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 Meeting

Annotated Agenda
Thursday February 9, 2012
2:00 p.m.
Lake County Conference Room
CMAP Offices

1.0 Call to Order and Introductions 2:00 p.m.
Ross Patronsky, Committee Chair

2.0 Agenda Changes and Announcements

3.0 Approval of November 4, 2011 Minutes
ACTION REQUESTED: Approval

4.0 Project Changes

4.1 Evanston – Sheridan Rd from Central St. to Chicago Ave (TIP ID 02-08-0005): the sponsor is requesting a scope and cost change. Staff recommends approval.

4.2 Hillside – Butterfield Rd from Wolf Rd to Mannheim Rd (TIP ID 04-12-0002): the sponsor is requesting a scope and cost change. Staff requests consideration.

4.3 Bedford Park – BRC Clearing, Yard Switcher Retrofit (TIP ID 06-09-0004): the sponsor is requesting a scope change and cost increase. Staff recommends approval.

4.4 University Park – University Parkway bike Facility and Intersection Improvement at Governors Highway (TIP ID 07-96-0003): the sponsor is requesting a cost increase. Staff requests consideration.

4.5 Berkeley – Union Pacific Proviso Railyard Switcher Engine Retrofit (TIP ID 04-09-0002): the sponsor is requesting a scope change and cost increase to purchase 14 more ultra-low-emitting GenSet switch locomotives at their Dolton facility. Staff requests consideration.

4.6 DuPage County DOT-75th St at Cass Ave and Plainfield Rd (TIP ID 08-09-0016): the sponsor is requesting to move funding from Construction to Engineering II. Staff undertook this as an administrative modification.

4.7 RTA – Chicagoland Commute Options (TIP ID 13-12-0004): the sponsor is requesting all funding be moved into 2012. Staff undertook this as an administrative modification.

4.8 DuPage County DOT – Thorndale Ave from I-290 Entrance Ramp to Park Blvd (TIP ID 08-07-0003): the sponsor is requesting removal from the program. Staff undertook this as an administrative modification.

4.9 Arlington Heights – Buffalo Creek Bike Path Extension – Intersection of Wilke at Lake Cook Road (TIP ID 03-08-0003): the sponsor is requesting removal from the program. Staff undertook this as an administrative modification.

4.10 Elgin – Elgin-IL58/Summit Street at IL25/Dundee Road (TIP ID 09-00-0021): the sponsor is withdrawing the project. Staff undertook this as an administrative modification.

4.11 Grayslake – Lake St from Washington St to Belvidere Rd (TIP ID 10-12-0001): the sponsor is requesting to transfer sponsorship to Lake County DOT. Lake County DOT accepts sponsorship. Staff undertook this as an administrative modification.

4.12 CTA - Retrofit of Electronic Engine Cooling Fan/System (TIP ID 16-12-0001): the sponsor is requesting to move all funding into 2012. Staff completed the request as an administrative modification.

4.13 CTA – Purchase a ZF TopoDyn Program (TIP ID 16-12-0002): the sponsor is requesting to move funding into 2012. Staff completed the request as an administrative modification.

5.0 Transit Status Quarterly Report Update

Staff has completed the analysis of the quarterly status transit expenditure update. An update will be given.
ACTION REQUESTED: Discussion

6.0 GO TO 2040 Focused Programming Approach Lessons Learned

Staff has begun preparing a document highlighting lessons learned during the CMAQ 2012-2016 Improvement Program. Comments have been solicited from interested parties.
ACTION REQUESTED: Information and Discussion

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 CMAQ Active Program Management Policies

Active program management policies will be discussed.
ACTION REQUESTED: Information and Discussion

9.0 Other Business

10.0 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.

11.0 Next Meeting

The committee meets next on March 15, 2012

12.0 Adjournment

CMAQ Project Selection Committee Members:

____Ross Patronsky, Chair	____Luann Hamilton	____ Jeff Schielke
____Martin Buehler	____ Mark Pitstick	
____Bruce Carmitchel	____ Mike Rogers	

Agenda Item No. 3.0

Chicago Metropolitan Agency for Planning

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CMAQ Project Selection Committee

Draft Minutes

Friday, November 4, 2011

Offices of the Chicago Metropolitan Agency for Planning
Cook County Conference Room
233 S. Wacker Drive, Suite 800
Chicago, Illinois 60606

Committee Members Present:	Ross Patronsky, Chair (CMAP), Marty Buehler (counties), Larry Keller (Council of Mayors) via teleconference, Mark Pitstick (RTA), Luann Hamilton (City of Chicago), Mike Rogers (IEPA), Susan Stitt (IDOT)
Staff Present:	Patricia Berry, Thomas Gonzales, Don Kopec, Tom Murtha, Holly Ostdick, Russell Pietrowiak
Others Present:	Curt Barrett, Allison Bos, Carlos Campos, Bruce Carmitchel (via phone), Michael Connely, Chalen Daigle (via phone), John Donovan, Jonathon Dosher, Tara Fifer, Staci Hulsberg (via phone), Tatiana Jane, Tam Kutzmark, Vida Morkunas, Kevin O'Malley, Mike Payette, Keith Privett, Eve Pytel, Tom Rickert, Lanny Schmid (via phone), Chris Staron, David Tomzik, Gerry Tumbali, Mike Walczak, Thomas Weaver, Tammy Wierciak (via phone)

1.0 Call to Order

The meeting was called to order at 2:05 p.m.

2.0 Agenda Changes and Announcements

Mr. Patronsky stated that staff had a request of the committee during the other business item.

3.0 Approval of the Minutes-July 21, 2011

On a motion by Ms. Stitt and a second by Mr. Buehler, the draft minutes for the September 15, 2011 meeting were approved.

4.0 October Status Updates

Ms. Ostdick reported that all October status updates were received. She highlighted the memo included in the packet summarizing the responses and reasons for delay. She mentioned that two additional reports were included in the packet. The orange-themed report is projects requesting their first one-time move. The red-themed report is projects that meet the criteria for removal by requesting either a second or third time move. The committee discussed possible actions for projects that meet the criteria for removal consideration. Staff suggested a clear time deadline be enacted. If obligation has not occurred by the deadline, funding is automatically removed, rather than considering reasons for delay. Staff suggested a deadline of the year in which a phase is programmed plus one additional year. The discussion continued and eventually the CMAQ PSC requested staff make recommendations for removal of specific projects at a special meeting to be scheduled. Mr. Buehler made a motion to approve the orange themed one time moves, Ms. Stitt seconded with the addition of delaying action on 13-10-0005 Norfolk Southern Railway Co. Switchyard Diesel Locomotive Retrofit Project. The motion carried.

5.0 Project Changes

5.1 Riverdale - Indiana Harbor Belt Railroad Retrofit (TIP ID 13-10-0002)

The sponsor requested a cost increase of $289,748. On motion by Ms. Hamilton and second by Ms. Stitt the change was approved.

5.2 Algonquin – Edgewood Dr. from Hanson Rd to Main St. (TIP ID 11-09-0062)

The sponsor requested to move funding into 2012. On a motion by Mr. Buehler and second by Mayor Keller the change was approved.

5.3 RTA – Regional Transit Signal Priority Integration Plan, Five Year Implementation: Priority Corridors (TIP ID 13-12-0002)

The sponsor requested moving all funding into 2012. On a motion by Ms. Hamilton and second by Mr. Pitstick the change was approved.

5.4 CDOT – Clark/Division Station Improvement - Red Line (TIP ID 01-96-0008)

The sponsor requested to move all funding into 2012. On a motion by Mayor Keller and second by Mr. Pitstick the change was approved.

5.5 Glen Ellyn - Glen Ellyn Station Commuter Parking (TIP ID 18-99-0566)

The sponsor requested a scope change to reduce the number of spaces from 75 to 55. On a motion by Mayor Keller and second by Mr. Pitstick the change was approved.

5.6 University Park - University Parkway Bike Facility and Intersection Improvement at Governors Highway (TIP ID 07-96-0003)

This project change request was tabled.

5.7 Berkeley - Union Pacific Proviso Railyard Switcher Engine Retrofit (TIP ID 04-09-0002)

The sponsor requested a scope change and cost increase to purchase 14 more ultra-low-emitting GenSet switch locomotives at their Dolton facility. The committee questioned if funds were available for the project. Staff answered that it was anticipated removal of projects would occur in the previous agenda item. On a motion by Mr. Pitstick, seconded by Ms. Stitt, the request was tabled.

5.8 Chicago Public Schools - Chicago Public Schools School Bus Retrofit (TIP ID 01-08-0005)

The sponsor requested to withdraw the project from the CMAQ program. Staff undertook this as an administrative modification.

5.9 DuPage County DOT - Thorndale Ave from I-290 Entrance Ramp to Park Blvd (TIP ID 08-07-0003)

The sponsor requested to extend the limits and change sponsorship with no increase in funds. Staff undertook this as an administrative modification.

5.10 Mundelein - Lake St from Hawthorne Blv to Hickory St (TIP ID 10-06-0064)

The sponsor requested to move funds between phases. Staff undertook this as an administrative modification.

5.11 Carpentersville - IL 31 at Huntley Rd (TIP ID 09-08-0005)

The sponsor requested reallocating funding between phases. Staff undertook this as an administrative modification.

6.0 FY 2012-2016 CMAQ Program

6.1 Multi-year B list Procedures

Mr. Patronsky reported that the Transportation Committee requested the CMAQ PSC consider a procedure for moving MYB projects into the active program. Staff stated that the priority of the CMAQ PSC is to focus on programmed projects and therefore a procedure should not be developed. Staff then distributed a list of common questions regarding the MYB list and staff's response.

1. When is a project "ready" to move into the A list? When Phase I is complete?

When significant progress has been made on the project by the sponsor, they may ask the Project Selection Committee for approval to move subsequent phases into the A list. Projects will be reviewed on a case by case basis and many will have very different circumstances. In the one example we can look to, the sponsor had completed Phase 1 engineering and was willing to move forward on Phase 2 engineering with their own funds, but only if they were assured of construction funding. Their request was brought to the CMAQ PSC Committee and was approved.

2. Does a project on the A list need to drop off before a B list project can move in?

The CMAQ Project Selection Committee hasn't really looked too much at fiscal constraint because of the large unobligated balance and the use of the A list. I don't believe that any projects dropped off when the last B list project was entered in the program.

No, an A List project does not have to come out, but the Committee will ask CMAP staff to assess where a request fits with in the fiscal limits of the program, so the latest status of dropped projects, low bids and approved cost increases will be a factor.

3. Are B list projects accepted at any time during the year when they are ready? Or will the CMAQ Project Selection Committee only accept B list projects at certain times?

At any time the sponsor feels they can demonstrate significant progress, it can be brought forward, subject of course to the Committee's established meeting schedule. For any given CMAQ meeting, the deadline would be the same as the project change deadline.

4. Will B list projects be ranked against other B list projects when trying to move to the A list? Or will this be strictly on air quality rankings or other factors?

No. And not applicable.

5. Can a project sponsor that has a behind schedule A list project move another project off the B list?
No. The committee concurred in staff's recommendation.

6.2 GO TO 2040 Focused Programming Evaluation
Staff reported that they are conducting an evaluation of the GO TO 2040 focused programming approach. Each member provided input. Staff stated that further discussion will occur during the next meeting.

7.0 2012 Meeting Schedule
Committee members concurred with the 2012 meeting schedule.

8.0 Other Business
Staff asked the committee if staff could have the authority to consider requests for moving project funding in out years into the current year. The committee concurred that staff could make that judgment and report on their actions at the next meeting.

9.0 Public Comment
Mr. Curt Barrett representing DMMC requested further clarification on how the project selection process occurred, specifically the determination of which projects were included in the active program and which were included in the MYB list.

Mr. Dosher requested the committee look favorably upon the Union Pacific request for additional ultra-low-emitting GenSet switch locomotives.

10.0 Next Meeting
The committee meets next on February 9, 2012 at 2:00 p.m.

11.0 Adjournment
The meeting adjourned at 4:30 p.m.

Respectfully submitted,

Holly Ostdick
Committee Liaison

2/2/12

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: February 1, 2012

Re: CMAQ Project Change Requests

Twelve projects have been submitted for changes. The net change in the federal CMAQ amount programmed for Federal Fiscal Year 2012 is $15,071,578 total ($12,057,262 federal) when including the Union Pacific request. Without inclusion of the Union Pacific request the net change is -$3,128,423 (-$2,502,738 federal). The sponsors' requests are attached.

For Committee Consideration:

Evanston – Sheridan Rd from Central St. to Chicago Ave (TIP ID 02-08-0005)
The sponsor is requesting a scope change and cost increase. The scope change being requested is to upgrade the traffic signal at Sheridan Rd and Central Ave. The sponsor is also requesting a cost increase of $266,694 total ($213,355 federal). The cost increase is for increased cost associated with bids coming in higher than anticipated and to help cover the cost associated with upgrading the traffic signal. This project is programmed for $843,000 total ($674,000 federal). If the cost increase is granted the project cost would increase to $1,109,194 total ($887,355 federal). A re-ranking was completed with the ranking changing from 8th to 14th among 2010 signal interconnect projects.

Consider approval of the scope change to include the upgrade of the traffic signal and a cost increase of $266,694 ($213,355 federal) for a total project cost of $1,109,194 total ($887,355 federal) for Evanston – Sheridan Rd from Central St. to Chicago Ave (TIP ID 02-08-0005).

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 (ULEL's) at the 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.

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).

Hillside – Butterfield Rd from Wolf Rd to Mannheim Rd (TIP ID 04-12-0002)
The sponsor is requesting a scope change and cost increase. The scope change being requested is to include the purchase of right of way for this project. Phase I engineering has identified right of way that is necessary to complete this project, which is a multi-use pathway. To purchase the right of way the sponsor is also requesting a cost increase of $800,000 total ($640,000 federal). This project is programmed for $565,000 total ($452,000 federal). If the cost increase is granted the project cost would increase to $1,365,000 total ($1,092,000 federal). This project was re-ranked with the ranking remaining unchanged at 2nd among 2012 bicycle facilities projects.

Recommendation to the CMAQ Project Selection Committee:

Consider approving the scope change to include right of way acquisition and the cost increase of $800,000 total ($640,000 federal) for total project cost of $1,365,000 total ($1,092,000 federal) for Hillside – Butterfield Rd from Wolf Rd to Mannheim Rd (TIP ID 04-12-0002).

Bedford Park – BRC Clearing, Yard Switcher Retrofit (TIP ID 06-09-0004)
The sponsor is requesting a scope change and cost increase. The sponsor would like to purchase Tier III (710 ECO) engines from EMD instead of GenSet Locomotives. The sponsor has indicated that the manufacturer is applying now to the US EPA for Tier III Linehaul-certification, with expected approval in April or May of 2012. The sponsor has stated that the technology would provide at least the same benefits to the community in terms of reduced emission and fuel economy, but with significant upside benefits in horsepower, life cycle costs, longevity, commonality with the BRC fleet, and maintenance. Additionally the sponsor is requesting a cost increase in the amount of $1,042,076 total ($678,000 federal, 65/35 split). The project is programmed for $4,305,000 total ($2,798,250 federal, 65/35 split). If the cost increase is granted the project cost would increase to $5,347,076 total ($3,476,250 federal). A re-ranking was completed and the project remained within all funded Diesel Emission Reduction Projects. A comparison between Genset engines and the proposed Tier III engine was also done and is included on the cost analysis sheet.

Recommendation to the CMAQ Project Selection Committee:

Consider approval of the scope change to allow the sponsor to purchase 710 ECO engines instead of Genset engines, and a cost increase of $1,042,076 total ($678,000 federal) for a total project cost of $5,347,076 total ($3,476,250 federal) for Bedford Park – BRC Clearing, Yard Switcher Retrofit (TIP ID 06-09-0004).

University Park - University Parkway Bike Facility and Intersection Improvement at Governors Highway (TIP ID 07-96-0003)
The sponsor is requesting a cost increase in the amount of $1,625,000 ($1,300,000 federal). The cost increase being requested is for the intersection improvement portion of the first phase of this project (University Parkway from Central Ave to Cicero Ave). There are 2 additional phases of this project and the implementation scheduled is still to be determined for those 2 additional phases. This

project has other fund sources in addition to CMAQ that have been increased. This project was programmed in 2000 for $928,750 total ($743,000 federal) and received a cost increase in the amount of $349,250 ($279,800 federal) in 2005. If the cost increase is granted the project cost would increase to $2,903,500 total ($2,322,800 federal). This project was re-ranked and with the project changing from 13th to 20th, dropping below one unfunded project. IDOT has confirmed that this project is scheduled to be let in June, 2012.

Recommendation to the CMAQ Project Selection Committee:

Consider the cost increase of $1,625,000 total ($1,300,000 federal) for total CMAQ cost of $2,903,500 total ($2,322,800 federal) for University Park - University Parkway Bike Facility and Intersection Improvement at Governors Highway (TIP ID 07-96-0003).

Administrative Modifications:

Arlington Heights - Buffalo Creek Bike Path Extension - Intersection of Wilke at Lake Cook Road (TIP ID 03-08-0003)
The sponsor is requesting to withdraw this project. This project was let at which time the bid proposals were double the anticipated cost for the project. This project is programmed for $51,000 total ($38,000 federal). Staff undertook this action as an administrative change.

DuPage County DOT - Thorndale Ave from I-290 Entrance Ramp to Park Blvd (TIP ID 08-07-0003)
The sponsor is requesting to withdraw this project. The sponsor has indicated that other projects are being completed in the area, particularly the Elgin-O'Hare western access project. At this time as improvements associated with this project would likely be removed or altered as other projects are implemented. The project has an unobligated balance of $4,986,790 total ($3,989,432 federal). Staff undertook this action as an administrative change.

DuPage County DOT – 75th St at Cass Ave and Plainfield Rd (TIP ID 08-09-0016)
The sponsor is requesting a scope change and a transfer of funds. The sponsor is requesting to have Phase II engineering included as part of this project for FFY12. ROW and Construction are the only phases that were submitted as part of the original application. The sponsor would now like to also include Phase II engineering as part of the CMAQ funded portion of this project. In addition the sponsor would also like to request a transfer of $550,000 total ($440,000 federal) from construction to Phase II engineering. At this time the sponsor is not seeking a cost increase. This project is programmed for $14,425,000 total ($10,100,000 federal). Staff undertook this action as an administrative change.

Elgin – Summit Street at Dundee Rd (TIP ID 09-00-0021)
The sponsor is requesting to withdraw this project. The sponsor has indicator that they no longer wish to pursue this project. This project is programmed for $1,700,000 total ($1,360,000 federal). Staff undertook this action as an administrative change.

Grayslake – Lake St. from Washington St. to Belvidere Rd (TIP ID 10-12-0001)
The lead agency for this project has changed from the Village of Grayslake to the Lake County Division of Transportation. Staff undertook this action as an administrative change.

RTA – Chicagoland Commute Options (TIP ID 13-12-0004)

The sponsor is requesting to move all funding for this project into Federal Fiscal Year 2012 so that they can obligate this project at one time. Current funding for this project is:

FFY Program Year	Total	CMAQ
2012	$429,704	$343,763
2013	$619,683	$495,746
2014	$20,600	$16,480
2015	$60,281	$48,225
2016	$105,493	$84,394
Total	$1,235,760	$988,608

Staff undertook this action as an administrative change.

CTA - Retrofit of Electronic Engine Cooling Fan/System (TIP ID 16-12-0001)

The sponsor is requesting to move all funding for this project from into Federal Fiscal Year 2012 so that they can obligate this project at one time. Current funding for this project is:

FFY Program Year	Total	CMAQ
2013	$5,000	$4,000
2013	$1,690,000	$1,352,000
2014	$4,030,000	$3,224,000
2015	$2,080,000	$1,664,000
Total	$7,805,000	$6,244,000

Staff undertook this action as an administrative change.

CTA - Purchase a ZF TopoDyn Program (TIP ID 16-12-0002)

The sponsor is requesting to move all funding for this project from into Federal Fiscal Year 2012 so that they can obligate this project at one time. Current funding for this project is:

FFY Program Year	Total	CMAQ
2012	$360,000	$288,000
2013	$312,000	$249,600
2014	$372,000	$297,600
2015	$72,000	$57,600
Total	$1,116,000	$892,800

Staff undertook this action as an administrative change.

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January 25, 2012

Mr. Ross Patronsky
Chair, CMAQ Project Selection Committee
Chicago Metropolitan Agency for Planning
233 South Wacker Drive, Suite 800
Chicago, IL 60606

Dear Mr. Patronsky:

On behalf of the City of Evanston, I am transmitting the below scope and cost increase request for the Sheridan Road Signal interconnect project from Chicago Ave. to Central St. (TIP Number: 02-08-0005).

Evanston currently has $674,000 programmed in CMAQ funds for its signal interconnect and upgrade project. The project was let on January 20 and the low bid amount was $1,239,228. The participating construction items total $972,528 (approved CMAQ scope). Evanston is requesting that the CMAQ Project Selection Committee increase the projects CMAQ funding by $104,022 to reach the 80 percent federal match of $778,022.

In addition, Evanston is requesting a scope increase to include the signal upgrade at Sheridan Rd. and Central Ave. After entering engineering, Evanston found that the signal needed to be upgraded to be included in the interconnect. This scope increase request is for $136,666 (total) and $109,333 (CMAQ). Taking both cost increase requests together, Evanston is requesting an additional $213,355 in CMAQ funding.

Current CMAQ Funds	$674,000
Cost Increase Request (Original Scope)(A)	$104,022
Cost Increase Request (From Scope Increase)(B)	$109,333
Total Cost Increase Request (A+B)	**$213,355**
Total CMAQ Funds Requested	**$887,355**

If you have any questions or need any additional information, please contact me at 847.296.9200. We thank you for your consideration and look forward to a favorable reply.

Sincerely,

Christopher Staron

Christopher Staron, Program Associate for Transportation, NWMC
Planning Liaison, North Shore Council of Mayors

Chicago Metropolitan Agency for Planning

TIP 02-08-0005

TIP ID:

Description: **Sheridan Rd from Central St. to Chicago Ave**

Ranking Computation

	2010 Award	2012 Increase
KilosVOC eliminated	688.2595	688.2595
Cost	$ 898,000	$ 1,239,228
$/Kilo VOC eliminated	$ 1,305	$ 1,801
Rank	8	14

Project Expenses

	Federal Share	Total	Fed %	
2010 Award	$ 674,000	$ 843,000	80.0%	Approved project
2012 Increase	$ 887,355	$ 1,109,194	80.0%	Letter from sponsor
Increase Amount	$ 213,355	$ 266,194		

FY 2010Program

CMAQ ID	Facility to be Improved	$ Per Kg VOC Eliminated	Proposed total
SI09103386	IL 64 from Tyler Rd to 7th Ave	$143	$112,000
SI09103391	Dunham Rd/Kirk Rd from Stearns Rd to IL 56/Butterfield Rd	$387	$1,736,800
SI07103407	Lincoln Highway from Chicago Rd to State St	$485	$408,000
SI08103388	Glen Ellyn Rd from Army Trail Rd to Armitage Ave	$550	$440,000
SI08103387	Geneva Rd from President St to Swift Rd	$606	$484,000
SI09103383	Farnsworth Ave from Molitor/Diehl Rd to E New York St	$665	$1,076,000
SI10103406	Highland Park Interconnect	$1,227	$2,723,000
SI02103385	**Sheridan Rd from Central St to Chicago Ave**	**$1,305**	**$674,000**
SI09103390	IL 25 from New Stearns Rd to Stearns/Dunham Rd	$1,317	$0
SI03103382	Greenwood from Ballard Rd to Dempster St	$1,318	$0
SI10103394	Sheridan Rd from Wadsworth Rd to Grand Ave	$1,339	$0
SI10103392	Cedar Lake Rd from Rollins Rd to S Rosedale Ct	$1,452	$0
SI10103395	Quentin Rd from Old McHenry to Ensell Rd	$1,655	$0
SI10103393	Waukegan Rd from Casimir Pulaski Dr to Norman Dr South	$1,789	$0
	Revised Rank	**$1,801**	
SI09103389	CH 10/Main St from Bliss Rd to Randall Rd	$2,223	$0
SI01103401	79th St from Ashland Ave to US 41/South Shore Dr	$2,523	$0

Village of
Hillside

President
Joseph T. Tamburino

Village Clerk
Patrick F. O'Sullivan

Trustees
Lytton H. Andersen
Carol Bibly
David Delgado
John N. Kramer
Frank J. Lomeli, Sr.
Marvin A. Watson

Village Administrator
Russell F. Wajda

Assistant Village Administrator
Village Treasurer
John T. Flood, Jr.

Village Attorney
Patrick E. Deady

Village Engineer
Hansen Professional Services

December 14, 2011

Chicago Metropolitan Agency for Planning (CMAP)
Attn: Mr. Doug Ferguson
233 South Wacker Drive
Suite 800
Chicago, IL 60606

Re: Village of Hillside
Butterfield Road (IL Route 56) Multi-Use Pathway Project
CMAQ Funding Request

Dear Mr. Ferguson:

The Village of Hillside is requesting funding from the Chicago Metropolitan Agency for Planning (CMAP) through Congestion Mitigation and Air Quality (CMAQ) for right-of-way acquisition on the Butterfield Road Multi-Use Pathway Project.

The Butterfield Road Multi-Use Pathway Project, part of the larger Butterfield Road Reconstruction Project, will realign the current Prairie Path route from the existing on-street section on Warren Avenue in the Village of Hillside. The areas surrounding Warren Avenue continue to be developed with business and industrial expansion. The increased truck and vehicular traffic from these developments have created a potential deterrent for pedestrians and bicyclists trying to utilize the path. The proposed alignment for the Prairie Path will allow for continuous off-street travel through the village.

The proposed pathway will travel from the end of the existing off-street portion, located approx. 600 feet south of the Mannheim Road / Washington Boulevard intersection, north along the east side of Mannheim Road to the intersection. Pedestrians and bicyclists will have protected crossings through the Mannheim Road / Washington Boulevard intersection to reach the continuation of the path along the north side of Washington Boulevard. The preferred design alternative, shown in Exhibit A, illustrates the proposed pathway will continue west along the realigned Butterfield Road, until it meets the existing off-street portion of the Prairie Path at the Butterfield Road / Forest Avenue intersection.

The Village of Hillside is currently funding the Phase I portion of the Butterfield Road Project, which includes the study and concept design of the proposed multi-use pathway. The initial Phase I has illustrated that right-of-way acquisitions and easements will be required to accommodate the new pathway in several areas. We have estimated 9,500 square feet of right-of-way acquisition will be required to meet the current design standards for a multi-use pathway. Approximately 10,100 square feet of permanent easements will be necessary to meet the width and clearances needed for this type of pathway.

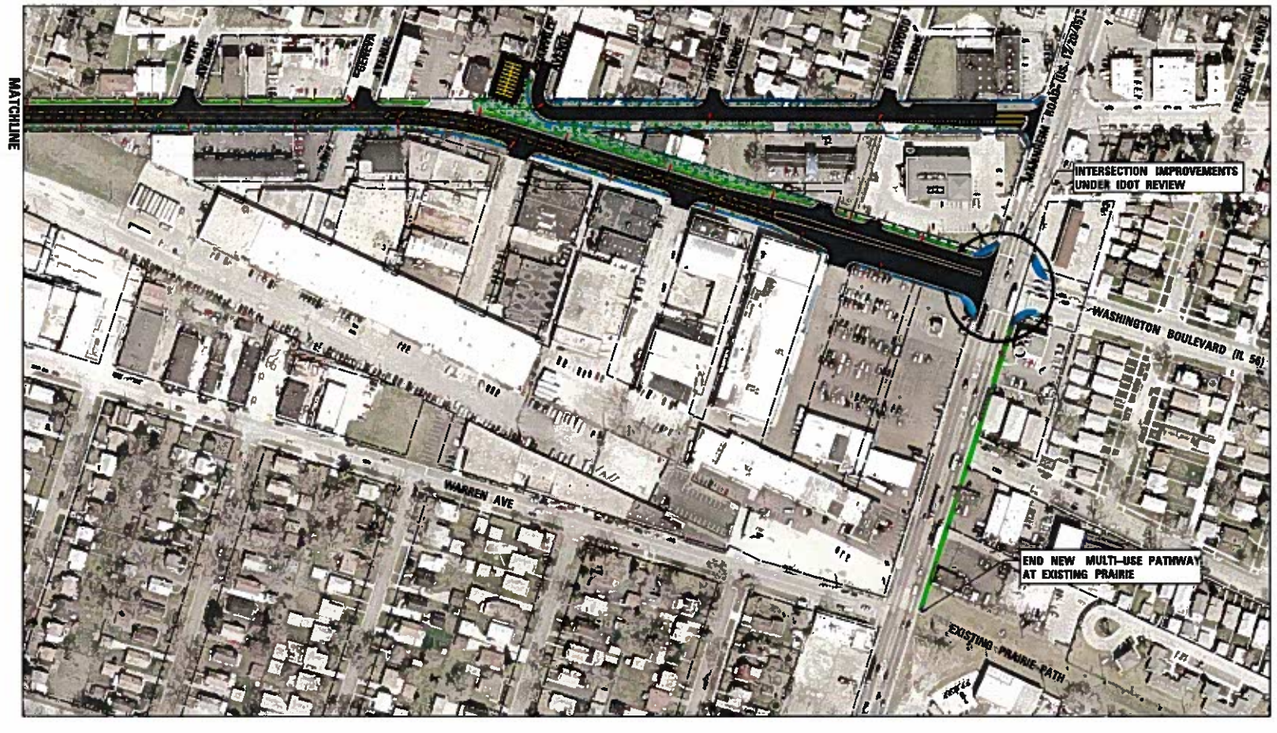
The Village of Hillside is requesting funding aid through CMAP and the CMAQ program for the right-of-way acquisitions and easements on this project. These costs are estimated to be $800,000. Engineering and property acquisition assistance fees are not included in these costs as they are currently being funded through other sources. We anticipate the right-of-way acquisition to commence in fall of 2012. The proposed project will provide continuous off-street travel through the Village of Hillside, to the surrounding Villages of Bellwood and Berkeley. The new alignment will promote safe travel for pedestrians and bicyclists utilizing the existing Prairie Path.

The Village of Hillside appreciates the agency's consideration of this request for funding. If you have any questions or require further information, please call me at 708-202-4330.

Sincerely,
Village of Hillside

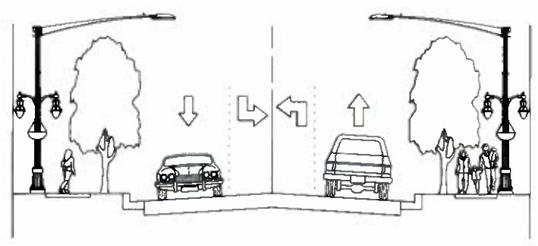
Russell F. Wajda
Village Administrator

Enclosure
cc: Hanson

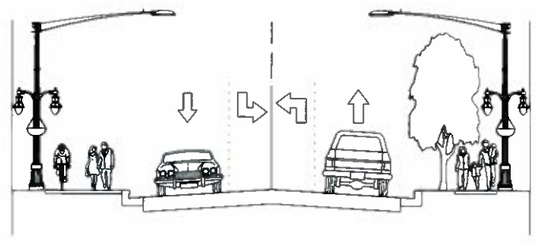


LEGEND

- PROPOSED PAVEMENT
- PROPOSED CURB & GUTTER
- PROPOSED SIDEWALK
- PROPOSED MULTI-USE PATHWAY
- PROPOSED ORNAMENTAL LIGHT
- PROPOSED TREE
- PROPOSED TRAFFIC SIGNAL UPGRADE



PROPOSED TYPICAL SECTION
WOLF ROAD TO N. FOREST
(LOOKING EAST)



PROPOSED TYPICAL SECTION WITH MULTI-USE PATHWAY
N. FOREST TO MANNHEIM
(LOOKING EAST)

EXHIBIT A - DESIGN ALTERNATIVE 1

FILE NAME = I:\10Jobs\10L0169\CADD\Road\Sheet\C-3 Lane Butterfield.dgn	USER NAME = Peter01040	DESIGNED - DWP	REVISED -
		DRAWN - DWP	REVISED -
	PLOT SCALE = 300.0000 ' / in.	CHECKED - XXX	REVISED -
	PLOT DATE = 12\14\2011	DATE - 04/08/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF HILLSIDE
BUTTERFIELD ROAD RECONSTRUCTION PROJECT

SCALE: AS SHOWN | SHEET NO. 01 OF 01 SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-00047-00-FP	COOK	1	1
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

Chicago Metropolitan Agency for Planning

CMAQ Cost Increase Analysis

TIP ID: **04-12-0002**

Description: **Butterfield Rd from Wolf Rd to Mannheim Rd**

Ranking Computation

	2012 Award	2012 Increase
Kilos VOC eliminated	5,340.2847	5,340.2847
Cost	$ 1,130,000	$ 1,930,000
$/Kilo VOC eliminated	$ 212	$ 361
Rank		

Project Expenses

	Federal Share	Total	Fed %	Basis
2012 Award	$ 452,000	$ 565,000	80.0%	Approved project
2012 Increase	$ 1,092,000	$ 1,365,000	80.0%	Letter from Sponsor
Increase Amount	$ 640,000	$ 800,000		

FY 2012CMAQ Program

CMAQ ID	Sponsor	Facility to be Improved	$ Per Kg VOC Eliminated	Proposed total
BP11123538	Crystal Lake	Crystal Lake Bikeway Corridor Improvements	$173	$60,468
BP04123676	**Hillside**	**Butterfield Rd from Wolf Rd to Mannheim Rd**	**$212**	**$452,000**
		Revised rank	**$361**	**$1,365,000**
BP02123659	Skokie	Skokie Valley Trail from Oakton St to Village Limits	$564	$544,000
BP12123619	Frankfort	St. Francis Rd Multi-Use Trail	$564	$142,000
BP01123688	CDOT	Streets for Cycling/Bike 2015 Plan Implementation - 2014-2016 Series	$692	$32,000,000
BP08123631	Lombard	Great Western Trail Lighting from West end of Village limits at I-355 to East end of Village limits on 3rd Street where Lombard abuts Villa Park	$719	$0
BP04123678	Northlake	Northwest Av from Grand Av to North Av	$738	$744,000
BP04123826	Oak Park	Madison St from Home Av to Lombard Av	$806	$456,000
BP03123624	Mount Prospect	Golf Rd Alt. 3 Regional Bike Route	$916	$292,000
BP12123556	Homer Glen	Homer Glen Community Trail - South Extension	$1,166	$422,000
BP06123600	Bridgeview	Bridgeview Community Multi-Use Path	$1,287	$0
BP10123654	Lake Forest	Robert McClory Bike Trail from Woodland Rd/Western Av to Illinois Rd/McKinley Av	$1,290	$0
BP03123551	Arlington Heights	Kensington Rd from Evanston Av to Forest Av	$1,299	$0
BP03123728	Prospect Heights Park District	Prospect Heights Connectivity Bike Plan - Segment 1	$1,648	$0
BP03123557	Hoffman Estates	Harmon Blv/Huntington Blv Corridor Bicycle Project	$1,720	$0
BP01123641	CDOT	North Branch Riverwalk - Addison Underbridge Connection	$1,835	$0
BP03123548	Des Plaines	Ballard Rd from Bender Rd to Good Av	$1,878	$426,000
BP02123725	Lincolnwood	Touhy Avenue Overpass (Skokie Valley Bike Trail)	$2,266	$1,432,000
BP02123652	Skokie	Old Orchard Rd from Skokie Blv to Gross Point Rd	$2,446	$461,000
BP01123518	Forest Preserve District of Cook County	North Branch Bike Trail Extension (East Segment)	$2,481	$3,402,000
BP10123672	Lake County DOT	Deerfield Rd/CH A47 from Milwaukee Av to Des Plaines River	$2,783	$0
BP12123634	Forest Preserve District of Will County	DuPage River Trail - Segment 5	$3,004	$1,372,000
BP09123711	Oswego	Mill Rd Multi-use Path	$3,105	$230,400
BP06123456	Oak Lawn	Stony Creek Bike Trail - Stage 3 from 103rd St / Mansfield Av to 107th St / Richards High School	$3,134	$0

FY 2012CMAQ Program

CMAQ ID	Sponsor	Facility to be Improved	$ Per Kg VOC Eliminated	Proposed total
BP01123640	CDOT	Weber Spur Trail UPRRfrom Devon/Springfield to Elston/Kimberly	$3,225	$0
BP10123691	Highland Park	Western Av at Fort Sheridan Metra Station Bike/Ped Improvements	$3,240	$0
BP06123627	Alsip Park District	Cal-Sag Trail (West) Project - Alsip/Palos Park Segment	$3,510	$326,000
BP06123532	Palos Heights	Cal Sag Greenway Trail West from Southwest Hwy/IL83 to IL83/South Ridgeland Av	$3,536	$181,000
BP06123571	Blue Island	Cal-Sag Trail East Segment (Blue Island)	$3,821	$0
BP03123730	Rolling Meadows	Salt Creek Bike Path Extension from Kirchoff Rd to Martin Ln	$3,848	$0
BP03123731	Rolling Meadows	Quentin Rd from Silentbrook Ln to Hartung Rd	$4,268	$0
BP03123735	Streamwood	IL 19/Irving Park Rd from Schaumburg Rd to Park Blvd	$4,310	$0
BP10123671	Highland Park	US 41/Skokie Valley Rd Pedestrian Overpass	$4,339	$0
BP08123633	DuPage Forest Preserve District	Winfield Mounds Segment - West Branch Regional Trail	$4,341	$0
BP07123651	Tinley Park	Oak Park Av Complete Streets	$4,805	$0
BP02123658	Glenview	Harlem Av from Glenview Rd to Golf Rd	$5,184	$0
BP02123698	Wilmette	Skokie Valley Trail from Lake Cook Rd to Old Orchard Rd	$5,237	$0
BP03123561	Des Plaines	US 12/Rand Rd Sidepath-Golf Rd to Elk Blvd	$5,250	$0
BP10123748	Buffalo Grove	Weiland Rd/Prairie Rd from IL 22 to Lake Cook Rd	$5,326	$0
BP03123555	Hoffman Estates	Shoe Factory Road / I 90 Bicycle and Pedestrian Project,	$5,706	$0
BP12123622	Frankfort	Sauk Trail Rd Bike Path	$5,844	$0
BP10123833	Lindenhurst Park District	Grass Lake Rd Underpass	$5,963	$0
BP11123534	Algonquin	Edgewood Dr from Hanson Rd to Main St	$6,048	$554,000
BP07123666	Burnham	Burnham Greenway Trail from State St to Brainard and Burnham	$6,236	$3,161,600
BP10123840	Lake County DOT	Quentin Rd from Main St to White Pine Rd	$6,657	$0
BP10123836	Lake County DOT	Deerfield Rd from Thornmeadow Rd to Saunders Rd	$6,831	$0
BP05123680	Riverside	Bike-Ped Bridge over 1st Av at Forest Av	$6,965	$0
BP08123632	DuPage Forest Preserve District	Mallard Lake Segment - North Central DuPage Regional Trail	$7,043	$0
BP01123637	CDOT	Bloomingdale Trail	$7,193	$36,540,000
BP10123835	Lake County DOT	Rollins Rd from Hainesville Rd to Hook Dr	$7,528	$0
BP12123552	Frankfort	Harlem Av Trail from Old Plank Rd Trail to Laraway Rd	$8,116	$0
BP03123695	Elk Grove Village	Overpass at IL Route 72 (Higgins Road) in Busse WoodsIL72/Higgins Road Overpass in Busse Woods	$8,180	$0
BP02123684	Glenview	IL 21/Milwaukee Av Multi-Use Path	$8,320	$0

FY 2012CMAQ Program

CMAQ ID	Sponsor	Facility to be Improved	$ Per Kg VOC Eliminated	Proposed total
BP12123650	Lockport	151st St from Archer Av to Farrell Rd	$8,543	$0
BP02123662	Glenview	Waukegan Rd from S of Glenview Rd to Chestnut Av	$8,662	$0
BP05123686	Countryside	Brainard Av Bike Path from Joliet Rd to 55th St	$8,831	$0
BP01123644	CDOT	Lawrence Avenue Bike Lane/Road Diet	$9,204	$0
BP09123625	North Aurora	Orchard Rd Multi-use Path	$9,762	$0
BP09123693	Elgin	Otter Creek Bike Bridge	$10,930	$0
BP03123732	Rolling Meadows	IL 58/Golf Rd Bike Path Extension from IL 53 to Busse woods Forest Preserve Trail	$11,101	$0
BP12123647	Manhattan	US 52 & Smith Rd Multi-Use Trail	$11,344	$0
BP03123562	Schaumburg	Martingale Road Bikeway	$11,480	$0
BP12123615	Frankfort	Bike Path along north side of Sauk Trail from 80thAv east to Harlem Av	$11,893	$0
BP08123638	DuPage County DOT	Gary Av Trail from Lies Rd to Great Western Trail	$12,233	$0
BP06123445	Oak Lawn	Stony Creek Bike Trail - Stage 2, from 101st St/Meade Av to 103rd St/Austin Av	$12,286	$0
BP12123541	Frankfort	Charrington Park Nature Trail from Pfeifer Road Trail to Old Plank Trail	$12,860	$0
BP03123618	Mount Prospect	Kensington Rd Shared Use Path from US12/Rand Rd to Burning Bush Ln	$12,994	$0
BP12123547	Frankfort	LaGrange Rd from Lincoln Hwy to Old Plank Rd Trail	$13,050	$0
BP06123482	Forest Preserve District of Cook County	Cal-Sag Trail - West Segment (FPDCC Leg)	$13,809	$0
BP06123736	Lemont	Lemont Rd and Bluff Rd from Waterfall Glen Bike Path to the Des Plaines River Bridge	$14,252	$0
BP12123649	Lockport	Division St and Gougar Rd Bicycle Facility	$14,703	$0
BP09123827	Kane County DOT	Randall Rd from Stearns/McDonald Rd to Silver Glen Rd	$14,854	$0
BP08123442	Naperville	N Aurora Rd Multi-use Path from Pennsbury Ln to Weston Ridge Dr	$14,940	$0
BP09123694	Batavia	Fabyan Parkway/CH 8 from Bent Tree Dr to Western Av	$15,169	$0
BP06123467	Oak Lawn	St Casimir Bike Trail	$15,378	$0
BP03123563	Schaumburg	Higgins and Roselle Rds Corridor Bikeways	$16,215	$0
BP09123700	Sugar Grove	Blackberry Creek Shared-Use Path Bridge from Virgil Gilman Trail to Belle Vue Ln	$17,259	$0
BP01123645	CDOT	71st Street Bike Lane/Road Diet	$18,445	$0
BP01123825	CDOT	Lakefront Trail-Navy Pier Flyover	$18,754	$11,328,000
BP03123617	Mount Prospect	New Bicycle/Pedestrian Bridge across US 14 (Northwest Hwy) and UPRR tracks	$18,784	$0
BP12123623	Frankfort	Laraway Rd Multi-Use Trail	$19,050	$0
BP09123830	Kane County DOT	Huntley Rd from Sleepy Hollow Rd to Tartan Dr Bike Path	$20,135	$0
BP09123721	Yorkville	US Route 34 Shared-Use Trail	$20,694	$0
BP02123702	Lincolnwood	Union Pacific Bike Path from Touhy Av to Devon Av	$20,981	$688,000

FY 2012CMAQ Program

CMAQ ID	Sponsor	Facility to be Improved	$ Per Kg VOC Eliminated	Proposed total
BP09123723	Elgin	McLean Boulevard Bikeway from Spartan Dr to Bowes Rd	$24,931	$0
BP10123724	Long Grove	Old McHenry Rd Multi-Use Path from IL 22 to N of Robert Parker Coffin Rd	$25,948	$0
BP09123699	Elgin	Sherman Hospital Metra Bicycle Connector - Randall Rd/CH 34 and Big Timber Rd/CH 21	$26,239	$0
BP11123535	Lakewood	Lakewood Rd Bicycle Facility	$26,325	$0
BP12123553	Frankfort	Charrington Park Nature Trail North from Pfeiffer Rd Trail to Charrington Drive	$26,745	$0
BP09123715	Elgin	Fox River Bike/Pedestrian Bridge	$27,658	$0
BP09123828	Kane County DOT	Bowes Rd from Del Webb Blv to McLean Blv	$34,100	$0
BP08123443	Woodridge	Illinois Route 53 Pedestrian Bridge at Prentiss Creek	$34,482	$0
BP11123537	Algonquin	Randall Rd Pedestrian Crossing from Golden Eagle Dr to Stonegate Rd	$37,721	$3,160,000
BP12123604	Frankfort	88th Ave Bike Path and Sauk Trail Sidewalk	$40,982	$0
BP12123616	Minooka	McEvilly Rd Multi-Use Path	$43,962	$0
BP09123704	St. Charles	Great Western Trail East Extension	$45,702	$0
BP10123839	Lake County DOT	Buckley Rd from Milwaukee Av to O'Plaine Rd	$67,672	$0
BP09123697	St. Charles	Red Gate Rd Bridge - Bicycle/Pedestrian Bridge	$96,610	$1,920,000
BP10123837	Lake County DOT	US 45 at Miller Rd	$98,239	$0
BP12123539	Channahon	Bridge St Multi-Use Path from 700 ft west of McKinley Woods Road to I & M Bike Path	$98,244	$0
BP01123646	CDOT	43rd St Bicycle-Pedestrian Bridge	$107,709	$0
BP01123643	CDOT	41st St Bicycle-Pedestrian Bridge	$119,372	$0

THE BELT RAILWAY COMPANY OF CHICAGO

6900 SOUTH CENTRAL AVENUE * BEDFORD PARK, ILLINOIS 60638

Timothy E. Coffey
General Counsel, Secretary
& Director of Human Resources

Phone: 708-496-4112
Fax: 708-496-2608
Email: tcoffey@beltrailway.com

January 9, 2012

Via Email: RPatronsky@cmap.illinois.gov
Mr. Ross Patronsky
Chairman, CMAQ Project Selection Committee
Chicago Metropolitan Agency for Planning
233 S. Wacker Dr. Suite 800
Chicago, IL 60606

Re: RE: CMAQ - Belt Ry of Chicago - Bedford Park GenSet project, Job No. C-91-732-10

Dear Mr. Patronsky:

In connection with our teleconference of January 4, 2012, herein is The Belt Railway Company of Chicago's (BRC) formal request to change the manufacturer of the environmentally friendly locomotives approved in the project referenced above. The following is an explanation of BRC's rationale supporting said request.

For fulfilment of the 2011/2012 funding approved by CMAQ for acquisition by BRC of three (3) low emission locomotives, Belt is requesting a substitution of its preferred technology. BRC proposes to achieve the targeted emissions objectives through an EMD 710 ECO 8-cylinder, 2,305 horsepower, single prime mover solution, instead of a 2,100 horsepower, Generator-set, skid-mounted technology involving multiple prime movers on a common frame.

The previously approved CMAQ funding for the subject 2011/2012 purchase cycle is $2,798,000. Among the three manufacturers who bid, EMD, the Original Equipment Manufacturer of the 710 ECO prime mover, has quoted $1,782,585 per unit, inclusive of a 5% contingency. BRC is also requesting a supplement to its authorized funding in the amount of $678,000 to maintain the CMAQ contribution at the previously agreed value of 65% of total purchase price.

In requesting this substitution, Belt believes the 710 ECO design will afford greater benefits for the public funds expended as other low emission technology. Specifically, EMD is applying now to the US EPA for Tier III Linehaul-certification of the 8-cylinder 710 ECO prime mover, with expected approval in April or May, 2012. EMD already has this certification for its 710 ECO 16-cylinder design; this certification level is the same as that certified on the BRC's GenSet locomotives. BRC is requesting a conditional approval based on the prime mover achieving this target certification:

BRC currently fields a 100% EMD OEM-sourced fleet of 22 fuel consuming locomotives. Our maintenance staffs are very familiar with the 710-engine and electrical equipment involved. EMD has produced over 8500 710-series prime movers and well over 10,000 of the AR-10 model main alternators, which our

maintenance forces routinely service and repair for all U.S. Class One carriers on a daily basis. Attached is additional information directly from EMD, regarding the 8-cylinder version of its 710-series of locomotives.

EMD designs, builds and warrants to its end users the entire locomotive. BRC is not only very familiar with these systems, but has a long-established parts and repair relationship with EMD for the entire locomotive. This 'one-source' arrangement is important to post-warranty maintenance of the locomotive, contributes to high levels of availability for service, and reduces BRC's administrative burden. Belt maintenance personnel are also familiar with the operation and diagnostics features of the control system as a part of their ongoing service track operations for our owner line, Class One carrier customers.

From a BRC standpoint, there are some specific details that also bear on our decision to select the 710 ECO single prime mover solution over the GenSet technology.

EMD's low RPM speed design has measured a 19% to 21% fuel savings for the 710 ECO prime mover when compared to units similar to our trade-in units. Lube oil savings are at least on par with the GenSet technology, and is the same material we currently supply to our existing EMD equipment. This level of fuel savings matches our GenSet fuel economy experience when our exclusive use of Remote Control Locomotive (RCL) operations is taken into account. RCL interface with locomotive throttle tends to maximize throttle position at the early stages of acceleration. Early acceleration tends to place more GenSet units on line, burning more fuel. We do not see an increase in fuel consumption with the 710 ECO in BRC train operations, despite the almost ten percent increase in horsepower.

Many of the 710-family prime movers currently in service in the U.S. are approaching twenty (20) years in service. Although Tier III certification would mandate scheduled upgrade and reconditioning of essential components well before that, the underlying prime mover and electrical systems are extremely durable. BRC is more comfortable with the proven long term (20 plus years) life cycle experience of the 710 ECO than with smaller, lighter, higher-speed off-road equipment.

BRC thoroughly evaluated the 710 ECO prior to submitting our first application with CMAQ in 2009, but Tier III was our target then, as now, and engine performance had not yet reached that objective. Now Tier III is within reach. Had the 710 ECO been a Tier III option in 2009, we would have submitted it as our preferred technology at that time.

In summary, The Belt Railway Company of Chicago is requesting your assent to substitute this technology now which provides at least the same benefits to the community in terms of reduced emissions and fuel economy, but with significant upside benefits in horsepower, life cycle costs, longevity, commonality with the BRC fleet and maintenance. This life cycle cost reduction is reflected in the increased unit price, for which we request an increase in matching funds as discussed above. Given BRC's lower track speed (25 mph) train operations and regular maintenance in the same shop each trip, locomotives can have extraordinarily long lives. BRC has a high confidence level that single prime mover technology will last much longer in our application than a GenSet. The longer the equipment remains in service, the more substantial the environmental payoff for the community.

Finally, BRC's extraordinary level of concentrated, high volume terminal operations in Chicago drives demand for high availability, easy to maintain locomotives. BRC's ability to handle the incremental increases in traffic predicted by industry and government literally comes down to pulling the "extra" cars and building the "extra" train. Long-term fuel savings and long-term transportation cost reduction go hand-in-hand at the BRC with accepting additional amounts of rail traffic with no increase in resources. We look to the 710 ECO design as the best combination of the newest, environmentally-friendly technology and a proven, long lasting core design.

Please contact me if you have any questions or desire any additional information

Sincerely,

Timothy E. Coffey

Timothy E. Coffey

Attachment

ELECTRO-MOTIVE

Michael Klabunde
Director – Locomotive Repowers
Electro-Motive Diesel, Inc. / Progress Rail Service Corp.
9301 W. 55th Street
LaGrange, Illinois 60525 USA
Tel: 708 387 6735
mklabunde@progressrail.com

January 10, 2012

Hugh Simon
The Belt Railway Company of Chicago
6900 South Central Avenue
Bedford Park, IL 60638

Subject: EMD 8-710 Engine Emissions Experience & Certifications

Dear: Mr. Simon,

As a follow-up from our discussion last week, I'm pleased to provide you with some additional details on the EMD family of engines. Specifically, we had been focusing on the 8-cylinder version of the 710-series engine family.

EMD's family of diesel engines has traditionally been focused on main-line locomotive applications. The latest engine family is the 710 engine family, and it has been in production since 1986. The dominant version of this engine is the 16-cylinder version of this engine, and it is currently in production at a 4300 hp rating.

Smaller versions of the 710-engine have been used in various applications including locomotives, power generation, and marine applications. EMD has developed 12-cylinder and 8-cylinder versions of this engine, in addition to a 20-cylinder engine. The smaller versions of the engine leverage the massive amounts of research and development expense and also the millions of hours of engine operation experience with durability and reliability. The EMD engines are known in the industry as one of the true, purpose-built locomotive diesel engines.

The locomotive application of the 8-710 engine really started in 1998, with a locomotive repower project of 50+ locomotives in Eastern Europe. These original units were accomplished with non-regulated engines. Since then, emissions development for the 8-710 engine has really followed the developments on the larger, mainline, 16-710 engine. The first 8-710 US EPA certification of the 8-710 in a locomotive was in 2008. This certification was at a Tier 0 and Tier 2 level. A copy of this original certificate is attached – technically this is a Tier 0 certification with a FEL at Tier 2 emissions levels.

The new locomotive regulations require EPA Tier 3 emissions levels beginning in 2012. At EMD, the original Tier 3 efforts have been focused on the mainline locomotive in the 16-cylinder version. The 8-710 and 12-710 version are following, and we expect to have Tier 3 line haul certification of the 8-710 engine in the spring of 2012. The Tier 3 version of the 8-710 engine was simply not available earlier.

The overall response from the railroad industry to the 8-710 and 12-710 engines has been very positive. These engines offer the following:

- Railroad personnel are quite familiar with this engine family, and there is extremely little additional training or new tooling required
- Parts from these engines are common with other production locomotives allowing from better inventory management
- The reliability of the engine is very good and very well demonstrated through the 1,000s of 710-engines in service
- As a purpose-built diesel engine, the durability of the engine in locomotive applications is similarly established and well proven..

Over the past 5 years, there have been over 90 locomotives repowered or upgraded in North America with the 8 and 12 cylinder engines with focus on emissions reductions and life-cycle cost improvements for railroads.

Sincerely,

Mike Klabunde

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2008 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Electro-Motive Diesel, Inc. (U.S. Manufacturer or Importer) **Certificate Number: 8EMDK0710GT2-015**	**Effective Date:** 09/08/2008 **Expiration Date:** 12/31/2008	Karl J. Simon, Director Compliance and Innovative Strategies Division	**Issue Date:** 09/08/2008 **Revision Date:** N/A

Engine Family Name (Remanufacturing Kit): 8EMDK0710GT2

The rebuild kit includes: Engine

Family Emission Limits:

	Switch	Line Haul
NOx FEL	8.1	5.5
PM FEL	0.24	0.20

Vehicle/Engine Category: Locomotive

Locomotive Model Years: 1957 to 2001

Models Covered: (4000THPModels), (4300THPModels), (3000THPModels), (2000THPModels)

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR 92, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the remanufacturing kit which has been found to conform to applicable requirements and which may be utilized with only the following locomotive engines, by engine family, more fully described in the documentation required by 40 CFR 92 and produced in the stated model year.

Parties who install this remanufacturing kit must also ensure that the base engine contains the following parts, more fully described in the Application for Certification for this kit:
N/A

This certificate of conformity is conditional upon compliance of said manufacturer with the provisions of 40 CFR Part 92, Subpart D. Failure to comply with these provisions may render this certificate void *ab initio*.

This certificate of conformity covers only those locomotive remanufacturing kits which conform in all material respects to the design specifications that applied to those kits more fully described in the Application for Certification required by 40 CFR 92 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR 92.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 92.215(d)(1) and 92.504 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR 92. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR 92.

Chicago Metropolitan Agency for Planning

CMAQ Cost Increase Analysis

TIP ID: **06-09-0004**

Description: **Indiana Harbor Belt Railroad Retrofit**

Ranking Computation

	2010 Award	2012 Increase
Kilos VOC eliminated	23,586.800	22,316.7400
Cost	$ 4,305,000	$ 5,347,076
$/Kilo VOC eliminated	$ 183	$ 240
Rank	7	

Project Expenses

	Federal Share	Total	Fed %	Basis
2010 Award	$ 2,798,250	$ 4,305,000	65.0%	Approved project
2012 Increase	$ 3,476,250	$ 5,347,076	65.0%	Letter from Sponsor
Increase Amount	$ 678,000	$ 1,042,076		

	Total VOC Eliminated (tons)	Total NOx Eliminated (tons)	Total PM Eliminated (tons)	Total VOC Eliminated (Kg)	Total NOx Eliminated (Kg)	Total PM Eliminated (Kg)
2010 Program: Genset	**26**	**344.4**	**9.6**	**23,586.80**	**312,434.42**	**8,708.97**
2012 Request Tier III	**24.6**	**286.2**	**11.3**	**22,316.74**	**259,636.27**	**10,251.19**

CMAQ ID	Sponsor	Facility to be Improved	$ Per Kg VOC Eliminated	Proposed Program
DR01103208	CTA	Diesel Particulate Filter Retrofit for CTA Buses	$252	$11,920,000
DR13103219	Cook County Dept of Environmental Control	Cook County DPF Diesel Retrofit	$110	$582,738
DR01103209	IEPA	Retofit of Amtrak Switcher Engines	$131	$1,200,000
DR07103216	Riverdale	CSXT Barr Rail Yard Switch Engine Retrofit	$133	$3,900,000
DR13103211	Franklin Park	Indiana Harbor Belt Railroad Switcher Engine Retrofit	$145	$958,100
DR04103212	Berkeley	Union Pacific Proviso Railyard Switcher Engine Retrofit	$168	$5,200,000
DR13103215	Riverdale	Indiana Harbor Belt Railroad Retrofit	$176	$4,641,000
DR06103213	**Bedford Park**	**BRC Clearing Yard Switcher Retrofit**	**$183**	**$2,798,250**
DR10103218	Lake County	Diesel Retrofit Project	$71	$23,400
DR13103221	IEPA	Norfolk Southern Railway Co Switchyard Diesel Locomotive Retrofit Project	$230	$3,380,000
		Revised Rank ↓	**$240**	
DR03103210	Hoffman Estates	Diesel Fleet Emissions Reduction Project	$413	$221,600
DR13103220	Pace	Diesel Engine Retrofits	$539	$4,680,000
DR13103381	Metra	Installation of GenSets on Two Metra Switch Engines	$857	$2,800,000
DR07103214	Riverdale	Diesel Vehicle Replacement Program	$12,125	$0
DR08103217	Itasca	Public Works Diesel Emissions Reduction Project	$11,482	$0
DR13103222	IDOT	IDOT Maintenance Fleet Air Pollution Reduction Effort	$1,575	$0

Village of
University Park

Vivian E. Covington
MAYOR

Dorothy R. Jones
VILLAGE CLERK

BOARD OF TRUSTEES
Larry B. Brown
Joseph E. Roudez III
Oscar H. Brown, Jr.
Keith J. Griffin
Milton C. Payton
Elizabeth Williams

Devon Dilworth
VILLAGE TREASURER

Lafayette Linear
VILLAGE MANAGER

January 18, 2012

Mr. Bud Fleming
South Suburban Mayors and Managers
1904 W. 174th Street
East Hazel Crest, IL 60429

Re: Revised Request for Increase in Project Funding from **CMAP**
University Parkway Reconstruction – Central Avenue to Crawford Avenue
Village of University Park
Section: 96-00014-00-PV
Tip ID.: 07-96-003

Dear Mr. Fleming:

We are requesting your assistance in requesting additional funding from **CMAP** for the University Parkway Reconstruction Project based on the increase in costs since the initial 1996 cost estimate and regional benefit of the project.

At the suggestion of IDOT, the project is being divided into three sections for construction with section 1 on track for a June letting date followed by construction in early 2012. The current request is for section 1 only and we anticipate requesting assistance for the future sections. The Village will contribute to the funding deficit to complete the section 1 of the project on the proposed schedule.

Please forward this request with the attached summary table to CMAP for an amount of **$1,300,000.**

If you have questions you can contact me at 708-534-6451.

Sincerely,

Lafayette Linear
Village Manager

Enclosure

cc: Chris Dagiantis, Crawford, Murphy & Tilly, Inc.
File

Summary of Costs and Requested Additional Funding
University Parkway Improvements - Cicero Avenue to Central Avenue
January 18, 2012

	As Single Project Central thru Crawford	Section 1 Central thru Cicero Intersection	Section 2 Cicero thru RR	Section 3 East of RR thru Crawford Intersection	Totals based on Construction in 3 Sections
Total Cost					
Construction Cost	$12,000,000	$3,500,000	$5,500,000	$4,500,000	$13,500,000
Right of Way	$150,000	$20,000	$100,000	$30,000	$150,000
Design and Construction Engineering	$2,085,000	$1,500,000	$550,000	$450,000	$2,500,000
Total	**$14,085,000**	**$5,020,000**	**$6,150,000**	**$4,980,000**	**$16,150,000**
Current Funding					
CMAQ	$1,077,800	$359,267	$359,267	$359,267	$1,077,800
STP	$2,925,000	$975,000	$975,000	$975,000	$2,925,000
STP - ROW *	$440,000	$140,000	$160,000	$140,000	$440,000
IDOT	$750,000	-	$750,000	-	$750,000
ICC Grade Crossing Protection Fund	$200,000	-	$200,000		$200,000
Total	**$5,392,800**	**$1,474,267**	**$2,444,267**	**$1,474,267**	**$5,392,800**
Funding Deficit					
Total Cost	$14,085,000	$5,020,000	$6,150,000	$4,980,000	$16,150,000
Total Current Funding (from above)	$5,392,800	$1,474,267	$2,444,267	$1,474,267	$5,392,800
Total Deficit	$8,692,200	$3,545,733	$3,705,733	$3,505,733	$10,757,200
Local Funds					
Village Contribution to Deficit	$3,000,000	$1,000,000	$1,000,000	$1,000,000	$3,000,000
Remaining Deficit					
Total Current Funding - Village Contribution	$5,692,200	$2,545,733	$2,705,733	$2,505,733	$7,757,200
Additional Requested Amount from State and CMAP					
Requested from CMAP (50% of remaining)	$2,846,100	$1,272,867	$1,352,867	$1,252,867	$3,878,600
Requested from STP (50% of remaining)	$2,846,100	$1,272,867	$1,352,867	$1,252,867	$3,878,600
Total Additional Amount Requested	**$5,692,200**	**$2,545,733**	**$2,705,733**	**$2,505,733**	**$7,757,200**

Notes:
1. Section 1 is on track for June 2012 letting.
2. Total project costs increase when project is split into sections for construction.
3. * Assumes part of STP funds allocated for right-of-ways will be available and allowed to be transferred to the construction phase.
4. Costs do not include previous phase I engineering costs.

Amount of Requested Funds for Section 1
$1,300,000 - STP
$1,300,000 - CMAP

Chicago Metropolitan Agency for Planning

CMAQ Cost Increase Analysis

TIP ID : **07-96-0003**
Description: **University Park - University Parkway at Governors Hwy Intersection Improvement**

Ranking Computation

	2000 Award	2005 Increase	2011 Increase
Tons VOC eliminated	7.8175	7.8175	7.8175
Cost	$ 928,750	$ 1,278,500	$ 2,903,500
$/Ton VOC eliminated	$ 204,669	$ 276,304	$ 371,411
Rank	12	13	20

Project Expenses

	Federal Share	Total	Fed %	Basis
2000 Award	$ 743,000	$ 928,750	80.0%	Approved Project
2005 Increase	$ 1,022,800	$ 1,278,500	80.0%	Letter from Village
2011 Increase	$ 2,322,800	$ 2,903,500	80.0%	Letter from Village
Increase Amount	$ 1,300,000	$ 1,625,000		

FY 2000 CMAQ Program

CMAQ ID	Facility to be Improved	$ Per Kg VOC Eliminated	Proposed total
II1224	Joliet-West Frontage Rd at US30/Plainfield Rd and at Caton Farm Rd Signalization	$10,835	$240
II1047	Lake Co DOT - Peterson Rd at IL 83 Int Imp	$16,083	$880
II1115	Huntley-IL 47 at Kreutzer Rd Intersection Improvement	$18,019	$320
II1028	Mundelein-Midlothian at Winchester Int Imp	$40,714	$0
II0836	Addison- US 20/Lake St at Swift Rd	$45,235	$501
II0834	Glen Ellyn-22nd St at Lambert Int Imp	$53,300	$301
II0412	Schiller Park-Des Plaines River Rd Continuous Left Turn Lane from River St to Winona	$54,312	$344
II1046	Grayslake-IL 83 at IL 137 Int Imp, Atkinson/Ivanhoe Realignment	$59,321	$0
II1038	IDOT-IL 83 at Washington St Intersection Improvement	$63,493	$0
II1036	Lake Bluff- IL 131 at IL 176 Int Imp	$71,600	$0
II0840	Elmhurst-IL 56/Butterfield Rd from Commonwealth to York Rd Int Imp & Sig Int Conn	$74,242	$679
II1114	Fox River Grove-US 14 at Algonquin Rd Int Imp	$117,691	$16
II0214	Northbrook-IL68/Dundee Rd at Skokie Blvd/I-94 Edens Expy Int Imp	$176,350	$723
II1029	Vernon Hills-Prairie at US 45 Int Imp	$181,921	$640
II0735	**University Park-University Parkway at Governors Hwy Intersection Improvement**	**$204,669**	**$550**
BE1030	Lake Co DOT-St Mary's Rd from IL 176 to Old Rockland	$230,606	$900
BE0329	IDOT- US 14 at Baldwin and at Colfax	$268,893	$0
II0839	Naperville-Washington St from Hobson to 75th Intersection Improvement and DuPage River Trail Segment II	$273,566	$497
	Revised Rank	**$276,304**	
II0327	IDOT-IL 68/Dundee Rd at IL 53 Interchange Improvement	$291,252	$1,533
II0210	IDOT-Willow at Sanders Intersection Improvement	$323,147	$0
	Revised Rank 2	**$371,411**	
II0736	University Park-University Parkway at IL 50/Cicero Ave Intersection Improvement	$519,748	$0
II1037	IDOT-US45 at IL 132/Grand Ave and Rollins Rd	$638,971	$0
II0328	IDOT-Palatine Rd at Wheeling Rd Intersection Improvement	$756,698	$0
II0914	Aurora- New York St Intersection Improvement at Oakhurst, Commons and Eola	$801,318	$0
II0912	Kane Co DOT-Dunham/Stearns/IL 25 Int Imp	$903,665	$1,000
II1050	IDOT-US 45 at Washington St Int Imp	$944,432	$0
II1226	Joliet-Theodore at IL 59 Intersection Improvement	$2,081,225	$0
II0215	Morton Grove- IL 43/58 Waukegan Rd Signalization	None	$0
II0340	Rolling Meadows-Meadows Town Mall Shopping Center Signalization at IL 62/Algonquin	None	$0
II0720	Lynwood-IL 83/Torrence Ave at Glenwood/Dyer Rd	None	$0
II0833	Itasca-IL 53/Rohlwing at Spring Lake Signalization	None	$0
II0835	Addison-Swift Rd at Pinehurst Signalization	None	$0
II0837	Naperville- North Aurora Ave at Weston Ridge Signalization;Improvement to Fairway	None	$0
II0915	Aurora- Metra Aurora Station Access Signalization	None	$0
II1045	Grayslake-Shorewood Rd/IL 83 Signalization	None	$0
II1222	Romeoville- Naperville Rd at Schmidt Rd Int Imp	None	$0
II1223	Lockport- IL 7/9th St at Read St Signalization	None	$0
II1225	Joliet-Essington and Hennepin Intersection Improvement	None	$0

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

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

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 -

From: Snyder, Christopher <Christopher.Snyder@dupageco.org>

Sent: Monday, January 23, 2012 3:20 PM

To: Ross Patronsky; Holly Ostdick

Cc: Mike Albin; Dolan, Agnes; Russell Pietrowiak

Subject: RE: 75th Street from Adams to Plainfield (TIP 08-09-16)

As a follow up to the below e-mail, DuPage County requests a scope change to include Phase II engineering. We request that $440k federal ($550k total) be transferred from construction to Phase II engineering. Please advise if you need additional information.

From: Snyder, Christopher

Sent: Friday, December 16, 2011 11:42 AM

To: Ross Patronsky; Holly Ostdick (Hostdick@cmap.illinois.gov)

Cc: Mike Albin; Dolan, Agnes

Subject: 75th Street from Adams to Plainfield (TIP 08-09-16)

Ross/Holly- the subject project was approved for CMAQ funding as part of the FFY 12-16 Program. Only construction and construction engineering was submitted by the county initially. We would like to request CMAQ funding approval for Phase II engineering. Phase I has already been completed and we are ready to begin Phase II early 2012. Expect Phase II engineering cost to be about $600k. CMAQ eligible engineering would be probably on the order to $400-450k since some of the proposed work is non-participating. Please advise what we would need to do to formally initiate our request (or will this e-mail suffice) and general timeframe when we might expect action on our request.

Thank you.

Christopher Snyder, P.E.

Chief Highway Engineer- Design and Construction

DuPage County Division of Transportation

630-407-6910

From: Holly Ostdick

Sent: Wednesday, December 14, 2011 1:35 PM

To: 'Pitstick, Mark'; Doug Ferguson; Joy Schaad

Cc: Stanciel, Kevin; Jane, Tatiana; Voto, Jared; Tumbali, Gerry; Morkunas, Vida

Subject: RE: CMAQ Proposal for Chicagoland Commute Options (CMAQ Application Number OT13123598, TIP ID Number 13-12-0004).

Staff approves this as an administrative modification. Please make the TIP change moving all funding into 2012. The CMAQ PSC Committee will be notified at their next meeting.

Holly Ostdick

From: Pitstick, Mark [mailto:PitstickM@RTACHICAGO.ORG]

Sent: Tuesday, December 13, 2011 3:12 PM

To: Doug Ferguson; Joy Schaad; Holly Ostdick

Cc: Stanciel, Kevin; Jane, Tatiana; Voto, Jared; Tumbali, Gerry; Morkunas, Vida

Subject: RE: CMAQ Proposal for Chicagoland Commute Options (CMAQ Application Number OT13123598, TIP ID Number 13-12-0004).

Doug, Joy and Holly,

The RTA hereby requests consideration to advance the federal funding for the above referenced project. In order to facilitate implementation of this region-wide program, it is our intention to obligate the entire approved amount ($988,608 federal) in 2012. Therefore, we request that all of the CMAQ A-list funding be advanced to FFY 2012.

Thank you,

Mark E. Pitstick, Ph.D. • Technical Advisor • Planning

Regional Transportation Authority • 175 West Jackson, Suite 1550, Chicago, IL 60604

Office 312/913.3235 • Fax 312/913-3206 • www.RTAchicago.com

From: Holly Ostdick

Sent: Wednesday, December 14, 2011 1:38 PM

To: 'Snyder, Christopher'

Cc: Dolan, Agnes; Ross Patronsky; Doug Ferguson; Patricia Berry;

Brian.Carlson@illinois.gov

Subject:RE: 08-07-0003 Thorndale Ave BE Project

Thank you. Staff approves this as an administrative modification. Please delete it from the TIP (I know you already did). The CMAQ PSC will be notified of the withdrawal at their 2/9/12 meeting.

Thanks,

Holly Ostdick

From: Snyder, Christopher [mailto:Christopher.Snyder@dupageco.org]

Sent: Wednesday, December 14, 2011 9:45 AM

To: Holly Ostdick

Cc: Dolan, Agnes; Ross Patronsky; Doug Ferguson; Patricia Berry; Brian.Carlson@illinois.gov

Subject: RE: 08-07-0003 Thorndale Ave BE Project

Holly- DuPage County recently met with IDOT and the Tollway concerning improvements along Thorndale Ave in the vicinity of I-290. The Tollway's recently announced $12B capital plan includes funding for the Elgin O-Hare. Construction is expected to begin as early as 2014. Based on the schedule for Elgin O'Hare, IDOT felt it was not fiscally appropriate to continue to pursue the "interim" improvements along Thorndale since the improvements would only be in-place for a short time and would be removed/not needed with the ultimate Elgin O'Hare project. Based on consultation with IDOT and the Tollway, the County recommends withdrawal of this project from the CMAQ Program.

Village of Arlington Heights

33 South Arlington Heights Road
Arlington Heights, Illinois 60005-1499
(847) 368-5000
Website: www.vah.com

November 8, 2011

Mr. Michael Walczak
Program Manager for Transportation
Northwest Municipal Conference
1616 East Golf Road
Des Plaines, IL 60016

RE: ***BUFFALO CREEK BIKE PATH EXTENSION***
WILKE ROAD AT LAKE-COOK ROAD
A.H.E. FILE #2007-26
TIP ID#: ***03-08-0003***
CMAQ ID#: ***BP03082903***

Dear Mike:

Per your recent request, please accept this letter as the Village's formal notification that the CMAQ funds allocated as part the above referenced proposal were not able to be adequately utilized.

Although let as part of the I.D.O.T. bid letting process, the bid prices were double the anticipated costs and the project was withdrawn. While the County has plans for the upgrade of the intersection to provide more efficient L.E.D. signal heads, subsequent inquiries by the Village to see if the County would include the pedestrian improvements designed for this intersection have not resulted in consideration to include this as a potential project within their transportation plan.

As mentioned in the most recent edition of the NWMC Newsletter, many of the projects along the Lake-Cook corridor were identified in the 2010 NWMC Bike Plan, but were not included in the final program.

We strongly advocate the pursuit of S.T.P. or other funding sources to make up the shortfall of funds or reassignment of the grant to another sponsor agency prior to re-appropriation of these grant funds.

The Village continues to advocate and support this major intersection improvement that creates interconnection of the regional bike plan between Lake and Cook Counties. Therefore, anything the NWMC could provide to facilitate implementation of this project would be appreciated.

Sincerely,

Thomas J. Ponsot

Thomas J. Ponsot
Traffic Engineer

c: Jim Massarelli, Director of Engineering
Mike Pagones, Deputy Director of Engineering
Briget Schwab, BPAC Liaison
Scott VanDerAa, Cook County Hwy. Dept.

ELGIN
THE CITY IN THE SUBURBS

Mayor
David J. Kaptain

City Council
Richard Dunne
Robert Gilliam
Anna C. Moeller
Tish S. Powell
John Prigge
F. John Steffen

City Manager
Sean R. Stegall

November 23, 2011

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

RE: TIP ID: 09-00-0021, Summit at Dundee - Roundabout
Section no. 0-00170-00-CH
Project no. CMM-8003(398)
Job no. R-91-012-04

Dear Holly:

The City of Elgin has decided not to pursue the subject project and will be closing out its files. Please close out our TIP and reprogram the funds appropriated towards the subject project. To the best of my knowledge the only agreements with IDOT are for the right-of-way acquisition and I intend to work with IDOT to close out these agreements. On behalf of the City, thank you very much for the opportunity. If you have any questions, please contact me at 847-931-5955.

Sincerely,

CITY OF ELGIN

Joseph Evers, P.E.
City Engineer

Cc: Sean Stegall, City Manager
David Lawry, P.E., Public Services Unit Director
Jay Beverly, Engineering Inspector
Temi Latinwo, FAA Technician, IDOT
Jan Ward, Dep. Council Director, Kane/Kendall Council of Mayors

VILLAGE OF
grayslake
est. 1895

November 14, 2011

Ms. Holly Ostdick
Chief of the CMAQ Program
CMAP
233 South Wacker Drive, Suite 800
Chicago, IL 60606

RE: Lake Street Signal Interconnect TIP ID Number 10-12-0001

Dear Ms. Ostdick:

Please be advised that the Village of Grayslake is not the lead agency for the above referenced project. The Lake County Division of Transportation should be listed as the lead local agency for this project. All future correspondence relating to this project should be directed to Ms. Paula Trigg at the Lake County Division of Transportation with a copy sent to our office for our records.

Please do not hesitate to call me at (847) 223-8515 if you have any questions or require additional information.

Very truly yours,

William Heinz
Director of Public Works/Village Engineer

cc: Martin G. Buehler, Lake County Division of Transportation
Michael Ellis, Village of Grayslake

Mayor: Rhett Taylor
Trustees: Bruce R. Bassett ~ Jeff Werfel ~ Amy Edwards ~ Shawn M. Vogel ~ Ronald L. Jarvis ~ Kevin D. Waldenstrom
Village Clerk: Cynthia E. Lee

Ten South Seymour Avenue ~ Grayslake, Illinois 60030 ~ 847-223-8515 ~ fax: 847-223-4821 ~ www.villageofgrayslake.com

16-12-0001 approval

From: Holly Ostdick
Sent: Friday, November 18, 2011 1:42 PM
To: 'Vazquez, Sofia'
Cc: Doug Ferguson; Connelly, Michael; Fedak, Laura; O'Malley, Kevin; Fiorito, James
Subject: RE: FY2012 CMAQ Projects

Sofia-

Please make the appropriate TIP change moving all funding into 2012.

Thanks,
Holly

Holly Ostdick
(312) 386-8836

From: Vazquez, Sofia [mailto:Svazquez@transitchicago.com]
Sent: Thursday, November 10, 2011 10:58 AM
To: Holly Ostdick
Cc: Doug Ferguson; Connelly, Michael; Fedak, Laura; O'Malley, Kevin; Fiorito, James
Subject: FY2012 CMAQ Projects

Holly,

CTA would like to request to move all projected funds of projects 16-12-0001 Retrofit of Electronic Engine
Cooling Fan System and 16-12-0002 ZF TopoDyn Program into fiscal year 2012. RTA has issued Proposed
Marks for their December Board Meeting reflecting this change and CTA would like to meet its projects to
their mark.

As always thank you.

TIP ID	Title	Fiscal Year	Budget
16-12-0001	Retrofit of Electronic Engine Cooling Fan System	2012	6,244,000
16-12-0002	ZF TopoDyn Program	2012	892,800
CMAQ Total			7,136,800

Sofia Vazquez
Financial Analyst
Budget and Capital Finance
Chicago Transit Authority
?(312) 681-3476 ?(312) 681-3497
??svazquez@transitchicago.com

16-12-0002 approval

From: Holly Ostdick
Sent: Friday, November 18, 2011 1:42 PM
To: 'Vazquez, Sofia'
Cc: Doug Ferguson; Connelly, Michael; Fedak, Laura; O'Malley, Kevin; Fiorito, James
Subject: RE: FY2012 CMAQ Projects

Sofia-

Please make the appropriate TIP change moving all funding into 2012.

Thanks,
Holly

Holly Ostdick
(312) 386-8836

From: Vazquez, Sofia [mailto:Svazquez@transitchicago.com]
Sent: Thursday, November 10, 2011 10:58 AM
To: Holly Ostdick
Cc: Doug Ferguson; Connelly, Michael; Fedak, Laura; O'Malley, Kevin; Fiorito, James
Subject: FY2012 CMAQ Projects

Holly,

CTA would like to request to move all projected funds of projects 16-12-0001 Retrofit of Electronic Engine
Cooling Fan System and 16-12-0002 ZF TopoDyn Program into fiscal year 2012. RTA has issued Proposed
Marks for their December Board Meeting reflecting this change and CTA would like to meet its projects to
their mark.

As always thank you.

TIP ID	Title	Fiscal Year	Budget
16-12-0001	Retrofit of Electronic Engine Cooling Fan System	2012	6,244,000
16-12-0002	ZF TopoDyn Program	2012	892,800
CMAQ Total			7,136,800

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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 2 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) 111th St and 115th St Split Route Service ($400,000 – FY 2009) and the
2) 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.

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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	1	1
Totals	50	10	15	--	$116,737,986	$46,313,655	2	8

* Funds are shown in Federal dollars.

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:

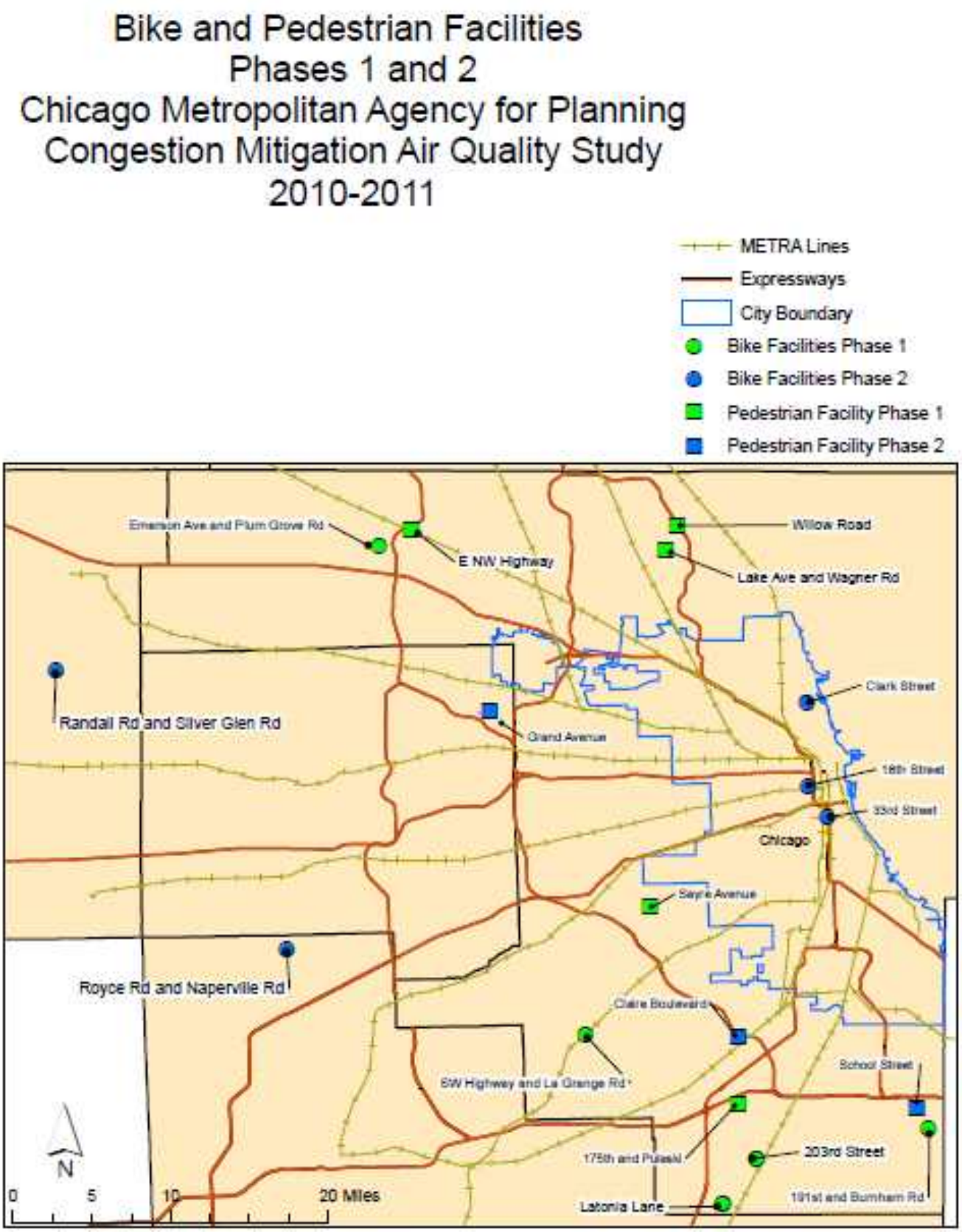
a) Non-motorized projects: In total, we surveyed users of eighteen bicycle and pedestrian facilities between the summer of 2009 and the spring of 2011, sixteen of which were funded by the CMAQ program and two projects that are very similar to the CMAQ projects but which were

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.

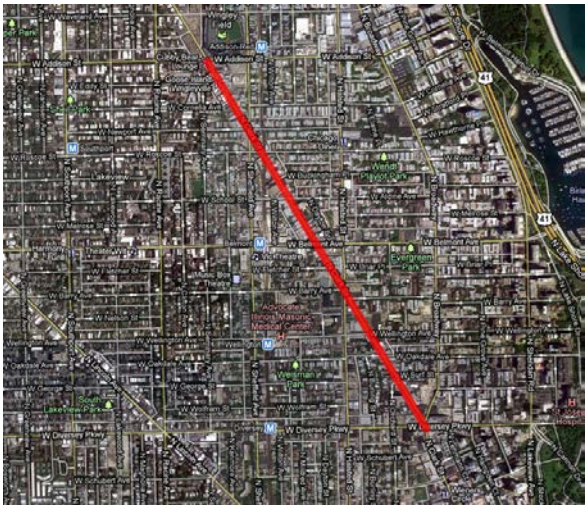
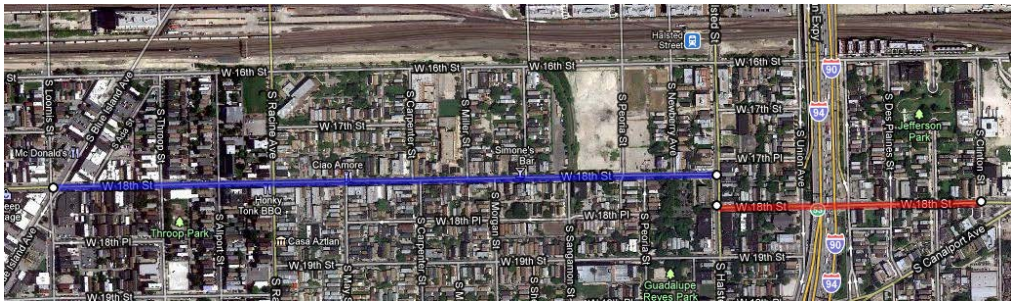


Figure 2.1 Bicycle lane on Clark Street, City of Chicago

(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).

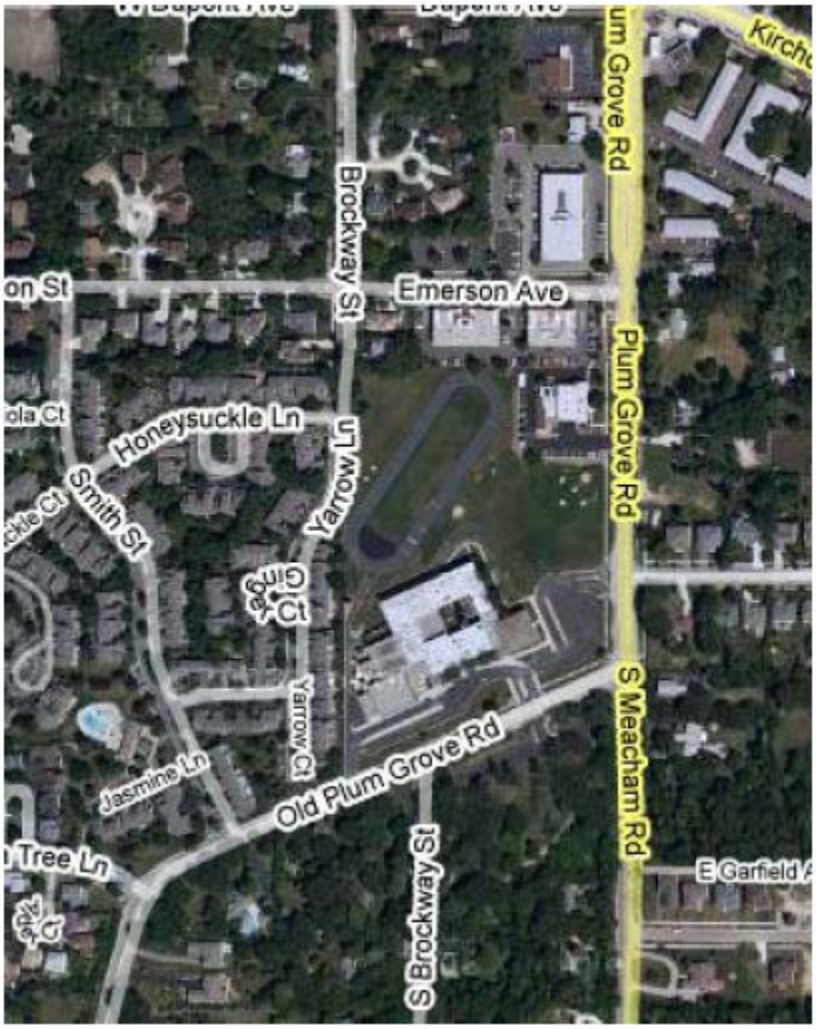


Figure 2.10: Bike path area in Rolling Meadows

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.

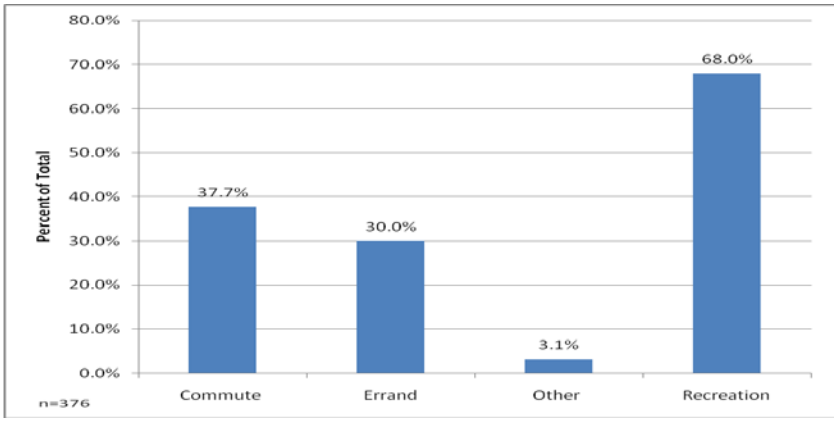


Figure 2.18: What are the reasons for which you use this path? (Respondents could "CHECK ALL THAT APPLY")

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.

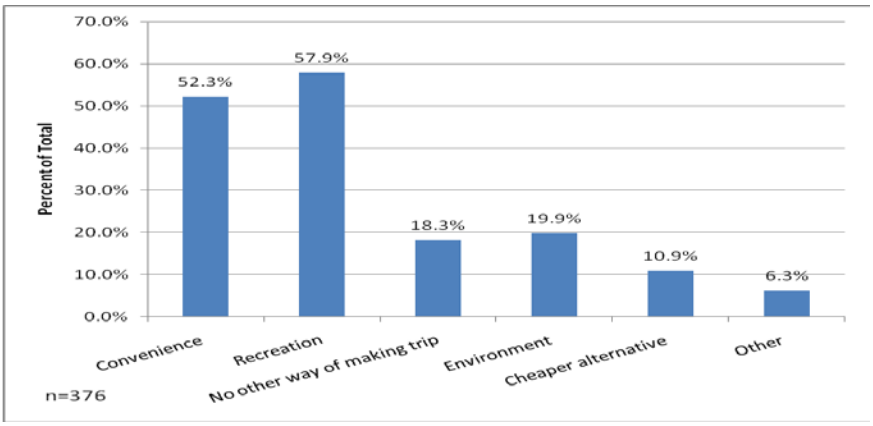


Figure 2.19: Why did you choose to use this path today? (Respondents could "CHECK ALL THAT APPLY")

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.

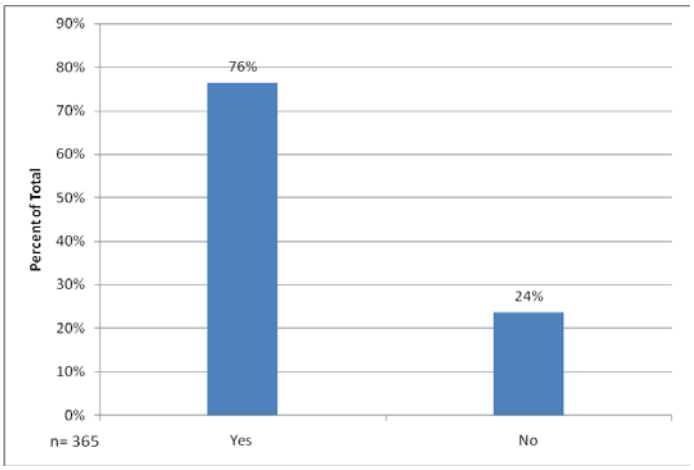


Figure 2.20: Do you always use this path for your trips for the purpose indicated above?

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.

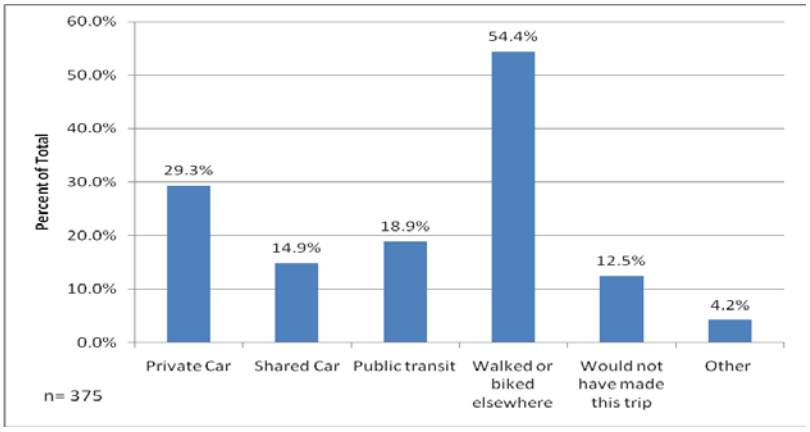


Figure 2.21: How else could you have made this trip? (Respondents could "CHECK ALL THAT APPLY")

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.

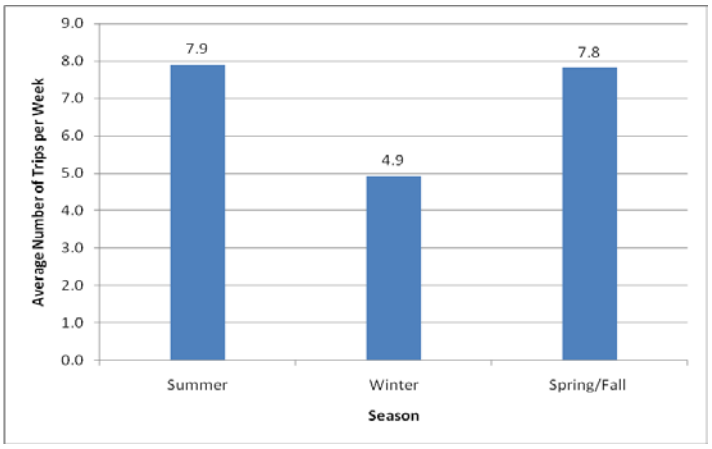


Figure 2.22: How many times per week do you typically use this path during the summer, winter and the fall and spring months?

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.

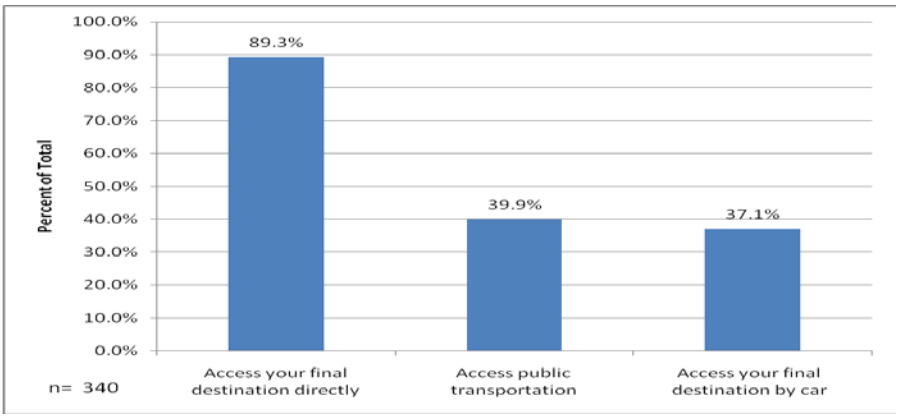


Figure 2.23: What are the reasons for not using this path for all of your trips for the purpose indicated above? CHECK ALL THAT APPLY

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.

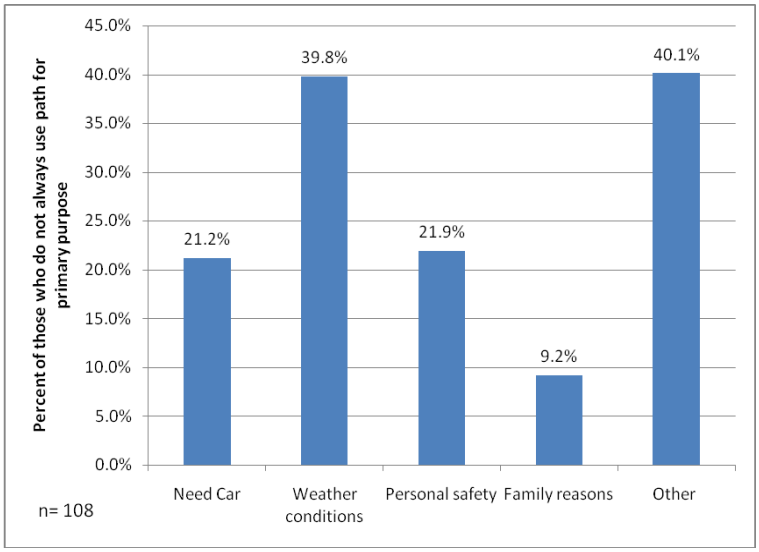


Figure 2.24: Accessibility reasons for using facility. CHECK ALL THAT APPLY

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.

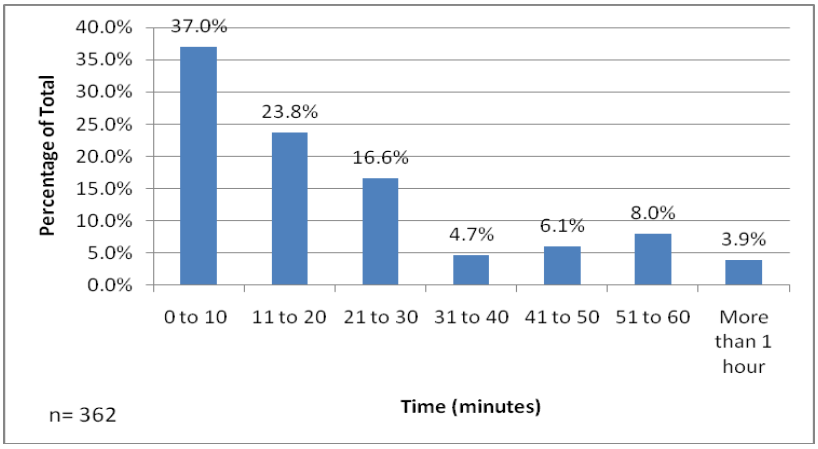


Figure 2.25: How much time do you typically spend on this path for this trip?

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.

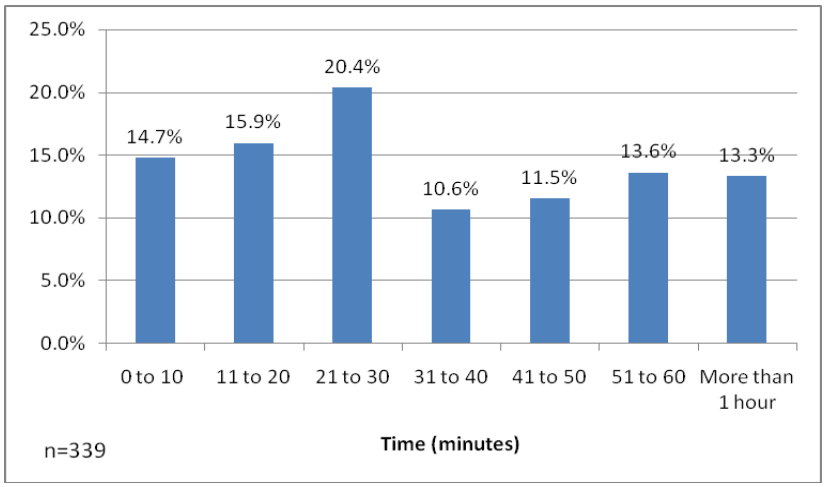


Figure 2.26: How long is your overall (door-to-door) trip? This will include time off the path.

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.

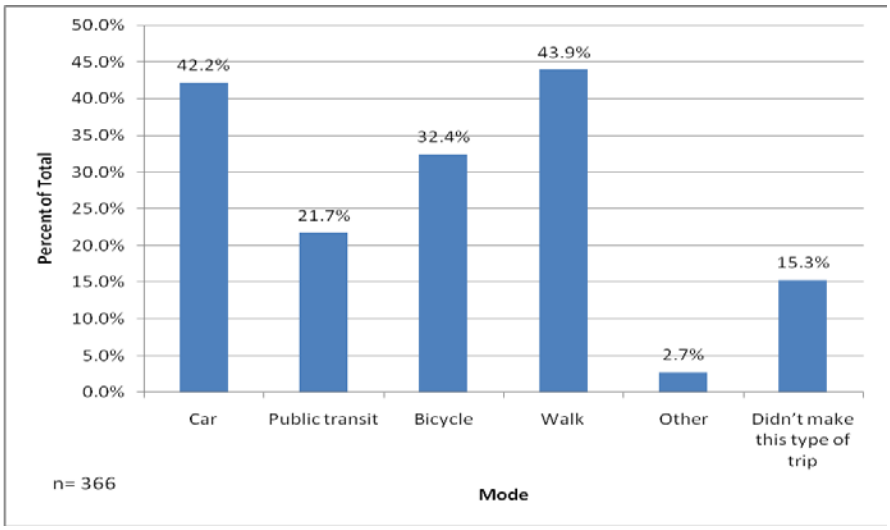


Figure 2.27: Before you began using this path for this type of trip, what type of transportation did you use? CHECK ALL THAT APPLY

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.

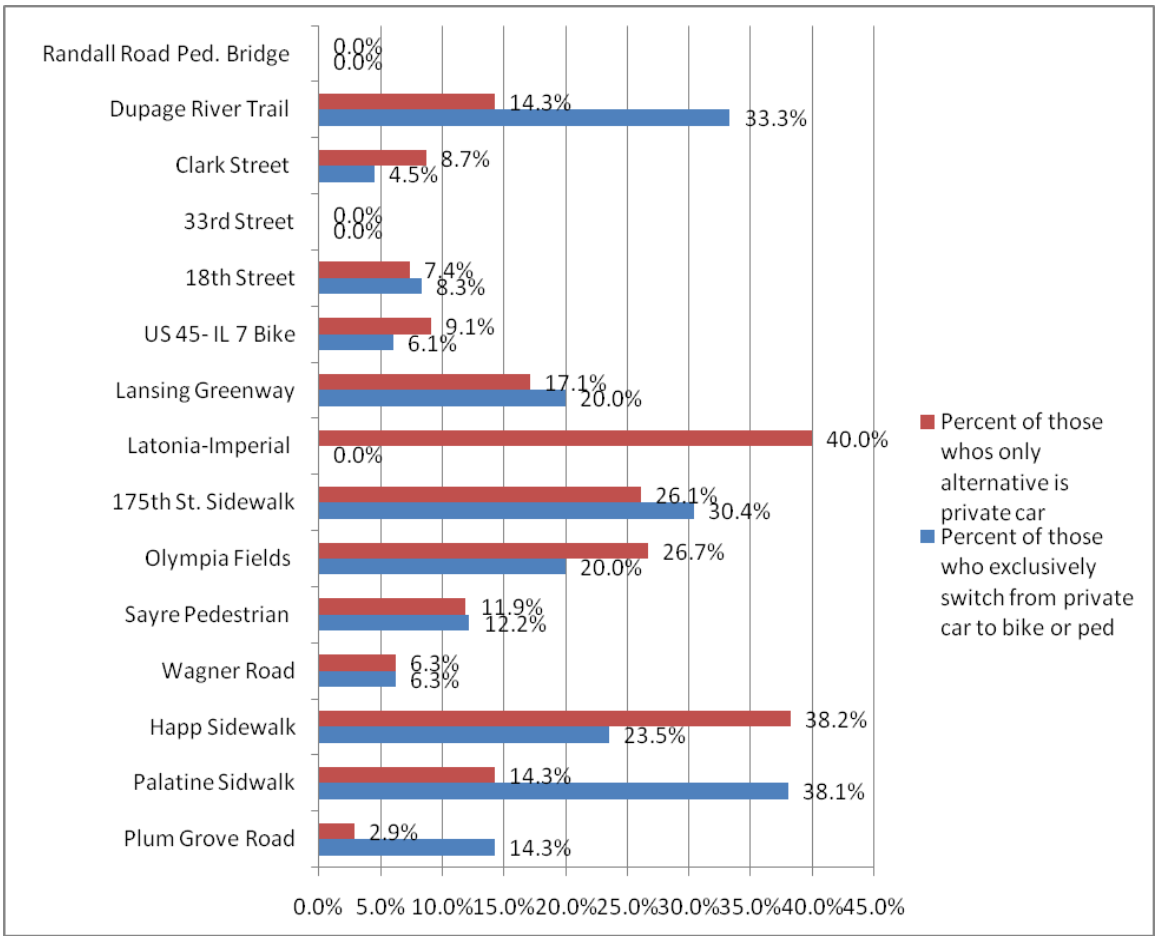


Figure 2.28: Site-by-site comparison of (A) percent for whom a private car is the only other mode of transportation available for the current non-motorized trip and (B) percent who were exclusively private car users for the trip purpose prior to the availability of the path

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.

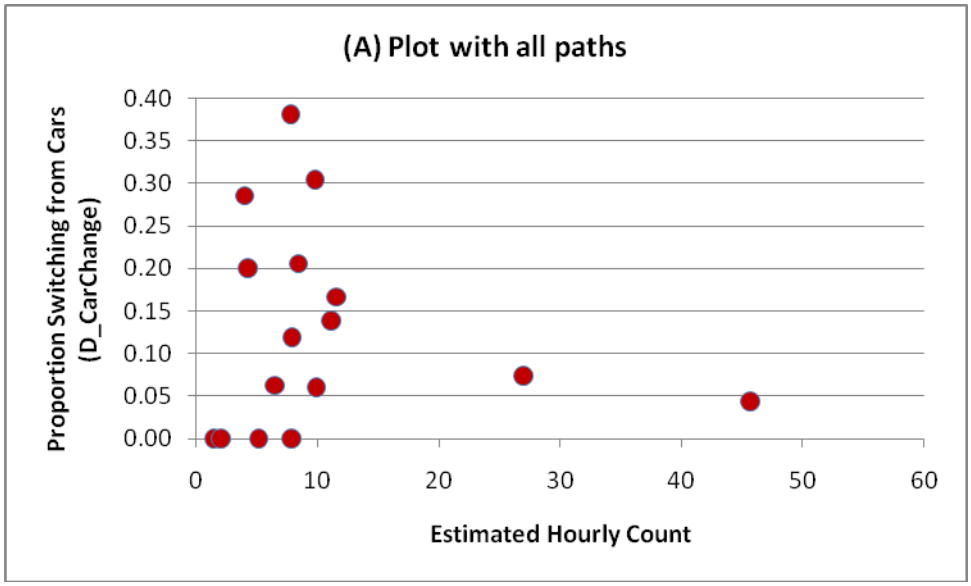


Figure 2.29(A): Percent who switched from being exclusive car users for the trip type at each site, against estimated hourly volumes

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.

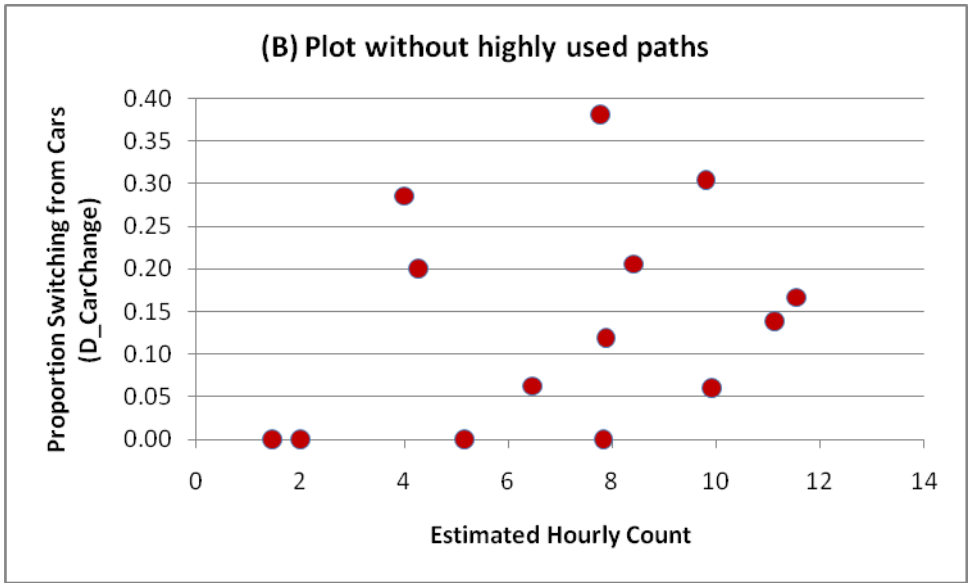


Figure 2.29(B): Percent who switched from being exclusive car users for the trip type at each site against estimated hourly volumes, with high usage sites removed

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.

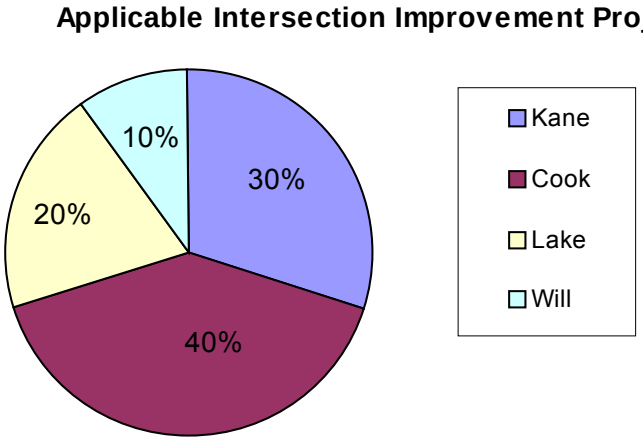


Figure 3.1: Applicable Intersection Improvement Projects

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.

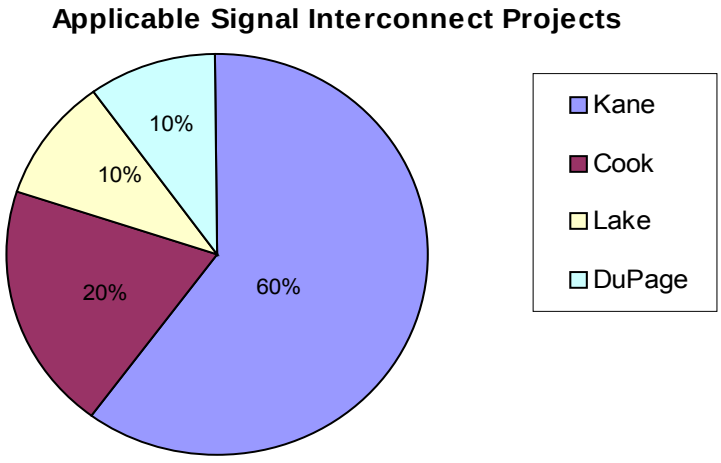


Figure 3.2: Applicable Signal Interconnect Projects

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.

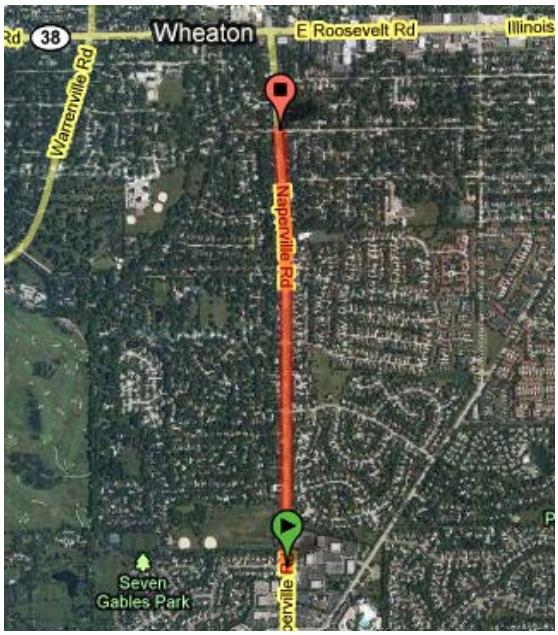
Table 3.1: Final traffic improvement projects confirmed for "before" and "after" study

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

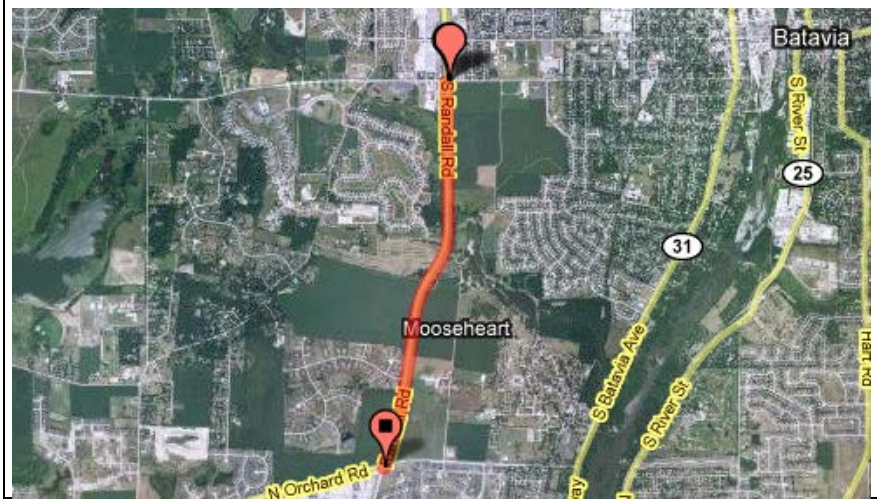
(1) Naperville Road between Elm Street and Danada Drive, Wheaton, DuPage, IL

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.

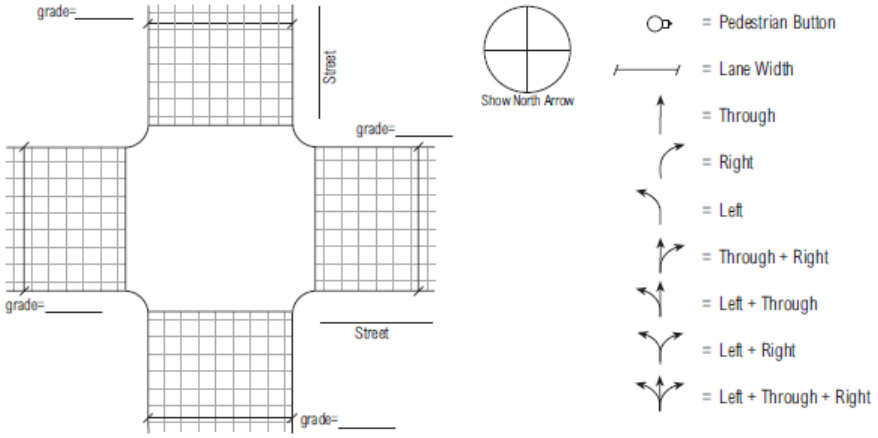
The number of surveyors needed per site was estimated from the roadway average daily traffic (ADT), and the number of intersection approaches. For each intersection in a selected project, a minimum of one person per approach was assigned; for roadways with heavy ADT volumes (> 30000 vehicles) we assigned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

1) Chicago Metropolitan Agency for Planning (2011). CMAQ Project Application Information Booklet. Federal Fiscal Year 2012-2016. Accessed from http://www.cmap.illinois.gov/cmaq/improvement-program-fy10-11 on July 10, 2011.
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.
3) Thakuriah, P., J. Lin, P. Metaxatos and E. Jensen (2010). *Post-Implementation Evaluation of the CMAQ Program in Northeastern Illinois*. *Phase 1 Final Report.* Final Report to Chicago Metropolitan Agency for Planning, October.

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	

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MEMORANDUM

To: Regional Coordinating Committee

From: CMAP Staff

Date: February 1, 2012

Re: CMAQ Active Program Management at CMAP

CMAP programs the federal Congestion Mitigation and Air Quality Improvement Program (CMAQ) for transportation capital and operating funds. The region currently receives approximately $80 million to $90 million per year in CMAQ funding. Unfortunately, the region has approximately $190 million, more than two years of funding, that remains unspent (unobligated).

A menu of options for addressing this issue has been discussed and is included in the attachment. The committees charged with CMAQ program management have discussed these and worked to implement changes to the program for a number of years. However, those efforts have not produced the necessary actions to institute programming policies that would ensure that projects are delivered on schedule. Consequently, the region has lost transportation dollars in the past and is in jeopardy of losing more. Addressing this program and implementing a solution to ensure that we program and spend this funding appropriately, responsibly, and on a timely basis is vital to the region and the implementation of GO TO 2040. Many of CMAP's policy positions and federal transportation authorization principles are contingent upon the region receiving or generating more direct transportation funding, which depends on our ability to spend it appropriately and responsibly.

At your meeting, since many of our Regional Coordinating Committee members are unfamiliar with this information, staff would like to present the committee with the background, information, and potential next steps to move forward and ensure the region is not in jeopardy of losing any transportation funding.

ACTION REQUESTED: Discussion

CMAQ Active Program Management Report

At the November meeting of the Transportation Committee, the Committee discussed the management of the Congestion Mitigation and Air Quality Improvement (CMAQ) program. The committee requested that staff put together materials on existing CMAQ program management policies. The following document includes a brief history on the management of the program, information on other MPOs' management policies and options for other program management activities. Due to the fact that many of the options are intended to change sponsor behavior related to project implementation, there is no way to predict what may result from the individual options.

Active Program Management Background

Since its inception, the CMAQ program has monitored project status to determine whether funds allocated to the region are being spent in a timely manner, and the air quality and congestion mitigation benefits of CMAQ projects are being realized.

For many years, monitoring took the form of a review of projects with unobligated balances. In some years, sponsors for all projects with unobligated balances were contacted. This ensured that no projects were overlooked. However, the number of active projects made it challenging to get useful responses.

So, in later years project sponsors were contacted based on selection criteria – projects that were two or more years old and had no obligation, were four or more years old and had at least ten percent of their funds still unobligated, or the project's estimated completion year was in the year of review. Using these criteria, the number of projects reviewed was reduced to thirty or forty – about a third of active projects at the time.

The CMAQ Project Selection Committee began discussing obligation management anew in the first half of 2006. Obligation management guidelines were adopted in September, 2006 by the Project Selection Committee, including consideration of withdrawing projects that do not obligate any funds in the first year they are programmed. In that same year, sponsors separated their projects into phases, with each phase programmed in the year it was expected to be completed. Prior CMAQ programs funded all project phases in the current year, leaving a considerable portion of the funds programmed, but unable to be obligated for an extended period while the initial phase was completed.

Additional discussions were held in 2008, when a potential lapse and large rescission at the end of fiscal 2009 were approaching. In the spring, staff and the Project Selection Committee reviewed the obligation status of projects and ultimately recommended three projects for removal from the program – in each case the sponsor had indicated that they did not intend to pursue the project.

In the fall of 2008, letters were sent to 45 sponsors of 2007 and 2008 projects that had not obligated funds. The Project Selection Committee set a December 31, 2008 deadline for either initiating the project (2008 projects) or obligating funds (2007 projects). No projects were ultimately removed from the program as a result of this effort; one sponsor voluntarily withdrew a project.

In December of 2008, the Project Selection Committee discussed a range of options for programming projects that were more likely to proceed. An updated programming and program management policy was adopted by the MPO Policy Committee in March, 2009, with several significant provisions. Notably:

- Programming a "B" list of projects that would be considered for funding if other projects were not proceeding.
- Semi-annual status updates in May and October, with removal from the program considered if progress benchmarks are not made.
- Establishing a "one-time move" policy for projects to obligate funds. Initially, projects that failed to obligate funds after the one-time move were to be removed from the program. As a result of committee discussions, this was modified so that projects would be considered for removal if the lack of progress was within the sponsor's control.

In 2009, the Project Selection Committee agreed to program both the FY 2010 and FY 2011 CMAQ funds. In part, this was to allow more time for program management activities during 2010, when there would not be a call for projects.

September 2009 marked an $83 million rescission from the CMAQ program. Since the CMAQ program was now out of fiscal constraint, the Project Selection Committee adopted a policy, now called the "CMAQ A" list, to move all projects with no obligations out of the TIP, with the understanding that a project could be brought into the TIP as soon as it was ready to obligate funds. No projects were removed from the program. This approach has been called the first ready, first funded approach.

Staff and the Project Selection Committee anticipated that the $83 M in "over programmed" projects would help create an additional way of bringing down the unobligated balance, since there were now significantly more projects approved for the CMAQ program than there are funds available. The rescission was later rescinded; now the CMAQ A list is used as another effort at allowing flexibility in the CMAQ program.

$70 million in CMAQ funds were obligated in 2010, a significant improvement over prior years. However, since the region receives between $80 million and $90 million in CMAQ funds each year, this improved obligation rate still left the region $20 million further behind on obligations.

The fall 2009 status update reviewed 150 project phases, of which 91 requested a one-time move. Many of the projects requesting a move in this review were projects programmed from 2006 and before. During the summer of 2009 these projects had redone their funding so that project phases would appear in realistic years; the 2009 fall update was the first opportunity these projects had to make a one-time move. Although a few projects were considered for removal from the program because they did not respond to the status update request, ultimately no projects were removed.

Mandatory initiation meetings were held in November, 2009 with all sponsors of 2010-2011 projects. IDOT staff, CMAP staff and Planning Liaisons presented detailed information on the steps needed to implement a project, with emphasis on submitting IDOT's Project Program Information forms (formerly

Job Request forms) in a timely and correct fashion, accurate scheduling of phases and using the Planning Liaisons effectively.

In the May, 2010 status review, five projects were identified for removal. In the end, two were removed with the acquiescence of the sponsors.

In the October, 2010 status review, twenty-one projects were identified for removal, either for failure to respond or for exceeding the one-time move limit. Following the receipt of additional information from sponsors, three projects were removed with the sponsors' agreement.

With adoption of GO TO 2040, CMAQ programming was restructured in early 2011 to help implement the plan's recommendations. One element of the restructuring was to program five years of CMAQ funds – in part to allow for a more coherent program of projects, but also to provide a larger pool of CMAQ projects to obligate; the policy is that a project in any year of the program may request permission to obligate funds if the sponsor is ready to do so.

In the Spring of 2011, the region was advised that approximately $140 million in CMAQ funds were at risk of lapsing at the end of September, 2013. Since this amount was at the limits of what the CMAQ program had been able to obligate in past years, the Project Selection Committee considered whether "contingency" projects could be identified – projects that are CMAQ-eligible, are ready to obligate immediately, and are large enough to use a substantial amount of CMAQ funds. At a June meeting, the Project Selection Committee considered potential projects of this sort. Ultimately it was decided that it is preferable to implement the projects that were originally programmed. If the lapse potential still exists in the spring of 2013, the concept can be revisited at that time.

In the October, 2011 status update, 47 projects were identified as meeting the criteria for removal. To date, none have been removed from the CMAQ program.

Survey of Other MPOs

Staff has found limited information available from other MPOs on the policies they have implemented for the management of their regions' CMAQ programs. One observation made is that northeastern Illinois is not alone in its problems with obligating CMAQ funds in a timely manner. The following summaries are offered on the San Francisco and Seattle MPOs.

Metropolitan Transportation Commission (MTC), the San Francisco Bay Area's MPO

MTC has been extremely effective at ensuring timely obligation of funds and has actually been able to obtain unused obligation authority from other regions in the state. MTC develops its annual program with the expectation that is will be able to capture a larger share of the state's funds. By programming to the expected maximum funding level, MTC may end up with more projects programmed than it can actually fund in a given year. Projects that meet program deadlines are given priority to be moved into the Transportation Improvement Program (TIP) and receive funds. The process additionally prioritizes implementer projects that are accomplished on time. This process forces projects to compete for funds by demonstrating progress. Projects not funded in the first round may still get funding that year if there

are cost-savings in other projects, or if MTC is able to capture obligation authority from other regions in California who do not obligate in time and have portions of their obligation authority redistributed. To ensure that projects are completed on schedule, MTC strictly enforces project deadlines, does not allow cost increases, and pulls project funding when projects fail to perform.

In direct discussions with MTC staff, it was learned that MTC allocates funds to Congestion Management Agencies (CMAs), which are created by state law, and correspond roughly to counties. MTC gives the CMAs direction on what areas to program, with guidelines for specific program areas. The CMAs submit a program of projects which MTC reviews and puts in TIP.

The CMAs are responsible for monitoring progress. Projects that are delayed are removed from the program, but may return to the program in the future once their delay is resolved. Each spring, the CMAs review their obligation status and program additional projects if it appears that the existing projects will not fully obligate the funds available. To do this, they will issue a call for federalized projects that are CMAQ-eligible, increase funding for projects that do not have an 80% CMAQ federal share, or previously-delayed projects that are now ready to proceed.

Placing the responsibility on the CMAs, with the use of contingency projects and active program management has resulted in a high obligation rate, with only a few (2) projects that have been dropped in the past 15 years for lack of progress

Puget Sound Regional Council (PSRC), the Seattle area's MPO

The PSRC requires that all STP- and CMAQ-funded projects designate the year each phase will obligate. Planning and design phases are expected to obligate the programmed funds in the designated year while the ROW acquisition and construction phases are allowed a one-year grace period beyond the designated year. Extensions may be granted but the cause of delay must be deemed to be clearly beyond the control of the sponsor. The example given of "beyond the control of the sponsor" is a lawsuit. All projects must submit quarterly status reports on every project and PSRC staff compare them to the project milestone schedules to monitor delay. Quarterly reports are made by staff to the oversight committees. A contingency list of projects is maintained by the PSRC for the purpose of handling unused funds prior to the next call for projects.

To date, PSRC has not responded to direct contact to discuss effectiveness – only their published active program management policies have been reviewed.

Additional Program Management Options

CMAP staff has put together some possible additional tools for actively managing the CMAQ program. The current practice for actively managing the CMAQ program includes a review of project status, taking into consideration the reasons for delay. It has proven a challenge to remove projects based on reasons for delay because every project has a reason for delay. The sponsors of projects, including those sitting on the Project Selection Committee, have an incentive to advocate project retention. There is no real constituency for removing projects. Most of these tools can be implemented for current projects as well

as future projects. These tools are intended to not only move lagging projects forward but to also create a behavioral change in how sponsors request projects for funding – therefore it is not useful to estimate how the current programmed projects would be affected.

Obligation Sunset

Each project provides a realistic schedule for the obligation of the funds for each phase involved in the project. Each phase will be expected to obligate its programmed CMAQ funding within a certain time. For example, a project phase must be obligated no later than two years subsequent to the year in which the sponsor programmed the phase. So if a sponsor programs a project's phase I engineering in FFY 2012, that project phase may be obligated in FFY 2012, 2013 or 2014. If the phase is not obligated by end of federal fiscal year 2014, than that phase and any subsequent phases of the project will automatically be removed from the CMAQ program.

The sponsor may re-submit the removed phase and subsequent phases at the next call for projects.

Accomplishment Sunset

An accomplishment sunset is allowing a specified time for a project phase to be accomplished. The chart below defines "accomplished" for the individual phases in both the highway and transit formats:

Phase	FHWA	FTA
Phase 1 Engineering	Design Approval	FTA Grant Approval
Phase 2 Engineering	Pre-Final Plans to Dist 1 IDOT	FTA Grant Approval
ROW	ROW Certified by IDOT Dist 1	FTA Grant Approval
Construction	Letting	FTA Grant Approval
Implementation	Federal Authorization	FTA Grant Approval

Each project provides a realistic schedule for phase accomplishment when the project application is submitted. Each phase will be expected to be accomplished within a certain time frame. The table below lays out the time frames that could be used based within the 1 + 3 timeframe within which federal funds must be obligated.

Options for phase sunset include:

Option	Explanation	Pros	Cons
1 Year	Remove project funding if one phase is not accomplished in the year programmed.	Strong motivation to accomplish projects in established realistic schedule.	Unrealistic based on historical data.
2 Years	Remove project funding if one phase is not accomplished in the year scheduled + one additional year	Some flexibility for unanticipated project issues.	Difficult to achieve based on historical data and Number of more than 1 one-time move.

3 Years	Remove project funding if one phase is not accomplished in the year scheduled + two additional years	Allows flexibility for unanticipated project issues.	Difficult to anticipate annual obligations
4 Years	Remove project funding if one phase is not accomplished in the year scheduled + three additional years	Allows flexibility for unanticipated project issues.	Difficult to anticipate annual obligations; Difficult to allow time for reprogramming of funds for expenditure before lapse.

Variable Local Match

Some local suburban councils of mayors use variable match depending on what phases are funded with local STP funding. This could be adapted to CMAQ to encourage local sponsors to accomplish phases that have historically delayed projects.

Projects Requiring ROW

Phase	All Phases Funded	PHI Locally Funded	PHI and ROW Locally Funded	PHI, PHII, and ROW Locally Funded
PHI	50/50	Locally Funded	Locally Funded	Locally Funded
PHII	50/50	60/40	70/30	Locally Funded
ROW	50/50	60/40	Locally Funded	Locally Funded
Construction/IMP	50/50	60/40	70/30	80/20

Projects Not Requiring ROW

Phase	All Phases Funded	PHI Locally Funded	PHI and PHII Locally Funded
PHI	50/50	Locally Funded	Locally Funded
PHII	50/50	70/30	Locally Funded
Construction/IMP	50/50	70/30	80/20

Sliding Scale for Federal Match

Another option is to encourage timely implementation of phases by creating rules that would adjust the federal match portion based on accomplishment. This could be completed in two different ways.

Project Specific: If a phase is accomplished in the year it was originally scheduled that phase could be funded at 100%; 90% or 80%. If the phase is accomplished one year later than the originally scheduled year it could be funded at 90%; 80% or 70% federal and so forth. A decreasing match for each year

delayed is the theme – a set percentage match would need to be chosen and decreased for each year of delay. Of course 100% funding is currently possible – however that is not guaranteed as it could be rescinded by an act of Congress.

Implementer Specific: If an implementer has historically not accomplished projects their local match would increase based on percentage of funds received and obligated.

There are disadvantages to this approach.

- Decreasing the match once a project is programmed is an impediment to implementation due to the required additional local match.
- Administrative work regarding funding agreements and budgeting will be difficult for local agencies.
- If the federal portion decreases, that does not assist directly with spending down the unobligated balance.

Not Funding Phase I Engineering

For highway projects, most delays and project issues arise during PHI engineering. The committee could consider not funding PHI engineering to ensure project development is underway and the project is a high priority of the implementer. While this would mean that programmed projects would have a more accurate scope of work developed prior to funding commitments being made, some projects may not get programmed if sponsors lack the funding for phase I engineering.

Some sub-regional councils of mayors only fund the construction phase of projects, so there is precedent for this approach in the region. The McHenry County Council of Mayors, Lake County Council of Mayors and DuPage Mayors and Managers Conference are three examples of councils of mayors that only fund construction. These councils of mayors have historically had low unobligated balances.

Limiting Cost Increases

Not allowing project cost increases is another tool for actively managing the CMAQ program. If project sponsors are aware that additional funds are not available this will:

- Encourage timely completion to avoid inflationary costs
- Provide motivation for increased accuracy in cost submittals, although overestimating costs could become a problem
- Promote completion of PHI engineering prior to applying

However, this method will also

- Require withdrawal of projects that have costly delays or costly scope changes
- Without a method for automatic project removal, projects could continue to linger.

Obligation Goals

An obligation goal could be set by the Project Selection Committee through the Transportation Committee in September for the upcoming Federal Fiscal Year (FFY). Or, goals could be set for numerous years in order to address the entire unobligated balance. Such a goal could be developed using historical allotments and an additional amount to spend down the unobligated balance in manageable amounts. In the spring the Project Selection Committee will assess the progress toward the obligation goal. If it is anticipated that projects will not move forward within the FFY they will be removed from the active program and the funds will be applied to other projects that can be obligated within the fiscal year.

How the Project Selection Committee chooses to fill the gap between the anticipated obligations and the goal in May has many different options.

- Moving up ready projects from out years.
- Moving ready B list projects into the active program.
- Selecting contingency projects for the active program.

Projects that have been removed from the program due to lack of accomplishment could be considered for contingency funding. Such projects would not remain eligible for contingency funding indefinitely, but would be active for some period following removal from the program. If the projects are not accomplished during this period, they will be removed from the program without consideration of the reason for delay or future schedule. Those projects are welcome to re-apply during future calls for projects.

Additional contingency projects include CMAQ–eligible, ready to go projects currently funded with other sources, or the creation of a flexible regional program such as Free Transit service on air pollution action days.

CMAQ Program Management- Comments and Recommendations

For some time CMAP staff and agency implementers have been discussing various strategies to more effectively and efficiently program and spend CMAQ funds. Central to the discussion has been the concern of an increasing unobligated balance and the potential that existing CMAQ funding may lapse. CMAP Staff recently proposed several Program Management options to try and address the current situation. Staff recommendations considered tools used by other MPO's. However, there was no consideration of assisting the improvement / streamlining of the federal project development process nor were there any recommendations to deal with the immediate issue of unobligated balances. In response to CMAP staff recommendations, the District 1 County Engineers met to discuss the issue. The following are both near term and longer term recommendations.

Follow a Transparent Process

Request that this discussion and decisions move forward through the well-established and familiar CMAP Committee structure. There are several concerns/ issues as noted below that are best addressed at the appropriate Committee level. Start with the CMAQ Project Selection Committee and then progress through the CMAP committee hierarchy.

Near Term:

1. Need clarification/ confirmation of the true level of unobligated balances and actual potential lapses and timeframes. A review of information provided by CMAP shows unobligated balances, in some cases significant balances, for projects already completed or for phases of a project not programmed until the out-years of the Program. It appears that the unobligated balances in CMAP's spreadsheet are the difference between the program (or "ask") amount and the actual obligation as authorized/ approved via the joint agreement process. As an example, if Phase I engineering is programmed at $100,000 and the actual, negotiated fee ends up being only $80,000, CMAP includes the $20,000 as unobligated under the implementer's project budget. The County Engineers disagree that the $20,000 difference be carried or shown as unobligated by the implementer. We believe procedures need to be in place to account for these differences between "programmed" and actual amounts and that the differences be reprogrammed. CMAP staff has indicated that potentially $258M in CMAQ funds are at risk of lapsing. The County Engineer's consulted with IDOT-OPP and was advised that according to their records, $102M could potentially lapse in September, 2013 and another $80M in September, 2014 if no further obligations occur during this time frame. However, it appears that that at current obligation rates and with the accounting of recent and anticipated FTA transfers that this may not be the issue it once was. There is a significant disparity between CMAP figures and that of IDOT-OPP that must be fully reviewed.
2. Program new projects/phases at 100% CMAQ; at least initially to reduce the "true" unobligated balance.
3. Re-program active CMAQ projects/ phases at 100%; again initially to reduce the true unobligated balance.
4. Continue to advance fund projects that are ready to move forward. Inventory project sponsors to identify potential projects that can be advanced.
5. Query B-List project sponsors for possible improvements that can be brought forward.

Long Term:

1. Petition FHWA to perform a process review of the current project development/ approval procedures under their Everyday Counts Initiative.

2. Allow LA's to proceed with engineering while agreements/ audits are being processed with no loss in potential federal funding; allow the LA's to "front" the local match. Or, if LA's elect to start engineering/ROW prior to federal authorization, then future phases could be funded at a higher federal share.
3. CMAP staff's recommendation cited San Francisco Bay Area's MPO and their use of Congestion Management Agencies with direct allocation of CMAQ funds. This strategy has proven to be extremely successful for the Bay Area. Perhaps there is merit to exploring a similar arrangement in NE IL through the various Councils of Mayors. The PL's have already been integrated into the CMAQ process and there is precedent for their programming/ managing projects through the STP program.

From: Pitstick, Mark <PitstickM@RTACHICAGO.ORG>
Sent: Monday, January 23, 2012 1:53 PM
To: Holly Ostdick
Cc: Doug Ferguson; Ross Patronsky; Patricia Berry
Subject: Comments on CMAQ Program Obligations and Tardy Projects

Holly, et al,

As a follow-up to the CMAQ discussion at the CMAP Transportation Committee meeting last Friday, my previously submitted comments are summarized and repeated below:

In mid December, CMAP staff cancelled the extra December 2011 meeting of the CMAQ Committee that was intended to address the lack of progress on 48 previously programmed projects. CMAP staff's explanation for cancelling that meeting was as follows:

Staff is not recommending removal of any projects since all projects had indicated some movement toward implementation.

To which my response to the CMAQ Committee and CMAP staff was as follows:

I understand that it's not easy to single out projects for removal, but that doesn't mean that our problem just disappears. We still have 48 projects (or project phases) that were supposed to get obligated in 2011, and I do not recall that the CMAQ PSC has yet given these projects another one time move.

Given that our next meeting is now scheduled for February 9, 2012, and we have additional meetings scheduled in April and May, I suggest that we use those meetings to begin addressing those four dozen tardy projects. I recommend that staff start by grouping these projects according to the severity of the delay. According to the severity, we can then invite the project sponsors to come to the meetings to explain how they are advancing each project. For example, projects that are scheduled for a spring letting would presumably get a pass, as would projects that requested and received additional funding in the 2012-2016 program (for now). But project sponsors that just keep using the same excuse (reason for delay), would be asked to appear at the February meeting to testify.

Yes, it might take a while. But that's the meaning of "active program management." We actually have to do the work of managing the program.

Nobody on the CMAQ Committee or from CMAP staff responded to my comments.

On the same day that the December CMAQ Committee meeting was cancelled, CMAP staff distributed their response to the request from the Transportation Committee. That response is the same as the materials included for the meeting last week, but with one important distinction. The new materials omit the Staff Recommendation section. In addition to the nice CMAQ background write-up, summary of current polices here and elsewhere, and the description of additional program management options, the previous version included three recommendations:

1. Replace the existing obligation sunset with an accomplishment sunset
2. Establish an obligation goal
3. Use a variable local match.

All of these recommendations have some merit, but they don't immediately address the tardy projects that have already been given a generous amount of time to get moving, as well as at least one opportunity to adjust the project schedule. My response to CMAP staff in December regarding their summary and recommendations was as follows:

This is a very nice write-up. It does a good job of capturing the issues, summarizing what we have already done, and what we could/should do. I have two comments/questions regarding the Staff Recommendations section that might warrant some additional attention at the appropriate time (i.e., the next Transportation and CMAQ Committee meetings):

1. Establish an Obligation Goal - This recommendation acknowledges the troubling situation that if we do better in spending CMAQ over the next

few years, this will result in a decrease in other federal funds for the region. I know CMAP is trying to address the 55/45 split with performance-based evaluation criteria. But let's assume that takes several years to address. Then why bother cleaning out the CMAQ unobligated balance? This is a rhetorical question, but we need to come up with a straight-forward explanation of why we should still pursue this.

2. Use a Variable Local Match - I am all in favor of this. But I can only envision that this would be applied to future projects, which would not really help our current situation (especially if we are soon designated as being "in attainment" and don't get any new CMAQ funds for a while). How could we apply this to existing projects? The only thing I can envision is if we now award 100% federal funding for the construction phase of some projects - as an award for good behavior. We would need to do this across the board, because there aren't many large projects or projects without local match (except for Clark/Division, which we already addressed).

The response from CMAP staff to my comments was to drop the recommendations section from the write-up - which is not very helpful.

Please let me know if you have any questions about my comments.

Thanks
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From: steveschlickman@gmail.com on behalf of Steve Schlickman <sschlick@uic.edu>
Sent: Monday, January 30, 2012 11:39 AM
To: Holly Ostdick
Cc: Peter Skosey; Randy Blankenhorn
Subject: Comments for the CMAQ Process Review by the Coordinating Committee

I hope this is not too late to consider. Sorry for missing the deadline but I was coordinating with Peter Skosey at MPC on a joint coment. Here it is:

Northeastern Illinois has the second highest backlog of CMAQ projects in the nation and faces the loss of millions in federal funding as a result. Clearly the process for allocating and spending CMAQ dollars is broken. CMAP staff has stated that the CMAQ committee has not been able to resolve this dilemma. Furthermore, the Transportation Committee has been unable to address the matter over the three years that it has been an issue. Our sense is the CMAQ Committee membership is primarily made up of CMAQ recipients who are hard pressed to make procedural changes that might take funding away from one of them and give it to another. Similarly, the Transportation Committee has a large number of CMAQ recipients as well and is too large to hash out the details of a process correction. We would encourage CMAP staff to put their own recommendation on the table. After the Coordinating Committee provides input, we strongly urge staff to return to the Transportation Committee with a specific recommendation for a change to the process. If the recommendation is not sufficiently specific the Transportation Committee should appoint a task force comprised of a majority of non-CMAQ recipients to develop a recommendation for fixing the process. Input from all CMAQ recipients who wish to express their opinion and concerns should be heard by that task force.

Sincerely,

Steve Schlickman UIC UTC
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Steve

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