Appendix 2.2-A

CTPS Journey to Work Data Memoranda

MEMORANDUM

TO: South Coast Rail Group Files   January 28, 2011

FROM: Scott Peterson

RE: **South Coast Rail Work Trips to Boston**

CTPS was asked by the South Coast Rail (SCR) Project Team to examine work trip flows from the SCR study area into Boston using Journey-Work (JTW) data and from the CTPS South Coast Rail Regional Travel Demand Model (RTDM). The JTW data represented work trips reported in the 2000 census by place of residence from the SCR area to major Boston neighborhoods. The same geographic analysis of work trip flows that was done on the JTW data by was done for the RTDM base year 2007 and 2030 inputs. The RTDM trip generation model converts population, household, and employment into person trips by purpose. One of the trip purposes was Home-based-work (HBW) trips, which CTPS used as a proxy to estimate JTW trip growth in 2030.

The SCR study area consists of 28 communities, which are identified below:

Acushnet	Fairhaven	Middleborough	Rochester
Attleboro	Fall River	New Bedford	Seekonk
Berkley	Freetown	North Attleborough	Somerset
Bourne	Lakeville	Norton	Swansea
Carver	Mansfield	Plainville	Taunton
Dartmouth	Marion	Raynham	Wareham
Dighton	Mattapoisett	Rehoboth	Westport

The seven key Boston neighborhoods for destinations are Back Bay, Beacon Hill, Chinatown, Financial District, South Boston, and the South End.

The analysis shows that there were 8,000 work trips from the SCR study area into the major Boston employment destinations in 2000. The RTDM HBW trips between these two areas grow by 15% between 2000 and 2030. Using the 15% growth rate for HBW trips as a proxy for JTW trips, translates into 9,200 JTW trips from the SCR study area to the major Boston destinations in 2030.

MEMORANDUM

DATE   August 30, 2013

TO   Jean Fox, South Coast Rail Project Manager

FROM Ben Dowling and Scott Peterson, CTPS

RE   Comparison Between Year 2000 Census Journey to Work Data and 2006 Through 2010 American Community Survey Data, for the South Coast Study Area

This memo briefly compares the year 2000 U.S. Census Journey to Work (JTW) data with U.S. Census American Community Survey (ACS) data for the years 2006 through 2010. This is in response to a comment received during the Final Environmental Impact Report (FEIR) submission, which asked about what census data was used to calibrate / validate the home-based work trips in the travel demand model that started in the South Coast Rail Study Area and were destined to markets in downtown Boston.

1.1   2000 Census Journey to Work and 2006-2010 American Community Survey

The 2000 U.S. Census Journey to Work (JTW) data was incorporated into the travel demand modeling work that was conducted for the South Coast Rail FEIR by the Central Transportation Planning Staff. This data set provided an important benchmark against which the South Coast Rail travel from the model was calibrated to.

The final round of travel demand modeling work for the South Coast Rail project was conducted after 2010, although at that time not all 2010 U.S. Census products were available. Recently, the Census Bureau has made American Community Survey (ACS) transportation data available, providing an opportunity to examine the travel patterns between Boston and the South Coast region over the last decade. The Census Bureau has discontinued the long form for JTW data set in favor of the ACS data set, so a perfect comparison between travel patterns from the 2010 Census and the 2000 Census, is not possible. Although a perfect apples-to-apples comparison is not possible, a certain level of comparison is possible.

There are several differences of note between the 2000 JTW data set and the 2006-2010 ACS data. The obvious difference between these two data sets is that they represent different years. The JTW data is a snapshot from March/April of 2000, whereas the 2006-2010 ACS data is a rolling snapshot taken over five years and thus is not subject to seasonal bias, like the JTW data. A major limitation of the ACS data is that it is not available below the

level of the municipality. During preliminary environmental permitting phase, prior to the FEIR, 2000 JTW data was used to identify 8,000 work trips from the South Coast area to select neighborhoods in Boston. This neighborhood level of analysis is not possible with the ACS data. The neighborhood analysis was important because the alternatives that were examined only served a portion of Boston and given the size of Boston, it didn't make sense to examine the JTW flows to all of Boston when only certain markets would likely benefit from the service improvements.

The SCR Study Area consists of 28 communities, which are identified below:

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Attleboro	Fall River	New Bedford	Seekonk
Berkley	Freetown	North Attleborough	Somerset
Bourne	Lakeville	Norton	Swansea
Carver	Mansfield	Plainville	Taunton
Dartmouth	Marion	Raynham	Wareham
Dighton	Mattapoisett	Rehoboth	Westport

The seven key Boston neighborhoods for destinations are Back Bay, Beacon Hill, Chinatown, Financial District, South Boston, and the South End. An analysis of the 2000 JTW data shows that there were 8,000 work trips from the SCR study area into the major Boston employment destinations in 2000.

It is possible to compare town level flows using the ACS, based on samples conducted between 2000 and 2010. Table 1 below presents the number of people travelling from the South Coast study area to Boston for work purposes in 2000 and 2010.

TABLE 1
2000 Journey to Work and 2006-2010 American Community Survey

	Work Trips to all of Boston
2000 JTW	12,181
2006-2010 ACS	13,268

As the table shows there seems to have been an increase in work trip making activity between the South Coast region and Boston over the last decade. The

- *ACS data that currently has been released is limited to town level flows, does not include information regarding mode, and has a higher level of error associated with it due to data suppression and sample size.*

1.2 New ACS Data Release

It is expected that Census Transportation Planning Product (CTPP) data that will include information regarding mode, finer geographic detail on origins and destinations, along with other transportation specific kinds of data will be released this year, 2013, but as of the writing of this memo, that data has not yet been released. Although the release of the CTPP data will provide more transportation specific information, because it is based on ACS data, it is not expected to provide the same level of detail as the 2000 JTW data and will likely having a higher margin of error associated with it, due to the survey method.

BHD/bhd

cc: S. Peterson, CTPS
    Y. Bao, CTPS
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