



**Transit Working Group**  
Friday, February 24, 2012  
1:30 p.m. – 3:30 p.m.  
City Council Chambers, Austin City Hall  
301 Willie Nelson Boulevard, Austin, Texas

**Call to Order**

1. Welcome and Introductions
2. Meeting Goals and TWG Upcoming Topics
3. Details on High-Capacity Transit Projects (Continued)
  - a. MoPac Express Lanes
4. TWG Feedback on Transit CEO Discussions
5. Project Connect System Analysis (Please see accompanying memorandum)
6. Adjourn

**Transit Working Group Membership**

Lee Leffingwell, Mayor, City of Austin (*Chair*)  
John Langmore, Board Vice Chair, Capital Metro. Trans. Authority (*Vice Chair*)  
Alan McGraw, Mayor, City of Round Rock  
Ronnie McDonald, County Judge, Bastrop County  
Bill Spelman, Council Member, City of Austin  
Sarah Eckhardt, County Commissioner, Travis County  
Will Conley, County Commissioner, Hays County  
Martha Smiley, Austin Area Research Organization  
Sid Covington, Chair, Lone Star Rail District  
Aundre Dukes, Portfolio Manager, Texas Facilities Commission  
Scott Flack, President, Real Estate Council of Austin  
Jesus Garza, Executive Vice President and COO, Seton Family of Hospitals  
Bobby Jenkins, Board Chair, Greater Austin Chamber of Commerce  
Johnny Limon, Board Member, Housing Works Austin,  
Chair, City of Austin Community Development Commission  
Barry McBee, Vice Chancellor, University of Texas  
Darrell Pierce, CEO, Snap Management Group  
Tom Stacy, Downtown Austin Alliance

**Working Group Charge, 2011-2012:** As a committee of CAMPO, the Transit Working Group will evaluate and provide input toward a regional high capacity transit plan for Central Texas and explore how its various components work as a system to fulfill the region's transportation and future growth needs.

Providing a regional high capacity transit system has been a key goal for Central Texas for decades. Progress towards the rail elements is already underway: Capital Area Metropolitan Planning Organization's (CAMPO) 2035 Regional Transportation Plan has been adopted; Capital Metropolitan Transportation Authority's (Capital Metro) MetroRail Red Line is open; and the City of Austin's Urban Rail and the Lone Star Rail District's intercity regional rail line have developed detailed plans and analyses. Capital Metro is also working to implement bus rapid transit portions of the system.

The Working Group will work toward clarifying and articulating the basis for developing high capacity transit in Central Texas and how its various components work as a system toward meeting community transportation needs. Additional topics expected to be addressed in this effort include how to organize to develop and operate the system and, what potential sources of funding can be formed into a long term conceptual financing plan that can accomplish the system's components.

Regional coordination and collaboration on this effort will be provided through the joint efforts of CAMPO, City of Austin, Lone Star Rail District and Capital Metro staff members. The name "Project Connect" has been coined to identify this joint administrative effort. Additionally, The City of Austin has provided funding to Capital Metro, who has tasked their general planning consultant, URS Corporation, to provide technical and public outreach consulting.

#### **Upcoming Meeting Schedule**

- March 9, 23
- April 6, 20

# PROJECT CONNECT

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## Transit Working Group Memorandum High-Capacity Corridor Evaluation Process February 14, 2012

The purpose of Project Connect is to work towards consensus on regional high-capacity transit. The three main questions that Project Connect is tasked to answer include:

1. System: How will the high-capacity transit components in the CAMPO 2035 plan work as a system?
2. Organization: How will our region organize to develop and operate the system?
3. Funding: How will we pay for the system over the long term?

The purpose of this technical memorandum is to provide the Transit Working Group (TWG) with the framework and results of the Project Connect Team's evaluation of the various existing high-capacity transit elements and the potential identified gaps. This effort helps determine if any changes and or additions to the CAMPO high-capacity transit system might be warranted. This technical memorandum is focused mainly on the first stage of analysis – Corridor Evaluation and contains descriptions of the following:

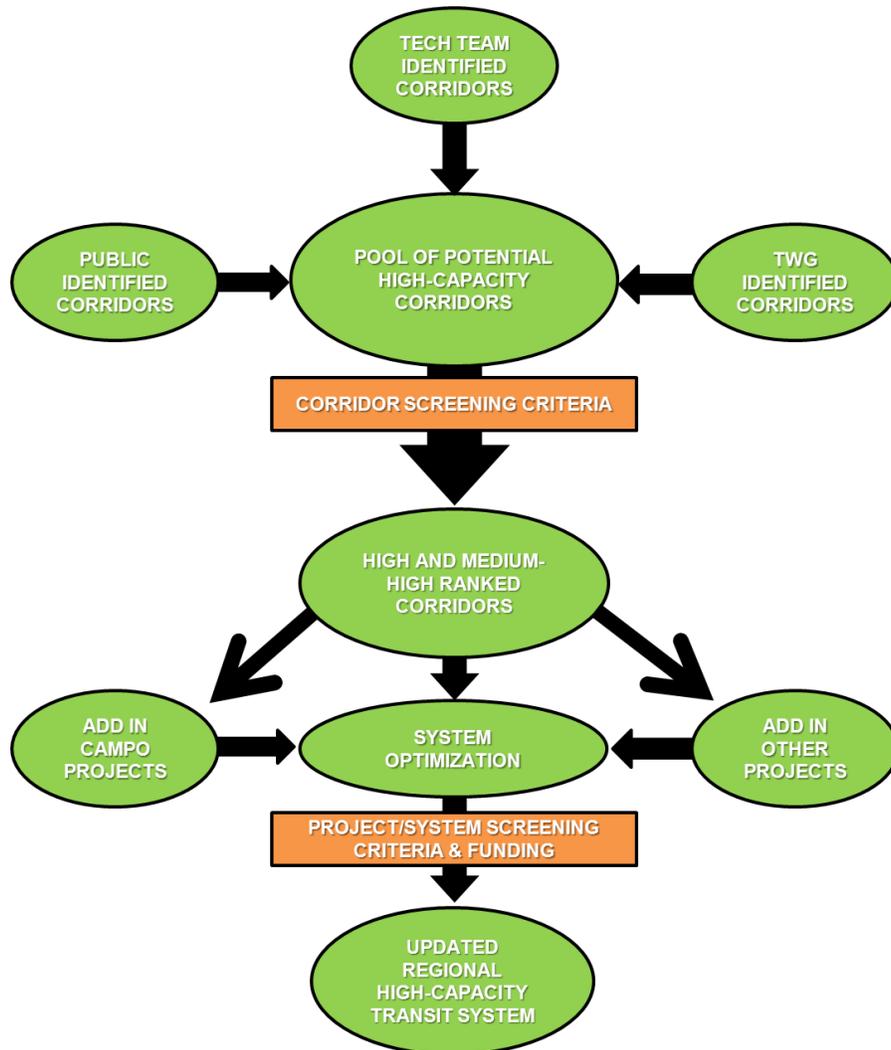
- The overall framework for the system evaluation component of Project Connect
- The high-capacity corridor evaluation process
- Definitions of general corridor criteria categories, as well as specific corridor criteria
- Draft high-capacity corridor criteria evaluation results – high/medium-high/medium/low rankings of corridors for each detailed criteria

### **The Overall Framework for the System Evaluation Component of Project Connect**

The Project Connect Team has identified several steps that are to be completed in order to address the System question above (see Figure 1). The team established the pool of potential high-capacity corridors based on the CAMPO 2035 high-capacity transit elements and identified gaps from the public, TWG, and the Project Connect Team. These corridors are going through a corridor screening (the focus of this memo), which results in the identification of the high and medium-high ranked corridors to take into the system optimization portion of the process. The high-capacity corridor evaluation matrix (See Table 1) is the main corridor-level screening tool used by the team to determine which corridors to evaluate further.

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Figure 1. System Evaluation Flow Chart



Following the corridor screening, the CAMPO 2035 high-capacity transit projects as well as other potential high-capacity projects within the identified corridors are evaluated for system optimization. This analysis attempts to optimize the overall system based on the desired system characteristics, including the TWG’s priorities (Reliability/“Congestion Proof”, Connections between Centers/Regional Connectivity, Economic Development, Travel Demand, Convenience/“True Alternative”).

After system optimization, the high-capacity transit system components are subject to a project/system and funding screening process which results in the recommendation of “packages” of high-capacity transit projects that are: 1) subject to a more detailed study such as an alternatives analysis, and/or 2) result in an updated CAMPO Plan.

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## **The High-Capacity Corridor Evaluation Process**

The Project Connect Team identified specific high-capacity transit corridor criteria, utilizing the five major criteria categories identified early in the Project Connect Process (Centers, Congestion, Core, Constraints, and Growth). These criteria are used in the evaluation of the potential high-capacity transit corridors in the CAMPO region and are discussed in detail later in the memo.

Additionally, the team identified nine transportation corridors to be evaluated as potential high-capacity transit corridors in the initial high-capacity corridor screening process. These transportation corridors include the Central, NC, NE, E, SE, SC, SW, W, and NW corridors. Through meetings with the public and the TWG, additional transportation corridors were identified that are also evaluated during the high-capacity corridor screening process for potential high-capacity transit solutions. Based on regional data collected, the team applies each of the corridor criteria to each identified corridor resulting in a rating of either “High”, “Medium”, or “Low” (see Table 1).

Based on the combined ratings of the individual corridor criteria, each corridor falls into one of the following groups: High, Medium-High, Medium, or Low. From here the High and Medium-High corridors are carried into the project/system screening process and the Medium and Low-ranked corridors are considered “vision” corridors that while not currently viable for high-capacity transit are re-evaluated during future updates of the high-capacity transit system plan. It is important to note that these corridor rankings are fluid based on the ever-changing regional conditions as well as the specific policies of the various municipalities. In this way, the high-capacity corridor evaluation matrix provides local municipalities with essentially a “toolbox” of criteria, some directly controlled by the municipalities, that if changed can potentially affect the overall ranking of the corridor in terms of high-capacity transit viability in the future.

## **General Corridor Criteria Categories used in the High-Capacity Corridor Evaluation**

The following section provides basic definitions for all five of the general criteria categories as well as the specific corridor criteria. The general criteria are as follows:

**Centers:** As envisioned in the CAMPO 2035 Plan, the growth concept proposes that CAMPO, local governments, and other regional partners implement strategies that would encourage the development of "activity centers" or “centers” throughout the region. These centers would be more intensely developed than the surroundings, pedestrian-oriented (many destinations within walking distance, safe and convenient pedestrian facilities), connected to surrounding neighborhoods and the region by a range of transportation options (including transit), provide a mix of employment, housing, and retail and, be tailored to the local area. CAMPO has established 37 activity centers (34 located within the Project Connect analysis area). These activity centers have been divided into large, medium, and small centers based on existing development within the centers.

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**Congestion:** Traffic congestion is a condition on road networks that occurs as use increases, and is characterized by slower speeds, longer trip times, and increased vehicular queuing.

**Core:** For Project Connect purposes, the “Core” is defined as the area of central Austin bounded by 45<sup>th</sup> Street on the north, Lady Bird Lake on the south, I-35 on the east, and MoPac on the west. The area contains the Austin Central Business District (CBD), the Capitol Complex, and the University of Texas, which make up the largest activity center in the region.

**Constraints:** A constraint restricts an entity, project, or system from achieving its potential with reference to its goal. For Project Connect purposes constraints can be physical, environmental, social, or any combination of the three. For example, the I-35 roadway facility through downtown Austin is both physically and socially constrained as an attempt to widen the highway would result in significant physical and social impacts to the surrounding community. In the transportation world, constraints are not universal as different modes of transportation have different constraints.

**Growth:** For Project Connect, growth is generally defined as population or employment increases in various locales around the CAMPO region. Growth can be either historical or projected and this growth can greatly influence future transportation investment decisions.

## **Definition of Specific Corridor Criteria used in the High-Capacity Corridor Evaluation**

**Number of CAMPO Centers:** Quantitative assessment of the number of CAMPO activity centers located within each transportation corridor. For ranking purposes, due to the various sizes of the activity centers, “large” and “medium” activity centers receive more weighting than “small” activity centers.

**Transit-Supportive Economic Development:** Qualitative assessment of the transportation corridor jurisdictions’ commitment to transit within their jurisdictional boundaries. This assessment is based on “yes” or “no” answers to the following sub-criteria questions:

1. Does their long-range plan contain a transit discussion?
2. Currently have or are proposing mixed-use zoning?
3. Any Transit-Oriented Development (TOD) provisions?
4. Currently a member of Capital Metro (i.e. provide financial support)?
5. Currently a member of CARTS (i.e. provide financial support)?
6. Any money allocated for future transit services?
7. Do they have a bicycle/pedestrian plan or a bike/pedestrian element in their long-range plan?

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**Building Permits within existing TOD Centers:** Quantitative assessment of the number of building permits (both residential and commercial) within existing TOD center boundaries between 2006 and 2010 within each transportation corridor.

**Existing and Projected Congestion in Corridor (2010 and 2035):** Quantitative assessment of highly congested highways and arterials within each corridor in 2010 and in 2035. “Highly Congested” includes highways or arterials with a volume to capacity (V/C) ratio of over 1.3. In order to more accurately compare corridors, total highly congested mileage is divided by total mileage within each corridor to provide a percentage of highly congested.

**Total Vehicle Hours Traveled per Mile (2010 and 2035):** Quantitative assessment of total vehicle hours traveled (VHT) per mile on highways or major arterials within each corridor in 2010 in 2035. Analysis is done by roadway segments contained entirely within each corridor and is a function of (link length x congested speed x link flow). The VHT is then normalized per mile in order to more accurately compare corridors.

**Transportation Demand per Acre (2010 and 2035):** Quantitative assessment of the number of origin and destination (O-D) trips within each corridor in 2010 and 2035 divided by the number of acres in each corridor in order to normalize for corridor size and more accurately compare the corridors. The O-D trips are based on total home-based work trips into and out of each corridor.

**Trips to Core per Acre (2010 and 2035):** Same as above, but specifically looking at home-based work trips to the downtown core instead of all home-based work trips.

**Environmental Suitability:** Quantitative assessment of the percentage of each corridor that is considered to have “high” environmental suitability based on CAMPO data. “Environmental Suitability” includes both the natural and built environments. Therefore, existing buildings are included in the calculation as well. For this criterion, a “High” ranking means that the corridor has low environmental sensitivity and a “Low” ranking means the corridor has high environmental sensitivity.

**Existing Rail ROW:** Preliminary qualitative assessment of the existing rail ROW in each corridor. This calculation consists of the number of active and abandoned rail rights-of-way and these rights-of-way may or may not contain existing railroad track.

**Existing Population and Employment (2010):** Quantitative assessment of total existing (2010) population and employment by acre within each corridor. The population and employment figures are provided per acre in order to normalize for corridor size and allow for a more accurate comparison of corridors.

**Projected Population and Employment (2035):** Quantitative assessment of total projected (2035) population and employment by acre within each corridor. The population and employment figures are

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provided per acre in order to normalize for corridor size and allow for a more accurate comparison of corridors.

**Equity:** Preliminary quantitative assessment of the percentage of environmental justice (EJ) populations within each corridor based on the currently available 2000 U.S. Census data. EJ populations include minorities and low income populations who are historically more likely to utilize transit. Therefore, a corridor with a “High” ranking contains a large EJ percentage compared to the total corridor population, making the corridor more viable for transit and high-capacity transit services.

## **Draft High-Capacity Corridor Criteria Evaluation Results**

Table 1 contains the draft results of the initial high-capacity corridor screening evaluation for each of the corridor criteria. A “High” ranking means that corridor ranked high for high-capacity transit potential for that particular criterion. Conversely, a “Low” ranking means that corridor ranked low for high-capacity transit potential for that particular criterion. High rankings are signified in green, medium rankings in orange, and low rankings in grey. In general, the technical team distinguished between high, medium, and low rankings based on the natural “breaks” in the data.

**Table 1: DRAFT Project Connect High-Capacity Corridor Screening**

Factor	Criteria	Description	Threshold*	Corridors**									
				North Central	Northeast	East	Southeast	South Central	Southwest	West	Northwest	Central	
<b>CENTERS</b>	Number of CAMPO Centers	The number of CAMPO activity centers located within each corridor	Numerical value based on the number of centers located within a corridor. "Large" centers are given a value of 4, "medium" centers are given a value of 2, and "small" centers have a value of 1	High	Low	Low	Low	Low	Low	Medium	Low	Medium	Medium
	Transit-Supportive Economic Development	Qualitative assessment of corridor jurisdictions' commitment to transit	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	Medium	High	Low	Low	Low	Low	High	High
	Building Permits within existing Transit Oriented Development (TOD) Centers	The number of building permits within existing TOD center boundaries between 2006 and 2010 within each corridor	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	High	Low	Low	Low	Low	Low	Medium	Low
<b>CONGESTION</b>	Estimated Congestion in Corridor (2010)	Quantitative assessment of highly congested highway and arterial mileage divided by total mileage within each corridor for 2010	"Highly Congested" highways and arterials are those with a volume to capacity ratio over 1.3. High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	Medium	Low	Medium	Medium	Low	Low	Medium	High	High	High
	Projected Congestion in Corridor (2035)	Quantitative assessment of highly congested highway and arterial mileage divided by total mileage within each corridor for 2035	"Highly Congested" highways and arterials are those with a volume to capacity ratio over 1.3. High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	Medium	Low	High	High	Low	Low	Medium	High	Medium	High
	Total Vehicle Hours Traveled per Mile (2010)	Quantitative assessment of total vehicle hours traveled per mile on highways or major arterials within each corridor in 2010	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	Medium	Medium	Low	Low	Medium	Medium	High	High
	Total Vehicle Hours Traveled per Mile (2035)	Quantitative assessment of total vehicle hours traveled per mile on highways or major arterials within each corridor in 2035	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	Medium	High	Low	Low	Medium	Medium	Medium	High
<b>CORE</b>	Transportation Demand per Acre (2010)	Quantitative assessment of the number of origin and destination trips within each corridor divided by the number of acres in each corridor	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	Medium	Low	Low	Low	Medium	Low	Medium	High
	Transportation Demand per Acre (2035)	Quantitative assessment of the number of origin and destination trips within each corridor divided by the number of acres in each corridor	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	Medium	Low	Low	Low	Medium	Low	Medium	High
	Trips to Core per Acre (2010)	Total number of trips to the core by corridor in 2010 per acre	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	High	Low	Low	Low	High	Low	High	High
	Trips to Core per Acre (2035)	Total number of trips to the core by corridor in 2035 per acre	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	Medium	Low	Low	Low	High	Low	Medium	High
<b>CONSTRAINTS</b>	Environmental Suitability	Preliminary quantitative assessment of the environmental suitability (environmental and built) within each corridor	Percentage of each corridor that is considered "highly sensitive" based on CAMPO data. Rated High/Medium/Low based on natural "breaks" in data with "High" meaning the corridor is better suited for High-Capacity Transit due to low environmental sensitivity	High	High	Medium	Low	High	Medium	Medium	High	Low	
	Existing Rail ROW	Preliminary qualitative assessment of the existing rail ROW in each corridor	High/Medium/Low ranking based on qualitative assessment of potential to use existing rail ROW in each corridor.	High	Medium	High	Low	Low	High	Low	Low	High	
<b>GROWTH</b>	Existing Population (2010)	Quantitative assessment of total existing (2010) population by acre within each corridor	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	Medium	Low	Low	Low	High	Low	High	High
	Existing Employment (2010)	Quantitative assessment of total existing (2010) employment by acre within each corridor	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	Medium	Low	Low	Low	Medium	Low	Medium	High
	Projected Population (2035)	Quantitative assessment of total projected (2035) population by acre within each corridor	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Medium	Medium	Medium	Low	Low	High	Low	High	High
	Projected Employment (2035)	Quantitative assessment of total projected (2035) employment by acre within each corridor	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	High	Low	Medium	Low	Low	Low	Medium	Low	Medium	High
	Equity	Preliminary quantitative assessment of Environmental Justice (low-income and minority) populations within each corridor based on 2000 census data	High/Medium/Low ranking will be determined after looking at natural "breaks" in the data	Medium	Medium	High	High	High	High	High	Low	Low	Medium

\* Each corridor is rated either high, medium, or low for each criteria depending on the threshold identified in the supporting documentation.

\*\* Additional corridors to be added and analyzed based on gaps identified by the public, TWG, and Project Connect Technical Team.