

Bill Farmer, Chair

Chuck Ellinger, Vice Chair

Linda Gorton

Steve Kay

Chris Ford

Tom Blues

Diane Lawless

Julian Beard

Doug Martin

Peggy Henson

Staff:

Jenifer Benningfield

AGENDA
PLANNING AND PUBLIC WORKS
COMMITTEE
May 8th, 2012
1:00pm

- | | | |
|--|----------|---------------|
| 1. Downtown Traffic Management and Revitalization Study | EQ Link | (1-11) |
| 2. Oliver Lewis Way Project Update | Blues | (12) |
| 3. Todds Road Widening Phase II Update | Stinnett | (13) |
| 4. Items Referred to Committee | | (14) |

Future Committee Meetings

June 19 - 1:00pm

August 14 - 1:00pm

September 18 - 1:00pm

October 16 - 1:00pm

November 20 - 1:00pm

December 11 - 1:00pm

“Planning and Public Works Committee, to which should be referred matters relating to the Division of Planning and including, but not limited to, matters related to housing, infill and redevelopment, purchase of development rights and historic preservation, and any related partner agencies and the Department of Public Works and its related divisions, including capital improvement projects and any related partner agencies.”

Study Purpose

The purpose of the study will be to assess the ability of the Downtown Lexington street system to accommodate current and future year traffic conditions with all existing one-way streets converted to two-way operation. The study will evaluate the conversion of existing one-way street pairs to assess the impacts of two-way conversion, identify mitigation measures, determine the extent to which the impacts can be mitigated, and ultimately provide information so that decision makers can determine which one-way streets should be converted. The study then will be used to develop a downtown mobility plan that encompasses these conversions and mitigation strategies.

The study will help to determine if two-way conversion can reduce driver confusion, increase accessibility to downtown businesses, and moderate vehicle speeds for improved safety. The study will also determine negative impacts (or problem spots) and propose practical solutions, if possible, for them; develop preliminary design and cost information for the two-way conversions; and engage public participation in the study.

For the purposes of detailed micro-simulation modeling/analysis, the study area primarily will be limited to the immediate downtown area where the one-way street pairs exist. However, potential impacts of diversion of traffic to other major streets outside the downtown area will be addressed; for example, surrounding neighborhood streets and New Circle Road. A map of the detailed study area is highlighted by the yellow dashed line shown in **Figure 1**.



Figure 1. Detailed Study Area

Scope of Work

The following is a description of the activities that will be undertaken by Stantec during the course of the study:

0.0 Project Management

Stantec shall perform continuous communication, coordination and management of team members and subconsultants throughout the course of the study. Stantec shall submit monthly invoices, progress reports and percent complete reports to the Lexington Fayette Urban County Government (LFUCG) Project Manager. The Stantec Project Director and/or Project Manager shall participate in coordination conference calls and meetings with representatives from the LFUCG as deemed necessary.

1.0 Traffic Model Development

Two primary types of traffic models will be used in the conduct of the study and in particular the evaluation of converting one-way streets to two-way. A downtown area traffic simulation model will be developed to evaluate operational impacts such as changes in intersection delays, travel times and queue (backup) lengths. The Lexington Area Metropolitan Planning Organization (LAMPO) Travel Demand Model will be used to quantify/predict travel patterns and to quantify anticipated traffic diversion under two-way street scenarios.

1.1 Data Collection

Data necessary to develop the traffic simulation model and perform the analyses for the study will be obtained. Data will include roadway network geometry, traffic control (including signal timing plans), 24-hour directional traffic volumes, peak period intersection turning movement counts, pedestrian crossing and bicycle counts, bus routes and schedules, parking inventories (including lot and garage capacities and usage rates, if available), travel time studies, crash data and accident reports, environmental resources and other relevant data. Much of these data are maintained currently by the LFUCG, the LAMPO, and the KYTC. Additional data that will be collected by Stantec include parking area ingress/egress counts; on-street parking inventory; saturation flow rates on selected intersection approaches, transit stop locations, and bus dwell time data.

All available reports and studies will be obtained and reviewed. These include the 2007 Comprehensive Plan, Downtown Master Plan, 2007 Downtown Transportation Analysis report, summary of comments from the 2010 public meeting on the conversion of Short and Second streets, and other pertinent documents.

1.2 Travel Demand Model Review

The LAMPO Travel Demand Model will be updated by the KYTC concurrent with this study. All model files and documentation will be obtained from the LAMPO. The travel demand model will be installed and the downtown study area network will be checked for accuracy. Downtown area traffic assignments also will be compared with assignments from the previous version of the model. A base year assignment will be performed and traffic volumes will be compared with existing traffic counts. If necessary, minor calibration adjustments will be made to the model in order to improve the accuracy within the study area.

Deliverable: A technical memorandum will be prepared documenting the travel demand model review and adjustments.

1.3 Traffic Simulation Model

The traffic simulation model will be developed using the TransModeler® traffic simulation software from Caliper Corporation®. The model will build upon the simulation model used in the *2007 Downtown Lexington Transportation Analysis* and will be updated to reflect current traffic conditions. Analysis periods will be:

- Weekday A.M. Peak (this generally occurs from 7:00 a.m. to 9:00 a.m.)
- Weekday Mid-Day (a mid-morning period and a mid-afternoon period)
- Weekday P.M. Peak (this generally occurs from 4:00 p.m. to 6:00 p.m.)

Existing 24-hour directional counts will be obtained from the Kentucky Transportation Cabinet (KYTC) and/or the LFUCG and will be analyzed to identify specifically the time and duration of these peak periods.

For each of the analysis periods, the following scenarios will be evaluated:

- Existing (Year 2011/2012)
- Modest Growth Scenario
- High Growth Scenario

The growth scenarios are not linked to a particular year but rather to a relative level of economic activity that would generate additional vehicular traffic downtown. External sources such as the Downtown Master Plan, future population and employment forecasts in the LAMPO travel demand model, and historic traffic volumes will be incorporated in the development of the growth forecasts.

It is recognized that the LAMPO travel demand model will be updated as part of a separate project that will run parallel to this study. When the LAMPO model update is complete, the downtown traffic simulation model will be checked/compared with the LAMPO travel demand model and adjusted as necessary.

Deliverables:

- A technical memorandum will be prepared that documents the development of the traffic simulation models and calibration of the base year model.
- Traffic model files
- Other collected data

2.0 Existing Conditions Analysis

An analysis to define the current state of the downtown transportation will be conducted. The analysis will include:

- A multimodal capacity and level-of-service (LOS) analysis of streets using the methodology in the 2010 Highway Capacity Manual. This “complete streets” approach provides levels of service for each of the primary travel modes within the urban street right-of-way: autos, pedestrians, bicycles and transit riders.
- A crash analysis to identify and quantify high-crash locations and potential causative factors within the study area.
- An evaluation of the traffic signal system and existing signal timing plans in their capacity to serve current traffic and pedestrian demands.
- An overview to identify environmental, safety, cultural, historic and other “red flags” and important potential impacts associated with conversion to two-way operation.

Deliverables:

- Multimodal LOS analysis technical memorandum
- Crash analysis technical memorandum
- Traffic signal system assessment
- Environmental overview

3.0 Future Travel Demand

As stated in Task 1.3, future travel demand will be projected not for specific target years but instead for target growth scenarios, which disconnects growth potential with a specific timeframe. Travel demand projections will be developed for two growth scenarios:

- Modest Growth Scenario
- High Growth Scenario

Future Downtown multimodal demand volumes will be developed in conjunction with the Technical Steering Group (TSG) for the Modest and High Growth scenarios. These forecasts will be used upon approval by the TSG. Components of this growth will include:

- An increase in automobile trips based on the LAMPO Travel Demand Model and incorporating specific projects such as the Centre Pointe development, Rupp Arena/Lexington Center revitalization, and the Distillery District;
- Increased pedestrian activity, especially pedestrian street crossings at intersections;
- Increased bicycle volumes along Downtown streets; and
- Increased transit vehicles, routes, and/or decreased bus headways.

Forecasted growth in pedestrian and bicycle volumes will be developed in conjunction with the TSG and will include the aforementioned projects plus related plans such as the Downtown Master Plan, the Comprehensive Plan, and the Lexington MPO Regional Bicycle and Pedestrian Plan.

Multiple forecasts will be developed for automobile, pedestrian and bicycle traffic. Regarding changes to the transit system, Stantec will coordinate with the LFUCG and LexTran to project future transit routes, bus ridership and bus headways. Coordination will include anticipated growth in transit ridership and corresponding service increases, as well as discussion of a potential future location for the downtown transit center.

4.0 Alternatives Identification and Evaluation

The following principles will guide the development and evaluation of transportation network alternatives:

1. Evaluate the potential operational and safety impacts of converting each of the one-way streets to two-way.
2. Develop alternatives for making the conversions and mitigating the impacts.
3. Evaluate the effectiveness of the alternative mitigation strategies.
4. Based on direction from the Technical Steering Group and the Policy Advisory Group regarding which one-way streets should be recommended for conversion to two-way, develop a multimodal downtown transportation plan that optimizes mobility (the ability to move people and goods) that also is consistent with the objective to enhance the “sense of place” for downtown Lexington.

“Alternative” incorporates physical changes to the street system plus corresponding changes to traffic control (such as signal timing). Alternatives include conversion of specific one-way pairs to two-way or other improvement projects (such as roundabout intersections) need to implement two-way conversion or to enhance mobility. “Scenario” refers to travel demand that will be evaluated for an alternative: 1) Existing; 2) Moderate Growth; or 3) High Growth. For each analysis scenario, the typical weekday A.M., Mid-Day and P.M. peak periods will be analyzed.

The following alternatives will be evaluated:

- A. All one-way streets converted to two-way
- B. Main Street/Vine Street converted to two-way*
- C. High Street/Maxwell Street converted to two-way*
- D. Limestone Street/Upper Street converted to two-way*
- E. Short Street/Second Street converted to two-way*
- F. Up to three combinations of B. through E. above
- G. The “downtown mobility plan” that includes one-way streets to be converted to two-way, recommended mitigation strategies, and corresponding strategies for non-auto modes – pedestrians, bicycles and transit.

* All other one-way streets remain as one-way

Each of the scenario alternatives will include an incident that occurs on a key converted two-way segment. Incidents are considered to be non-recurring events that disrupt traffic flow and shall include vehicle crashes, emergency vehicles, and service vehicles. The details of the incident (i.e. location, extent and duration) will be determined in consultation with the Technical Steering Group before the analyses are performed).

For each of the alternatives and combinations of alternatives evaluated, performance measures and other metrics will be computed or identified and will include:

Arterial Street Operations

- Travel Time
- Average Travel Speed
- Intersection Delay
- Queue Lengths
- Congestion “Hot Spots”

Transportation System

- Vehicle-Miles of Travel
- Vehicle-Hours of Travel

Multimodal

- Level of Service
- Impacts on Pedestrian, Bicycle and Transit Operations

Safety

- Comparative Conflicts
- Anticipated Crash Reduction

Environmental

- Cultural Resource Impacts
- Affected historic properties and structures
- Other environmental “red flags”

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- Potential air quality impacts and impact on attainment status for air quality conformity

Infrastructure

- Capital Cost
- Impacts on Parking Lots, Garages

Others

- Impacts on Truck Loading, Unloading
- Business Impacts/Economic Benefits
- Neighborhood and Community Impacts
- Signing/Wayfinding
- Special Events Impacts
- Impacts on Emergency Vehicles and Incident Response
- Public Preferences
- Opportunities for Streetscaping, Other Amenities

In addition to those metrics listed above, other measures may be generated throughout the course of the study that will be used to evaluate and compare alternatives.

For each alternative that is evaluated, problem areas or congestion “hot spots” will be identified. Problem areas that were identified in the 2007 study include the High Street-Maxwell Street “yoke” at Woodland Avenue and the Rose Street intersections with Main Street and Vine Street. Other problem areas have been identified since then, including the section of Short Street west of Broadway, in the vicinity of the Explorium and Opera House. Options for mitigating the impacts of conversion on these areas will be included in the evaluation of alternatives.

For each alternative, once the problem areas or congestion “hot spots” have been identified and once the impacts have been quantified:

1. Mitigation measures and strategies will be developed to improve operations and safety, improve pedestrian and bicycle mobility, and enhance business activity and downtown vibrancy;
2. Alternatives will include phasing and prioritization, parking recommendations, streetscaping, signal timing and other parameters needed for two-way operation; and
3. Downtown mobility and business accessibility as a whole will be considered.

Evaluation of alternatives will include the identification of future projects and developments that will affect traffic flow and circulation. Specifically, these will include completion of the Newtown Pike Extension (Oliver Lewis Way), renovations to Rupp Arena and the Lexington Center, the Centre Pointe Development, relocation of the Transit Center and potential construction of towers in the current location, and other downtown developments. Other “peripheral” developments having likely impacts will be identified as well, such as the Bluegrass Community and Technical College campus construction on Newtown Pike and developments on the UK campus.

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Consideration of Special Events

Special events traffic will not be modeled specifically, but a qualitative evaluation of special events and how they will impact traffic operations on two-way streets will be performed. Specifically, special events at Rupp Arena/Lexington Center will be addressed with respect to impacts on traffic circulation, pedestrian flow, and emergency response.

Deliverables:

- Technical memorandum summarizing the evaluation of alternatives and including an evaluation matrix
- Technical memorandum summarizing impacts of two-way streets on special events traffic

5.0 Community Involvement

The community involvement effort will seek to engage the general public, stakeholders, businesses, neighborhoods, schools and churches, and other impacted groups to identify issues and concerns, determine support and opposition, and build consensus for a Downtown Mobility Plan. Individual elements of Public Participation are discussed below.

5.1 Technical Steering Group Meetings

A project Technical Steering Group (TSG) will be established to serve in an advisory capacity in determining prioritization of study elements, alternatives to be evaluated, revisions to project schedule, and other decisions likely to arise. It is anticipated that the TSG will include representatives from:

- Mayor's Office
- LFUCG Planning
- LFUCG Engineering
- LFUCG Traffic Engineering
- Kentucky Transportation Cabinet
- LexTran
- Lexington & Fayette County Parking Authority (LEXPARK)
- Lexington Downtown Development Authority

Also it is recognized that representatives from additional stakeholders may be added to the TSG.

Monthly meetings will be held with the TSG at which time Stantec will update the study progress, present results from technical evaluations, and identify study issues. Summaries will be prepared and submitted to document meeting attendees and discussion topics.

5.2 Policy Advisory Group Meetings

A Policy Advisory Group will be formed, as appointed by the Mayor, to receive briefings and give guidance on decisions with policy implications. Stantec will meet with the Policy Advisory Group periodically throughout the study as needed. Meetings will include a summary of progress to-date, issues to be addressed, and results of analyses as they become available.

5.3 Key Stakeholder Meetings

It will be necessary to meet with key stakeholders in the process for the purpose of exchanging information and listening to concerns. Key stakeholders will include but are not limited to:

- Individual members of the Lexington-Fayette Urban Council
- Kentucky Transportation Cabinet officials
- Rupp Arena, Arts and Entertainment District Task Force
- Lexington Fire, Police and Emergency Management Officials
- Lexington Opera House
- Explorium of Lexington
- Commerce Lexington
- Downtown-Area Businesses
- Downtown-Area Neighborhoods
- Downtown-Area Churches and Schools
- Downtown Developers

Stantec will initiate and lead these meetings at the direction of the LFUCG Project Manager. Following each meeting, Stantec will prepare and submit a written summary. Stantec will participate in up to 15 total meetings with key stakeholders.

5.4 Public Meetings

Three (3) public meetings will be held during the study. These will be open house-style meetings that also will include brief presentations. The meetings will be held in adequate and accessible locations at times that will facilitate the highest level of participation. Some or all of the meetings will include the use of electronic real-time polling to obtain participant input.

The following is a breakdown of the individual meetings and anticipated topics:

Public Meeting No. 1

- Identification of Key Concepts and Issues
- Community Concerns
- Study Goals and Objectives
- Snapshot of Existing Conditions

Public Meeting No. 2

- Future Travel Demand
- Identification and Evaluation of Alternatives

Public Meeting No. 3

- Proposed Downtown Mobility Plan

5.5 Other Meetings and Presentations

As directed by the LFUCG Project Manager, presentations will be made to the Lexington-Fayette Urban County Council and the Lexington Area MPO Transportation Policy Committee, which will include the Lexington Area MPO Transportation Technical Coordinating Committee and the Lexington Area MPO Congestion Management Committee. These presentations will include study progress, identification of issues, and evaluation alternatives as applicable.

5.6 Website and Social Media

Stantec will develop and maintain a project Website for the purpose of providing project-related information and obtaining public input. The Website will be used to administer online versions of surveys that are conducted at public meetings for the purpose of maximizing community participation. As deemed appropriate by the LFUCG, social media – specifically Facebook and Twitter – will be used to supplement the Website and provide information about the project as well as public meeting announcements.

Deliverables:

- Technical Steering Group summaries
- Stakeholder meeting summaries
- Project Website

6.0 Downtown Mobility Plan

Based upon the analysis of alternatives, stakeholder input and public input, a recommended Downtown Mobility Plan will be developed. Every attempt will be made to develop a consensus or at least broad support for the plan. The plan will include:

- One-way street pairs to be converted to two-way
- Measures to mitigate the impacts of one-way conversion, including problem areas and congestion “hot spots”
- Conceptual drawings and cost estimates of capital improvements needed to implement the plan
- Recommendations for pedestrian, bicycle and transit improvements
- Identification of opportunities and development of concepts and costs for improving aesthetics, community character, and relationships through urban design principles
- Proposed phasing scheme to implement the plan
- Proposed timing plans for the downtown signals impacted by two-way street conversion

- Recommendations for changes to parking ingress/egress for affected lots and structures
- Recommendations for delivery truck operations and loading/unloading zones

Deliverables:

- Downtown Mobility Plan Executive Summary (the final report will include a detailed discussion of the Plan)
- Conceptual drawings for capital roadway and streetscaping improvements

7.0 Final Report

A final report will be prepared that documents the study results and presents the conclusions. The report will include an Executive Summary. A draft report will be submitted to the TSG. The report will be finalized upon TSG review and comment. Twenty (20) printed, bound copies of final the report will be submitted as well as an electronic version in PDF format.

8.0 Schedule

The time frame for the study will be fourteen (14) months from Notice to Proceed. A detailed schedule of individual tasks, planned meetings and deliverable dates is shown in **Figure 2**.

**Newtown Pike Extension
May 8, 2012**

Phase I (Redevelopment/Mitigation Area)

- On April 5, AU Associates- a woman owned Business Enterprise- was selected to be the developer for financing and construction of the rental units in the new neighborhood.
- All houses along DeRoode Street are vacant and slated for demolition, with the exception of one structure on a property that is undergoing eminent domain proceedings.
- Fitzsimmons Office of Architecture is beginning design of renovations for the Carver Center.
- Design plans for the mitigation area are approximately 50% complete.
- Regarding the noise wall along the railroad yard, all foundation work is complete, wall panels are being fabricated now and installation will begin in late May or June.
- Combined utility and construction costs for the redevelopment area are estimated at \$10.5 million; funds are programmed.

Community Land Trust

- The KYTC has approved the third installment of payment to the Community Land Trust.

Phase II (Versailles Road to South Broadway)

- Design plans are approximately 50% complete.
- The KYTC is proceeding with acquisitions for the 21 “total takes” within Phases II and III. These include the Nathaniel Mission and Harry Gordon Steel.
- A series of meetings have been held with Nathaniel Mission representatives and various scenarios investigated relative to temporary or permanent relocation of the Mission. Discussions remain ongoing.
- Utility costs are estimated at \$5.4 million and construction costs at \$16.1 million; funds are programmed.

Phase III – (Scott Street Connector)

- Final design has not begun on this section.
- Utility costs are estimated at \$3.5 million and construction costs at \$8.7 million; funds are programmed for beyond 2014.

Phase IV – (Main Street to Versailles Road)

- Utility companies continue to work through the KYTC to bury cables. To date only one aerial communication cable remains to be buried.

KY 1927 – Liberty/Todds Road Widening
Section 2
May 8, 2012

Project Description

The project begins on Todds Road near Andover Forest Drive, where the Liberty/Todds Road Section 1 improvements ended, and extends 1.6 miles southeast to the future Polo Club intersection just east of the I-75 overpass. The project will widen the existing rural 2-lane section of Todds Road to an urban 2-lane section plus a center turn lane, bike lanes, curb and gutter and sidewalks. Existing right of way will be utilized for new construction as much as possible to minimize new right of way acquisition.

Design Phase

The design plans are approximately 60% complete. A contract modification was approved by Council just over a year ago, to complete the design, incorporating changes resulting from the Practical Solutions Review with the project review team. The funding/reimbursement agreement for this contract modification was just received from KYTC and is going through Council now. The project will be split into 2 phases due to the considerable construction cost anticipated. Phase 2A will be from Kimbolton Drive/Cypress Point Way to Andover Forest Drive/Forest Hill Drive and Phase 2B will be from Polo Club Blvd to Kimbolton Drive/Cypress Point Way.

Right of Way Phase

When design is nearly complete, the right of acquisition process may begin. \$1 million is programmed in the Transportation Improvement Program (TIP) in FY12 for right of way acquisition.

Utility Relocation Phase

Approximately \$2 million is programmed in the TIP in FY13 for utility relocation.

Construction Phase

Construction funding, currently estimated at \$10 million, is beyond FY14 in the TIP.

Planning & Public Works Committee Referrals

<u>Item</u>	<u>Referred By</u>	<u>Date</u>	<u>Status</u>
Oliver Lewis Way Project	Blues	4-9-09	Quarterly Update/ May 2012 Moved from PS/PW Committee
Todds Road Widening Phase II	Stinnett	4-15-10	Quarterly Update/ May 2012 Moved from PS/PW Committee
Erecting Large Utility Poles in ROW	Martin	3-12-10	Moved from PS/PW Committee
Re Paving Program	Martin	4-13-11	Moved from PS/PW Committee
Working with Fayette County Public Schools to Sustain Road Salt Services	EQ Link	6-19-11	Moved from PS/PW Committee
Downtown Traffic Management & Revitalization Study	Stinnett	8-16-11	Law/Building Inspection Review
Right of Entry & Administrative Warrants	Beard	9-27-11	April 17 2012
Review Chapter 4 of UCG Code re Harboring Animals In Residential Areas	Martin	9-27-11	David Leonard June 2012
Review Street Tree & Tree Protection Ordinances			
Article 16 Zoning Ord: Off Parking Requirements/ Stormwater Management	Lawless	11-22-11	
Building Permit Extensions in ND-1 & H-1 Designated Areas	Lawless	2-21-12	

5.2.2012