County Road Board

½ Cent Transportation Sales Tax Fund
Gateway Green Light

March 20, 2018
Mission Statement

The mission of the County Road Board is to recommend to the County Executive road improvements to be funded by the County's 1/2 cent transportation sales tax that promote safe travel on our local roads and enhance our communities.
County Ordinance

Priorities

• New Arterial Roadways or Improvements to Existing Arterials

• Congestion Mitigation / Safety

• Economic Development Enhancement Projects
Past Expenditures

• Since 2008, the County’s ½ cent transportation sales tax has provided over $250 million in County funding to construct over $400 million in transportation improvements.

• With changes in available funding the County funding percentage has varied by year from as little as 47 percent to as much as 88 percent of total project costs, with a 10-year average of 62 percent.

• The proposed 2018 TIP will provide over $15 million in County funds to construct over $25 million in improvements, a funding percentage of just over 60 percent.
General Timeline for Normal Application Process

- Solicitation for Project Applications: January – May
- Scoring: June
- Presentations: June – July
- Ranking: July
- Recommendation: August – September
- Approval of TIP: November/December
# 2018 Applications Overview

## Types of Projects

<table>
<thead>
<tr>
<th>Types of Projects</th>
<th># of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial Road Improvements</td>
<td>2</td>
</tr>
<tr>
<td>Congestion Mitigation</td>
<td>4</td>
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<tr>
<td>Safety</td>
<td>4</td>
</tr>
<tr>
<td>New Road</td>
<td>4</td>
</tr>
<tr>
<td>Study</td>
<td>2</td>
</tr>
<tr>
<td>Bridge</td>
<td>2</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>22</strong></td>
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</table>
Scoring and Project Selection

Data Driven

- Pavement Conditions
- Crash Data
- Travel Times / Delay
- Travel Demand Model
# Recommended Projects

<table>
<thead>
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<tr>
<td>Arterial Road Improvements</td>
<td>2</td>
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<tr>
<td>Congestion Mitigation</td>
<td>3</td>
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<tr>
<td>Safety</td>
<td>1</td>
</tr>
<tr>
<td>New Road</td>
<td>2</td>
</tr>
<tr>
<td>Study</td>
<td>2</td>
</tr>
<tr>
<td>Bridge</td>
<td>2</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL** 15
Economic Development

Road Board Economic Development Application

PROJECT INFORMATION
Name:
Limits:

CONTACT INFORMATION
Sponsoring Agency:
Contact Person Name:
Title:
Telephone Number:
E-mail Address:

PROPERTY OWNER INFORMATION
Contact Person Name:
Title:
Telephone Number:
E-mail Address:

DEVELOPER INFORMATION
Contact Person Name:
Title:
Telephone Number:
E-mail Address:

TENANT INFORMATION
Please list both the identified and proposed tenants and provide a brief description of their business.

ECONOMIC IMPACT TO COUNTY:
Is the project in an underserved or economically distressed area? Describe.

Temporary Job Creation, including construction (G): Average Wage:
Permanent Job Creation (G): Average Wage:
Existing Jobs Retained (G): Average Wage:
New Investment:
Net New Property Tax to the County:
Net New Sales Tax to the County

PROJECT FINANCING PLAN:
ITEM COST
Road Improvement:
Other Public Infrastructure:
SUBTOTAL:
Acquisition of Land & Existing Buildings:
Architectural and Engineering:
Site Preparation:
Materials:
Labor:
Construction Contracts:
Utility Connections:
Paving & Landscaping:
Renovation Costs:
Machinery & Equipment:
Other:
SUBTOTAL:
GRAND TOTAL:

FUNDING FOR IMPROVEMENTS:

<table>
<thead>
<tr>
<th></th>
<th>County</th>
<th>City</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Right-of-Way</td>
<td></td>
<td></td>
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<tr>
<td>Utility Relocations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>PERCENT (%)</td>
<td></td>
<td></td>
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</tbody>
</table>
Recent Projects

NorthPoint Development – Wentzville

- Roadway Improvements associated with the 1.1 million square foot Logistics Center on MO Route A near Highway 61
- 400 New Jobs
- Roadway Improvements included:
  - New Roadway connection on site
  - Improvements to Route A intersection
  - New signals at Route A and I-70 interchange
- Total Roadway Cost = $5,836,000
  - 50% County
  - 5% Other
  - 45% City
Goals and Objectives

**Goals**

To *reduce travel times, delays*, fuel consumption, greenhouse gas emissions and incidents, and to *increase mobility and reliability* of travel in St. Charles County.

**Objectives**

- Build a communication network to support a county-wide Advanced Traffic Management System (ATMS)
- Procure and install ATMS software and hardware needed to manage all signals in the county from a centralized location
- Develop and optimize coordinated signal timing plans
- Supply and install supporting Intelligent Transportation System (ITS) devices such as pan tilt zoom (PTZ) cameras, dynamic message signs (DMS), count stations, and travel time sensors
- Monitor traffic during peak hours
Multi-Agency Partnering
Multi-Agency Partnering

- 2009 - Periodic Stakeholder Meetings
- 2011 - Monthly Stakeholder Meetings
- 2012 - Gateway Green Light Advisory Board Formed (MOU)
- 2015 - Technical Advisory Committees to the Board
- 2016 - Quarterly Performance Measure Reports, Citizen Surveys
- 2017 - Survey Results, Public Outreach
- 2018 - Full-time County GGL Project Manager
Project Overview

- Federal Funding awarded for 6 phases so far
- Over $14 million in Federal Congestion Mitigation & Air Quality (CMAQ) Funds
- Phase 2 construction was completed Summer 2017
- Phase 3 constructions will be complete Spring 2018
- Phase 4 construction is scheduled to begin Summer 2018
ATMS / ITS Management

- TransCore TransSuite software selected as GGL ATMS
- Same Platform as MoDOT’s ATMS
- Supports multiple brands and types of controllers and other ITS & ATMS field devices allowing for competitive bidding
Project Status

- 340 Signals
- 90 Travel Time Detectors
- 45 CCTV
- 1 DMS (2 more this Spring)
- 11 Radios
- 95 Video Detection Systems
Project Status

https://ggl-traffic-lite.com/TransSuite.Map/
Project Status

MS2 – Count Module

http://sccmo.ms2soft.com
Signal Optimization Efforts

The ATMS combined with signal timing projects initially resulted in as much as 16% improvement in Average Travel Time on some routes.
Signal Optimization Efforts

Muegge Rd. Signal Optimization – 2014 Project

Table 2
Annualized Savings Due to Improved Coordination
Muegge Rd
St. Charles, MO

<table>
<thead>
<tr>
<th>Cost or Emission Measure</th>
<th>Pre-Study</th>
<th>Post-Study</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Annual Fuel Consumption (gallons/year):</td>
<td>2,586,845</td>
<td>2,450,090</td>
<td>136,755</td>
</tr>
<tr>
<td>Estimated Annual Operating Costs (dollars/year)*:</td>
<td>$6,984,482</td>
<td>$6,615,243</td>
<td>$369,239</td>
</tr>
<tr>
<td>Estimated Annual Pollutant Emissions (pounds/year):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOC</td>
<td>86,346</td>
<td>78,661</td>
<td>7,685</td>
</tr>
<tr>
<td>CO</td>
<td>661,588</td>
<td>573,340</td>
<td>88,248</td>
</tr>
<tr>
<td>NO</td>
<td>154,782</td>
<td>154,485</td>
<td>297</td>
</tr>
<tr>
<td>Total (VOC, CO, NO):</td>
<td>902,716</td>
<td>806,485</td>
<td>96,231</td>
</tr>
</tbody>
</table>

*Based on Average Automobile Fuel Cost for the State of Missouri in November 2014 ($2.70/gallon Regular Unleaded) as Reported by AAA Motor Club.

5% reduction in fuel consumption
10% reduction in pollutant emissions
10% reduction in PM travel time northbound
45% reduction in PM travel time southbound
Performance Measures

- Customer surveys will compare public perception versus measured performance
Customer Survey

71% of survey responses in 2016 indicated signalized roadways.

**CONGESTION**

Perception of congestion?

- 17%
- 75%
- 8%

Where?

- Local unsignalized roadways: 2%
- Minor signalized roadways: 29%
- Major signalized roadways: 42%
- Interstates & freeways: 27%
Special Events

A pre-planned event that results in a huge spike in traffic for a limited amount of time:

- August ‘17 Eclipse
- St. Patrick’s – Cottleville
- 4th of July – St. Charles
- Family Arena Events
- “Black Friday” Shopping

Total number of events handled in previous 12 months: 45

For the August ‘17 Eclipse, traffic signals county-wide were programmed, after morning rush, to favor traffic flowing into the “totality area”, and then during the eclipse, signals were changed to favor traffic out of the “totality area” for the rest of the afternoon.
Non-Recurring Congestion – Major Crashes

Unplanned events that quickly shifts traffic patterns requiring immediate action to mitigate diversions.

Example:
Freeway crash that closes multiple lanes during peak hours for hours.

Friday, June 30: 10 vehicle crash on I-70 WB resulting in full WB closure for ~2 hours. Traffic was officially diverted at TR Hughes however, Bryan Road was observed via CCTV to also being utilized. Diversion plans at MoDOT and O’Fallon signals were implemented.

Total number of events handled by GGL staff in previous 12 months: 13
Future Phases

Data Sharing

Connected Vehicles
Questions?

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