APPLICATION FORM
OKI SUB-ALLOCATED FEDERAL FUNDS
(OHIO—STP, CMAQ; KY—SNK; INDIANA—STP, CMAQ)
Revised October 2009

APPLICANT INFORMATION

Applicant:	Clermont County Transportation Improvement District
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PROJECT INFORMATION

Describe the proposed project, including location, length of project, termini and scope. If this is a capacity adding project, it must be included in the OKI Metropolitan Transportation Plan (MTP)

This project is for the comprehensive Phase Two implementation of advanced traffic management technologies known as the Clermont County Phase Two Intelligent Transportation System (hereinafter referred to as "Project"). This Project is unique in that it continues development of the ITS system by providing an integrated group of highly cost-effective Transportation Systems Management (TSM) improvements across a large geographic area as illustrated in **Exhibit A**. As can be seen in the this exhibit, there are four groupings of traffic signals that have initially been identified as separate and distinct traffic management areas: the Business 28 Project Area, the SR 28 / US 50 / Rivers Edge / SR 450 Project Area, the Eastgate Project Area, and the Clough / Mt. Carmel Tobasco Project Area. The key elements of the Project are listed below. Additional detail on Project scope and technology is provided in **Exhibit B**:

- Optimization of signal timing at all of the County's and applicable municipal signals; signals will be interconnected and synchronized in the Eastgate area and in other areas where it is feasible to provide coordination between locations;
- Signal controller equipment upgrades at 26 traffic signals so that they may be fully coordinated and integrated into the ITS system;
- Installation of light-emitting diode (LED) signal indications at 37 intersection locations and at 17 school zone locations to improve traffic safety and reduce energy consumption;
- Installation of advanced video detection devices (with traffic counting capability) at 28 traffic signals to provide more reliable traffic operations and continuous traffic counting at these critical locations;
- Installation of closed-circuit television cameras (CCTV) at 18 locations to aid in active traffic management, incident management, and enhance the safety and security of 3 park-and-ride lots;
- Installation of hardware and software for a centralized County Traffic Management Center (CTMC) at the Clermont County Engineer's Office (CCEO) to monitor and manage traffic signals and other devices, support incident management and construction traffic management, and provide travel information to the public and emergency responders (this system will be linked to the regional ARTIMIS system);
- Installation of pedestrian signal installations (detection and indications) and supporting facilities at 2 locations with pedestrian accessibility needs;
- Installation of 1 stream monitoring gauge at a location with historical roadway flooding, to provide automatic notification of high-water events and activate road closure warning devices and/or gates, where appropriate;
- Installation of upgrades to the County's and CCTID's websites to provide traveler information from the TMC including: traffic flow information, traffic incident information, construction information, transit status information and live streaming video of traffic monitoring cameras;
- Installation of wireless ITS communications devices at all traffic signals, CCTV and other ITS locations to communicate with and control the above functions; and

- Initiation of a new County wireless communications system utilizing 3G technology and integrated with the existing copper hardwire and spread-spectrum radio communication systems currently deployed in the Eastgate on-street master controller systems. The 3G system will be transitioned to the significantly larger bandwidth 4G technology when available, currently anticipated to be in late 2010 or early 2011.

This Project will acquire, install and integrate all the necessary equipment, hardware, and software to accomplish the above elements of the CCTID's Phase Two ITS system.

Future phases of ITS technology implementation and expansion are anticipated and will continue to be coordinated with ODOT and other local jurisdictions as needed. The planned future projects include:

- Installation of full ITS system capabilities at all new traffic signals provided in projects built by the Clermont County Transportation Improvement District Regional Transportation Improvement Program (CCTID RTIP);
- Installation and use of Smart Work Zones in all CCTID RTIP roadway improvement projects;
- Integration of the Clermont County ITS system with ODOT traffic systems;
- Installation of Emergency Vehicle Preemption equipment on high-priority emergency response routes; Application of Advanced Vehicle Location (AVL) technology for Clermont Transportation Connection(CTC) and maintenance vehicles;
- Application of pavement condition sensors to support weather-related traffic management planning and operations; and
- Additional traveler information dissemination through use of Dynamic Message Signs (DMS) on major arterial routes.

This Project is unique in that its scope and geographic coverage does not allow it to easily fit some of the Transportation Factors for Highway Projects ranking criteria. Therefore, six (6) representative corridors have been selected from the four project areas shown in Exhibit A to provide data relative to Safety, LOS, ADT, Truck %, and Functional Classification. An "average" was then developed for the group of corridors to best represent the collective impact of the Project in these ranking criteria.

COST ESTIMATE

Phase	Requested Funds	Local Match	Total Project Estimate
PE (Indiana Only)			
Design (KY Only)			
ROW*			
Utility (KY & IN)			
Construction	$2,168,000.00	$542,000.00	$2,710,000.00
TOTALS			
Percentages	80%	20%	100%
If applicable:			
Costs for bike/ped Portion of project	$43,040.00	$10,760.00	$53,800.00

* ROW includes utility costs in Ohio

Attach a certified cost estimate Engineer's Seal or other Generally Accepted Standard

Fiscal Year (July 1 through June 30) for which funds are being sought (by phase): The certified cost estimate for this project is attached as **Exhibit C**.

CURRENT STATUS OF PROJECT DEVELOPMENT:

The Clermont County ITS system began several years ago with the installation and maintenance of 50 traffic signals as shown in **Exhibit A**. While these traffic signals are foundational elements of the County's intelligent transportation system (ITS), the CCTID and other County/local agencies have also installed ITS improvements and a number of advanced ITS technologies to better address local Transportation System Management and safety needs. These elements include:

- two coordinated on-street traffic signal systems in the Eastgate area, one north of SR 32 and one south of SR 32 (designated on **Exhibit A**);
- installed advanced traffic signal controllers at approximately 13 intersections;
- installed light-emitting diode (LED) traffic signal indications at approximately 17 intersections; and
- installed GPS-based emergency vehicle signal preemption at 30 intersections in Miami Township through a Federal grant.

Phase One of the Clermont County ITS (CCITS) also involves the interconnection and coordination of the two separate on-street master signal systems in the Eastgate area as shown in **Exhibit A** (this project is currently under design for a 2010 implementation);

The CCTID also has several additional TSM/ITS projects currently planned or in progress and they include:

- development of a long-range ITS Master Plan for the County;
- development of a county-wide wireless communications system which will serve all current and future ITS installations as well as other important County services, initially operated with 3G bandwidths and transitioning to 4G bandwidths in late 2010 or 2011; and
- installation of approximately 12 new traffic signals utilizing advanced controllers and LED signal indications through projects in the CCTID RTIP and other sources.

This Phase Two ITS project is a critical element of the CCTID's overall Transportation Demand Management (TDM) program that is being implemented for the entire CCTIP. Upgrading and interconnecting the backbone traffic signal system, along with integration of the other initial advanced ITS technologies such as video detection and selective traffic surveillance cameras, will form the foundation of the TDM traffic management program. As area projects progress and the roadway and transit system expansions occur, additional ITS elements and strategies will be added to the TDM traffic management program.

This Phase Two Project being applied for has progressed through the initial planning analysis and project concept development, in coordination with other transportation system projects in the CCTID RTIP and OKI TIP. Development of final plans and specifications for the project is anticipated to begin in early Summer 2010 and will continue to be carefully coordinated with other existing and planned transportation system projects.

RELATION TO OTHER FUNDING SOURCES:

List any other funding sources contemplated or committed

No other funding sources are contemplated beyond this CMAQ grant and the CCTID matching funds.

RELATION TO OTHER LOCAL/REGIONAL IMPROVEMENTS:

Is Project part of a larger project or plan or adopted in a local plan with a budget?

The ITS improvements included in this project application are a part of the CCTID RTIP and are consistent with and support the implementation of nearly $29 Million of roadway improvements contained in eight (8) projects in the OKI Regional TIP. The CCTID and its member jurisdictions are investing over $13 Million of local funds to construct these projects. This ITS project will greatly assist CCTID, other local governments and ODOT in managing the tremendous traffic management challenges that will exist in the implementation of this near-$29 Million of programmed construction from 2010 through 2015. The projects included in this group of improvements are:

- US 50 – WHP to Round Bottom
- US 50 – SR 450/Eastman Drive Phase I/II
- Business 28 – Phase 1
- Wolfpen-Pleasant Hill Improvements

- SR 28 Improvements – I-275 to Castleberry
- Eastgate North Frontage Road
- Tina Drive Extension
- Stonelick-Williams Corner Covered Bridge

Additional ITS system expansion will occur as a part of other area projects in the CCTID RTIP and OKI Regional TIP as they are programmed and constructed beyond 2015.

This project will support the I-275/SR 32 Interchange Project (PID #76289).

This project will also be linked to the Advanced Regional Traffic Interactive Management & Information System (ARTIMIS) which provides incident, congestion, and freeway management for the OKI Metro Region.

This project supports, and is consistent with, the transportation policies and objectives, improvements, and TSM recommendations contained in several key planning documents. All ITS investments developed by Clermont County, Townships and Municipalities, and the CCTID to date have been supportive of, and consistent with, the following regional and state planning efforts:

- OKI Intelligent Transportation Systems (ITS) Architecture Update and Strategic Plan (2008)
- ODOT and ARTIMIS ITS system expansion concepts
- Part 13-Intelligent Transportation Systems of the ODOT Traffic Engineering Manual
- Eastern Corridor MIS, FEIS, ROD and other related corridor infrastructure and land use planning documents
- OKI Strategic Regional Policy Plan
- CCTID Regional Transportation Improvement Plan
- OKI 2030 Regional Transportation Plan
- Clermont County Thoroughfare Plan "Access Clermont" (update being adopted April 27, 2010)
- SR32 Corridor Land Use Vision Plan
- SR28 Corridor Access Management Plan
- Union Township Comprehensive Land Use Plan 20/20

LOCAL/REGIONAL SUPPORT AND ENDORSEMENTS:

Document public support for the project, including Environmental Justice communities

As discussed in the previous section, a number of key regional and local transportation and land use planning documents (Eastern Corridor, OKI ITS Architecture Update and Strategic Plan, Access Clermont, SR 32, SR 28, etc) have been developed in the past few years for areas of Clermont County. These documents were developed utilizing major public involvement efforts at which a wide range of transportation improvement concepts and strategies were discussed and finally endorsed with adoption of the plans. In each of these plans the importance of Transportation System Management efforts were discussed and recommended. For instance, the following excerpts from *Access Clermont* (County Thoroughfare Plan) illustrate the endorsement of TSM improvements such as this ITS project:

A major component of The Official Clermont County 2006 Thoroughfare Plan Update: Access Clermont is the application of Transportation System Management (TSM) improvement strategies. TSM strategies have been utilized in the 2006 Thoroughfare Plan Update to modify Clermont County's transportation system….to maximize performance and safety of existing road and transit systems and reduce the need for new highway capacity.

The *Access Clermont* Countywide TSM and Alternative Mode Strategies list identifies targeted TSM strategies specifically for Clermont County and its communities. A key strategy related to this ITS project is to "*support the efforts of local governments, the Clermont County Engineer and the Ohio Department of Transportation to improve signal timing on arterial roadway corridors."*

The Eastern Corridor Record of Decision calls for "*a multi-modal transportation program that increases capacity, reduces congestion and delay, improves safety and provides transportation options and connectivity to the region's key transportation corridors and social and economic centers for the efficient movement of people, goods and services.*" It further calls for Transportation Systems Management

(TSM) improvements at various locations in the corridor to address efficiency, capacity and service quality of the existing transportation network using lower cost measures such as improved signal timing which helps to reduce the need for new highway capacity.

The Union Township Comprehensive Land Use Plan 20/20 calls for TSM improvements to "*promote the improvement, convenience, and ease of travel on congested roadways*", all of which are addressed by this ITS project.

This project has been discussed with all member agencies of the CCTID and all are in support of its implementation. **Exhibit D** is a resolution passed by the CCTID Board of Trustees establishing this project and adding it to the CCTID Regional Transportation Improvement Plan (RTIP).

The project has also been discussed with representatives of ODOT's state-wide ITS program and District 8 traffic operations staff and they have expressed support for installation of the advanced traffic management technologies contemplated in this project. They also expressed support for continued integration of area transportation management systems, including ARTIMIS, with the CCTID ITS System.

DESCRIBE HOW THE PROJECT MEETS THE GOALS AND OBJECTIVES OF THE MTP

Refer to Goals and Objectives beginning on page 8

The Project will specifically address key goals of the MTP as follows:

1. Improve travel safety

The ITS improvements in this project will facilitate travel safety in a number of ways including: creating better signal operations which reduce the overall number of traffic stops and related crashes, improving incident detection, notification and response which will reduce incident duration and related secondary crashes.

2. Improve accessibility and mobility options for people and goods

This ITS project improves existing system linkage and regional connectivity through advanced travel demand system investment increasing mobility and accessibility for passenger vehicles, transit vehicles, trucks, pedestrians and bicycles.

3. Protect and enhance the environment

The ITS improvements contained in this project have been proven to benefit the environment by significantly reducing emissions resulting from traffic congestion and will reduce vehicle energy consumption. The LED traffic signals will also reduce energy usage.

4. Enhance the integration and connectivity of the transportation system

This project will facilitate improved integration and connectivity of the transportation system by improving on-time reliability of transit vehicles and through installation of operations cameras at CTC park-n-ride facilities.

5. Promote efficient system management and operation

This goal is the primary beneficiary of this ITS project as a well-timed, coordinated and monitored traffic signal system will reduce congestion, reduce overall vehicle stops and delays, improve emergency and incident management response, and improve monitoring and management of construction projects and maintenance activities throughout the street system.

6. Emphasize the preservation of the existing transportation system

This project preserves the existing transportation system by maximizing its operational efficiency, thereby serving more users with less overall investment.

7. Support economic vitality

This project enhances economic vitality by improving traffic and travel conditions, reducing congestion and providing increased traveler information to area businesses, employees and residents. In addition, this ITS system will be in place and play a major role in management of construction activities and maintenance of traffic as the CCTID RTIP and ODOT projects are constructed over the next 5 to 7 years. The availability of traffic cameras for system surveillance, 24/7 monitoring of traffic signals and improving traffic signal timing and operations will all aid traffic management and coordination activities for each project and across the street network as a whole. And last, a fully-synchronized and coordinated traffic signal system, supported by CCTV monitoring as needed, will allow for a much higher level of traffic management during peak shopping periods in the commercial areas.

8. Consider regional security

This project enhances local and regional security by detecting and responding to incidents and emergency conditions more efficiently. Cameras installed for traffic monitoring and management can also be used by public safety personnel for security applications consistent with County policy.

9. Strengthen the connection between infrastructure and land use

This project allows for maximum efficiency of street system operations, allowing streets to be operated in coordination with land use needs.

DESCRIBE HOW THE PROJECT MAY POTENTIALLY AFFECT STORMWATER RUNOFF IN THE AREA. (*SEE US EPA NPDES PHASE II Final Rule, Dec 2005)*

The project will comply with US EPA NPDES Phase II regulations as adopted in March of 2003 – the current permit became effective January 30, 2009. Please refer to the link below for further details.

http://permit.clermontcountyohio.gov/PhaseIIMar03plan.pdf

This project will not increase impervious area or involve major project construction. There will be a small number of localized project sites for pole installations and, as a result, there are no storm water impacts anticipated with this project.

TRANSPORTATION FACTORS FOR HIGHWAY PROJECTS ONLY

(*Any Capacity-Adding Project must be listed in the OKI MTP)*

This Project is unique in that its scope and geographic coverage does not allow it to easily fit some of the Transportation Factors for Highway Projects ranking criteria. Therefore, six (6) representative corridors have been selected from the four project areas shown in Exhibit A to provide data relative to Safety, LOS, ADT, Truck %, and Functional Classification. An "average" was then developed for the group of corridors to best represent the collective impact of the Project in the ranking criteria.

1. What is the existing safety condition of the project area?

_____ More than 9 accidents per MVM
X_____ More than 7 accidents per MVM
_____ More than 5 accidents per MVM
_____ More than 3 accidents per MVM
_____ More than 1 accident per MVM

The OKI Project Application Assistant did not have safety data for a majority of the corridor segments that are analyzed in questions 3 through 7. The Clermont County Engineer's Office provided accident data for representative corridors and one intersection. An average weighted rating of 7 accidents per MVM was determined to be representative for this group. (see CCEO **Exhibit E** - attached)

Segment	2007-09 Accidents	Segment Length (mile)	ADT	Accident Rate
Clepper Rd - Gleneste Withamsville to Eastgate South	41	0.52	7,803	9.23
Eastgate Blvd - Aicholtz to Old SR 74	163	0.93	20,191	7.93
Old SR 74 - From Gleneste Withamsville Rd to Schoolhouse Rd	114	0.8	18,359	7.09
Clough Pike @ Mt. Carmel Tobasco	94	1.0	13,457	6.38
Business 28 - Entire Length	97	1.24	13,205	5.41
US 50 - Cemetery Rd to Olympic Drive	36	0.66	18,669	2.67

2. What is the project impact on safety?
   X_____ High _____ Medium _____ Low _____ No Impact

Please explain: Safety is improved by this project in several ways including:

- Improved traffic signal timing optimization and coordination is estimated to reduce traffic stops by a minimum of 10%, and likely more. Reducing vehicle stops contributes to reduced rear-end accidents.
- Pedestrian signals will allow for improved pedestrian safety for roadway crossings
- Installation of LED traffic signal indications improves signal visibility and therefore contributes to improved signal awareness and compliance
- Installation of CCTV cameras allows for visual monitoring of traffic conditions in order to better understand the need to revise signal timing to address congestion and traffic incident conditions which will reduce accident potential
- CCTV cameras also allow for emergency responders (police, fire, ambulance) to view accident and incident scenes before arrival in order to select safer response routes and dispatch safety equipment more rapidly
- The stream monitoring gauge will alert motorists to flooded roadway conditions in advance of the hazard thereby allowing them to safely stop in advance

3. What is the existing LOS?
   X_____ E/F _____ D _____ C _____ B _____ A

For this area-wide project the level of service and congestion vary depending on the roadway segment and by time of day. In the most congested areas, LOS exists in the E/F range. LOS was taken from the results of the latest OKI Transportation Demand Model. (see **Exhibit F** - attached)

Segment	LOS
SR 32 – I-275 to Gleneste Withamsville	F
Eastgate Blvd – SR 32 to Aicholtz	D/E
Eastgate Blvd – SR 32 to Old SR 74	F
Old SR 74 - Gleneste Withamsville Rd to Mt. Carmel Tobasco	C/D
Mt. Carmel Tobasco – Clough to Old SR 74	C
Clough Pike – Amelia Olive Branch to Mt. Carmel Tobasco	C/D
SR 28 – I-275 to Wolfpen-Pleasant Hill	E

4. What is the impact on LOS?
   X_____ High _____ Medium _____ Low _____ No Impact

Please explain: Other than the number of lanes, efficient operation of the traffic signal system is the most important investment an agency can make in its transportation system. It is also the most cost-effective investment that can be made to improve the operation of the street system and ensure maximum capacity from the roadway.

5. What is the current Average Daily Traffic (ADT)?
   X_____ Source of ADT data OKI Project Applicant Assistant
   (If the project involves several roadway segments, an average should be used and documented)

   The average ADT for these six segments is 19,700.

Segment	ADT
SR 32 – I-275 to Gleneste Withamsville	28,554
Eastgate Blvd – SR 32 to Aicholtz	24,254
Eastgate Blvd – SR 32 to Old SR 74	12,454
Old SR 74 - Gleneste Withamsville Rd to Mt. Carmel Tobasco	15,454
Mt. Carmel Tobasco – Clough to Old SR 74	10,603
Clough Pike – Amelia Olive Branch to Mt. Carmel Tobasco	11,400
SR 28 – I-275 to Wolfpen-Pleasant Hill	15,503

6. Freight Corridors--What are the truck traffic volumes in the project area?
   X_____ Source of truck ADT data OKI Project Application Assistant___
   See table__Percentage of total ADT (question #5)

The average truck ADT is 710 and the average percentage of total ADT is 3.9%.

Segment	Truck ADT	% of Total ADT
SR 32 – I-275 to Gleneste Withamsville	1,770	6.2%
Eastgate Blvd – SR 32 to Aicholtz	461	1.9%
Eastgate Blvd – SR 32 to Old SR 74	162	1.3%
Old SR 74 - Gleneste Withamsville Rd to Mt. Carmel Tobasco	665	4.3%
Mt. Carmel Tobasco – Clough to Old SR 74	392	3.7%
Clough Pike – Amelia Olive Branch to Mt. Carmel Tobasco	251	2.2%
SR 28 – I-275 to Wolfpen-Pleasant Hill	558	3.6%

7. What is the roadway classification of this project?
   _____ Freeway/Expressway or Principal Arterial
   X_____ Minor Arterial
   _____ Collector

The "average" roadway classification for this group is considered Minor Arterial.

Note: This area-wide project includes improvements to several roadways and all roadway classifications are impacted. Benefits are expected to be more significant along higher-classification roadways due to the generally higher traffic volumes and accident experience.

Segment	Roadway Classification
SR 32 – I-275 to Gleneste Withamsville	Principle Arterial
Old SR 74 - Gleneste Withamsville Rd to Mt. Carmel Tobasco	Minor Arterial
Eastgate Blvd – SR 32 to Aicholtz	Collector
Eastgate Blvd – SR 32 to Old SR 74	Collector
Clough Pike @ Mt. Carmel Tobasco	Minor Arterial / Collector
Mt. Carmel Tobasco – Clough to Old SR 74	Minor Arterial
Business 28 - Entire Length	Minor Arterial
US 50 - Cemetery Rd to Olympic Drive	Minor Arterial

8. How has the Complete Streets concept been applied to the project? Which modes are being improved or added through this project?
   X_____ Motor vehicle
   X_____ Fixed transit route
   X_____ Pedestrian facility
   X_____ Bicycle facility
   _____ Separate shared use path
   _____ Traffic calming

   Please explain: The systems and technologies implemented with this project will greatly improve vehicular traffic flow (passenger vehicles, trucks, buses, etc) but will also provide additional facilities at signalized intersections for pedestrians and bicycles. CCTV monitoring of the critical intersections will allow for increased monitoring of traffic flow conditions and confirmation of the existence of pedestrians and bicyclists.

9. What is the existing status of the project?
   _____ Construction and/or ROW plans completed
   _____ P/E and Environmental complete
   X_____ Request for construction funding only (no ROW needed or already acquired)
   _____ Request for construction and ROW funding
   _____ Request for CON, ROW and PE/Design (Kentucky and Indiana only)

NOTE: THE TRANSIT AND NON-HIGHWAY FREIGHT SECTION HAVE BEEN REMOVED.

PLANNING FACTOR FOR ALL PROJECTS

23. What percentage of project is replacement and what percentage is expansion?
    100____ % replacement
    _____ % expansion
    Please explain:

This project preserves the existing system and does not add physical roadway system capacity. It does allow for maximum utilization and efficiency of the physical roadway system through the TSM/ITS improvements.

24. Environmental Justice

    a. Does your project have any impact(s) on any of the following OKI identified Environmental Justice groups? Check all that apply. See attached maps for details

_____ Minority X_____ Elderly X_____ Zero-car Household
X_____ Low-income X_____ Disabled

Please keep in mind that even if your project is not located in or adjacent to an identified Environmental Justice group, there still remains the possibility of impact on one of these groups. ***All applicants must fill in all questions of the Environmental Justice section for their application to be considered.***

b. During the implementation state, does the project have a negative impact or burden on any of the OKI identified EJ groups listed above? No negative impacts are expected with the implementation of this project on any of EJ groups.

If so, please describe the temporary negative impact: None Expected.

c. Does the completed project have a negative impact or burden on any of the OKI identified EJ groups? No negative impacts are expected with the implementation of this project.

If so, please describe the permanent negative impact(s): None Expected.

d. Describe any plans to mitigate the temporary or permanent negative impacts or burdens associated with the project: No Mitigation Is Necessary.

e. Describe any direct or indirect permanent benefits of your project on the identified EJ groups:

This project will make the area transportation system operate more efficiently and safely, smoothing traffic flow which will reduce traffic stops and delays. Pedestrian movements and safety (including elderly and disabled pedestrians) will also be enhanced through installation of pedestrian signals. Overall, these improvements will directly benefit drivers and pedestrians in all EJ groups. It will also indirectly benefit EJ groups who utilize the County transit system (particularly zero-car households) as they are expected to experience improved transit operations and increased security at transit stations through closed-circuit television cameras.

f. How are you planning to communicate with any of the OKI identified EJ groups about your project? (i.e. public meetings, bilingual information, develop community liaisons):

A project information meeting will be advertised and held during the final plans development process. This meeting will offer all local EJ communities and the general public the opportunity to learn more about the project and offer input as the plans are being developed.

25. Strategic Regional Policy Plan (SRPP)

a. If appropriate, please select one of the following:

_____ Is the project located in a town/neighborhood center or downtown area?

X_____ Is the project located in an area with a mix of uses with a central focus?

X_____ Is the project located along a functionally classified major collector or higher roadway with urban development characteristics?

X_____ Is the project located in an area that is experiencing strong growth pressures and expected and/or planned to develop into a mixed use/multi modal center?

Explain: As seen in Exhibit A, this project encompasses an area that includes portions of several major Federal and State highway corridors (I-275, SR 32, SR 28, SR 131, SR 125, US 50) and a number of major County roadway facilities. These corridors have experienced, and are continuing to experience, strong growth pressures that create need to advanced traffic monitoring and active management of the traffic signal system. Specifically, the project areas represented on Exhibit A are considered to be in these area types:

AREA	Town/ Neighborhood or Downtown Center	Mix of Uses with Central Focus	Collector or Higher w/ Urban Development	Strong Growth Pressure and Future Mixed Use
Business 28 Project Area			X	X
SR 28 / US 50 / Rivers Edge; SR 450 Project Area			X	X
Eastgate Project Area		X	X	X
Clough / Mt. Carmel Tobasco Project Area			X	X

b. Will this project serve brownfield or greyfield properties, or areas where infrastructure is underutilized? ____ Yes X____No
Explain: No significant brownfield or greyfield properties in the area will be impacted by this project.

c. Are efforts to avoid, minimize or offset/compensate for environmental impacts planned as part of this project (e.g. wetlands, forests, streams, noise)?
__X____ Yes _____ No
Explain: This project only includes equipment upgrades/installations or small spot construction sites. These sites will these be designed to meet all Federal, State and local regulations regarding environmental impacts.

d. Are green infrastructure strategies planned as part of this project (e.g. contiguous corridors to reduce habitat fragmentation, innovative stormwater runoff techniques)?
X__Yes ___No
Explain: This project will reduce emissions from improved traffic management and produce energy saving for the County through use of LED traffic signal indications. Overall it allows for maximum utilization of the existing transportation infrastructure and contributes to a reduced carbon footprint for the project areas.

e. Does this project abut or directly impact any potentially sensitive environmental resources (as identified in state conservation plans, maps or inventories)?
_____ Yes X_____ No
Explain:

f. General – which specific transportation objectives and policies of the SRPP does this project accomplish or promote?

This TSM/ITS project supports many aspects of the SRPP but in particular directly or indirectly accomplishes or promotes the following policies and/or objectives of the plan:

Policy 1.A.3. The transportation element of each local comprehensive plan will emphasize the high priority of access management and preservation and maintenance of existing transportation facilities and corridors, as appropriate.

Policy 3.C.2. Transportation investments that help to meet regional needs and maximize the effectiveness and efficiency of the transportation network will be given funding priority.

Policy 5.E.4. All levels of government will continue to promote reduction in vehicle miles traveled through such measures as provision of a street and parking network designed for pedestrians, the disabled, bicyclists, transit, and automobiles.

Objective 6.F. By 2012, transportation funding priority will be given to projects consistent with comprehensive plans that encourage the use of arterial and collector roadways for local trips.

Policy 6.F.3. All levels of government will give high priority to preservation and rehabilitation projects that make more efficient use of existing arterial and collector roadways.

Policy 6.F.4. All levels of government will emphasize access management and signalization along arterials to increase roadway efficiency.

Policy 7.G.1. Local and regional investments in transportation facilities and services will support compact, pedestrian, bicycle, and transit-friendly land uses, where appropriate, and facilitate travel demand management strategies.

Policy 7.G.2. Local comprehensive plans will support a mix of land uses, higher density development, and non-motorized connections to reduce single-occupant vehicle trips, where appropriate.

Policy 7.G.3. Local land use and infrastructure decisions and regional capital investments will support compliance with federal clean air standards.

26. Local Planning Factor

This factor will award up to five points to proposed transportation projects that are consistent with a comprehensive plan **or** other discrete studies or plans if the applicant can demonstrate that the plan meets similar analysis and content criteria. (Comprehensive plans typically do not address routine maintenance projects; however, routine maintenance is a key factor in preserving the region's existing transportation system. A project that is predominantly comprised of routine maintenance will receive 5 points regardless of the status of the jurisdiction's comprehensive plan because of its inherent system preservation function)

a. **Comprehensive Plan (or other):** Is the project consistent with the jurisdiction's comprehensive plan? __X___Yes _____ No

Title of Plan: 2006 Clermont County Thoroughfare Plan Update - Access Clermont_____
Date Adopted: April 27, 2010 *(currently in public hearing process)*_____
Contact Person: Ray Sebastian, Clermont County Planning Director_____

Title of Plan: CCTID Regional Transportation Improvement Program_____
Date Adopted: February, 2007_____
Contact Person: Steve Wharton, CCTID ___

Title of Plan: SR 28Corridor Improvements Plan_____
Date Adopted: February, 2009_____
Contact Person: Steve Wharton, CCTID_____

Title of Plan: Union Township Comprehensive land Use Plan 20/20_____
Date Adopted: September 11, 2001
Contact Person: Ken Geis, Township Administrator_____

Title of Plan: Ohio 32 Corridor Land Use Vision Plan_____
Date Adopted: September 2000_____
Contact Person: Dave Spinney, Clermont County Administrator_____

Title of Plan: City of Milford Comprehensive Plan_____
Date Adopted: 2008_____
Contact Person: Loretta Rokey, City Manager_____

Title of Plan: Eastern Corridor FEIS_____
Date Adopted: September 30, 2005_____
Contact Person: Ted Hubbard, Chief Deputy County Engineer_____

Title of Plan: OKI ITS Architecture Update and Strategic Plan_____

Date Adopted: March 2008
Contact Person: Robert Koehler, Deputy Executive Director, OKI

b. **Planning Area:** For planning documents other than local comprehensive plans, please identify the planning area (location) in relation to the proposed transportation project.

The multiple areas receiving TSM improvements in this project are covered by a number of plans, all of which are addressed in the section above.

c. **Data Analysis:** Generally describe the process of data gathering and analysis as the basis for the plan (Include page references to specific examples, where applicable).

The plans and studies noted in Section (a) above assessed natural features, economic conditions, cultural and historic resources, existing and proposed infrastructure (provided by the Clermont County Engineer, Clermont County Water Resources, and the applicable local jurisdictions), existing land use, zoning, planning documents, and public participation.

The 2006 Clermont County Thoroughfare Plan Update – Access Clermont expanded on the traditional method of thoroughfare planning (i.e. roadway hierarchies and a listing a specific projects) to a more comprehensive transportation planning approach that integrate alternative transportation modes, and transportation system management techniques. The plan specifically recommends improved passenger and goods movement travel time efficiency by coordination of mainline roadway traffic signal timing. A Countywide assessment of transportation service deficiencies and limitations was performed and is presented on pages 9-12 of the Thoroughfare Plan. See link below for a .pdf of the Clermont County Thoroughfare Plan:

http://planning.clermontcountyohio.gov/2006ThoroughfarePlanUpdateFull.pdf

d. **Public Participation:** Generally describe the public participation process for the plan (Include page references to specific examples, where applicable).

The plan and study processes noted in Section (a) above included broad public involvement efforts led by the responsible agencies and their consultants. The public participation process represented townships, villages, county officials, development community, institutions, business owners, property owners and neighborhoods. Numerous public meetings were held as these studies and plans were evolved and were developed and finally approved by the respective agencies.

Specifically, the Clermont County Thoroughfare Plan Update – Access Clermont included several public meetings to gather input from each township, village, and County office in Clermont County. Please see pages 2-6 for details.

e. **Core Contents:** Generally describe the contents of the applicable plan related to the following elements: transportation, land use, economic development, public facilities, housing, natural resources, recreation, intergovernmental coordination and capital improvements. For example, are each of these elements included in the plan? Was appropriate inventory and analysis completed for these elements? Were goals objectives and policies set for these elements? If not, why not (e.g., resource limitations, characteristics of the jurisdictions)?

The numerous plans and studies noted in Section (a) above addressed all of the core contents noted here. While there are too many to address in this application, the goals included in the County Thoroughfare Plan include:

(1) Maximize the performance and safety of existing roadway and public transit opportunities;
(2) Enhance economic development opportunities;
(3) Improve passenger transfer opportunities between private vehicles, public transit, and bike, pedestrian facilities;
(4) Provide transportation opportunities to those dependent on public transit;

(5) Protect quality of residential life; and
(6) Promote transportation-friendly land development practices.

f. **Goals, Objectives and Policies:** Generally describe how the project implements the goals, objectives and/or policies of the applicable plan (Include page references to specific examples).

As noted in the previous section, this ITS project implements the TSM goals of the numerous plans and study recommendations.

This project specifically implements the goals of planning documents through the preservation and enhancement of existing infrastructure, improved travel safety along the corridor. The project also enhances the economic development opportunities of the several areas receiving ITS improvements through improved traffic flow and safety as well as improved access for trucks, transit and other travel modes (bike/pedestrian) provided by the project.

g. **Land Use/Transportation Relationship:** Generally describe the relationship between land use and the proposed transportation project as set forth in the plan? For example, is new development in the area creating need for the project? Is new development planned for/expected that the project will serve? (Include page references to specific examples).

Existing land use and future growth are both driving the need for TSM improvements and this project as outlined in the many transportation, land use and economic planning studies and plans developed for this area. Almost all plans call for maximum utilization of the existing transportation network through TSM improvements, and that is the primary benefit of this ITS project.

h. **Implementation and Evaluation:** Generally describe the processes by which the plan will be updated and implemented (Include page references to specific examples, where applicable).

Each of the plans noted in Section (a) have their own process for being updated. The primary county transportation planning document, the Clermont County Thoroughfare Plan – Access Clermont, will be modified as needed to accommodate the dynamic nature of CCTID planning efforts on the major corridors in Clermont County. The thoroughfare plan is meant to be a living document and will incorporate all corridor planning efforts that are ongoing and the results of other regional planning efforts, such as Segment IVa of The Eastern Corridor.

27. Will the project reduce Vehicle Miles Traveled (VMT), Vehicle Hours Traveled (VHT) or both?

_____ VMT reduced
X_____ VHT reduced
X_____ Emissions Reductions (transit or diesel retrofits)

Please explain:

Improved traffic signal timing and operations have consistently shown that they produce significant improvements in traffic stops, delay and emissions. It is estimated that improper traffic signal timing accounts for 5 to 10 percent of all traffic delay in the United States, and that congestion causes the average peak-period traveler an extra 38 hours of travel time and an additional 26 gallons of fuel, amounting to a cost of $710 per traveler per year.

Other studies have shown that the benefits of investments in improving traffic signal systems outweigh the costs by 40:1 or more. Although these are national statistics, improvements of this magnitude can be expected to result from this Clermont County project.

Based on numerous studies of the benefits and costs of projects of this type, appropriately designed, located, operated and maintained traffic signals provided through this project can be expected to achieve the following results:

- provide for the smooth flow of traffic along streets and highways at defined speeds, thereby reducing congestion;

- increase the traffic-handling capacity of intersections to improve mobility through the use of appropriate control measures and regular reviews and updates to the operational parameters; and
- reduce the number of stops that vehicles make, thereby lessening the negative impacts to air quality, and reducing fuel consumption.
- create reductions in traffic delay ranging from 15-40%
- create reductions in travel time up to 25%;
- create reductions in stops ranging from 10-40%
- create reductions in fuel consumption of up to 10%.
- create reduction in harmful emissions (carbon monoxide, nitrogen oxides, volatile organic compounds) up to 22%

Beyond the benefits to vehicular traffic noted above, there will be indirect performance benefits for transit, pedestrians, and freight movement.

The observable outcomes that can clearly be attributed to the implementation of LEDs bear some relationship to air quality improvements, and there is a large amount of data available on LED traffic signals and the energy, maintenance and pollution savings achieved through their implementation. An excel-based tool was used to evaluate the energy, maintenance and pollution savings achieved through the replacement of incandescent traffic signals with LED signals. In summary, the benefits achieved from replacing incandescent traffic signals with LED signals is an annual CO_2 savings of approximately 566,000 pounds, equating to removing 62 vehicles off the road and an annual maintenance savings of approximately $18,500. (See **Exhibit G**)

28. How much additional local match is being provided OVER the required match?
    0_____ % **additional match over 20%** required match
    (This figure should correspond with that shown on the first page of the application)

29. What is the existing condition of the project area?
    X_____ Critical
    X_____ Poor
    _____ Fair
    _____ Good
    Please explain:

    The project area's transportation system improvements, while planned, are lagging behind the tremendous growth that has occurred in the western portion of the County, primarily along I-275 and major state highway corridors. As a result there is substantial and recurring congestion and delay along several major roadway corridors and intersections. These conditions have escalated over time and will not be appreciably improved until the major roadway system improvements are implemented. The projects that will address many of the current roadway deficiencies will also likely add to this congestion during the construction processes. This ITS/TSM project will maximize utilization of the existing transportation system and aid in its efficient use during construction of the many roadway projects planned for this area.

30. How does the project provide economic vitality in the project area?
    X_____ Retains employment
    _____ Retains and creates employment*
    _____ Project does not directly affect employment
    **Job creation must be within 3 years of project initiation*
    Please explain:

    A well-designed and functioning ITS system improves traffic and travel conditions, reduces congestion and provides increased traveler information to area businesses, employees and residents. National studies have shown that improvements of this type will effectively add capacity to previously inefficient streets and street systems. This newly-captured capacity will support additional travel in the area and/or improve travel conditions, both of which enhance access to local businesses.

In addition, this ITS system will be in place and play a major role in management of construction activities and maintenance of traffic as the many CCTID RTIP and ODOT projects are constructed over the next 5 to 7 years. The availability of traffic cameras for system surveillance, 24/7 monitoring of traffic signals and improving traffic signal timing and operations will all aid traffic management and coordination activities for each project and across the street network as a whole. These activities will help to minimize the negative travel consequences of the many roadway construction projects planned for the County's major commercial areas.

And finally, a fully-synchronized and coordinated traffic signal system, supported by CCTV monitoring as needed, will allow for a much higher level of traffic management during peak shopping periods in the commercial areas.

31. Project Delivery History
Has the applicant had any programmed projects miss their originally programmed date?
_____ Yes X_____ No
Specify projects: *(see application instructions for negative points associated with this factor)*

Is the applicant requesting additional funds for a project previously funded with OKI allocated federal funds? _____ Yes X_____ No

32. Intermodal Connections
Does this project create or enhance new intermodal connections?
___X_____ Yes _____ No
If yes, please describe: The ITS improvements will provide for more efficient and reliable transportation operations which will enhance transit scheduling and on-time transit performance. Closed circuit television cameras as park-n-ride facilities will also enhance connections by providing increased security and comfort for transit patrons.

The project has a positive impact on transit safety and security through the installation of three (3) closed-circuit television cameras for safety and security purposes, one in each park-n-ride lot operated by the Clermont Transportation Connection (CTC). The project also improves the efficiency of the transportation system and provides real-time traffic information to local agencies and the public, both of which allow for improved transit operations. And while this project is anticipated to improve on-street transit performance and operations for the reasons noted above, these improvements may contribute to increases in transit use.

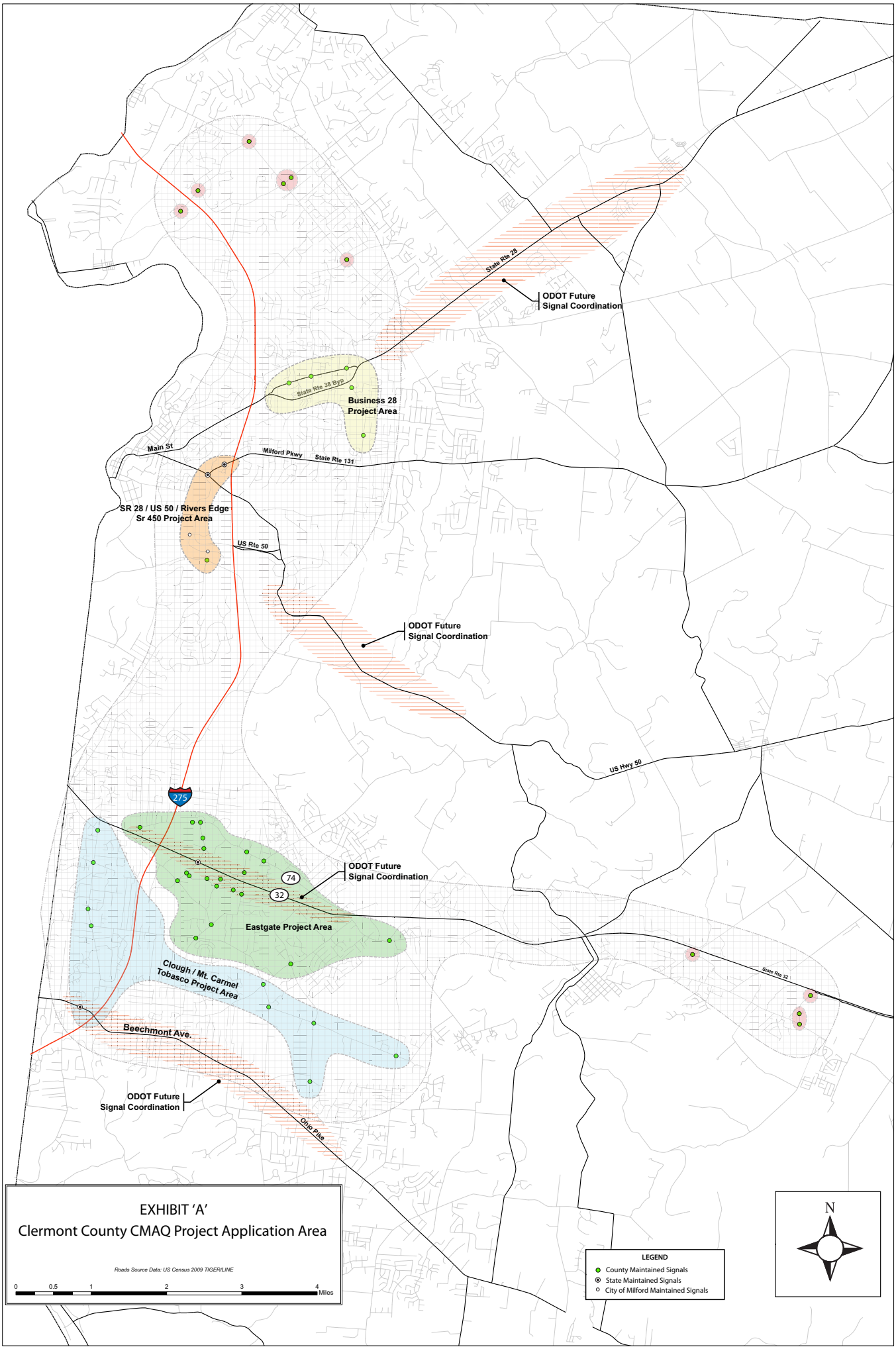

State Rte 28
ODOT Future
Signal Coordination
State Rte 38 Byp.
Business 28
Project Area
Main St
Milford Pkwy
State Rte 131
SR 28 / US 50 / Rivers Edge
Sr 450 Project Area
US Rte 50
ODOT Future
Signal Coordination
US Hwy 50
275
74
32
ODOT Future
Signal Coordination
Eastgate Project Area
Clough / Mt. Carmel
Tobasco Project Area
State Rte 32
Beechmont Ave.
ODOT Future
Signal Coordination
Ohio Pike
EXHIBIT 'A'
Clermont County CMAQ Project Application Area
Roads Source Data: US Census 2009 TIGER/LINE
0
0.5
1
2
3
4
Miles
LEGEND
County Maintained Signals
State Maintained Signals
City of Milford Maintained Signals
N

EXHIBIT 'B'

CLERMONT COUNTY INTELLIGENT TRANSPORTATION SYSTEM -- PHASE 2

	CLERMONT COUNTY SIGNALIZED INTERSECTIONS	APPLICABLE PROJECT COMPONENTS BY AREA & INTERSECTION						
		Signal Head Upgrades to LED	Upgrade Signal Controller	Upgrade Detection (Video)	Add/Upgrade Ped Signals	Add/Expand Communications	Coordinate (C)/ Optimize (O) Signal Timing	CCTV
EASTGATE PROJECT AREA	Eastgate Blvd & Aicholtz Rd			X			C	
	Eastgate Blvd & Eastgate South Dr	X		X		X	C	
	Eastgate Blvd & Eastbound SR 32 Exit Ramp	X		X		X	C	X
	Eastgate Blvd & Westbound SR 32 Exit Ramp	X		X		X	C	X
	Eastgate Blvd & Eastgate North/Eastgate Mall	X		X		X	C	X
	Eastgate Blvd & Eastgate Crossing	X		X			C	
	Eastgate Blvd & Old SR 74	X		X		X	C	X
	Eastgate South Dr & Eastgate Square Dr	X		X			C	
	Eastgate South Dr & HH Greg	X		X			C	
	Clepper Ln & Eastgate Blvd	X		X			C	
	Clepper Ln & Eastgate Square Dr	X		X			C	
	Clepper Ln & Eastgate South Dr	X		X			C	
	Gleneste Withamsville Rd & Clepper Ln	X		X			C	
	Gleneste Withamsville Rd & Clough Pike	X	X	X		X	C	X
	Gleneste Withamsville Rd & Old SR 74	X	X	X		X	C	X
	Gleneste Withamsville Rd & Eastgate North Dr	X	X	X		X	C	
	Gleneste Withamsville Rd & Aicholtz Rd			X		X	C	
	Old SR 74 & Eastgate Mall	X	X	X		X	C	X
	Old SR 74 & Summerside Rd	X	X	X		X	C	
	Old SR 74 & Tealtown Rd	X	X	X		X	C	
	Old SR 74 & Olive Branch Stonelick			X		X	O	
	Bach Buxton Road & Shayler Rd	X	X	X		X	O	
BUSINESS 28 PROJECT AREA	Business 28 & Cook Rd	X	X	X		X	C	
	Business 28 & Cinema Dr	X	X	X		X	C	
	Business 28 & Wolfpen Pleasant Hill Rd	X	X	X	X	X	C	X
	Wolfpen Pleasant Hill Rd & Allen Dr/Bypass 28			X		X	C	X
	Wolfpen Pleasant Hill Rd & Eagles Way	X	X			X	C	
SR28/US50/RIVERS EDGE/SR450 PROJECT AREA	SR 28 & Castleberry *	X	X			X	C	
	US 50 & Cemetery *	X	X			X	C	
	Chamber Dr & Wal-Mart Entrance *	X	X			X	C	
	Chamber Dr & Beechwood *	X	X			X	C	
	Beechwood Rd & Round Bottom Rd.					X	C	X
CLOUGH/MT. CARMEL TOBASCO PROJECT AREA	Mt. Carmel Tobasco Rd & Old SR 74	X	X	X		X	C	X
	Mt. Carmel Tobasco Rd & Glen Rose Ln	X	X		X	X	C	
	Mt. Carmel Tobasco Rd & Beechmont Dr.					X	C	
	Clough Pike & Mt. Carmel Tobasco Rd			X		X	O	X
	Clough Pike & Amelia Olive Branch Rd	X	X			X	O	
	Clough Pike & Union Twp park					X	O	
	Clough Pike & Ivy Pointe Blvd					X	O	
	Clough Pike & Shayler Rd					X	O	X
	Clough Pike & McMann Rd					X	O	
	Bach Buxton Road & Clough Pike	X	X			X	O	
	Ivy Pointe Blvd & Office Dr					X	O	
	Bach Buxton Road & Midland					X	O	
OTHER SIGNALS	Bauer Rd & Hospital Dr	X	X			X	O	
	Branch Hill Guinea Pike & Cook Rd	X	X			X	O	
	Branch Hill Guinea Pike & Loveland Miamiville					X	O	
	Batavia Rd & Front Wheel Dr	X	X			X	C	
	Batavia Rd & Ford Entrance	X	X			X	C	
	Batavia Rd & Old SR 32	X	X			X	C	
	Loveland Miamiville & Kroger					X	O	
	Wards Corner Rd & Tri Ridge Blvd/Service Center Dr	X	X			X	O	
	Wards Corner Rd & Branch Hill Guinea Pike					X	O	
	Wards Corner Rd & Loveland Miamiville		X			X	O	
		37	26	28	2	46	54	13

* City of Milford maintained signals

ADDITIONAL ITS ELEMENTS	COMPONENTS
Upgrade School Zone Equipment / Remote Monitoring & Control	17 locations
Stream Monitoring Gauge / Activate Road Flooding/Closure Devices	1 stream water level monitoring location
Traffic Management Hardware/Software	central signal software, workstation, network switch
Website Upgrades	provide capability to show traffic/travel conditions, camera locations & video feeds

EXHIBIT 'C'

CLERMONT COUNTY INTELLIGENT TRANSPORTATION SYSTEM - PHASE 2
PRELIMINARY COST ESTIMATE

DESCRIPTION	ITEM	ITEM EXTENSION	QUANTITY	UNIT	$/UNIT	TOTAL $
TRAFFIC SIGNAL						
REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEMS (SIGNAL HEADS)	632	90020	1	EACH	$50,000	$50,000
(1) SIGNALIZATION, MISC.: INSTALL WIRELESS EQUIP. IN CABINETS	632	90400	63	EACH	$500	$31,500
SIGNAL CABLE, 7 CONDUCTOR, NO. 12 AWG	632	42700	60,000	LIN. FT.	$2	$90,000
PEDESTRIAN PUSHBUTTON	632	26000	8	EACH	$200	$1,600
PEDESTRIAN SIGNAL HEAD (LED), COUNTDOWN TYPE A2	632	20510	16	EACH	$700	$11,200
VEHICULAR SIGNAL HEAD (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE	632	05084	148	EACH	$1,250	$185,000
VEHICULAR SIGNAL HEAD (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE	632	05004	148	EACH	$850	$125,800
(2) VEHICULAR SIGNAL HEAD (LED), 1-SECTION, 12" LENS, 1-WAY, POLYCARBONATE	632	04800	68	EACH	$350	$23,800
CONTROLLER UNIT, TYPE TS2 TYPE 2	633	01830	26	EACH	$4,000	$104,000
VIDEO DETECTION SYSTEM	816	30000	112	EACH	$6,000	$672,000
CENTRAL SIGNAL CONTROL HARDWARE/SOFTWARE			1	LUMP	$225,000	$225,000
COORDINATE/OPTIMIZE SIGNAL TIMING			54	EACH	$4,000	$216,000
CCTV CAMERA (DOME TYPE - MOUNTED ON EXISTING POLE)			13	EACH	$4,500	$58,500
(3) CCTV CAMERA (DOME TYPE - MOUNTED ON NEW POLE)			5	EACH	$25,000	$125,000
UPGRADES TO WEBSITE (FOR VIDEO FEEDS)			1	LUMP	$45,000	$45,000
STREAM LEVEL MONITORING GAUGE			1	EACH	$24,000	$24,000
					SUBTOTAL	**$1,988,400**
TRAFFIC CONTROL (5% OF TOTAL)			1	LUMP	$99,420	$99,420
MOBILIZATION (5% OF TOTAL)			1	LUMP	$99,420	$99,420
OTHER CONSTRUCTION ITEMS (8.5% OF TOTAL)			1	LUMP	$169,014	$169,014
SUBTOTAL						**$2,356,254**
CONTINGENCY						**$353,746**
GRAND TOTAL						**$2,710,000**

(1) Includes 17 school zone flasher locations
(2) Item for replacement of signal heads at 17 school flasher locations
(3) Includes 3 park-and-ride lot locations

EXHIBIT 'D'

CLERMONT COUNTY
TRANSPORTATION IMPROVEMENT DISTRICT

Resolution Number 2010 - 05

A RESOLUTION DESIGNATING INTELLIGENT TRAFFIC SYSTEM DEVELOPMENT PROJECT

WHEREAS, the Clermont County Transportation Improvement District ("CCTID") is authorized by Ohio Revised Code ("ORC") Chapter 5540 (1) to finance, construct, maintain, repair, and operate street, highway, and other transportation projects and (2) to construct, reconstruct, improve, alter, and repair roads, highways, public places, buildings, and other infrastructure; and

WHEREAS, the projects undertaken by the CCTID pursuant to ORC Chapter 5540 are essential and will contribute to the improvement of the prosperity, health, safety, and welfare of the people of Clermont County (the "County"), including the Townships of Union and Miami (the "Townships"), the City of Milford (the "City") and of the State of Ohio (the "State") and are essential governmental functions; and the exercise by the CCTID of the authority granted by ORC Chapter 5540 is necessary for the prosperity, health, safety, and welfare of the County and the State and their people and is consistent with and will promote industry, commerce, distribution, and research activity in the County and the State; and

WHEREAS, the CCTID recognizes, consistent with its charter, mission and in the development of its projects under ORC Chapter 5540, as established by its Board of Trustees, that it is a priority to engage and cooperate to the greatest extent practical in related efforts and with the County, the Townships, the City and the Clermont County Engineer, and the Ohio Department of Transportation ("ODOT"); and

WHEREAS, the CCTID is assisting and cooperating with the County, the Township, the City, the Clermont County Engineer's Office (CCEO) and ODOT in the development of a regional transportation management system through its Regional Transportation Improvement Program (RTIP); and

WHEREAS, the CCTID pursuant to ORC§5540.03(A)(4), in coordination with the County, the Townships, the City, CCEO and ODOT is accordingly hereby designating as a CCTID project, development and deployment of intelligent traffic systems (ITS) strategies and related improvements to the corridors under development by CCTID, including the ITS system infrastructure planning, development, design, right-of-way acquisition, relocation, and construction of improvements (the "Project"); and

WHEREAS, the CCTID, pursuant to R.C.§5540.03 is authorized to take such actions, receive such funding, and enter into all agreements necessary or incidental to performance of its functions and the execution of its powers to effect its purposes and transportation projects; and now

THEREFORE, BE IT RESOLVED, by the Board of Trustees of the CCTID, that the Intelligent Traffic System (ITS) Development Project, referenced herein as the "Project," is hereby designated as a transportation improvement project of the CCTID, pursuant to ORC§5540.03(A)(4) and the Project is hereby added to and made part of the CCTID's Regional Transportation Improvement Program, known as the "RTIP."

It is found and determined that all formal actions of this Board concerning and relating to the adoption of this resolution were adopted in an open meeting of this Board, and that all deliberations of this Board that resulted in such formal action, were in meetings open to the public, in compliance with the law, including § 121.22 of the Ohio Revised Code.

Adopted at a regularly adjourned meeting of the Board of Trustees of the Clermont County Transportation Improvement District, Clermont County, Ohio, this 18th day of March, 2010.

Clermont County Transportation Improvement District
Chairman

Attest:

A. Steven Wharton
Clermont County Transportation Improvement District
Secretary-Treasurer

Motion to Pass Resolution: Wright

Seconded by: Frank

104597.000001/#4817-7877-7857 v1, 07/18/07

EXHIBIT 'E'

Clough Pike @ Mt. Carmel Tobasco
2007-2009 Accidents

Number of Accidents	94
Segment Length (miles)	1
ADT	13,457
Number of Years	3
Accident Rate (acc/mvm)	6.38

Business 28 - Entire Length
2007-2009 Accidents

Number of Accidents	97
Segment Length (miles)	1.24
ADT	13,205
Number of Years	3
Accident Rate (acc/mvm)	5.41

Eastgate Blvd - Aicholtz to Old SR 74
2007-2009 Accidents

Number of Accidents	163
Segment Length (miles)	0.93
ADT	20,191
Number of Years	3
Accident Rate (acc/mvm)	7.93

US 50 - Cemetery Rd to Olympic Drive
2007-2009 Accidents

Number of Accidents	36
Segment Length (miles)	0.66
ADT	18,669
Number of Years	3
Accident Rate (acc/mvm)	2.67

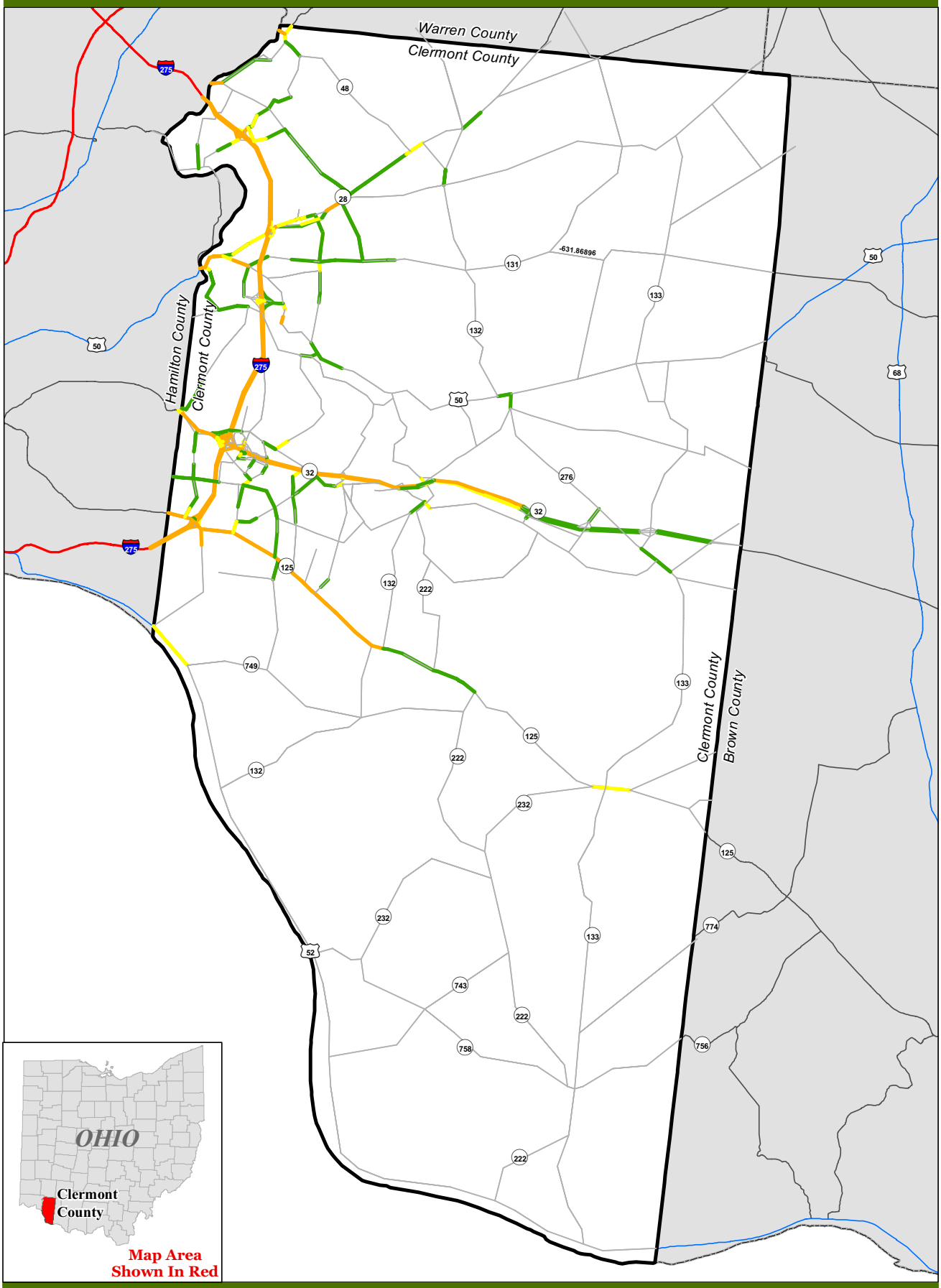
Clepper Rd - Gleneste Withamsville to Eastgate South
2007-2009 Accidents

Number of Accidents	41
Segment Length (miles)	0.52
ADT	7,803
Number of Years	3
Accident Rate (acc/mvm)	9.23

Old SR 74 - From Gleneste Withamsville Rd to Schoolhouse Rd
2007-2009 Accidents

Number of Accidents	114
Segment Length (miles)	0.8
ADT	18,359
Number of Years	3
Accident Rate (acc/mvm)	7.09

EXHIBIT 'F'
Volume/Capacity Ratio



Legend

Volume / Capacity Ratio

- 0.00 - 0.70
- 0.71 - 0.90
- 0.91 - 1.10
- 1.11 and Higher

N W E S

0 2.5 5
Miles

Source:
Ohio Department of Transportation:
Roadway Files
Ohio-Kentucky-Indian Regional Council of Governments:
TAZ Files

EXHIBIT 'G'

ENERGY, MAINTENANCE, & POLLUTION SAVINGS CALCULATIONS

Source: Dialight — **Clermont County Phase 2 ITS -- Signal Upgrades**

Input Field
Output Field

Notes: The purpose of this calculator is to give an estimate of energy, environmental, and maintenance savings, as well as payback years. This spreadsheet is based on user inputs.
"Signals" refers to individual balls/arrows/peds, not complete heads. Calculate with US Dollars.

Energy Savings

	Unit	LED SOURCE											EXISTING LIGHT SOURCE										
		8" Red	12" Red	Red Arw	8" Grn	12" Grn	Grn Arw	8" Yel	12" Yel	Yel Arw	Ped Man	Ped Hand	8" Red	8" Grn	8" Yel	12" Red	12" Grn	12" Yel	Red Arw	Grn Arw	Yel Arw	Ped Man	Ped Hand
Energy consumed by signal	Watts	0	12	0	0	20	7	0	18	7	6	6	65	65	65	135	135	135	135	135	135	65	65
Energy rate	$/kWh	0.026291											0.095										
On-time of signal per day	%	55%		0%	42%		17%	3%		3%	15%	85%											
Number of intersections		37																					
Avg. Number of signals/intersection		0.00	8.00	0.00	0.00	8.00	4.00	0.00	9.84	4.00	0.00	0.00											
Total number of signals		0	296	0	0	296	148	0	364	148	0	0											
Energy Consumed Annually	kWh	0	17,114	0	0	21,781	1,543	0	1,722	272	0	0	0	0	0	192,527	147,021	12,914	0	29,754	5,251	0	0
Energy Dollars Spent Annually	$/year	$0	$450	$0	$0	$573	$41	$0	$45	$7	$0	$0	$0	$0	$0	$18,290	$13,967	$1,227	$0	$2,827	$499	$0	$0
Energy Dollars Saved Annually	$/year	$35,694																					
Annual Energy Savings	kWh	345,036																					

Harmful Environmental Emissions Caused by Power Generation

	Unit	
Carbon Dioxide CO_2	lb/kWh	1.64
Annual Carbon Dioxide Savings	lb	565,859
Equivalent Amount of Cars Eliminated by Energy Savings per Year		62

Maintenance Savings

	Unit	LED SOURCE											EXISTING LIGHT SOURCE										
		8" Red	12" Red	Red Arw	8" Grn	12" Grn	Grn Arw	8" Yel	12" Yel	Yel Arw	Ped Man	Ped Hand	8" Red	8" Grn	8" Yel	12" Red	12" Grn	12" Yel	Red Arw	Grn Arw	Yel Arw	Ped Man	Ped Hand
Scheduled intersection maintenance per year		1											1										
Cost of scheduled maintenance	$	150											150										
Cost of emergency bulb replacement	$												200	200	200	200	200	200	0	200	200	200	200
Frequency of emergency bulb replacements per year													0.5	0	0.5	0.5	0	0.5	0	0	0.5	0	0
Maintenance Dollars Spent Annually	$/year	$5,550											$24,050										
Maintenance Dollars Saved Annually	$/year	$18,500																					

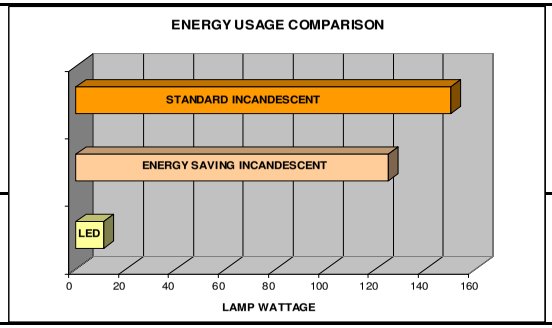
Investment

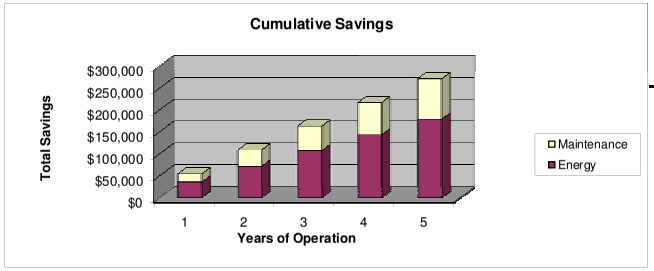
	Unit	LED SOURCE										
		8" Red	12" Red	Red Arw	8" Green	12" Grn	Green Arw	8" Yel	12" Yel	Yellow Arw	Ped Man	Ped Hand
Capital cost of one signal	$	0	267	0	0	267	300	0	267	300	350	350
Total Material Cost Per Signal Type	$	$0	$79,032	$0	$0	$79,032	$44,400	$0	$97,188	$44,400	$0	$0
Cost to replace each bulb with LED		$25	$25	$25	$25	$25	$25	$25	$25	$25	$25	$25
Total Investment per Signal Type	$	$0	$86,432	$0	$0	$86,432	$48,100	$0	$106,288	$48,100	$0	$0
Total Investment For Signals		$375,352										
Total Project Rebate	$	$0										
Energy Engineering & Admin	$	$0										
Total Capital Required		$375,352										
Finance Charges	$	$0										
Total Project Investment	$	$375,352										

PAYBACK YEARS **6.93**

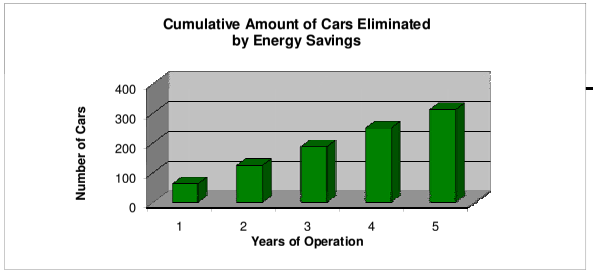
ANNUAL CO_2 SAVINGS (lbs.) **565,859**

EQUIV. # OF CARS ELIMINATED BY ENERGY SAVINGS PER YEAR **62**





Year	Energy	Maintenance
1	$35,694	$18,500
2	$71,388	$37,000
3	$107,081	$55,500
4	$142,775	$74,000
5	$178,469	$92,500



Year	Cars Eliminated by Energy Savings
1	62
2	125
3	187
4	250
5	312

Source: Dialight, Inc.