



## STATE/MUNICIPAL AGREEMENT FOR A LOCALLY-LET CMAQ PROJECT

Program Name: Congestion Mitigation and Air  
Quality Improvement (CMAQ)  
Sub-program #: 211

Date: August 18, 2016

I.D.: 2984-09-03/93

Project Title: Computer Optimization Traffic  
Signals

Location/Limits: 135 Locations

Project Length: N/A

Project Sponsor: **City of Milwaukee**

County: **Milwaukee**

MPO Area: SEWRPC

The signatory, City of Milwaukee, hereinafter called the Project Sponsor, through its undersigned duly authorized officers or officials, hereby requests the State of Wisconsin Department of Transportation, hereinafter called the State, to initiate and effect the transportation project hereinafter described.

23 U.S.C. 149 and Wis. Stat. 85.245 authorize the State to administer a program for the distribution of federal funds for Congestion Mitigation and Air Quality Improvement Program projects.

The authority for the Project Sponsor to enter into this agreement with the State is provided by Sections 86.25(1), (2), and (3) and Section 66.0301 of Wisconsin Statutes.

### NEEDS AND ESTIMATE SUMMARY:

All components of the project must be defined in the environmental document if any portion of the project will be submitted for approval in a federally funded program. The Municipality agrees to complete all participating and any non-participating work included in this improvement consistent with the environmental document. No work on final engineering and design may occur prior to approval of the environmental document.

Proposed Improvement - Nature of work: Describe and give reason for request: **Computer signal optimization of 135 traffic signals along various corridors in the City of Milwaukee. See list page 10.**

Need for or benefit of project: **Optimization of traffic signals will minimize vehicle emissions and reduce fuel consumption with decreased stop and idle times.**

Describe non-participating work included in the project and other work necessary to completely finish the project that will be undertaken independently by the Municipality. Please note that non-participating components of a project/contract are considered part of the overall project and will be subject to applicable Federal requirements if the project is approved in a federally funded program: **N/A.**

The Project Sponsor agrees to the following State Fiscal Year 2016-2020 CMAQ project funding conditions:

All Project Sponsors and processes, including real estate acquisition and environmental documentation, must comply with *A Sponsor's Guide to Non-Traditional Transportation Project Implementation* (Sponsor's Guide) and the current WisDOT Facilities Development Manual (FDM).

The subject project is funded with 80% federal funding up to a maximum of \$220,000 for all federally-funded project phases when the Project Sponsor agrees to provide funds in excess of the \$220,000 federal funding maximum, in accordance with CMAQ guidelines. Non-participating costs are 100% the responsibility of the Project Sponsor. Any work performed by the Project Sponsor prior to federal authorization is not eligible for federal funding. The Project Sponsor will be notified by the State when each project phase or ID is authorized and available for charging.

The project is subject to a discretionary DBE goal assessment. The Catalogue of Federal Domestic Assistance (CFDA) number for this project is 20.205 – Highway Planning and Construction.

**Project Award date: May 16, 2016**

**All Work Complete Date/ Sunset: June 30, 2022**

The subject project must be completed by June 30, 2022, and the Project Sponsor must submit a project completion certificate to WisDOT central office on or before this date. WisDOT may consider a written request to extend the completion deadline from the Project Sponsor and may approve such a request in the presence of extenuating circumstances. The written request shall explain the reasons for project implementation delay and revised timeline for project completion.

In the summary funding table below, the federal share of the total estimated cost distribution indicates the maximum amount of federal funding available to the project, to be distributed across federally-funded project phases. The final Project Sponsor share is dependent on the final federal participation, and the actual costs will be used in the final division of costs for billing and reimbursement.

<b>SUMMARY OF COSTS</b>					
<b>PHASE</b>	<b>Total Est. Cost</b>	<b>Federal Funds</b>	<b>%</b>	<b>Project Sponsor Funds</b>	<b>%</b>
<b>ID 2984-09-03</b>					
Design	\$216,000	\$172,800	80%*	\$43,200	20%*
Design Review #	\$9,000	\$7,200	80%*	\$1,800	20%*
<b>ID 2984-09-93</b>					
Participating Construction	\$42,000	\$33,600	80%*	\$8,400	20%*
Participating Construction Review #	\$8,000	\$6,400	80%*	\$1,600	20%*
Non-Participating Construction		\$0.00	\$0.00	\$0.00	100%
<b>Total Est. Cost Distribution</b>	<b>\$275,000.00</b>	<b>\$220,000.00</b>	<b>MAX</b>	<b>\$55,000.00</b>	<b>N/A</b>

\*This project has a CMAQ federal funding maximum of \$220,000. This maximum is cumulative for all federally funded project phases.

# Review costs are administered and paid for by WisDOT. WisDOT will bill the Project Sponsor for any required local match and for costs beyond the cumulative federal or state funding.

This request is subject to the terms and conditions that follow (pages 3–11) and is made by the undersigned under proper authority to make such request for the designated Project Sponsor and upon signature by the State shall constitute agreement between the Project Sponsor and the State. No term or provision of neither this State/Municipal Agreement nor any of its attachments may be changed, waived or terminated orally but only by an instrument in writing duly executed by both parties to this State/Municipal Agreement.

Signed for and in behalf of the City of Milwaukee (please sign in blue ink)		
Name:	Title:	Date:
Name:	Title:	Date:
Signed for and in behalf of the <b>State</b> (please sign in blue ink)		
Name:	Title: SE Region Planning Chief	Date

## **GENERAL TERMS AND CONDITIONS:**

1. All projects must be in an approved Transportation Improvement Program (TIP) or State Transportation Improvement Program (STIP) prior to requesting authorization.
2. Work prior to federal authorization is ineligible for federal funding. The Project Sponsor will be notified by the State when each project phase or ID is authorized and available for charging.
3. The initiation and accomplishment of the project will be subject to the applicable federal and state regulations, as referenced in the document *A Sponsor's Guide to Non-Traditional Project Implementation*. The Project Sponsor, throughout the entire project, commits to comply with and promote all applicable federal and state laws and regulations that include, but are not limited to, the following:
  - a. Environmental requirements, including but not limited to those set forth in 23 U.S.C. 139 and the National Environmental Policy Act (42 U.S.C. 4321 et seq.).
  - b. Equal protection guaranteed under the U.S. Constitution, WI Constitution, Title VI of the Civil Rights Act and Wis. Stat. Sec. 16.765. The Project Sponsor agrees to comply with and promote applicable Federal and State laws, Executive Orders, regulations, and implementing requirements intended to provide for the fair and equitable treatment of individuals and the fair and equitable delivery of services to the public. In addition the Project Sponsor agrees not to engage in any illegal discrimination in violation of applicable Federal or State laws and regulations. This includes but is not limited to Title VI of the Civil Rights Act of 1964 which provides that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." The Project Sponsor agrees that public funds, which are collected in a nondiscriminatory manner, should not be used in ways that subsidize, promote, or perpetuate illegal discrimination based on prohibited factors such as race, color, national origin, sex, age, physical or mental disability, sexual orientation, or retaliation.
  - c. All applicable DBE requirements that the State specifies.
  - d. Federal and state statutes that govern the CMAQ Program, including but not limited to 23 U.S.C. 149 and Wis. Stat. 85.245.
4. Additional applicable state and federal requirements may include, but are not limited to, the following:
  - a. Prevailing wage requirements, including but not limited to 23 U.S.C. 113 and Wis. Stat. Sec. 103.50.
  - b. Buy America Provision and its equivalent state statutes, set forth in 23 U.S.C. 313 and Wis. Stat. Sec. 16.754.
  - c. Competitive bidding requirements set forth in 23 U.S.C. 112 and Wis. Stat. Sec. 84.06.

## **STATE RESPONSIBILITIES AND REQUIREMENTS:**

5. Funding for the project is subject to inclusion in Wisconsin's approved Congestion Mitigation and Air Quality Program. Federal funding will be limited to participation in the costs of the following items, as applicable to the project:
  - a. The grading, base, pavement, curb and gutter, sidewalk, and replacement of disturbed driveways in kind.
  - b. Storm sewer mains necessary for the surface water drainage.
  - c. Catch basins and inlets for surface water drainage of the improvement, with connections to the storm sewer main.

- d. Construction engineering incident to inspection and supervision of actual construction work (except for inspection, staking, and testing of sanitary sewer and water main).
  - e. Signing and pavement marking, including marking of detour routes. Detour routes and haul roads are not eligible on local projects.
  - f. New installations or alteration of street lighting and traffic signals or devices.
  - g. Landscaping.
  - h. Preliminary Engineering:
  - i. Real estate for the improvement:
  - j. Management Consultant and State Review Services:
6. Project items purchased with federal funding are for the primary use of the Congestion Mitigation and Air Quality Program.
7. State Disbursements:
- a. Payment by the State to the Project Sponsor shall be made on a regular basis upon presentation of Reimbursement Requests for expenditures incurred during prior periods of the project duration subject to the allowable maximum payment. Exceptions to this schedule will be made as appropriate. In general, State reimbursements will be made after sufficient proof of payment is sent to the state.
  - b. A final adjustment of state payments will be made upon completion of the State's audit of the project. If the State's audit establishes that the State paid more than its share of the eligible project costs, the Project Sponsor shall refund to the State upon demand a sum equal to the overpayment.

**PROJECT SPONSOR RESPONSIBILITIES AND REQUIREMENTS:**

8. Work necessary to complete the CMAQ project to be financed entirely by the Project Sponsor or other utility or facility owner includes the items listed below, when applicable to the project.
- a. New installations of or alteration of sanitary sewers and connections, water, gas, electric, telephone, telegraph, fire or police alarm facilities, parking meters, and similar utilities.
  - b. Damages to abutting property after project completion due to change in street or sidewalk widths, grades or drainage.
  - c. Detour routes and haul roads. The Project Sponsor is responsible for determining the detour route.
  - d. Conditioning, if required and maintenance of detour routes.
  - e. Repair of damages to roads or streets caused by reason of their use in hauling materials incident to the improvement.
  - f. All work related to underground storage tanks and contaminated soils.
  - g. Street and bridge width in excess of standards, in accordance with the current WisDOT Facilities Development Manual (FDM).
9. The work eligible for Federal participation will be administered by the Project Sponsor. The Project Sponsor is an eligible recipient of these grant funds pursuant to Wis. Stat. Sec. 85.245 and federal law at 23 U.S.C. 213.

10. Where applicable, all contracts will be let by competitive bid and awarded to the lowest responsible bidder in accordance with the requirements set forth in 23 U.S.C. 112 and Wis. Stat. Sec. 84.06. Where applicable, all contracts for design related services shall be awarded and administered in accordance with the requirements of 23 CFR 172 and procedures published in the Wisconsin Department of Transportation Facilities Development Manual (FDM), Chapter 8, Consulting Services.
11. The Project Sponsor must receive, read, and agree to meet the requirements outlined in the *Sponsor's Guide to Non-Traditional Transportation Project Implementation*. The Project Sponsor must indicate this understanding and agreement by submitting the *Sponsor's Guide Acknowledgement Form*, which must be accepted by the State before approval of this State/Municipal Agreement shall be granted
12. The Project Sponsor must complete and submit *Certification for Non-Traditional Project Administration and Delivery* documentation, and this documentation must be accepted by the State, before approval of this State/Municipal Agreement shall be granted. The Project Sponsor, and all consultants and other entities working on behalf of the Project Sponsor, are required to comply with the federal and state rules and requirements for projects being administered through a local letting process.
13. The project, in accordance with its scope, must employ the services of a registered professional engineer, architect or landscape architect, to be responsible for design and construction engineering and related activities.
14. A copy of the plans, specifications, and estimates containing the engineer's, architect's, or landscape architect's seal as prepared for bidding purposes (in accordance with project scope) must be provided to the State for approval prior to advertising the project for bids.
15. The improvement will take place in accordance with the appropriate standards unless an exception to standards is granted by the State prior to construction. The entire cost of the construction project, not constructed to standards, will be the responsibility of the Project Sponsor unless such exception is granted.
16. Work to be performed by the Project Sponsor without Federal funding participation, necessary to ensure a complete improvement acceptable to the Federal Highway Administration and/or the State may be done in a manner at the election of the Project Sponsor but must be coordinated with all other work undertaken during construction.
17. The Project Sponsor is responsible for financing administrative expenses related to Project Sponsor responsibilities.
18. The project is subject to a discretionary DBE goal assessment.
19. The Project Sponsor will not proceed with any State/Municipal Agreement revisions without first receiving prior approval from the State. A change order must be executed for revisions to the State/Municipal Agreement prior to the Project Sponsor's request for reimbursement for the revisions.
20. If reviews or audits show any of the work to be ineligible for Federal funding, the Project Sponsor will be responsible for any withdrawn costs associated with the ineligible work.
21. If the Project Sponsor should withdraw the project, it will reimburse the State for any costs incurred by the State on behalf of the project upon demand.
22. The Project Sponsor will assume all responsibility for retaining a complete project file that includes not only construction documentation but also copies of letting documents, all Local and State submittals and approvals contained in these instructions, and other pertinent documents to support project procurement, development, implementation and cost and any other item required by 49 CFR part 18 and submitting such information, upon request, in order to receive reimbursement. The Project Sponsor will keep all project records and have them available for inspection by representatives of the Federal Government and the State and will furnish copies thereof when requested.
23. Federal Single Audits of the Project Sponsor:

- a. The Project Sponsor shall have a single organization audit performed by a qualified independent auditor if required to do so under Federal law and regulations. (See Federal Office of Management and Budget (OMB) Circular No. A-133).
  - b. This audit shall be performed in accordance with federal OMB Circular No. A-133 and State single audit guidelines issued by the Wisconsin Department of Administration (DOA).
24. In connection with the performance of work under this State/Municipal Agreement, the Project Sponsor agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in S. 51.01(5), sexual orientation or national origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. Except with respect to sexual orientation, the Project Sponsor further agrees to take affirmative action to ensure equal employment opportunities. The Project Sponsor agrees to post in conspicuous places, available for employees and applicants for employment, notices to be provided by the employment officer setting forth the provisions of the nondiscrimination clause.
25. The Project Sponsor will include in all contracts executed by them a provision obligating the contractor not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in s. 51.01 (5), sexual orientation as defined in s. 111.32 (13m), or national origin.
26. When applicable to the project, the Project Sponsor will at its own cost and expense:
  - a. Maintain all portions of the project that lie within its jurisdiction (to include, but not limited to, cleaning storm sewers, removing debris from sumps or inlets, and regular maintenance of the catch basins, curb and gutter, parking lanes, bicycle lanes, trails, and other facilities, sidewalks and other pedestrian facilities, and other project infrastructure) for such maintenance through statutory requirements in a manner satisfactory to the State, and will make ample provision for such maintenance each year. The Project Sponsor will ensure that facilities are available in all weather conditions, including clearing snow from sidewalks and multi-use trails.
  - b. Regulate [or prohibit] parking at all times in the vicinity of the proposed improvements during their construction.
  - c. Regulate [or prohibit] all parking at locations where and when the pavement area usually occupied by parked vehicles will be needed to carry active traffic in the street.
  - d. Assume general responsibility for all public information and public relations for the project and to make fitting announcement to the press and such outlets as would generally alert the affected property owners and the community of the nature, extent, and timing of the project and arrangements for handling traffic within and around the projects.
  - e. Provide relocation orders and real estate plats and easements, as required by the project.
  - f. Use the *WisDOT Utility Accommodation Policy* unless it adopts a policy, which has equal or more restrictive controls.
  - g. Provide maintenance and energy for lighting.
  - h. Provide proper care and maintenance of all landscaping elements of the project including replacement of any plant materials damaged by disease, drought, vandalism or other cause.
27. It is further agreed by the Project Sponsor that:
  - a. The Project Sponsor assumes full responsibility for the design, installation, testing and operation of any sanitary sewer and water main infrastructure within the improvement project and relieves the

State and all of its employees from liability for all suits, actions, or claims resulting from the sanitary sewer and water main construction under this State/Municipal Agreement.

- b. The Project Sponsor assumes full responsibility for the plans and special provisions provided by their designer or anyone hired, contracted or otherwise engaged by the Project Sponsor. The Project Sponsor is responsible for any expense or cost resulting from any error or omission in such plans or special provisions. The Project Sponsor will reimburse the State if the State incurs any cost or expense in order to correct or otherwise remedy such error or omission or consequences of such error or omission.
- c. The Project Sponsor will be 100% responsible for all costs associated with utility issues involving the Contractor, including costs related to utility delays.
- d. All signs and traffic control devices and other protective structures erected on or in connection with the project including such of these as are installed at the sole cost and expense of the Project Sponsor or by others, will be in conformity with such "Manual on Uniform Traffic Control Devices" as may be adopted by the American Association of State Highway and Transportation Officials, approved by the State, and concurred in by the Federal Highway Administration.

28. The subject project must be completed by June 30, 2022, and the Project Sponsor must submit a project completion certificate to WisDOT central office on or before this date. WisDOT may consider a written request to extend the completion deadline from the Project Sponsor and may approve such a request in the presence of extenuating circumstances. The written request shall explain the reasons for project implementation delay and revised timeline for project completion.

#### **LEGAL RELATIONSHIPS:**

29. Responsibility for Damage and Tort Claims: The Project Sponsor and the Project Sponsor's surety shall indemnify and save harmless the State, its officers and employees, from all suits, actions or claims of any character brought because of any injuries or damages received or sustained by any person, persons or property on account of the operations of the Project Sponsor; or on account of or in consequence of any neglect in safeguarding the work; or because of any act or omission, neglect or misconduct of the Project Sponsor; or because of any claims or amounts recovered for any infringement by the Project Sponsor of patent, trademark or copyright; or from any claims or amounts arising or recovered under the Worker's Compensation Act, relating to the Project Sponsor's employees; or any other law, ordinance, order or decree relating to the Project Sponsor's operations. So much of the money due the Project Sponsor under and by virtue of the contract as shall be considered necessary by the State for such purposes, may be retained for the use of the State; or, in case no money or insufficient money is retained, the Project Sponsor's surety may be held until such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid shall have been settled and suitable evidence to that effect furnished to the State; except that money due the Project Sponsor will not be withheld when the Project Sponsor produces satisfactory evidence that the Project Sponsor is adequately protected by public liability and property damage insurance. The Project Sponsor also shall comply with all of the above requirements indemnifying and saving harmless the county, town, or municipality in which the improvement is made and each of them separately or jointly and officers and employees.

The State shall not be liable to the Project Sponsor for damages or delays resulting from work by third parties. The State also shall be exempt from liability to the Project Sponsor for damages or delays resulting from injunctions or other restraining orders obtained by third parties except where the damage or delay is a direct result of an injunction or restraining order obtained by a citizen's action alleging violations of 42 U.S.C. 4331 - 4332, 23 U.S.C. 138 or Public Law 91-646.

It shall be the Project Sponsor's responsibility to see that all of the contract operations incident to the completion of the contract are covered by public liability and property damage liability insurance so the general public or any representative of the contracting authority may have recourse against a responsible party for injuries or damages sustained as a result of the contract operations. This requirement shall apply with equal force, whether the work is performed by the Project Sponsor, by a subcontractor or by anyone directly or indirectly employed by either of them.

It is the express intent of this provision that a Project Sponsor that is a county, town or municipality may and should contractually pass on this entire Responsibility for Damage and Tort Claims provision to any public and private entities with which it may subcontract any of the work covered by this State/Municipal Agreement.

- a. The word, "surety" in the above paragraphs refers to the issuer of a payment and performance bond under Wis. Stat. Sec. 779.14.
- b. Nothing in this section should be construed as a waiver of any statutory defenses that may be available to any governmental party.

30. The Project Sponsor, also known as the primary participant, as that term is defined in 49 CFR Part 29, certifies to the best of its knowledge and belief, that it and its principals, as that term is defined in 49 CFR Part 29:

- a. Are not currently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded by any State of Wisconsin or Federal department or agency;
- b. Have not, within a three-year period preceding this State/Municipal Agreement, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or Local) transaction or contract under a public 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;
- c. Are not currently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated above;
- d. Have not within a three-year period preceding this State/Municipal Agreement had one or more public transactions (Federal, State or Local) terminated for cause or default; and
- e. That all grantees, contractors, and suppliers, including what is also known as lower tier participants as that term is used in 49 CFR Part 29 and the Appendix to Part 29 -- Covered Transactions, have certified in writing that neither they or their principals are currently debarred, suspended, proposed for debarment or suspension, have been declared ineligible, or have voluntarily been excluded from participating in this or any other Federal, State or Local transaction by any Federal, State or Local department, agency or official.

31. *Contract Modification:* This State/Municipal Agreement can only be modified by written instruments duly executed by both parties. No term or provision of neither this State/Municipal Agreement nor any of its attachments may be changed, waived or terminated orally.

32. *Binding Effects:* All terms of this State/Municipal Agreement shall be binding upon and inure to the benefits of the legal representatives, successors and executors. No rights under this State/Municipal Agreement may be transferred to a third party. This State/Municipal Agreement creates no third- party beneficiary rights to be held by any person or entity who is not a party to this State/Municipal Agreement. Nor does it accord on any non-party the right of enforcement.

33. *Choice of Law and Forum:* This State/Municipal Agreement shall be interpreted and enforced in accordance with the laws of the State of Wisconsin. The Parties hereby expressly agree that the terms contained herein and in any deed executed pursuant to this State/Municipal Agreement are enforceable by an action in the Circuit Court of Dane County, Wisconsin.

34. Nothing in this State/Municipal Agreement shall be construed as a waiver of the State's sovereign immunity.

#### **PROJECT FUNDING CONDITIONS**

35. *Non-Appropriation of Fund:* With respect to any payment required to be made by the Department under this State/Municipal Agreement, the parties acknowledge the Department's authority to make such payment is



contingent upon appropriation of funds and required legislative approval sufficient for such purpose by the Legislature. If such funds are not so appropriated, either the Project Sponsor or the Department may terminate this State/Municipal Agreement after providing written notice not less than thirty (30) days before termination.

36. Maintenance of Records: During the term of performance of this State/Municipal Agreement, and for a period not less than three years from the date of final payment to the Project Sponsor, records and accounts pertaining to the performance of this State/Municipal Agreement are to be kept available for inspection and audit by representatives of the Department. The Department reserves the right to audit and inspect such records and accounts at any time. The Project Sponsor shall provide appropriate accommodations for such audit and inspection.

In the event that any litigation, claim or audit is initiated prior to the expiration of said records maintenance period, the records shall be retained until such litigation, claim or audit involving the records is complete.

Records pertaining to the performance of the State/Municipal Agreement are subject to disclosure pursuant to Wis. Stats. Sec. 19.31 et seq., and shall be preserved by the Project Sponsor.

37. The Project Sponsor agrees to the following State Fiscal Year 2016-2020 CMAQ project funding conditions:
- a. ID 2984-09-03: Design and any related review costs are funded with 80% federal funding when the Project Sponsor agrees to provide the remaining 20%. These costs are subject to the cumulative project federal funding cap. This includes Plan Development, Management Consultant Review, and State Review. The work includes project review, approval of required reports and documents and processing the final PS&E document for award of the contract.
  - b. ID 2984-09-93: Construction:
    - i. Costs for traffic retiming and any related review costs: are funded with 80% federal funding, when the Project Sponsor agrees to provide the remaining 20%. These costs are subject to the cumulative project federal funding cap.
  - c. The maximum participation of federal funding will be limited to 80% of the actual eligible project cost or the total cost distribution of CMAQ funds shown on page 2 of this State/Municipal Agreement, whichever is less. The project federal funding maximum of \$220,000 is cumulative for all federal funded project phases.

**Computer Optimization of Traffic Signals, City of Milwaukee  
135 Intersections, Various Corridors**

No.	Hwy.	Street 1	Street 2
1	STH 175	Appleton	Burleigh
2	STH 175	Appleton	60th
3	STH 175	Appleton	Center
4	STH 175	Appleton	Lisbon
5	STH 175	Lisbon	55th
6	STH 175	Lisbon	51st
7	STH 175	Lisbon	North/48th
8	STH 175	Lisbon	46th
9	Loc Str	Lisbon	Sherman
10	Loc Str	Lisbon	40th
11	Loc Str	Lisbon	35th
12	Loc Str	Lisbon	84th
13	STH 181	Lisbon	76th
14	Loc Str	Burleigh	Lisbon
15	Loc Str	Lisbon	68th
16	Loc Str	Center	Lisbon/60th
17	Loc Str	Keefe	60th
18	Loc Str	Burleigh	Roosevelt/60th
19	Loc Str	Burleigh	Menomonee River Pkwy.
20	Loc Str	Burleigh	92nd
21	Loc Str	Burleigh	84th
22	STH 181	Burleigh	76th
23	Loc Str	Center	92nd
24	Loc Str	Center	84th
25	STH 181	Center	76th
26	Loc Str	Center	68th
27	Loc Str	North	49th
28	Loc Str	North	46th
29	Loc Str	Lloyd	47th
30	STH 175	Lloyd	46th
31	Loc Str	Lloyd	Sherman
32	Loc Str	Brown	35th
33	Loc Str	Galena	35th
34	Loc Str	Highland	Vliet
35	Loc Str	Vliet	40th
36	Loc Str	Vliet	35th
37	Loc Str	Vliet	33rd
38	Loc Str	Emmber Ln. Ramp	16th
39	Loc Str	Potawatomi Ramp	16th
40	Loc Str	Pittsburgh	2nd
41	STH 32	Pittsburgh	1st
42	Loc Str	Virginia	6th
43	Loc Str	Virginia	2nd
44	STH 32	Virginia	1st
45	STH 57	Evergreen Ln.	Layton Blvd./27th
46	STH 57	Layton Blvd.	Pierce
47	Loc Str	Pierce	Chavez Dr./16th
48	STH 59	National	35th
49	STH 57/59	Layton Blvd.	National
50	STH 59	National	21st

No.	Hwy.	Street 1	Street 2
51	STH 59	National	19th
52	STH 59	Chavez Dr.	National
53	STH 59	National	11th
54	STH 59	National	9th
55	STH 38/59	National	6th
56	STH 59	National	5th
57	STH 59	National	2nd
58	STH	National	1st
59	Loc Str	Chavez Dr.	Mineral
60	IH	Mineral	6th
61	Loc Str	Chavez Dr.	Washington
62	STH 38	Washington	6th
63	STH 32	Washington	1st
64	Loc Str	Scott	35th
65	Loc Str	Layton Blvd.	Scott
66	Loc Str	Chavez Dr.	Scott
67	Loc Str	Chavez Dr.	Ped Hybrid s/o Scott
68	Loc Str	Greenfield	35th
69	Loc Str	Greenfield	31st
70	Loc Str	Greenfield	Layton Blvd.
71	Loc Str	Greenfield	21st
72	Loc Str	Chavez Dr.	Greenfield/ Muskego
73	Loc Str	Greenfield	11th
74	STH 38	Greenfield	6th
75	Loc Str	Greenfield	5th
76	Loc Str	Greenfield	4th
77	Loc Str	Greenfield	2nd
78	STH 32	Greenfield	1st
79	Loc Str	Lapham	Layton Blvd.
80	Loc Str	Chavez Dr.	Lapham Blvd.
81	Loc Str	Lapham Blvd.	13th
82	Loc Str	Lapham Blvd.	11th
83	Loc Str	Lapham Blvd.	9th
84	STH 38	Lapham Blvd.	6th
85	IH 43/94	Lapham Blvd.	5th
86	IH 43/94	Lapham Blvd.	4th
87	Loc Str	Lapham Blvd.	2nd
88	STH 32	Lapham Blvd.	1st
89	Loc Str	Mitchell	35th
90	Loc Str	Layton Blvd.	Mitchell
91	Loc Str	Mitchell	21st
92	Loc Str	Mitchell	Muskego
93	Loc Str	Chavez Dr.	Mitchell/16th
94	Loc Str	Mitchell	13th
95	Loc Str	Forest Home	13th
96	Loc Str	Mitchell	11th
97	Loc Str	Mitchell	9th
98	Loc Str	Mitchell	7th
99	STH 38	Mitchell	6th
100	Loc Str	Mitchell	5th

**Computer Optimization of Traffic Signals, City of Milwaukee  
135 Intersections, Various Corridors**

<b>No.</b>	<b>Hwy.</b>	<b>Street 1</b>	<b>Street 2</b>
101	Loc Str	Mitchell	4th
102	Loc Str	Mitchell	1st
103	STH 32	Kinnickinnic	1st
104	STH 32	Kinnickinnic	Mitchell
105	Loc Str	Maple	11th
106	STH 38	Maple	6th
107	Loc Str	Burnham	35th
108	Loc Str	Burnham	Layton Blvd.
109	Loc Str	Burnham	Muskego
110	Loc Str	Burnham	16th
111	Loc Str	Forest Home	16th
112	Loc Str	Becher	35th
113	Loc Str	Becher	Layton Blvd.
114	Loc Str	Becher	Muskego
115	Loc Str	Becher	Forest Home/20th
116	Loc Str	Becher	16th
117	Loc Str	Becher	13th
118	Loc Str	Becher	Windlake
119	STH 38	Becher	6th
120	IH 43/94	Becher	5th
121	IH 43/94	Becher	4th
122	Loc Str	Becher	1st
123	Loc Str	Windlake	13th
124	Loc Str	Lincoln	20th
125	Loc Str	Lincoln	16th
126	Loc Str	Lincoln	Windlake
127	Loc Str	Lincoln	13th
128	Loc Str	Lincoln	9th Pl.
129	STH 38	Lincoln	6th
130	STH 38	Chase	Lincoln
131	Loc Str	Lincoln	5th
132	Loc Str	Lincoln	4th
133	Loc Str	Lincoln	1st
134	Loc Str	Windlake	16th
135	STH 38	Chase	1st