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Technical Memorandum #1 – Evaluation Criteria

Introduction

The purpose of the Florida Avenue and Tampa Street/Highland Avenue Corridor study is to identify and evaluate potential alternative configurations of the Florida Avenue and Tampa Street/Highland Avenue corridor at a planning level to determine how to best meet the current and future needs of the wide range of users within this corridor.

Study Limits

The study limits for the corridor study include the portions of Florida Avenue and Tampa Street/Highland Avenue from just south of Scott Street (I-275) to just north of Hillsborough Avenue. While the primary focus of the study is on Florida Avenue and Tampa Street/Highland Avenue, the study will also consider the areas east of the corridor to about Nebraska Avenue and west to about North Boulevard in the evaluation process. Figure 1 illustrates the general study area.

Purpose of this Technical Memorandum

This technical memorandum outlines the quantitative and qualitative measures that will guide the evaluation of the potential alternatives for the corridor. The study is not designed to provide a definitive alternative recommendation for the corridor, but is intended to define criteria/performance measures for the corridor and provide an initial assessment of the extent to which each identified alternative meets the study’s objectives of:

- Providing drivers, transit users, pedestrians, and bicyclists safe access to and between downtown Tampa and the neighborhoods and destinations north of downtown;
- Providing access to adjacent commercial property and neighborhood streets;
- Serving as neighborhood main streets and commercial districts;
- Serving as major thoroughfares;
- Contributing to the public realm of the City and surrounding neighborhoods; and
- Serving a regional role in the larger transportation network (e.g., evacuation route, incident management, north-south alternative to I-275).
Figure 1: Study Area
Evaluation Overview

The proposed evaluation process for the Florida Avenue and Tampa Street/Highland Avenue Corridor Study will be accomplished in three phases:

1. A fatal flaws analysis will be conducted to ensure that only viable alternatives are considered for further analysis.
2. An initial screening consisting of quantitative and qualitative measures will be conducted to evaluate each of the identified alternatives on how well they relate to the objectives of the study.
3. After the initial screening process a final screening process will be conducted to incorporate any adjustments to the evaluation criteria and/or weighting criteria, as deemed appropriate by the project’s advisory group.

Fatal Flaws Analysis

There are potentially an endless number of alternatives that could be developed for the corridor. To ensure that the identified and analyzed alternatives are potentially viable, all identified alternatives will be subjectively evaluated based on how well they support the study’s objectives and on whether or not they possess a fatal flaw that would likely impede implementation.

Initial Screening Evaluation

The following provides a summary of the criteria that have been developed as a means to assess the existing conditions and potential future corridor alternatives that will be identified and evaluated during later stages of the corridor study. Utilizing this set of quantitative and qualitative criteria and measures will allow the study to objectively evaluation each of the alternatives on how they relate to the needs of the corridor.

Traffic and Corridor Function:

These measures will help in the understanding of how traffic operates within the corridor today and in the future. What is the demand for travel in the corridor? How do intersections operate today, in the future? How long does/will it take someone to travel the length of the corridor? These questions and more will be addressed by the following measures:
• **Traffic Volumes** – How are traffic volumes along the corridor affected by the identified corridor alternatives? Forecasted volumes for the existing corridor configuration will be compared against the projected volumes for each alternative.

• **Travel Speed/Time** – Existing travel speeds and times derived from the model and verified with collected data will be compared against the predicted travel speeds and times of the corridor alternatives.

• **Intersection Level of Service/Delay** – Intersection level of service (LOS) provides a measured scale that matches the perception of drivers to the operation of the intersection. Intersection LOS provides a means for identifying intersections with operational deficiencies, as well as providing a comparative scale between intersections. Forecasted LOS for the existing corridor configuration will be compared against the projected intersection LOS for each identified alternative.

• **Length of Queues** – How do the identified alternatives affect the length of queues at signalized intersections? Excessive intersection queues may be a sign that there could be operational deficiencies at the intersection, while not a critical measure, it is important to understand how the corridor alternatives might affect future queue lengths, especially at intersections that currently experience excessive queue lengths (e.g., Florida Ave at Hillsborough Ave).

**System-Wide Function:**

These measures will evaluate the overall “system-wide” function of the corridor study area under existing conditions and the conditions of the identified alternatives. These measures will assist in providing a sense of the number of vehicles, how far they’re traveling, how long it takes them to get to where they are traveling to, and the relationship between congestion and time.

• **Vehicle Miles Traveled** – Vehicle mile traveled (VMT) is the sum total distance traveled by all vehicles within a specified area for a specified period of time, how far are people traveling. A comparison of VMT will be used as a general indicator of traffic activity and trip making decisions between the existing network condition and the conditions of each alternative within the corridor area.

• **Vehicle Hours Traveled** – Vehicle hours traveled (VHT) is the total vehicle hours expended traveling on the roadway network
within a specified area during a specified time period; basically, how long it takes to get from point A to point B during a specific time frame. The VHT from the alternatives will be compared to the current condition.

- **Vehicle Hours of Delay** – Vehicle hours of delay will be used to evaluate how the different alternative effect congestion and delay. Vehicle hours of delay is calculated by determining the difference between the travel times under actual conditions and under free flow (uncongested) conditions.

**Pedestrian and Bicycle Infrastructure:**

In order to provide for the needs of all the users of the corridor it is imperative to consider not only the presence of facilities for non-motorized users, but also the quality, from the perspective of the user, of those facilities. The following measures will be used to evaluate pedestrian and bicycle infrastructure within the corridor:

- **Percent Sidewalk Coverage** – A quantitative measure of the percentage of the corridor with sidewalk coverage. The existing percent sidewalk coverage will be compared against the proposed sidewalk coverage for each alternative.
- **Percent Bicycle Lane Coverage** – A quantitative measure of the percentage of the corridor with bicycle lanes (ratio of bicycle lane miles to roadway miles). The existing condition will be compared against the proposed bicycle lane percentage for each alternative.
- **Pedestrian Quality/Level of Service** – Pedestrian quality/level of service (Q/LOS) is a measure based on the pedestrians’ perceptions of the roadway or nearby roadway environment. Pedestrian Q/LOS is based on four variables with relative importance ordered in the following list:
  - Existence of a sidewalk
  - Lateral separation of pedestrians from motorized vehicles
  - Motorized vehicle volumes
  - Motorized vehicle speeds
  Existing pedestrian Q/LOS will be compared against the calculated pedestrian Q/LOS for each of the alternative scenarios.
- **Bicycle Quality/Level of Service** – Bicycle quality/level of service (Q/LOS) is a measure based on the bicyclists’ perceptions of the
roadway environment. Bicycle Q/LOS is based on five variables with relative importance ordered in the following list:

- Average effective width of the outside through lane
- Motorized vehicle volumes
- Motorized vehicle speeds
- Heavy vehicle (truck) volumes
- Pavement conditions

Existing bicycle Q/LOS will be compared against the calculated bicycle Q/LOS for each of the alternative scenarios.

Traffic Safety:

A critical component of the corridor study is to identify alternatives that will provide all users (drivers, transit patrons, pedestrians, and bicyclists) with a safe and comfortable environment to travel within throughout the corridor. As a means of identifying the potential impacts on safety the alternatives evaluation will consider the expected reduction/increase in the number and severity of crashes using the following measures:

- Using available and relevant crash modification factor data specific components of the alternatives will be evaluated for expected decrease/increase in overall crashes and severity of crashes.
- As evaluation/comparison of the overall changes in expected crash rates between the different alternatives will be conducted using FDOT crash rate categories and Highway Safety Manual procedures. An example of this would be the difference in expected crash rates between a 3-lane one-way road, 2-lane one-way road, and 2-lane with two-way left turn lane two-way road.
- Based on a crash history review, an identification of crashes that are behavior-related and may benefit from components of the alternatives will be noted.

Transit:

Beyond documenting existing transit service within the corridor – routes, routing, service span, frequency, stop-level ridership, etc., the study will evaluate the effect that the identified alternatives may or may not have on transit service within the corridor. The following represent some of the factors that will be considered in the evaluation of potential alternatives:
Route Modifications – Would any existing fixed service routes be impacted by any of the identified alternatives? Potential impacts to the existing transit network will be documented and assessed as part of the alternative evaluation process.

Route Performance – How might the alternatives affect the speed and reliability of bus service within the corridor? An assessment of how transit performance might be impacted based on the results of the traffic evaluation will be considered as part of the corridor evaluation.

Ridership Impacts – If there are impacts to the routing and performance of transit in the corridor, how does it affect transit ridership and access to transit (positive, negative, or neutral)? Modifications to routing and/or performance could have an impact on transit access and the attractiveness of transit along the corridor; a qualitative assessment of ridership impacts will be documented.

Community Impacts:

Number of Impacted Parcels – Quantitative measure of the number of parcels (commercial and residential) that may be impacted by a need for right-of-way or direct access, by each of the identified alternatives. The intention is to not identify alternatives that may require a larger right-of-way investment, but depending on the alternative there may be some right-of-way needs (i.e., corner clips) to accommodate the design features of the alternatives.

Business Access – Qualitative measure of how each alternative may impact business access; would the impact to business access be positive, negative, or neutral?

Other:

Planning Consistency – Are the identified alternatives consistent with the vision/goals of recently completed plans in the area? Recent planning efforts have engaged the local community to develop specific goals and visions for the various communities along the corridor. A qualitative assessment of how each alternative promotes these visions/goals will be conducted.

Parking – What effects might the identified alternatives have on parking supply and activity? The intention of this measure is to evaluate the supply and availability of on-street parking (within the right-of-way).
Final Screening Evaluation

The final screening evaluation of the corridor alternatives will determine if there are any necessary adjustments to the criteria and measures that were evaluated during the initial evaluation screening and will determine how to apply the criteria weighting that will be developed later in the study. Following any adjustments to the criteria evaluation process and/or weighting system, the evaluation of the alternatives will be refined and replicated, as deemed appropriate by the study’s project advisory group.

As stated earlier in this memorandum, this corridor study is not designed to establish a definitive alternative recommendation for the corridor. However, it is expected that as the identified alternatives are evaluated, in respect to the criteria identified within this memo, the most fitting alternative(s) should begin to emerge, eventually leading to further analysis and potential “next steps” for the corridor.