Chicago Metropolitan Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, Illinois 60606

312 454 0400
www.cmap.illinois.gov

CMAQ Project Selection Committee

Annotated Agenda
Thursday, April 5, 2012
2:00 p.m.
Teleconference # 800-747-5150, Access Code 3868824

Cook County Conference Room
233 S. Wacker Drive, Suite 800
Chicago, Illinois

1.0 Call to Order 2:00 p.m.

2.0 Agenda Changes and Announcements

3.0 Approval of Minutes—March 13, 2012
ACTION REQUESTED: Approval

4.0 Project Changes

4.1 Berkeley - Union Pacific Proviso Railyard Switcher Engine Retrofit (TIP ID 04-09-0002)
The sponsor is requesting a scope change and cost increase. Staff requests consideration.

4.2 IEPA - Chicago Area Diesel Retrofit Program (TIP ID 13-09-0003)
The sponsor is requesting a scope change. Staff recommends approval.

4.3 IEPA - Retrofit of Amtrak Switcher Engines (TIP ID 01-09-0006)
The sponsor is requesting a scope change and cost increase. Staff requests consideration.

4.4 Aurora - McCoy Dr/Commons Dr from Gregory St/New York St to IL 59/US34 (TIP ID 09-12-0012)
The sponsor is requesting a scope change and cost increase. Staff recommends approval.

4.5 Elgin - Elgin Bikeway Plan Route 1 NE Quadrant (TIP ID 09-09-0006)
The sponsor is requesting a cost increase. Staff recommends approval.

4.6 CDOT – BIKE FAC-CHICAGO-STREETS FOR CYCLING/BIKE 2015 Plan Implementation (TIP ID 01-94-0092)
The sponsor is requesting moving funding into Implementation. Staff undertook this as an administrative modification.

4.7 Lake County DOT - Aptakisic Rd Adaptive Traffic Control (TIP ID 10-12-0003)

The sponsor is requesting to move funding from phase II engineering into construction. Staff undertook this as an administrative modification.

4.8 Lake County DOT - Gilmer/Hawley/IL176 Adaptive Traffic Control (TIP ID 10-12-0004)

The sponsor is requesting to move funding from phase II engineering into construction. Staff undertook this as an administrative modification.

4.9 IEPA – Illinois Clean Diesel Engine Repowers (TIP ID 13-12-0003)

The sponsor is requesting to move all funding into federal fiscal year 2012. Staff undertook this as an administrative modification.

5.0 Program Monitoring

5.1 Projects with Final Phase Obligated and a Programming Balance

Review of proposed procedure for freeing up funds from projects that have not been closed out but for which the final phase has been obligated.

ACTION REQUESTED: Discussion and Approval

5.2 Programming Project Status Sheets

A recurring update report on the programming status of active projects and the line item changes since the last meeting of the Project Selection Committee.

ACTION REQUESTED: Review and Discussion

5.3 Transit Status Quarterly Report Updates

Staff has completed the analysis of the 3rd & 4th Quarters' 2011 quarterly status transit expenditure updates. An update will be given.

ACTION REQUESTED: Discussion

6.0 GO TO 2040 Focused Programming Approach Lessons Learned

The draft document highlighting the lessons learned during the development of 2012-2016 CMAQ Improvement Program. Comments have been received from all of the Project Selection Committee members and other interested parties including 5 of the 12 Councils of Mayors.

ACTION REQUESTED: Discussion and Approval

7.0 Post-Implementation Evaluation of Emissions Benefits of CMAQ Projects

The final report from UIC has been completed and is included for your information.

ACTION REQUESTED: Information

8.0 Other Business

9.0 Public Comment

This is an opportunity for comments from members of the audience. The amount of time available to speak will be at the chair's discretion. It should be noted that the exact time for the public comment period will immediately follow the last item on the agenda.

10.0 Next Meeting

The committee's next meeting is scheduled for May 24, 2012.

11.0 Adjournment

CMAQ Project Selection Committee Members:

_____Ross Patronsky, Chair	_____Luann Hamilton	_____Jeffery Schielke
_____Martin Buehler	_____Mark Pitstick	
_____Bruce Carmitchel	_____Mike Rogers	

Agenda Item No. 3.0

Chicago Metropolitan Agency for Planning

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DRAFT Meeting Minutes

CMAQ Project Selection Committee
Tuesday, March 13, 2012
CMAP offices

Committee Members Present:	Ross Patronsky, Chair (CMAP), Marty Buehler (counties), Bruce Carmitchel (IDOT), Luann Hamilton (City of Chicago), Larry Keller (Council of Mayors), Mark Pitstick (RTA), Mike Rogers (IEPA)
Staff Present:	Patricia Berry, Doug Ferguson, Don Kopec, Holly Ostdick, Joy Schaad
Others Present:	Reggie Arkell, Chalen Daigle, John Donovan, Tara Fifer, Aimee Lee, Chad Riddle, Chris Staron, David Tomzik, Mike Walczak, and Thomas Weaver

1.0 Call to Order
Committee Chair Ross Patronsky called the meeting to order at 12:15 p.m.

2.0 Agenda Changes and Announcements
Chairman Patronsky stated that Mr. Buehler, who requested the agenda item on IDOT/Federal Local Project Process Review, asked that the discussion be moved to after the Active Program Management item. There were no objections.

3.0 Approval of Minutes—February 9, 2012
On a motion by Mr. Buehler and a second by Mr. Rogers, the minutes of the February 9, 2012 meeting were approved as presented.

4.0 CMAQ Active Program Management Policies
Chairman Patronsky drew the Committee's attention to the latest staff draft of recommendations. He explained each recommendation and the committee made comments and asked questions. Regarding the proposed requirement that phase 1 engineering be completed at the sponsor's expense prior to the date of PSC program recommendations (usually in July) it was agreed that sponsors that do not have their project's PDR (project development report) submitted to IDOT by the time of PSC

recommendations, cannot be included in the program, but can be placed on the B List, if the project so merits. The process to move projects from the deferred list to the funded program was clarified as: the project shows completed phase and the sponsor requests consideration to move into the funded program; the PSC considers the request based on a verification of the project's status and availability of funding. If approved by the Committee, the project follows usual TIP amendment procedures. The fact that CMAQ PSC and Transportation Committee meetings are scheduled based on the IDOT lettings will ensure minimal TIP processing delay for the changes that cannot be handled administratively. Those dates can be viewed in the *Programmers' Resources* section of the CMAP website. It is believed that once a phase is judged "ready" by IDOT and FHWA, the TIP processing would take two months at most, so should not be a problem.

The accomplishment sunset recommendations were discussed. Each work phase is allowed the programmed year and two additional years to be completed, i.e. three years. The milestones that will be used to define each phase's accomplishment are laid out in the draft policy recommendations and were reviewed. It was clarified that a project that is delayed beyond the three years, becomes a deferred project and it loses its guaranteed funding status. Ms. Hamilton expressed the importance of maintaining the October 2011 approved B List to show that those projects are priorities in the FFY 2012-16 timeframe.

The Committee discussed the funding ratio policy for traditional roadway projects whereby phase 1 engineering will be funded at 0% federal share and subsequent phases at 100% federal share. It was clarified that for transit projects that do not have distinct preliminary engineering (phase 1) and design engineering (phase 2) phases – the engineering will be funded at 50% and the other work types at 100%. An accommodation for extenuating circumstances, whereby sponsors can request traditional funding ratios of 80%/20% for all phases was discussed. Such requests will be considered, but only phase 1 engineering will be programmed at the onset. Other phases of work can be brought into the program at a later date.

The purpose and use of an annual obligation goal was discussed. There was discussion of the options of where "letting ready" or non-construction "obligation ready" contingency projects should be drawn from. It was agreed that the priority would be laid out as:

1. Out-year projects in the current CMAQ program,
2. Deferred projects, which have priority over regular B List projects,
3. Vetted Projects:
    a. Regular B List projects,
    b. Projects with partial CMAQ funding that would be increased,
    c. Projects with good air quality benefits but have not been placed in the CMAQ program,
4. Extraordinary projects, i.e. projects that are CMAQ eligible but have not been evaluated for benefits previously.

It was clarified that projects that had previously ranked well for air quality benefits (out year CMAQ projects and approved B List projects) should keep their priority over extraordinary projects, but the emphasis will be projects that are "ready to go" to meet the year's obligation goal, so that distinction may be moot.

It was agreed that the current B List would be replaced with a new B List each time a new CMAQ Program is adopted, but the list of deferred projects would remain over time. If a sponsor wants their project in the new program or on the new B List, they would have to submit a CMAQ application in the call for projects.

Mr. Pitstick asked that the contingency structure be clarified in the final write up. Mr. Buehler asked that the final write up also include definitions of apportionment, rescission, state appropriation and obligation authority. Mr. Buehler brought up the concept of a "combination bid" which is an aggregation of projects let together. This would be a way to bring smaller ready projects into the program without adding a lot of staff administration effort.

Ms. Ostdick drew the Committee's attention to the listing of current project standings. Ms. Berry stated that several members had expressed interest in seeing status of projects, obligations, and obligation rates regularly, and that the staff is working on reports to show that in an effective manner.

There was a discussion on how and when the CMAQ program would switch over to the new funding ratios and it was agreed that sponsors of projects in the FFY 2012-16 program should have the option of switching to the new percentages as discussed in the document.

On a motion by Mr. Buehler and a second by Mayor Keller, the project listing and the staff policy recommendations, as amended during the meeting, were approved as recommendations to forward to the CMAP Transportation Committee.

5.0 IDOT/Federal Local Project Process Review

Mr. Buehler reviewed the committee's previously discussed concerns about the project development process. Mr. Buehler drew the Committee's attention to a write up that the county engineers had developed. He stated that IDOT staff is doing an excellent job and that some delays have been reduced in the last few years. For further improvement he suggested that logging the amount of time that steps take and analyzing the data for average or normal processing times, or benchmarks, would be helpful. Once benchmarks are established, if IDOT staff could be assigned to watch for projects that were not progressing at near normal timeframes; those projects could be dealt with before the delays become problematic.

There was discussion of various agencies' experiences and how monitoring project progress could be helpful. Several committee members commented that there are many players in the project development process, that delays occur throughout the process, not

just at IDOT, and many delays are the result of actions that ensure a better final project. The committee members supported the recommendation of contacting IDOT to ask for establishment of a function to react to projects that are not meeting benchmarks. On a motion by Mr. Buehler and a second by Ms. Hamilton, the Committee voted to have staff prepare a request letter from the Project Selection Committee to IDOT.

6.0 Other Business

There was no other business.

7.0 Public Comment

There was no public comment.

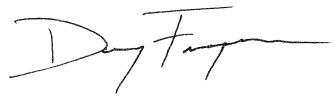
8.0 Next Meeting

The next meeting was confirmed for April 5, 2012 at 2:00 p.m. at the CMAP offices.

9.0 Adjournment

The meeting was adjourned at 2:20 p.m.

Respectfully submitted,



Douglas Ferguson
Committee Liaison
3-29-12 /*JMS*

Chicago Metropolitan Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, Illinois 60606

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MEMORANDUM

To: CMAQ Project Selection Committee

From: CMAP Staff

Date: March 29, 2012

Re: CMAQ Project Change Requests

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5 projects have been submitted for changes. The net change in the federal CMAQ amount programmed for Federal Fiscal Year 2012 is $20,719,469 total ($16,575,575 federal) when including the Union Pacific request. Without inclusion of the Union Pacific request the net change is $2,519,469 ($2,015,575 federal). The sponsors' requests are attached.

For Committee Consideration:

Berkeley - Union Pacific Proviso Railyard Switcher Engine Retrofit (TIP ID 04-09-0002)
The sponsor is requesting a scope change and cost increase of $22,400,000 total ($14,560,000 federal) for a total project cost of $33,600,000 total ($21,840,000 federal). The sponsor has indicated that they have the ability to utilize up to 14 more ultra-low-emitting GenSet switch locomotives at their Dolton facility. The estimated unit cost of these engines is $1,600,000 total ($1,040,000 federal). The sponsor and IDOT have recently executed an agreement and will be taking delivery of the 7 GenSet engines originally funded by this project in the very near future.

Although the emissions benefits would vary slightly from the original analysis, staff does not expect the ranking to change significantly, nor would the ranking fall below the few diesel retrofit projects not funded that year. The projects that were not funded that year all had much lower cost/benefit ratios.

The Union Pacific has indicated flexibility in the specific number of locomotives to be funded, but would like a response soon, to fit in with their own capital planning activities.

Recommendation to the CMAQ Project Selection Committee:

Consider the request for a scope change and cost increase of $22,400,000 total ($14,560,000 federal) for a total project cost of $33,600,000 total ($21,840,000 federal) to fund additional GenSet engines for Berkeley - Union Pacific Proviso Railyard Switcher Engine Retrofit (TIP ID 04-09-0002).

IEPA – Chicago Area Diesel Retrofit Program (TIP ID 13-09-0003)
The sponsor is requesting a scope change to allow for 100% funding for private school bus fleet particulate filters. The experience of the sponsor is that there is no incentive for private school bus fleet operators to install particulate filters if a match is required and IEPA is therefore requesting that 100% funding be provided to private school bus fleet operators in this case. For other types of retrofits involving private operators, a 50% match is required. There is no change in the total cost of the project. Additionally staff administratively moved all funding for the project into 2012 at the request of the sponsor.

Recommendation to the CMAQ Project Selection Committee:

Consider approving the scope change to allow IEPA to administer 100% funding to private school bus operators to install particulate filters.

IEPA - Retrofit of Amtrak Switcher Engines (TIP ID 01-09-0006)
The sponsor is requesting a scope change and cost increase. The project is programmed to fund two switcher engine retrofits at the cost of $1,500,000 total ($1,200,000 federal). The costs have increased to $2,050,000 total ($1,640,000 federal) per engine. The sponsor is additionally requesting 100% funding for a total of $4,100,000 total/federal for the project. The sponsor anticipates taking delivery of the engines by spring 2013. A re-ranking was completed for 2009 and 2010. The project fell below un-funded projects from that year but was funded in future years.

Recommendation to the CMAQ Project Selection Committee:

Consider the scope and cost change of $1,700,000 federal for IEPA Retrofit of Amtrak Switcher Engines (TIP ID 01-09-0006) for $4,100,000 total/federal.

Aurora - McCoy Dr/Commons Dr from Gregory St/New York St to IL 59/US34 (TIP ID 09-12-0012)
The sponsor is requesting a scope change and cost increase to include an additional signal. The sponsor is requesting an additional $15,750 total ($12,600 federal) for phase II engineering and $214,719 ($184,375 federal) for construction for a total project cost of $1,152,370 ($921,875 federal). A re-ranking was completed and the project went from 12th to 8th in the 2012-2016 program.

Recommendation to the CMAQ Project Selection Committee:

Consider approval of the scope and cost change to include the signal at Commons Drive and Liberty Street and an increase of $230,469 ($184,375 federal) for a total project cost of $1,152,375 ($921,875 federal).

Elgin - Elgin Bikeway Plan Route 1 NE Quadrant (TIP ID 09-09-0006)
The sponsor is requesting a cost increase for Phase II Engineering in the amount of $51,400 total ($41,100 federal) and for Construction in the amount of $113,200 total ($90,100 federal). The increased cost was realized upon the completion of phase I engineering in which it was determined that an off street path will be needed. This project was programmed for a total of $422,800 total ($338,200 federal) in 2009. A re-ranking was completed and the project went from 5th to 7th but did not fall below any un-funded projects.

Recommendation to the CMAQ Project Selection Committee:

Recommend approval of a cost increase for $164,600 total ($131,200 federal) for a total project cost of $586,750 ($469,400 federal).

Administrative Modifications:

CDOT – BIKE FAC-CHICAGO-STREETS FOR CYCLING/BIKE 2015 Plan Implementation (TIP ID 01-94-0092)

The sponsor is requesting a scope change moving $1,600,000 into the implementation phase. Staff undertook this as a modification.

Lake County DOT - Aptakisic Rd Adaptive Traffic Control (TIP ID 10-12-0003)

The sponsor is requesting to move $44,388 total ($35,510 federal) for phase II engineering into construction. Staff undertook this as an administrative modification.

Lake County DOT - Gilmer/Hawley/IL176 Adaptive Traffic Control (TIP ID 10-12-0004)

The sponsor is requesting to move $117,400 total ($93,920 federal) for phase II engineering into construction. Staff undertook this as an administrative modification.

IEPA – Illinois Clean Diesel Engine Repowers (TIP ID 13-12-0003)

The sponsor is requesting to move $4,000,000 into 2012 from out years for a total project cost of $5,000,000 in 2012. Staff undertook this as an administrative modification.

October 10, 2011

Mr. Douglas Ferguson
Chicago Metropolitan Agency for Planning
Suite 800, Sears Tower
233 South Wacker Drive
Chicago, IL 60606

Dear Mr. Ferguson:

Please recall our recent agreement (Section 10-00033-00-MS, Project CMM-9003(689), Job No. C-91-728-10) for the acquisition of seven (7) ultra-low-emitting genset switch locomotives (ULEL's) for use in our Proviso Yard.

The delivery of those units will start in a few weeks, and we will immediately begin the 'debugging' process as well as continue the training efforts for mechanics and trainmen that have been ongoing. We are excited to get them up and running, and to then showcase their capability on the hump and trim operations.

We understand that progress on several other CMAQ contracts is lagging and that funding may be available for redistribution. We would welcome the opportunity to acquire more ULEL gensets, and have the ability to utilize up to 14 more at our Dolton facility (Yard Center). We anticipate that we would be required to comply with the provisions of the above referenced agreement if this request is approved. One key element that would need review and further discussion however is the delivery schedule.

Please call Lanny Schmid at 402.544.2262 to discuss this request at your earliest convenience.

Sincerely,

RM Grimaila

Robert M. Grimaila
VP Safety & CSO

From: Lanny A. Schmid <LASCHMID@up.com>

Sent: Friday, October 21, 2011 3:58 PM

To: Doug Ferguson

Cc: Johnson, Jason L; Holly Ostdick; Russell Pietrowiak

Subject:Fw: CMAQ - UP - GenSet Project Agreement

Attachments: pic12382.gif

I am providing more details that will aid in your evaluation of this project, including :

- these switchers would have less horsepower (1400 vs 2100) and tractive effort (4 axles vs 6) than those at Proviso given the nature of the work at Dolton;

- the approximate cost (based partially on a fairly old quote and estimated price increases) is $1.6 million each, or roughly $22.5 million total for the 14 gensets; and,

- all 14 gensets would be acquired and operating by mid 2013, targeting 7 for delivery in mid/later 2012 and 7 in the first half of 2013.

Recognize that these are rough numbers to aid in gaining an overall perspective of the cost and timing for the project; we'd prefer to get firm quotes for these gensets to better quantify actual costs.

Lanny

Lanny A. Schmid | Director Environmental Operations | Union Pacific Railroad | 1400 Douglas Street -

Chicago Metropolitan Agency for Planning

CMAQ Cost Increase Analysis

TIP ID: **04-09-0002**

Description: **Union Pacific Railyard Switcher Engine Retrofit**

Ranking Computation

	2009 Award	2010 Award	2011 Increase
Kilos VOC eliminated	15509.2667	76,384.9551	181,527.67
Cost	$3,200,000	$ 8,000,000	$ 33,600,000
$/Kilo VOC eliminated	$ 206	$ 168	$ 185
Rank		6	8

Project Expenses

	Federal Share	Total	Fed %	Basis
2009 Award	$2,080,000	$3,200,000		
2010 Award	$5,200,000	$8,000,000	65.0%	Approved project
2011 Increase	$21,840,000	$33,600,000	65.0%	Letter from Sponsor
Increase Amount	$ 14,560,000	$ 22,400,000		

2009 award for 2 switch engines
2010 award for 5 switch engines
2011 request for 14 switch engines

FY 2010 CMAQ Program

CMAQ ID	Facility to be Improved	$ Per Kg VOC Eliminated	Proposed total
DR01103208	Diesel Particulate Filter Retrofit for CTA Buses	$252	$11,920,000
DR13103219	Cook County DPF Diesel Retrofit	$110	$582,738
DR01103209	Retofit of Amtrak Switcher Engines	$131	$1,200,000
DR07103216	CSXT Barr Rail Yard Switch Engine Retrofit	$133	$3,900,000
DR13103211	Indiana Harbor Belt Railroad Switcher Engine Retrofit	$145	$958,100
DR04103212	Union Pacific Proviso Railyard Switcher Engine Retrofit	$168	$5,200,000
DR13103215	Indiana Harbor Belt Railroad Retrofit	$176	$4,641,000
DR06103213	BRC Clearing Yard Switcher Retrofit	$183	$2,798,250
	Revised Rank	**$185**	
DR10103218	Diesel Retrofit Project	$71	$23,400
DR13103221	Norfolk Southern Railway Co Switchyard Diesel Locomotive Retrofit Project	$230	$3,380,000
DR03103210	Diesel Fleet Emissions Reduction Project	$413	$221,600
DR13103220	Diesel Engine Retrofits	$539	$4,680,000
DR13103381	Installation of GenSets on Two Metra Switch Engines	$857	$2,800,000
DR07103214	Diesel Vehicle Replacement Program	$12,125	$0
DR08103217	Public Works Diesel Emissions Reduction Project	$11,482	$0
DR13103222	IDOT Maintenance Fleet Air Pollution Reduction Effort	$1,575	$0

SSMMA

SOUTH SUBURBAN MAYORS & MANAGERS ASSOCIATION

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Calumet Park
Chicago Heights
Country Club Hills
Crete
Dixmoor
Dolton
East Hazel Crest
Flossmoor
Ford Heights
Glenwood
Harvey
Hazel Crest
Homewood
Lansing
Lynwood
Markham
Matteson
Midlothian
Mokena
Monee
New Lenox
Oak Forest
Olympia Fields
Orland Hills
Orland Park
Palos Heights
Park Forest
Phoenix
Posen
Richton Park
Riverdale
Robbins
Sauk Village
South Chicago Heights
South Holland
Steger
Thornton
Tinley Park
University Park

February 7, 2012

Ms. Holly Ostdick
Chicago Metropolitan Agency for Planning
233 S. Wacker Drive, Suite 800
Chicago, IL 60606

Dear Ms. Ostdick:

On behalf of the South Suburban Mayors and Managers Association, please accept this letter as an indication of our strong support for the Union Pacific Railroad and its CMAQ proposal to acquire genset switchers for their Dolton yard. As the Union Pacific continues to upgrade and enhance their Dolton Yard, the use of genset switches for the yard would be of great environmental benefit to the Village of Dolton and other surrounding communities, including Riverdale and South Holland.

Thank you for consideration of this request and please forward this letter to the CMAQ Committee members. If you have any questions, please contact me.

Sincerely,

Edward W Paesel

Edward W. Paesel
Executive Director

EWP/rak
cc: Bud Fleming
Wes Lujan, Union Pacific

1904 W. 174th Street
East Hazel Crest, Illinois 60429

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February 7, 2011

Dear Ms. Ostick,

Respiratory Health Association of Metropolitan Chicago has taken an active interest in CMAQ funding over the years. The program helps clean the air in northeastern Illinois, which in turn helps minimize the incidence and severity of lung disease in the region.

As we have noted in the past, CMAQ projects that retrofit or replace diesel engines have some of the highest cost efficiencies. Several CMAQ projects have been approved in recent years that focus on reducing emissions from railroad switcher locomotives, and all have been well below $200/Kg VOCs reduced. Such projects provide local benefits in the region as switcher engines remain and operate almost exclusively within the region.

In this vein we want to express support for a proposed project scope change that would significantly increase the number of locomotive switcher engine replacements at a yard in Dolton using an existing CMAQ project in western Cook County – the Union Pacific Proviso Railyard Switcher Engine Retrofit (TIP ID 04-09-0002).

While the project scope increase of $14.56m (federal) is large and program funds for the 2012-16 multi-year CMAQ plan are fully allocated, it is also our understanding that several older CMAQ projects may not be moving forward which could lead to funds being recinded if not spent. Losing these resources from the region would be unfortunate and so we are very supportive of CMAP efforts to find alternate ways to invest these federal funds in a way that will provide maximum local health benefits in projects that are cost effective, can be quickly funded and implemented, and could maximize the leverage of federal dollars. This project fits that bill as IDOT has completed a legal framework to govern the original project, the replacements could be purchased fairly quickly and this project would continue to have a higher than average 35 percent match requirement.

Thank you for considering our thoughts on the matter.

Sincerely,

Brian P. Urbaszewski
Director of Environmental Health Programs

Formerly known as:
American Lung Association of Metropolitan Chicago*
(1993–2007)

Chicago Lung Association
(1972–1993)

Tuberculosis Institute of Chicago and Cook County
(1937–1972)

Chicago Tuberculosis Institute
(1906–1937)

*Respiratory Health Association of Metropolitan Chicago is not affiliated with American Lung Association.

Citizen ACTION
ILLINOIS

February 7, 2012

Ms. Holly Ostdick
Chicago Metropolitan Agency for Planning
Manager, CMAQ Program
233 S. Wacker Blvd., Suite 800
Chicago, IL, 60606

Re: Union Pacific Proviso Railyard Switcher Engine Retrofit (TIP ID 04-09-0002)

Dear Ms. Ostdick,

Given the serious public health problems caused by diesel pollution, Citizen Action/Illinois writes to express support for the proposed project scope change to increase the number of locomotive switcher engine replacements at the Union Pacific Proviso Railyard (TIP ID 04-09-0002).

CMAQ projects that retrofit or replace diesel engines are exceptionally cost effective. And switch engine retrofits, in particular, provide additional air quality benefits to the region because the engines remain and operate almost exclusively within their home railyards.

The cleanup of Dolton Yard's switcher engines will lead to significant reductions in diesel soot pollution throughout the South Suburbs. To this end, we strongly urge the CMAQ Project Selection Committee to fully fund the proposed project scope change.

Sincerely,

Jonathan Q. Doster
Manager, Illinois Campaign to Clean Up Diesel Pollution
Citizen Action/Illinois

27 East Monroe Street, Suite 1100 ● Chicago, IL 60603 ● P: 312.427.2114 ● F: 312.379.0313
www.citizenaction-il.org

From: Rogers, Michael D. <Michael.Rogers@Illinois.gov>
Sent: Thursday, February 02, 2012 4:23 PM
To: Holly Ostdick; Ross Patronsky
Cc: Burkhart, Darwin J.
Subject: Chicago Clean School Bus Project Change

Holly and Ross,

The Chicago Clean School Bus Initiative CMAQ project has issued over $1 million to school district-owned bus fleets to install both emissions- and idle-reduction technology. The CMAP MPO Policy approved recently approved a $5 million continuation of the program from FY2012 to 2016 (TIP ID #13-09-0003). The second “phase” of the program expands applicant eligibility to include private school bus service providers. As originally approved, such private companies would have to provide a 50% match for equipment.

During the first phase of the Clean School Bus program, over 90% of the funds requested were for direct-fired heater idle reduction equipment, primarily because the use of this equipment significantly reduces school bus fuel usage, saving the school districts money. Exhaust emissions reduction equipment such as diesel particulate filters are significantly more expensive than the heaters and do not provide any fuel use reduction benefits, so there is no financial incentive to install them. For this reason, through our separate Illinois EPA Clean Diesel Grant Program, no match is required for the purchase and installation of such exhaust emissions reduction equipment.

We believe that the private school bus operators might be interested in installing the idle reduction equipment with the required 50% match, but that there would be little or no interest in installing the particulate filters with the match requirement and no associated fuel reduction benefit. The private bus operators primarily operate within the City of Chicago and Cook County, so there may be very little exhaust emission reduction benefit from this program within that area due to this constraint.

Therefore, the Illinois EPA is requesting to change the Chicago Clean School Bus program to drop the 50% match requirement for private school bus operators for the purchase and installation of diesel particulate filters. The match would still be required for the purchase of idle reduction technology.

Please call me with any questions. Thank you.

Mike Rogers

****

Mike Rogers
Illinois EPA, Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794-9276

phone: 217 524-4408

NATIONAL RAILROAD PASSENGER CORPORATION
40 Massachusetts Avenue, NE, Washington, DC 20002

February 9, 2012

Mr. Michael Rodgers
Illinois EPA
Bureau of Air
P.O. Box 19276
Springfield, IL 62794-2976

Re: TIP ID# 01090006

Dear Mike,

Thank you for the opportunity to review our grant for the purchase of two GenSets for use in the Amtrak Chicago Yard. We appreciate your assistance.

Attached is the letter from the GenSet manufacturer, Motive Power, that describes the reason for the significant price discrepancy from the original grant request which was based upon a GenSet ordered for use at the Amtrak Oakland, CA Yard. (We had received permission from Illinois DOT to sole source this grant for the two Chicago GenSets.)

Also, attached is a notice from Motive Power describing the change in delivery date for the two GenSets. This notice was sent to Jason Johnson a few days ago for his review.

Amtrak requests 100 percent funding for Grant TIP ID# 01090006 for the two GenSets. We appreciate the re-review of our request based on the changes in price and delivery date.

Please contact me at 202-906-3278 if you have questions.

Sincerely,

Roy Deitchman

Roy Deitchman
Vice President
Environmental Health and Safety

cc: Holly Ostag – CMAP
Jason Johnson – IDOT
Ellen Jurczak
Mark Bagosy

MotivePower
A Wabtec company

4600 Apple Street
Boise, ID 83716

Phone: (208) 947-4800
Fax: (208) 947-4820
Toll Free: (800) 272-7702
www.wabtec.com

31 January 2012

AMTRAK
Attn: Mark Bagosy
30th and Market Street, 5th Floor South
Philadelphia, PA 19104

Mr. Bagosy;

Per your request, I am sending a letter responding to Amtrak's inquiry on price for two (2) MP14B genset switcher locomotives.

The model quoted in this letter is identical in design and specification to the unit delivered to Amtrak's Oakland facility in 2010 (AMTK 590).

The quoted price is based on the aforementioned specification. Variances in the locomotives material are a function of new revisions of the same part number; the most significant of which is the engine (Cummins QSK19). The larger variances, and their associated cost increases are discussed below. Pricing does not include any applicable taxes or freight costs (Incoterms, EXWorks, MPI, Boise, Idaho).

MotivePower is appreciative of the opportunity to provide this quotation and understand the dire need for information. The price for the locomotives is *two-million, fifty-thousand dollars and zero cents **($2,050,000.00)** each* or a total cost of *four-million, one-hundred-thousand dollars and zero cents **($4,100,000.00)***. These prices are quoted in US dollars and are subject to executive approval of schedule.

The initial schedule (assuming Notice to Proceed by 2/27/12) would be delivery of the first unit by 27MAR2013 and the second locomotive by 10APR2013. These delivery dates are subject to capacity and may be consumed by new orders placed in advance of Amtrak.

There is a significant price discrepancy from the original MP14B (AMTK 590) shipped to Oakland, and the current quotation. The new price takes the following into consideration:

- The original locomotive's, delivered to Amtrak's Oakland yard, real costs (material and labor) were more than original agreed upon price.
- Increase in material costs (steel, wire and cabling) consistent with current BLS Producer Price Indices
- Increase in labor costs consistent with current BLS Producer Price Indices
- Increase in cost of Cummins QSK19 engines
    - Re-certified to EPA Tier 3 Locomotive

All specified material and design for MotivePower's MP14B is predicated on mutual agreement of terms and conditions. MotivePower recommends utilizing the agreed upon contract for the

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locomotive delivered to Oakland, CA (AMTK 590) with negotiated provisions for the IDOT requirements.

MPI is pleased for the opportunity to work with Amtrak and look forward to a continued, long-term relationship.

Best regards,

Garrett Riley

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26 January 2012

AMTRAK
Attn: Mark Bagosy
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Philadelphia, PA 19104

Mr. Bagosy;

Per our phone conversation that took place Monday, 23JAN2012, I sending this letter out to you that addresses delivery of the two (2) MP14B locomotives per your request.

The initial schedule (assuming Notice to Proceed by 2/27/12) would be delivery of the first unit by 27MAR2013 and the second locomotive by 10APR2013. I understand the need to have the units delivered by December of 2012, however, we (MPI) are unable to meet this request.

The principal reason for a delayed schedule involves capacity. With the current workflow through the shops and commitments to work booked in 2010 and 2011, the aforementioned dates would be the soonest we could deliver. We are currently building locomotives for three different rail agencies and will deliver a record number of new locomotive models out of our facility. We do have "room" on the premises to build more locomotives, just not the resources needed to perform the functions involved in completing the build. This is our challenge. The next "window" in the shops is early 4Q 2012.

Please note the delivery dates are subject to capacity and may be consumed by new orders placed in advance of Amtrak.

We want to help and would appreciate the opportunity to build these locomotives for Amtrak. In an effort to expedite the schedule, MPI went through various iterations, unfortunately the net effect happened to result in a delayed delivery.

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NATIONAL RAILROAD PASSENGER CORPORATION
40 Massachusetts Avenue, NE, Washington, DC 20002

February 9, 2012

Mr. Michael Rodgers
Illinois EPA
Bureau of Air
P.O. Box 19276
Springfield, IL 62794-2976

Re: TIP ID# 01090006

Dear Mike,

Thank you for the opportunity to review our grant for the purchase of two GenSets for use in the Amtrak Chicago Yard. We appreciate your assistance.

Attached is the letter from the GenSet manufacturer, Motive Power, that describes the reason for the significant price discrepancy from the original grant request which was based upon a GenSet ordered for use at the Amtrak Oakland, CA Yard. (We had received permission from Illinois DOT to sole source this grant for the two Chicago GenSets.)

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Chicago Metropolitan Agency for Planning

CMAQ Cost Increase Analysis

TIP ID: **01-09-0006**

Description: **Retofit of Amtrak Switcher Engines**

Ranking Computation

	2009 Award	2010 Award	2012 Increase
Kilos VOC eliminated	15,812.23	11,430.53	15,812.23
Cost	$3,000,000	$1,500,000	$ 4,100,000
$/Kilo VOC eliminated	$ 190	$ 131	$ 259
Rank			

Project Expenses

	Federal Share	Total	Fed %	Basis
2009 Award	$1,200,000	$3,000,000	40.0%	Approved Project
2010 Award	$1,200,000	$1,500,000	80.0%	Approved Project
2012 Incrase	$4,100,000	$4,100,000	100.0%	Letter from Sponsor
Increase Amount	$ 1,700,000	$ (400,000)		

2010 Program

Sponsor	Facility to be Improved	Proposed Program	$ Per Kg VOC Eliminated
CTA	Diesel Particulate Filter Retrofit for CTA Buses		$252
Cook County Dept of Environmental Control	Cook County DPF Diesel Retrofit	$ 582,738	$110
IEPA	Retofit of Amtrak Switcher Engines	$ 1,200,000	$131
Riverdale	CSXT Barr Rail Yard Switch Engine Retrofit	$ 2,925,000	$133
Franklin Park	Indiana Harbor Belt Railroad Switcher Engine Retrofit	$ 958,100	$145
Berkeley	Union Pacific Proviso Railyard Switcher Engine Retrofit		$168
Riverdale	Indiana Harbor Belt Railroad Retrofit		$176
Bedford Park	BRC Clearing Yard Switcher Retrofit		$183
Lake County	Diesel Retrofit Project	$ 23,400	$71
IEPA	Norfolk Southern Railway Co Switchyard Diesel Locomotive Retrofit Project		$230
IEPA	Retofit of Amtrak Switcher Engines	$ 1,200,000	$259
Hoffman Estates	Diesel Fleet Emissions Reduction Project	$ 221,600	$413
Pace	Diesel Engine Retrofits	$ 2,340,000	$539
Metra	Installation of GenSets on Two Metra Switch Engines		$857
Riverdale	Diesel Vehicle Replacement Program		$12,125
Itasca	Public Works Diesel Emissions Reduction Project		$11,482
IDOT	IDOT Maintenance Fleet Air Pollution Reduction Effort		$1,575

2009 Program

CMAQ ID	Facility to be Improved	$ Per Kilo VOC Eliminated	Proposed Program
DR13093149	Cook County Dept of Environmental Control-Cook County Fleet Diesel Retrofit	$31	$633,873
DR13093151	Pace-Bus Diesel Engine Retrofits	$130	$4,548,080
DR13093150	IEPA-Chicago Area Diesel Retrofit Program	$111	$1,000,000
DR01093127	IEPA-Retofit of Amtrak Switcher Engines	$190	$1,200,000
DR01093125	CDOE-Chicago Diesel Emissions Reduction Project	$275	$1,739,000
DR04093133	Berkeley-Union Pacific Proviso Railyard Switcher Engine Retrofit	$212	$2,080,000
DR01093126	IEPA-Norfolk Southern Railway Co Switchyard Diesel Locomotive Retrofit Project	$213	
DR06093132	Bedford Park-BRC Clearing Yard Switcher Retrofit	$232	$2,925,000
DR01093127	IEPA-Retofit of Amtrak Switcher Engines	$259	$1,200,000
DR07093135	IEPA-CSXT Barr Rail Yard Switch Engine Retrofit-Year 2 & 3	$266	
DR13093148	Riverdale-Indiana Harbor Belt Railroad SD-20 Retrofit	$320	
DR05093134	Cicero-Cicero Rail Yard Locomotive Diesel Retrofit	$372	$1,820,000
DR13093142	Franklin Park-Indiana Harbor Belt Railroad Switcher Engine Retrofit	$403	$2,763,150
DR13093182	IDOT-IDOT Maintenance Fleet Emissions Reduction	$821	$800,000
DR07093136	Riverdale-Biofuels Facility for the South Region	Not Analyzed	

09-12-0012 Request

From: Chaudhry, Akram <achaudhry@hrgreen.com>
Sent: Tuesday, February 21, 2012 10:52 AM
To: Doug Ferguson
Cc: Holly Ostdick; Eric Gallt (egallt@aurora-il.org); Simmons, Tony; Stanko, Jeff
Subject: City of Aurora, Traffic Signals interconnect ;TIP ID: 09-12-0012
Attachments: Project_Map.pdf

Doug:

On behalf of the City, we are requesting your approval of adding the Liberty/Commons

intersection in our proposed scope(see revised map). If approved, we will resubmit the PPI to
reflect the increased cost in Engineering and construction.

The City of Aurora received CMAQ funds for the Traffic Signals interconnect project along
McCoy Drive and Commons Drive which consists of 8 signals. The City would like to extend the
northerly limits of the project along Commons Drive from the original northerly terminus at New
York Street to the next Traffic signal north at Liberty street which was inadvertently left out.

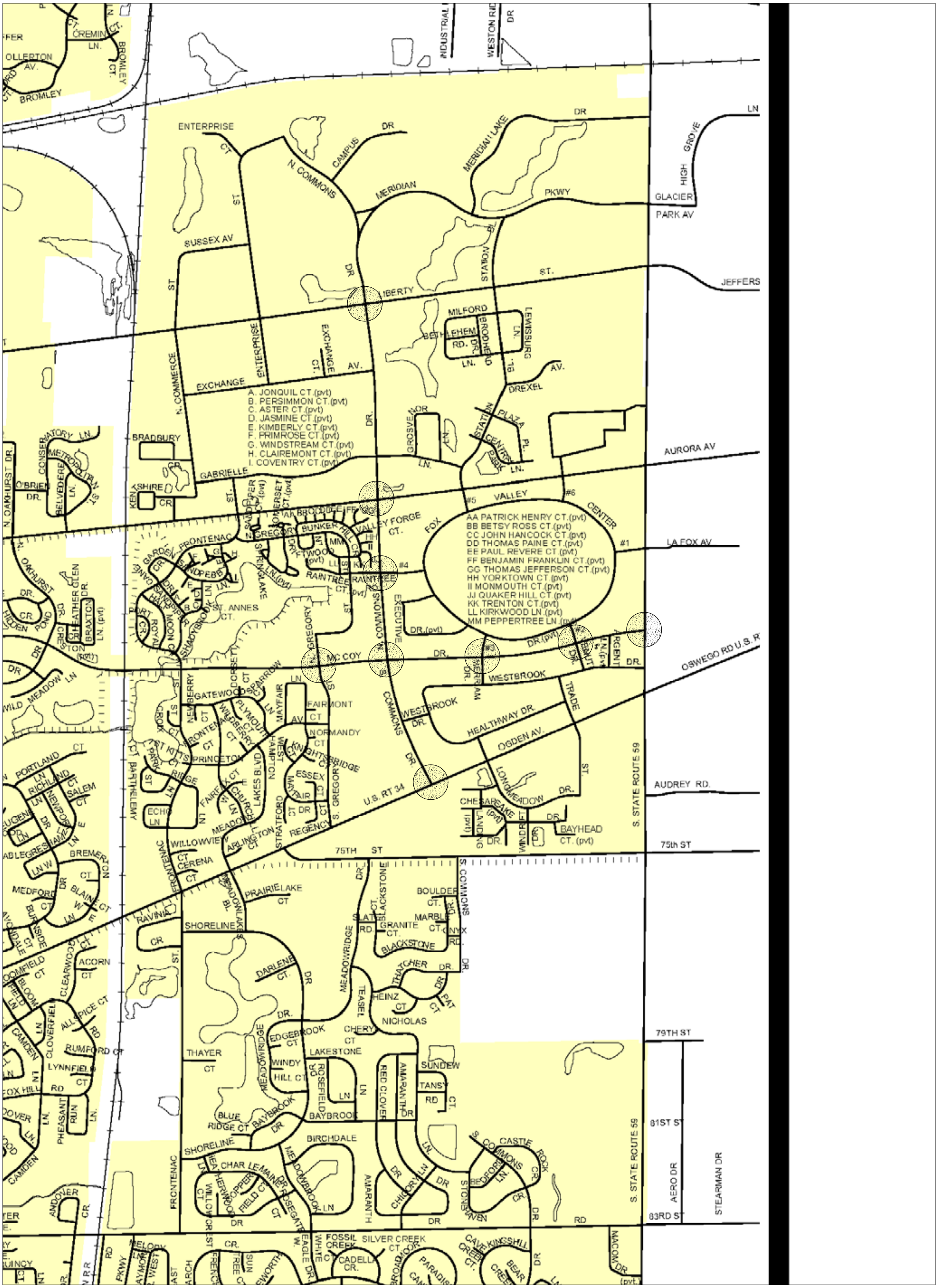
Akram Chaudhry, P.E.
Vice President/Principal
HR GREEN, INC.
420 N. Front Street, Suite 100
McHenry, Illinois 60050
Main: 815.385.1778
Direct: 815.759.8310 Fax: 815.385.1781

Learn more at HRGreen.com

PROJECT MAP
McCOY DRIVE INTERCONNECT
CITY OF AURORA
DUPAGE COUNTY

1000 0 1000 2000
SCALE IN FEET

N



LENGTH OF PROJECT = 2.40 MILES

LEGEND

INTERSECTIONS TO BE INTERCONNECTED

TRAFFIC SIGNAL OPINION OF PROBABLE COSTS

McCoy Drive (Gregory Street to IL Route 59) & Commons Drive (US Route 34 to Liberty Street)
City of Aurora: Traffic Signal Interconnect and Modernization
CMAQ Program: FY 2012-2016
Section: 11-00297-00-TL
Project No.: CMM-9003(938)
Job No.: D-91-217-12
TIP ID No. : 09-12-0012
HR Green Job No.: 070690.10

	Original Application (2011)			Revised Application (2012)			Additional CMAQ
	CMAQ (80%)	Local (20%)	Total	CMAQ (80%)	Local (20%)	Total	Funds Requested
Phase II Engineering	$ 50,400.00	$ 12,600.00	$ 63,000.00	$ 63,000.00	$ 15,750.00	$ 78,750.00	**$ 12,600.00**
Phase III Engineering	$ 56,700.00	$ 14,200.00	$ 70,900.00	$ 70,875.00	$ 17,750.00	$ 88,625.00	**$ 14,175.00**
Construction Cost	$ 630,400.00	$ 157,600.00	$ 788,000.00	$ 788,000.00	$ 197,000.00	$ 985,000.00	**$ 157,600.00**
Project Grand Total	$ 737,500.00	$ 184,400.00	$ 921,900.00	$ 921,875.00	$ 230,500.00	$ 1,152,375.00	**$ 184,375.00**

Summary

The City of Aurora received CMAQ funds for the Traffic Signal Interconnect project along McCoy Drive (FAU 1531) and Commons Drive (FAU 2532), which consists of eight (8) signalized intersections. The City is proposing to extend the northerly project limits along Commons Drive from the original northerly terminus at New York Street to the next signalized intersection north at Liberty Street. Liberty Street is the last signalized intersection along this corridor and was inadvertently left out of the original proposal during the CMAQ FY 2012-2016 call for projects. The proposed extension of the project limits would add one (1) more signalized intersection and 0.5 miles in total length to the scope of the project. This represents an increase of approximately 25% in project length, which has been used as the basis for projecting the increased costs associated with the proposed increase in scope.

Chicago Metropolitan Agency for Planning

CMAQ Cost Increase Analysis

TIP ID: **09-12-0012**

Description: **McCoy Dr/Commons Dr from Gregory St/New York St to IL 59/US34**

Ranking Computation

		2012		2012
Kg VOC eliminated		715.54		807.45
Cost	$	921,900	$	1,152,375
$/Kg VOC eliminated	$	1,288	$	1,427
Rank		12		8

Project Expenses

	Federal Share		Total		Federal %	Basis
2012	$	737,500	$	921,875	80.0%	Approved Projects
2012	$	921,900	$	1,152,375	80.0%	Letter from Sponsor
Increase Amount	$	184,400	$	230,500		

FY 2012-2016 CMAQ Program

Application Number	Sponsor	Description	2012-2016 total	$ Per Kg VOC Eliminated
SI04123542	Oak Park	Village of Oak Par Traffic Signal Management System	$104,320	$78
SI08123515	DuPage County DOT	DuPage Co Central Signal System - Phase I	$716,000	$87
SI08123517	DuPage County DOT	DuPage County Central Signal System - Phase III	$0	$172
SI08123516	DuPage County DOT	DuPage Co Central Signal System - Phase II	$676,800	$241
SI09123545	Aurora	Eola Rd from E New York St to Wolf's Crossing Rd	$1,467,600	$421
SI01123522	CDOT	IL 19/Irving Park Rd from Western Av to US 41/Lake Shore Dr	$928,000	$558
SI08123514	DuPage County DOT	55th St/CH 35 from Dunham Rd to Clarendon Hills Rd	$744,000	$615
SI09123544	Aurora	McCoy Dr/Commons Dr from Gregory St/New York St to IL 59/US34	$737,500	$787
SI10123525	Lake County DOT	US 12/Rand Rd from IL 176 Ramps to Millller Rd	$0	$886
SI10123524	Lake County DOT	IL 83 from IL 173 to Millstone Dr	$0	$1,142
SI08123513	DuPage County DOT	Schmale Rd/CH 38 from Bloomingdale Ct to Fullerton Rd	$392,000	$1,209
SI01123521	CDOT	Ashland Av from Devon Av/Clark St to Fullerton Av/Ashland Av	$0	$1,277
SI09123544	Aurora	McCoy Dr/Commons Dr from Gregory St/New York St to IL 59/US34	$737,500	$1,288
SI09123543	Aurora	Hill Av from Ohio St to Montgomery Rd	$586,700	$1,535
SI01123520	CDOT	Ashland Av from Roosevelt Rd to Cermak Rd/Blue Island Av	$0	$1,642
SI10123527	Lake County DOT	Cedar Lake Rd from Rollins Rd to S Rosedale Ct	$0	$1,725
SI09123533	Kane County DOT	Stearns Rd/CH 37 from Randall Rd to Kane/DuPage County Line	$1,788,600	$1,763
SI02123536	Evanston	Dempster St from Fowler Av to Ridge Av	$792,000	$1,796
SI10123526	Lake County DOT	IL 120/Belvidere Rd from IL 134/Main St to US 45	$0	$1,862
SI10123560	Grayslake	Lake St from Washington St to Belvidere Rd	$540,140	$1,911
SI10123818	Lake County DOT	Sunset Av, Glen Flora Av, Jackson St, 10th St and 14th St	$0	$1,978
SI10123531	Lake County DOT	Sheridan Rd from Wadsworth Rd to Grand Av	$0	$2,049
SI01123519	CDOT	Cermak Rd from Ashland Av to MLK Jr Dr	$0	$2,808
SI10123528	Lake County DOT	Waukegan Rd from Casimir Pulaski Dr to Norman Dr South	$0	$3,814
SI05123559	Berwyn	16th St from Wenonah Av to Ridgeland Av	$0	$13,691

TranSystems

Memo

1475 E. Woodfield Road
Suite 600
Schaumburg, IL 60173

T 847-605-9600
F 847-605-9610

www.transystems.com

Elgin Bike Route #1
Section Number: 09-00175-00-BT
TIP ID: 09-09-0006

RE: CMAQ Funding Increase Request

The City of Elgin has recently completed the Phase I study for this bikeway route within the City of Elgin. Design approval from IDOT was received on December 13, 2011. This route will provide connections to neighborhoods and additional modes of transportation which will serve the residents of the City and surrounding communities by promoting increased bicycle usage and safety. The bikeway route will connect the downtown with an existing regional bike path extending into Hoffman Estates and a forest preserve.

The original 2.7-mile facility was planned as an on-street route for the majority of the segment. Through the course of the Phase I studies it was determined that a portion of the facility would need to be off-road due to the narrow roadway width for Congdon Avenue east of Preston Avenue for a distance of approximately 1,950 feet. As a result, the costs of the project have increased from both an engineering and construction perspective. In addition to the new costs of the bike pavement there are additional associated costs including the following:

- Tree Removal and Replace (R&R)
- PCC Sidewalk R&R
- Sodding
- Curb and Gutter Removal
- Driveway Pavement R&R
- Lighting Relocation

Due to these additional scope items, the City is requesting additional funding to implement the Phase II engineering and construction of the project. The table below identifies the additional funding request

Originally Programmed: Segment 1 NE Quadrant

	Total Cost	Fed Cost	City Cost
Phase I Engineering	$16,800	$13,400	$3,400
Phase II Engineering	$33,600	$26,900	$6,700
Construction	$336,400	$269,100	$67,300
Construction Eng.	$36,000	$28,800	$7,200
	$422,800	$338,200	$84,600

Revised Funding: Segment 1 NE Quadrant

	Total Cost	Fed Cost	City Cost
Phase I Engineering	$41,782	$33,425	$8,357
Phase II Engineering	$85,000	$68,000	$17,000
Construction	$435,600	$348,000	$87, 000
Construction Eng.	$50,000	$40,000	$10,000
	$611,782	$489,425	$122,357

The City respectfully requests the Committee allocate the additional funding needed for the project. Like many communities, Elgin cannot implement such improvements without the help of outside agencies. With continued funding, we will make sure that this project is implemented.

The Phase II Engineering Agreement has been prepared will be submitted to IDOT for review and approval.

Thank you for your time and consideration.

By: _____

Brian L. Fairwood, TranSystems

Chicago Metropolitan Agency for Planning

CMAQ Cost Increase Analysis

TIP ID: **09-09-0006**

Description: **Elgin Bikeway Plan Route 1 NE Quadrant**

Ranking Computation

	2009	2012 increase
Kg VOC eliminated	362.69	362.69
Cost	$ 422,800	$ 611,782
$/Kg VOC eliminated	$ 1,166	$ 1,687
Rank	5	7

Project Expenses

	Federal Share	Total	Federal %	Basis
2009	$ 338,200	$ 422,800	80.0%	Approved Projects
2012	$ 469,400	$ 586,750	80.0%	Letter from Sponsor
Increase Amount	$ 131,200	$ 163,950		

2009 CMAQ Program

CMAQ ID	Facility to be Improved	Project Total	$ Per Kilo VOC Eliminated	Proposed Program
BP01093029	CDOT-Streets for Cycling/Bike 2015 Plan Implementation-2010/2011 Series	$ 2,925,000		
			$195	$400,000
BP03093032	Des Plaines-City of Des Plaines Bike Network Implementation Stage 1	$ 155,000	$244	$124,000
BP03093035	Arlington Heights-Douglas Ave Multi-use Path	$ 130,000		
			$561	$90,000
BP06093039	Orland Hills-Lake Lorin and Ashbourne Lake Bike Trail Connectors	$ 191,000		
			$1,013	**$120,000**
BP09093052	Elgin-Elgin Bikeway Plan Route 1 NE Quadrant	$ 422,800		
			$1,166	$40,300
BP09093045	Carpentersville-Wilmette Ave Bicycle Multi-use Path	$ 122,000	$1,250	$82,000
BP11093072	Algonquin-Hanson Rd Bike Path	$ 192,000	$1,464	$144,000
BP09093052	Elgin-Elgin Bikeway Plan Route 1 NE Quadrant	$ 422,800	$1,687	$40,300
BP08093042	Addison-Salt Creek Greenway Trail from Villa/2nd to FP Dr/Addison Rd	$ 5,470,350		
			$2,587	$3,920,000
BP12093089	Bolingbrook-Lily Cache Bike Path	$ 680,000		
			$2,918	$153,000
BP06093040	Palos Heights-Cal Sag Greenway Bike Trail from IL 83 to 127th St	$ 8,510,000		
			$3,531	$360,000
BP09093053	Elgin-Elgin Bikeway Plan Route 1 SW Quadrant	$ 3,401,000		
			$3,551	$324,000
BP03093034	Hoffman Estates-Higgins Rd Pedestrian and Bicycle Project	$ 863,000		
			$3,587	$600,000
BP11093071	Lake in the Hills Parks & Recreation Department-Harvest Gate Bike Path	$ 707,625		
			$5,630	
BP01093026	CDOT-Weber Spur Trail UPRR (Former CNW)	$ 9,210,000		
			$7,074	$1,680,000
BP01093030	CDOT-CDOT-Lakefront Trail-Navy Pier Flyover	$ 28,335,500		
			$8,548	$5,500,000
BP11093073	Cary-Cary-Algonquin Rd Bikeway from West Main St to North Fox Trails Dr	$ 878,600		
			$8,949	
BP03093028	Schaumburg-Martingale Rd Bikeway	$ 1,354,900		
			$9,123	
BP10093067	Antioch-East Bike Path along Little Silver Lake Rd, North Deep Lake Rd, IL 173	$ 690,000		
			$12,236	
BP10093066	Antioch-West Bike Path along Trevor Rd, North Ave, Tiffany Rd, IL 173, IL 59	$ 882,000		
			$12,411	
BP12093086	New Lenox-Metra Southwest Station Bike Path	$ 751,500		
			$13,440	
BP12093084	Homer Glen-Homer Glen Community Trail West Extension	$ 1,304,000		
			$13,530	
BP08093043	Woodridge-Woodridge Bicycle/Pedestrian Bridge over IL 53	$ 2,427,000		
			$17,448	
BP12093085	Minooka-Lion's Park Bike Path	$ 603,825		
			$18,051	
BP10093068	Hawthorn Woods-Midlothian Rd Bike Path from Kruckenburg/Heritage Oaks Park to Old McHenry Rd	$ 684,000		
			$18,476	
BP09093064	Sugar Grove-Blackberry Creek Shared-Use Path Bridge and Connector	$ 429,500		
			$20,568	
BP10093069	Long Grove-Old McHenry Rd Multi-Use Path from IL 22 to N of Robert Parker Coffin Rd	$ 1,284,800		
			$23,626	
BP07093041	Burnham-Burnham Greenway Trail from State St to Brainard and Burnham	$ 4,318,000		
			$24,549	
BP12093087	New Lenox-Nelson Rd South Bike Path	$ 1,380,300		
			$24,940	
BP12093088	Frankfort-SE Area Community Bike Trail Pfeiffer Rd and Sauk Trail to 80th Ave	$ 937,700	$28,129	
BP03093031	Cook County Highway Department-Deer Grove Forest Preserve Paved Bike Extension	$ 1,599,000	$31,208	
BP09093063	Montgomery-Baseline Rd Shared Use Path Orchard/Horseman Trail/Caterpillar Rd	$ 359,000	$37,835	
BP09093044	St. Charles-Red Gate Rd Bike Trail Part of Red Gate Rd Bridge Project	$ 3,619,000	$94,361	
BP09093062	Montgomery-US 30 Shared-use Path Bridge 700ft N/S of US 30	$ 881,600	$398,964	

01-94-0092 Request 3

From: Privett, Keith <keith.privett@cityofchicago.org>
Sent: Thursday, January 26, 2012 3:25 PM
To: Holly Ostdick; Ross Patronsky; Doug Ferguson
Cc: Amsden, Mike; Gomberg, Ben; Hamilton, Luann
Subject: CMAQ Streets for Cycling (01-94-0092) implementation

CDOT will soon be executing $1,600,000 in IPAs for engineering consultant services in Streets for Cycling
(01-94-0092) while this will expedite implementation of the projects in the new CMAQ award, we have
some funds remaining unobligated from previous years.

We will either need to move earlier FY funds Construction to ENG 1 and ENG 2 to "use oldest money
first," or draw on the FY12 funds in the new FY12 award - since our records indicate that is the earliest
year we have engineering funds available.

However the new award was designed as ENG/IMP instead of ENG1/ENG2/CONST since some tasks don't
fit the normal construction cycle, and to eliminate shifts between engineering phases.

So, perhaps the simplest thing would be to move remaining Pre FY12 funds into ENG/IMP as well.

We can do what ever is easiest for staff or best for calculating unobligated balances in order to get the
funding available. Please let me know what approach you recommend and I will send a more concise official request for the move for CMAQ agenda/minutes.

Thanks,
Keith

10-12-0003 request

From: Holly Ostdick
Sent: Monday, March 26, 2012 2:26 PM
To: 'Christensen, Bruce D.'
Subject: RE: 10-12-0003 & 10-12-0004

CMAP staff will process this as an administrative modification and the TIP change can be made. TIP changes are due 4/11/12 for the 4/27/12 Transportation Committee meeting. The CMAQ PSC will be made aware of the move at their 4/5/12 meeting.

Thanks,
Holly

Holly Ostdick
(312) 386-8836

From: Christensen, Bruce D. [mailto:BChristensen@lakecountyil.gov]
Sent: Monday, March 26, 2012 1:57 PM
To: Holly Ostdick
Subject: 10-12-0003 & 10-12-0004

Holly-

Lake County DOT has decided to use local funds only for the preliminary engineering on the two CMAQ projects 10-12-0003 and 10-12-0004. As such I would like to submit TIP changes moving the approved engineering $ to construction on both projects.

Bruce D. Christensen
Transportation Coordinator
Lake County Division of Transportation
600 Winchester Road
Libertyville, IL 60048
(847) 377-7400
bchristensen@lakecountyil.gov

10-12-0004 request

From: Holly Ostdick
Sent: Monday, March 26, 2012 2:26 PM
To: 'Christensen, Bruce D.'
Subject: RE: 10-12-0003 & 10-12-0004

CMAP staff will process this as an administrative modification and the TIP change can be made. TIP changes are due 4/11/12 for the 4/27/12 Transportation Committee meeting. The CMAQ PSC will be made aware of the move at their 4/5/12 meeting.

Thanks,
Holly

Holly Ostdick
(312) 386-8836

From: Christensen, Bruce D. [mailto:BChristensen@lakecountyil.gov]
Sent: Monday, March 26, 2012 1:57 PM
To: Holly Ostdick
Subject: 10-12-0003 & 10-12-0004

Holly-

Lake County DOT has decided to use local funds only for the preliminary engineering on the two CMAQ projects 10-12-0003 and 10-12-0004. As such I would like to submit TIP changes moving the approved engineering $ to construction on both projects.

Bruce D. Christensen
Transportation Coordinator
Lake County Division of Transportation
600 Winchester Road
Libertyville, IL 60048
(847) 377-7400
bchristensen@lakecountyil.gov

13-12-0003 Approval

From: Holly Ostdick
Sent: Tuesday, March 27, 2012 9:15 AM
To: 'Rogers, Michael D.'; Doug Ferguson
Cc: Burkhart, Darwin J.; Dial, Nancy S; Ross Patronsky; Biggs, Mike
Subject: RE: Illinois Clean Diesel Engine Repowers CMAQ Grant - TIP ID # 13-12-0003

Thank you Mike.

The change is currently pending in the regional TIP and is anticipated to be approved at the CMAP
Transportation Committee meeting on 4/27/12. The CMAQ Project Selection Committee will be made
aware of the change at their 4/5/12 meeting.

Thank you,
Holly

Holly Ostdick
(312) 386-8836

From: Rogers, Michael D. [mailto:Michael.Rogers@Illinois.gov]
Sent: Tuesday, March 27, 2012 9:12 AM
To: Holly Ostdick; Doug Ferguson
Cc: Burkhart, Darwin J.; Dial, Nancy S; Ross Patronsky; Biggs, Mike
Subject: RE: Illinois Clean Diesel Engine Repowers CMAQ Grant - TIP ID # 13-12-0003

Holly and Doug,

This is to request that the “Illinois CMAQ Diesel Repower” CMAQ project, (CMAP TIP ID number 13-12-
0003) be moved into the FY2012-2016 TIP as soon as possible. We would like to move the full
$5,000,000 into FY2012. This project was developed based on the discussions of the Direct Emissions
Reduction Focus Group and was approved by the CMAP Board in October 2011.

Please let me know if you have any questions.

Thank you.

Mike
****
Mike Rogers
Illinois EPA, Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794-9276

phone: 217 524-4408
fax: 217 557-2559
e-mail: michael.rogers@illinois.gov

Agenda Item No. 5.1

Chicago Metropolitan Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, Illinois 60606

312 454 0400
www.cmap.illinois.gov

MEMORANDUM

To: **CMAQ Project Selection Committee**

From: CMAP Staff

Date: March 29, 2012

Re: Proposed procedure for FHWA administered projects that are not closed out

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The recent review of unobligated CMAQ projects resulted in discussion of the funds tied up during the period between federal authorization of the final phase of a project and close out. Staff met with regional stakeholders to develop a proposed procedure for freeing up CMAQ funds from projects for which the final phase has been authorized/obligated by FHWA but which are not closed out.

The current practice is for CMAP staff to remove funds from a project when a final voucher is received for a project's final phase. For example, a project programmed for $3,000,000 for construction is federally authorized for $2,000,000 based on the Phase II engineering engineer's estimate. The $1,000,000 unauthorized/unobligated but programmed is not removed until a final voucher is received.

The proposal is that a set portion of the unauthorized yet programmed $1,000,000 (in the example above) be removed from the project and placed back in the circulation for use on cost increases, contingency projects or future funding cycles. The remaining portion not removed and placed back in circulation would stay with the project to ensure that if change orders occur the funds will be available. The portion to remain with the project is:

Total Project Federal Amount Programmed	Percentage to Remain
$0-$999,999	10%
$1,000,000-$4,999,999	5%
$5,000,000-$9,999,999	3%
$10,000,000+	1%

Once authorization/obligation of the final phase occurs the percentages above will be applied to determine the amount to remain with the project. The balance of all phases will be removed from the project in the TIP and be unavailable to the project sponsor. In the example above, the total federal programmed amount is $3,000,000 which means 5% is defined for remaining with the project. The authorization/obligation is $2,000,000; therefore the $2,000,000 plus an additional 5% ($100,000) will remain programmed to the project. The unobligated/unauthorized yet programmed balance of $900,000 will be removed from the project and be placed back in circulation. If a larger change order occurs than what remains programmed for the project, the Project Selection Committee will be asked to approve a cost increase for the project.

This procedure will not affect transit projects or implementation projects with funding in multiple years. Transit projects in general obligate the entire programmed amount when the FTA grant is executed. Implementation projects with funding in multiple years are on-going and therefore there is no set end phase.

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Chicago Metropolitan Agency for Planning

CMAQ Program Summary - By Year - 2012 - 2016

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
01-01-0009	CDOT	CDOT-Lakefront Trail-Navy Pier Flyover	CONST	$4,128,000				$4,128,000
01-05-0002	CDOT	41st St Bicycle-Pedestrian Bridge	ENG2	$880,000				$880,000
01-06-0005	CDOT	Walk to Transit - Pedestrian Improvements to Intersections near CTA Rail Stations	CONST	$688,000				$688,000
01-08-0001	Forest Preserve District of Cook County	North Branch Bicycle Trail Extension (East Segment)	CONST	$2,390,000				$2,390,000
01-08-0002	CDOT	Bloomingdale Trail	ENG2	$480,000				$480,000
01-08-0003	CDOT	Signal Controller Upgrade and Timing Program	ENG2	$320,000				$320,000
01-08-0003	CDOT	Signal Controller Upgrade and Timing Program	IMP	$1,600,000				$1,600,000
01-08-0004	CDOE	City of Chicago Bicycle Fleet Program	IMP	$80,000				$80,000
01-09-0002	CDOT	Weber Spur Trail UPRRfrom Devon/Springfield to Elston/Kimberly	ENG1	$800,000				$800,000
01-09-0004	CDOT	Union Station Transportation Center	ROW	$4,720,000			$4,720,000	$0
01-09-0005	CDOT	Traffic Management Center Integrated Corridor Management	IMP	$1,520,000				$1,520,000
01-10-0004	CTA	Diesel Particulate Filter Retrofit for CTA Buses 404.024	IMP	$11,920,000			$12,720,000	($800,000)
01-12-0002	CDOT	Arterial VMS Traveler Information System, Phase I	ENG	$172,000				$172,000
01-12-0003	CDOT	Chicago Bike Sharing Program - Startup	IMP	$18,000,000			$18,000,000	$0
01-12-0004	CDOE	Chicago Area Alternative Fuel Deployment Project, Phase 2	IMP	$15,000,000				$15,000,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
01-12-0005	CDOT	Arterial Detection System Improvements	IMP	$412,000				$412,000
01-12-0006	CDOT	US 41/Lakeshore Dr and Columbus Dr from Monroe Dr to US 41/Waldron Dr (1600 S)	ENG	$124,000				$124,000
01-12-0006	CDOT	US 41/Lakeshore Dr and Columbus Dr from Monroe Dr to US 41/Waldron Dr (1600 S)	IMP	$820,000				$820,000
01-12-0007	CDOT	IL 19/Irving Park Rd from Western Av to US 41/Lake Shore Dr	ENG	$122,000				$122,000
01-12-0007	CDOT	IL 19/Irving Park Rd from Western Av to US 41/Lake Shore Dr	IMP	$806,000				$806,000
01-96-0008	CDOT	CLARK/DIVISION STATION IMPROVEMENT - RED LINE	CONST	$8,640,000			$8,640,000	$0
01-96-0008	CDOT	CLARK/DIVISION STATION IMPROVEMENT - RED LINE	CONST	$39,600,000			$39,600,000	$0
01-97-0088	CDOT	87th St from Pulaski Rd to I-94/Dan Ryan Ewy	ENG1	$200,000				$200,000
02-10-0001	Lincolnwood	Lincolnwood Union Pacific (UP) Rail Line/Weber Spur Bike/Multiuse Trail	ENG2	$52,000				$52,000
02-10-0002	Lincolnwood	Lincolnwood Commonwealth Edison (ComEd) Utility ROW / Skokie Valley Bike/Multiuse Trail	ENG2	$84,000				$84,000
02-10-0002	Lincolnwood	Lincolnwood Commonwealth Edison (ComEd) Utility ROW / Skokie Valley Bike/Multiuse Trail	CONST	$704,000				$704,000
02-12-0002	Skokie	Skokie Valley Trail from Oakton St to Village Limits	CONST	$544,000				$544,000
02-12-0003	Lincolnwood	Touhy Av Overpass (Skokie Valley Bike Trail)	ENG1	$88,000				$88,000
02-12-0006	Evanston	Dempster St from Fowler Av to Ridge Av	ENG1	$24,000				$24,000
03-08-0004	Rolling Meadows	Arlington Park Train Station Bicycle Lane Extension	CONST	$420,000	$167,000			$587,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
03-09-0008	Hoffman Estates	Higgins Rd Pedestrian and Bicycle Project	CONST	$600,000			$511,978	$88,022
03-10-0004	Hoffman Estates	IL 59 at Shoe Factory Rd	CONST	$880,000				$880,000
03-12-0002	IDOT	IL 59 at W Bartlett Rd	ROW	$96,000				$96,000
03-12-0005	Des Plaines	Ballard Rd from Bender Rd to Good Av	ENG1	$20,000				$20,000
03-12-0010	Mount Prospect	Golf Rd Alt. 3 Regional Bike Route	ENG1	$8,000				$8,000
03-12-0010	Mount Prospect	Golf Rd Alt. 3 Regional Bike Route	ENG2	$12,000				$12,000
03-12-0011	Des Plaines	Des Plaines - Pedestrian Refuge Medians	CONST	$144,800				$144,800
03-12-0012	Niles	Cleveland St Crosswalks from Waukegan Rd to Caldwell Av	ENG1	$8,000				$8,000
03-12-0013	Schaumburg	Bike-to-Metra Guides: Round 2 (Regionwide)	IMP	$76,800				$76,800
04-00-0010	Schiller Park	Des Plaines River Rd Continuous Left Turn Lane from River St to Winona	CONST	$320,000				$320,000
04-08-0001	Melrose Park	North Ave Commuter Bicycle Path from Mannheim Rd to Thatcher Ave	ENG2	$59,165				$59,165
04-08-0001	Melrose Park	North Ave Commuter Bicycle Path from Mannheim Rd to Thatcher Ave	CONST	$1,108,000				$1,108,000
04-08-0002	Northlake	Grand Ave Sidewalk from Northwest Ave to Rhodes Ave	CONST	$1,693,000				$1,693,000
04-12-0001	Oak Park	Madison St from Home Av to Lombard Av	ENG1	$52,000				$52,000
04-12-0001	Oak Park	Madison St from Home Av to Lombard Av	ENG2	$32,000				$32,000
04-12-0003	Oak Park	Covered Bike Parking along CTA Blue	ENG2	$20,000				$20,000
04-12-0004	Oak Park	Oak Park Traffic Signal Management System	ENG2	$3,360				$3,360
04-12-0004	Oak Park	Oak Park Traffic Signal Management System	CONST	$100,960				$100,960

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
04-12-0007	Northlake	Northwest Av from Grand Av to North Av	ENG1	$57,200				$57,200
04-12-0007	Northlake	Northwest Av from Grand Av to North Av	ENG2	$57,200				$57,200
06-06-0061	Palos Heights	Cal Sag Greenway Bike Trail from IL 83 to 127th St	ROW	$20,000				$20,000
06-06-0061	Palos Heights	Cal Sag Greenway Bike Trail from IL 83 to 127th St	CONST	$326,000				$326,000
06-09-0005	IDOT	104th Ave/Flavin Rd at 95th St	CONST	$2,000,000			$1,996,000	$4,000
07-06-0002	University Park	Cicero Ave Shared Use Path	ENG2	$14,000				$14,000
07-06-0058	Forest Preserve District of Cook County	Thorn Creek Bicycle Trail Completion	ENG2	$304,400			$377,530	($73,130)
07-08-0002	Hazel Crest	New Commuter Parking Lot on the NW corner of 171st St at Park Ave.	ENG2	$23,973			$23,973	$0
07-08-0002	Hazel Crest	New Commuter Parking Lot on the NW corner of 171st St at Park Ave.	CONST	$320,000				$320,000
07-08-0009	Homewood	Village of Homewood Bicycle Network - Near and Mid-Term Priorities	CONST	$105,000			$114,100	($9,100)
07-08-0010	Riverdale	CSXT Barr Rail Yard Switch Engine Retrofit	IMP	$4,500,000			$4,362,000	$138,000
07-09-0003	Hazel Crest	Commuter Parking along Park Av from 167th St to 171st St	ENG2	$32,320			$20,880	$11,440
07-10-0001	Tinley Park	183rd St at Oak Park Ave	ENG2	$144,000				$144,000
07-10-0003	IDOT	Lincoln Hwy from Chicago Rd to State St	CONST	$408,000				$408,000
07-12-0001	IDOT	IL 394 at Sauk Trail	ROW	$108,000				$108,000
07-12-0004	Burnham	Burnham Greenway Trail from State St to Brainard and Burnham	CONST	$3,161,600				$3,161,600
08-05-0002	DuPage County	DuPage County Transit Service Marketing	IMP	$480,000				$480,000
08-07-0003	DuPage County DOT	Thorndale Ave from I-290 Entrance Ramp to Park Blvd	CONST	$200,000	$0	$200,000		$0

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
08-07-0013	Carol Stream	Kuhn Rd Bike Path from Lies Rd to The Great Western Trail	CONST	$74,000			$73,282	$718
08-08-0001	Villa Park	Ardmore Ave at High Ridge Rd	ROW	$12,000				$12,000
08-08-0001	Villa Park	Ardmore Ave at High Ridge Rd	ENG2	$56,000				$56,000
08-09-0011	Elmhurst	IL 56/Butterfield Rd at Commonwealth Ln	CONST	$377,180				$377,180
08-09-0016	DuPage County DOT	75th St at Cass Ave and Plainfield Rd	ROW	$100,000				$100,000
08-09-0016	DuPage County DOT	75th St at Cass Ave and Plainfield Rd	ENG2	$440,000				$440,000
08-10-0002	Bensenville	Jefferson St Sidewalk Improvements, Evergreen St to York Rd	CONST	$259,200			$224,000	$35,200
08-10-0004	DuPage County DOT	Geneva Rd from President St to Swift Rd	CONST	$860,000				$860,000
08-12-0003	Elmhurst	IL 56/Butterfield Rd at York St	ENG1	$112,000				$112,000
08-12-0004	DuPage County DOT	55th St at Main St	ENG1	$52,000				$52,000
08-12-0005	DuPage County DOT	Schmale Rd/CH 38 from Bloomingdale Ct to Fullerton Rd	ENG2	$40,000				$40,000
08-12-0006	DuPage County DOT	Fabyan Pkwy/Washington St at Roosevelt Rd	ROW	$200,000				$200,000
08-12-0006	DuPage County DOT	Fabyan Pkwy/Washington St at Roosevelt Rd	ENG2	$525,000				$525,000
08-12-0008	Wheaton	Sign the Wheaton Bicycle Network	IMP	$144,160				$144,160
08-12-0009	Wheaton	Various Downtown Bicycle Racks	IMP	$36,000				$36,000
08-12-0011	DuPage County DOT	DuPage Co Central Signal System - Phase I	ENG2	$80,000				$80,000
09-00-0012	IDOT	IL 64 from Tyler Rd to 7th Ave	CONST	$99,200	$148,000			$247,200
09-03-0001	Kane County DOT	Randall Road at Fabyan Parkway	CONST	$2,556,806			$2,427,556	$129,250
09-06-0003	Kane County DOT	Randall Rd at US 20/Foothill Rd	CONST	$954,132	$786,858		$1,694,777	$46,213
09-08-0002	Kane County DOT	Kirk Rd at Douglas Rd	ROW	$160,000			$160,000	$0

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
09-08-0003	Kane County DOT	Main St at Nelson Lake Rd	ROW	$496,000				$496,000
09-08-0005	Carpentersville	IL 31 at Huntley Rd	ROW	$260,000				$260,000
09-08-0005	Carpentersville	IL 31 at Huntley Rd	ENG2	$190,400				$190,400
09-08-0005	Carpentersville	IL 31 at Huntley Rd	CONST	$2,636,800				$2,636,800
09-09-0007	Elgin	Elgin Bikeway Plan Route 4 SW Quadrant	CONST	$2,397,000				$2,397,000
09-09-0010	Kane County DOT	Huntley Rd at Galligan Rd	ROW	$248,000				$248,000
09-09-0010	Kane County DOT	Huntley Rd at Galligan Rd	ENG2	$135,960			$135,960	$0
09-09-0010	Kane County DOT	Huntley Rd at Galligan Rd	CONST	$1,058,840				$1,058,840
09-09-0013	Kane County DOT	IL 64 from Randall Rd to Burlington Rd	CONST	$477,882			$477,883	($1)
09-10-0003	Kane County	Fabyan Pwy from Nagle Blv to IL 25	ROW	$204,000				$204,000
09-10-0003	Kane County	Fabyan Pwy from Nagle Blv to IL 25	ENG2	$128,000				$128,000
09-10-0003	Kane County	Fabyan Pwy from Nagle Blv to IL 25	CONST	$1,628,700				$1,628,700
09-10-0005	Kane County DOT	Dunham Rd/Kirk Rd from Stearns Rd to IL 56/Butterfield Rd	CONST	$1,616,800	$161,680		$1,616,800	$161,680
09-11-0013	Kane County	Arterial Management Center	CONST	$558,740	$296,200			$854,940
09-12-0003	IDOT	IL 47/72/Higgins Rd at US 20	ROW	$160,000				$160,000
09-12-0005	Batavia	Pedestrian Crossings Various (8) Locations along IL 31 and IL 25	ENG1	$33,600				$33,600
09-12-0007	IDOT	IL 47/72 at US 20	ROW	$160,000				$160,000
09-12-0008	Oswego	Mill Rd Multi-use Path	ENG2	$40,000				$40,000
09-12-0008	Oswego	Mill Rd Multi-use Path	CONST	$190,400				$190,400
09-95-0011	Kane County DOT	Kane County-Orchard Road Interconnect	CONST	$368,000			$141,487	$226,513
09-96-0019	St. Charles	Red Gate Rd Bike Trail Part of Red Gate Rd Bridge Project	CONST	$1,920,000			$1,920,000	$0

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
10-00-0128	Lake County DOT	Roberts Rd at River Rd	ROW	$102,000				$102,000
10-00-0128	Lake County DOT	Roberts Rd at River Rd	ENG2	$330,000				$330,000
10-00-0129	Lake County DOT	Hart Rd at US 14/W Northwest Hwy	ENG2	$506,000				$506,000
10-02-0007	Lake Zurich	Lake Zurich-US 12/Rand Road at Ela Road	CONST	$275,400				$275,400
10-02-0007	Lake Zurich	Lake Zurich-US 12/Rand Road at Ela Road	CONST	$175,383	$148,400			$323,783
10-06-0064	Mundelein	Lake St from Hawthorne Blv to Hickory St	CONST	$168,611	$215,518			$384,129
10-09-0008	Lake County DOT	IL 83 from US 45 to Westmoreland Dr	CONST	$1,789,600			$1,789,600	$0
10-10-0002	Lake County DOT	Washington St Bike Path (sidepath)	ENG2	$40,000				$40,000
10-10-0003	Lake County	Prairie Crossing Bike Path/Midlothian Rd	CONST	$1,910,400			$615,757	$1,294,643
10-11-0017	Lake County DOT	Deerfield Rd/CH A47 from Milwaukee Av to Des Plaines River	ENG1	$40,000				$40,000
10-12-0002	Lake Forest	Bicycle Parking Facility adjacent to Lake Forest Train Station	ENG1	$2,080				$2,080
10-12-0002	Lake Forest	Bicycle Parking Facility adjacent to Lake Forest Train Station	ENG2	$4,160				$4,160
10-12-0002	Lake Forest	Bicycle Parking Facility adjacent to Lake Forest Train Station	CONST	$41,600				$41,600
10-12-0003	Lake County DOT	Aptakisic Rd Adaptive Traffic Control	ENG2	$35,510		$35,510		$0
10-12-0004	Lake County DOT	Gilmer/Hawley/IL176 Adaptive Traffic Control	ENG2	$93,920		$93,920		$0
11-00-0201	McHenry County Division of Transportation	IL Rt 31 West Bypass of Algonquin	CONST	$316,000			$685,000	($369,000)
11-03-0007	McHenry	IL 31 from McCullom Lake Rd to IL 120	CONST	$554,959				$554,959
11-07-0001	McHenry County Division of Transportation	Virginia Rd at IL 31(southwest quadrant)	CONST	$320,000	$700,000			$1,020,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
11-09-0062	Algonquin	Edgewood Dr from Hanson Rd to Main St	CONST	$554,000			$554,000	$0
11-11-0004	Lakewood	Huntley Rd Bikepath Improvements (on-street bike lanes)	ENG2	$48,000				$48,000
11-12-0006	Algonquin	Randall Rd Pedestrian Crossing from Golden Eagle Dr to Stonegate Rd	ENG1	$120,000				$120,000
12-02-0011	Will County Department of Highways	Will County-Weber Road at Renwick Road	CONST	$3,260,000			$3,235,480	$24,520
12-04-0002	Will County Department of Highways	Naperville-Plainfield Rd at 119th	ROW	$80,000				$80,000
12-04-0002	Will County Department of Highways	Naperville-Plainfield Rd at 119th	CONST	$900,000			$980,000	($80,000)
12-06-0002	Will County Department of Highways	Gougar Rd at US 30	CONST	$1,056,000			$920,000	$136,000
12-08-0003	Will County Department of Highways	Laraway Rd at Cedar Rd	ROW	$520,000				$520,000
12-08-0003	Will County Department of Highways	Laraway Rd at Cedar Rd	ENG2	$200,000				$200,000
12-08-0003	Will County Department of Highways	Laraway Rd at Cedar Rd	CONST	$2,433,600				$2,433,600
12-10-0001	Romeoville	135th St Metra Parking Lot	ENG2	$440,000				$440,000
12-12-0001	Forest Preserve District of Will County	DuPage River Trail - Segment 5	ENG1	$72,000				$72,000
12-12-0002	Homer Glen	Homer Glen Community Trail - South Extension	ENG1	$31,000				$31,000
12-12-0002	Homer Glen	Homer Glen Community Trail - South Extension	CONST	$31,000				$31,000
12-12-0004	Frankfort	St Francis Rd Multi-Use Trail	ENG1	$12,000				$12,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
13-09-0003	IEPA	Chicago Area Diesel Retrofit Program	IMP	$5,000,000				$5,000,000
13-10-0005	IEPA	Norfolk Southern Railway Co Switchyard Diesel Locomotive Retrofit Project	IMP	$3,380,000				$3,380,000
13-10-0010	IDOT	I-55 from Naperville Rd to Lorenzo Rd Expansion of Congestion Monitoring, Incidence Detection and Traveler Information	IMP	$45,000			$75,637	($30,637)
13-10-0010	IDOT	I-55 from Naperville Rd to Lorenzo Rd Expansion of Congestion Monitoring, Incidence Detection and Traveler Information	IMP	$18,000			$23,464	($5,464)
13-10-0010	IDOT	I-55 from Naperville Rd to Lorenzo Rd Expansion of Congestion Monitoring, Incidence Detection and Traveler Information	IMP	$1,838,547			$1,838,547	$0
13-10-0010	IDOT	I-55 from Naperville Rd to Lorenzo Rd Expansion of Congestion Monitoring, Incidence Detection and Traveler Information	IMP	$3,098,453			$2,638,964	$459,489
13-12-0002	RTA	Regional Transit Signal Priority Integration Plan, Five Year Implementation: Priority Corridors	ENG	$5,043,543				$5,043,543
13-12-0002	RTA	Regional Transit Signal Priority Integration Plan, Five Year Implementation: Priority Corridors	IMP	$3,391,596				$3,391,596
13-12-0002	RTA	Regional Transit Signal Priority Integration Plan, Five Year Implementation: Priority Corridors	IMP	$6,984,256				$6,984,256
13-12-0002	RTA	Regional Transit Signal Priority Integration Plan, Five Year Implementation: Priority Corridors	IMP	$7,723,855				$7,723,855
13-12-0002	RTA	Regional Transit Signal Priority Integration Plan, Five Year Implementation: Priority Corridors	IMP	$8,856,750				$8,856,750
13-12-0003	IEPA	Illinois Clean Diesel Engine Repowers	IMP	$1,000,000	$4,000,000			$5,000,000
13-12-0004	RTA	Chicagoland Commute Options	IMP	$988,608				$988,608

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2012								
13-12-0005	RTA	Improvements at 19 Priority Interagency Transit Transfer Locations	CONST	$3,360,000				$3,360,000
13-97-0002	IEPA	Clean Air Public Information Campaign and Regional Carpool Radio Advertising	IMP	$3,000,000				$3,000,000
16-00-0001	CTA	Western Ave Express Bus Stops	CONST	$266,400	$80,000		$346,400	$0
16-12-0001	CTA	Retrofit of Electronic Engine Cooling Fan/System	IMP	$6,244,000				$6,244,000
16-12-0002	CTA	Purchase a ZF TopoDyn Program	IMP	$892,800				$892,800
17-09-0001	Pace	Bus Diesel Engine Retrofits	IMP	$4,548,080			$4,548,080	$0
17-12-0001	Pace	I-90 Corridor Enhanced Markets	ENG1	$1,000,000				$1,000,000
17-12-0002	Pace	Regional Rideshare Program	IMP	$350,000				$350,000
17-12-0003	Pace	Transit Diesel Engine Retrofits 2012-2016	IMP	$3,060,000				$3,060,000
17-12-0004	Pace	I-55 Corridor Market Enhancement	IMP	$719,250				$719,250
17-94-0002	Pace	VIP Vanpool Program	IMP	$5,439,148			$5,439,148	$0
18-12-0001	Metra	Metra UP Automatic Engine Start-Stop System	ENG	$40,000				$40,000
18-12-0001	Metra	Metra UP Automatic Engine Start-Stop System	IMP	$328,000				$328,000
18-12-0002	Metra	Metra BNSF Replace Main Engine Drive Generator	ENG	$120,000				$120,000
18-12-0002	Metra	Metra BNSF Replace Main Engine Drive Generator	IMP	$800,000				$800,000
18-12-0003	Metra	Metra MD Locomotive Repowers	ENG	$160,000				$160,000
18-12-0003	Metra	Metra MD Locomotive Repowers	IMP	$3,840,000				$3,840,000
170 line items in 2012 totalling:				**$252,880,087**	**$6,703,656**	**$329,430**	**$123,648,283**	**$135,606,030**
2013								

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2013								
01-01-0009	CDOT	CDOT-Lakefront Trail-Navy Pier Flyover	CONST	$7,200,000				$7,200,000
01-03-0002	CDOT	Stony Island Ave from Midway Plaisance to US 12/US 20/95th St	CONST	$4,352,000				$4,352,000
01-03-0004	CDOT	Roosevelt Rd from Western Ave to US 41/Lake Shore Dr	ENG2	$344,000			$344,000	$0
01-03-0004	CDOT	Roosevelt Rd from Western Ave to US 41/Lake Shore Dr	ENG	$638,400				$638,400
01-05-0002	CDOT	41st St Bicycle-Pedestrian Bridge	CONST	$187,771				$187,771
01-06-0005	CDOT	Walk to Transit - Pedestrian Improvements to Intersections near CTA Rail Stations	ENG1	$188,000				$188,000
01-06-0005	CDOT	Walk to Transit - Pedestrian Improvements to Intersections near CTA Rail Stations	ENG2	$372,000				$372,000
01-08-0001	Forest Preserve District of Cook County	North Branch Bicycle Trail Extension (East Segment)	CONST	$3,402,000				$3,402,000
01-08-0002	CDOT	Bloomingdale Trail	ENG2	$2,240,000				$2,240,000
01-09-0002	CDOT	Weber Spur Trail UPRRfrom Devon/Springfield to Elston/Kimberly	ENG2	$560,000				$560,000
01-12-0005	CDOT	Arterial Detection System Improvements	IMP	$140,800				$140,800
01-12-0008	CDOT	Build new Washington/Wabash Station on Loop Elevated to replace Randolph/Wabash and Madison/Wabash	ENG2	$3,600,000				$3,600,000
01-94-0045	CDOT	Bike Parking	ENG	$480,000				$480,000
01-94-0045	CDOT	Bike Parking	IMP	$1,520,000				$1,520,000
02-10-0001	Lincolnwood	Lincolnwood Union Pacific (UP) Rail Line/Weber Spur Bike/Multiuse Trail	ROW	$4,800,000				$4,800,000
02-12-0004	Skokie	Old Orchard Rd from Skokie Blv to Gross Point Rd	ROW	$33,000				$33,000
02-12-0006	Evanston	Dempster St from Fowler Av to Ridge Av	ENG2	$51,000				$51,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2013								
03-12-0002	IDOT	IL 59 at W Bartlett Rd	CONST	$480,000				$480,000
03-12-0005	Des Plaines	Ballard Rd from Bender Rd to Good Av	ROW	$40,000				$40,000
03-12-0005	Des Plaines	Ballard Rd from Bender Rd to Good Av	ENG2	$20,000				$20,000
03-12-0005	Des Plaines	Ballard Rd from Bender Rd to Good Av	CONST	$346,400				$346,400
03-12-0010	Mount Prospect	Golf Rd Alt. 3 Regional Bike Route	CONST	$272,000				$272,000
04-12-0001	Oak Park	Madison St from Home Av to Lombard Av	CONST	$372,000				$372,000
04-12-0002	Hillside	Butterfield Rd from Wolf Rd to Mannheim Rd	CONST	$452,000				$452,000
04-12-0003	Oak Park	Covered Bike Parking along CTA Blue	CONST	$168,000				$168,000
04-12-0005	Oak Park	North Blv from Marion St to Forest Av Intermodal Station Bike Parking	ENG2	$20,000				$20,000
04-12-0007	Northlake	Northwest Av from Grand Av to North Av	CONST	$629,600				$629,600
06-06-0061	Palos Heights	Cal Sag Greenway Bike Trail from IL 83 to 127th St	CONST	$161,000				$161,000
07-06-0002	University Park	Cicero Ave Shared Use Path	CONST	$168,000				$168,000
07-08-0001	Hazel Crest	S Kedzie Ave from 167th St to 172nd St	CONST	$133,000	$392,000			$525,000
07-10-0001	Tinley Park	183rd St at Oak Park Ave	ROW	$320,000				$320,000
07-12-0001	IDOT	IL 394 at Sauk Trail	CONST	$540,000				$540,000
08-00-0008	IDOT	IL 53 from North Ave/IL 64 to St Charles Rd	CONST	$209,000				$209,000
08-05-0005	Oak Brook	Oak Brook Employment Area Distributor Service	IMP	$910,000				$910,000
08-08-0001	Villa Park	Ardmore Ave at High Ridge Rd	CONST	$559,000				$559,000
08-09-0016	DuPage County DOT	75th St at Cass Ave and Plainfield Rd	CONST	$9,560,000				$9,560,000
08-12-0005	DuPage County DOT	Schmale Rd/CH 38 from Bloomingdale Ct to Fullerton Rd	CONST	$352,000				$352,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2013								
08-12-0011	DuPage County DOT	DuPage Co Central Signal System - Phase I	CONST	$636,000				$636,000
08-12-0012	DuPage County DOT	DuPage Co Central Signal System - Phase II	ENG2	$80,000				$80,000
09-06-0002	Kane County DOT	Randall Rd at Bolcum Rd/Ridgewood Dr	CONST	$311,660	$412,727		$326,204	$398,183
09-08-0004	IDOT	Mooseheart Rd at Lincoln Way	CONST	$1,204,000				$1,204,000
09-10-0002	Sleepy Hollow	Bike Path along Sleepy Hollow Road from Thorobred Lane to Dundee Township Bird Sanctuary Trail Head	CONST	$72,000				$72,000
09-10-0016	IDOT	IL 47 at Plato Rd	ROW	$160,000				$160,000
09-12-0002	Aurora	Hill Av from Ohio St to Montgomery Rd	ENG2	$40,100				$40,100
09-12-0003	IDOT	IL 47/72/Higgins Rd at US 20	CONST	$1,400,000				$1,400,000
09-12-0004	Aurora	Eola Rd from E New York St to Wolf's Crossing Rd	ENG2	$89,400				$89,400
09-12-0006	Kane County DOT	Fabyan Pkwy/CH 8 at Kaneville Rd/CH 84	ENG1	$88,000				$88,000
09-12-0007	IDOT	IL 47/72 at US 20	CONST	$1,000,000				$1,000,000
09-12-0009	Elgin	Elgin CBD Bike Racks Program	IMP	$76,800				$76,800
09-12-0010	Kane County DOT	Kane County Bike Rack Program	IMP	$67,200				$67,200
09-12-0011	Kane County DOT	Fabyan Pkwy/CH 8 at Kirk Rd/CH 77	ENG1	$285,000				$285,000
09-12-0012	Aurora	McCoy Dr/Commons Dr from Gregory St/New York St to IL 59/US34	ENG2	$50,400				$50,400
09-12-0014	Kane County DOT	Stearns Rd/CH 37 from Randall Rd to Kane/DuPage County Line	ENG2	$160,000				$160,000
10-00-0113	Lake County DOT	Cedar Lake Rd at Monaville Rd	CONST	$4,325,000				$4,325,000
10-00-0129	Lake County DOT	Hart Rd at US 14/W Northwest Hwy	ROW	$659,000				$659,000
10-06-0003	Deerfield	Deerfield Rd Sidewalk	CONST	$302,492	$84,172			$386,664

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2013								
10-08-0031	Lake County DOT	Washington St/CH A22 at CN/Metra Crossing	CONST	$16,939,000				$16,939,000
10-10-0002	Lake County DOT	Washington St Bike Path (sidepath)	CONST	$624,480				$624,480
10-12-0003	Lake County DOT	Aptakisic Rd Adaptive Traffic Control	CONST	$355,100	$35,510			$390,610
10-12-0004	Lake County DOT	Gilmer/Hawley/IL176 Adaptive Traffic Control	CONST	$939,190	$93,920			$1,033,110
11-11-0004	Lakewood	Huntley Rd Bikepath Improvements (on-street bike lanes)	CONST	$647,200			$647,200	$0
11-12-0004	Crystal Lake	Crystal Lake Bikeway Corridor Improvements	CONST	$60,468				$60,468
11-96-0007	McHenry County Conservation District	BIKE FAC-MCHENRY CONSERVATION DISTRICT-WOODSTOCK CRYSTAL LAKE BIKEWAY	CONST	$419,200				$419,200
12-10-0001	Romeoville	135th St Metra Parking Lot	CONST	$812,000				$812,000
12-10-0001	Romeoville	135th St Metra Parking Lot	CONST	$2,840,000				$2,840,000
12-12-0001	Forest Preserve District of Will County	DuPage River Trail - Segment 5	ENG2	$68,000				$68,000
12-12-0002	Homer Glen	Homer Glen Community Trail - South Extension	ENG2	$31,000				$31,000
12-12-0004	Frankfort	St Francis Rd Multi-Use Trail	ENG2	$12,000				$12,000
12-12-0005	IDOT	US 6/Southwest Hwy at Gougar Rd	ROW	$160,000				$160,000
12-12-0010	IDOT	US 6/Southwest Hwy at Parker Rd	ROW	$160,000				$160,000
17-12-0001	Pace	I-90 Corridor Enhanced Markets	ENG2	$2,000,000				$2,000,000
17-12-0003	Pace	Transit Diesel Engine Retrofits 2012-2016	IMP	$3,060,000				$3,060,000
17-12-0004	Pace	I-55 Corridor Market Enhancement	IMP	$719,250				$719,250
73 line items in 2013 totalling:				**$86,674,911**	**$1,018,329**		**$1,317,404**	**$86,375,836**
2014								

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2014								
01-01-0011	CDOT	CDOT-New Resident/Student Bike Marketing Program	IMP	$2,000,000				$2,000,000
01-05-0001	CDOT	Safe Routes to School Program - Citywide	CONST	$692,000				$692,000
01-05-0001	CDOT	Safe Routes to School Program - Citywide	IMP	$100,000				$100,000
01-06-0005	CDOT	Walk to Transit - Pedestrian Improvements to Intersections near CTA Rail Stations	ENG2	$160,000				$160,000
01-11-0008	CDOT	North Branch Riverwalk - Addison Underbridge Connection	CONST	$2,824,000				$2,824,000
01-12-0002	CDOT	Arterial VMS Traveler Information System, Phase I	IMP	$1,141,200				$1,141,200
01-12-0005	CDOT	Arterial Detection System Improvements	IMP	$140,800				$140,800
01-94-0092	CDOT	BIKE FAC-CHICAGO-STREETS FOR CYCLING/BIKE 2015 Plan Implementation	ENG	$8,640,000				$8,640,000
01-94-0092	CDOT	BIKE FAC-CHICAGO-STREETS FOR CYCLING/BIKE 2015 Plan Implementation	IMP	$29,200,000				$29,200,000
01-97-0092	CDOT	IL 50/Cicero Ave from US 14/Peterson Ave to Lexington Ave	CONST	$8,108,000				$8,108,000
02-10-0001	Lincolnwood	Lincolnwood Union Pacific (UP) Rail Line/Weber Spur Bike/Multiuse Trail	CONST	$688,000				$688,000
02-12-0003	Lincolnwood	Touhy Av Overpass (Skokie Valley Bike Trail)	ENG2	$88,000				$88,000
02-12-0004	Skokie	Old Orchard Rd from Skokie Blv to Gross Point Rd	CONST	$428,000				$428,000
02-12-0006	Evanston	Dempster St from Fowler Av to Ridge Av	CONST	$717,000				$717,000
03-12-0001	IDOT	IL 68/E Dundee Rd at S Barrington Rd	ROW	$96,000				$96,000
03-12-0004	IDOT	IL 59/Sutton Rd at Stearns Rd	ROW	$160,000				$160,000
03-12-0006	IDOT	Barrington Rd at Bode Rd	ROW	$64,000				$64,000
03-12-0008	IDOT	IL 68/Dundee Rd at Kennicott Av	ROW	$56,000				$56,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2014								
03-12-0009	IDOT	IL 19/Irving Park Rd at IL 59	ROW	$56,000				$56,000
03-12-0012	Niles	Cleveland St Crosswalks from Waukegan Rd to Caldwell Av	CONST	$94,000				$94,000
03-12-0014	IDOT	IL 68/Dundee Rd at McHenry Rd/Wheeling Rd	ROW	$160,000				$160,000
03-12-0015	IDOT	IL 68/Dundee Rd at IL 83	ROW	$160,000				$160,000
04-12-0005	Oak Park	North Blv from Marion St to Forest Av Intermodal Station Bike Parking	CONST	$60,000				$60,000
07-10-0001	Tinley Park	183rd St at Oak Park Ave	CONST	$1,600,000				$1,600,000
08-12-0003	Elmhurst	IL 56/Butterfield Rd at York St	ROW	$349,920				$349,920
08-12-0003	Elmhurst	IL 56/Butterfield Rd at York St	ENG2	$128,000				$128,000
08-12-0004	DuPage County DOT	55th St at Main St	ROW	$148,000				$148,000
08-12-0004	DuPage County DOT	55th St at Main St	ENG2	$104,000				$104,000
08-12-0006	DuPage County DOT	Fabyan Pkwy/Washington St at Roosevelt Rd	CONST	$5,600,000				$5,600,000
08-12-0010	DuPage County DOT	55th St/CH 35 from Dunham Rd to Clarendon Hills Rd	ENG2	$80,000				$80,000
08-12-0012	DuPage County DOT	DuPage Co Central Signal System - Phase II	CONST	$596,800				$596,800
08-12-0013	IDOT	IL 59 at IL 38 (north ramps)	ROW	$80,000				$80,000
09-06-0068	Kane County DOT	Burlington Rd at IL 47 - Roundabout	CONST	$856,000		$8,000		$848,000
09-08-0002	Kane County DOT	Kirk Rd at Douglas Rd	CONST	$720,000				$720,000
09-08-0003	Kane County DOT	Main St at Nelson Lake Rd	CONST	$1,120,000				$1,120,000
09-10-0016	IDOT	IL 47 at Plato Rd	CONST	$2,400,000				$2,400,000
09-12-0002	Aurora	Hill Av from Ohio St to Montgomery Rd	CONST	$546,600				$546,600
09-12-0004	Aurora	Eola Rd from E New York St to Wolf's Crossing Rd	CONST	$1,378,200				$1,378,200

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2014								
09-12-0005	Batavia	Pedestrian Crossings Various (8) Locations along IL 31 and IL 25	ENG2	$33,600				$33,600
09-12-0012	Aurora	McCoy Dr/Commons Dr from Gregory St/New York St to IL 59/US34	CONST	$687,100				$687,100
09-12-0014	Kane County DOT	Stearns Rd/CH 37 from Randall Rd to Kane/DuPage County Line	CONST	$1,628,600				$1,628,600
10-00-0128	Lake County DOT	Roberts Rd at River Rd	CONST	$4,530,000				$4,530,000
10-11-0017	Lake County DOT	Deerfield Rd/CH A47 from Milwaukee Av to Des Plaines River	ROW	$257,000				$257,000
10-11-0017	Lake County DOT	Deerfield Rd/CH A47 from Milwaukee Av to Des Plaines River	ENG2	$32,000				$32,000
10-12-0001	Lake County DOT	Lake St from Washington St to Belvidere Rd	ENG2	$49,100				$49,100
10-12-0005	IDOT	IL 68/Dundee Rd at Buffalo Grove Rd	ROW	$160,000				$160,000
11-12-0006	Algonquin	Randall Rd Pedestrian Crossing from Golden Eagle Dr to Stonegate Rd	ROW	$320,000				$320,000
11-12-0006	Algonquin	Randall Rd Pedestrian Crossing from Golden Eagle Dr to Stonegate Rd	ENG2	$120,000				$120,000
12-12-0001	Forest Preserve District of Will County	DuPage River Trail - Segment 5	CONST	$1,232,000				$1,232,000
12-12-0002	Homer Glen	Homer Glen Community Trail - South Extension	CONST	$360,000				$360,000
12-12-0004	Frankfort	St Francis Rd Multi-Use Trail	CONST	$118,000				$118,000
12-12-0005	IDOT	US 6/Southwest Hwy at Gougar Rd	CONST	$800,000				$800,000
12-12-0006	IDOT	US 30/Lincoln Hwy at I-55 Ramps	CONST	$800,000				$800,000
12-12-0010	IDOT	US 6/Southwest Hwy at Parker Rd	CONST	$2,400,000				$2,400,000
17-12-0001	Pace	I-90 Corridor Enhanced Markets	CONST	$12,500,000				$12,500,000
17-12-0001	Pace	I-90 Corridor Enhanced Markets	IMP	$12,500,000				$12,500,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2014								
17-12-0003	Pace	Transit Diesel Engine Retrofits 2012-2016	IMP	$2,280,000				$2,280,000
17-12-0004	Pace	I-55 Corridor Market Enhancement	IMP	$719,250				$719,250
58 line items in 2014 totalling:				**$113,067,170**		**$8,000**		**$113,059,170**
2015								
01-06-0005	CDOT	Walk to Transit - Pedestrian Improvements to Intersections near CTA Rail Stations	CONST	$2,460,000				$2,460,000
01-08-0002	CDOT	Bloomingdale Trail	CONST	$34,300,000				$34,300,000
01-09-0002	CDOT	Weber Spur Trail UPRRfrom Devon/Springfield to Elston/Kimberly	CONST	$5,128,888				$5,128,888
01-12-0005	CDOT	Arterial Detection System Improvements	IMP	$140,800				$140,800
01-97-0088	CDOT	87th St from Pulaski Rd to I-94/Dan Ryan Ewy	CONST	$1,338,000				$1,338,000
01-97-0093	CDOT	95th St from Western Ave to US 41/Ewing Ave	CONST	$3,460,000				$3,460,000
01-97-0093	CDOT	95th St from Western Ave to US 41/Ewing Ave	CONST	$4,360,000				$4,360,000
02-12-0001	IDOT	IL 68/Dundee Rd at Landwehr Rd	ROW	$96,000				$96,000
02-12-0005	IDOT	IL 68/Dundee Rd at Pfingsten Rd	ROW	$160,000				$160,000
02-97-0006	Cook County Highway Department	Old Orchard Rd from Harms to Skokie Blvd (new limits E of I-94/Edens Expy to W of IL 41/Skokie Blvd	CONST	$800,000				$800,000
03-12-0001	IDOT	IL 68/E Dundee Rd at S Barrington Rd	CONST	$480,000				$480,000
03-12-0003	IDOT	IL 62/Algonquin Rd at Barrington Rd	ROW	$80,000				$80,000
03-12-0004	IDOT	IL 59/Sutton Rd at Stearns Rd	CONST	$1,200,000				$1,200,000
03-12-0006	IDOT	Barrington Rd at Bode Rd	CONST	$320,000				$320,000
03-12-0007	IDOT	IL 68/Dundee Rd at North Wilke Rd	ROW	$64,000				$64,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2015								
03-12-0008	IDOT	IL 68/Dundee Rd at Kennicott Av	CONST	$280,000				$280,000
03-12-0009	IDOT	IL 19/Irving Park Rd at IL 59	CONST	$280,000				$280,000
03-12-0014	IDOT	IL 68/Dundee Rd at McHenry Rd/Wheeling Rd	CONST	$800,000				$800,000
03-12-0015	IDOT	IL 68/Dundee Rd at IL 83	CONST	$680,000				$680,000
03-12-0018	Cook County Highway Department	Lake Cook Rd at Weiland Rd	CONST	$4,185,000				$4,185,000
06-12-0002	IDOT	IL 43/Harlem Av at 143rd St	ROW	$160,000				$160,000
06-12-0004	IDOT	Pulaski Rd at 115th St	ROW	$160,000				$160,000
06-12-0005	IDOT	IL 43/Harlem Av at 151st St	ROW	$160,000				$160,000
07-03-0012	Lan-Oak Park District	Lansing Greenway Connection from Grand Illinois Trail to Thorn Creek Trail	CONST	$323,014				$323,014
08-12-0002	IDOT	IL 38/Roosevelt Rd at Ardmore Av	ROW	$160,000				$160,000
08-12-0004	DuPage County DOT	55th St at Main St	CONST	$1,120,000				$1,120,000
08-12-0007	IDOT	IL 59 at IL 38 (south ramps)	CONST	$320,000				$320,000
08-12-0010	DuPage County DOT	55th St/CH 35 from Dunham Rd to Clarendon Hills Rd	CONST	$664,000				$664,000
08-12-0013	IDOT	IL 59 at IL 38 (north ramps)	CONST	$560,000				$560,000
09-12-0005	Batavia	Pedestrian Crossings Various (8) Locations along IL 31 and IL 25	CONST	$419,200				$419,200
09-12-0006	Kane County DOT	Fabyan Pkwy/CH 8 at Kaneville Rd/CH 84	ENG2	$112,000				$112,000
09-12-0011	Kane County DOT	Fabyan Pkwy/CH 8 at Kirk Rd/CH 77	ROW	$280,000				$280,000
09-12-0011	Kane County DOT	Fabyan Pkwy/CH 8 at Kirk Rd/CH 77	ENG2	$356,000				$356,000
10-00-0129	Lake County DOT	Hart Rd at US 14/W Northwest Hwy	CONST	$2,300,000				$2,300,000
10-11-0017	Lake County DOT	Deerfield Rd/CH A47 from Milwaukee Av to Des Plaines River	CONST	$12,000				$12,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2015								
10-12-0001	Lake County DOT	Lake St from Washington St to Belvidere Rd	CONST	$491,040				$491,040
10-12-0005	IDOT	IL 68/Dundee Rd at Buffalo Grove Rd	CONST	$2,000,000				$2,000,000
11-09-0006	Crystal Lake	Main St and Crystal Lake Ave Railroad Crossings	CONST	$938,000				$938,000
11-12-0006	Algonquin	Randall Rd Pedestrian Crossing from Golden Eagle Dr to Stonegate Rd	CONST	$2,600,000				$2,600,000
12-12-0003	Will County Department of Highways	Bell Rd/CH 16 at 143rd St/CH 37	CONST	$10,384,000				$10,384,000
17-12-0001	Pace	I-90 Corridor Enhanced Markets	IMP	$10,360,350				$10,360,350
41 line items in 2015 totalling:				**$94,492,292**				**$94,492,292**
2016								
01-06-0005	CDOT	Walk to Transit - Pedestrian Improvements to Intersections near CTA Rail Stations	IMP	$100,000				$100,000
01-12-0005	CDOT	Arterial Detection System Improvements	IMP	$140,800				$140,800
01-97-0088	CDOT	87th St from Pulaski Rd to I-94/Dan Ryan Ewy	CONST	$1,670,000				$1,670,000
02-12-0001	IDOT	IL 68/Dundee Rd at Landwehr Rd	CONST	$480,000				$480,000
02-12-0003	Lincolnwood	Touhy Av Overpass (Skokie Valley Bike Trail)	CONST	$1,256,000				$1,256,000
02-12-0005	IDOT	IL 68/Dundee Rd at Pfingsten Rd	CONST	$640,000				$640,000
03-12-0003	IDOT	IL 62/Algonquin Rd at Barrington Rd	CONST	$400,000				$400,000
03-12-0007	IDOT	IL 68/Dundee Rd at North Wilke Rd	CONST	$320,000				$320,000
03-12-0017	Cook County Highway Department	Lake Cook Rd at Buffalo Grove Rd	CONST	$5,113,000				$5,113,000
03-12-0019	Cook County Highway Department	Lake Cook Rd at IL 83/McHenry Rd	CONST	$2,974,000				$2,974,000

TIP ID	Sponsor	Brief Description	Phase	CMAQ $ (Fed)	Increases	Withdrawals	Obligations	Balance
2016								
06-12-0002	IDOT	IL 43/Harlem Av at 143rd St	CONST	$400,000				$400,000
06-12-0004	IDOT	Pulaski Rd at 115th St	CONST	$680,000				$680,000
06-12-0005	IDOT	IL 43/Harlem Av at 151st St	CONST	$640,000				$640,000
08-12-0002	IDOT	IL 38/Roosevelt Rd at Ardmore Av	CONST	$400,000				$400,000
08-12-0003	Elmhurst	IL 56/Butterfield Rd at York St	CONST	$1,025,920				$1,025,920
09-12-0006	Kane County DOT	Fabyan Pkwy/CH 8 at Kaneville Rd/CH 84	CONST	$1,083,100				$1,083,100
09-12-0011	Kane County DOT	Fabyan Pkwy/CH 8 at Kirk Rd/CH 77	CONST	$3,846,000				$3,846,000
13-12-0003	IEPA	Illinois Clean Diesel Engine Repowers	IMP	$1,000,000		$1,000,000		$0
13-12-0003	IEPA	Illinois Clean Diesel Engine Repowers	IMP	$1,000,000		$1,000,000		$0
13-12-0003	IEPA	Illinois Clean Diesel Engine Repowers	IMP	$1,000,000		$1,000,000		$0
13-12-0003	IEPA	Illinois Clean Diesel Engine Repowers	IMP	$1,000,000		$1,000,000		$0
21 line items in 2016 totalling:				**$25,168,820**		**$4,000,000**		**$21,168,820**

Chicago Metropolitan Agency for Planning

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MEMORANDUM

To: CMAQ Project Selection Committee

From: CMAP Staff

Date: March 29, 2012

Re: CMAQ Transit Project Expenditure Updates – 4th Quarter 2011

Staff conducted the 4th quarter of 2011 Transit Expenditure Updates. This effort is intended to track transit project expenditures after the project has been obligated. A table summarizing the responses is attached. Of the 47 transit projects reported on this quarter, 13 are complete and 2 of those have been closed out within the quarter. Thirteen projects have not expended any CMAQ funds yet. The table also shows federal dollars expended, the unexpended balances, and the percent of obligated CMAQ funds expended on each agency's projects (excluding completed projects) to show the degree to which active projects are yet to be undertaken. For eight projects, the schedule for completion remains unclear. The eight projects labeled stalled/unclear were also identified in the 3rd quarter update:

- **CTA-111th St and 115th St Split Route Service (TIP ID 16-09-0003) for $400,000 - FY 2009**
- **CTA- Purple Line Weekend Express Service (TIP ID 16-10-0005) for $361,708 – FY 2010**
    - The CTA is having difficulty identifying local match on both, but still hopes to complete the projects. The agency informed the committee last summer that they would need more time.
- **CDOT-Carroll Avenue Busway (TIP ID 01-04-0004) for $1.6 million – FY 2004**
    - The City is planning to submit a request to the CMAQ Committee to re-scope the project (remaining funds = approx. $1.588 m)
- **Metra-GenSets Installation on Switch Engines (TIP ID 13-10-0007) for $2.8 million - FY 2012**
    - As of Dec. 31, Metra is in discussions w/ RTA regarding sharing in the local match.

The final four are commuter parking projects whose next implementation steps are under the control of the local governments:

- **Metra-Glen Ellyn Station Parking - ROW & Construction (TIP ID 18-99-0566) for $624,000 – FY 1999**
    - The village is currently undertaking design. Metra has not received a timeline for land acquisition and construction activities.

- **Metra-Fox Lake Station Parking - Construction only (TIP ID 18-03-3558 for $200,000 – FY 2003**
    - Currently in design phase.
- **Metra-Great Lakes Station Parking - Construction only (TIP ID 18-03-355) for $280,000 – FY 2003**
    - Held up by Union Pacific land acquisition issues.
- **Metra-Cary Station Parking - Construction only (TIP ID 11-05-0001) for $148,000 – FY 2006**
    - Currently in design phase.

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Chicago Metropolitan Agency for Planning

Summary of CMAQ Transit Project Expenditures Updates - 4th Quarter 2011

March 28, 2012

Agency	Number of Projects	Number of completed projects (but not closed)	Number of Active Projects w/ zero expendi-tures	Combined % expended on incomplete projects	Dollars expended on incomplete projects*	Remaining Balance on incomplete Projects*	Number of new "close outs"	Number "stalled / unclear" projects
RTA	4	0	0	69.4%	$4,115,493	$1,810,907	0	0
CTA	12	0	5	43.5%	$3,265,363	$4,249,394	2	2
Metra	11	3	6	44.9%	$4,477,376	$5,484,874	0	5
Pace	8	3	1	85.0%	$48,001,705	$8,497,329	0	0
CDOT	12	5	1	36.9%	$6,874,743	$11,749,257	0	1
Totals	47	11	13	--	$66,734,680	$31,791,761	2	8

* Funds are shown in Federal dollars.

Chicago Metropolitan Agency for Planning

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Suite 800
Chicago, Illinois 60606

312 454 0400
www.cmap.illinois.gov

MEMORANDUM

To: CMAQ Project Selection Committee

From: CMAP Staff

Date: February 1, 2012

Re: CMAQ Transit Project Expenditure Updates – 3rd Quarter 2011

Staff conducted the 3rd quarter of 2011 Transit Expenditure Updates. This effort is intended to track transit project expenditures after the project has been obligated. A table summarizing the responses is attached. Of the 50 transit projects reported on this quarter, 12 are complete and 3 of those have been closed out within the quarter. For eight projects, the schedule for completion is unclear. Fifteen projects have not expended any CMAQ funds. The table also shows federal dollars expended, the unexpended balances, and the percent of obligated CMAQ funds expended on each agency's projects (excluding completed projects) to show the degree to which active projects are yet to be undertaken.

The eight projects labeled stalled/unclear are:

1) CTA-111th St and 115th St Split Route Service ($400,000 – FY 2009) and the
2) CTA-Purple Line Weekend Express Service ($361,708 – FY 2010). The CTA is having difficulty identifying local match, but still hopes to complete the projects. The agency informed the committee last summer that they would need more time.
3) CDOT's Carroll Avenue Busway ($1.6 million - FY 2004). The City is re-evaluating the project's scope.
4) Metra's Installation of GenSets on Switch Engines project ($2.8 million - FY 2012). As of September 30th Metra is facing a lack of local match.

The final four are commuter parking projects whose next implementation steps are under the control of the local governments:

5) Glen Ellyn Station Parking - ROW & Construction ($624,000 – FY 1999). The village currently has a site, but Metra has not received a timeline for land and construction activities from them;
6) Fox Lake Station Parking - Construction only ($200,000 – FY 2003). On hold per the village.
7) Great Lakes Station Parking - Construction only ($280,000 – FY 2003). Held up by Union Pacific land acquisition issues.
8) Cary Station Parking - Construction only ($148,000 – FY 2006). Held up by Union Pacific land acquisition issues.

###

Chicago Metropolitan Agency for Planning

Summary of CMAQ Transit Project Expenditures Updates - 3rd Quarter 2011

February 1, 2012

Agency	Number of Projects	Number of completed projects (but not closed)	Number of Active Projects w/ zero expendi-tures	Combined % expended on active (incomplete) projects	Dollars expended on active (incomplete) projects*	Remaining Balance on Active Projects*	Number of new "close outs"	Number "stalled / unclear" projects
RTA	4	0	1	67.3%	$3,988,612	$1,937,788	0	0
CTA	13	1	5	41.9%	$3,637,004	$5,042,953	1	2
Metra	11	3	7	41.9%	$4,175,892	$5,786,358	0	5
Pace	8	0	1	83.0%	$47,172,935	$9,326,099	0	0
CDOT	14	6	1	70.5%	$57,763,543	$24,220,457	2	1
Totals	50	10	15	--	$116,737,986	$46,313,655	3	8

* Funds are shown in Federal dollars.

rev. 3-29-12

Agenda Item No. 6.0

Chicago Metropolitan Agency for Planning

233 South Wacker Drive
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Chicago, Illinois 60606

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MEMORANDUM

To: **CMAQ Project Selection Committee**

From: CMAP Staff

Date: March 29, 2012

Re: CMAQ GO TO 2040 Focused Programming Lessons Learned

As the program development process for the FY2012-2016 CMAQ Improvement Program came to a close, the CMAQ Project Selection Committee (PSC) agreed that a review of the new programming approach should occur. Ways to improve the process will be discussed as we prepare for the next call for proposals. Some historical context has been provided below with a summary of the GO TO 2040 Focused Programming approach. Staff solicited comments on the new approach and on program development in general.

History

The traditional approach to programming CMAQ funds has been to issue an annual call for proposals, allowing all eligible government bodies in the region to propose transportation projects that meet the federal guidelines for the CMAQ program. Non-governmental bodies also have had an opportunity to participate in the CMAQ program by partnering with eligible government bodies. These proposals were evaluated for their air-quality and congestion reduction benefits and the proposals were ranked showing which proposals provided the best cost/benefit ratio in each program category. The proposal rankings were the primary criterion used in recommending proposals for funding. Five rankings are developed:

- Cost per Ton of VOC Eliminated
- Cost per Ton of NOx Eliminated
- Cost per Ton of PM Eliminated (only for diesel emissions reduction projects)
- Cost per 1000 VMT Eliminated
- Cost per 1000 SOV Trips Eliminated

Additional considerations of project readiness, highway facilities on which transit routes run, project mix, mode mix, prior CMAQ funding history and geographic equity were also taken into account when developing a program. Prior to the 2007 program year, funding was programmed for only one program year at a time. With the 2007 program, multi-year funding was implemented. The first year was fully programmed; out years were partially programmed with phases that could not be completed in the first year.

GO TO 2040 Focused Programming

In January, 2011 CMAP adopted a new, focused programming approach which called for development of a five-year program of proposed improvements to help implement GO TO 2040. The focus groups were charged with developing cohesive "packages of projects" which would have more impact than the former approach. The overall goals of the CMAQ program, to improve air quality and reduce congestion, did not change. GO TO 2040 calls for the use of CMAQ funding to help implement the vision set out in the plan. Staff, with the help of our regional partners, identified four objectives of the program that could be directly linked with GO TO 2040.

- Localized Congestion Relief
- Operational Improvements
- Mode Shift
- Direct Emissions Reduction

Four focus groups were used, one for each of the objectives. Each focus group identified GO TO 2040 actions areas with which to evaluate and prioritize the proposals submitted. In addition to the proposals submitted by sponsors, the focus groups could also identify projects from existing state, regional, subregional, and local plans and programs for consideration. The focused programming approach did not replace the technical air quality and congestion benefits analysis but complemented it to ensure a program that provides continued air quality and congestion benefits and helps advance the region towards the vision set out in GO TO 2040. The focus groups were not asked to consider whether or not any proposals were a good fit for CMAQ funding. They were asked to identify projects that help implement GO TO 2040. Each focus group presented its recommendations to the PSC which used the recommendations along with the air quality and congestion benefits and the other factors cited above to develop a proposed program.

Summary of Comments Received

The following is a summary of the comments received to date.

Focused Programming Approach:

- Better define the role of the focus groups so as to increase focus groups' understanding of their role.
- More time is needed to modify/develop proposals for the process.
- The time in which to conduct the proposal evaluation and prioritization was too short.
- Too extensive a time commitment was required from CMAP staff and program focus group participants.
- Municipal proposals suffered in the recommendations due to their lack of understanding of the focused programming approach on their part.
- More outreach to municipalities is needed for them to understand the process.
- More direction is needed from the PSC on how the focus groups should review projects and structure their recommendations.

- The corridor approach used by RTOC should be refined and its use expanded to other groups.
- The corridor approach should be refined to include a diversity of projects that may include modernization and/or expansion project types. It should be more multi-modal in approach.
- Presentations to the focus groups by proposal sponsors added value to the process.
- Staff should provide a first cut evaluation of bicycle/pedestrian proposals before focus group evaluation begins.
- It is critical to the success of the focused programming approach that the focus groups work on developing non-CMAQ eligible proposals in addition to CMAQ eligible proposals.
- Some focus group members were reluctant to provide input on proposals being reviewed by other focus groups.
- When evaluating transit proposals for Transit Oriented Development (TOD) benefits, a question arose as to whether priority should be given to proposals that support existing TOD over a planned TOD or vice versa.

Development of Proposed Program

- Use the work of the focus groups to help modify the methods used for the emissions and congestion reduction analysis to reflect GO TO 2040 more closely.
- Each sponsor's overall unobligated balance should be considered when programming new funds. Sponsors with large unobligated balances should have their funding restricted.
- A pre-application process would help develop more cohesive proposals that could foster the corridor approach.
- Don't fund phase I engineering; require the sponsors to prepare phase I with their own funds so they can develop realistic phasing schedules and costs for proposals.
- Clarify other project selection factors and how they relate with the other ranking criteria.
    - Regional Equity
    - Project Readiness
    - Sponsor Prioritization
    - Program Focus Group recommendations
- Encourage more public comment throughout the programming cycle.
- Clarify project information booklet to include further explanations:
    - Roles of staff, Task Force, Project Selection Committee, Policy Committee
        - How their input is weighted.
    - Explain the relationship and weight between emissions reduction, GO TO 2040 goals, Task Force priorities, project readiness.
    - Further explain the MYB list.
- Lack of objective ranking makes it difficult to apply for projects.

- Sub-regional councils and other sponsor groups should be given the opportunity to identify project proposals that are a particular priority within their sub-region.

Staff Recommendations

Overall, CMAP staff sees the GO TO 2040 focused programming approach as a successful addition to the programming of CMAQ funding for northeastern Illinois. The focus groups' work added value to the selection process. While many of the comments received offer suggestions on how to improve the focused programming approach, none of them indicate that it should be discarded.

Several comments and suggestions submitted did not lend themselves to staff recommendations. These included comments on the different approaches that the focus groups used and specific changes to the groups' evaluations. Each focus group is unique in composition and with the types of proposals that they are reviewing and evaluating. Setting a standard method would unnecessarily limit their flexibility. Proposed changes in the methods of the focus groups should be considered by each individual focus group. Comments made through this process will be passed along to the individual groups.

Comments were also received on programming projects of sponsors whose current projects have significant unobligated balances. The PSC has recommended changes to the active program management strategies that will directly address the issue of unobligated funds.

One comment expressed a concern for the lack of an objective ranking of each project. All projects are ranked by a cost per ton for VOCs, NOx, trips, and vehicle miles traveled eliminated. These objective rankings play a prominent role in determining the proposed program. There is not a composite ranking taking into consideration emission benefits, consistency with GO TO 2040 and other factors. The CMAQ Committee considered this approach a number of years ago and rejected the idea.

A few comments were received about the recommendations of the focus groups and how they were used by the PSC in developing the proposed program. At no point was the role of the focus groups to make recommendations that the PSC would simply incorporate into a recommended program. The focus groups were asked to evaluate and prioritize proposals with respect to the goals, objectives and action areas from GO TO 2040.

The staff recommendations are:

1. Follow the previous program development schedule. Under this schedule the call for proposals begins in early December and concludes at the end of January. In comparison the call for the 2012-2016 CMAQ program was held during the months of February and March.
2. The focus programming groups should begin meeting prior to the call so that they may develop a schedule for themselves that will allow for the potential development of new proposals and increased coordination between project proposals. This should also reduce the time crunch that occurred last year and allow for proposals to be evaluated by multiple focus groups if warranted.

3. Staff should work with the PSC to improve the project instruction booklet and related materials to improve sponsors' understanding of what is expected. This includes working with the Council of Mayors and their staff (the planning liaisons) to help the region's municipalities develop project proposals that are more regional in scope and more directly support the implementation of GO TO 2040. Schedules and timelines will be expanded and clarified so that there is a better understanding of when decisions are made and when input can be provided. The application instructions will make clear that sponsors with multiple proposals, or Councils may identify proposals that are a particular sub-regional priority.
4. The focus groups should continue to improve their examination and evaluation of projects that advance the region toward the vision of GO TO 2040 without regard to the most appropriate fund source. Using the work done over the prior year will provide a base that can be advanced.

POST-IMPLEMENTATION EVALUATION OF EMISSIONS BENEFITS OF CMAQ PROJECTS

Phase 2 Final Report

Submitted to
Chicago Metropolitan Agency for Planning

By

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UNIVERSITY OF ILLINOIS AT CHICAGO

NOVEMBER 14, 2011

Disclaimer *The analysis and views presented in this report are the sole responsibility of the authors.*

Table of Contents

Abstract

This study evaluates a random sample of eighteen bicycle and pedestrian facilities, sixteen of which were funded by the Congestion Mitigation and Air Quality (CMAQ) program in the Chicago metro area. Users of these facilities were surveyed in intercept mode during specific intervals of time starting in the summer of 2009 and ending in the spring of 2011, leading to 376 responses. Usage levels were also enumerated in all sites. The study showed varying levels of use at the different facilities and that motorized mode substitution (change from personal car use to bicycle and pedestrian modes) resulted after the facilities became available to users, potentially leading to improved air quality outcomes. There is also evidence of latent mode substitution, i.e., respondents self-reported that the current non-motorized trip could have been made by using motorized modes, but that they chose not to. The majority of users cited recreation and exercise to be the primary reason for using the facilities.

Site-level factors play an important role in the propensity to switch from being exclusively Single Occupant Vehicle (SOV) users to bicycle and pedestrian users, controlling for individual socio-demographic factors. Users of bicycle paths were less likely than pedestrians to have been SOV users for their trip purpose prior to starting use of the non-motorized facility. Bicyclists are more likely to self-report using public transportation or bicycles on alternative facilities prior to using the CMAQ-funded facility. Respondents surveyed in high density areas were also more likely to have been non-car users for the current trip prior to using the facility. Respondents surveyed in areas farther away from the center of the City of Chicago are more likely to have switched from SOV modes. Finally, respondents surveyed in areas with lower levels of car ownership are less likely to have used SOV modes for the current trip prior to using the facility.

The propensity to switch from being exclusively SOV users is positively correlated with the higher levels of Average Daily Traffic in highway links in surrounding census tracts and with the percent of population who speak limited or no English in surrounding areas. Finally, the ability to connect directly to a transit station is positively correlated while the recreational usage is negatively correlated with the propensity to switch from being previously exclusively SOV users for the trip purpose. Our analysis also found that depending on the location and overall sociodemographic, transportation and other characteristics of the surrounding areas, there are likely to be at least four groupings of CMAQ-funded projects that exhibit various combinations propensity to switch and overall use levels.

Although data on 4 randomly selected intersection improvement and 4 randomly selected signal interconnect projects ("roadway projects") were collected for the "before" period of a before-and-after evaluation of traffic outcomes, only two projects, both signal interconnect projects, were completed within the timeline of the project. The field observations reveal that there is a 7.15% and 10.68% improvement on the southbound and northbound direction respectively in one of the signal interconnect sites, which equates to a 2.8 mph and 3.2 mph increase in the southbound and northbound respectively. Field observations in the other location revealed that while there is a 5.81% improvement in speed (representing a 2mph increase) on the southbound direction, the northbound direction incurred a speed reduction of almost 11%, i.e., a 4.2 mph decrease in speed. Due to the extremely small sample size of completed before-and-after cases, we do not consider the results of the roadway project analysis to be conclusive or generalizable.

CHAPTER 1: INTRODUCTION AND SCOPE OF STUDY

1.1 BACKGROUND

The Congestion Mitigation and Air Quality (CMAQ) program was established by the Intermodal Surface Transportation Efficiency Act in 1991, following the passage of the Clean Air Act Amendments of 1990, which imposed strict new deadlines for meeting National Ambient Air Quality Standards (NAAQS) in nonattainment areas. The primary purpose of the CMAQ program is to fund transportation projects and programs that have a potential to reduce transportation related emissions. The initial focus of the CMAQ program was on areas designated as being in nonattainment for ozone and carbon monoxide, which were the pollutants of greatest concern when the CAAA and ISTEA were passed. Particulate matter became of concern later, when areas designated as being in nonattainment for particulate matter PM_{10}) became explicitly eligible to receive CMAQ funds under the Transportation Equity Act for the 21st Century (TEA-21). USEPA designations of nonattainment areas are based on violations of national air quality standards for carbon monoxide (CO), lead (Pb), ozone (O_3) (1-hour), particulate matter (PM_{10}), sulfur dioxide (SO_2) and previously, nitrogen dioxide (NO_2). Northeastern Illinois does not attain national ambient air quality standards for certain pollutants. It is classified as a moderate non-attainment area for the 8-hour ozone standard, and a non-attainment area for the annual fine particulate matter (PM2.5) standard. Currently, there are no nonattainment listings for nitrogen dioxide.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) program (2005-2009) authorized over $8.6 billion over the five-year authorization period, with annual authorization amounts increasing each year during this period (Federal Highway Administration, 2006). Under SAFETEA-LU, CMAQ funds may be invested in all 8-hour ozone, CO, and PM nonattainment and maintenance areas. It is also possible to expend funds in the few remaining1-hour ozone maintenance areas, since the 1-hour standard remains in effect for these areas. These counties also have Early Action Compacts in place (FHWA, 2006). Since 1991, the program has provided $22.7 billion in funding to states, Metropolitan Planning Organizations (MPOs) and transit agencies in US EPA designated non attainment and maintenance air quality areas to invest in projects that reduce criteria air pollutants emitted by transportation related sources. CMAQ funds have been used in the Chicago nonattainment area in Northeast Illinois (comprising of Cook, DuPage, Kane, Lake, McHenry, and Will counties, and part of Kendal and Grundy counties) to fund a variety of projects since 1992.

The overall goal of the project is to assess the effects of the CMAQ program as it pertains to selected non-motorized and roadway projects and as implemented in Northeastern Illinois, on the basis of primary (measured) and not modeled data on outputs and outcomes. The purpose of this report is to present the results of this study. The scope of the evaluation project is restricted to the evaluation of: (A) non-motorized: bicycle and pedestrian facilities that have been constructed using program funds and (B) roadway: intersection improvements and traffic signal improvement projects.

1.2 Objectives of the Study

The project has two major objectives:
1) *Determine the outcomes of investments on non-motorized facilities*: The outcome of interest with non-motorized projects is changes in trip-making behavior, specifically the diversion of trips from motorized to non-motorized modes such as biking or walking, due to program-funded non-motorized facilities.
2) *Determine the outputs of investments in roadway projects*: The primary output in the case of the roadway projects are changes in speeds of motorized traffic using road segments in which intersection improvement and traffic signal interconnect projects were implemented.

Description of the sampling design used to select sites for analysis, along with the data collection methods, is given in an earlier report titled "Post-Implementation Evaluation of Emissions Benefits of CMAQ Projects: Phase 1 Final Report" (Thakuriah, et al. 2010), and will not be reproduced here in detail. Very briefly, projects were randomly selected from the universe of CMAQ projects funded in each of the two project categories. A 16-item survey questionnaire was used to query bicycle and pedestrian users of the selected CMAQ non-motorized projects about a variety of factors relating to their sociodemographics, facility use patterns and their travel behavior prior to using the CMAQ-funded non-motorized facility including the mode of transportation for the trip purposes for which the respondent currently uses the facility, frequency of use and travel time spent for the same trip purposes. This enabled us to implement a "recall-after" approach to a "before-and-after" evaluation design, wherein a baseline or control was established by means of respondent's recall of their travel behavior "before" their use of the facility. Due to potential memory decay and recall problems, only recent projects funded by the program were considered for selection into the study sample. In the case of the roadway projects, traffic conditions such as speeds were measured at two different points in time – before the CMAQ-funded project was implemented and after. This allows us to compare changes in outcomes of interest such as speeds that can be attributed to the CMAQ-funded roadway project.

The study consisted of two phases:

a) Phase 1: This phase was completed in June 2009. We collected data from 10 bicycle and pedestrian projects and the "before" period data from 10 signal interconnect and intersection improvement projects. The report titled "Post-Implementation Evaluation of Emissions Benefits of CMAQ Projects: Phase 1 Final Report" (Thakuriah, et al. 2010) provides extensive details on the overall study methodology for the entire study (including Phase 1 and Phase 2), as well as the results of the Phase 1 data collection effort.

b) Phase 2: This phase was completed in June, 2011. Data were collected from an additional 8 non-motorized projects and the "after" period of 2 of the 10 roadway projects that were constructed within the overall project timeframe.

The results of the data collection effort, over these two phases, are as follows:

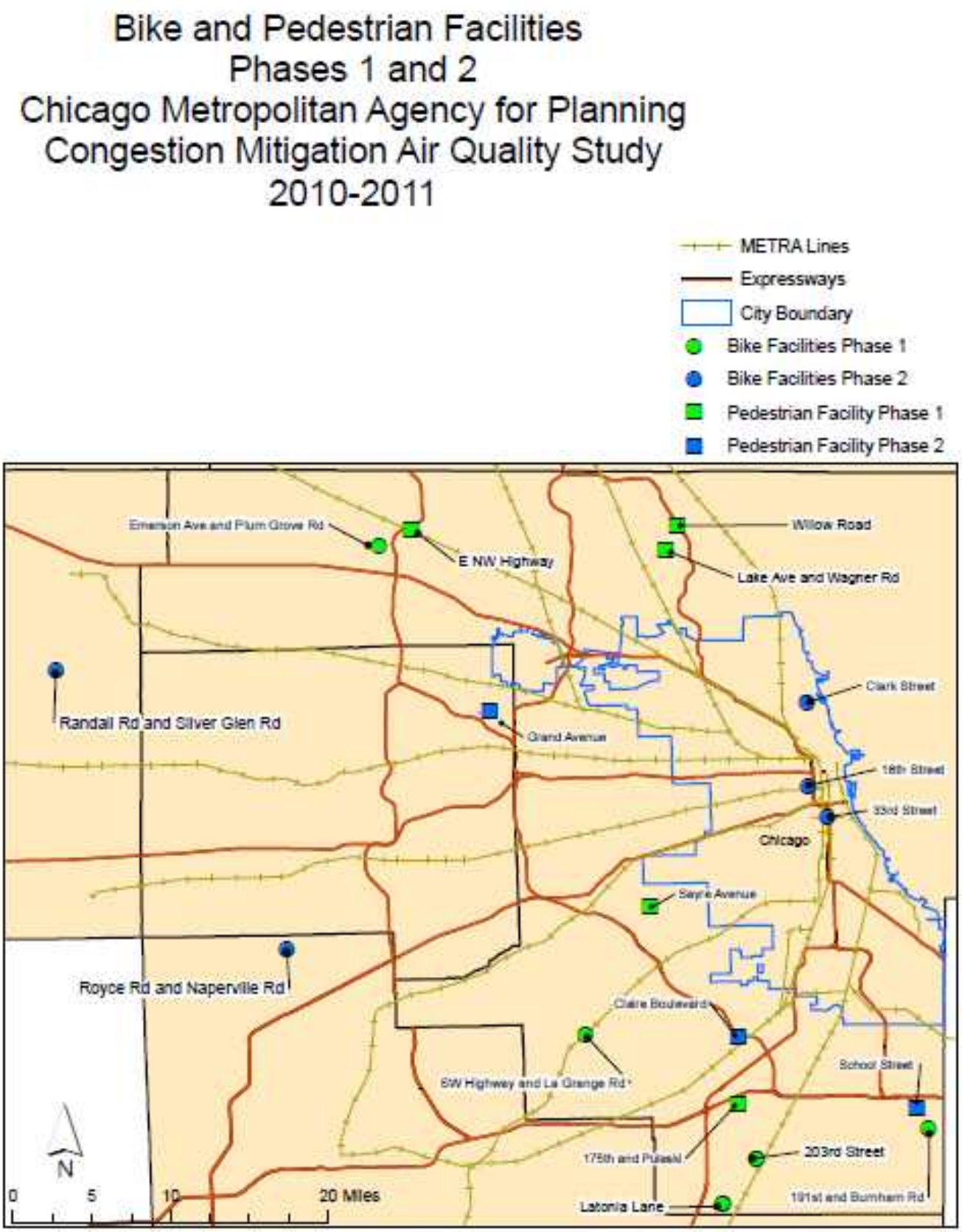
a) Non-motorized projects: In total, we surveyed users of eighteen bicycle and pedestrian facilities between the summer of 2009 and the spring of 2011, sixteen of which were funded by the CMAQ program and two projects that are very similar to the CMAQ projects but which were

funded by other state and local programs. The locations of the non-motorized projects studied are given in Figure 1.1. Valid responses were obtained from 376 users.

b) Roadway projects: We also collected "before" data from eight roadway projects, 4 of which were signal interconnect and 4 were intersection improvement that were at the letting stage, before these were constructed or improved by means of CMAQ funds. However, by the time our project ended, construction/improvement in only two of the 8 projects for which before data had been collected had been completed. Hence, our sample of roadway projects for the completed before-and-after analysis consists of two projects.

The report is organized as follows: in Chapter 2, we present the results of the non-motorized project evaluation and in Chapter 3, we discuss the main findings from our evaluation of the roadway projects. Conclusions from the study are given in Chapter 4. A series of technical appendices present the details of various methodological aspects of the study.

Figure 1.1: Location of Bicycle and Pedestrian CMAQ projects in study sample



CHAPTER 2: ANALYSIS OF NON-MOTORIZED FACILITIES

2.1 BACKGROUND

The bicycle and pedestrian facilities considered in this study were randomly selected from a master list of non-motorized CMAQ projects that were completed upto two years prior to the survey date for each site. A preliminary list was created from a longer list of randomly sampled projects. We attempted to obtain more information about each site with the help of CMAP staff and from program managers and by means of site visits. Each site was visited and assessed to see what the current status of the project was and also to take photographs and to develop written descriptions of the facility. After this was completed, we were able to choose exactly which projects were going to be fully researched and surveyed. The final list included eighteen sites. Two of the listed pedestrian facilities, located in Lansing and Midlothian, were partially funded by the Safe Routes to School program. Two of the selected bicycle projects – one in Lansing (Lansing Greenway) and the other in Orland Park (US 45-IL7) – were not CMAQ-funded, but similar in scope and scale as the CMAQ projects. At each site, users were randomly selected for surveying, as described in Section 2.4. Refusals were recorded and every passing person was counted using specially-developed enumeration forms to obtain information on facility usage levels.

2.2 PHASE 2 FACILITIES

In this section, we describe the Phase 2 bicycle and pedestrian facilities in detail. The projects which were surveyed in Phase 1 are described in detail in the Phase 1 report, but for the sake of completeness, briefly included here, in Section 2.3.

2.1.1 PHASE 2 BICYCLE FACILITIES

(1) Clark Street from Diversey to Addison, City of Chicago

The first bicycle facility is located along Clark Street in the City of Chicago, between Addison Street to Diversey Parkway, and is a designated striped lane along both sides of the street. The facility is approximately 1.2 miles long. The facility is mainly used to access downtown Chicago and is heavily used during the rush hour. Land use around the facility tends to be a mix of commercial and residential. The facility passes through several neighborhoods and there are different land uses along the way. This site was surveyed twice during our survey period, once from 7:00AM to 10:00AM to record morning rush and once from 3:00PM to 6:00PM during the afternoon rush.

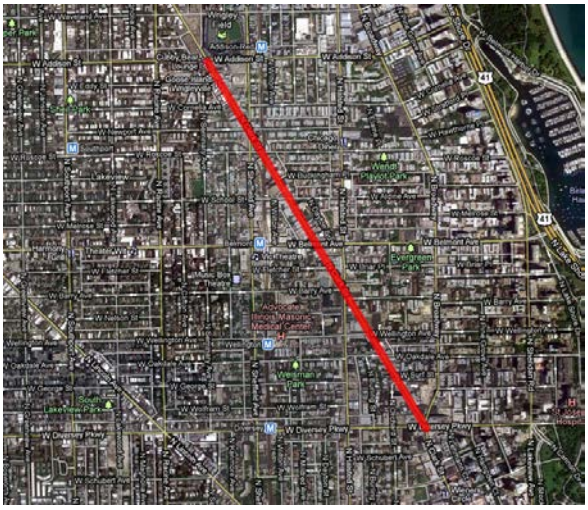
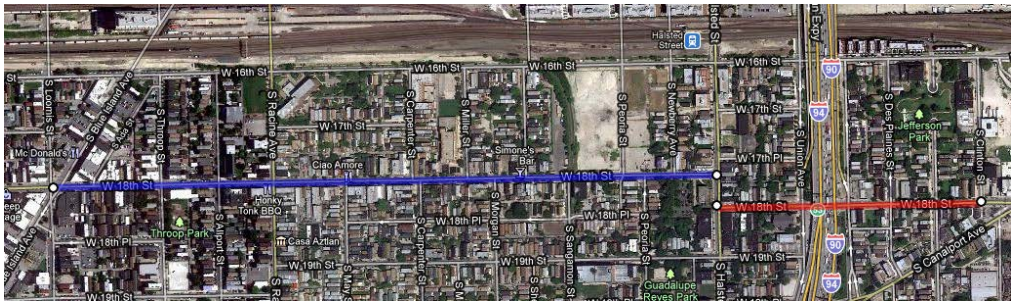


Figure 2.1 Bicycle lane on Clark Street, City of Chicago

(2) 18th Street, City of Chicago

The study also surveyed users of the bicycle lanes in a 1-mile long section along 18th Street from Loomis Street to Halsted Street, where 18th Street ends in a T-intersection. The lanes begin again half a block south of the T-intersection and eventually end at Clinton Street. As with Clark Street, the facility included a designated striped lane on both sides of the street and marking identifiers. We surveyed this site twice as well, once in the morning and once at night.



(3) 33rd Street from Halsted to Martin Luther King Drive , City of Chicago

The last bicycle facility that was surveyed in the City of Chicago is a bike lane along 33rd Street that passes through the Illinois Institute of Technology campus. The path is located from Halsted Street to Martin Luther King Drive, spanning 1.5 miles. Unlike the two other city sites (on Clark Street and 18th Street), 33rd Street does not have a designated lane, but has marked identifiers along the roadway thus allowing bicyclists to share the roadway with motorists. The site was surveyed once during the morning rush hour and once during the afternoon rush.

Figure 2.3: 33rd Street shared lane identifier

Figure 2.4: Location of shared lane facility along 33rd Street.

2.2.2 Phase 2 Mixed Facilities

Two of the suburban facilities surveyed in Phase 2 were considered to be mixed facilities allowing pedestrians and bicyclists to use the facility. At these locations, respondents who were biking or walking were asked to complete the survey. These locations were typically identified as trails and were located near parks and recreational facilities.

(4) DuPage River Trail, Naperville

The DuPage River Trail is a winding, mixed use pathway that is approximately 2.5 miles long and is located along or near the DuPage River through Kane and Will Counties. The CMAQ grant was used to fund an extension of the project in Will County in the southern parts of the City of Naperville.

Figure 2.5: Segment of the DuPage River Trail surveyed in Naperville

(5) Randall Road Pedestrian Bridge, St. Charles

The second mixed use facility is located in St. Charles, Illinois, directly south of Elgin in Kane County. The facility is comprised of a large pedestrian/bicycle bridge that spans over the intersection of Randall Road and Silver Glen Road. The facility is a part of the larger River Bend Bike Trail that goes through the Blackhawk County Forest Preserve and eventually connects to the Fox River Trail which runs adjacent to the Fox River. The bridge was built in 2007 to provide better access to those using the trial. The bridge was constructed to provide bicyclists and pedestrians with a safe way to cross the busy Randall Road.

Figure 2.6: Pedestrian bridge over Randall Road, St. Charles

2.2.3 Phase 2 Pedestrian Facilities

The pedestrian sites that were surveyed in Phase 2 were located in the suburban areas of Chicago. The projects considered were either newly constructed sidewalks, extensions of existing sidewalks or the addition of traffic signals to facilitate street crossing. Two of the projects (Claire Boulevard sidewalk and the traffic signal installation at Ridge and School Streets) were part of the Safe Routes to School program as well as CMAQ. These projects were located close to schools and provided better access for students walking to and from school.

(6) Grand Ave Sidewalk from York Road to Church Road, Bensenville

The Grand Avenue sidewalk project is located on Grand Avenue in the Village of Bensenville, between York Road and Church Road. The sidewalk approximately 0.7 miles long . The sidewalk is located only on the north side of the street. The area is primarily commercial with several auto dealerships and commercial centers along Grand Avenue.

Figure 2.7: Grand Avenue sidewalk location

(7) Claire Blvd, Midlothian

The last two pedestrian facilities were co-funded by Safe Routes to School program. The first is a sidewalk along Claire Boulevard in Midlothian that connects neighboring communities to Springfield Elementary School. The sidewalk is approximately 0.2 miles long and extends from the Tri-State Tollway (I-294) to Springfield Street. The facility surveyed is located on the south side of the street.

Figure 2.8: Claire Boulevard sidewalk

(8) Ridge and School Streets, Lansing

The final facility surveyed in Phase 2 is located in Lansing and is a traffic signal construction project at the intersection of School Street and Ridge Road. The intersection is located very close to Lansing Memorial Junior High School and traffic signal project facilitates easier crossing by the many school children who walk everyday to and from the school.

Figure 2.9: Intersection of School Street and Ridge Road, Lansing

2.3 PHASE 1 FACILITIES

The CMAQ-funded facilities that were surveyed in Phase 1 are described in detail in the Phase 1 report. For the sake of completeness, we describe them here very briefly.

2.3.1 PHASE 1 BICYCLE FACILITIES

The first bicycle facility, in Rolling Meadows, was completed in 2006. It is a picturesque route about ½ a mile long through mostly wooded park and open space areas (Figure 2.10). The second bicycle facility, in Olympia Fields, is 1,260 feet long and was completed in 2007 (Figure 2.11). The third bicycle facility, in Richton Park, is 7,197 feet and was completed in 2007 (Figure 2.12). The fourth bicycle facility, in Orland Park, was completed also in 2007 (Figure 2.13). Finally, the fifth bicycle facility, in Lansing, is approximately 1.5 miles long and was completed in 2008 (Figure 2.14).

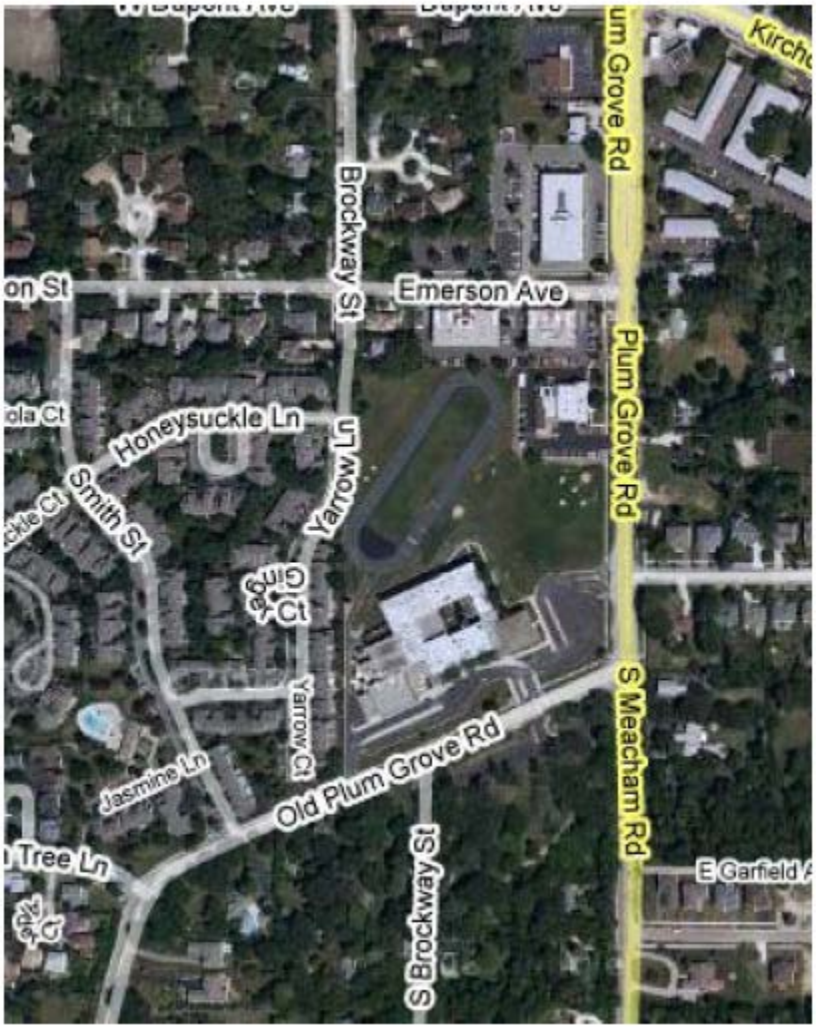


Figure 2.10: Bike path area in Rolling Meadows

Figure 2.11: Bike Path in Olympia Fields

Figure 2.12: Bike path in Richton Park

Figure 2.13: Bike path area in Orland Park

Figure 2.14: Bike path in Lansing

2.3.2 PHASE 1 PEDESTRIAN FACILITIES

All five pedestrian facilities surveyed in Phase 1 are sidewalks. The first sidewalk is located in Bedford Park and is approximately 2,550 ft long. The facility was completed in 2006. It is on the east side of Sayre Avenue from 75th St. to 79th St. (Figure 2.15). The second sidewalk, in Palatine, was completed in 2007 to improve access to the train station near Arlington Park racetrack (Figure 2.16). The third, in Northfield, was completed in 2008 to link the high school to downtown (Figure 2.17). The fourth sidewalk, in Country Club Hills, is about 0.5 miles long and was completed in

2007 to help with high school student access to and from school. Finally, the fifth sidewalk, in Glenview, is about a mile long and was completed in 2008 .

Figure 2.15: Pedestrian facility (sidewalk) in Bedford Park

Figure 2.16: Pedestrian facility (sidewalk) in Palatine

Figure 2.17: Pedestrian facility (sidewalk) in Northfield

2.4 SURVEY DESIGN

In order to properly analyze and understand the use of each facility, a 16-item survey instrument was created. The survey asked questions regarding the respondent's socio-demographics, reasons for use of the path, variations in seasonal trip making and time spent on the path. The survey also established the respondent's travel conditions prior to starting use of the facility. The resultant data allowed us to develop an understanding of each respondent's reason for taking the path and their daily trip patterns to assess the overall use of the facility. The survey instrument is given in Appendix A.

The questionnaire is a pen-and-paper instrument (PAPI) to implement the before-after study design based on the subjects' recall of their travel and transportation conditions before they started to use the facilities , and after. The details regarding questionnaire development are given in the Phase 1 report. The purpose of the questionnaire was to gather data on the research questions of interest and the design was specifically driven in order to implement the research design adopted. The broad topics covered in the instrument include the following:

- History of facility use including the time period at which the respondent first started to use the facility;
- Current facility use patterns including trip purposes, reasons for not using the facility for all trips for the stated purpose, access and egress points and connectivity to their final destination or intermediate transfer points such as parking lots and transit stations and bus stops, trip frequency;
- Facility use patterns over a whole year (asked for the summer, winter and fall/spring months);
- Transportation behavior prior to the facility use including the mode of transportation for the trip purposes for which the respondent currently uses the facility, frequency of use and travel time spent for the same trip purposes;
- Sociodemographics and other background characteristics, including facility access and egress points and the nearest intersection to the respondent's home location as well as the nearest intersection of their final destination.

2.5 Data Collection

In Phase 1, each site was visited two times for a full day shift. Each site was visited two times between the hours of 6:00 A.M. and 7:00 P.M. Days were divided into two shifts with teams of two reporting between 6:00 A.M. and 12:30 P.M. and between 12:30 P.M. and 7:00 P.M. The13-hour day was divided into 20-minute intervals, and during each interval, only one interview was completed. This was done to randomize among passers-by and to break up clustering patterns, including avoiding members of the same family. We received a total of 297 completed surveys from Phase 1. The breakdown, in terms of total enumerated, refusals, number completed and the response rates for Phase 1 projects are shown in Table 2.1.

Table 2.1: Facility list showing number of completed surveys, the number of refusals reported and the total population of reported during the survey periods – Phase 1 facility list

Project Name	Facility Type	City	Completes		Refusals	Enumerated (over 26 hours)
			Number	Percent		
Plum Grove Rd.	Bicycle	Rolling Meadows	36	12.1%	32	289
Palatine Sidewalk	Pedestrian	Palatine	42	14.1%	3	202
Happ Sidewalk	Pedestrian	Northfield	34	11.4%	28	219
Wagner Rd. Sidewalk	Pedestrian	Glenview	16	5.4%	15	168
Sayre Ped	Pedestrian	Bedford Park	42	14.1%	40	205
Forest Preserve	Bicycle	Olympia Fields	30	10.1%	6	111
175th. St. Sidewalk	Pedestrian	County Club Hills	23	7.7%	2	255
Latonia-Imperial	Bicycle	Richton Park	5	1.7%	6	38
Lansing Greenway*	Bicycle	Lansing	36	12.1%	15	300
US 45-IL7 Bike*	Bicycle	Orland Park	33	11.1%	11	258
Total			297		158	2045

* Not funded by the CMAQ program.

In Phase 2, three surveyors were usually present at each site. One surveyor oversaw the collection process. Another surveyor approached the bicyclists or pedestrians to request them to complete survey. The last surveyor enumerated every bicyclist or pedestrian using the facility during the allotted time, using the Enumeration Form given in Appendix B. Bottles of water and snacks were given to each respondent who chose to take the survey to thank them for their participation.

As mentioned, enumeration was done to determine the overall use of the facility during the rush hour times. The form also allowed us to note information concerning demographics and use of the path. This included race, the approximate age of the user and which direction they were travelling. The outcome of our respondent recruiting effort was also noted on the form. If a surveyor approached a user and asked them if they would fill out the survey and the user declined, it was noted as a refusal. The refusal form is given in Appendix C. If the user completed the survey on site, it was noted as complete. In some circumstances, users were not able to fill out the survey on site, but would take it with them and mail back the completed survey. They were noted as "mail backs." For those that were not asked (usually due to them travelling on the other side of the street or if someone seemed to be a minor) they were coded as "NA" or not asked.

In some of the sites for Phase 2, however, due to the low number of users, we noticed that waiting for 20 minutes to approach someone drastically limited our expected completion rates. For example, if we approached someone during each interval and they refused we would have to wait another 20 minutes to ask someone again. This method was replaced by asking anyone who passed at anytime to take the survey. In the end we were able to receive many more surveys by this method.

Additionally, in Phase 2, sites were surveyed a variable number of times. The Grand Avenue sidewalk, the intersection of School and Ridge Streets and the Claire Boulevard sidewalk projects were only surveyed once during the survey period. For the most part, this was due to weather conditions during that time. Also, some of these sites represented some of the lowest levels of use compared to other projects. The pedestrian bridge over Randall Road in St. Charles was visited three times during the survey period. The first two times were done during rush hour periods from 7:00AM to 10:00AM and from 3:00PM to 6:00PM. The results from these two site visits yielded a very small number of enumerated persons using the facility. Also, no surveys were completed during both site visits**.** It was noted by those at CMAP that the site was probably used more frequently during the weekend for recreational purposes. On Saturday, June 4, 2011, the site was surveyed for a third time from 11:30AM to 2:30PM to determine its overall use on weekends. 37 persons were enumerated and we received 7 surveys.

In the end, we received 79 completed surveys from the Phase 2 projects. This includes surveys completed by respondents on site and also those mailed back. The highest response rate was for the DuPage River Trail in Naperville. The lowest was from the intersection improvement at Ridge and School Streets where no persons were surveyed because although usage levels was quite high, all users appeared to be under 18 years of age and we were not allowed, by our Institutional Review Board (IRB) requirements, to survey persons less than 18 years of age. Table 2.2 shows the Phase 2 results.

Table 2.2: Facility list showing number of completed surveys, the number of refusals reported and the total population of reported during the survey periods – Phase 2

Project Name	Phase	Facility Type	City	Completes		Refusals	Enumerated (over 6 hours)
				Number	Response rate		
Clark Street	2	Bicycle	Chicago	23	5.4%	146	275
Randall Rd. Pedestrian Bridge**	2	Mixed	St. Charles	7	29.2%	17	37
DuPage River Trail	2	Mixed	Naperville	7	63.6%	4	14
Grand Avenue*	2	Pedestrian	Bensenville	0	0.0%	8	14
Claire Blvd*	2	Pedestrian	Midlothian	1	50.0%	2	6
33rd St.	2	Bicycle	Chicago	14	37.9%	23	63
18th St.	2	Bicycle	Chicago	27	34.8%	52	162
Ridge and School Sts.*	2	Pedestrian	Lansing	0	0.0%	0	145
TOTAL				79		252	716

**Site was surveyed three times

*Site was surveyed once

2. 6TRENDS IN BICYCLE AND PEDESTRIAN FACILITY USE

This section presents the findings from the bicycle and pedestrian use data acquired from the intercept survey during Phases 1 and 2 of the project. Phase 1 surveying was done during 2009 while most of Phase 2 surveying was done in 2010, although a few sites were surveyed during the spring of 2011. Although we surveyed at different times of the year, the data is still consistent for each site. Many questions ask the respondent to check all values that apply. Thus on many of the following graphs, the percentage values do not add up to 100%.

2.6.1 USAGE LEVELS

Table 2.3 shows the usage of each site from Phases 1 and 2. For Phase 1 projects, in total 26 hours was spent at each site to collect data and enumerate. For Phase 2, only rush hour periods were surveyed which represented 6 hours of complete surveying. Many of the new sites that were surveyed (Clark Street through DuPage River Trail) in Table 2.3, show low usage during the morning and afternoon rush hours. The Grand Avenue sidewalk only average .67 persons per hour during our site visits which represented the lowest amount on any site. The sidewalk in Midlothian was also sparsely used by persons in the community and only averaged 2 users per hour.

Table 2.3: Usage levels per site (estimated hourly volume)

Location of project	Mode	Type of project	Estimated average hourly volume
Rolling Meadows	bicycle	Bike Path	11.12
Olympia Fields	bicycle	Bike Path	4.27
Richton Park	bicycle	Bike Lane	1.46
Orland Park	bicycle	Commuter and Bicycle Bridge	9.92
Lansing	bicycle	Bike Path	11.54
Bedford Park	ped	Sidewalk	7.88
Palatine	ped	Sidewalk	7.77
Northfield	ped	Sidewalk	8.42
Country Club Hills	ped	Sidewalk	9.81
Glenview	ped	Sidewalk	6.46
Clark Street	bicycle	Bike lane	45.67
33rd Street	bicycle	Bike lane	5.16
18th Street	bicycle	Bike lane	27.00
Grand Avenue	ped	Sidewalk	0.67
Randall Road	mixed	Bicycle/pedestrian bridge	7.83
Lansing	ped	Sidewalk	48.00
Midlothian	ped	Sidewalk	2.00
DuPage River Trail	mixed	Bike Path	4.00

The sites with the highest usage were typically bike lanes along major streets in the City of Chicago. For example, Clark Street averaged 45.67 users per hour during the peak periods of the day. The Ridge and School Street pedestrian project in Lansing site also saw a large number of users during rush hour periods. This was due to its proximity to a local school that many children in the area walk to and attend. It needs to be noted that although counts were high, we could not survey the

school children because of their age due to restrictions put by our institution's Institutional Review Board (we did not approach any person who looked to be less than 18 years of age); hence the number of survey responses from this site is 0.

2.6.2 TRIP PURPOSES AND REASONS FOR USING NON-MOTORIZED FACILITY

Figure 2.18 shows that, in general, most respondents (68.0%) use the path for recreational purposes, with many using the paths for exercise. Errands/ personal business were reported by 30% of those surveyed and commuting as a trip purpose was reported by 37.7%. Close to 3% of the trips were categorized as other. In this question, respondents were given the option to choose multiple answers.

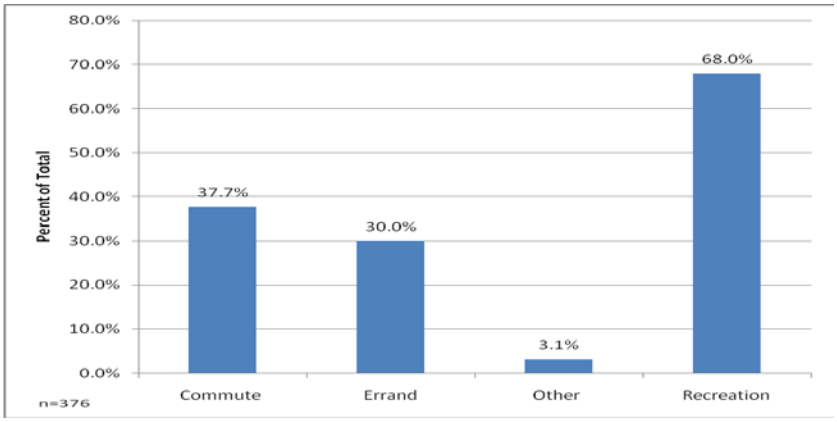


Figure 2.18: What are the reasons for which you use this path? (Respondents could "CHECK ALL THAT APPLY")

Figure 2.19 shows that recreation was the most cited reason as to why the respondent chose to use the path (57.9%) on the survey day. Convenience was also noted as being important to the choice of path with 52.3% indicating that it was convenient to use the facility on the survey day. Close to 20% self-reported the environment as being a factor along with 10.9% stating that biking or walking was a less costly alternative. 18.3% responded that there was no other way to make the trip and 6.3% stated other reasons.

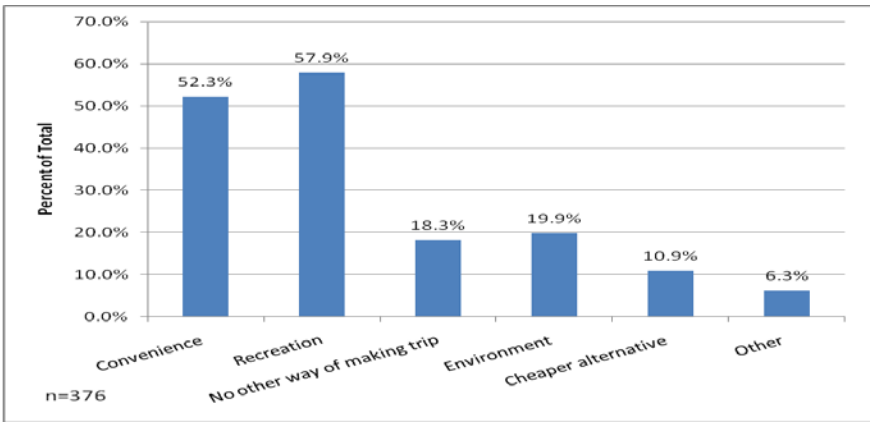


Figure 2.19: Why did you choose to use this path today? (Respondents could "CHECK ALL THAT APPLY")

Figure 2.20 shows that 76% of those surveyed answered that they always use the path for the trip purposes stated in the first graph. 24% responded that the path did not always use the path for that reason.

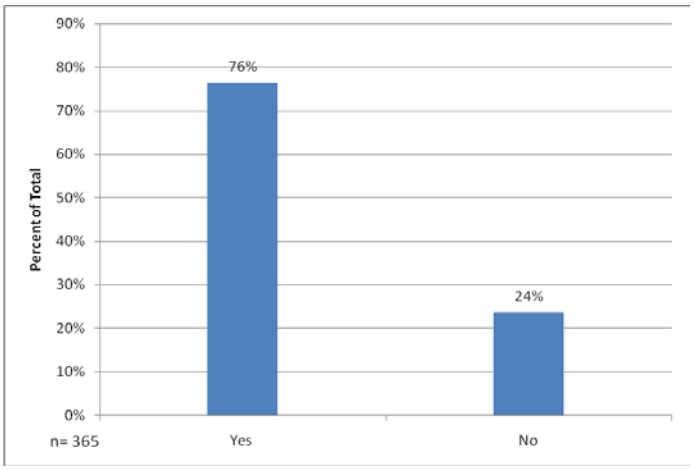


Figure 2.20: Do you always use this path for your trips for the purpose indicated above?

2.6.3 ALTERNATIVE TRANSPORTATION

Figure 2.21 shows that the majority of respondents stated that if the path was available, they would have biked or walked elsewhere (54.4%). About 19% responded that public transit would also be an option. Private car was seen as an alternative option by 29.3% of those surveyed along with 14.9% stating that shared ride was available. Only 12.5% would not have made the trip if the path was not present and 4.2% responded with other reasons.

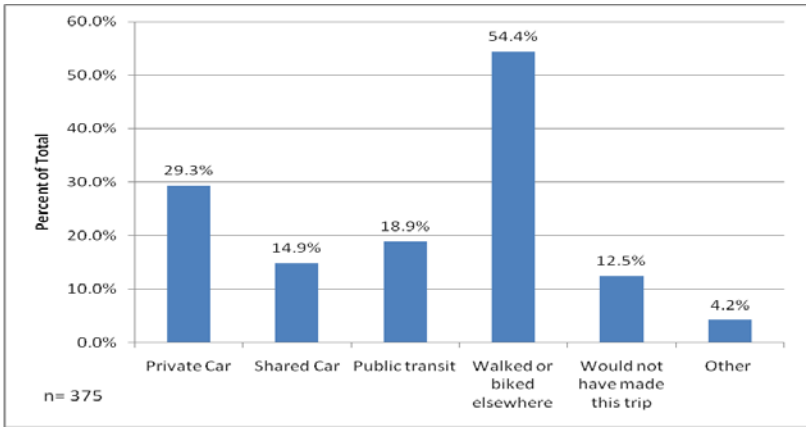


Figure 2.21: How else could you have made this trip? (Respondents could "CHECK ALL THAT APPLY")

2.6.4 SEASONAL TRENDS

The results of the survey showed that respondents use the facilities in greater frequency during the summer months compared to other seasons. The average weekly trip number for summer was 7.9 trips and the spring and fall season averaged 7.9 trips per week. A sharp decline was seen for trips during the winter season. Respondents only averaged 4.9 trips per week. Figure 2.22 shows the results.

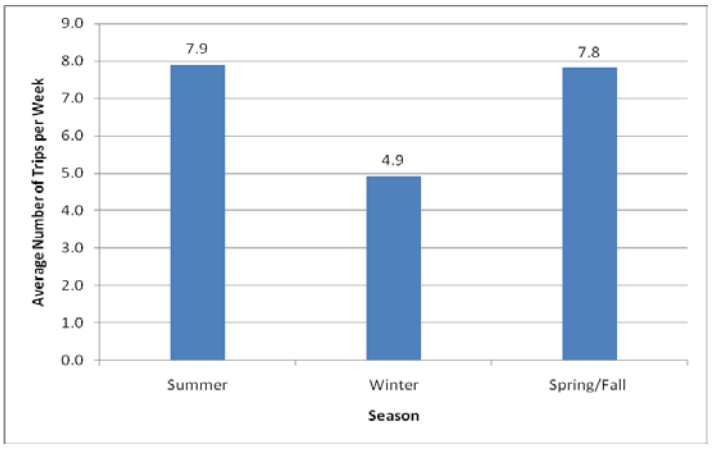


Figure 2.22: How many times per week do you typically use this path during the summer, winter and the fall and spring months?

2.6.5 TRIP PURPOSES

We asked those who responded that they did not always use this particular path to reach their final destination for their reasons behind that choice. The majority (40.1%) responded with other reasons not listed, for example, 9.8% responded that weather conditions played an important factor in them not using the facility. 21.2% responded that a car was needed for that trip at certain times along with their own personal safety cited as a reason by 21.9% of the respondents in this category. Family reasons were seen as a factor for 9.2% of the respondents. This included dropping off or picking up a family member as well as the transportation of children. These trends are shown in Figure 2.23.

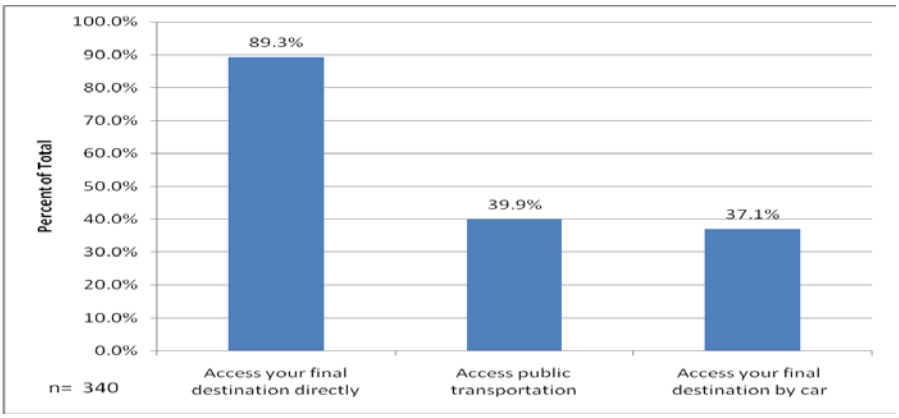


Figure 2.23: What are the reasons for not using this path for all of your trips for the purpose indicated above? CHECK ALL THAT APPLY

Figure 2.24 depicts responses for the question that dealt with how well the path gives access to the respondent's final destination. Close to 89% responded that the path allowed direct access to their final destination. Only 39.9% said that the path would eventually lead them to public transit (either a bus or train station) that they would then take to their final destination. 37.1% cited that they could use the path to then get access to a vehicle that they could then drive to their final destination.

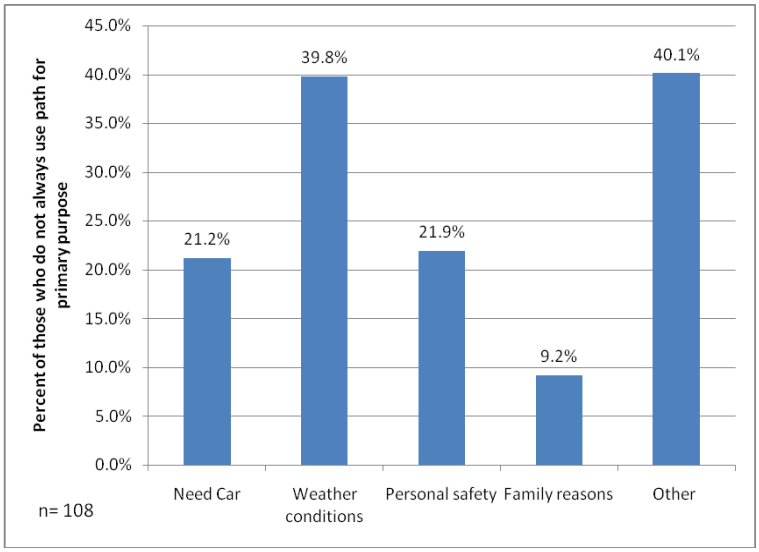


Figure 2.24: Accessibility reasons for using facility. CHECK ALL THAT APPLY

2.6.6 DURATION OF FACILITY USE AND TRAVEL TIMES

As shown in Figure 2.25, about 37% typically spend less than 10 minutes on the path. 23.8% responded that it takes them 11 to 20 minutes on the path to reach their destination, while 16.6% spend between. 21 to 30 minutes. The remaining respondents spend more than 30 minutes on the path.

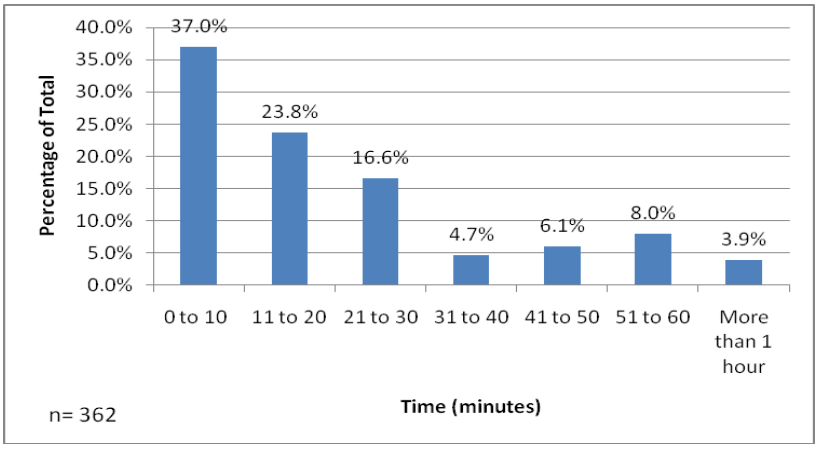


Figure 2.25: How much time do you typically spend on this path for this trip?

Figure 2.26 graphically depicts responses to the question on total door-to-door travel times (including the time spent on the path and additional time for access and egress to and from their trip origins and destinations). The majority of those asked said the total amount of time was between 21 and 30 minutes. Close to 16% said the overall time took on average 11 to 20 minutes.

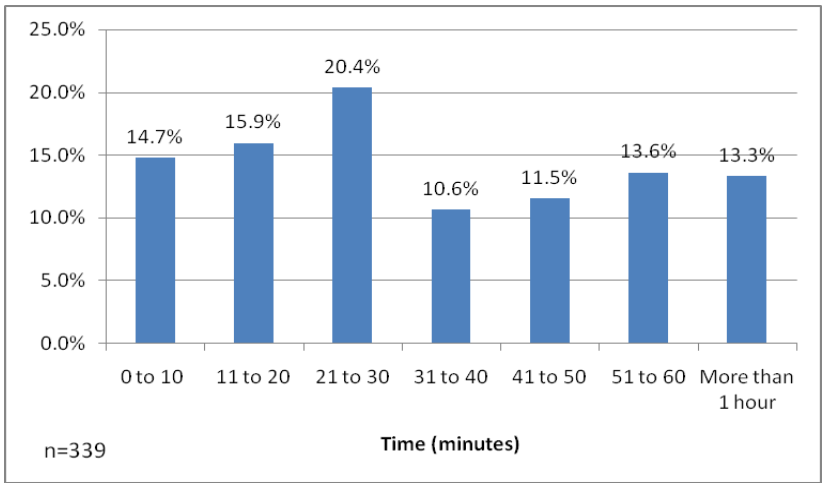


Figure 2.26: How long is your overall (door-to-door) trip? This will include time off the path.

Figure 2.27 gives the distribution of responses for a major policy question in the current analysis – the percent of respondents who indicated that they changed to the current non-motorized path use from car or shared-car (motorized) modes for their current trip purpose. This question indicates the extent to which air quality gains may have accrued as a result of the facility.

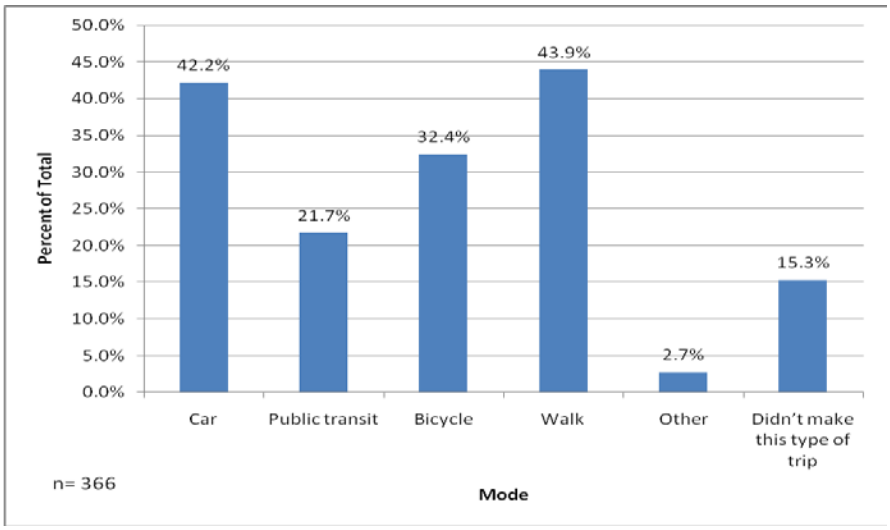


Figure 2.27: Before you began using this path for this type of trip, what type of transportation did you use? CHECK ALL THAT APPLY

Public transit was noted by 21.7% to be the previous mode used to reach their destination, before starting use of the path. Close to 32% responded that previously they would still ride a bicycle on alternative paths to arrive at their final destination, even though the CMAQ-funded path was not available at that time. Walking was noted by 43.9% of those asked as a previous mode. About 42% responded that they previously used a car before the path was available. Of these respondents, 16% reported being exclusively car users for the trip purpose prior to using the service.

Figure 2.28 gives site-level estimates of the percent of respondents whose only other travel alternative is a car and those who reported being exclusively car users for the trip purpose prior to starting to use the CMAQ-funded non-motorized facility. Blue represents the percent of those who exclusively switch from private car to bike or pedestrian, ie, they were previously, prior to the availability of the path, exclusively car users for the trip purpose that was being undertaken at the time of the survey. The red bars represent the percent for whom the only other alternative mode of travel for the current trip is private car, ie, they represent the percent of respondents, who, if the path was not available on the day of the survey, would have to use a private automobile.

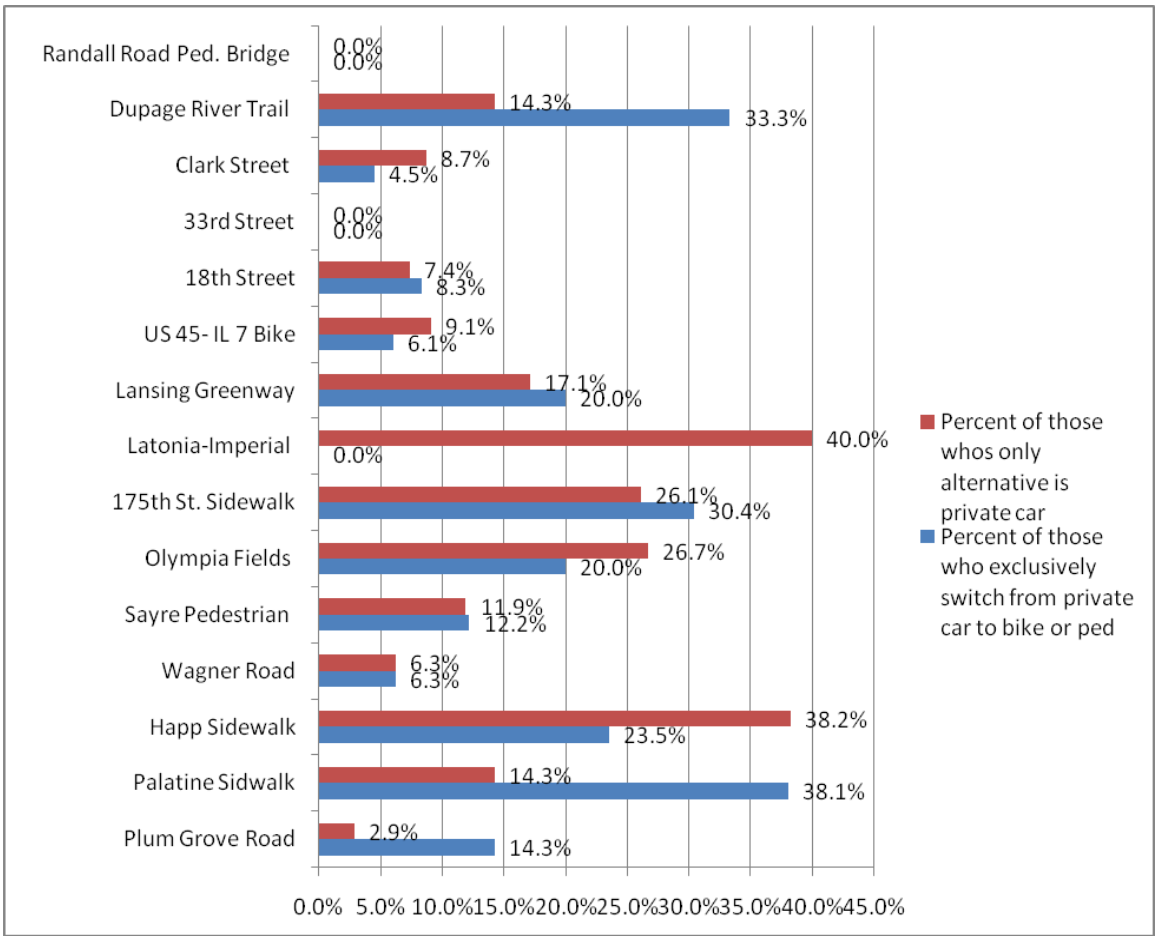


Figure 2.28: Site-by-site comparison of (A) percent for whom a private car is the only other mode of transportation available for the current non-motorized trip and (B) percent who were exclusively private car users for the trip purpose prior to the availability of the path

2.7 Analysis of Results

Since CMAQ funds projects to improve air quality and to relieve congestion, and since the potential of a facility to provide non-motorized alternatives to the Single Occupant Vehicle (SOV) is a major factor in funding allocation decisions, we consider a policy variable *D_CarChange,* which is a binary variable that takes a value of 1 if the respondent indicated that they were exclusively solo car drivers (excluding shared rides) for the particular trip purpose (e.g., shopping, work, etc) prior to using the facility, and 0 otherwise. Overall, 16% of all respondents surveyed indicated that they drove a car exclusively for the trip type prior to the availability of the path, with the remaining respondents indicating that they previously walked, biked, used public transportation or shared rides for their current trip purpose. Figure 2.29(A) shows the percent who switched from being exclusive car users for the trip type at each site, against estimated hourly volumes. A slightly decreasing relationship appears to be observed.

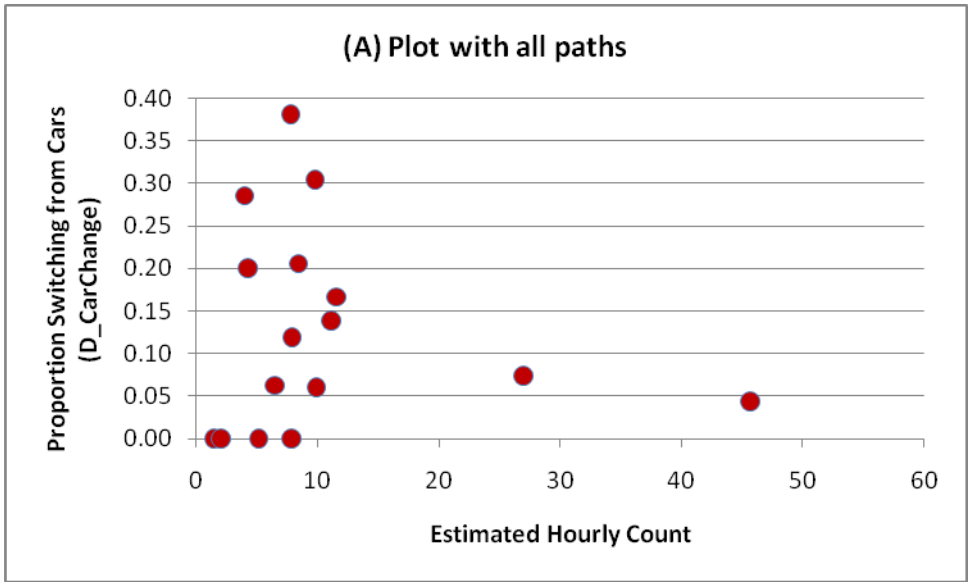


Figure 2.29(A): Percent who switched from being exclusive car users for the trip type at each site, against estimated hourly volumes

However, if the sites with very high counts per hour are removed, as in Figure 2.29(B), the percent who switched from being exclusive car users appear to increase linearly with hourly counts, although there is a great deal of site-to-site variability.

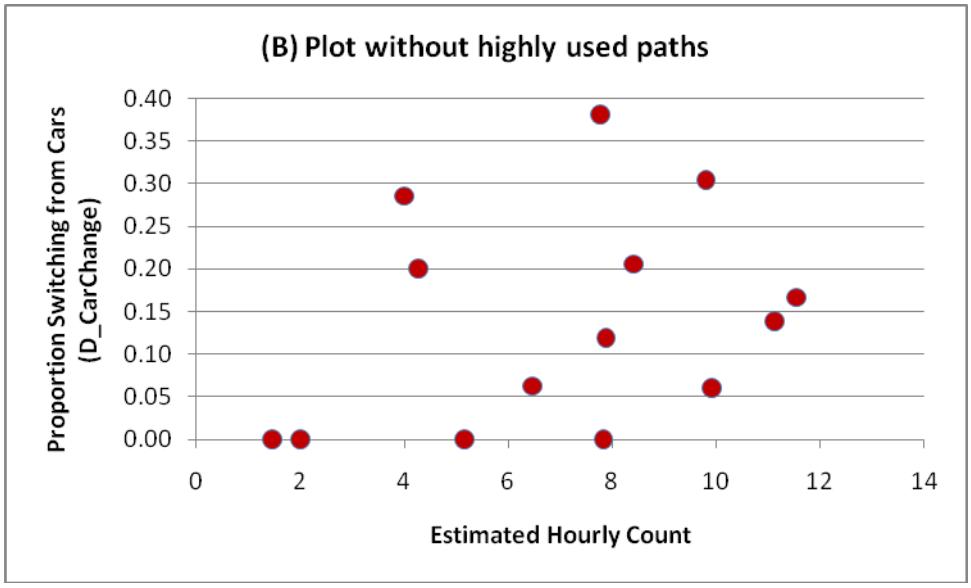


Figure 2.29(B): Percent who switched from being exclusive car users for the trip type at each site against estimated hourly volumes, with high usage sites removed

Emphasis is given in the Chicago area project selection process on both bicycle and pedestrian facilities that reduce automobile travel (Chicago Metropolitan Agency for Planning, 2011). Proposals for bicycle and pedestrian projects for the FY 2012-2016 grant cycle solicits information on the miles of existing bicycle/pedestrian facilities intersecting the proposed facility, trip attractors (work centers, transit facilities, schools and shopping centers) linked directly to the proposed facility, and for off-street bicycle facilities, the traffic volumes, speeds and percent trucks on adjacent roadway.

In addition, proposers are required to show any major land uses connected by the proposed facility, e.g., schools, shopping centers, office centers, recreation sites, and residential neighborhoods. Information on outreach and marketing of the facility is also required. Weights are applied to a selection of these factors and to internally derived factors such as the population of the surrounding area (a mile for bike projects and a half-mile buffer, for pedestrian projects); these weighted factors, along with fixed SOV diversion rates of 0.43 for all proposed bike projects and all 0.5 for pedestrian proposals, are used to estimate reduction in daily Vehicle Miles Traveled (VMT), and ultimately to air quality impacts. Projects are prioritized on the basis of technically derived expected air quality benefit estimates; however, availability of matching funds and several additional considerations enter into final project selection, including "regional equity, project readiness and project mix" (CMAP, 2011).

Our objective here is to understand the types of factors that contribute to the propensity of users to switch from cars. The major variables used in this part of the analysis are given in Table 2.4. Part I of the table give variables on the respondent's socio-demographics and use factors (person-level factors), Part II gives site-level descriptors and usage levels and Part III gives site-level variables from secondary sources including the Census 2000 and a Spatial Decision Support Systems (SDSS) created by the authors.

Table 2.4: Major variables used in the analysis (see footnote for explanation of significance of correlation coefficient)

Variable	Description	Means	Correlation Coefficient with D_CarChange
D_CarChange	1 if the respondent was exclusively solo car driver (excluding shared rides) for the particular trip purpose prior to using the facility, and 0 otherwise	0.16	1
Part I: Person-Level Factors			
gender	gender of interviewee; 1 if male; 0 if female	0.60	-0.00339
age	age of respondent	43.41	0.04765
finaldestconnect	1 if path connects respondent to final destination; 0 otherwise	0.89	-0.04497
finaldesttransit	1 if path connects respondent to transit; 0 otherwise	0.40	0.10248
pathchoose_recex	1 if trip purpose is recreation; 0 otherwise	0.68	-0.15348
pathchoose_errand	1 if trip purpose is to run errands; 0 otherwise	0.30	0.06285
propttime	proportion of total travel time spent on facility	0.81	-0.05918
Part II: Site-Level Descriptors and Usage Levels			
facility_type	facility type where interview took place; 1 if bicycle path; 0 if pedestrian path	0.54	***-0.15384***
bike	mode of transportation of respondent; 1 if bike, 0 if pedestrian	0.38	-0.05305
Hourly_count	Estimated hourly volume	17.63	-0.13
			0
Pop00_Density	Population /square mile in census tract	6,049.66	***-0.14205***
Transit Availability Index	Composite index giving the extent to which residents have access to transit (bus and rail); based on three input measures – frequency (person-minutes served), hours of service (number of hours) and service coverage (percentage of census tract area covered	0.57	0.01957
Pedestrian Environment Factor	Composite index ranking tract suitability for pedestrian travel; based on input values of population, income, number of households, amount of commercial and residential land uses as a percentage of census tracts, weighted trip origins and destinations	26.88	0.08192
Dist_citycenter	Distance (miles) to CBD	27.09	***0.14935***
Sum_AADT	Total annual average daily traffic on links of all highway functional classes within census tract; output from regional traffic assignment model and GIS	570,862.62	**0.10629**
PercentLowEng	Percentage of persons who speak no English or limited English (Census 2000 data)	0.29	**-0.10408**
PercentChildren	Percentage of population under the age of 16 (Census 2000 data)	0.27	-0.07373
PercentNoCars	Percentage of population without access to a vehicle (Census 2000 data)	0.09	***-0.15283***

Italicized and bold: Significant at .01 level
Bold: Significant at .05 level
Underlined: Significant at .10 level

Table 2.4 shows that the following variables have a highly significant correlation with *D_CarChange* (at $p < .01$):

1) *Facility type*, with bicycle facilities having a negative correlation with *D_CarChange*, indicating that the respondents surveyed in bicycle facilities were more likely to have been using other non-car modes for the current trip prior to using the facility;
2) *Population density of surrounding census tracts*, also having a negative correlation with *D_CarChange*, indicating that the respondents surveyed in high density areas were more likely to have been using other non-car modes for the current trip prior to using the facility;
3) *Distance from City Center* (State and Madison Streets) is positively correlated with *D_CarChange*, indicating that the respondents surveyed in areas farther away from the center of the City of Chicago are more likely to have switched from SOV modes for the current trip after to using the facility;
4) *Percent of population with no cars in surrounding census tracts* has a negative correlation with *D_CarChange*, indicating that the respondents surveyed in areas with lower levels of car ownership are less likely to have been using SOV modes for the current trip prior to using the facility.

Table 2.4 also shows that the following variables have a significant correlation with *D_CarChange* (at $p < .05$):

1) *Average Daily Traffic in highway links in surrounding census tracts* is positively with *D_CarChange*, indicating that the respondents surveyed in areas with heavier levels of motorized traffic are more likely to have switched from SOV modes for the current trip after to using the facility;
2) *Percent of population who speak limited or no English in surrounding census tracts* is negatively correlated with *D_CarChange*, indicating that respondents surveyed in such areas are more likely to have already been using non-motorized modes for the current trip prior to using the CMAQ-funded facility.

Finally, Table 2.4 also shows that the following variables have a statistically weak correlation with *D_CarChange* (at $p < .10$):

1) *Ability to connect directly to a transit station* is weakly but positively correlated with *D_CarChange*, as these individuals are potentially able to use non-motorized modes to access transit stops to reach their final destinations due to the CMAQ-funded facility, thereby enabling them to switch from private cars to access transit;
2) *Recreational usage* is weakly and negatively correlated with *D_CarChange*, as these individuals are probably already using other forms of non-motorized modes or in other locations for recreational purposes.

The variables discussed above may interact in different ways to create groupings of CMAQ-funded sites, in terms of how *D_CarChange* changes with different combinations of variables. To test this idea, we conducted a cluster analysis using *D_CarChangeE*, *Hrly_Count*, *Pop00_Density*, *Dist_CityCenter* and *PercentNoCars* as clustering variables (we tried different various combinations of variables and these variables gave the best fit). The cluster analysis results are shown in Table 2.5. There are four clusters of facilities, with unequal sample size in each cluster.

Table 2.5: Results of Cluster Analysis

	Clusters			
Variable	**A**	**B**	**C**	**D**
D_CarChange	0.18	0.17	0.04	0.04
Hourly_count	6.56	10.28	91.67	37.50
Proportion Less than 25 Years	0.29	0.41	0.17	0.54
Pop00_density	1,691.06	4,058.07	29,418.00	20,920.98
finaldestransit	0.32	0.29	0.50	0.83
finaldestconnect	0.92	0.83	0.95	0.94
Peestraian Environment Factor	29.60	24.17	9.01	25.82
Sum_AADT	686,640.63	330,258.33	54,750.00	282,961.11
PercentLowEng	0.21	0.17	0.17	0.79
Dist_CityCenter	27.58	26.77	4.16	2.75
Pathchoose_commute	0.32	0.14	0.87	0.71
Pathchoose_Errand	0.26	0.19	0.65	0.65
Pathchoose_Recreational	0.72	0.79	0.57	0.62
PercentNoCars	0.05	0.04	0.30	0.28
PercentChildren	0.28	0.32	0.16	0.30
Ratio of time on facility to total travel time	0.78	1.03	0.49	0.56

Cluster A: Long-Distance Transit-Based Commuting Facilities: *Facilities that lead to the highest levels of switching in the sample from solo car use (18%) on the average and with greatly lower levels of usage on an hourly volume basis (an average of only 7 users per hour)*. These facilities are located in extremely low-density areas and are the farthest away from the center of the City of Chicago, but connect a larger share of users to public transportation than Cluster 1 facilities, thereby increasing the ability of users to use the facility for part of their commuting trip. Reflecting the commuting nature of the facility use, average ages of users are higher (only 29% are less than 25 years of age). The walkability levels in the surrounding neighborhoods are the lowest of all clusters and highway network links in the surrounding areas have the highest levels of Average Annual Daily Traffic. Cluster 3 users tend to spend the longest proportion of time on the facility out of their total travel time (78% of their total time spent in travel is on the facility). The facilities in Palatine, Northfield, Glenview, Bedford Park, Olympia Fields, Richton Park, Lansing and the DuPage River Trail are in this cluster.

Cluster B: Recreational Facilities for Discretionary Usage: *Facilities that lead to high levels of switching from solo car use (17%) for the trip purpose for which the respondent was traveling at the time they were surveyed, but with fairly low levels of total usage, on an estimated hourly volume basis (about 10 users per hour)*. These facilities tend to be located far away from the city center and have high levels of Annual Average Daily Traffic. Users are young, with more than 40% less than 25 years of age. The vast majority of travelers use the facilities for recreational purposes (79%), with low levels of commuting trip purposes. These facilities tend to be in areas with a large proportion of young children (in our sample, 32% are children less than 16 years of age). The overall walkability characteristics of surrounding areas is low, and the vast majority of users reported being able to reach their final destination from the facility (presumably home, after their recreational trip) and only a small proportion of individuals are able to reach a transit stop from the facility that connects

them to their final destination. The facilities in Rolling Meadows, Country Club Hills and Orland Park are in Cluster B.

Cluster C: Non-motorized Commuting Facilities in Extremely High Density Areas: *Facilities with high volumes of non-motorized usage for commuting purposes: Low proportion of users who switched from motorized modes prior to using the CMAQ-funded facility (4%), but with highest levels of hourly volumes of non-motorized usage on the facility (an average of 92 users per hour).* These facilities lead to high levels of non-motorized usage but are drawing users who were already non-motorized or public transportation users prior to using the CMAQ-funded facilities. Such facilities have high levels of commuting trips, with a large proportion of users of all ages being able to reach their final destination, such as work, directly from the facility or via additional facilities to which the facility connects to. The areas surrounding such facilities have the highest levels of population density, high levels of walkability and the lowest levels of Annual Average Daily Traffic.The surrounding areas have low levels of residents who speak little or no English and, overall, low levels of car ownership (30% of households in surrounding areas do not have a car). They are located close to the center of the city. In our sample, only the Clark Street bike facility is in this cluster.

Cluster D: Non-motorized Commuting and Mixed Use Facilities in High Density Areas: *The lowest proportion of users who switched from motorized modes prior to using the CMAQ-funded facility (3%), but with relatively higher levels of hourly volumes of non-motorized usage on the facility (an average of 38 users per hour).* These facilities draw the greatest share of young users (with 54% less than 25 years of age), who tend to use the facilities for a wide variety of purposes including commuting, running errands and for recreational purposes. They are located close to the City of Chicago's downtown area, have high levels of carlessness in surrounding areas (27% of households in surrounding areas without cars) and very large numbers of residents who speak little or no English (79%). Large shares of the population in surrounding areas are children less than 16 years (close to 30%). The 18th Street and 33rd Street locations are in Cluster D.

The analysis above identified the variables which have a significant correlation with D_CarChange. However, many of those variables are themselves correlated with each other. In order to find out which combination of variables explain the propensity to switch from cars to the current non-motorized mode, we utilize a binary logit model of $p_{ij} = \Pr(D\_CarChange_{ij} = 1)$

The results are shown in Table 2.6.

Table 2.6: Parameter Estimates and Odds Ratio of Binary Logit Model of P(D_CARCHANGE=1)

Variable	Estimate	p	Odds
Intercept	-4.07	0.01	0.02
Age	0.01	0.59	1.01
Gender	-0.52	0.23	0.59
Hourly Count	0.03	0.53	1.03
Access to Public Transportation	**0.86**	0.04	2.37
time_prop	-0.68	0.16	0.51
Transit Availability Index	0.33	0.83	1.40
Pedestrian Environment Factor	-0.01	0.65	0.99
Facility Type	-0.89	0.07	0.41
Distance from City Center	***0.10***	0.01	1.10

Underlined*:* Significant at .10 level; **Bold:** Significant at .05 level; ***Bold and Italicized***: Significant at .01 level

McKelvey-Zavoina R^2	0.67
AIC	200.31
N	242
Log-Likelihood	-90
Likelihood Ratio	23.50

The model results show that because *Dist_CityCenter* is strongly correlated with a number of other variables, including *Pop00_Density*, *SUM_AADT* and other variables that were found earlier to be important in explaining *D_CarChange*, we can simply use it as a proxy for these other variables. It is significantly related to *D_CarChange* at the .01 level, an increase in which increases the odds of switching from cars to bicycle or pedestrian use in the CMAQ-funded facilities by 1.10. Controlling for other variables, access to public transit from the facility increases the odds of *D_CarChange* by a factor of 2.37. As noted earlier, bicycle facilities are less likely to significantly lead to a switch from cars, since many bicycle users are likely to have been users of other (non-motorized or public transport modes) prior to using the CMAQ facilities.

CHAPTER 3: ASSESSMENT OF SIGNAL INTERCONNECT AND INTERSECTION IMPROVEMENT PROJECTS

3.1 BACKGROUND

In assessing CMAQ investments on signal interconnect and intersection improvement projects, CMAP was interested in using field data on travel behavior before and after the investments in both types of projects, with the goal of assessing their effects on reducing emissions. As mentioned previously, a before-after study design was adopted for this purpose. The primary travel behavior measure used in both signal interconnect and intersection improvement projects is travel speed. The general premise is that improving travel speed will reduce traffic related emissions. Travel speed is impacted by several traffic parameters such as traffic volume, signal plan, pedestrian volume and roadway geometry. Therefore, data must be collected on those factors along with travel speed, which will be discussed in the data collection subsection.

In the rest of the chapter, we describe our research approach to assessing the effects of the two categories of traffic improvement projects. First, we describe the before-after study design and the advantages and limitations of this design, as it relates to traffic improvement projects. Then we present the project site selection procedure for field data collection and analysis. Next, we discuss the data collection requirements to assure data quality and validity of the research findings. Lastly, we describe methods for data analysis once the before and after data are collected and processed.

3.2 BEFORE-AFTER STUDY DESIGN

To assess the potential benefits of the traffic improvement projects, we implemented a before-after study design, in which the pre-defined travel behavior metrics (e.g., travel speed, traffic volume) were measured in the field both before a project (i.e., signal interconnect or intersection improvement) is implemented and after. The difference between the before and after measurements is the estimated impact of the investment and the "before" measurements serves as a baseline or the control measurements.

3.2.1 DESIGN ISSUES

In this study, the study population is defined as the CMAQ-funded signal interconnect and intersection improvement projects that were funded in the six-county NE Illinois region. Random samples of projects were drawn from the study population by randomly selecting a weekday (Tuesday, Wednesday, or Thursday) on which to collect data. Ideally, measurements should be taken repeatedly from the same sample over time to account for the changes over time due not only to changes as a direct outcome of the investment and "natural change" that would have happened anyway regardless of the investment, but also to other changes such as shift in demographics and land uses in the surrounding areas. There are also possibly time lags during when drivers learn about the improvement and time-lapses in recovery and adjustment in driver behavior after the implementation.

In this study, measurements are taken only once in time before and once after the implementation. The underlying assumption for doing so is that the eligible population of users is reasonably constant over time. In addition, the selection of the "after" data collection time point becomes somewhat a delicate exercise for the reasons explained above. Of course, the study can be considerably strengthened if measurements are taken at multiple points in time both before and after such that the effects of other changes are better controlled and accounted for. In particular, we recommend, if resources permit, a longer-term, repeated (time series) data collection to facilitate more powerful and useful evaluation.

3.2.2 Strengths and Weaknesses of Before-after Study

The key strength of the before-after study is that it is relatively easy and simple to implement. However, the design has considerable weaknesses that must be recognized when one interprets the study findings.

The main weakness of the design, as mentioned earlier, is that the "after" measurements do not separate out the changes due to different causes. This is particularly problematic if the improvement is expected to have a relatively small impact, compared to even the "natural change" that happens anyway over time due to other changes that may take place during the study period.

The design can be strengthened by collecting the time series data over a longer time period extended before and after the implementation of the project. With the time series data, it is then possible to more accurately identify the time point at which the change or effect takes place after the project is implemented. On the other hand, this requires much more data collection effort.

3.3 Site Selection Procedure

Both "before" and "after" traffic data must be collected for the CMAQ funded signal interconnect and intersection improvement projects in order to evaluate each individual project. The project scope led us to collect the "before" data in Phase 1 and the "after" data in Phase 2.

Before the field data collection, a list of project must be determined. As described there are a total of 770 funded CMAQ projects in the Great Chicago metropolitan region. This includes 202 signal interconnect projects and 74 intersection improvement projects.

As per the before-after study design we have adopted, projects that are already completed are obviously no longer eligible for the study. Therefore, the candidate projects must be those (1) that are labeled "incomplete" in the database during Phase I of the study; and (2) that are expected to be completed within 12 to 18 months after Phase I study and before the "after" data collection in Phase II. Based on those criteria, there were 42 intersection improvement projects and 58 signal interconnect projects that were incomplete and had estimated completion years between 2007 and 2011.

We then compiled a short list of candidate projects using random sampling from the above list and randomly selected 10 projects in each category. In the next step, phone calls were made to the project contacts to confirm the incomplete status of the projects. If the project was already completed but its status was not updated in the database, it was dropped from the list.

Next, the expected completion dates of the candidate projects were confirmed with the Illinois Department of Transportation (IDOT). Due to many practical factors involved in the completion of

a project, the expected completion dates are subject to frequent changes. After communicating with the CMAP staff, it was determined that the best available information to be based on to estimate the completion dates was the estimated letting date information posted by IDOT. Because CMAQ funding comes from the federal government, plan sets require IDOT's approval before the project can move forward to a public bid (let) and then to the construction stage The IDOT oversees the public bid process for the majority of the projects, although there are some agencies that have approval to do the bid process themselves.

Previously in Phase 1, there were only 10 intersection improvement projects the IDOT letting list included with geographical locations shown in Figure 3.1.

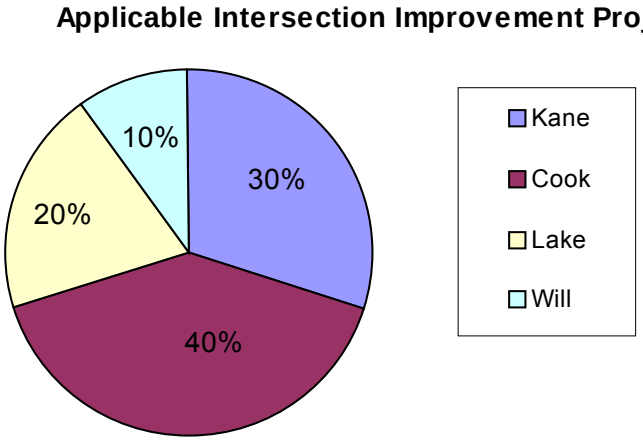


Figure 3.1: Applicable Intersection Improvement Projects

The schedule we received indicated 9 signal interconnect projects that should be ready to let for 2009. The geographical breakdowns by county are given in Figure 3.2.

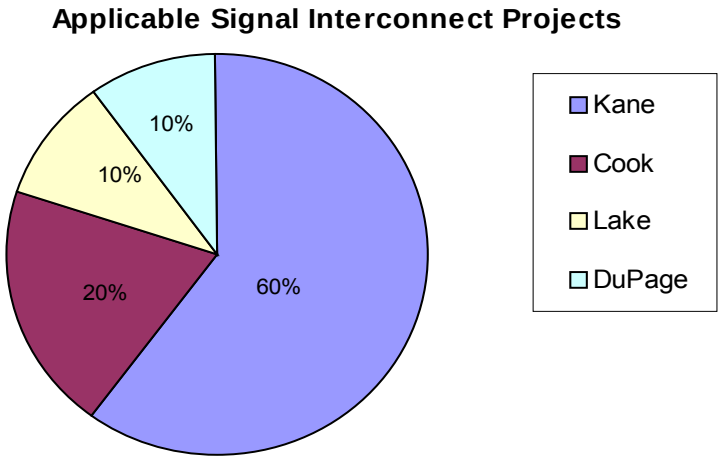


Figure 3.2: Applicable Signal Interconnect Projects

We then cross-referenced our random sample list with the IDOT letting list for 2009, which resulted in only one initially selected intersection improvement project and two signal interconnect projects. Hence, the previous random sampling method was augmented by "randomly" choosing additional project sites with the feasible letting dates that will enable the "after" data collection to

occur no later than 2010. This resulted in 3 additional intersection improvement projects and 2 additional signal interconnect projects being selected in order to maintain 4 projects for each category. The final list of the "before" intersection improvement projects and signal interconnect projects are as follows.

(I) Intersection Improvement Projects

1. Dundee and Summit, Elgin, Kane, IL
2. Dunham at Sterns and IL 25, Elgin, Kane, IL
3. Governors Hwy and Poplar, Richton Park, Cook, IL
4. River Rd and Winona, Schiller Park, Cook, IL

(II) Signal Interconnect Projects

1. Peterson Ave from Cicero to Ridge, Chicago, Cook, IL
2. Naperville Rd from Elm to Danada, Wheaton, DuPage, IL
3. Randall Rd from Main to Orchard, Batavia, Kane, IL
4. Randall Rd from Corporate Pkwy to Huntley, Carpentersville, Kane, IL

The four selected intersection improvement projects consisted of two projects in Kane and two projects in Cook (see Figure 3.3 for the description of the selected sites). The four selected signal interconnect projects consisted of two from Kane County, one from Cook County, and one from DuPage county, which accurately represents the applicable projects.

As mentioned earlier, when those eight projects were chosen during Phase 1, they were expected to be completed by the time the second phase of the project started in fall 2010 so the "after" traffic conditions could be evaluated. However, none of the four selected intersection improvement projects were completed by early spring 2011, which was the window for our project data collection, due to various reasons. In the signal interconnect projects, only the Naperville Rd in Wheaton and Randall Rd in Batavia were confirmed completed. In other words, we were able to collect "after" traffic data only at two project sites, i.e., Naperville Rd in Wheaton and Randall Rd in Batavia, for traffic improvement project evaluation.

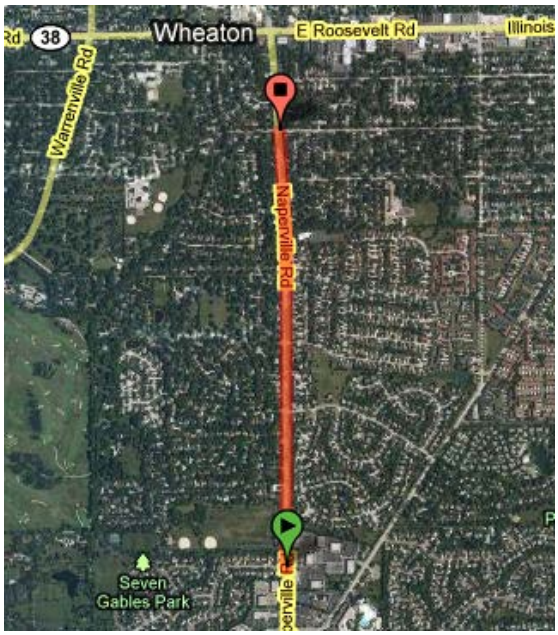
Table 3.1: Final traffic improvement projects confirmed for "before" and "after" study

Signal Interconnect			
Project site	**County**	**No. of intersections**	**Data collection status**
Naperville Rd from Elm to Danada, Wheaton	DuPage, IL	4	**Before**: 10/29/08 7:00am-7:15am, 10/30/08 7:45am-8:00am, 11/5/08 4:45pm-5:00pm, and 11/13/08 5:00pm-5:15pm **After**: 5/17/11 and 5/18/2011 3pm-6pm
Randall Rd from Main to Orchard, Batavia	Kane, IL	2	**Before**: 9/9/09 7am-8am, 9/22/09 7am-8am **After**: 5/11/11 7am-10am, 5/11/11 2:45pm-5:45pm
Intersection Improvement: None			

Figure 3.3: The final project sites

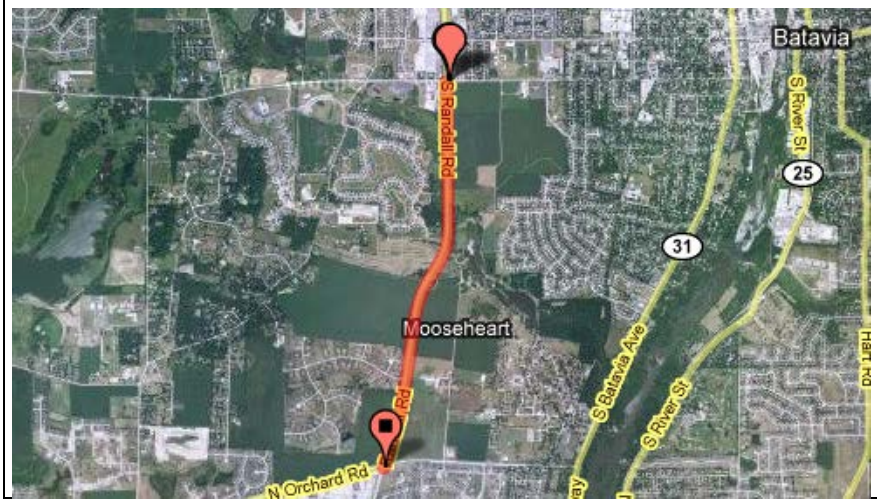
(1) Naperville Road between Elm Street and Danada Drive, Wheaton, DuPage, IL

The corridor of Naperville Road from Elm to Danada is located in the western suburb of Wheaton and serves as a connection to Roosevelt Rd (IL rte 38) and Butterfield Rd (IL rte 56). The land use bordering the study area is mostly residential. There are also some office buildings at Danada Drive and a church and park along the roadway. Naperville is a four lane arterial throughout the 1.1-mile corridor from Danada to Elm and consists of four signalized intersections.



(2) Randall Rd between Main and Orchard, Batavia, Kane, IL

The corridor of Randall Road from Main to Orchard is located in the far western suburb of Batavia. Randall Road is a major north-south arterial in Kane County. The land use bordering the study area is largely farmland. There are also some subdivisions to the north and south of the corridor; in addition there is a shopping plaza, "The Shoppes at Windmill Place" located directly north of the Main street intersection. Randall Road is a four lane arterial throughout the 2.0-mile corridor from Main Street to Orchard Road and consists of two signalized intersections. Pace route 529 services Randall Road for the entirety of the study area.



In the remainder of post-project evaluation in this report, we will focus on those two projects where the effects of the CMAQ improvements are compared using speed measurements. Detailed "before" and "after" LOS intersection analyses on all project sites (i.e., eight "before" projects and two "after" projects) are available in Appendix D.

3.4 Data Requirements and Collection Procedure

The "before" data collection was carried out at each of the eight selected sites during fall 2008 and summer and fall 2009. The "after" data collection at the two eligible sites was carried out in May 2011. Figure 3.4 is the data collection worksheet used in the study. It consists of five sets of data: (1) general information including project site and data collection date and time, (2) intersection geometry including lane configuration for each approach, (3) traffic volumes at each travel direction, (4) signal timing and plan, and (5) average travel speeds at the intersection.

3.4.1 Average Travel Speed

The primary surrogate measure of air quality benefits from the signal interconnect and the intersection improvement projects is the speed improvement. Therefore, the average traveling speeds along the study corridors were recorded manually by the "floating car method". A research member driving the study corridor conducts this method and maintains the average speed of the surrounding vehicles while recording the travel time from one study boundary to the other. Many engineers also note the instantaneous vehicle speeds when entering a study intersection and between intersections in order to help visualize the speed-position graph and note where delays occur on the corridor. In an effort to maintain the same level of accuracy of a GPS transponder we recorded the instantaneous speeds every minute and recorded the travel time of the corridor. With the recorded travel time and the length of the corridor we were able to calculate the average vehicle speed and determine the slow regions from the instantaneous speeds.

3.4.2 Other Traffic Data

Other traffic data were also collected in the study in order to properly account for effects of other traffic parameters on travel speed and to create a functional simulation model. The UIC team collected the necessary data such as: multiple 15-minute turning movement counts, recorded signal phase timings and lane configuration, and average vehicle speed. The 15-minute turning movement counts were conducted with one counter per intersection approach. Fifteen minutes is the standard interval given by the Highway Capacity Manual (HCM) to detail traffic volumes and create peak hour factors. All of the site counts covered at least half an hour or more of peak period data. After each count the data sheets were collected and the data was entered into excel spreadsheets. Also data on lane configuration data were recorded during the field visit.

The signal timing of each of the phases was also recorded at the same time when the traffic data were collected. The green time, yellow time, red time, and all red time was recorded for each phase and a phasing diagram was constructed, as can be seen from Figure 3.4, which is the sample data collection worksheet used in the study. Problems arose when many of the signals had multiple actuated phases and did not maintain an equal cycle length. Because of the multiple actuated phases, the data collectors were instructed to record the phase multiple times to determine the average time for each phase. A better solution would be to obtain a copy of the implemented signal timing plans for the selected sites with actuated signals from the responsible agencies in order to properly analyze the intersection, which we were not be able to obtain at this time.

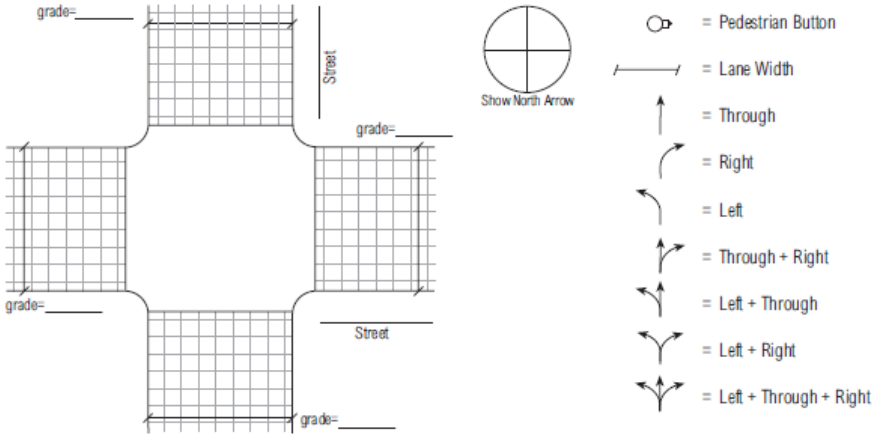
The number of surveyors needed per site was estimated from the roadway average daily traffic (ADT), and the number of intersection approaches. For each intersection in a selected project, a minimum of one person per approach was assigned; for roadways with heavy ADT volumes (> 30000 vehicles) we assigned two people per approach. The number of people at each site is specified under the respective project heading.

Figure 3.4: Sample Data Collection Worksheet

General Information

Analyst		Intersection	
Date Performed		Area Type	
Analysis Time Period		Analysis Year	

Intersection Geometry



Volumes

	EB			WB			NB			SB		
	Lt	Thru	Rt	Lt	Thru	Rt	Lt	Thru	Rt	Lt	Thru	Rt
Volume [veh/hr]												
Heavy Vehicles [%]												
Peak Hour Factor												
Pretimed or Actuated												
Pedestrian Volume [ped/hr]												
Bicycle Volume [bike/hr]												
Parking [Yes or No]												
Parking Maneuvers [#/hr]												
Bus Stopping [Buses/hr]												

Signal Phasing Plan

Phase	1	2	3	4	5	6	7	8
G								
Y								
AR								

Vehicle Speed—Corridor (Minimum 2000ft)

Direction	EB	WB	NB	SB
Average Vehicle Speed [mph]				

3.4.3 Impacted boundaries of Project Site in Data Collection

In principle, data collection must be carried out in all intersections where traffic operation is expected to be impacted by the project, which may go beyond the intersections at which the investment will take place. In reality, however, the impacted boundaries are difficult to draw without a comprehensive network level analysis, which requires necessary data collection and coding of the regional network, which is far beyond the resources of the current study. Hence, in this study we considered only the "direct" impact at the intersections where the investment occurred and conducted the data collection at those intersections only. The potential impact beyond the investment site was not considered in the analysis.

3.5 Data Analysis Methods

Data analysis consists of (1) comparison study of the before and after conditions from direct observations, and (2) level-of-service (LOS) analyses of the before and after conditions from the field measurements respectively. The field collected data on the worksheets were entered into electronic data spreadsheets. Data is organized by intersection. For each study intersection, there are four categories of data: intersection geometry (number of lanes, lane groups, lane width, exclusive turn lanes/bays, crosswalks, etc., near-side/far-side bus stop), traffic volume and other factors by approach (hourly volume, % heavy vehicles, pedestrian volume, bicycle volume, parking lane, parking maneuvers, bus stopping), signal plan (pretimed or actuated, number of phases, sequence of phases, green, yellow and red time in each phase), and average travel speed by approach.

Direct comparisons of the before and after speeds, traffic volumes and other parameters are conducted to show the observed change in traffic condition before and after the investment.

The individual intersection LOS and the corridor LOS are also determined for the before and after scenarios respectively by running the collected data through the Highway Capacity Software (HCS) but not directly used in the analysis. LOS defines how smooth traffic operation is on a roadway section. Specifically for a signalized intersection corridor, the amount of delay per vehicle (or slow-down of traffic) at an intersection determines the performance level of the intersection. Therefore, LOS analysis gives us a sense of the traffic condition at the intersections. Intersection LOS analysis and detailed HCS input and output files for these two intersections are given in Appendix D.

3.6 Before And After Comparison

This section presents the average peak hour traffic speed through the entire study corridor of each of the two signal interconnect projects. Detailed time of day and day of week speed observations can be found in Appendix D.

Note that the speed data was collected slightly differently in Phase I (before) and Phase II (after) of the study. In Phase I, the total travel distance and run time along the study corridor were recorded by the floating car and the average speed was derived by dividing the corridor travel distance by the corresponding run time. In Phase II, travel distance and run time were recorded for each

intersection from mid-block upstream to mid-block downstream. Therefore, average travel speed can be derived at each intersection of the study corridor as well as for the entire corridor itself.

(1) Naperville Road between Elm Street and Danada Drive, Wheaton, DuPage, IL

Table 3.2: Average Traffic Speed on Naperville Road: Before versus After

Study Corridor: Naperville between Elm and Danada				
	Before		After	
Summary	SB	NB	SB	NB
Measured corridor length (miles)	1.32	1.32	1.37	1.37
Average run time (sec)	156	156	150.8	146
Average speed (mph)	30.6	30.6	32.8	33.9
Average speed improvement			7.15%	10.68%

The average speeds in Table 3.2 represent the average through traffic traveling speed on Naperville Avenue in both the southbound and northbound directions between Elm Street and Danada Street over a number of repeated field measurements during the morning and/or evening peak hours on the data collection dates noted in Table 3.1. The field observations reveal that there is a 7.15% and 10.68% improvement on the southbound and northbound direction respectively. That equates 2.8 mph and 3.2 mph increase in the southbound and northbound respectively.

(2) Randall Rd between Main and Orchard, Batavia, Kane, IL

Table 3.3: Average Traffic Speed on Randall Rd: Before versus After

Study Corridor: Randall between Main and Orchard				
	Before		After	
Summary	SB	NB	SB	NB
Corridor length (miles)	2.78	2.78	2.51	2.51
Average run time (sec)	288	258	246	261
Average speed (mph)	34.8	38.8	36.8	34.6
Average speed improvement			5.81%	-10.83%

Again the average speeds in Table 3.3 represent the average through traffic traveling speed on Randall Street in both the southbound and northbound directions between Main Street and Orchard Street over a number of repeated field measurements during the morning and/or evening peak hours on the data collection dates. The field observations reveal that while there is a 5.81% improvement in speed (representing a 2 mph increase) on the southbound direction the northbound direction suffers a speed reduction of almost 11%, i.e., a 4.2 mph decrease in speed. However, these observations are based on an uneven mix of AM and PM data, so are not less comparable.

CHAPTER 4: CONCLUSIONS

A total of 18 bicycle and pedestrian facilities and two signal interconnect projects were analyzed using a before and after evaluation design and field-measured observations, to determine the level of expected outcomes from CMAQ investments.

The analysis of the non-motorized projects showed a wide range of usage levels in the different sites and that substitution of motorized modes resulted (from Single Occupant Vehicles to bicycle and pedestrian modes), potentially leading to improved air quality outcomes. Respondents reported using the facilities for a wide variety of purposes including recreation, commuting and other purposes.

The propensity for previously exclusive car users for a trip type to switch to using a non-motorized facility for a particular trip purpose has a highly significant negative correlation with bicycle facilities, and the population density and the percent of population with no cars in surrounding census tracts, while the distance from city center (intersection of State and Madison Streets in the City of Chicago) has a highly significant positive correlation. The propensity has a significant positive correlation with the Average Daily Traffic in highway links in surrounding census tracts and is significantly positively correlated with the percent of population who speak limited or no English in surrounding areas. Finally, the ability to connect directly to a transit station has a weaker level of significant positive correlation and the recreational usage levels has a weaker level of negative correlation with the propensity to switch from being exclusively an SOV user for the trip purpose.

Our analysis found that depending on the location and overall sociodemographic, transportation and other characteristics of the surrounding areas, there are likely to be at least four groupings of CMAQ-funded projects that exhibit various combinations propensity to switch and overall use levels. These groupings are formed by different mixtures of the above factors and obtained through a cluster analysis. These are:

(1) Cluster A: Long-Distance Transit-Based Commuting Facilities: Facilities that lead to the highest levels of switching in from solo car use and with greatly lower levels of usage on an hourly volume basis are located in extremely low-density areas that are farthest away from the center of the City of Chicago; these facilities connect a large share of users to public transportation thereby increasing the ability of users to use the facility for part of their commuting trip.

(2) Cluster B: Recreational Facilities for Discretionary Usage: Facilities that lead to high levels of switching from solo car use but with fairly low levels of total usage tend to be also located far away from the city center and have high levels of Annual Average Daily Traffic, with large share of young users who primarily tend to use the facilities for recreational purposes.

(3) Cluster C: Non-motorized Commuting Facilities in Extremely High Density Areas: Facilities with high volumes of non-motorized commuters who are able to make door-to-door commuting connectivity using the facilities in very high density areas that are located close to the center of the city but with a low proportion of users of all ages who switched from motorized modes prior to using the CMAQ-funded facility.

(4) Cluster D: Non-motorized Commuting and Mixed Use Facilities in High Density Areas close to downtown Chicago, which may have the lowest proportion of users who switched from motorized modes prior to using the CMAQ-funded facility but with high levels of use by large proportions of

young users for a wide variety of purposes including commuting, running errands and for recreational purposes.

Although data on 4 intersection improvement and 4 signal interconnect projects were collected for the "before" period of a before-and-after evaluation of traffic outcomes, only two signal interconnect projects were completed within the timeline of the project. The field observations reveal that there is a 7.15% and 10.68% improvement on the southbound and northbound direction respectively in one of the signal interconnect sites, which equates to a 2.8 mph and 3.2 mph increase in the southbound and northbound respectively. Field observations in the other location revealed that while there is a 5.81% improvement in speed (representing a 2mph increase) on the southbound direction, the northbound direction suffered a speed reduction of almost 11%, i.e., a 4.2 mph decrease in speed. Due to the extremely small sample size of completed before-and-after cases, we do not consider the results of the roadway project analysis to be conclusive or generalizable in any way.

REFERENCES

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2) Federal Highway Administration (2006). *The Congestion Mitigation and Air Quality (CMAQ) Improvement Program under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. Interim Guidance.* Oct 31, 2006. Accessed from http://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/cmaq06gd.pdf on Nov 15, 2011.
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APPENDIX A: BICYCLE AND PEDESTRIAN SURVEY INSTRUMENT

SRL CASEID #_____
DATE _____
INTERVIEWER #_____

SURVEY OF BICYCLE AND PEDESTRIAN PATH USERS

1. What are the reasons you use this path?
   (CHECK ALL THAT APPLY)
   - 1 ☐ Commute to work (including part of commute to work)
   - 2 ☐ Errands/personal business (such as shopping, banking)
   - 3 ☐ Recreation
   - 4 ☐ Other → _____

2. Why did you choose to use this path today?
   (CHECK ALL THAT APPLY)
   - 1 ☐ Convenience (includes directness of route or other routes are less desirable)
   - 2 ☐ Recreation/Exercise
   - 3 ☐ Environment
   - 4 ☐ No other way to make this trip
   - 5 ☐ Less costly alternative
   - 6 ☐ Other → _____

3. How else could you have made this trip?
   (CHECK ALL THAT APPLY)
   - 1 ☐ Private car
   - 2 ☐ Shared car ride
   - 3 ☐ Public transit (bus, vanpool, train)
   - 4 ☐ Walked or biked elsewhere
   - 5 ☐ Would not have made this trip
   - 6 ☐ Other

Path Location: _____

Circle one: Biking Walking

Time: _____

Gender: Male Female

Direction of Travel

Circle one: North East South West

4. How many times per week do you typically use this path during the summer, winter and the fall and spring months? For example, a full-time worker who works 5 days a week would typically make 10 one-way trips to and from their workplace using this path.

During the summer months? (June, July, August)	During the winter months? (Dec., Jan., Feb.)	During the spring and fall months? (March, April, May / Sept., Oct., Nov.)
_____ one-way trips per week	_____ one-way trips per week	_____ one-way trips per week
If less than once per week → Please specify the approximate number of trips per summer month on this path. _____	If less than once per week → Please specify the approximate number of trips per winter month on this path. _____	If less than once per week → Please specify the approximate number of trips per spring and fall month on this path. _____

(Please turn over)

5a. Do you always use this path for your trips for the purpose indicated in Question 1 above?

☐ Yes (Please go to Question 6) ☐ No

5b. What are the reasons for not using this path for all of your trips for the purpose indicated in Question 1 above? (CHECK ALL THAT APPLY)

1 ☐ Need car
2 ☐ Weather conditions
3 ☐ Personal safety
4 ☐ Family reasons (drop off/pick up partner, children)
5 ☐ Other (please specify)_____

6. As a result of using this path, are you able to:

a. Access your final destination directly?..... ☐ Yes ☐ No
b. Access public transportation, which then takes you to your final destination? ..... ☐ Yes ☐ No
c. Access your final destination by car from a convenient parking place close by? .... ☐ Yes ☐ No

6d. How much time do you typically spend on this path for this trip? ___ minutes

6e. How long is your overall (door-to-door) trip? This will include time off of this path. _____minutes

6f. In what month/year did you first begin using this path?___/_____ Month / Year

7. Before you began using this path for this type of trip (such as work or shopping), what type of transportation did you use? (CHECK ALL THAT APPLY)

1 ☐ Car
2 ☐ Public Transit
3 ☐ Bicycle
4 ☐ Walk
5 ☐ Other → (if carpool or vanpool, typically with how many other people)_____
6 ☐ Didn't make this type of trip (Please go to Question 9)

8. When you previously made this trip …

a. What was the distance to your final travel destination? _____ miles
b. How much time did it take to travel to your destination? ____ hours and ____ minutes
c. How many times per week did you make this trip to your destination? _____ per week
d. How many times per week did you make this trip to your destination during each of the following seasons?

_____ times per week during the summer months;
_____ times per week during the winter months; and
_____ times per week during the spring and fall months

9. What year were you born? _____

10. GENDER: 1 ☐ Male 2 ☐ Female

11. Number of adults 18 years of age or older in household (including yourself)? _____ # adults

12. Number of children under 18 in household? ..... _____ # children

13. How many vehicles are available for use in your household?..... _____ # vehicles

14. What is the closest major street intersection to your home? _____

15. What is the closest major street intersection where you leave the path? _____

16. What is the closest major street intersection to your final destination?

_____

APPENDIX B: ENUMERATION FORM

ENUMERATING FORM

DATE:
SHIFT: AM / PM
LOCATION: _____
INTERVIEWERS: _____

	Time	Gender	Race	Direction of Travel	Trail Use	Approximate Age	Outcome
	Military Time	Male / Female	White / Black / Other	North / East / South / West	Walk / Bike	17 or less / 18 to 25 / 26 to 35 / 36 to 45 / 46 to 55 / 56 to 65 / 65 +	Complete / Refusal / Not Asked
1		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
2		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
3		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
4		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
5		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
6		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
7		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
8		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
9		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
10		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
11		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
12		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
13		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
14		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐
15		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	C☐ R☐ NA☐

APPENDIX C: REFUSAL FORM

REFUSAL FORM

DATE:
SHIFT: AM / PM
LOCATION: _____
INTERVIEWERS: _____

	Time	Gender	Race	Direction of Travel	Trail Use	Approximate Age	Notes
	Military Time	Male / Female	White / Black / Other	North / East / South / West	Walk / Bike	17 or less / 18 to 25 / 26 to 35 / 36 to 45 / 46 to 55 / 56 to 65 / 65 +	Fill in if needed
1		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
2		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
3		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
4		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
5		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
6		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
7		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
8		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
9		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
10		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
11		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
12		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
13		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
14		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	
15		M☐ F☐	W☐ B☐ O☐	N☐ E☐ S☐ W☐	W☐ B☐	17☐ 18☐ 26☐ 36☐ 46☐ 56☐ 65☐	

APPENDIX D: TRAFFIC ANALYSIS

D.1 INTERSECTION LEVEL-OF-SERVICE (LOS)

Intersection LOS was estimated individually by using the Highway Capacity Software (HCS) 2000. Table D.1 summarizes the two signal interconnect projects that have the complete "before" and 'after" information, i.e., Naperville Rd between Danada and Longfellow and Randall Rd between Main Street and Orchard Street. Detailed HCS input and output files for these two intersections can be found in Appendix D. The Appendix also includes the detailed HCS inputs and outputs for the "before" analysis of the other "before" projects that were not chosen for the "after" study.

It must be pointed out that the following "before" and "after" LOS analyses used the same signal timing and phasing configuration due to the fact that the signal interconnect improvement plans were not available to us at the point when this report was written – it will require considerable amount of effort to obtain the information. Therefore, in this analysis we applied a presumably worse scenario for the "after" condition (i.e., without the improved signal configuration) under the assumption that the improved signal interconnect would make the LOS better than in the "before" condition. So the expected "after" LOS should be similar to the "before" LOS. Table 3.4 confirms that expectation. In fact, the slight worse LOS at some of the intersections on Naperville Rd in the "after" condition provides an argument for needing a signal interconnect improvement. Nonetheless, all intersections seem to be operating at the LOS no worse than D in the current condition.

Table D.1: Completed signal interconnect project LOS: Before and After

			Before		After	
Intersection	**Street**	**Approach**	**Approach LOS**	**Intersection LOS**	**Approach LOS**	**Intersection LOS**
Naperville and Danada	Naperville	SB	C	C	D	D
		NB	C		C	
	Danada	WB	D		D	
		EB	D		D	
Naperville and Elm	Naperville	SB	A	A	A	B
		NB	A		A	
	Elm	WB	D		C	
		EB	C		C	
Naperville and Farnham	Naperville	SB	B	C	B	B
		NB	B		B	
	Farnham	WB	D		C	
		EB	D		C	
Naperville and Longfellow	Naperville	NB	B	B	C	C
		SB	B		C	
	Longfellow	WB	C		C	
		EB	C		C	
Randall and Main	Randall	SB	D	E	E	D
		NB	E		D	
	Main	WB	D		D	
		EB	F		D	
Randall and Orchard	Randall	SB	C	D	C	D
		NB	C		C	
	Orchard	WB	E		E	
		EB	E		D	