


Local Agency Lake County Division of Transportation	L O C A L A G E N C Y	 Illinois Department of Transportation Engineering Services Agreement For Federal Participation	C O N S U L T A N T	Consultant Delcan Corporation
County Lake				Address 650 E. Algonquin Road, Suite 104
Section 09-00268-08-TL				City Schaumburg
Project No. -----				State IL
Job No. -----				Zip Code 60173
Contact Name/Phone/E-mail Address Tony Khawaja 847-377-7400 dot@co.lake.il.us	Contact Name/Phone/E-mail Address Joseph Brahm 847-925-0120 j.brahm@delcan.com			

THIS AGREEMENT is made and entered into this _____ day of _____, 2009 between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the PROJECT. Federal-aid funds allotted to the LA by the state of Illinois under the general supervision of the Illinois Department of Transportation (STATE) will be used entirely or in part to finance engineering services as described under AGREEMENT PROVISIONS.

Project Description

Name	Lake County Passage Phase 3	Route	Various	Length	Structure No.
Termini	_____				

Description: Provide design and integration services for the Phase 3 Lake County Passage system development in accordance with the Schedule A Scope of Work.

Agreement Provisions

I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance, in accordance with STATE approved design standards and policies, of engineering services for the LA for the proposed improvement herein described.
2. To attend any and all meetings and visit the site of the proposed improvement at any reasonable time when requested by representatives of the LA or STATE.
3. To complete the services herein described within 730 calendar days from the date of the Notice to Proceed from the LA, excluding from consideration periods of delay caused by circumstances beyond the control of the ENGINEER.
4. The classifications of the employees used in the work should be consistent with the employee classifications and estimated man-hours shown in EXHIBIT A. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are indicated in Exhibit A to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
5. That the ENGINEER is qualified technically and is entirely conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated herein.
6. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of work by the STATE will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or for clarification of any ambiguities.
7. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by the ENGINEER and will affix the ENGINEER's professional seal when such seal is required by law. Plans for structures to be built as a part of the improvement will be prepared under the supervision of a registered structural engineer and will affix structural engineer seal when such seal is required by law. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the STATE.
8. That the ENGINEER will comply with applicable federal statutes, state of Illinois statutes, and local laws or ordinances of the LA.

9. The undersigned certifies neither the ENGINEER nor I have:
- employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for me or the above ENGINEER) to solicit or secure this AGREEMENT,
 - agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
 - paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for me or the above ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
 - are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
 - have not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
 - are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (e) and
 - have not within a three-year period preceding this AGREEMENT had one or more public transactions (Federal, State or local) terminated for cause or default.
10. Scope of Services to be provided by the ENGINEER are included as Schedule A.

II. THE LA AGREES,

- To furnish the ENGINEER all presently available survey data and information
- To pay the ENGINEER as compensation for all services rendered in accordance with this AGREEMENT, on the basis of the following compensation formula. The Total compensation for this shall not exceed **\$2,212,000.00**.

Cost Plus Fixed Fee CPFF = 14.5%[DL + R(DL) + OH(DL) + IHDC]

Where: DL = Direct Labor
 IHDC = In House Direct Costs
 R = Complexity Factor
 OH = Consultant Firm's Actual Overhead Factor

- To pay the ENGINEER using one of the following methods as required by 49 CFR part 26 and 605 ILCS 5/5-409:

With Retainage

- Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to 90% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- Final Payment** – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and the STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER. For the purposes of this Agreement, LA and the State shall provide any comments or exceptions to the Engineer's reports within 20 business days following submission of the report in question. Failure to comment within this time frame shall conclusively indicate acceptance of said report by LA and the State. This same time frame shall apply upon any resubmission of a report by the Engineer following the provision of comments by LA and the State.

Without Retainage

- For progressive payments** – Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- Final Payment** – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and STATE, a sum o money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

4. The recipient shall not discriminate on the basis on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31U.S.C. 3801 et seq.).

III. IT IS MUTALLY AGREED,

1. That no work shall be commenced by the ENGINEER prior to issuance by the LA of a written Notice to Proceed.
2. That tracings, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LA and that basic survey notes, sketches, charts and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request, to the LA or to the STATE, without restriction or limitation as to their use. Notwithstanding the above, the ENGINEER shall be entitled to reuse any work product produced pursuant to this Agreement, provided that the LA and the STATE shall be responsible for any liabilities that arise in connection with such reuse.
3. The LA acknowledges that the ENGINEER will utilize and/or provide as part of its work product software (the "Software") which is currently owned either by Delcan or a third party. The Engineer agrees to grant the LA a royalty-free, nonexclusive, nontransferable, personal, irrevocable, perpetual, license including access to all source codes and readable documentation to reproduce; use; modify; recompile; review; evaluate; maintain; upgrade or reinstall the Software, but only to the extent necessary to manage, maintain, operate, develop, and improve the transportation systems within the geographical boundaries of Lake County. This includes the use of the Software by IDOT and other Lake County municipalities to maintain and/or operate the transportation system in Lake County. The LA agrees to require third parties who wish to obtain technical information, including but not limited to, all technical documents, software documentation and source code regarding the Software to execute a Confidentiality Agreement, marked and attached as Schedule B, prior to the LA disclosure of any information. The LA shall not be restricted in any way from releasing information, including proprietary information, in response to a subpoena, court order, or other legal process but shall promptly notify ENGINEER in writing of the demand for information before the LA responds to such demand. Notwithstanding the forgoing, any Commercial Off the Shelf Software (COTS) provided to the LA through this agreement shall be subject to the terms and conditions set forth in the COTS license agreements.
4. That all reports, plans, estimates and special provisions furnished by the ENGINEER shall be in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE, it being understood that all such furnished documents shall be approved by the LA and the STATE before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.
5. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall not be construed to relieve the ENGINEER of any responsibility for the fulfillment of this agreement.
6. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General and the STATE; and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the STATE for the recovery of any funds paid by the STATE under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
7. The payment by the LA in accordance with numbered paragraph 3 of Section II will be considered payment in full for all services rendered in accordance with this AGREEMENT whether or not they be actually enumerated in this AGREEMENT, with the exception of payment for additional work which is requested by LA and in relation to which it is agreed between the parties that additional compensation will be paid.
8. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LA, the STATE, and their officers, agents and employees from all suits, claims, actions or damages of any nature whatsoever resulting therefrom. These indemnities shall not be limited by the listing of any insurance policy.

9. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any, from soil survey and subsurface investigation with the understanding that all such material becomes the property of the LA. The LA will be responsible for reimbursement of all eligible expenses to date of the written notice of termination. Furthermore, this Agreement may be terminated by the Engineer in the event that LA is in material breach of its obligations hereunder, provided that the Engineer first provides 30 days written notice of its intentions and also provided that said breach has not been remedied within the 30 day notice period. LA acknowledges and agrees that the Engineer cannot warrant the fitness of any work that is incomplete due to early termination or suspension of the work, or that is altered, revised, amended or modified without the Engineer's knowledge and consent or used for any purpose other than that for which it was originally intended.
10. This certification is required by the Drug Free Workplace Act (30ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the State unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to, suspension of contract or grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the State for at least one (1) year but no more than five (5) years.

For the purpose of this certification, "grantee" or "contractor" means a corporation, partnership or other entity with twenty-five (25) or more employees at the time of issuing the grant, or a department, division or other unit thereof, directly responsible for the specific performance under a contract or grant of \$5,000 or more from the State, as defined in the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

- a. Publishing a statement:
 - (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
 - (2) Specifying the actions that will be taken against employees for violations of such prohibition.
 - (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
 - (a) abide by the terms of the statement; and
 - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.
- b. Establishing a drug free awareness program to inform employees about:
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's or contractor's policy of maintaining a drug free workplace;
 - (3) Any available drug counseling, rehabilitation and employee assistance program; and
 - (4) The penalties that may be imposed upon an employee for drug violations.
- c. Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
- d. Notifying the contracting or granting agency within ten (10) days after receiving notice under part (B) of paragraph (3) of subsection (a) above from an employee or otherwise receiving actual notice of such conviction.
- e. Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by,
- f. Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.
- g. Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

11. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of DOT assisted contracts. Failure by the ENGINEER to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LA deems appropriate.

12. In the event the ENGINEER fails to meet any of its contractual obligations, as set forth in this AGREEMENT, then the LA, at its option, may consider the AGREEMENT as canceled effective with the delivery of written Notice of Termination for Cause to the ENGINEER, and the ENGINEER shall have no further claims or rights against the LA except as set forth herein. The LA may, as additional remedies, and without prejudice to or waiver of any other right or remedy which it possesses hereunder or as a matter of law, and after delivering a Notice of Termination for Cause to the ENGINEER, secure services from any other available source and any reasonable cost resulting as damages incurred by the LA due to the negligence of the ENGINEER shall be charged back to the ENGINEER, or the LA may deduct any such cost from any payments due or to become due ENGINEER, if any. In addition to any difference in cost for services, incurred by the LA, the ENGINEER shall pay the LA for any costs, fees, or expenses, including administrative, engineering and legal expenses incurred by the LA due to the failure of the ENGINEER to meet such obligations. The foregoing costs, fees and expenses, may, at the direction of the LA, be deducted from any sums remaining due for services properly performed prior to the effective date of the cancellation and termination. The ENGINEER's total liability to the LA under this paragraph shall not exceed \$250,000.

A Notice of Termination for Cause may be delivered to the ENGINEER upon the occurrence of any of the following:

- a. If the ENGINEER becomes insolvent, commits any act of bankruptcy, makes a general assignment for the benefit of creditors, or becomes the subject of any proceeding commenced under any statute or law for the relief of debtors;
- b. If a receiver, trustee or liquidator of any of the property or income of the ENGINEER shall be appointed;
- c. If the ENGINEER shall fail to perform the scope of services, or any part thereof, with the diligence necessary to maintain its progress and compete the scope of services as prescribed by the time schedule and shall fail to take such steps as reasonably directed by the LA to remedy such failure within thirty (30) days after written notice thereof from LA;
- d. If the ENGINEER shall violate any of the terms, provisions, conditions or covenants contained in this Agreement and shall fail to take such steps as reasonably directed by the LA to remedy such default within Thirty (30) days after written notice thereof from LA.

13. For greater certainty, the ENGINEER shall have no obligation to provide services where funds to pay compensation for such services are not available and/or approved, except as required pursuant to Section I.6.

14. Hardware purchased under this agreement will be invoiced to the LA with no mark up by ENGINEER.

Executed by the LA:

Lake County

(Municipality/Township/County)

ATTEST:

By: _____

Clerk

By: _____
Title: _____

(SEAL)

Executed by the ENGINEER: Delcan Corporation

ATTEST:

By: _____
Title: _____

By: _____
Title: _____

INTRODUCTION

This agreement provides for engineering services to design and integrate upgrades to the Lake County Passage Program

The work will be accomplished as detailed in the following 8 tasks.

- TASK 1 Program and Project Management
- TASK 2 ATMS Phase 3 System Enhancements
- TASK 3 Change Control Board
- TASK 4 Communications and Field Element Design & Integration Support
- TASK 5 Network Equipment
- TASK 6 System Maintenance
- TASK 7 Support Long Term Passage Planning
- TASK 8 Traffic Signal Timing

Detailed task descriptions are provided in the following sub-sections

Notes:

- All project reports, documents, manuals, and training materials will be delivered in both electronic and hardcopy formats. Lake County will be provided with up to 5 draft copies and 5 final copies of all key document deliverables unless otherwise noted or agreed by both parties.

TASK 1: PROGRAM AND PROJECT MANAGEMENT

PURPOSE:

The purpose of this task is to help LCDOT coordinate the work and implementation of the Lake County Passage program upgrades. These activities will help the project to maintain its schedule, stay within budget and ensure that all tasks are completed properly. The following outlines the anticipated work items included in this task.

INPUTS:

- Document set from the Lake County TMC Feasibility Study and Implementation Plan.
- Documents from Phase 1 and 2 design and deployment.
- Delcan Project Management Information System.
- Regular updates from all members of the project team concerning work completed and any outstanding issues.
- This Scope of work.
- Biweekly status meetings.
- Outputs from previous phase work.

ACTIVITIES:

- Maintain project schedule, budget and scope.

- Coordinate and manage day-to-day project activities with the Delcan Team and the client project team.
- Provide project invoices and status reports.
- Continuously monitor and track project schedules, budgets and critical path items. To the extent possible, anticipate potential problems so they can be addressed prior to causing unrecoverable damage to the project schedule, budget or scope.
- Work closely with the LCDOT project management team to resolve any identified issues.
- Work with LCDOT and IDOT to identify, prioritize and track potential system enhancements to be included in Task 2 or future phases of system development.
- Work with LCDOT and IDOT to promote the regional program and procure future system funding allocations.
- Work with LCDOT in coordinating project details with the local agencies including meeting preparation and attendance.
- Work with LCDOT to facilitate the development of interagency agreements as needed for the project.
- Support ongoing funding request efforts.

DELIVERABLES TO LAKE COUNTY:

- Monthly status reports on progress of the project with potential problems highlighted.
- Monthly invoices detailing work accomplished against anticipated progress.
- Minutes of meetings between the LCDOT and Delcan, summaries of meetings with other interests.
- Baseline project build schedule and applicable schedule updates as well as cost reports with any problems explained and solutions proposed.
- Correspondence relevant to project.

ASSUMPTIONS

- The budget provided under this task is based on the anticipated schedule and a two year project life. Delays in this schedule outside of Delcan's control may add to project management costs.
- The project management budget assumes the program proceeds in accordance with this Scope of Work. Significant deviations from this program plan may affect project management costs.

TASK 2: ATMS PHASE 3 SYSTEM ENHANCMENTS*PURPOSE:*

The purpose of this task is to design, develop and integrate Phase 3 upgrades into the Lake County Passage ATMS. LCDOT has expressed interest in adding several new functional components to the ATMS. In addition, LCDOT anticipates that they will identify other desired modifications as they continue to use the ATMS. Under this Task, LCDOT will issue task orders for Delcan to review, design and deploy ATMS upgrades. Typically, system upgrades will be developed under two Task Orders. First LCDOT will issue a Task Order to review and provide a preliminary budget and design for a potential upgrade or upgrades. Under this Design Task Order

Delcan will provide LCDOT with a write-up, and possibly a presentation for larger tasks, describing what would be required to make the requested changes, what it would cost and provide a potential schedule for deployment. Based on the results of the Design Task Order, LCDOT may choose to issue an Upgrade Task Order to develop and deploy the upgrade as outlined in the Design Task Order.

INPUTS:

- This Scope of Services
- Lake County TMC Study and Implementation Plan Document Set
- Initial System Requirements Document and deferred requirements
- Inputs from LCDOT and other stakeholders
- Results of Design Task Orders

ACTIVITIES TO BE COMPLETED BY DELCAN:

The list below identifies several items that Lake County would like to consider for upgrades to the ATMS. It is understood that LCDOT may not be able to deploy all these enhancements within the project budget. Upon execution of this agreement, one of the first Task Orders will be to help LCDOT review and prioritize these potential enhancements. In order to optimize LCDOT's return on their investment, many of these enhancements will be based on the reuse of software from other Delcan systems. Some of these upgrades are currently under development on other systems. As a result, scheduling, and prioritizing of these enhancements will consider how to make the best use of upgrades developed under other contracts.

Potential system enhancements:

- Operator instant messaging
- Maintenance logging system enhancements
- Potential PDA based traveler information system
- Integrate additional detection types
- Email notifications to the public
- Additional CAD interfaces
- Possible modifications to ETSB CAD interface based on future changes to the CAD system
- Potential streaming video to the web (internal and/or external)
- Enhanced GCM interface as the GCM functions change
- Possible integration of probe data from the GCM
- Web based city interface that allows cities in the county to access the system over the internet.
- Other signal system related enhancements
- Potential AVL integration
- Potential integration with other municipalities
- Implement wireless options for western Lake County
- Integrate HAR beacon control
- Integrate new encoders / decoders and CCTV
- Other upgrades as defined as Phase 1b or Phase 2 in the original requirements matrix
- Other new upgrades or changes as authorized by LCDOT

Each Task Order will include a clear definition of the work to be performed, clear and defined deliverables and a task budget. Task Orders that include the deployment of system upgrades will include a description of acceptance criteria for the upgrade. All Task Orders will be approved by the County Traffic Engineer or a LCDOT designee assigned in writing by the County Engineer or County Traffic Engineer.

Delcan will be compensated for work completed under this task on a time and materials basis in accordance with the terms of this contract. Delcan will not be authorized to exceed the budget limits defined in a Task Order without prior written approval from the County Traffic Engineer or his designee.

Upon the Request of LCDOT, Delcan will be authorized up to 8 hours to put together a Task Order. Delcan will not expend more than 8 hours developing a Task Order without prior written approval from the County Traffic Engineer or his designee.

DELIVERABLES TO LAKE COUNTY:

- Draft and final Task Orders in Word format.
- Deliverables as defined in individual Task Orders.
- Tested and deployed system upgrades as defined in Upgrade Task Orders.
- Acceptance criteria for system Upgrade Task Orders.
- System documentation upgrades as defined with each Upgrade Task Order.
- Training for system upgrades as defined in individual Task Orders.

ASSUMPTIONS:

- Upgrades will typically be designed and deployed in groups to improve build efficiency.
- Builds will be coordinated with LCDOT through the Change Control Board (CCB) as defined in Task 3.
- Minor system enhancements suggestions will continue to be recorded and tracked through the LCDOT Maintenance Log.

TASK 3: CHANGE CONTROL BOARD (CCB)

PURPOSE:

It is important that modifications are deployed in a coordinated and structured manner. The CCB process helps to ensure that upgrades are being deployed in the most cost effective fashion and changes are controlled and tracked. This also minimizes the chances of having significant operating problems as upgrades are being deployed and tested.

Through the CCB, minor system enhancements will be prioritized and grouped with other minor enhancements or significant upgrades when appropriate. Minor modifications approved by the CCB will be assigned to a software build and become part of an Upgrade Task Order under Task 2.

INPUTS:

- Maintenance log entries
- Draft Task Orders from Task 2
- Input from LCDOT and Delcan CCB members
- Deferred requirements from the Phase 1 ATMS deployment

ACTIVITIES TO BE COMPLETED BY DELCAN:

- Delcan will coordinate CCB meetings on a bi-monthly basis
- Appropriate Delcan staff will attend each CCB meeting.
- Delcan will update the status of maintenance log entries based on the conclusions from the CCB.
- Delcan will assign system changes to system builds based on the input from the CCB.

DELIVERABLES TO LAKE COUNTY:

- Updated maintenance log status.
- Input to Upgrade Task Orders developed under Task 2

ASSUMPTIONS

Typically CCB meetings will be held bi-monthly; however, they may be mutually adjusted as needed to support the level of activity at any given time as long as the total number of CCB meetings does not exceed 12 for the term of the contract.

TASK 4: COMMUNICATIONS AND FIELD ELEMENT DESIGN & INTEGRATION SUPPORT*PURPOSE:*

This task includes the preparation of plans, specifications and estimates (PS&E package) for the installation of the Phase 3 field communications, ITS elements and signal design. Delcan will base the construction plan format on the Phase 2 PS&E. All relevant IDOT and County standards will be used, including the design standards contained in Chapter 11 of the Lake County *Highway Access Regulation Ordinance*. The final plans developed will be thorough and detailed, with multiple system block diagrams, fiber assignment and splicing diagrams, and enough equipment details to ensure a comprehensive design package on which accurate contractor bids can be made.

INPUTS:

- Base Maps in MicroStation format
- Phase 1 ITS deployment PS&E package
- Phase 2 ITS deployment PS&E package
- Lake County TMC Study and Implementation Plan Document Set.
- Document set from the Lake County TMC Feasibility Study and Implementation Plan.
- Sample LCDOT and IDOT plan sets provided by the agencies.
- Aerial photos and GIS files provided by LCDOT.
- IDOT and LCDOT design and drafting standards.

ACTIVITIES TO BE COMPLETED BY DELCAN:

Delcan will design the Phase 3 communications infrastructure and number of field elements identified in Exhibit B. The tasks are grouped into the following:

- Gather and assess background information required for the system design.
- Confirm existing equipment in the field through visual sight inspection
- Develop a detailed communications design for Phase 3 with consideration for the existing design and the long term implementation.
- Evaluate HAR and CCTV locations.
- Collect survey and utility information.
- Develop project plans specifications and estimates for all Phase 3 work.
- Conduct informal 30% design review with LCDOT, IDOT, ISTHA and Cook County as appropriate.
- Build 95% PS&E for all Phase 3 communications and field element deployment.
- Build final PS&E for all Phase 3 communications and field element deployment.
- Provide support for Phase 3 integration testing in coordination with the contractor and LCDOT.
- Two sets of PS&E packages will be developed. One for a letting in late 2009 (CMAQ work) and one for a letting in 2010. However, if IDOT requires, we may need to split the CMAQ work into to PS&E projects. In this case there could be 3 PS&E packages.

DELIVERABLES TO LAKE COUNTY:

- 2-50% construction plans for IDOT and LCDOT for review and comment prior to plan set development.
- 2-95% plans for LCDOT, IDOT and ISTHA review. A total of up to 8 full size plan sets will be provided and 2 - 11X17 sets.
- 2-100% final PS&E set in hard copy and electronic format. Up to 9 full size paper sets and 1 full size mylar set will be provided, as well as a CD with the PS&E in electronic format.
- In addition to the typical PS&E package, the final PS&E packages will include: system wide fiber plan and fiber assignment details; high level system schematics; TMC schematics; and node schematic wiring/splicing diagrams.
- 2-As-built plans.

ASSUMPTIONS

- The PS&E package will be very similar to the package developed for phase 2 with the addition of signal system designs for 3 identified locations.
- The PS&E interconnect base maps will utilize LCDOT provided aerial photos used as back drops for the interconnect plans. The interconnect plans will include ROW lines based on information provided by the agencies.
- No survey work will be required for interconnect and ITS device deployment design. However, survey work may be required at three locations where signals will be upgraded through CMAQ funding.
- Interconnect plans will be provided at 1" = 50' and intersection plans will be provided at 1" = 20'.

- Intersection plans will utilize existing electronic files as base maps when available. When electronic plans are not available, existing hard copy plans will be scanned in and used as the base map back drop.
- Intersection plans will only be provided at intersections where the signals are being upgraded or new conduit or a new cabinet will be installed. For intersections that only include the installation of new equipment in an existing cabinet, 50 scale interconnect style plans will be used.
- Field element locations will be provided based on offsets and distances from fixed objects.
- The estimate is based on the number of devices and communications architecture defined as Exhibit B.
- It is anticipated that the 50% plans will be approved as to format in 3 weeks from the initial review meeting. The 95% plan review is expected to take the agencies about 3 weeks.
- Rail crossing permits will be the responsibility of the construction contractor as needed. All rail crossings will be identified and the contractor made aware in plans and specs that permits will be required and scheduled work adjusted as required.
- CCTV installations will be based on the same system and specifications and similar details as the previously installed CCTVs. Some new mounting details are expected.
- Model 332 [Type 170] controller cabinets may be used if they are deemed to be the most appropriate for the communications equipment. Any cabinets installed on IDOT systems or property will be approved by the state.
- The cost for the development of the PS&E is based on the design of the communications and number of field elements specifically identified as Phase 3 in Exhibit B. Delcan will not be required to provide more than 2 PS&E package, of 3 if required by IDOT.

TASK 5: NETWORK EQUIPMENT

PURPOSE:

This task will expand the backbone network as defined in the PS&E package created in task 4. A budget will be established for all material to be purchased. Each purchase order will be approved by LCDOT and IDOT prior to purchasing material. All of the network gear and video encoders will be procured and stored at Delcan's Schaumburg office. It will be configured there by Delcan. It will then be installed by the contractor in the field. Finally, the network components will be integrated into the existing network. Some reprogramming of existing network equipment will also be required.

INPUTS:

Phase 3 PS&E package
Existing LCDOT network diagram
Existing LCDOT network configurations

ACTIVITIES TO BE COMPLETED BY DELCAN:

- Create purchase orders for network equipment
- Review and evaluate equipment options
- Purchase network equipment
- Store network equipment
- Update LCDOT network diagram

- Configure network equipment
- Install network equipment
- Integrate network equipment with existing network

DELIVERABLES TO LAKE COUNTY:

- Updated LCDOT network diagram
- Installed and integrated network equipment
- Updated network diagram and IP addresses
- Programmed and installed video encoders

ASSUMPTIONS

- The cost for this task is based on the design of the communications and number of field elements specifically identified as Phase 3 in Exhibit B. Switches and encoders required for the CMAQ funded construction will be purchased by the construction contractor through the construction contract.
- The setup, programming and debugging of switches and encoders to support other construction contracts that were not designed in Task 4 above is not included in this task. In addition, the setup, programming and debugging of switches and encoders to support the CMAQ funded constructions will be provided through the construction contract outside this project

TASK 6: SYSTEM MAINTENANCE*PURPOSE:*

The Passage System components will require maintenance and repairs for continued proper operation. This task allows for a structured approach to providing routine maintenance and on call troubleshooting and repair. Delcan will provide monthly routine maintenance for the central ATMS and ITS communications system in accordance with the outline below. When system problems or failures occur, LCDOT will issue a Problem Ticket to Delcan. Under each Problem Ticket, Delcan will be authorized to spend up to eight hours to review the problem. Upon receipt of the Problem Ticket, Delcan will investigate the problem and either resolve the issue (if it can be fixed within the authorized 8 hours), submit a Problem Correction Plan, or assign the problem to the field Electrical Maintenance Contractor (if it is determined that the problem is related to a field device covered under their contract). While investigating a Problem Ticket, Delcan will not exceed the authorized 8 hours without prior written approval by LCDOT.

The Problem Correction Plans will describe the issue and what Delcan believes it will take to correct the problem, as well as provide an estimate on the number of hours expected. LCDOT will review Problem Correction Plans and may authorize Delcan to proceed with execution of the Correction Plan. Approval of the Correction Plans by LCDOT will authorize Delcan to spend up to the estimated hours to resolve the problem. If additional issues are identified while attempting to correct the problem, Delcan will not exceed the estimated hours without prior written approval by LCDOT.

Issues relating to ATMS functionality may be referred to the CCB for resolution and distribution in accordance with Task 3.

INPUTS:

- Installed and integrated system.
- Input from system monitoring and evaluation tools.
- Problem Tickets.
- Email notifications
- Problem Correction Plans.

ACTIVITIES TO BE COMPLETED BY DELCAN:

- Monthly system maintenance and status checks
 - Review operating system and ATMS logs looking for record errors
 - Check process status to verify all ATMS processes are running properly
 - Check disk storage reserves for process and databases
 - Monitor ATMS security and user rights
 - Review switch maintenance logs
 - Purge all counters
 - Investigate system anomalies identified during monthly reviews
 - Resolve anomalies identified during monthly review or create a Problem Ticket
- Quarterly system maintenance
 - Shutdown servers, run diagnostic and restart application
 - Apply OS patches and applications as needed
- Investigate Problem Ticket issues
- Resolve problems related to the ATMS and Passage communications backbone
- Write up Problem Correction Plans for issues that cannot be resolved within the initial 8 hour investigation of a Problem Ticket
- Assign Problem Tickets to the Electrical Maintenance Contractor for problems that appear to be related to field devices that are covered under the electrical maintenance contract
- Procure and install replacement equipment as needed and authorized by LCDOT
- May also procure additional spare components as requested and authorized by LCDOT

DELIVERABLES TO LAKE COUNTY:

- Field reviews and assessments
- Problem Ticket Resolution Reports
- Problem Correction Plans
- System problem resolutions
- Replacement parts procured under this task

ASSUMPTIONS:

- All Delcan work under this task will be reimbursed based on actual time and material spent up to the limits authorized under each Problem Ticket or approved Problem Correction Plan.
- Delcan will typically be the first to be contacted to investigate Passage System problems or failures.

- Delcan will not be required to expend any time above and beyond those specifically authorized by LCDOT to resolve system problems.
- Delcan is only required to provide maintenance as budget is available. Nothing in this agreement is interpreted to be a guarantee that the budget allocated will be sufficient to cover all annual maintenance. However, the budget was based on our best expectation.
- As long as budget is available, Delcan will respond to field maintenance problems within 48 hours of written notification from authorized LCDOT staff. If Delcan does not respond within 48 hours, the LCOT project manager may notify the Delcan project manager in writing that liquidated damages will be applied if Delcan does not respond within 24 hours of the written notification of pending liquidated damages. If Delcan does not respond within 24 hour of the pending liquidated damages notification, LCDOT may asses Delcan up to \$300 per day in liquidated damages until Delcan staff respond to the problem. LCDOT will notify Delcan in writing each day that the \$300 liquidated damage assessment is applied. If Delcan is not notified in a day, no assessment will be applied for that day.
- Response will typically mean a trip to the problem location in the field. However, some problems may be resolved or assessed from the Delcan Office. If Delcan can assess the problem from the office and provide LCDOT with an action plan to resolve the problem, this will be considered appropriate response. However most field element problems will require a trip to the field to respond appropriately.
- For clarity, response will not necessarily mean the problem is solved. However, if Delcan cannot solve the problem at the first response, they will provide LCDOT with an assessment of the issue and an action plan, or suggestion, to resolve it.
- Delcan will invoice LCDOT \$20 per month for each of the 4 Delcan field maintenance personnel assigned to the project to support communications related to field maintenance activities.

TASK 7: SUPPORT LONG TERM PASSAGE PLANNING*PURPOSE:*

The purpose of this task is to work with LCDOT and the project stake holders to provide the preliminary planning for future Passage system enhancements.

INPUTS:

- Document set from the Lake County TMC Feasibility Study and Implementation Plan.
- NET Proposal for ATMS Final Design and Integration
- CCB Meeting Notes
- Inputs from LCDOT and other stakeholders
- Items identified but not implemented under Task 2

ACTIVITIES TO BE COMPLETED BY NET:

Delcan will work with Lake County to design and update long term Passage Program plans.

DELIVERABLES TO LAKE COUNTY:

- High level Passage Program Plan update.

ASSUMPTIONS

- The level of detail provided in this Program Plan Update will be based on the time and budget provided under this Task
- Delcan will not be required to allocate more time than is budgeted under this task to complete this task.

TASK 8: TRAFFIC SIGNAL TIMING

There are three types of traffic signal timing work that are included under this task. They are divided into three sub tasks; 8A, 8B and 8C

SUB TASK 8A - LAKE COUNTY TRAFFIC RESPONSIVE PROGRAMMING FOR IDOT SYSTEMS IN ICONS

The purpose of this sub task is to help LCDOT & IDOT develop traffic responsive plans for the IDOT signal system sections running under the traffic signal software (currently ICONS) software. The scope will provide for the development and fine-tuning of the plans to ensure satisfactory operation.

INPUTS:

- Existing system detector locations and numbers
- Current time-of-day plan for starting point of traffic responsive operation

ACTIVITIES TO BE COMPLETED BY DELCAN:

The following describes activities related to this task:

Verify System detectors, graph daily plots and select Level profile values

The purpose of this is to ensure that there are adequate system detectors available for traffic responsive operation, to verify proper volume data and to graph the data and select the various Level profile numbers to select the proper timing plans.

Key activities include:

- Accessing the detector locations in the traffic signal software
- Reviewing the detector volumes to determine proper vehicle counting
- Plot each satisfactory detector to be used in the Level profile
- Selecting appropriate values from the plots for the AM, MD, PM and Free profiles

Enter all Level profile values

Delcan will input all of the parameters to build each TRS plan. Using the values derived above, all of the level profiles will be developed. To maintain consistency Level 1 will

choose Plan 1 or the Midday plan, Level 2 will choose Plan 2 or the AM plan, Level 3 will choose Plan 2 or the PM plan and Level 4 will select Free operation.

Key activities include:

- Q/A assurance checking of all parameters entered by the engineer and making sure only the test controller will be affected by the enabling of the TRS plan.

Enable the TRS plan on the test controller and monitor

Since the current version of ICONS does not allow the user to run a TRS plan in the background, each TRS plan developed will be enabled to the test controller before actually running the plan in the field.

Key activities include:

- Enable the developed TRS plan to control the Test controller.
- Monitor the test controller to ensure it is being commanded by the TOD/TRS plan command.
- Monitor the test controller event log for pattern changes everyday for 2 weeks minimum.
- Adjust parameters as needed and collect new traffic graphs to make adjustments to Level profiles and other parameters.
- Evaluate the Pattern selection as compared to the expected time-of-day pattern changes.
- Check weekend pattern changes

Enable TRS plan to Live Control Section and Monitor

At the completion of the previous task, the developed TRS plan should be operating satisfactorily. However, since it has not been used on live controllers, a subsequent monitoring period will be conducted to ensure proper operations once the plan has been enabled.

Key activities include:

- Enable the TRS plan and monitor for a minimum two week period.
- Make adjustments as necessary to ensure proper operations.

It is recommended that a procedure to periodically check all enabled TRP programs be developed. This will ensure proper signal operations and prevent incorrect timing plans from being sent to the field. Most common problems centered around failed system detectors which give misleading vehicular travel parameters to the TRS algorithms.

DELIVERABLES TO LAKE COUNTY:

Traffic responsive plan for each section or group of signals as defined by Lake County and Delcan.

ASSUMPTIONS

The following assumptions were made for the scope of work to be carried out:

- The cost is developed on a per section basis or per TRS plan developed.
- Each TRS plan will include roughly 20 or less system detectors.
- No complex TRS plans are included in this scope. The TRS plan will include a simple 4 plan (AM, MIDDAY, PM and FREE) operation.
- All system detectors are set up and functioning correctly. Delcan will provide verification of the detectors and report to Lake County any problems for resolution.

TASK 8B - LAKE COUNTY TRAFFIC SIGNAL RESPONSE PLAN - MOVE INTERSECTION

The purpose of this sub task is to produce traffic signal response plans for the Event Management portion of the Lake County Passage ATMS. The scope will provide for developing timing plans for signals that will be moved from one section to another and possibly across jurisdictional groupings between IDOT, Lake County and participating municipalities.

INPUTS:

- List of potential intersections to be recommended for moving to a different group
- Timing plans from new group that intersection is to be moved to (cycle lengths, splits and offsets of nearest intersections for matching)

ACTIVITIES TO BE COMPLETED BY DELCAN:

The following describes activities related to this task:

Copy AM, Midday, and PM peak plans for moved intersections to match new group response plan locations.

DELCAN will move or edit timing plans as needed to match the new group. This task may require developing new split times and estimating new offsets. It is assumed that no traffic counts will be collected or other analysis be done. Intersections being moved will be “matched” into the new group/section as needed and with engineering judgment.

Key activities include:

- Determining the appropriate plans (AM, Midday, and PM peak) by intersection and agency jurisdiction
- Copying plans into the appropriate plan numbers
- Make modifications to the intersections Cycle, splits and offset as required
- Perform QA checks of copied plans

Modify timing plans based on field review

Under this task, DELCAN will field review the newly matched timing plans for each location. This will be done for every peak time period AM, Midday, and PM peak. Delcan will have personnel present in the field reviewing operations and personnel in the office available to download timing changes as needed. Once satisfactory field operations are achieved, the timing plan will be considered complete.

Key activities include:

- Making appropriate timing plan modifications to ensure satisfactory operations at the initial timing plan implementation
- Proper field review by qualified engineering staff. On-street experience is necessary to ensure proper traffic signal operations.
- Having experienced staff in the office to make timing change requests from the field engineer.
- Documentation of signal operations for agency staff in the event that operations are less than standard after the task is complete.

DELIVERABLES TO LAKE COUNTY:

Updated and fine-tuned timing plans for intersections to be moved. The number of new intersection plans will be determined by the number of plans that the intersections will match up to in the new group. I.E., may match plans in AM but not the PM.

ASSUMPTIONS

ICONS will allow intersections to be in multiple groups depending on either time-of-day or type of operation or intersections can move between groups by other means in the software.

8C - LAKE COUNTY TRAFFIC SIGNAL RESPONSE PLAN DEVELOPMENT

The purpose of this task is to produce traffic signal response plans for the Event Management portion of the Lake County Passage ATMS. The scope will provide for developing timing plans for signals as recommended by the LCDOT and IDOT. The following describes each portion of the scope of work.

INPUTS:

- Determination of Response intersections versus non-response intersections
- Current timing plans and phase rotations and assignments for all intersections
- Determination of AM and PM plan locations based on agency jurisdiction

ACTIVITIES TO BE COMPLETED BY DELCAN:

Copy AM and PM peak plans for all intersections into response plan locations

Under this task, DELCAN will populate all of the timing plans into the plan numbers as defined in the design document. The AM peak plan will be copied into timing plan numbers 21 through 29 and the PM peak plan will be copied into timing plan numbers 31

through 39. Currently, ICONS does not have a copy feature. Delcan will make use of the Synchro module and the Uniform Traffic Data Format (UTDF) to copy plans. This will reduce risk of data entry error of keying timings in by hand.

Key activities include:

- Determining the appropriate plans (AM and PM peak) by intersection and agency jurisdiction
- Copying plans into the appropriate Signal Response plan numbers
- Perform QA checks of copied plans

For Non-response intersections this will require moving the current AM plan to Plan 29 and the PM Plan to Plan 39. The same QA checks will be performed.

Modify timing plans for Response Intersections

DELSCAN will develop the actual Signal Response timings for the signalized intersection included in the scope. In this task, it will be important to know the signal phasing designations used by Lake County, IDOT, and any potential local agency. For each response intersection, it will be important to have a phasing diagram that shows the numbering of signal phases by direction (east, west, etc.). The event response algorithm is based on the direction of the response intersection from the event and the appropriate plan that correlates to this direction will need to be called. At this time, it will be important to work with both Lake County and IDOT staff to make some initial determinations as to the extent the timing plans will be modified in the initial implementation. Delcan has developed an excel spreadsheet to aid in the development of the actual response plans.

Key activities include:

- Making determinations with Lake County and IDOT staff as to the extent of timing plan adjustments that will be allowed in the initial implementation
- Determining any unusual configurations, geometry, or road directions that do not conform to the design document. These will be adjusted in the next step to ensure proper timing plans are being called.
- Making timing plan revisions to increase left turn times for response plans based on the design document which defines the plan numbering by direction and whether the intersection in question is contiguous or non-contiguous or a non-diversion intersection that will be included in the coordination group (plan 29 or 39). Modify timing plan numbering as necessary to accommodate unusual conditions.
- Performing testing of the response plans. This will either be done off-line or during non-rush hour times. Simulate an incident within the ATMS system and then verify the timing plans being called. After confirming that the proper plans have been designated by the ATMS, then send plans to the controllers. View the status of the controllers in ICONS to determine that they are running the proper incident response plans and coordinating. *For the Non-response intersections this will require testing Plans 29 and 39 for any errors on operation only. At this point the non-response intersection will*

be complete.

Revise timings Based on Testing in Task 2

Under this task, Delcan will make adjustments to the timing plans to account for any potential split timing (coordination) issues or for any intersections that do not conform to a standard east-west or north-south configuration. This will be accommodated in either the intersection timings or the ATMS software tables as needed. Final testing will then be done.

Key activities include:

- Make split adjustments for any intersections that experience coordination errors in Task 2 testing.
- Make timing plan modifications for any plans not being correctly called due to unusual geometry or route directions
- Any unusual intersections will be documented for the ATMS operators. This will aid in making logical control decisions of the incident response plans. Some intersections may be required to have plan numbering that doesn't conform to the design document because of these unusual geometries or route directions.
- Re-test all changes made until satisfactory operation is achieved.

DELIVERABLES TO LAKE COUNTY:

- For response intersections - 18 timing plans numbered 21-29 and 31-39 for AM and PM incidence response to help motorists around major incidents.
- For non-response intersections – timing plans 29 and 39 to match cycle lengths and remain in coordination with response intersections.

ASSUMPTIONS:

- Current phasing and phasing rotations follow IDOT standards and are known for each intersection

8D - LAKE COUNTY TRAFFIC SIGNAL SYSTEM OPTIMIZATION

The purpose of this task is to develop optimized traffic signal timings for various signal system sections in the signal system (currently ICONS).

INPUTS:

- Identification of traffic signal system sections requiring optimization
- Existing Synchro runs if available
- Current traffic counts if available
- Lake County Staff input for expected operations, cycle lengths, time periods, pedestrian clearances and standard timing intervals for min, max, yellow and all-red parameters.

ACTIVITIES TO BE COMPLETED BY DELCAN:**Data Collection Program**

The following text briefly describes the data collection effort:

- 24 Hour (7 Day Counts) - This data will be collected using system detectors whenever possible. Otherwise, Automated Traffic Recorders (ATRs) will be placed. This data will identify peak periods and day of week traffic fluctuations.
- Turning Movement Counts - This data will be obtained during peak periods of 6:30 a.m. to 9:30 a.m.; 11:00 a.m. to 1:00 p.m.; and 3:30 p.m. to 6:30 p.m. This data will not be collected on Monday mornings or Friday afternoons unless otherwise indicated by the 24 hour ATR counts or known peak traffic flows during these time periods. Occasionally, weekend, or where possible holiday traffic periods will also be obtained as requested or necessitated by local conditions. Data obtained in the field can be directly downloaded into spreadsheets for summarizing, error checking and reporting.
- Miscellaneous Data Collection - All data described below will be obtained to properly code the modeling software.
- Special Vehicle Counts - These counts will be obtained to identify the number of heavy vehicles, buses etc. that impact the arterial under study. This information is also relevant to the Highway Capacity Software for determination of saturation flow rates. Pedestrian traffic will also be obtained where required.
- Collect Field Geometrics - This information will be obtained to properly reflect field conditions for the modeling software and to properly fine tune the model output. At a minimum, the following information will be collected:
 - Number of Approach Lanes
 - Number of Throat Lanes
 - Lane Widths
 - Lane Type
 - Approach Grades
 - Signal and Pedestrian Indications
 - Pedestrian Push-buttons
 - Crosswalks and Pedestrian Clearances
 - Left Turn Bay Storage Length
 - Link Lengths
- Determine Speed Limits
- Collect Parking Restriction Information
- Special Lane Usage - Special lanes include identification of bus lanes, reversible lanes, on-street parking in painted through lanes, etc.
- Existing Signal Phasing Sequence - Often, the modeling software will suggest new phase sequences for better coordination. Typically, these suggestions will include the implementation of lagging left turns or split phases. Ordinarily, any change of this nature to the signal sequence is not appropriate or politically feasible. However, if it is deemed to be in the best interest of traffic flow, Delcan will document any benefits for such a change.
- Existing Signal Timings - Existing signal timing parameters will be obtained. This data will include: Walk; Pedestrian Clearance; Minimum Green; Maximum Greens; Yellow; All Red; Extension; Time to Reduce; Time Before Reduction; etc. This data will provide information relative to the timing plan development effort and the fine-tuning process.

-
- Photograph Intersections - A photographic record of all intersection approaches will be taken.
 - Perform "Before Study" - The following data will be collected in the field for the "Before" Study:
 - Floating Car Field Study - This study will be conducted on the study arterial. A minimum of three runs in each direction per study period will be performed. The before study will be conducted on the existing timings contained in the controllers. The SPEEDY speed/delay utility will be used.
 - Before MOE's will be generated using the Floating Car field studies and computer models to evaluate delay, stops, fuel consumption, and vehicle emissions.

Data Analysis

This Task represents the work required to assemble all data collected above and to model actual traffic flows, driver behavior, and field conditions with the appropriate piece of software. For this project the software will include: Highway Capacity Software, Transyt, Passer, or Synchro as deemed appropriate. The following sub-tasks describe the data analysis effort in some detail that Delcan will perform.

- Enter Data into proper analysis package.
- Determine Saturation flow rates and perform capacity analysis.
- Run Optimization program - Optimization software will be used to develop cycle lengths, splits and offsets.
- Optimize computer model and Fine-tune - The computer output, as with any modeling results, must be evaluated with a keen knowledge of traffic and signal operations. It will be necessary to adjust and to re-adjust the splits until a satisfactory result is obtained that is practical and safe for field implementation.
- Reverse Engineer Final Analysis - Once the final output is settled, it will be necessary to "reverse engineer" the output into a standard input file for the appropriate traffic signal software.
- Submit Pre-Implementation Report - Prior to implementation of the timings, Delcan will submit to Lake County the proposed timings.
- Revise Timings as Required - Comments received from Lake County relative to the timing plans developed will be reflected in a revised set of timing plans.

Implementation

The implementation Task is critical in that this is the first time the public will be exposed to the timing plan design effort. It is necessary to be cognizant of this fact, but first and foremost it is absolutely necessary to be safety conscious. To this end, Delcan will never implement anything in the field without being present. The maintenance contractor will also be notified before implementation occurs. Signal operation will be quickly and thoroughly checked for safe operation. Next, split timings and side street queues will be evaluated. After the system is checked and deemed to be operating safely with the new timing plans, Delcan will fine tune the system operation by checking splits and offsets. Delcan will perform this Task.

- Set Up Master - This task will include setting up the graphics, time of day/day of week operation, communications, etc.
- Set Up Intersections - Intersection databases will be set up and downloaded to the controllers.

- Evaluate Timing Plans - The timing plans will be first evaluated to ensure safe operation.
- Fine Tune Plans for Coordination - After safety is guaranteed, the timing plans will be fine-tuned to ensure adequate side street splits and provide for better coordination.
- Calibrate System Detection - The system detection will be examined to ensure the data provided by the detectors produces suitable information for the traffic responsive database to respond to fluctuations in traffic flows by transitioning to a new and appropriate timing plan.

Evaluation

An objective evaluation of the performance of the timing plans as compared with the "before" conditions will be made. A comparison of all MOEs obtained as a result of field studies and simulation runs of the modeling software will be made. Delcan will perform this Task.

- Perform "After" Study - The following data will be collected in the field for the "After" Study:
- Floating Car Field Study - This study will be conducted on the study arterial. A minimum of three runs in each direction per study period will be performed. Again, SPEEDY will be used.

Data obtained in the above study will be compared with the data obtained from the "Before" study.

- After MOE's will be developed from the Floating Car field studies and computer models and compared to the before studies to develop a Benefit/Cost Ratio for the system implementation.
- Prepare Final Report

DELIVERABLES:

The following tasks will result in deliverable products that will be provided.

- A pre-implementation report will be submitted to Lake County and any local agency affected by the signal timing implementation prior to installing any signal timings in the field. This report will summarize all timing parameter modifications, coordinated timing parameters and the Time-of-Day, Day-of-Week schedule.
- A Final Report will be submitted to Lake County. This report will summarize the project background, project scope, methodology employed, MOE comparison results and any special recommendations and/or observations.
- A "System Documentation Notebook" and CD will be provided for each system. This notebook will consist of several volumes and is intended to provide a historical data reference to all activities undertaken by the project. This will be a "living" document and will be formatted to easily maintain a current record of all data or timing changes to the system. The "System Documentation Notebook" will include the following items:
- The Final Report will be included in the final "System Documentation Notebook".
- A summary of all data collected and inventory information - This data will be presented in a clear and concise manner and neatly bound for easy reference.

- A summary of all studies conducted - This material will include all studies conducted for each system as well as results of the "Before" and "After" studies. All information will be presented in a clear and concise manner and bound separately from the data for easy reference.
- All optimization analyses performed will be provided. This document will summarize the modifications that will be made in the field to the optimized timing outputs to fine-tune the signal coordination.
- All data, studies, and modeling input and output data files developed with computer hardware will be delivered to Lake County on a CD.

ASSUMPTIONS:

None

COST ESTIMATE OF CONSULTANT SERVICES

FIRM
PTB
PRIME/SUPPLEMENT

Delcan Corporation
Lake County TMC Implementation
Prime

DATE 03/03/09

COMPLEXITY FACTOR
OVERHEAD RATE

0.05
1.835

ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD (C)	IN-HOUSE DIRECT COSTS (D)	OUTSIDE DIRECT COSTS ^(E)	SERVICES BY OTHERS (F)	PROFIT (G)	TOTAL (C+D+E+F)	% OF GRAND TOTAL
Program & Project Mgmt.	508	34,088.19	62,551.82	907.00		0.00	14,391.46	111,938.47	5.06%
ATMS Phase 3 System Enhancements	2071	88,808.39	162,963.40	887.00		0.00	37,279.39	289,938.18	13.11%
Change Control Board	179	8,738.16	16,034.52	470.00		0.00	3,723.54	28,966.21	1.31%
Comm & Field Element Design & Int. Support	3288	124,183.42	227,876.58	5,844.00		0.00	52,796.41	410,700.41	18.57%
Network Equipment	1012	45,778.25	84,003.10	1,803.00	197,000.00	0.00	19,411.62	347,995.97	15.73%
System Maintenance	1636	74,813.12	137,282.07	1,296.00	165,000.00	0.00	31,484.12	409,875.31	18.53%
Support Long Term Passage Planning	100	6,053.83	11,108.79	163.92		0.00	2,556.24	19,882.78	0.90%
Traffic Signal Timing	4230	135,329.45	248,329.55	2,124.00			56,919.67	442,702.67	20.01%
CAD Vendors	0	0.00	0.00			150,000.00		150,000.00	6.78%
TOTALS	13024	517,792.82	950,149.82	13,494.92	362,000.00	150,000.00	218,562.44	2,212,000.00	100.00%

PREPARED BY THE AGREEMENTS UNIT

AVERAGE HOURLY PROJECT RATES

FIRM Delcan Corporation
 PTB Lake County TMC Implementation
 PRIME/SUPPLEMENT Prime

DATE 03/03/09

SHEET 1 OF 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Program & Project Mgmt.			ATMS Phase 3 System Enh			Change Control Board			Comm & Field Element Des			Network Equipment			System Maintenance		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Executive	70.00	12	0.11%	0.07	0			8	0.39%	0.27	0			4	0.12%	0.09	0			0		
Sr. Management	70.00	706	6.20%	4.34	480	94.49%	66.14	50	2.41%	1.69	40	22.35%	15.64	36	1.09%	0.77	18	1.78%	1.25	40	2.44%	1.71
Chief Engineer	66.25	140	1.23%	0.81	0			100	4.83%	3.20	40	22.35%	14.81	0			0			32	1.96%	1.30
PS-5	56.20	1938	17.02%	9.56	0			290	14.00%	7.87	32	17.88%	10.05	560	17.03%	9.57	256	25.30%	14.22	190	11.61%	6.53
PS-4	57.20	1297	11.39%	6.52	0			360	17.38%	9.94	0			332	10.10%	5.78	320	31.62%	18.09	280	17.11%	9.79
PS-3	38.26	1955	17.17%	6.57	0			570	27.52%	10.53	0			940	28.59%	10.94	160	15.81%	6.05	280	17.11%	6.55
PS2/PS1	26.19	2080	18.26%	4.78	0			300	14.49%	3.79	0			760	23.11%	6.05	120	11.86%	3.11	280	27.67%	7.25
T-4	54.96	208	1.83%	1.00	0			120	5.79%	3.18	8	4.47%	2.46	80	2.43%	1.34	0			48	4.74%	2.61
T-3	28.19	360	3.16%	0.89	0						0									240	23.72%	6.68
T-2	18.56	1807	15.87%	2.94	0			110	5.31%	0.99	19	10.61%	1.97	540	16.42%	3.05	138	13.64%	2.53	166	10.15%	1.88
T-1	18.14	720	6.32%	1.17				120	5.79%	1.05										80	7.91%	1.43
Admin	17.44	165	1.45%	0.27	28	5.51%	0.96	43	2.08%	0.36	40	22.35%	3.90	36	1.09%	0.19						
TOTALS		11388	100%	\$38.94	508	100.00%	\$67.10	2071	100%	\$42.88	179	100%	\$48.82	3288	100%	\$37.77	1012	100%	\$45.24	1636	124%	\$45.73

AVERAGE HOURLY PROJECT RATES

FIRM Delcan Corporation
PTB Lake County TMC Implementation
PRIME/SUPPLEMENT Prime

DATE 03/03/09

SHEET 2 **OF** 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Support Long Term Passage			Traffic Signal Timing									CAD Vendors					
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Executive	70.00																		
Sr. Management	70.00	82	82.00%	57.40															
Chief Engineer	66.25																		
PS-5	56.20				800	18.91%	10.63												
PS-4	57.20				285	6.74%	3.85												
PS-3	38.26				285	6.74%	2.58												
PS2/PS1	26.19				900	21.28%	5.57												
T-4	54.96																		
T-3	28.19				360	8.51%	2.40												
T-2	18.56				1000	23.64%	4.39												
T-1	18.14				600	14.18%	2.57												
Admin	17.44	18	18.00%	3.14															
TOTALS		100	100%	\$60.54	4230	100%	\$31.99	0	0%	\$0.00	0	0%	\$0.00	0	0%	\$0.00	0	0%	\$0.00

PAYROLL RATES

FIRM NAME Delcan Corporation
 PRIME/SUPPLEMENT Prime
 PTB NO. Lake County TMC Implementation

DATE 03/03/09

ESCALATION FACTOR **3.78%**

CLASSIFICATION	CURRENT RATE	ESCALATED RATE
Executive	\$90.27	\$70.00
Sr. Management	\$72.12	\$70.00
Chief Engineer	\$63.84	\$66.25
PS-5	\$54.15	\$56.20
PS-4	\$55.12	\$57.20
PS-3	\$36.87	\$38.26
PS2/PS1	\$25.24	\$26.19
T-4	\$52.96	\$54.96
T-3	\$27.16	\$28.19
T-2	\$17.88	\$18.56
T-1	\$17.48	\$18.14
Admin	\$16.80	\$17.44
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00

**PAYROLL ESCALATION TABLE
FIXED RAISES
NEW FORMULA**

FIRM NAME Delcan Corporation
PRIME/SUPPLEMENT Prime

DATE 03/03/09
PTB NO. Lake County TMC Implementation

CONTRACT TERM	<u>24</u> MONTHS	OVERHEAD RATE	<u>183.50%</u>
START DATE	<u>2/1/2007</u>	COMPLEXITY FACTOR	<u>0.05</u>
RAISE DATE	<u>11/1/2007</u>	% OF RAISE	<u>5.00%</u>

ESCALATION PER YEAR

2/1/2007 - 11/1/2007	11/2/2007 - 11/1/2008	11/2/2008 - 2/1/2009		
9	12	3		
24	24	24		

= 37.50%
= 1.0378

52.50%

13.78%

The total escalation for this project would be:

3.78%

Exhibit B: Field Devices and Equipment

	Location	Wireless	CCTV	Signal	Auto Scope	New CCTV	fiber length	GBIC	2955	c44e	c40e
System Redundancy Projects											
R1	21 (6 flags)		29	80	19		0.5	2			
R2	45 (Casey)		40	76	22		1.35	4			
R3	Sunset (131 Lewis)		15	45	5		1.5	4			
R4	22 (Quentin - 83)		19	49	5		3.5	2			
Network Expansion Projects											
E1	various	0	0	0	0	19	0		19	0	19
E2	wireless backhaul	10	0	0	0	0	0		0	0	0
E3	Lewis / 173 - YorkHouse	0	1	8	1	3	0		4	1	4
E4	137 / 173 - Wadsworth	2	0	9	0	2	0		2	0	2
E5	43 / firestation-Kates		0	9	0	4	0.4		4	0	4
E6	59 / 120	1	1	5	1	1	0		2	1	2
E7	176 / darrell	1	0	6	0	1	0		1	0	1
E8	59 / 176	1	0	4	0	1	0		1	0	1
E9	14 / LakeCook	2	1	11	1	3	1.25		4	1	4
E10	cedar lake / 60	1	1	2	0	0	0		1	0	1
E11	midlothian peterson	1	1	1	1	0	0		1	1	1
E12	midlothian / park district	1	1	1	1	0	0		1	1	1
E13	fremont center	1	1	1	1	0	0		1	1	1
E14	bonner / old rand	1	1	1	1	1	0.5		2	1	2
E15	59 / Kelsey - Roberts	2	0	3	0	1	0		1	0	1
E17	Quentin / Ensell - OldMcHenry		0	3	0	1	1		1	0	1
E18	fairfield / gilmer	1	1	0	0	0	0		1	0	1
E20	Sunset / lewis - sheridan	0	0	3	0	1	1.5		1	0	1
Network Expansion CMAQ											
C3	rollins / 59 - cedar lake	0	0	8	8	8	5		8	0	8
C3x	rollins / 59 - cedar lake	0	0	0	0	0	0		0	0	0
C4	83 / 45 - westmoreland	0	0	2	0	2	1		2	0	2
C4x	83 / 45 - westmoreland	0	0	0	0	0	0		0	0	0

Note: The budget for PS&E development and device programming is based on the number of devices listed above plus or minus 5 devices. If additional devices are needed the project budget does not include the cost for the equipment.

Exhibit B: Signal Timing

Signal ID #	INTERSECTION	Response INT.	Cost	Move Potential?	Move Cost	TRP Cost	Total	
6	Lake Cook Rd @ Arlington Hts.	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
7	Lake Cook Rd @ Weidner Rd.	No	\$343.25		\$0.00		\$343.25	0
8	Lake Cook Rd @ Raupp Blvd.	No	\$343.25		\$0.00		\$343.25	0
9	Lake Cook Rd @ Buffalo Grove Rd	Yes	\$940.69		\$0.00		\$940.69	1
10	Lake Cook Rd @ IL 83 / McHenry Rd	Yes	\$940.69		\$0.00		\$940.69	1
11	Lake Cook Rd @ Weiland Rd.	Yes	\$940.69		\$0.00		\$940.69	1
36	Lake Cook Rd @ Wal-Mart	No	\$343.25		\$0.00		\$343.25	0
12	Lake Cook Rd @ Lexington Dr.	No	\$343.25		\$0.00		\$343.25	0
13	Lake Cook Rd @ Northgate Pkwy.	No	\$343.25		\$0.00		\$343.25	0
539	IL 83 @ Hightpoint Rd / Buffalo Grove S.C.	No	\$343.25		\$0.00		\$343.25	0
540	IL 83 @ Pauline Av	No	\$343.25		\$0.00		\$343.25	0
541	IL 83 @ Buffalo Grove Rd	Yes	\$940.69		\$0.00		\$940.69	1
14	Lake Cook Rd @ Port Wine Rd.	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
15	Lake Cook Rd @ Deer Trail Court	No	\$343.25		\$0.00		\$343.25	0
16	Lake Cook Rd @ Corporate Dr. / Caribou Crossing	No	\$343.25		\$0.00		\$343.25	0
17	Lake Cook Rd @ Saunders Rd.	Yes	\$940.69		\$0.00		\$940.69	1
18	Lake Cook Rd @ I-94 West Ramp	Yes	\$940.69		\$0.00		\$940.69	1
19	Lake Cook Rd @ I-94 East Ramp	Yes	\$940.69		\$0.00		\$940.69	1
20	Lake Cook Rd @ Wilmot Rd.	Yes	\$940.69		\$0.00		\$940.69	1
459	Saunders Rd. @ Parkway North	No	\$343.25		\$0.00		\$343.25	0
460	Saunders Rd. @ Baxter Pkwy.	No	\$343.25		\$0.00		\$343.25	0
338	Saunders @ Discover Way	No	\$343.25		\$0.00		\$343.25	0
454	Deerfield Rd. @ Saunders Rd.	Yes	\$940.69		\$0.00		\$940.69	1
455	Deerfield Rd. @ I-94 West	Yes	\$940.69		\$0.00		\$940.69	1
456	Deerfield Rd. @ I-94 East	Yes	\$940.69		\$0.00		\$940.69	1
457	Deerfield Rd @ Castlewood Ln/Tennaqua Ln	No	\$343.25		\$0.00		\$343.25	0
458	Deerfield Rd @ Wilmot Rd	Yes	\$940.69		\$0.00		\$940.69	1
619	Lake Cook Rd @ Quentin Rd	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
620	Lake Cook Rd @ Deer Park Blvd.	Yes	\$940.69		\$0.00		\$940.69	1
621	Lake Cook Rd @ Plum Grove Rd.	Yes	\$940.69		\$0.00		\$940.69	1
600	Lake Cook Rd @ Hicks Rd. / IL 53	Yes	\$940.69		\$0.00		\$940.69	1
4	Lake Cook Rd @ Old Hicks Rd	No	\$343.25		\$0.00		\$343.25	0
5	Lake Cook Rd @ Wilke Rd	No	\$343.25		\$0.00		\$343.25	0
601	US 12 (Rand Rd) @ IL 53 (Hicks Rd)	Yes	\$940.69		\$0.00		\$940.69	1
598	US 12 (Rand Rd) @ Lake Cook Rd	Yes	\$940.69		\$0.00		\$940.69	1
599	US 12 (Rand Rd) @ Plum Grove Rd	Yes	\$940.69		\$0.00		\$940.69	1
525	US 12 (Rand Rd) @ Deerpark Blvd	Yes	\$940.69		\$0.00		\$940.69	1
526	US 12 (Rand Rd) @ Long Grove Rd	Yes	\$940.69		\$0.00		\$940.69	1
840	US 12 (Rand Rd) @ Access	No	\$343.25		\$0.00		\$343.25	0
527	US 12 (Rand Rd) @ Quentin Rd	Yes	\$940.69		\$0.00		\$940.69	1
431	Quentin Rd @ Rue Royale (Field Pkwy)	No	\$343.25		\$0.00		\$343.25	0
432	Quentin Rd @ Long Grove Rd	Yes	\$940.69		\$0.00		\$940.69	1
828	Quentin Rd @ White Pines Rd.	No	\$343.25		\$0.00		\$343.25	0
433	Quentin Rd @ West Cuba Rd.	Yes	\$940.69		\$0.00		\$940.69	1
434	Quentin Rd @ East Cuba Rd.	No	\$343.25		\$0.00		\$343.25	0
59	Deer Park Blvd @ Field Pkwy/Motorola Ent.	No	\$343.25		\$0.00		\$343.25	0
528	US 12 (Rand Rd) @ Cuba Rd	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
529	US 12 (Rand Rd) @ Old Rand Rd South	Yes	\$940.69		\$0.00		\$940.69	1
530	US 12 (Rand Rd) @ Pheasant Ridge/Deerpath	No	\$343.25		\$0.00		\$343.25	0
531	US 12 (Rand Rd) @ June Terrace/Home Depot (Lake Zurich Theater)	No	\$343.25		\$0.00		\$343.25	0
532	US 12 (Rand Rd) @ Ela Rd	Yes	\$940.69		\$0.00		\$940.69	1
533	US 12 (Rand Rd) @ IL 22	Yes	\$940.69		\$0.00		\$940.69	1
534	US 12 (Rand Rd) @ K-Mart Dr/Northlake Commons	No	\$343.25		\$0.00		\$343.25	0
535	US 12 (Rand Rd) @ Old Rand Rd North Ravine	Yes	\$940.69		\$0.00		\$940.69	1
536	US 12 (Rand Rd) @ Miller Rd	Yes	\$940.69		\$0.00		\$940.69	1
537	IL 22 @ Village Sq Ent/North Lake Commons	No	\$343.25		\$0.00		\$343.25	0
538	IL 22 @ Ela Rd	Yes	\$940.69		\$0.00		\$940.69	1
539	IL 22 @ Main Street West	Yes	\$940.69		\$0.00		\$940.69	1
831	IL 22 @ Old Rand Road	Yes	\$940.69		\$0.00		\$940.69	1
829	IL 22 @ Main Street East	Yes	\$940.69		\$0.00		\$940.69	1
646	IL 22 @ Buesching Rd	No	\$343.25		\$0.00		\$343.25	0
651	IL 22 @ Oakwood Rd	No	\$343.25		\$0.00		\$343.25	0
634	IL 22 @ Quentin Rd	Yes	\$940.69		\$0.00		\$940.69	1
562	IL 83 @ Busch/Checker	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
563	IL 83 @ Arlington Hts Rd	Yes	\$940.69		\$0.00		\$940.69	1
564	IL 83 @ IL 53	Yes	\$940.69		\$0.00		\$940.69	1
565	IL 83 @ Robert Parker Coffin Rd	Yes	\$940.69		\$0.00		\$940.69	1
566	IL 83 @ Aptakasic	Yes	\$940.69		\$0.00		\$940.69	1
567	IL 83 @ Hilltop Rd/Briar Crossing	No	\$343.25		\$0.00		\$343.25	0
568	IL 83 @ IL 22	Yes	\$940.69		\$0.00		\$940.69	1
617	IL 83 @ Gilmer/Oakwood Road	Yes	\$940.69		\$0.00		\$940.69	1
618	IL 83 @ Westmoreland Dr	Yes	\$940.69		\$0.00		\$940.69	1
850	Gilmer Road @ Diamond Lake Road	Yes	\$940.69		\$0.00		\$940.69	1
569	IL 53 @ Old McHenry	Yes	\$940.69		\$0.00		\$940.69	1
321	US 45-IL 21 (Milwaukee) @ Wolf Road	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
243	US 45-IL 21 (Milwaukee) @ Lakecook Road S. Ramps	Yes	\$940.69		\$0.00		\$940.69	1
244	US 45-IL 21 (Milwaukee) @ Lakecook Road N. Ramps	Yes	\$940.69		\$0.00		\$940.69	1
245	US 45-IL 21 (Milwaukee) @ Columbus Pkwy/Riverwalk Dr	No	\$343.25		\$0.00		\$343.25	0
246	US 45-IL 21 (Milwaukee) @ Inverrary Lr	No	\$343.25		\$0.00		\$343.25	0
323	US 45-IL 21 (Milwaukee) @ Deerfield Pkwy	Yes	\$940.69		\$0.00		\$940.69	1
324	US 45-IL 21 (Milwaukee) @ Busch Pkwy	Yes	\$940.69		\$0.00		\$940.69	1
447	Deerfield Pkwy @ Buffalo Grove Road	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
834	Deerfield Pkwy @ Highland	No	\$343.25		\$0.00		\$343.25	0
833	Deerfield Pkwy @ Firestation Ent.	No	\$343.25		\$0.00		\$343.25	0

\$12,353.65

\$15,773.16

\$18,938.48

\$17,654.54

\$14,997.60

\$10,637.40

449	Deerfield Pkwy @ Busch Pkwy	Yes	\$940.69		\$0.00		\$940.69	1
442	Weiland Rd @ Aptakisc Tripp Schoo	No	\$343.25		\$0.00		\$343.25	0
443	Buffalo Grove Rd @ Thompson	No	\$343.25		\$0.00		\$343.25	0
439	Aptakisc Rd @ Buffalo Grove Rd	Yes	\$940.69		\$0.00		\$940.69	1
440	Aptakisc Rd @ Prairie Rd	Yes	\$940.69		\$0.00		\$940.69	1
441	Aptakisc Rd @ Weiland Rd	Yes	\$940.69		\$0.00		\$940.69	1
444	Aptakisc Rd @ Bond St	No	\$343.25		\$0.00		\$343.25	0
445	Aptakisc Rd @ Barclay Blvd	Yes	\$940.69		\$0.00		\$940.69	1
446	Aptakisc Rd @ Parkway Dr	No	\$343.25		\$0.00		\$343.25	0
507	US 45 - IL 21 @ Aptakisc Rd	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
858	US 45 - IL 21 @ Audobon	No	\$343.25		\$0.00		\$343.25	0
508	US 45 - IL 21 @ Tower Pkwy	No	\$343.25		\$0.00		\$343.25	0
509	US 45 - IL 21 @ Knightsbridge Pkwy	No	\$343.25		\$0.00		\$343.25	0
510	US 45 - IL 21 @ Marriott Dr	No	\$343.25		\$0.00		\$343.25	0
511	US 45 - IL 21 @ IL 22	Yes	\$940.69		\$0.00		\$940.69	1
875	US 45 - IL 21 @ Old Half Day Rd	Yes	\$940.69		\$0.00		\$940.69	1
512	US 45 - IL 21 @ US 45 Old Half Day Rd	Yes	\$940.69		\$0.00		\$940.69	1
513	IL 21 @ Woodland Pkwy	No	\$343.25		\$0.00		\$343.25	0
514	IL 21 @ Corporate Woods Pkwy	No	\$343.25		\$0.00		\$343.25	0
871	IL 21 (Milwaukee) @ American Hote	No	\$343.25		\$0.00		\$343.25	0
519	IL 22 @ Buffalo Grove Rd	Yes	\$940.69		\$0.00		\$940.69	1
523	IL 22 @ Arboretum Wy	No	\$343.25		\$0.00		\$343.25	0
520	IL 22 @ Fire Station Time of day plans??	No	\$343.25		\$0.00		\$343.25	0
521	IL 22 @ Prairie Rd West	Yes	\$940.69		\$0.00		\$940.69	1
524	IL 22 @ Stevenson High School	No	\$343.25		\$0.00		\$343.25	0
685	IL 22 @ Barclay	Yes	\$940.69		\$0.00		\$940.69	1
614	IL 22 @ Old Half Day Rd	Yes	\$940.69		\$0.00		\$940.69	1
610	IL 22 @ Elm Oxford	No	\$343.25		\$0.00		\$343.25	0
607	IL 22 @ Riverwoods	Yes	\$940.69		\$0.00		\$940.69	1
258	IL 22 @ Westminster /Hewitt	No	\$343.25		\$0.00		\$343.25	0
259	IL 22 @ I-94 West Ramp	Yes	\$940.69		\$0.00		\$940.69	1
260	IL 22 @ I-94 East Ramp	Yes	\$940.69		\$0.00		\$940.69	1
261	IL 22 @ Lakeside Dr	No	\$343.25		\$0.00		\$343.25	0
714	US 45 @ Buffalo Grove Rd/Fairway Rd	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
294	US 45 @ Ranney Av/Commuter Parking Lot	No	\$343.25		\$0.00		\$343.25	0
295	US 45 @ Deerpath Dr	No	\$343.25		\$0.00		\$343.25	0
296	US 45 @ Evergreen Dr	No	\$343.25		\$0.00		\$343.25	0
297	US 45 @ Butterfield Rd	Yes	\$940.69		\$0.00		\$940.69	1
298	US 45 @ Oakwood Rd	No	\$343.25		\$0.00		\$343.25	0
438	Buffalo Grove Rd @ Port Clinton	Yes	\$940.69		\$0.00		\$940.69	1
288	US 45 @ IL 83	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
289	US 45 @ IL 60	Yes	\$940.69		\$0.00		\$940.69	1
290	US 45 @ Jewel/Venture/Townline Sq SC	No	\$343.25		\$0.00		\$343.25	0
291	IL 60-83 @ Diamond Lake Rd	Yes	\$940.69		\$0.00		\$940.69	1
292	IL 60/Willow Stream Rd @ IL 83	Yes	\$940.69		\$0.00		\$940.69	1
293	IL 60 @ Oak Creek Plaza/Madline Dr	No	\$343.25		\$0.00		\$343.25	0
280	IL 60 @ St. Mary's Rd	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
281	IL 60 @ W W Grainger West Ent/Deerpath Farm Ent	No	\$343.25		\$0.00		\$343.25	0
282	IL 60 @ Riverwoods Rd/Bradley Rd	Yes	\$940.69		\$0.00		\$940.69	1
283	IL 60 @ I-94 West Ramps	Yes	\$940.69		\$0.00		\$940.69	1
284	IL 60 @ I-94 East Ramps	Yes	\$940.69		\$0.00		\$940.69	1
285	IL 60 @ Saunders Rd/Field Ct	No	\$343.25		\$0.00		\$343.25	0
286	IL 60 @ Conway Farms Rd/Field Ct	No	\$343.25		\$0.00		\$343.25	0
287	IL 60 @ Lake Forest Academy Dr	No	\$343.25		\$0.00		\$343.25	0
549	US 41 Skokie @ West Park Av	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
550	US 41 Skokie @ IL 22 - no n/s lefts	Yes	\$940.69		\$0.00		\$940.69	1
551	US 41 Skokie @ Old Elm Rd	Yes	\$940.69		\$0.00		\$940.69	1
552	US 41 Skokie @ Westleigh Rd	Yes	\$940.69		\$0.00		\$940.69	1
553	US 41 Skokie @ IL 60 Kennedy	Yes	\$940.69		\$0.00		\$940.69	1
99	Park Av @ Dominick's	No	\$343.25		\$0.00		\$343.25	0
554	Half Day Rd @ US 41 N/B Ramp - NB left only	Yes	\$940.69		\$0.00		\$940.69	1
589	IL 43 @ Everett Rd	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
590	IL 43 (Waukegan) @ Gloucester Xing/Settlers Sc	No	\$343.25		\$0.00		\$343.25	0
591	IL 43 (Waukegan) @ Westleigh Rd	Yes	\$940.69		\$0.00		\$940.69	1
592	IL 43 (Waukegan) @ IL 60 (Kennedy Rd)	Yes	\$940.69		\$0.00		\$940.69	1
593	IL 43 (Waukegan) @ Deerpath Av	Yes	\$940.69		\$0.00		\$940.69	1
594	IL 43 (Waukegan) @ Westmorel Dr/Middlefork Dr	No	\$343.25		\$0.00		\$343.25	0
595	IL 43 (Waukegan) @ IL 176 (Rockland Rd)	Yes	\$940.69	Yes	\$1,429.84	\$5,247.45	\$7,617.98	1
596	IL 43 (Waukegan) @ Foster Av	No	\$343.25	Yes	\$1,429.84		\$1,773.09	0
609	IL 176 @ US 41 West Ramp	Yes	\$940.69		\$0.00		\$940.69	1
611	IL 176 @ US 41 East Ramp	Yes	\$940.69		\$0.00		\$940.69	1
615	IL 176 @ IL 131	Yes	\$940.69		\$0.00		\$940.69	1
501	IL 43 (Waukegan) @ Atkinson Av	Yes	\$940.69		\$0.00		\$940.69	1
502	IL 43 (Waukegan) @ Abbott Lab Gate 4	No	\$343.25		\$0.00		\$343.25	0
503	IL 43 (Waukegan) @ Abbott Lab Gate 1	No	\$343.25		\$0.00		\$343.25	0
504	IL 43 (Waukegan) @ Abbott Lab Gate 2	No	\$343.25		\$0.00		\$343.25	0
500	IL 137 (Buckley) @ IL 43 (Waukegan)	Yes	\$940.69		\$0.00		\$940.69	1
505	IL 43 (Waukegan) @ Martin Luther King	Yes	\$940.69		\$0.00		\$940.69	1
506	IL 43 (Waukegan) @ Baxter/Norman	No	\$343.25		\$0.00		\$343.25	0
495	IL 137 @ St. Mary's Rd	Yes	\$940.69		\$0.00		\$940.69	1
496	IL 137 @ O'Plaine	Yes	\$940.69		\$0.00		\$940.69	1
497	IL 137 @ I-94 SB Ramps	Yes	\$940.69		\$0.00		\$940.69	1
498	IL 137 @ I-94 NB Ramps	Yes	\$940.69		\$0.00		\$940.69	1
499	IL 137 @ Abbott Lab Gate 3	No	\$343.25		\$0.00		\$343.25	0
423	IL 176 @ St. Mary's	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14	1
299	IL 176 (Park Ave) @ I-94 (west ramp)	Yes	\$940.69		\$0.00		\$940.69	1
300	IL 176 (Park Ave) @ I-94 (east ramp)/Lambs Farr	Yes	\$940.69		\$0.00		\$940.69	1
301	IL 176 (Park Ave) @ Bradley	Yes	\$940.69		\$0.00		\$940.69	1
422	St. Mary's Rd @ Rockland Rd	No	\$343.25		\$0.00		\$343.25	0

425	St Mary's Rd. @ Atkinson Rd. / Terre Dr.	Yes	\$940.69		\$0.00		\$940.69	\$10,637.40	1
570	IL 60 @ Butterfield Rd	Yes	\$940.69		\$0.00	\$0.00	\$940.69		1
571	IL 60 (Townline) @ Aspen Dr	No	\$343.25		\$0.00		\$343.25		0
572	IL 60 (Townline) @ Deerpath Rc	No	\$343.25		\$0.00		\$343.25		0
573	IL 60 (Townline) @ Lakeview Pkwy	Yes	\$940.69		\$0.00		\$940.69		1
574	IL 60 (Townline) @ Hawthorn SC W Gate 3	Yes	\$940.69		\$0.00		\$940.69		1
575	IL 60 (Townline) @ Hawthorn SC Cent Gate 4	No	\$343.25		\$0.00		\$343.25		0
576	IL 60 (Townline) @ Hawthorn SC Cent Gate 5	No	\$343.25		\$0.00		\$343.25		0
577	IL 60 (Townline) @ IL 21 (Milwaukee)	Yes	\$940.69		\$0.00		\$940.69		1
578	IL 21 (Milwaukee) @ Continental Di	No	\$343.25		\$0.00		\$343.25		0
579	IL 21 (Milwaukee) @ Executive Way	No	\$343.25		\$0.00		\$343.25		0
580	IL 21 (Milwaukee) @ Hawthorne SC #2/Rivertree	No	\$343.25		\$0.00		\$343.25		0
581	IL 21 (Milwaukee) @ Hawthorne SC #6	No	\$343.25		\$0.00		\$343.25		0
582	IL 21 (Milwaukee) @ Hawthorne SC #7	Yes	\$940.69		\$0.00		\$940.69		1
606	IL 21 (Milwaukee) @ North Hollister Pkwy	No	\$343.25		\$0.00		\$343.25		0
605	IL 21 (Milwaukee) @ South Artarius Pkwy	No	\$343.25		\$0.00		\$343.25		0
470	IL 21 (Milwaukee) @ Artarius Pkwy/Gregg's Pkwy	Yes	\$940.69		\$0.00		\$940.69		1
417	Butterfield @ Hawthorne Pkwy	No	\$343.25		\$0.00		\$343.25		0
226	Phillip @ Deerpath	No	\$343.25		\$0.00		\$343.25		0
225	Phillip @ Lakeview	No	\$343.25		\$0.00		\$343.25		0
227	Lakeview @ Fairview	No	\$343.25		\$0.00		\$343.25		0
224	Hawthorne @ Lakeview	No	\$343.25		\$0.00		\$343.25	\$10,792.89	0
471	IL 21 (Milwaukee) @ Greentree/Redtop	No	\$343.25	Yes	\$1,429.84	\$5,247.45	\$7,020.54		0
472	IL 21 (Milwaukee) @ Golf Rd	Yes	\$940.69		\$0.00		\$940.69		1
473	IL 21 (Milwaukee) @ Valley Park Dr	No	\$343.25		\$0.00		\$343.25		0
474	IL 21 (Milwaukee) @ Condell Dr	No	\$343.25		\$0.00		\$343.25		0
475	IL 21 (Milwaukee) @ Rockland Rd	No	\$343.25		\$0.00		\$343.25		0
476	IL 21 (Milwaukee) @ IL 176	Yes	\$940.69		\$0.00		\$940.69		1
477	IL 21 (Milwaukee) @ Church	No	\$343.25		\$0.00		\$343.25		0
478	IL 21 (Milwaukee) @ Cook	No	\$343.25		\$0.00		\$343.25		0
479	IL 21 (Milwaukee) @ Lake	No	\$343.25		\$0.00		\$343.25		0
233	IL 21 (Milwaukee) @ Winchester	Yes	\$940.69		\$0.00		\$940.69		1
234	IL 21 (Milwaukee) @ Libertyville Fire Dept	No	\$343.25		\$0.00		\$343.25		0
630	IL 21 @ IL 137	Yes	\$940.69		\$0.00		\$940.69	\$13,186.05	1
418	Butterfield @ Allinson/Greggs	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14		1
419	Butterfield @ Huntington	No	\$343.25		\$0.00		\$343.25		0
420	Butterfield @ Golf Rd	Yes	\$940.69		\$0.00		\$940.69		1
421	Butterfield @ Crane	No	\$343.25		\$0.00		\$343.25		0
229	Butterfield @ IL 176	Yes	\$940.69		\$0.00		\$940.69		1
426	Butterfield @ Winchester	Yes	\$940.69		\$0.00		\$940.69		1
108	Butterfield @ Virginia	No	\$343.25		\$0.00		\$343.25		0
693	Butterfield @ IL 137	Yes	\$940.69		\$0.00		\$940.69		1
733	IL 137 @ Access Drive	No	\$343.25		\$0.00		\$343.25	\$11,323.90	0
247	US 45 @ Courtland	No	\$343.25		\$0.00	\$5,247.45	\$5,590.70		0
248	US 45 @ Division	No	\$343.25		\$0.00		\$343.25		0
249	US 45 @ Hawley	Yes	\$940.69		\$0.00		\$940.69		1
250	US 45 @ IL 176	Yes	\$940.69		\$0.00		\$940.69		1
251	US 45 @ University/Dunbar	No	\$343.25		\$0.00		\$343.25		0
252	US 45 @ Motorola Pkwy	No	\$343.25		\$0.00		\$343.25		0
253	US 45 @ Winchester Dr	Yes	\$940.69		\$0.00		\$940.69		1
254	US 45 @ Peterson Rd	Yes	\$940.69		\$0.00		\$940.69		1
414	Winchester @ Midlothian	Yes	\$940.69		\$0.00		\$940.69		1
416	Winchester @ Technology	No	\$343.25		\$0.00		\$343.25	\$11,667.15	0
262	US 45 @ Arbor	No	\$343.25		\$0.00	\$5,247.45	\$5,590.70		0
263	US 45 @ IL 120 (Belvidere Rd)	Yes	\$940.69		\$0.00		\$940.69		1
264	US 45 @ Center St/Deerpath	Yes	\$940.69		\$0.00		\$940.69		1
265	US 45 @ Brae Loch Rd	No	\$343.25		\$0.00		\$343.25		0
266	US 45 @ Gages Lake Rd	Yes	\$940.69		\$0.00		\$940.69		1
267	US 45 @ Washington	Yes	\$940.69		\$0.00		\$940.69		1
311	IL 83 @ Center	Yes	\$940.69		\$0.00		\$940.69		1
322	IL 83 @ Library Ln	No	\$343.25		\$0.00		\$343.25		0
312	IL 83 @ Fredrick Rd	No	\$343.25		\$0.00		\$343.25		0
313	IL 83 @ Washington	Yes	\$940.69		\$0.00		\$940.69		1
698	IL 83 @ N Lake St	Yes	\$940.69		\$0.00		\$940.69		1
721	IL 83 @ W Shorewood	No	\$343.25		\$0.00		\$343.25		0
728	IL 83 @ Brighton Ln	No	\$343.25		\$0.00		\$343.25		0
367	Washington @ Lake St	Yes	\$940.69		\$0.00		\$940.69		1
368	Washington @ Atkinson	Yes	\$940.69		\$0.00		\$940.69		1
369	Washington @ Lancer Ln/CLC	No	\$343.25		\$0.00		\$343.25		0
370	Washington @ Mainsail	No	\$343.25		\$0.00		\$343.25	\$16,459.66	0
400	Rollins Rd @ Lotus	No	\$343.25		\$0.00	\$5,247.45	\$5,590.70		0
399	Rollins Rd @ Cedar Lake	Yes	\$940.69		\$0.00		\$940.69		1
398	Rollins Rd @ Nicole	No	\$343.25		\$0.00		\$343.25		0
397	Rollins Rd @ Orchard Ln	No	\$343.25		\$0.00		\$343.25		0
396	Rollins Rd @ Claredon/East End	No	\$343.25		\$0.00		\$343.25		0
395	Rollins Rd @ Mallard Rd/Creek Drive	No	\$343.25		\$0.00		\$343.25		0
394	Rollins Rd @ Hainesville Rd	Yes	\$940.69		\$0.00		\$940.69		1
604	Rollins Rd @ IL 83	Yes	\$940.69		\$0.00		\$940.69		1
393	Rollins Rd @ shopping center	No	\$343.25		\$0.00		\$343.25		0
464	Rollins Rd @ Hook Dr	Yes	\$940.69		\$0.00		\$940.69		1
466	Rollins Rd @ N Drury Ln	Yes	\$940.69		\$0.00		\$940.69		1
603	IL 83 @ Hook Dr	Yes	\$940.69		\$0.00		\$940.69		1
624	IL 83 @ E Millstone	No	\$343.25		\$0.00		\$343.25	\$13,294.34	0
613	US 45 @ Rollins Rd	Yes	\$0.00		\$0.00	\$5,247.45	\$5,247.45		1
612	US 45 @ IL 132	Yes	\$0.00		\$0.00		\$0.00		1
616	IL 132 @ Rollins Rd	Yes	\$0.00		\$0.00		\$0.00		1
542	IL 132 @ Almond/Hutchins	Yes	\$0.00		\$0.00		\$0.00		1
543	IL 132 @ Brookside Dr	No	\$0.00		\$0.00		\$0.00		0
544	IL 132 @ Stonebrook	No	\$0.00		\$0.00		\$0.00		0

546	IL 132 @ Huntclub	Yes	\$0.00		\$0.00		\$0.00		1
547	IL 132 @ Gumee Mills SW Access	No	\$0.00		\$0.00		\$0.00		0
548	IL 132 @ Gumee Mills SE/Tri-State Pkwy	No	\$0.00		\$0.00		\$0.00		0
373	Almond @ Gages Lake	Yes	\$0.00		\$0.00		\$0.00		1
372	Almond @ Julie Ln/Warren HS	No	\$0.00		\$0.00		\$0.00		0
371	Almond @ Washington	Yes	\$0.00		\$0.00		\$0.00		1
62	Almond @ Woodland School	No	\$0.00		\$0.00		\$0.00		0
374	Washington @ White Oak	No	\$0.00		\$0.00		\$0.00		0
378	Washington @ Cemetary	No	\$0.00		\$0.00		\$0.00		0
469	Washington @ Tri-State Pkwy	No	\$0.00		\$0.00		\$0.00		0
379	Hunt Club @ Gages Lake	Yes	\$0.00		\$0.00		\$0.00		1
377	Hunt Club @ Washington	Yes	\$0.00		\$0.00		\$0.00		1
376	Hunt Club @ Orchard Valley	No	\$0.00		\$0.00		\$0.00		0
375	Hunt Club @ Dada	No	\$0.00		\$0.00		\$0.00		0
380	Hunt Club @ Grand Hunt Dr	No	\$0.00		\$0.00		\$0.00		0
381	Hunt Club @ Westbrook Ln	No	\$0.00		\$0.00		\$0.00		0
364	Hunt Club @ Stearns School Rd	Yes	\$0.00		\$0.00		\$0.00		1
365	Stearns School Rd @ North Creek	No	\$0.00		\$0.00		\$0.00		0
366	Stearns School Rd @ Dilleys	Yes	\$0.00		\$0.00		\$0.00	\$5,247.45	1
268	IL 132 @ Dilleys	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14		1
269	IL 132 @ Six Flaggs/Lawson	No	\$343.25		\$0.00		\$343.25		0
270	IL 132 @ IL 21	Yes	\$940.69		\$0.00		\$940.69		1
271	IL 132 @ O'Plaine Rd	Yes	\$940.69		\$0.00		\$940.69		1
272	IL 132 @ N 1st street	No	\$343.25		\$0.00		\$343.25		0
382	Dilleys @ Nations/Pinewood	No	\$343.25		\$0.00		\$343.25	\$9,099.27	0
639	Delaney @ US 41	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14		1
347	Delaney @ Grove	No	\$343.25		\$0.00		\$343.25		0
346	Delaney @ Porett	No	\$343.25		\$0.00		\$343.25		0
345	Delaney @ St. Paul Ave	No	\$343.25		\$0.00		\$343.25		0
344	Delaney @ Ryan	No	\$343.25		\$0.00		\$343.25		0
343	Delaney @ Sunset	Yes	\$940.69		\$0.00		\$940.69		1
348	Sunset @ Northwestern Av	No	\$343.25		\$0.00		\$343.25		0
666	Sunset @ IL 131	Yes	\$940.69		\$0.00		\$940.69	\$9,785.77	1
486	IL 137 @ US 41	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14		1
487	IL 137 @ Mississippi St	No	\$343.25		\$0.00		\$343.25		0
488	IL 137 @ Great Lakes Dr	No	\$343.25		\$0.00		\$343.25		0
489	IL 137 @ Meridian	No	\$343.25		\$0.00		\$343.25		0
490	IL 137 @ IL 131	Yes	\$940.69		\$0.00		\$940.69		1
491	IL 137 @ Lewis Av	Yes	\$940.69		\$0.00		\$940.69		1
492	IL 137 @ Ray St	No	\$343.25		\$0.00		\$343.25		0
493	IL 137 @ Illinois St	No	\$343.25		\$0.00		\$343.25		0
494	IL 137 @ IL 137 Amstutz/Lake Front	Yes	\$940.69		\$0.00		\$940.69		1
640	US 41 @ ML King Dr	Yes	\$940.69		\$0.00		\$940.69		1
641	US 41 @ Amhurst Pkwy	No	\$343.25		\$0.00		\$343.25		0
362	ML King Dr (22nd) @ Abbot	No	\$343.25		\$0.00		\$343.25		0
692	ML King Dr (22nd) @ Amstutz	Yes	\$940.69		\$0.00		\$940.69		1
518	Sheridan @ 24th	Yes	\$940.69		\$0.00		\$940.69		1
517	Sheridan @ Farragut	No	\$343.25		\$0.00		\$343.25		0
516	Sheridan @ Buckley	Yes	\$940.69		\$0.00		\$940.69		1
515	Sheridan @ "D" street	No	\$343.25		\$0.00		\$343.25		0
870	IL 131 @ Cavin	No	\$343.25		\$0.00		\$343.25	\$16,205.47	0
302	IL 131 @ 14th Street	Yes	\$940.69		\$0.00	\$5,247.45	\$6,188.14		1
303	IL 131 @ 10th Street	Yes	\$940.69		\$0.00		\$940.69		1
304	IL 131 @ IL 120	Yes	\$940.69		\$0.00		\$940.69		1
305	IL 131 @ Washington	Yes	\$940.69		\$0.00		\$940.69		1
306	IL 131 @ Brookside	No	\$343.25		\$0.00		\$343.25		0
307	IL 131 @ IL 132	Yes	\$940.69		\$0.00		\$940.69		1
308	IL 131 @ Crescent Av	No	\$343.25		\$0.00		\$343.25		0
201	Washington @ Washington Terrace	No	\$343.25		\$0.00		\$343.25		0
200	Washington @ McAree/Keller	No	\$343.25		\$0.00		\$343.25		0
184	Washington @ Lewis	Yes	\$940.69		\$0.00		\$940.69		1
199	Washington @ N Butrick	No	\$343.25		\$0.00		\$343.25		0
198	Washington @ Jackson	No	\$343.25		\$0.00		\$343.25		0
197	Washington @ West	No	\$343.25		\$0.00		\$343.25		0
196	Washington @ MLK Dr	No	\$343.25		\$0.00		\$343.25		0
195	Washington @ County	No	\$343.25		\$0.00		\$343.25		0
194	Washington @ Genesee	No	\$343.25		\$0.00		\$343.25		0
193	Washington @ Sheridan	Yes	\$940.69		\$0.00		\$940.69		1
171	IL 120 @ Pioneer Ct	No	\$343.25		\$0.00		\$343.25		0
170	IL 120 @ Keller Av	No	\$343.25		\$0.00		\$343.25		0
169	IL 120 @ Belevdere Mall	No	\$343.25		\$0.00		\$343.25		0
206	IL 120 @ Lewis	Yes	\$940.69		\$0.00		\$940.69		1
207	IL 120 @ Glen Rock	No	\$343.25		\$0.00		\$343.25		0
208	IL 120 @ Jackson St.	No	\$343.25		\$0.00		\$343.25		0
209	IL 120 @ McAlister St	No	\$343.25		\$0.00		\$343.25		0
210	IL 120 @ MLK Dr	No	\$343.25		\$0.00		\$343.25		0
211	IL 120 @ Genesee St	No	\$343.25		\$0.00		\$343.25		0
212	IL 120 @ Sheridan Rd	No	\$343.25		\$0.00		\$343.25		0
172	Grand @ Sheridan Rd	Yes	\$940.69		\$0.00		\$940.69	\$20,235.41	1

\$343,550.12 51%
Response Intersections