

VILLAGE OF DOWNERS GROVE
REPORT FOR THE VILLAGE COUNCIL MEETING
JUNE 21, 2011 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
Intergovernmental Agreement with IDOT for Traffic Signal Maintenance	✓ Resolution Ordinance Motion Discussion Only	Nan Newlon, P.E. Director of Public Works

SYNOPSIS

A resolution has been prepared authorizing execution of an intergovernmental agreement between the Village of Downers Grove and the Illinois Department of Transportation (IDOT) for traffic signal maintenance on State highways within the corporate limits of Downers Grove.

STRATEGIC PLAN ALIGNMENT

The goals for 2011 to 2018 include *Top Quality Infrastructure*.

FISCAL IMPACT

NA

RECOMMENDATION

Approval on the June 21, 2011 consent agenda.

BACKGROUND

The Illinois Department of Transportation (IDOT) operates and maintains the traffic signals on State highways within the corporate limits of municipalities as specified by intergovernmental agreements, also referred to as “master agreements” with each municipality. These agreements have a ten year term and the current master agreement between the Village of Downers Grove and the Illinois Department of Transportation will expire on June 30, 2011.

Exhibit A of the Agreement contains a list of signalized intersections and locations along State highways located within the Village of Downers Grove that are subject to the provision of the attached Agreement. The updated agreement maintains the State as the agency responsible for the cost of traffic signal maintenance and energy, except in the cases where it is DuPage County or a private party. In the case of the intersection of IL56 at the Home Depot, these costs are paid by the Village, which is reimbursed by the property owner through a separate agreement. The proposed agreement does not contain significant changes from the prior agreement.

ATTACHMENTS

Resolution
Agreement

RESOLUTION NO. _____

**A RESOLUTION AUTHORIZING EXECUTION OF AN
INTERGOVERNMENTAL AGREEMENT BETWEEN
THE VILLAGE OF DOWNERS GROVE AND THE
ILLINOIS DEPARTMENT OF TRANSPORTATION
FOR TRAFFIC SIGNAL MAINTENANCE**

BE IT RESOLVED by the Village Council of the Village of Downers Grove, DuPage County, Illinois as follows:

1. That the form and substance of a certain Agreement (the "Agreement"), between the between the Village of Downers Grove ("Governmental Body") and the Illinois Department of Transportation (the "Department") for traffic signal maintenance on State highways within the corporate limits of Downers Grove as set forth in the form of the Agreement submitted to this meeting with the recommendation of the Village Manager, is hereby approved.
2. That the Mayor and Village Clerk are hereby respectively authorized and directed for and on behalf of the Village to execute, attest, seal and deliver the Agreement, substantially in the form approved in the foregoing paragraph of this Resolution, together with such changes as the Manager shall deem necessary.
3. That the proper officials, agents and employees of the Village are hereby authorized and directed to take such further action as they may deem necessary or appropriate to perform all obligations and commitments of the Village in accordance with the provision of the Agreement.
4. That all resolutions or parts of resolutions in conflict with the provision of this Resolution are hereby repealed.
5. That this Resolution shall be in full force and effect from and after its passage as provided by law.

Mayor

Passed:

Attest: _____
Village Clerk

INTERGOVERNMENTAL AGREEMENT

This Interagency Agreement is entered into between the Village of Downers Grove

_(“GOVERNMENTAL BODY”) and the Department of Transportation(“DEPARTMENT”) pursuant to the “Intergovernmental Cooperation Act” (5 ILCS 220)and in accordance with The DEPARTMENT’s rules at 92 Ill. Adm. Code 544.

1. Governmental Body and the DEPARTMENT have a mutual interest in and the maintenance and apportionment of energy costs for traffic control devices located on State highways within or near the Governmental Body as shown on the attached Exhibit A, which is hereby made a part of this agreement.
2. In furtherance of said interests of, the entities agree:
 - a. **Cost.** The DEPARTMENT and the GOVERNMENTAL BODY agree to the maintenance responsibility and to the division of energy costs, for the traffic signals and other traffic control devices listed on the attached Exhibit A.
 - b. **Maintenance.** Modernization of traffic control devices is not covered under this agreement. It is agreed that the actual maintenance will be performed by the DEPARTMENT indicated on Exhibit A, either with its own forces or through contractual agreements
 - c. **Maintenance Level.** It is agreed that the signals and devices shall be maintained to at least the level of maintenance specified in the attached Exhibit B, which is hereby made a part of this agreement. It is understood this will meet the minimum requirements of the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways. Additional provisions regarding maintenance may be incorporated in this document (Exhibit B) upon agreement by both parties.
 - d. **Interconnect & Timing.** The DEPARTMENT agrees to maintain all signal equipment and interconnects associated with interconnected signal systems and interconnects with at-grade railroad crossings. The DEPARTMENT, in cooperation with the GOVERNMENTAL BODY, shall determine the signal timing to coordinate and regulate the flow of traffic. No signal timing shall be changed at any state system intersection without prior DEPARTMENT approval. The DEPARTMENT may elect to allow the GOVERNMENTAL BODY to determine the signal timing to coordinate and regulate the flow of traffic at any location. The GOVERNMENTAL BODY shall inform the DEPARTMENT of any changes made in signal timings. The DEPARTMENT reserves the right to withdraw the privilege of timing signals from the GOVERNMENTAL BODY at any time.

Traffic signals interconnected with an at-grade railroad crossing shall not be modified without prior Illinois Commerce Commission and DEPARTMENT notification and approval. Interconnected signals at an at-grade railroad crossing may be repaired to the

original condition; however, the Illinois Commerce Commission and the DEPARTMENT must be notified thereof.

- e. **Interconnections: Installation & Damage.** The DEPARTMENT is not responsible for the cost of installing or maintaining traffic signals not on (but interconnected to traffic signals on) U.S. or State routes. Any damage done to State traffic signals in the attempt to connect local traffic signals shall be repaired to the DEPARTMENT's satisfaction and shall be the responsibility of the GOVERNMENTAL BODY.
- f. **Master Monitoring Costs.** Master controllers installed on State intersections for the coordination of traffic signals are primarily used for the traffic signals located on U.S. or State routes. The GOVERNMENTAL BODY may connect traffic signals to a State owned master controller for the coordination or operation of non-State owned traffic signals, for the purpose of synchronizing time or gaining remote access. If the GOVERNMENTAL BODY desires a communications link to their office for monitoring purposes, the GOVERNMENTAL BODY shall pay the entire cost of installing and maintaining such monitoring system.
- g. **Payment for Energy Costs.** The GOVERNMENTAL BODY will reimburse the DEPARTMENT for the GOVERNMENTAL BODY's proportionate share of the energy charges.
- h. **Indemnity.** The GOVERNMENTAL BODY shall indemnify and hold harmless the DEPARTMENT for any and all third party claims for personal injury and property damage arising solely out of the maintenance of the signals and devices listed in Exhibit A, for which the GOVERNMENTAL BODY has responsibility as shown on said Exhibit A.
- i. **Emergency Vehicle Preemption Devices.** The costs of installation, timing, phasing, and maintenance of emergency vehicle preemption systems shall be the sole responsibility of the GOVERNMENTAL BODY. Any Governmental Body must notify the DEPARTMENT of any change in the emergency vehicle preemption system. However, the DEPARTMENT reserves the right to approve or reject, at any time, the placement of such systems on its traffic signal equipment.
- j. **Previous Agreements.** All traffic signal and traffic control device maintenance and electrical energy provisions contained in presently existing agreements or understandings between the DEPARTMENT and the GOVERNMENTAL BODY for traffic signals and/or other traffic control devices covered by this Master Agreement shall upon execution of this Master Agreement by the DEPARTMENT be superseded and be of no force or effect.

All parking ordinances and provisions bearing on items other than traffic signal and traffic control device maintenance and energy charges contained in presently existing agreements or letters of understanding between the DEPARTMENT and the GOVERNMENTAL BODY shall remain in full force and effect.

- k. **Modification.** Exhibit A can be modified to add or delete signals or devices, but only by written revision signed by the Regional Engineer, the Engineer of Operations and the authorized representative for the GOVERNMENTAL BODY. The modification shall be effective when fully executed and filed with the Department and the Clerk or Secretary of the GOVERNMENTAL BODY. This provision applies only to modification of Exhibit A.
- l. **Plan Review.** All traffic signal plans prepared by others for installation on State highways within municipal corporate limits, which are to be added to this agreement, must be reviewed and approved by the DEPARTMENT and the GOVERNMENTAL BODY.
- m. **Cost Sharing.** As indicated in Exhibit A, the cost of energy and maintenance of traffic signals, and/or other traffic control devices shall be shared in proportion to the number of approaches maintained by each unit of government. The maintenance cost of the interconnect and interconnect related equipment, as listed in Exhibit A, as well as engineering costs for any approved coordination and timing studies, shall be shared in proportion to the approaches maintained by each unit of government at all intersections within the interconnected system.
- n. **Billing.** Bills shall be submitted by the DEPARTMENT on a three (3) month basis. The amount billed shall be the costs incurred less any proceeds from third party damage claims received during the billing period for repair of signals or devices that are the responsibility of the GOVERNMENTAL BODY.
 - i. Any proposed single expenditure in excess of \$10,000 for repair or damage to an installation must be approved by the GOVERNMENTAL BODY before the expenditure is made.
 - ii. The hours, or parts thereof, billed for each maintenance item will be at the actual time directly related to the work task. The DEPARTMENT reserves the right to examine the records of the GOVERNMENTAL BODY to determine that costs billed are fully documented.
 - iii. THE DEPARTMENT costs are composed of labor, equipment, materials and the quantity of each. The cost for labor will be determined by the actual hourly rate for the employee plus a multiplier to include direct and indirect labor related costs, retirement, social security, health, hospitalization and life insurance, holidays, vacation, sick leave and workers compensation. Equipment costs will be as listed in the Schedule of Average Annual Equipment Ownership Expense. Materials will be at cost.
 - iv. The cost for contracted work will be the actual cost for the contractor.

3. Notice under this agreement shall be as follows:

For The DEPARTMENT:

For the GOVERNMENTAL BODY:

4. **Effective Date.** This Agreement shall be effective from July 1, 2011 through June 30, 2021 and may be terminated prior to that date, by either party, upon 30 days written notice.

FOR THE GOVERNMENTAL BODY:

Signature and Job Title of Authorized Representative

Type or Print Name of Authorized Representative

Date

FOR THE DEPARTMENT:

Diane M. O'Keefe, Regional Engineer, Division of Highways

Ellen Schanzle-Haskins, Chief Counsel

Date

(Approved as to form)

By: _____

Christine M. Reed, P.E., Director, Division of Highways, Chief Engineer

Matthew R. Hughes, Acting Director, Finance & Administration

Date

Date: _____

By: _____

By: _____

Gary Hannig, Secretary of Transportation

Date

By: _____

EXHIBIT A

Following is the list of signalized intersections and locations with traffic control devices along State highways located within or near the Village of Downers Grove, that are subject to the provisions of the attached Master Agreement to which this list is an exhibit.

LOCATION		% OF MAINTENANCE RESPONSIBILITY			% OF ENERGY CHARGES RESPONSIBILITY			AGENCY PERFORMING MAINT.
		STATE	LOCAL	OTHER	STATE	LOCAL	OTHER	
I-88 WB Exit Ramp @ Highland Av.	(P/DC)	100			100			DuPage Co.
Belmont @ Maple Av.	(DC)			100 DuPage Co.			100 DuPage Co.	DuPage Co.
I-88 EB Exit Ramp @ Highland Av.	(P/DC)			100 DuPage Co.				DuPage Co.
IL 56 @ Highland Av.	(ADT)	100			100			DuPage Co.
US 34 @ I-355 (W.Ramp)	(S)	100			100			STATE
US 34 @ I-355 (E.Ramp)	(S)	100			100			STATE
US 34 @ Cross St	(S/M)	100			100			STATE
US 34 @ Belmont/Finley Rd.	(S/DC)	100			100			STATE
US 34 @ Saratoga Av.	(S/M)	100			100			STATE
US 34 @ Main St.	(S/DC)	100			100			STATE
US 34 @ Fairview Av.	(S/M)	100			100			STATE
US 34 @ Downers Plaza	(PB)			100 Downers Plaza			100 Downers Plaza	STATE
IL 56 @ Woodcreek/Lloyd	(S/M/TWP)	100			100			STATE
IL 56 @ Esplanade/Home Depot	(PB)		100	Private Benefit		100	Private Benefit	STATE
IL 56 @ I-355 (W. Ramp)	(S)	100			100			STATE
IL 56 @ I-355 (E. Ramp)	(S)	100			100			STATE
IL 56 @ Finley Rd.	(ADT)	100			100			STATE
IL 56 @ I-355/Downers Dr.	(S/M)	100			100			STATE

(S) = State
 (M) = Municipality
 (PB) = Private Benefit
 (ADT) = Avg. Daily Traffic
 (DC) = DuPage Co.
 (TWP) = Township

As of 05/31/11

EXHIBIT B TRAFFIC SIGNAL MAINTENANCE PROVISIONS

A. GENERAL PROVISIONS

1. CABINET PACK

Wiring diagrams, phase diagrams, and manuals that are required to be in each traffic signal controller cabinet at the time of construction completion shall remain in the cabinet. Written documentation of all traffic signal timing changes shall be provided in the cabinet. All entries shall be written in a clear and concise manner. The agent of the maintaining agency making any entries shall provide his/ her signature and date of entry. These shall be kept in the cabinet to assist the DEPARTMENT on emergency call outs.

2. HARDWARE SPECIFICATIONS

All equipment and material used shall comply with the requirements of the DEPARTMENT's Standard Specifications for Road and Bridge Construction.

3. HIGHWAY LIGHTING

For maintenance involving combination traffic signal and lighting unit mast arm assemblies and poles, the foundation, traffic signal mast arm assembly, pole and all signal cable shall be considered part of the traffic signal system. The lighting arm, luminaire and all lighting cable shall be part of the highway lighting system.

The highway lighting system components of each combination mast arm assembly and pole shall be tested for proper operation and physical condition during the intersection cabinet inspection. All cost of inspecting and maintaining the highway lighting system equipment, is the responsibility of the GOVERNMENTAL BODY. In addition to regular inspection and maintenance, all cost of repairing or replacing damaged or missing highway lighting system equipment is the responsibility of the GOVERNMENTAL BODY.

4. EMERGENCY VEHICLE PREEMPTION SYSTEM

Test Emergency Vehicle Preemption System (EVPS) equipment for proper operation and physical condition during the intersection cabinet inspection. All program settings and each sequence of operation must be verified to be correct during each inspection. All cost of inspection and maintaining the EVPS equipment, including the light detectors, light detector amplifiers, radio transmitters and receivers, antennas, confirmation lights, and cables and related components, is the responsibility of the GOVERNMENTAL BODY. In addition to regular inspection and maintenance, all cost of repairing or replacing damaged or missing EVPS equipment is the responsibility of the GOVERNMENTAL BODY.

5. RAILROAD PREEMPTION

At all locations with railroad/traffic signal interconnects, respond to any and all emergency and all red flash alarms in a timely manner and notify the Illinois Commerce Commission and the GOVERNMENTAL BODY of the malfunction.

None of the traffic signal railroad preempt parameters including but not limited to the phase timings, phase sequences and pedestrian and vehicular clearance intervals can be modified without prior approval from the Illinois Commerce Commission.

Maintain unique spare controller data modules or sets of data chips containing the final railroad preemption parameters for each location.

Cooperate in any inspection as deemed necessary by the DEPARTMENT or the Illinois Commerce Commission.

The DEPARTMENT shall provide contact personnel available at all times to who railroad preemption malfunctions must be reported.

6. DAMAGE REPAIRS

Repair or replace any and all equipment damaged by any cause whatsoever.

7. ACCIDENT DAMAGE

Be responsible to make recovery for damage to any part of the installation or system from the party causing the damage.

Whenever third party claims cannot be recovered, the GOVERNMENTAL BODY shall share in the loss only for those intersections/signals for which it has responsibility as shown on Exhibit A.

8. TEMPORARY TRAFFIC CONTROL

Provide temporary traffic control during a period of equipment failure or for when the controller must be disconnected. This may be accomplished through the installation of a spare controller, placing the intersection on flash, manually operating the controller, manually directing traffic through the use of proper authorities, or installing temporary stop signs which will be removed once the signal is in working condition.

9. EMERGENCY PERSONNEL

Provide skilled maintenance personnel who will be available to respond without delay to emergency calls. This may be provided by agency forces, contract, or maintenance agreement. Controller failure, lights out, knockdowns, or two (2) red lights out at intersection are considered emergencies.

10. L.E.D. SIGNAL HEADS

Install all light emitting diodes (L.E.D.) signal heads according to instructions provided by each head's manufacturer and vendor so as to prolong their life and assure compliance under any warranties. Maintain logs of the dates of the L.E.D. modules installation for warranty and for end of service life determination purposes.

B. AS REPORTED OR OBSERVED

1. LAMP REPLACEMENT

Replace burned out lamps for all red signal indications within twenty-four (24) hours of notification of burnout or on the next business day following the notification. However, if two or more red indications for an approach are burned out, these lamps must be replaced as soon as possible, and under no circumstances longer than twenty-four (24) hours after notification. Replace all other burned out lamps within forty-eight (48) hours or next business day of notification of burnout. Lamp changes shall always include a lens cleaning.

2. SIGNAL ALIGNMENT

Keep signal heads properly adjusted, including plumb, and tightly mounted. All controller cabinets, signal posts and controller pedestals should be tight on their foundations and in alignment.

3. CONTROLLER PROBLEMS

Check the controllers, relays, and detectors after receiving complaints or calls to ascertain that they are functioning properly and make all necessary repairs and replacement.

4. L.E.D. SIGNAL HEAD AND L.E.D. MODULE REPLACEMENT

An L.E.D. module shall be considered failed and shall be replaced if at least one-fourth of the signal indication is dark or if the module fails to meet ITE specification on minimum maintained luminous intensity.

Replace failed modules for all red signal indications within twenty-four (24) hours of notification of failure or on the next business day following the notification. However, if two or more red indications for an approach are failed, these modules must be replaced as soon as possible, and under no circumstances longer than twenty-four (24) hours after notification. Replace all other failed modules within forty-eight (48) hours or next business day of notification of failure.

Provide replacement light emitting diodes (L.E.D.) signal heads and modules that fully comply to the latest applicable Institute of Transportation Engineers (I.T.E.) specifications for vehicular and pedestrian L.E.D. signal modules. including but not limited to, color and intensity requirements. The signal and pedestrian housings shall also comply with the applicable ITE specifications.

5. PAINTING

Repaint all signal components exposed to weather as needed.

C. WEEKLY

1. MASTER CONTROLLER SYSTEMS

At locations that are a part of a closed loop signal system maintained by the GOVERNMENTAL BODY, repair any and all malfunctions in a timely manner so that the signals remain under the control of the master at all times.

As needed assist in the implementation of the signal system timing plans.

Maintain the central signal system software on a PC so that the signal system is monitored weekly. Check weekly by phone or location visit for any malfunction. Verify software accuracy to central office software.

D. ANNUAL

1. CABINET INSPECTION

Check the controllers, relays, and detectors to ascertain that they are functioning properly and make all necessary repairs and replacement.

Keep interior of controller cabinet in a clean and neat condition at all times.

2. OBSERVE SIGNALS

Observe the signals at the time of the annual cabinet inspection. This involves stopping and watching for correct detection and timing operation.

3. DETECTION TESTING

Test and inspect vehicle detection inductance loops, loop detectors, and pedestrian detection during cabinet visit annually.

4. VIDEO DETECTION TESTING

Inspect, maintain, and clean all video detection and surveillance systems annually or as needed, to achieve clean lenses, proper alignment and proper focus. This shall include system camera, lenses, camera housings and hood/shield, pan, tilt, and zoom mechanisms and motors, mounting brackets and hardware, poles, microprocessors, controller, cables and communication equipment, and other related components. Maintenance shall include modifications to programmable detection zones.

5. RELAMP

For the remaining incandescent signal heads, clean reflectors, lenses and lamps once at least every twelve (12) months or more often, if necessary. Replacement of lamps shall be performed on the same occasion as the cleaning required in this provision.

6. CONTROLLER CHECK

When solid state controllers malfunction, they shall be removed, repaired, and bench checked. Solid state controllers shall not be removed for annual maintenance inspections.

This annual check should verify software with central office software and reprint cabinet pack timings sheet. Controller check shall occur during a annual cabinet inspection.

7. FUSE AND BREAKER CHECKS

Fuse and breaker check should occur during a annual cabinet inspection. Replace burned out fuses or deteriorated breakers as needed.

8. CLEARANCE TRIMMING

Remove any obstruction blocking the line of sight of the traffic signal face to the motorist. The maintaining agency shall trim trees, bushes or any other form of vegetation blocking said lines of sight. The maintaining agency shall remove, or order the removal of, any man-made obstructions such as signs or banners blocking said line of sight. Visibility for line of sight shall meet the standards established and contained in the Manual on Uniform Traffic Control Devices (MUTCD). All trimmed vegetation shall be legally disposed of by the maintaining agency off the right of way.

9. HARDWARE INSPECTION

Inspect all mast arm assemblies, mast arm poles, brackets (or other types of hardware) supporting traffic heads or pedestrian signal heads on an annual basis. The inspection shall focus on the structural elements of the mast arm assembly and must include a close up, arms length investigation of the mast arm, pole, mast to pole connection, base plate, and anchor bolts.

The arm of the assembly shall be visually inspected at all signal head connections for any defects, such as cracks or buckles. Inspect the mast arm to pole connection for significant loss of section, cracks in welds or base metal, and deterioration of the connection plates. The bolts of the arm to pole connection shall be inspected for tightness and condition. Check the pole for external corrosion, impact damage, rust through perforation, deflection, distortion, or cracking. Closely inspect pole for corrosion near the base plate, especially if mounted on a grout bed. Check welds of the pole to base plate connection for cracks. Inspect base plate for section loss or deformation. Inspect mast arm anchor bolts for any corrosion or bending, and for loose or missing nuts.

Upon discovery of any buckles or significant structural defects (loose or missing nuts, severe corrosion or dents, cracks in welds, plate or structure, etc.), take corrective action in a timely manner.