

**PROJECT 7:**  
**STATE HIGHWAY 7 BUS RAPID TRANSIT STUDY**  
**BOULDER TO BRIGHTON**  
**TIP # *BLCO-2014-015***

PROJECT TYPE: **Studies**

**SCOPE:**

In February 2014 the State Highway 7 (SH 7) Planning and Environmental Linkages (PEL) study was published providing direction on transportation improvements on SH 7 from SH 287 on the west to US 85 on the east. This multi-year, multi-jurisdictional study provided details on the need for potential traffic operations improvements in the corridor.

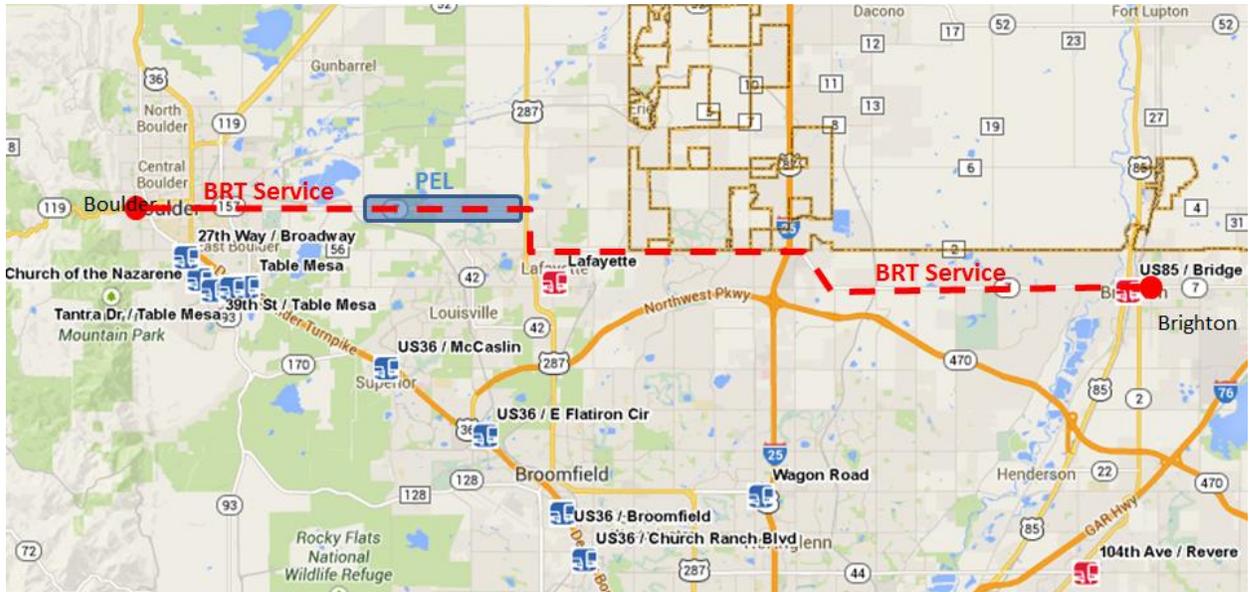
The purpose of this SH 7 Bus Rapid Transit (BRT) Study would be twofold. First is to continue the type of PEL analysis and recommendations for SH 7 between 75<sup>th</sup> Street in Boulder County and SH 287. Second is to develop a cohesive plan for Bus Rapid Transit operations on SH 7 from downtown City of Boulder to downtown City of Brighton. The study would include a focused connectivity analysis at the future Larkridge Bus Station at I-25 as well as the RTD's North Metro Rail Line terminus at 162<sup>nd</sup> in the City of Thornton.

The study will:

- Identify traffic operation problems on SH 7 between 75<sup>th</sup> Street and SH 287 both now and forecasted for 2035.
- Identify current safety concerns.
- Provide recommended cross-sections on SH 7 between 75<sup>th</sup> Street and SH 287, similar to the PEL.
- Describe how a SH 7 BRT planning study is consistent with the recently completed North Area Mobility Study as well as RTD Board direction to advance BRT projects to improve regional mobility in the NW area.
- Perform a BRT passenger demand analysis along the corridor from City of Boulder to the Town of Brighton.
- Develop level of transit service scenarios that would meet the current and projected demands for the corridor. Include vehicle procurement needed for the new service.
- Identify non-vehicle capital improvements (queue jump lanes, transit signal priority (TSP), stop enhancements, etc) needed to support the BRT service.
- Identify First and Final mile opportunities in the corridor that would support transit patrons getting to and from the new service.
- Identify transit patron transfer locations along the route and the needed capital enhancements to make these possible. This includes the RTD operated L Route at SH 287, the CDOT operated Bustang at I-25, and the RTD operated R, 120 and 145x at the Brighton park-n-Ride.
- Recommend how this service would interline with RTD's existing JUMP family of services along SH 7 (aka Short JUMP, Long Jump and Extra Long JUMP).

- Define any possible revenue opportunities to support capital, operations and maintenance of the new service.

**STUDY AREA MAP:**



**ELIGIBILITY:**

Eligibility of this project falls within “Studies” as outlined in Table 11 of the Policy on TIP Preparation which states that “All types of transportation-related studies are eligible.” The following local agencies have been involved in the discussion of this study: City of Boulder, Boulder County, City of Lafayette, City and County of Broomfield, Adams County, City of Thornton, City of Brighton, CDOT and RTD.

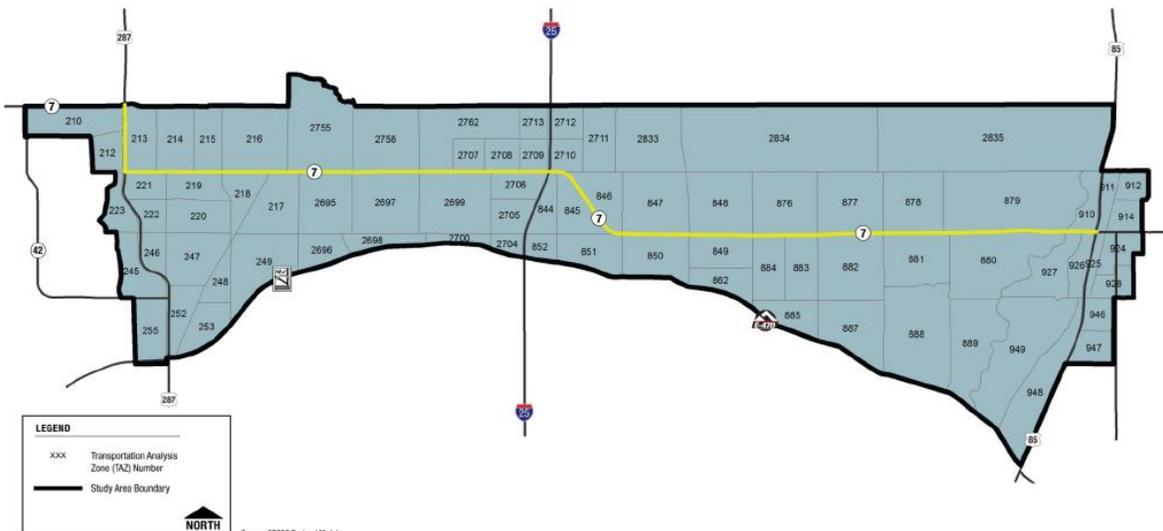
**EXISTING STUDY AREA DATA:**

Much of the data needed to perform a BRT passenger demand analysis in the corridor has already been completed as part of the SH 7 PEL. This SH 7 BRT study would strive to leverage recently completed work to the largest extent possible.



February 2014

Figure 4.1 Transportation Analysis Zones



**Table 4.1 Household and Employment Forecasts by TAZ within SH 7 Study Area**

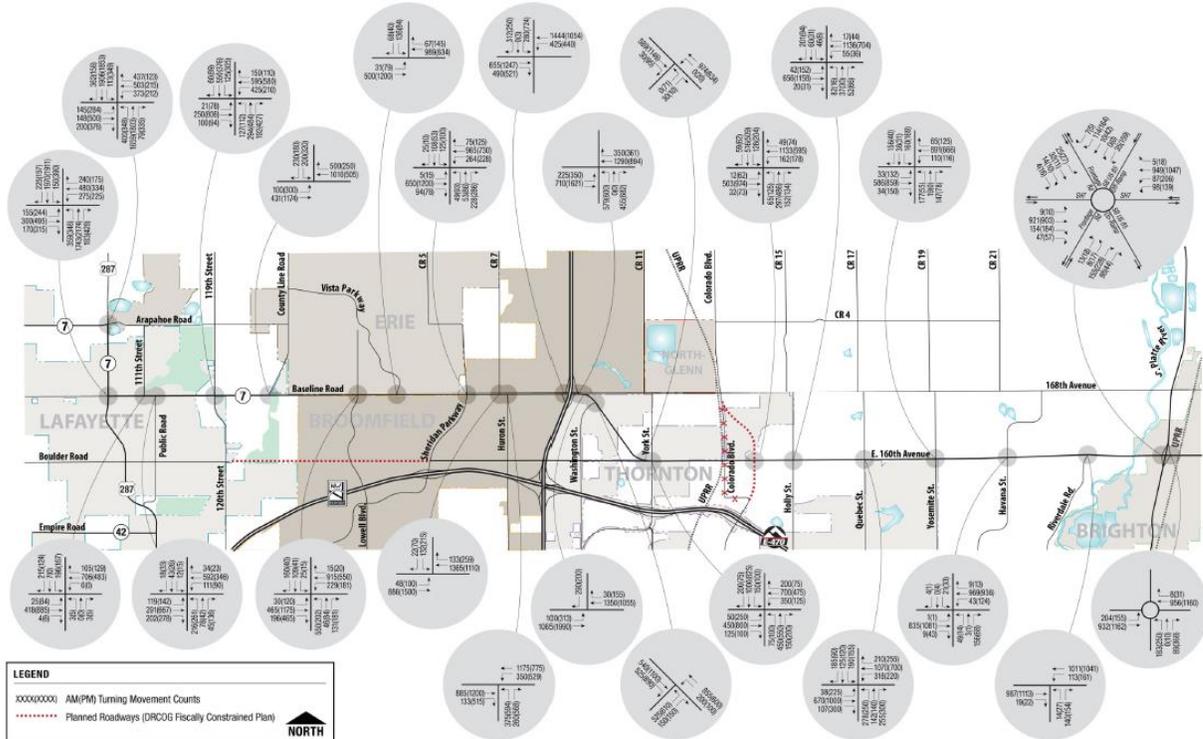
TAZ	Households			Employment		
	2010	2035	Capacity	2010	2035	Capacity
210	95	95	95	540	511	594
212	69	590	623	265	328	813
213	472	940	958	173	211	305
214	703	1244	1,279	64	108	256
215	38	38	38	30	24	39
216	26	26	26	94	85	106
217	26	26	26	13	14	16

*Transportation Analysis Zones data on some of the SH 7 BRT route*

In addition to the employment and household data that already exists, the SH 7 BRT study could utilize the extensive amount of traffic operations data that has been collected and forecasted. Specifically, this data would be useful to determine the impacts and possible benefits queue jump lanes and Transit Signal Priority (TSP) could have on person/vehicle levels of service at key intersections along the corridor.



**Figure 4.3 2035 No-Action AM and PM Peak Hour Turning Movement Forecasts**



*Traffic operations data on some of the SH 7 BRT route*

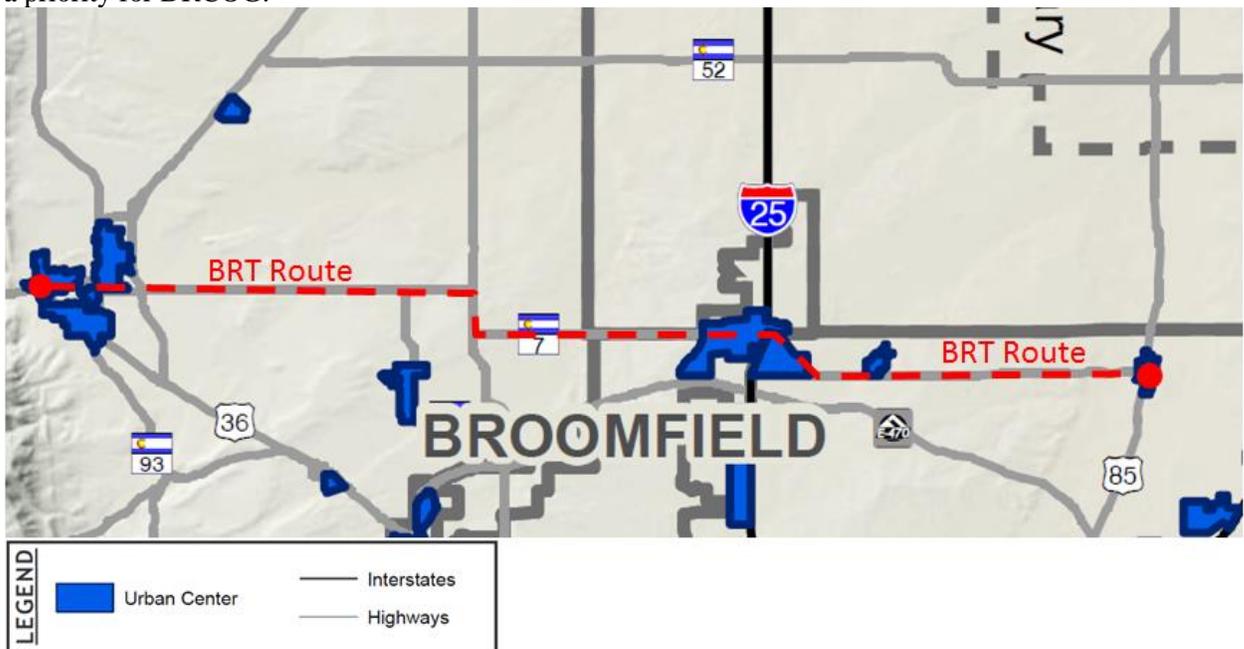
**ENVIRONMENTAL JUSTICE AREAS:**

It is relevant to know that the proposed BRT route does go through several Environmental Justice Areas as well as several areas with employment growth above the average for the DRCOG area, as depicted below.



**URBAN CENTERS:**

The SH 7 BRT route would also connect several of the Urban Centers in the northern part of the DRCOG area. This is not a requirement to receive funding however projects that service Urban Centers have been a priority for DRCOG.



**BUDGET AND PHASING:**

The study is proposed to begin in FY16, or as soon as funding becomes available and all necessary contracts become fully executed. The local agencies served by this new service believe this study is a natural next step from the recommendations coming out of the PEL and the North Area Mobility Study. Local agency staffs are eager to begin this study as soon as possible.

Given the large geographical extent of the project, as well as the detailed analysis needed for the 75<sup>th</sup> to SH 287 segment, the funding request for this study is larger than a typical transit study. The total federal funding request is \$200,000 split over FY16-FY17. This will be coupled with a total local match of \$50,000 bringing the total project to \$250,000.

Funding Level	FY16	FY17	FY18	FY19	Total	Match Ratio
Federal	80	120	0	0	\$200	Local 20.0%
State	0	0	0	0	\$0	State 0.0%
Local	20	30	0	0	\$50	State + Local 20.0%
Total	\$100	\$150	\$0	\$0	\$250	Federal 80.0%
Matching	✓	✓	✓	✓		Total 100.0%