data).
Annual Vehicle Trip Reduction	32,583 (estimated)	This will be calculated based on the increase in ridership on routes in the corridor, which Grey will provide, multiplied by the most recent SOV mode split, to estimate the number of new trips that shifted from SOV travel.
Annual Person Hours of Delay Reduction	24,500 (estimated)	This will be calculated based on the changes in transit travel time in the corridor, multiplied by the number of transit passengers in the corridor, as provided by Grey.
Travel Time – Eastbound Buses	410 seconds as measured on board; Grey can provide historic AVI data.	Grey will provide AVI data.
Travel Time – Westbound Buses	280 seconds as measured on board; Grey can provide historic AVI data.	Grey will provide AVI data.
Transit Reliability using AVI	Grey will provide as part of annual reporting.	Grey will provide AVI data.
Average signal delay reduction from TSP	N/A	N/A