If you plan to submit a bid directly to the Department of Transportation

PREQUALIFICATION

Any contractor who desires to become pre-qualified to bid on work advertised by IDOT must submit the properly completed pre-qualification forms to the Bureau of Construction no later that 4:30 p.m. prevailing time twenty-one days prior to the letting of interest. This pre-qualification requirement applies to first time contractors, contractors renewing expired ratings, contractors maintaining continuous pre-qualification or contractors requesting revised ratings. To be eligible to bid, existing pre-qualification ratings must be effective through the date of letting.

REQUESTS FOR AUTHORIZATION TO BID

Contractors downloading and/or ordering CD-ROM's and are wanting to bid on items included in a particular letting must submit the properly completed "Request for Authorization to Bid/or Not For Bid Status" (BDE 124INT) and the ORIGINAL, signed and notarized, "Affidavit of Availability" (BC 57) to the proper office no later than 4:30 p.m. prevailing time, three (3) days prior to the letting date.

WHO CAN BID ?

Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction.

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID? When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status"(BDE 124INT) he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial.

ABOUT AUTHORIZATION TO BID: Firms that have not received an authorization form within a reasonable time of complete and correct original document submittal should contact the department as to status. This is critical in the week before the letting. These documents must be received three days before the letting date. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions.

ADDENDA AND REVISIONS: It is the contractor's responsibility to determine which, if any, addenda or revisions pertain to any project they may be bidding. Failure to incorporate all relevant addenda or revisions may cause the bid to be declared unacceptable.

Each addendum will be placed with the contract number. Addenda and revisions will also be placed on the Addendum/Revision Checklist and each subscription service subscriber will be notified by e-mail of each addendum and revision issued.

The Internet is the Department's primary way of doing business. The subscription server e-mails are an added courtesy the Department provides. It is suggested that bidder check IDOT's website http://www.dot.il.gov/desenv/delett.html before submitting final bid information.

IDOT is not responsible for any e-mail related failures.

Addenda Questions may be directed to the Contracts Office at (217)782-7806 or D&Econtracts@dot.il.gov

Technical Questions about downloading these files may be directed to Tim Garman (217)524-1642 or garmantr@dot.il.gov.

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

ABOUT SUBMITTING BIDS: It is recommended that bidders deliver bids in person to insure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

Questions Regarding	**Call**
Prequalification and/or Authorization to Bid	(217)782-3413
Preparation and submittal of bids	(217)782-7806
Mailing of plans and proposals	(217)782-7806
Electronic plans and proposals	(217)524-1642

ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS

Planholders should verify that they have received and incorporated the addendum and/or revision prior to submitting their bid. Failure by the bidder to include an addendum could result in a bid being rejected as irregular.

RETURN WITH BID

100

Proposal Submitted By

Name

Address

City

Letting January 20, 2006

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL
(See instructions inside front cover)

NOTICE TO PROSPECTIVE BIDDERS
This proposal can be used for bidding purposes by only those companies that request and receive written AUTHORIZATION TO BID from IDOT's Central Bureau of Construction.
(SEE INSTRUCTIONS ON THE INSIDE OF COVER)

Notice To Bidders, Specifications, Proposal, Contract and Contract Bond

Springfield, Illinois 62764

Contract No. 60A32
Various Counties
Section 2005-054I
District 1 Formal Contracts
Various Routes

PLEASE MARK THE APPROPRIATE BOX BELOW:

☐ A Bid Bond is included.

☐ A Cashier's Check or a Certified Check is included.

Plans Included Herein

Prepared by

S

Checked by

(Printed by authority of the State of Illinois)

INSTRUCTIONS

ABOUT IDOT PROPOSALS: All proposals issued by IDOT are potential bidding proposals. Each proposal contains all Certifications and Affidavits, a Proposal Signature Sheet and a Proposal Bid Bond required for Prime Contractors to submit a bid after written **Authorization to Bid** has been issued by IDOT's Central Bureau of Construction.

WHO CAN BID?: Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction. To request authorization, a potential bidder must complete and submit Part B of the Request for Authorization to Bid/or Not For Bid Status form (BDE 124 INT) and submit an original Affidavit of Availability (BC 57).

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "Request for Proposal Forms and Plans" he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial. If a contractor has requested to bid but has not received a **Proposal Denial and/or Authorization Form**, they should contact the Central Bureau of Construction in advance of the letting date.

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond

2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

ABOUT SUBMITTING BIDS: It is recommended that bidders deliver bids in person to insure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

Questions Regarding	**Call**
Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
Mailing of CD-ROMS	217/782-7806

RETURN WITH BID

PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

   _____

Taxpayer Identification Number (Mandatory) _____

for the improvement identified and advertised for bids in the Invitation for Bids as:

Contract No. 60A32
Various Counties
Section 2005-054I
Various Routes
District 1 Formal Contracts

Annual maintenance of REVLAC, Roosevelt Ramp Access Control, CCTV Systems, SOMET, furnishing arterial DMS and installation of ramp gates all located at various locations in District One.

2. The undersigned bidder will furnish all labor, material and equipment to complete the above described project in a good and workmanlike manner as provided in the contract documents provided by the Department of Transportation. This proposal will become part of the contract and the terms and conditions contained in the contract documents shall govern performance and payments.

RETURN WITH BID

3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned further declares that he/she has carefully examined the proposal, plans, specifications, form of contract and contract bond, and special provisions, and that he/she has inspected in detail the site of the proposed work, and that he/she has familiarized themselves with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this proposal he/she waives all right to plead any misunderstanding regarding the same.

4. **EXECUTION OF CONTRACT AND CONTRACT BOND.** The undersigned further agrees to execute a contract for this work and present the same to the department within fifteen (15) days after the contract has been mailed to him/her. The undersigned further agrees that he/she and his/her surety will execute and present within fifteen (15) days after the contract has been mailed to him/her contract bond satisfactory to and in the form prescribed by the Department of Transportation, in the penal sum of the full amount of the contract, guaranteeing the faithful performance of the work in accordance with the terms of the contract.

5. **PROPOSAL GUARANTY.** Accompanying this proposal is either a bid bond on the department form, executed by a corporate surety company satisfactory to the department, or a proposal guaranty check consisting of a bank cashier's check or a properly certified check for not less than 5 per cent of the amount bid or for the amount specified in the following schedule:

Amount of Bid			Proposal Guaranty	Amount of Bid			Proposal Guaranty
Up to		$5,000	$150	$2,000,000	to	$3,000,000	$100,000
$5,000	to	$10,000	$300	$3,000,000	to	$5,000,000	$150,000
$10,000	to	$50,000	$1,000	$5,000,000	to	$7,500,000	$250,000
$50,000	to	$100,000	$3,000	$7,500,000	to	$10,000,000	$400,000
$100,000	to	$150,000	$5,000	$10,000,000	to	$15,000,000	$500,000
$150,000	to	$250,000	$7,500	$15,000,000	to	$20,000,000	$600,000
$250,000	to	$500,000	$12,500	$20,000,000	to	$25,000,000	$700,000
$500,000	to	$1,000,000	$25,000	$25,000,000	to	$30,000,000	$800,000
$1,000,000	to	$1,500,000	$50,000	$30,000,000	to	$35,000,000	$900,000
$1,500,000	to	$2,000,000	$75,000	over		$35,000,000	$1,000,000

Bank cashier's checks or properly certified checks accompanying proposals shall be made payable to the Treasurer, State of Illinois, when the state is awarding authority; the county treasurer, when a county is the awarding authority; or the city, village, or town treasurer, when a city, village, or town is the awarding authority.

If a combination bid is submitted, the proposal guaranties which accompany the individual proposals making up the combination will be considered as also covering the combination bid.

The amount of the proposal guaranty check is _____ $( ). If this proposal is accepted and the undersigned shall fail to execute a contract bond as required herein, it is hereby agreed that the amount of the proposal guaranty shall become the property of the State of Illinois, and shall be considered as payment of damages due to delay and other causes suffered by the State because of the failure to execute said contract and contract bond; otherwise, the bid bond shall become void or the proposal guaranty check shall be returned to the undersigned.

Attach Cashier's Check or Certified Check Here

In the event that one proposal guaranty check is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guaranties which would be required for each individual proposal. If the guaranty check is placed in another proposal, state below where it may be found.

The proposal guaranty check will be found in the proposal for:

Item _____

Section No. _____

County _____

Mark the proposal cover sheet as to the type of proposal guaranty submitted.

BD 354 (Rev. 11/2001)

6. **COMBINATION BIDS.** The undersigned further agrees that if awarded the contract for the sections contained in the following combination, he/she will perform the work in accordance with the requirements of each individual proposal comprising the combination bid specified in the schedule below, and that the combination bid shall be prorated against each section in proportion to the bid submitted for the same. If an error is found to exist in the gross sum bid for one or more of the individual sections included in a combination, the combination bid shall be corrected as provided in the specifications.

When a combination bid is submitted, the schedule below must be completed in each proposal comprising the combination.

If alternate bids are submitted for one or more of the sections comprising the combination, a combination bid must be submitted for each alternate.

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices shall govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.

8. **CERTIFICATE OF AUTHORITY.** The undersigned bidder, if a business organized under the laws of another State, assures the Department that it will furnish a copy of its certificate of authority to do business in the State of Illinois with the return of the executed contract and bond. Failure to furnish the certificate within the time provided for execution of an awarded contract may be cause for cancellation of the award and forfeiture of the proposal guaranty to the State.

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 60A32

State Job # - C-91-032-06
PPS NBR - FORM CON
County Name - VARIOUS- -
Code - 0 - -
District - 0 - -
Section Number - 2005-054I

Project Number

Route VARIOUS

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0320990	D1 ELECT MAINT	L SUM	1.000				

CONTRACT NUMBER **60A32**

THIS IS THE TOTAL BID **$** _____

NOTES:

1. **Each PAY ITEM should have a UNIT PRICE and a TOTAL PRICE.**
2. **The UNIT PRICE shall govern if no TOTAL PRICE is shown or if there is a discrepancy between the product of the UNIT PRICE multiplied by the QUANTITY.**

RETURN WITH BID

STATE REQUIRED ETHICAL STANDARDS GOVERNING CONTRACT PROCUREMENT: ASSURANCES, CERTIFICATIONS AND DISCLOSURES

I. GENERAL

A. Article 50 of the Illinois Procurement Code establishes the duty of all State chief procurement officers, State purchasing officers, and their designees to maximize the value of the expenditure of public moneys in procuring goods, services, and contracts for the State of Illinois and to act in a manner that maintains the integrity and public trust of State government. In discharging this duty, they are charged by law to use all available information, reasonable efforts, and reasonable actions to protect, safeguard, and maintain the procurement process of the State of Illinois.

B. In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. By execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances has been read and understood, that each certification is made and understood, and that each disclosure requirement has been understood and completed.

C. In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for termination of the contract and the suspension or debarment of the bidder.

II. ASSURANCES

A. The assurances hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous assurance, and the surety providing the performance bond shall be responsible for the completion of the contract.

B. Felons

1. The Illinois Procurement Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any state agency from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-10.

C. Conflicts of Interest

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

(a) Prohibition. It is unlawful for any person holding an elective office in this State, holding a seat in the General Assembly, or appointed to or employed in any of the offices or agencies of state government and who receives compensation for such employment in excess of 60% of the salary of the Governor of the State of Illinois, or who is an officer or employee of the Capital Development Board or the Illinois Toll Highway Authority, or who is the spouse or minor child of any such person to have or acquire any contract, or any direct pecuniary interest in any contract therein, whether for stationery, printing, paper, or any services, materials, or supplies, that will be wholly or partially satisfied by the payment of funds appropriated by the General Assembly of the State of Illinois or in any contract of the Capital Development Board or the Illinois Toll Highway authority.

(b) Interests. It is unlawful for any firm, partnership, association or corporation, in which any person listed in subsection (a) is entitled to receive (i) more than 7 1/2% of the total distributable income or (ii) an amount in excess of the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(c) Combined interests. It is unlawful for any firm, partnership, association, or corporation, in which any person listed in subsection (a) together with his or her spouse or minor children is entitled to receive (i) more than 15%, in the aggregate, of the total distributable income or (ii) an amount in excess of 2 times the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(d) Securities. Nothing in this Section invalidates the provisions of any bond or other security previously offered or to be offered for sale or sold by or for the State of Illinois.

(e) Prior interests. This Section does not affect the validity of any contract made between the State and an officer or employee of the State or member of the General Assembly, his or her spouse, minor child or any combination of those persons if that contract was in existence before his or her election or employment as an officer, member, or employee. The contract is voidable, however, if it cannot be completed within 365 days after the officer, member, or employee takes office or is employed.

The current salary of the Governor is $150,700.00. Sixty percent of the salary is $90,420.00.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-13, or that an effective exemption has been issued by the Board of Ethics to any individual subject to the Section 50-13 prohibitions pursuant to the provisions of Section 50-20 of the Code and Executive Order Number 3 (1998). Information concerning the exemption process is available from the Department upon request.

D. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

(a) It is unlawful for any person employed in or on a continual contractual relationship with any of the offices or agencies of State government to participate in contract negotiations on behalf of that office or agency with any firm, partnership, association, or corporation with whom that person has a contract for future employment or is negotiating concerning possible future employment.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-15, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

E. Inducements

1. The Illinois Procurement Code provides:

Section 50-25. Inducement. Any person who offers or pays any money or other valuable thing to any person to induce him or her not to bid for a State contract or as recompense for not having bid on a State contract is guilty of a Class 4 felony. Any person who accepts any money or other valuable thing for not bidding for a State contract or who withholds a bid in consideration of the promise for the payment of money or other valuable thing is guilty of a Class 4 felony.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-25, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

F. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

Section 50-30. Revolving door prohibition. Chief procurement officers, associate procurement officers, State purchasing officers, their designees whose principal duties are directly related to State procurement, and executive officers confirmed by the Senate are expressly prohibited for a period of 2 years after terminating an affected position from engaging in any procurement activity relating to the State agency most recently employing them in an affected position for a period of at least 6 months. The prohibition includes, but is not limited to: lobbying the procurement process; specifying; bidding; proposing bid, proposal, or contract documents; on their own behalf or on behalf of any firm, partnership, association, or corporation. This Section applies only to persons who terminate an affected position on or after January 15, 1999.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-30, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

G. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

Section 50-40. Reporting anticompetitive practices. When, for any reason, any vendor, bidder, contractor, chief procurement officer, State purchasing officer, designee, elected official, or State employee suspects collusion or other anticompetitive practice among any bidders, offerors, contractors, proposers, or employees of the State, a notice of the relevant facts shall be transmitted to the Attorney General and the chief procurement officer.

2. The bidder assures the Department that it has not failed to report any relevant facts concerning the practices addressed in Section 50-40 which may involve the contract for which the bid is submitted.

H. Confidentiality

1. The Illinois Procurement Code provides:

Section 50-45. Confidentiality. Any chief procurement officer, State purchasing officer, designee, or executive officer who willfully uses or allows the use of specifications, competitive bid documents, proprietary competitive information, proposals, contracts, or selection information to compromise the fairness or integrity of the procurement, bidding, or contract process shall be subject to immediate dismissal, regardless of the Personnel code, any contract, or any collective bargaining agreement, and may in addition be subject to criminal prosecution.

2. The bidder assures the Department that it has no knowledge of any fact relevant to the practices addressed in Section 50-45 which may involve the contract for which the bid is submitted.

RETURN WITH BID

I. Insider Information

1. The Illinois Procurement Act provides:

Section 50-50. Insider information. It is unlawful for any current or former elected or appointed State official or State employee to knowingly use confidential information available only by virtue of that office or employment for actual or anticipated gain for themselves or another person.

2. The bidder assures the Department that it has no knowledge of any facts relevant to the practices addressed in Section 50-50 which may involve the contract for which the bid is submitted.

III. CERTIFICATIONS

A. The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous certification, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

(a) Prohibition. No person or business shall be awarded a contract or subcontract under this Code who:

(1) has been convicted under the laws of Illinois or any other state of bribery or attempting to bribe an officer or employee of the State of Illinois or any other state in that officer's or employee's official capacity; or

(2) has made an admission of guilt of that conduct that is a matter of record but has not been prosecuted for that conduct.

(b) Businesses. No business shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of the business if the employee or agent is no longer employed by the business and:

(1) the business has been finally adjudicated not guilty; or

(2) the business demonstrates to the governmental entity with which it seeks to contract, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

(c) Conduct on behalf of business. For purposes of this Section, when an official, agent, or employee of a business committed the bribery or attempted bribery on behalf of the business and in accordance with the direction or authorization of a responsible official of the business, the business shall be chargeable with the conduct.

(d) Certification. Every bid submitted to and contract executed by the State shall contain a certification by the contractor that the contractor is not barred from being awarded a contract or subcontract under this Section. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

2. The bidder certifies that it is not barred from being awarded a contract under Section 50.5.

C. Educational Loan

1. Section 3 of the Educational Loan Default Act provides:

§ 3. No State agency shall contract with an individual for goods or services if that individual is in default, as defined in Section 2 of this Act, on an educational loan. Any contract used by any State agency shall include a statement certifying that the individual is not in default on an educational loan as provided in this Section.

2. The bidder, if an individual as opposed to a corporation, partnership or other form of business organization, certifies that the bidder is not in default on an educational loan as provided in Section 3 of the Act.

D. Bid-Rigging/Bid Rotating

1. Section 33E-11 of the Criminal Code of 1961 provides:

§ 33E-11. (a) Every bid submitted to and public contract executed pursuant to such bid by the State or a unit of local government shall contain a certification by the prime contractor that the prime contractor is not barred from contracting with any unit of State or local government as a result of a violation of either Section 33E-3 or 33E-4 of this Article. The State and units of local government shall provide the appropriate forms for such certification.

(b) A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

A violation of Section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

2. The bidder certifies that it is not barred from contracting with the Department by reason of a violation of either Section 33E-3 or Section 33E-4.

E. International Anti-Boycott

1. Section 5 of the International Anti-Boycott Certification Act provides:

§ 5. State contracts. Every contract entered into by the State of Illinois for the manufacture, furnishing, or purchasing of supplies, material, or equipment or for the furnishing of work, labor, or services, in an amount exceeding the threshold for small purchases according to the purchasing laws of this State or $10,000.00, whichever is less, shall contain certification, as a material condition of the contract, by which the contractor agrees that neither the contractor nor any substantially-owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act.

2. The bidder makes the certification set forth in Section 5 of the Act.

F. Drug Free Workplace

1. The Illinois “Drug Free Workplace Act” applies to this contract and it is necessary to comply with the provisions of the “Act” if the contractor is a corporation, partnership, or other entity (including a sole proprietorship) which has 25 or more employees.

2. The bidder certifies that if awarded a contract in excess of $5,000 it will provide a drug free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance, including cannabis, is prohibited in the contractor’s workplace; specifying the actions that will be taken against employees for violations of such prohibition; and notifying the employee that, as a condition of employment on such contract, the employee shall abide by the terms of the statement, and 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 the dangers of drug abuse in the workplace; the contractor’s policy of maintaining a drug free workplace; any available drug counseling, rehabilitation, and employee assistance programs; and the penalties that may be imposed upon employees for drug violations.

(c) Providing a copy of the statement required by subparagraph (1) to each employee engaged in the performance of the contract and to post the statement in a prominent place in the workplace.

(d) Notifying the Department within ten (10) days after receiving notice from an employee or otherwise receiving actual notice of the conviction of an employee for a violation of any criminal drug statute occurring in the workplace.

(e) Imposing or requiring, within 30 days after receiving notice from an employee of a conviction or actual notice of such a conviction, an appropriate personnel action, up to and including termination, or the satisfactory participation in a drug abuse assistance or rehabilitation program approved by a federal, state or local health, law enforcement or other appropriate agency.

(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 actions and efforts stated in this certification.

G. Debt Delinquency

1. The Illinois Procurement Code provides:

Section 50-11 and 50-12. Debt Delinquency.

The contractor or bidder certifies that it, or any affiliate, is not barred from being awarded a contract under 30 ILCS 500. Section 50-11 prohibits a person from entering into a contract with a State agency if it knows or should know that it, or any affiliate, is delinquent in the payment of any debt to the State as defined by the Debt Collection Board. Section 50-12 prohibits a person from entering into a contract with a State agency if it, or any affiliate, has failed to collect and remit Illinois Use Tax on all sales of tangible personal property into the State of Illinois in accordance with the provisions of the Illinois Use Tax Act. The contractor further acknowledges that the contracting State agency may declare the contract void if this certification is false or if the contractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

H. Sarbanes-Oxley Act of 2002

1. The Illinois Procurement Code provides:

Section 50-60(c).

The contractor certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 for a period of five years prior to the date of the bid or contract. The contractor acknowledges that the contracting agency shall declare the contract void if this certification is false.

I. ADDENDA

The contractor or bidder certifies that all relevant addenda have been incorporated in to this contract. Failure to do so may cause the bid to be declared unacceptable.

J. Section 42 of the Environmental Protection Act

The contractor certifies in accordance with 30 ILCS 500/50-12 that the bidder or contractor is not barred from being awarded a contract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The contractor acknowledges that the contracting agency may declare the contract void if this certification is false.

K. Apprenticeship and Training Certification (Does not apply to federal aid projects)

In accordance with the provisions of Section 30-22 (6) of the Illinois Procurement Code, the bidder certifies that it is a participant, either as an individual or as part of a group program, in the approved apprenticeship and training programs applicable to each type of work or craft that the bidder will perform with its own forces. The bidder further certifies for work that will be performed by subcontract that each of its subcontractors submitted for approval either (a) is, at the time of such bid, participating in an approved, applicable apprenticeship and training program; or (b) will, prior to commencement of performance of work pursuant to this contract, begin participation in an approved apprenticeship and training program applicable to the work of the subcontract. The Department, at any time before or after award, may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and any or all of its subcontractors. Applicable apprenticeship and training programs are those that have been approved and registered with the United States Department of Labor. The bidder shall list in the space below, the official name of the program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's forces. Types of work or craft work that will be subcontracted shall be included and listed as subcontract work. The list shall also indicate any type of work or craft job category that does not have an applicable apprenticeship or training program. **The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project as reported on the Construction Employee Workforce Projection (Form BC-1256) and returned with the bid is accounted for and listed.**

_____

_____

_____

The requirements of this certification and disclosure are a material part of the contract, and the contractor shall require this certification provision to be included in all approved subcontracts. In order to fulfill this requirement, it shall not be necessary that an applicable program sponsor be currently taking or that it will take applications for apprenticeship, training or employment during the performance of the work of this contract.

TO BE RETURNED WITH BID

IV. DISCLOSURES

A. The disclosures hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous disclosure, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all bids of more than $10,000 shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

In addition, all disclosures shall indicate any other current or pending contracts, proposals, leases, or other ongoing procurement relationships the bidding entity has with any other unit of state government and shall clearly identify the unit and the contract, proposal, lease, or other relationship.

2. Disclosure Forms. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **The forms must be included with each bid or incorporated by reference.**

C. Disclosure Form Instructions

Form A: For bidders that have previously submitted the information requested in Form A

The Department has retained the Form A disclosures submitted by all bidders responding to these requirements for the April 24, 1998 or any subsequent letting conducted by the Department. The bidder has the option of submitting the information again or the bidder may sign the following certification statement indicating that the information previously submitted by the bidder is, as of the date of signature, current and accurate. The Certification must be signed and dated by a person who is authorized to execute contracts for the bidding company. Before signing this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder signs the Certification, the Bidder should proceed to Form B instructions.

CERTIFICATION STATEMENT

I have determined that the Form A disclosure information previously submitted is current and accurate, and all forms are hereby incorporated by reference in this bid. Any necessary additional forms or amendments to previously submitted forms are attached to this bid.

_____
(Bidding Company)

_____ _____
Name of Authorized Representative (type or print) Title of Authorized Representative (type or print)

_____ _____
Signature of Authorized Representative Date

Form A: For bidders who have NOT previously submitted the information requested in Form A

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on the second page of Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES ___ NO___
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than $90,420.00? YES ___ NO___
3. Does anyone in your organization receive more than $90,420.00 of the bidding entity's or parent entity's distributive income? (Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.) YES ___ NO __
4. Does anyone in your organization receive greater than 5% of the bidding entity's or parent entity's total distributive income, but which is less than $90,420.00? YES ___ NO __

   (Note: Only one set of forms needs to be completed per person per bid even if a specific individual would require a yes answer to more than one question.)

A "YES" answer to any of these questions requires the completion of Form A. The bidder must determine each individual in the bidding entity or the bidding entity's parent company that would cause the questions to be answered "Yes". Each form must be signed and dated by a person that is authorized to execute contracts for your organization. **Photocopied or stamped signatures are not acceptable**. The person signing can be, but does not have to be, the person for which the form is being completed. The bidder is responsible for the accuracy of any information provided.

If the answer to each of the above questions is "NO", then the NOT APPLICABLE STATEMENT on page 2 of Form A must be signed and dated by a person that is authorized to execute contracts for your company.

Form B: **Identifying Other Contracts & Procurement Related Information** Disclosure Form B must be completed for each bid submitted by the bidding entity. It must be signed by an individual who is authorized to execute contracts for the bidding entity. *Note: Signing the NOT APPLICABLE STATEMENT on Form A does not allow the bidder to ignore Form B. Form B must be completed, signed and dated or the bidder may be considered nonresponsive and the bid will not be accepted.*

The Bidder shall identify, by checking Yes or No on Form B, whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other (non-IDOT) State of Illinois agency. If "No" is checked, the bidder only needs to complete the signature box on the bottom of Form B. If "Yes" is checked, the bidder must do one of the following:

Option I: If the bidder did not submit an Affidavit of Availability to obtain authorization to bid, the bidder must list all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. These items may be listed on Form B or on an attached sheet(s). Do not include IDOT contracts. Contracts with cities, counties, villages, etc. are not considered State of Illinois agency contracts and are not to be included. Contracts with other State of Illinois agencies such as the Department of Natural Resources or the Capital Development Board must be included. Bidders who submit Affidavits of Availability are suggested to use Option II.

Option II: If the bidder is required and has submitted an Affidavit of Availability in order to obtain authorization to bid, the bidder may write or type "See Affidavit of Availability" which indicates that the Affidavit of Availability is incorporated by reference and includes all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. For any contracts that are not covered by the Affidavit of Availability, the bidder must identify them on Form B or on an attached sheet(s). These might be such things as leases.

D. Bidders Submitting More Than One Bid

Bidders submitting multiple bids may submit one set of forms consisting of all required Form A disclosures and one Form B for use with all bids. Please indicate in the space provided below the bid item that contains the original disclosure forms and the bid items which incorporate the forms by reference.

- The bid submitted for letting item _____ contains the Form A disclosures or Certification Statement and the Form B disclosures. The following letting items incorporate the said forms by reference:

_____

_____

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A
Financial Information & Potential Conflicts of Interest Disclosure

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number	Email Address	Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Code (30 ILCS 500). Vendors desiring to enter into a contract with the State of Illinois must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for bids in excess of $10,000, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the BIDDER (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than $90,420.00 (60% of the Governor's salary as of 7/1/01). **(Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)**

FOR INDIVIDUAL (type or print information)

NAME: _____

ADDRESS _____

_____

Type of ownership/distributable income share:

stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet):

% or $ value of ownership/distributable income share: _____

2. Disclosure of Potential Conflicts of Interest. Check "Yes" or "No" to indicate which, if any, of the following potential conflict of interest relationships apply. If the answer to any question is "Yes", please attach additional pages and describe.

(a) State employment, currently or in the previous 3 years, including contractual employment of services.
Yes ___ No __

If your answer is yes, please answer each of the following questions.

1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois Toll Highway Authority? Yes ___ No __

2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds $90,420.00, (60% of the Governor's salary as of 7/1/01) provide the name the State agency for which you are employed and your annual salary. _____
_____

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds $90,420.00, (60% of the Governor's salary as of 7/1/01) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___No __

4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds $90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor? Yes ___No __

(b) State employment of spouse, father, mother, son, or daughter, including contractual employment services in the previous 2 years.

Yes ___No __

If your answer is yes, please answer each of the following questions.

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois Toll Highway Authority? Yes ___No __

2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds $90,420.00, (60 % of the Governor's salary as of 7/1/01) provide the name of your spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____

   _____

3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds $90,420.00, (60% of the salary of the Governor as of 7/1/01) are you entitled to receive (i) more then 71/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___No __

4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds $90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor?

   Yes ___No __

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years. Yes ___No __

(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___No __

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United States of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years. Yes ___No __

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___No __

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government.

Yes ___No __

RETURN WITH BID/OFFER

(h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No __

(i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections.
Yes ___ No __

(j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections.
Yes ___ No __

APPLICABLE STATEMENT

This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page.

Completed by: _____
Name of Authorized Representative (type or print)

Completed by: _____
Title of Authorized Representative (type or print)

Completed by: _____ _____
Signature of Individual or Authorized Representative — Date

NOT APPLICABLE STATEMENT

I have determined that no individuals associated with this organization meet the criteria that would require the completion of this Form A.

This Disclosure Form A is submitted on behalf of the CONTRACTOR listed on the previous page.

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____ _____
Signature of Authorized Representative — Date

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B
Other Contracts & Procurement Related Information Disclosure

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number	Email Address	Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Act (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for bids in excess of $10,000, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

1. Identifying Other Contracts & Procurement Related Information. The BIDDER shall identify whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency: Yes ___ No __
If "No" is checked, the bidder only needs to complete the signature box on the bottom of this page.

2. If "Yes" is checked. Identify each such relationship by showing State of Illinois agency name and other descriptive information such as bid or project number (attach additional pages as necessary). SEE DISCLOSURE FORM INSTRUCTIONS:

THE FOLLOWING STATEMENT MUST BE SIGNED

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative

Date

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SPECIAL NOTICE TO CONTRACTORS

The following requirements of the Illinois Department of Human Rights' Rules and Regulations are applicable to bidders on all construction contracts advertised by the Illinois Department of Transportation:

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

(a) All bidders on construction contracts shall complete and submit, along with and as part of their bids, a Bidder's Employee Utilization Form (Form BC-1256) setting forth a projection and breakdown of the total workforce intended to be hired and/or allocated to such contract work by the bidder including a projection of minority and female employee utilization in all job classifications on the contract project.

(b) The Department of Transportation shall review the Employee Utilization Form, and workforce projections contained therein, of the contract awardee to determine if such projections reflect an underutilization of minority persons and/or women in any job classification in accordance with the Equal Employment Opportunity Clause and Section 7.2 of the Illinois Department of Human Rights' Rules and Regulations for Public Contracts adopted as amended on September 17, 1980. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.

(c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.

RETURN WITH BID

Illinois Department of Transportation

Contract No. 60A32
Various Counties
Section 2005-054I
Various Routes
District 1 Formal Contracts

PART I. IDENTIFICATION

Dept. Human Rights #_____ Duration of Project: _____

Name of Bidder: _____

PART II. WORKFORCE PROJECTION

A. The undersigned bidder has analyzed minority group and female populations, unemployment rates and availability of workers for the location in which this contract work is to be performed, and for the locations from which the bidder recruits employees, and hereby submits the following workforce projection including a projection for minority and female employee utilization in all job categories in the workforce to be allocated to this contract:

TABLE A

TOTAL Workforce Projection for Contract													TABLE B: CURRENT EMPLOYEES TO BE ASSIGNED TO CONTRACT			
			MINORITY EMPLOYEES						TRAINEES							
JOB CATEGORIES	TOTAL EMPLOYEES		BLACK		HISPANIC		*OTHER MINOR.		APPREN-TICES		ON THE JOB TRAINEES		TOTAL EMPLOYEES		MINORITY EMPLOYEES	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
OFFICIALS (MANAGERS)																
SUPERVISORS																
FOREMEN																
CLERICAL																
EQUIPMENT OPERATORS																
MECHANICS																
TRUCK DRIVERS																
IRONWORKERS																
CARPENTERS																
CEMENT MASONS																
ELECTRICIANS																
PIPEFITTERS, PLUMBERS																
PAINTERS																
LABORERS, SEMI-SKILLED																
LABORERS, UNSKILLED																
TOTAL																

TABLE C

TOTAL Training Projection for Contract								
EMPLOYEES IN TRAINING	TOTAL EMPLOYEES		BLACK		HISPANIC		*OTHER MINOR.	
	M	F	M	F	M	F	M	F
APPRENTICES								
ON THE JOB TRAINEES								

*Other minorities are defined as Asians (A) or Native Americans (N).

Please specify race of each employee shown in Other Minorities column.

Note: See instructions on the next page

FOR DEPARTMENT USE ONLY

RETURN WITH BID

Contract No. 60A32
Various Counties
Section 2005-054I
Various Routes
District 1 Formal Contracts

PART II. WORKFORCE PROJECTION - continued

B. Included in "Total Employees" under Table A is the total number of **new hires** that would be employed in the event the undersigned bidder is awarded this contract.

The undersigned bidder projects that: (number) _____ new hires would be recruited from the area in which the contract project is located; and/or (number) _____ new hires would be recruited from the area in which the bidder's principal office or base of operation is located.

C. Included in "Total Employees" under Table A is a projection of numbers of persons to be employed directly by the undersigned bidder as well as a projection of numbers of persons to be employed by subcontractors.

The undersigned bidder estimates that (number) _____ persons will be directly employed by the prime contractor and that (number) _____ persons will be employed by subcontractors.

PART III. AFFIRMATIVE ACTION PLAN

A. The undersigned bidder understands and agrees that in the event the foregoing minority and female employee utilization projection included under **PART II** is determined to be an underutilization of minority persons or women in any job category, and in the event that the undersigned bidder is awarded this contract, he/she will, prior to commencement of work, develop and submit a written Affirmative Action Plan including a specific timetable (geared to the completion stages of the contract) whereby deficiencies in minority and/or female employee utilization are corrected. Such Affirmative Action Plan will be subject to approval by the contracting agency and the **Department of Human Rights**.

B. The undersigned bidder understands and agrees that the minority and female employee utilization projection submitted herein, and the goals and timetable included under an Affirmative Action Plan if required, are deemed to be part of the contract specifications.

Company _____ Telephone Number _____

_____

Address _____

NOTICE REGARDING SIGNATURE

The Bidder's signature on the Proposal Signature Sheet will constitute the signing of this form. The following signature block needs to be completed only if revisions are required.

Signature: _____ Title: _____ Date: _____

Instructions: All tables must include subcontractor personnel in addition to prime contractor personnel.

Table A - Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work.

Table B - Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed.

Table C - Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A.

RETURN WITH BID

Contract No. 60A32
Various Counties
Section 2005-054I
Various Routes
District 1 Formal Contracts

PROPOSAL SIGNATURE SHEET

The undersigned bidder hereby makes and submits this bid on the subject Proposal, thereby assuring the Department that all requirements of the Invitation for Bids and rules of the Department have been met, that there is no misunderstanding of the requirements of paragraph 3 of this Proposal, and that the contract will be executed in accordance with the rules of the Department if an award is made on this bid.

Firm Name _____

(IF AN INDIVIDUAL)

Signature of Owner _____

Business Address _____

_____

Firm Name _____

By _____

(IF A CO-PARTNERSHIP)

Business Address _____

_____

Name and Address of All Members of the Firm:

_____ _____

_____ _____

Corporate Name _____

By _____

Signature of Authorized Representative

_____

Typed or printed name and title of Authorized Representative

(IF A CORPORATION)

Attest _____

Signature

(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW)

Business Address _____

_____

Corporate Name _____

By _____

Signature of Authorized Representative

_____

Typed or printed name and title of Authorized Representative

(IF A JOINT VENTURE)

Attest _____

Signature

Business Address _____

_____

If more than two parties are in the joint venture, please attach an additional signature sheet.

RETURN WITH BID

Illinois Department of Transportation

Division of Highways
Proposal Bid Bond
(Effective November 1, 1992)

Item No. _____
Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

_____

as PRINCIPAL, and _____

_____ as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in Article 102.09 of the "Standard Specifications for Road and Bridge Construction" in effect on the date of invitation for bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH, That Whereas, the PRINCIPAL has submitted a bid proposal to the STATE OF ILLINOIS, acting through the Department of Transportation, for the improvement designated by the Transportation Bulletin Item Number and Letting Date indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified in the bidding and contract documents, submit a DBE Utilization Plan that is accepted and approved by the Department; and if, after award by the Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to make the required DBE submission or to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

IN THE EVENT the Department determines the PRINCIPAL has failed to comply with any requirement as set forth in the preceding paragraph, then Surety shall pay the penal sum to the Department within fifteen (15) days of written demand therefor. If Surety does not make full payment within such period of time, the Department may bring an action to collect the amount owed. Surety is liable to the Department for all its expenses, including attorney's fees, incurred in any litigation in which it prevails either in whole or in part.

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this _____ day of _____ A.D., _____.

PRINCIPAL **SURETY**

_____ _____
(Company Name) (Company Name)

By: _____ By: _____
(Signature & Title) (Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
COUNTY OF _____

I, _____, a Notary Public in and for said County, do hereby certify that

_____and _____

(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ day of _____, A.D. _____.

My commission expires _____ _____
Notary Public

In lieu of completing the above section of the Proposal Bid Form, the Principal may file an Electronic Bid Bond. By signing below the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the State of Illinois under the conditions of the bid bond as shown above.

_____ _____ _____
Electronic Bid Bond ID# Company/Bidder Name Signature and Title

PROPOSAL ENVELOPE

Illinois Department of Transportation

PROPOSALS

for construction work advertised for bids by the
Illinois Department of Transportation

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

Bidders should use an IDOT proposal envelope or affix this form to the front of a 10” x 13” envelope for the submittal of bids. If proposals are mailed, they should be enclosed in a second or outer envelope addressed to:

Engineer of Design and Environment - Room 326
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

NOTICE

Individual bids, including Bid Bond and/or supplemental information if required, should be securely stapled.

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

None of the following material needs to be returned with the bid package unless the special provisions require documentation and/or other information to be submitted.

Contract No. 60A32
Various Counties
Section 2005-054I
Various Routes
District 1 Formal Contracts

Illinois Department of Transportation

Illinois Department of Transportation

NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., January 20, 2006. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.

2. **DESCRIPTION OF WORK**. The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

   Contract No. 60A32
   Various Counties
   Section 2005-054I
   Various Routes
   District 1 Formal Contracts

Annual maintenance of REVLAC, Roosevelt Ramp Access Control, CCTV Systems, SOMET, furnishing arterial DMS and installation of ramp gates all located at various locations in District One.

3. **INSTRUCTIONS TO BIDDERS**. (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

   (b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.

4. **AWARD CRITERIA AND REJECTION OF BIDS**. This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Timothy W. Martin, Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS
Adopted March 1, 2005

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-02) (Revised 3-1-05)

SUPPLEMENTAL SPECIFICATIONS

RECURRING SPECIAL PROVISIONS

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

ASMC
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STATE OF ILLINOIS

SPECIAL PROVISIONS

1.0 INTRO TO THE ADVANCED SYSTEMS MAINTENANCE CONTRACT

GENERAL REQUIRMENTS

The Contractor is automatically authorized and required to perform routine maintenance work on the ASMC systems. Unless certain work is specifically described herein to be non-routine work or as notified in writing by the Engineer to be non-routine work, all work required by the Contract, including immediate response, scheduled and preventive work, all maintenance activities, equipment repairs and/or replacements, and all associated work to keep the ASMC system equipment operating at peak performance, shall be considered incidental to the requirements of routine maintenance, and the costs of such work shall be included in the routine maintenance pay items. In addition, all work documentation as required herein, or at the request of the Engineer, shall be incidental to routine maintenance. Requirements of routine maintenance are included in the articles of the Contract herein.

SCHEDULE OF PRICES/SUMMARY OF PRICES

1. Each Pay Item shall have a unit price and a total price.
2. The unit price shall govern if no total price is shown or if there is a discrepancy between the total price and the product of the unit price and the quantity.
3. If a unit price is omitted, the total price will be divided by the quantity in order to establish a unit price.
4. A bid will be declared unacceptable if neither unit price nor a total price is shown.
5. All bidders understand that the quantities in the schedule of prices will be used for calculating a gross sum for the comparison of bids and for determining the qualified low bidder.
6. The Contractor will be paid only for actual quantities of work performed and accepted, but not for estimated quantities in the schedule of prices.
7. Non-routine work will be authorized based on preventive maintenance reports, ongoing operational needs and system improvement needs. The Department is under no obligation to authorize any non-routine pay item work.
8. Quantities for bidding are only estimates and actual quantities may vary. The pace of construction activities as well as a number of other unpredictable factors will cause variances from these indicated quantities, both for routine maintenance pay item and non-routine pay item quantities.
9. The bidder's unit prices are expected to be realistic and no additional compensation will be allowed due to variances in quantities; however, the Engineer retains the right to seek a revised unit price where quantities exceed to the extent that additional economies of scale would be normal.
10. The Engineer retains the right to use force account procedures or use other procurement means available to the Department where unit prices are significantly higher than the Department or project norms. The bidders are cautioned against unbalanced bidding.

DESCRIPTION OF WORK

This contract is for the maintenance of:

- The Kennedy Expressway Reversible Lane Access Control (REVLAC) System
- The Roosevelt Ramp Access Control System (RACS) and Ramp Gates
- Various CCTV systems within Region 1, as defined
- SONET and AVL Systems

The Contractor shall, as specified herein:

1. Provide labor and materials, equipment, communications, and facilities to maintain the systems.

2. Provide continuous maintenance and repair service, including Saturdays, Sundays, and Holidays to correct any malfunction of equipment, to affect any temporary emergency repairs to missing, stolen, defective, damaged, or displaced equipment resulting from any cause whatsoever to minimize the duration of, and negative impact upon, traffic and IDOT operations.

3. Clean, repair, perform preventive maintenance, overhaul specified equipment at stated intervals of time, and perform work to modify the system as directed by the Engineer.

4. Provide the necessary transportation for workers.

5. Patrol and inspect the respective systems and perform all activities required herein.

6. Provide supervisory monitoring and administration to assure compliance with contract requirements. Provide timely and accurate documentation.

PRE-BID MEETING

The Contract work shall be performed only by a contractor having the special expertise and organizational capabilities necessary to accomplish its scope of work. All bidders must be pre-approved by the IDOT Central Bureau of Operations, prior to bidding upon the Advanced Systems Maintenance Contract. Therefore, attendance at the ASMC Pre-Bid Meeting is mandatory for all prospective bidders. The tentative date and venue for the Pre-bid meeting are:

10:30 AM, Wednesday, January 4, 2006
Illinois Department of Transportation
201 West Center Court
Schaumburg, IL. 60196-1096

The bidders shall check with IDOT Central Bureau of Operations for any changes to the above schedule and venue.

BIDDERS' SPECIAL QUALIFICATION SUBMITTAL INSTRUCTIONS

Due to the specialized and multi-technology nature of the work under this contract, and the need for a real-time response to system maintenance 24-hours a day, the prospective bidders shall submit their qualification information to allow determination of the bidder's ability to perform the contract work. Therefore, each prospective bidder shall submit the following special qualification information for review and evaluation by the Department prior to being allowed to bid. The qualification information shall address each item listed below, clearly identifying the respective item number.

1. **A descriptive list of project work having incorporating related technologies** complete with the name and phone number of a customer reference contact for each listed project. Project descriptions shall describe the nature of the project, the portion of the project actually performed by the Contractor, the dollar value of the contractor's portion of the project, electrical work and technology which is related to the electrical systems and technology employed in REVLAC and RACS, and a listing of subcontractors' and in-house personnel involved in the work who would be employed in the ASMC contract.

   To be considered qualified for the ASMC work, a prospective bidder must demonstrate existing in-house capabilities and experience in understanding and managing large-scale multi-technology projects that include complex computerized controls, wireless data transfer and utilization, Microwave system, AC power and DC control systems, fiber optic data transmission, CCTV systems and miscellaneous support and auxiliary functions. In addition, a qualified bidder will have on-board staff, present from the time of bidding, capable of outside electrical work on the state highway right-of-way and significant experience and staffing capable of electrical work in buildings, with capabilities of reading, understanding and designing electrical control circuits in ladder logic and in trouble-shooting standard and PLC-based control circuits and lane access control (gates and barrier assemblies) systems.

2. **A detailed 24-hour emergency response plan**. Existing capability to handle 24-hour response activities as specified must be demonstrated.

   To be considered qualified for the ASMC work, the Contractor shall provide a specific detailed response plan describing how the 24-hour emergency response provisions of the contract will be met. The response plan shall include proposed responses to lane access control system, PLC, SONET, fiber, Microwave and CCTV failures, as well as equipment damage. Generic or hypothetical plans will not be acceptable.

3. **A preliminary organizational structure for management and execution of ASMC contract work.** The contractor's structure shall include all personnel specified in these Special Provisions plus any additional key personnel the contractor references to establish its position of experience and credentials in ASMC technologies. The structure shall be accompanied by resumes of listed personnel, and these shall describe work history and current level of expertise applicable to the ASMC systems.

   A qualified bidder will demonstrate a structure which meets the intent of the specified requirements with currently employed in-house staff on board and firm commitments from any subcontracted firms and personnel in the form of letters of intent signed by principals of the firm involved. Personnel experience credentials shall match the work requirements of the contract. The Project Manager shall have experience in managing complex multi-technology systems which incorporate Microwave communication, SONET, fiberoptic and PLC systems.

4. **Documentation of an existing presence within IDOT Region 1,** with a location and description of headquarters, yard, storage and facilities proposed to be used in performing the ASMC contract work.

   A qualified bidder must demonstrate an existing presence and workforce proximity to the work in Region One. It will not be acceptable to base qualification of a bidder on the promise of mobilization and on only a plan to acquire the personnel and resources necessary to perform the work.

5. **A listing of key subcontractors** complete with intended subcontractor work items. The listing shall identify the specialty work intended for the subcontractor and shall include subcontractor project background relevant to the ASMC work together with resumes of key subcontractor personnel to be employed in maintaining the ASMC systems. Due to the required response times, the proposed subcontractors, except for the original software developer, shall have an established presence within Region One.

   A qualified bidder will presently have significant in-house expertise, staffing and resources for the work. Expertise which is not resident in-house must be demonstrated to be acquired by firm commitments with subcontractors in the form of letters of intent signed by principals of the firms involved who shall also demonstrate the necessary expertise, staffing and clearly state a commitment for a 24-hour, 7-day a week response for the proposed subcontracted work. The submittal must clearly demonstrate that the subcontractor has specific experience with the type of equipment used in the ASMC.

   It will not be acceptable to subcontract the work to the extent that a bidder can avoid the need for significant in-house multi-technology expertise. To this extent the Contractor is reminded of the requirements of Section 108.01 of the Standard Specifications.

6. **A description of existing and ongoing work with large-scale Allen Bradley programmable logic control (PLC) systems**, complete with a listing of all on-board personnel who have completed factory training on these systems.

   A qualified bidder must presently have a local response capability with significant familiarity with Allen-Bradley PLC equipment and generation and troubleshooting of ladder logic used in the REVLAC and RACS systems. The listing of personnel shall also include which factory training classes were taken, when they were taken and results of any factory certification.

   There is insufficient time to base qualification on the promise to acquire this capability, and such promise is insufficient guarantee to the Department that a bidder will be capable of keeping the REVLAC and RACS systems operational.

7. **Documentation to demonstrate compliance with the software developer requirements specified herein.**

   The complicated nature of the programming for the system, and the need to modify this programming as part of the planned work under this contract, necessitates that a qualified bidder establish a firm connection and commitment in the form of a letter of intent signed by the principals involved with the original software developer or an acceptable alternate developer who must demonstrate, as defined elsewhere herein, competency and expert fluency in the programming used on the REVLAC and RACS system and a willingness to respond 24 hours a day, 7 days a week. See specifications elsewhere herein.

8. **Description of ongoing work in fiber optic and microwave systems** relevant to the ASMC.

   A qualified bidder must be familiar and experienced in maintaining and managing fiber optic and microwave system work of the type used in the ASMC systems. Certain work on this technology may be subcontracted, but such subcontracting must be firmly committed with signed letters of intent from the subcontractors in the qualification documentation, and the bidder must presently have a 24 hour, 7 day a week local response capability with personnel experienced in coordinating the integration of these types of systems with other systems of the type in place on the ASMC system.

9. **CCTV Capabilities.** A qualified bidder must have in-house familiarity and capability in installing and maintaining CCTV systems and qualification documentation shall present project and staff experience in this regard. The Contractor may, however, utilize a specialty subcontractor to perform CCTV work. The intent to use a subcontractor, the extent of subcontracted work, and the identification of the subcontractor shall be part of the qualification documentation.

10. **SONET System Capability.** A qualified bidder shall demonstrate a definitive plan to handle maintenance of the SONET system installed as part of the RACS system. The bidder shall have established a conditional arrangement with manufacturer's service or an otherwise factory-authorized service provider for the maintenance of the SONET communications equipment for on-call service that involves mapping or other setup or software work. Connections, power supplies, auxiliary devices, etc. may be handled by qualified Contractor personnel, but unless the Contractor, or an approved subcontractor, is an authorized service provider for the installed SONET equipment, the contractor must supplement his staff with outsourced specialty service. The qualification documentation shall clearly define the established service relationships, qualifications of in-house staff, and the identity and qualifications of the supplemental service provided.

11. **Identification of key equipment** presently owned and employed by the bidder, or, if leased, to be immediately available for response to the maintenance needs of the ASMC systems.

Inasmuch as immediate rapid response to the maintenance needs of the ASMC systems are extremely important to the reliability of the system and flow of traffic on the Kennedy and Eisenhower Expressways, a qualified bidder, having a presence proximital to the system in Region 1, must have sufficient mobile equipment to handle response activities. Trucks, lifts for access to signs and barrier devices, cranes and hoists to handle component equipment, etc. are all to be considered in determining qualification.

12. **A statement, signed by the bidder, attesting that the information submitted is accurate and truthful.**

The information so submitted is for purposes of determining the overall expertise and capability of the contractor to perform the work required by this maintenance contract and qualification of a contractor to bid in no way relieves that contractor from full compliance with contract specifications if awarded the contract. The Engineer may request supplemental information to help determine qualification. Separate post-award submittals are required as specified elsewhere herein, and this pre-bid submittal shall not relieve the successful contractor of those requirements. With the approval of the Engineer, the Contractor may make revisions to this submittal information when submitting after award, and the Engineer reserves the right to separately review and approve the final staffing plan and other submittal information based on specified contract requirements.

The Contractor is fully responsible for submitting the information responsive to the requirements listed herein. Any misrepresentation of qualifications submitted in this process or incomplete treatment of information is the responsibility of the bidder. The Department may solicit clarifications of submitted information.

This information shall be submitted in two sealed packages, one of each addressed to the following:

Mr. Joseph S. Hill, P.E.
Engineer of Operations
Attn: Jim Schoenherr
2300 South Dirksen Parkway
Springfield, Illinois 62704

and

Diane O'Keefe, P.E.
Region I Engineer
Attn.: Martin E. Anderson, P.E.
201 West Center Court
Schaumburg, Illinois 60196-1096

The submitted information will be analyzed and, if requested by the Engineer, the prospective bidder shall facilitate an inspection of its facilities and/or equipment. If it is determined that the prospective bidder is qualified to perform the work and was in attendance at the mandatory pre-bid meeting, then the prospective bidder may be authorized to bid.

BIDDING INSTRUCTIONS

EXAMINATION OF PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS: The prospective bidder shall, before submitting his bid, carefully examine the proposal form, specifications, special provisions and form of contract and bond and other referenced documents necessary to gain full awareness of contract requirements.

Except as excluded by the Engineer, in writing, prior to transfer of maintenance to this contract, the prospective bidder shall be responsible for any pre-existing maintenance deficiencies that may exist at the time this contract is executed and the Contractor's bid shall reflect these deficiencies. If this bid is accepted, the Contractor will be responsible for all errors in the Contractor proposal resulting from the Contractor's failure or neglect to comply with these instructions. The Department will, in no case, be responsible for any change in anticipated profits resulting from such failure or neglect.

ABOUT IDOT PROPOSALS: All proposals issued by IDOT are potential bidding proposals. Each proposal contains all Certifications and Affidavits, a Proposal Signature Sheet, and a Proposal Bid Bond required for Prime Contractors to submit a bid after written Authorization to Bid has been issued by IDOT's Central Bureau of Construction.

HOW MANY PROPOSALS SHOULD PROSPECTIVE BIDDERS REQUEST? Prospective bidders should, prior to submitting their initial request for plans and proposals, determine their needs and request the total number of plans and proposals needed for each item requested. No additional material will be furnished when the **Authorization to Bid** is issued. There will be a nonrefundable charge of $15 for each set of plans and specifications issued.

WHO CAN BID? Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction.

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID? When a prospective prime bidder submits a "Request for Proposal Forms and Plans", he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After

the request has been analyzed, the bidder will be issued a **Proposal Authorization Form**, approved by the Central Bureau of Construction, which indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Authorization Form** will indicate the reason for denial.

WHAT SHOULD PROSPECTIVE BIDDERS DO UPON RECEIPT OF WRITTEN AUTHORIZATION TO BID? Prospective bidders should, upon receipt of written **Authorization to Bid**, mark the box on the cover sheet of their proposal(s) to indicate that **Authorization to Bid** has been received. For the convenience of the bidder, a space has been provided for this purpose. This is important as this is the only way to identify, at a glance, whether or not bidding has been authorized.

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED? Bidders need not return the entire proposal when bids are submitted. The portion of the proposal that must be returned includes the following:

1. Schedule of Prices and Summary of Prices
2. Other special documentation and/or information that may be required by the contract special provisions.

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

ABOUT SUBMITTING BIDS: It is recommended that bidders deliver bids in person to ensure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

Questions Regarding	**Call**
Prequalification and/or Authorization to Bid	(217) 782-3413
Preparation and Submittal of Bids	(217) 782-7806
Mailing of Plans and Proposals	(217) 782-7806

PROPOSAL ENVELOPE

Illinois Department of Transportation

Proposals

for construction work advertised for bids by the
Illinois Department of Transportation

Item No.	Item No.	Item No.

SUBMITTED BY:

Name:
Address:
Phone No:

Bidders should affix this form to the front of a 10" X 13" envelope and use that envelope for the submittal of bids. If proposals are mailed, they should be enclosed in a second or outer envelope addressed to:

Engineer of Design and Environment - Room 323
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

TRANSMITTAL COVER SHEET

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL
(See instructions inside front cover)

PROPOSAL SUBMITTED BY
NAME
ADDRESS
CITY

LETTING: JANUARY 20, 2006

SCHEDULE OF PRICES

See next page

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL $
	ROUTINE MAINTENANCE				
A - 1	ROUTINE MAINTENANCE OF REVLAC SYSTEM	12	MONTH	$	-
A - 2	ROUTINE MAINTENANCE OF RACS	12	MONTH	$	-
A - 3	ROUTINE MAINTENANCE OF CCTV SYSTEMS	12	MONTH	$	-
A - 4	ROUTINE MAINTENANCE OF SONET AND AVL SYSTEMS	12	MONTH	$	-
		ROUTINE MAINTENANCE SUB-TOTAL:		$	-
	NON-ROUTINE MAINTENANCE				
AAA1	CLEAR DAMAGE	15	EACH	$	-
AAM1	MICROWAVE UPGRADE FOR REVLAC, FURNISH AND INSTALL	2	EACH	$	-
ACB1	MULTICONDUCTOR POWER CABLE, INSTALL ONLY	1,600	FEET	$	-
ACB2	MULTICONDUCTOR CONTROL CABLE, INSTALL ONLY	1,600	FEET	$	-
ACB3	EXISTING CABLE FROM CONDUIT, REMOVE ONLY	1,600	FEET	$	-
ACC1	CCTV CAMERA ASSEMBLY, COLOR, FIXED, FURNISH AND INSTALL	4	EACH	$	-
ACC2	CCTV CAMERA ASSEMBLY, REMOVAL, SALVAGE	4	EACH	$	-
ACC3	CCTV CAMERA, FURNISH AND INSTALL	4	EACH	$	-
ACC4	CCTV CAMERA POLE, FURNISH ONLY	1	EACH	$	-
ACC5	CCTV CAMERA POLE, REMOVAL, SALVAGE	1	EACH	$	-
ACC6	CCTV CAMERA POLE, INSTALL ONLY	1	EACH	$	-
ACC7	CCTV CAMERA TRANSFORMER BASE, FURNISH ONLY	1	EACH	$	-
ACC8	CCTV CAMERA TRANSFORMER BASE, REMOVAL, SALVAGE	1	EACH	$	-
ACC9	CCTV CAMERA TRANSFORMER BASE, INSTALL ONLY	1	EACH	$	-
ACC10	CCTV CAMERA LOWERING SYSTEM, FURNISH AND INSTALL	2	EACH	$	-
ACC11	CCTV CAMERA MOUNT FOR LIGHT TOWER, RETROFIT	6	EACH	$	-
ACC12	CCTV DOME CAMERA ASSEMBLY, COLOR, PTZ, FURNISH ONLY	2	EACH	$	-
ACC13	CCTV DOME CAMERA ASSEMBLY, COLOR, PTZ, REMOVAL, SALVAGE	2	EACH	$	-
ACC14	CCTV DOME CAMERA ASSEMBLY, COLOR, PTZ, INSTALL ONLY	2	EACH	$	-
ACC15	CCTV COLOR MONITOR, 8.4", FURNISH ONLY	10	EACH	$	-
ACC16	CCTV COLOR MONITOR, 12", FURNISH ONLY	2	EACH	$	-
ACC17	CCTV LCD MONITOR, FURNISH AND INSTALL	2	EACH	$	-

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL $
ACC18	CCTV CAMERA FOR CONSTRUCTION AREAS, FURNISH AND INSTALL	2	EACH	$	-
ACC19	CCTV CAMERA FOR CONSTRUCTION AREAS, REMOVAL, SALVAGE	2	EACH	$	-
ACC20	CCTV COLOR MONITOR, DUAL, 8.4", FURNISH ONLY	6	EACH	$	-
ACC21	CCTV COLOR MONITOR, QUAD, 4", FURNISH ONLY	6	EACH	$	-
ADMS1	ARTERIAL DYNAMIC MESSAGE SIGNS, 8" CHARACTERS	6	EACH	$	-
ADMS2	ARTERIAL DYNAMIC MESSAGE SIGNS, 10" CHARACTERS	2	EACH	$	-
ADMS3	ARTERIAL DYNAMIC MESSAGE SIGNS, 12" CHARACTERS	3	EACH	$	-
AGR1	GROUP RELAMPING OF FIBER OPTIC SIGNS	46	EACH	$	-
ALC1	PADLOCK	25	EACH	$	-
ALD1	LED CHEVRON SIGN, FURNISH ONLY	4	EACH	$	-
ALD2	LED AUXILIARY SIGN, FURNISH ONLY	3	EACH	$	-
ALD3	LED LANE USAGE SIGN, FURNISH ONLY	1	EACH	$	-
ALD4	LED OR FIBER OPTIC SIGN, REMOVAL, SALVAGE	1	EACH	$	-
ALD5	LED OR FIBER OPTIC SIGN, INSTALL ONLY	1	EACH	$	-
ALD6	LED GORE SIGN, FURNISH ONLY	1	EACH	$	-
ALD7	LED GORE SIGN, REMOVAL, SALVAGE	1	EACH	$	-
ALD8	LED GORE SIGN, INSTALL ONLY	1	EACH	$	-
ARB1	RESTRAINING BARRIER TAPE CARTRIDGE, FURNISH ONLY	2	EACH	$	-
ARB2	RESTRAINING BARRIER TAPE CARTRIDGE, REMOVAL, SALVAGE	2	EACH	$	-
ARB3	RESTRAINING BARRIER TAPE CARTRIDGE, INSTALL ONLY	2	EACH	$	-
ARB4	RESTRAINING BARRIER CRASH DETECTOR ASSEMBLY, FURNISH ONLY	2	EACH	$	-
ARB5	RESTRAINING BARRIER CRASH DETECTOR ASSEMBLY, REMOVAL, SALVAGE	2	EACH	$	-
ARB6	RESTRAINING BARRIER CRASH DETECTOR ASSEMBLY, INSTALL ONLY	2	EACH	$	-
ARB7	RESTRAINING BARRIER DRAGNET ASSEMBLY, FURNISH ONLY	1	EACH	$	-
ARB8	RESTRAINING BARRIER DRAGNET ASSEMBLY, REMOVAL, SALVAGE	1	EACH	$	-
ARB9	RESTRAINING BARRIER DRAGNET ASSEMBLY, INSTALL ONLY	1	EACH	$	-
ARIA1	SAND MODULE IMPACT ATTENUATORS	60	EACH	$	-
ARG1	RAMP GATE, 17' ARM, FURNISH ONLY	40	EACH	$	-
ARG2	RAMP GATE, 23' ARM, FURNISH ONLY	40	EACH	$	-

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL $
ARG3	RAMP GATE, INSTALL WITH HELIX FOUNDATION	40	EACH	$	-
ARG4	RAMP GATE, INSTALL WITH CONCRETE FOUNDATION	40	EACH	$	-
ARG5	RAMP GATE ARM, 17 FT., FURNISH ONLY	6	EACH	$	-
ARG6	RAMP GATE ARM, 23 FT., FURNISH ONLY	6	EACH	$	-
ASG1	GATE-ARM CAPSTAN AND BRACKET ASSEMBLY, FURNISH ONLY	2	EACH	$	-
ASG2	GATE ARM CAPSTAN AND BRACKET ASSEMBLY, REMOVAL, SALVAGE	2	EACH	$	-
ASG3	GATE ARM CAPSTAN AND BRACKET ASSEMBLY, INSTALL ONLY	2	EACH	$	-
ASG4	SWING GATE ARM, 2 FT. TO 4 FT., FURNISH ONLY	2	EACH	$	-
ASG5	SWING GATE ARM, 5 FT. TO 8 FT., FURNISH ONLY	4	EACH	$	-
ASG6	SWING GATE ARM, 9 FT. TO 12 FT., FURNISH ONLY	4	EACH	$	-
ASG7	SWING GATE ARM, 13 FT. TO 16 FT., FURNISH ONLY	4	EACH	$	-
ASG8	SWING GATE ARM, 17 FT. TO 20 FT., FURNISH ONLY	6	EACH	$	-
ASG9	SWING GATE ARM, 21 FT. TO 23 FT., FURNISH ONLY	6	EACH	$	-
ASG10	EXISTING SWING GATE ARM, RE-ASSEMBLE	20	EACH	$	-
ASG11	FIBERGLASS REINFORCED GATE TIP, FURNISH AND INSTALL	30	EACH	$	-
ASG12	SWING GATE ARM ASSEMBLY, INSTALL ONLY	30	EACH	$	-
ASG13	SWING GATE ARM PROXIMITY SWITCH, FURNISH ONLY	4	EACH	$	-
ASG14	SWING GATE ARM PROXIMITY SWITCH, REMOVAL, SALVAGE	4	EACH	$	-
ASG15	SWING GATE ARM PROXIMITY SWITCH, INSTALL ONLY	4	EACH	$	-
ASG16	SWING GATE CONTROLLER, FURNISH ONLY	1	EACH	$	-
ASG17	SWING GATE CONTROLLER, REMOVAL, SALVAGE	1	EACH	$	-
ASG18	SWING GATE CONTROLLER, INSTALL ONLY	1	EACH	$	-
ASG19	SWING GATE ARM HAND CRANK, FURNISH ONLY	2	EACH	$	-
ASG20	GATE DRIVETRAIN ASSEMBLY, FURNISH ONLY	1	EACH	$	-
ASG21	GATE DRIVETRAIN ASSEMBLY, REMOVAL, SALVAGE	1	EACH	$	-
ASG22	GATE DRIVETRAIN ASSEMBLY, INSTALL ONLY	1	EACH	$	-
ATC1	TRAFFIC CONTROL FOR NON-ROUTINE WORK, 1 LANE EXPY DAY CLOSURE	2	EACH	$	-
ATC2	TRAFFIC CONTROL FOR NON-ROUTINE WORK, 1 LANE EXPY NIGHT CLOSURE	2	EACH	$	-
ATC3	TRAFFIC CONTROL FOR NON-ROUTINE WORK, 2 LANE EXPY DAY CLOSURE	2	EACH	$	-

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL $
ATC4	TRAFFIC CONTROL FOR NON-ROUTINE WORK; 2 LANE EXPY NIGHT CLOSURE	2	EACH	$	-
ATC5	TRAFFIC CONTROL FOR NON-ROUTINE WORK, 3 LANE EXPY DAY CLOSURE	2	EACH	$	-
ATC6	TRAFFIC CONTROL FOR NON-ROUTINE WORK, 3 LANE EXPY NIGHT CLOSURE	2	EACH	$	-
ATC7	TRAFFIC CONTROL FOR NON-ROUTINE WORK, RAMP DAY CLOSURE	2	EACH	$	-
ATC8	TRAFFIC CONTROL FOR NON-ROUTINE WORK, RAMP NIGHT CLOSURE	2	EACH	$	-
AVCE1	VIDEO COMMUNICATION ENCODER, 1 CHANNEL, FURNISH AND INSTALL	30	EACH	$	-
AVCE2	VIDEO COMMUNICATION ENCODER, 2 CHANNEL, FURNISH AND INSTALL	1	EACH	$	-
AVCE3	VIDEO COMMUNICATION DECODER, 1 CHANNEL, FURNISH AND INSTALL	4	EACH	$	-
AVCE4	VIDEO COMMUNICATION DECODER, 2 CHANNEL, FURNISH AND INSTALL	1	EACH	$	-
AVCF1	VIDEO COMMUNICATION FIBER TRANSCEIVER, FURNISH AND INSTALL	2	EACH	$	-
AVCF2	VIDEO COMMUNICATION FIBER MEDIA CONVERTER, FURNISH AND INSTALL	2	EACH	$	-
AVCF3	VIDEO COMMUNICATION FIBER MEDIA CONVERTER LH, FURNISH AND INSTALL	2	EACH	$	-
AVCF4	VIDEO COMMUNICATION FIBER SWITCH, FURNISH AND INSTALL	2	EACH	$	-
AVCH1	VIDEO COMMUNICATION HUT, FURNISH AND INSTALL	1	EACH	$	-
AVCL1	VIDEO COMMUNICATION LINK, FURNISH AND INSTALL	1	EACH	$	-
AVCM1	VIDEO COMMUNICATION MUX, FURNISH AND INSTALL	1	EACH	$	-
AVCP1	VIDEO COMMUNICATION POLE, FURNISH AND INSTALL	2	EACH	$	-
AVCR1	VIDEO COMMUNICATION RACK, OPEN, FURNISH AND INSTALL	4	EACH	$	-
AVCR2	VIDEO COMMUNICATION RACK, ENCLOSED, FURNISH AND INSTALL	4	EACH	$	-
AVCS1	VIDEO COMMUNICATION SWITCH, FURNISH AND INSTALL	1	EACH	$	-
AVCW1	VIDEO CONTROL WORKSTATION, FURNISH AND INSTALL	2	EACH	$	-
AVL1	AUTOMATIC VEHICLE LOCATOR, UTILITY VEH., FURNISH AND INSTALL	25	EACH	$	-
AVL2	AUTOMATIC VEHICLE LOCATOR, SNOW PLOW, FURNISH AND INSTALL	125	EACH	$	-
AVL3	AVL RADIO MODEM, FURNISH AND INSTALL	150	EACH	$	-
AVL4	AVL WORKSTATION, FURNISH AND INSTALL	2	EACH	$	-
			NON-ROUTINE MAINTENANCE SUBTOTAL:	$	-

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL $
	BUDGETARY ALLOWANCES				
ABA1	BUDGETARY ALLOWANCE FOR REVLAC REMOTE CONTROL MODIFICATIONS	1	LSUM	$ 50,000.00	$ 50,000.00
ABA2	BUDGETARY ALLOWANCE FOR PLC CONTROL SYSTEM REPAIR	1	LSUM	$ 20,000.00	$ 20,000.00
ABA3	BUDGETARY ALLOWANCE, FOR STATE STOCK PURCHASES	1	LSUM	$ 50,000.00	$ 50,000.00
ABA4	BUDGETARY ALLOWANCE FOR REMOTE NETWORK MONITORING SYSTEM	1	LSUM	$ 15,000.00	$ 15,000.00
ABA5	BUDGETARY ALLOWANCE FOR CCTV SYSTEM REPAIR	1	LSUM	$ 50,000.00	$ 50,000.00
ABA6	BUDGETARY ALLOWANCE FOR COMMUNICATION SYSTEM REPAIR	1	LSUM	$ 20,000.00	$ 20,000.00
ABA7	BUDGETARY ALLOWANCE FOR SWING GATE HEATER REPAIR	1	LSUM	$ 25,000.00	$ 25,000.00
ABA8	BUDGETARY ALLOWANCE FOR UPS AND OTHER BUILDING EQUIP. REPAIRS	1	LSUM	$ 30,000.00	$ 30,000.00
ABA9	BUDGETARY ALLOWANCE FOR GATE DRIVETRAIN ASSEMBLY REPAIRS	1	LSUM	$ 50,000.00	$ 50,000.00
ABA10	BUDGETARY ALLOWANCE FOR MICROWAVE REPAIRS	1	LSUM	$ 30,000.00	$ 30,000.00
ABA11	BUDGETARY ALLOWANCE FOR ASMC - EMCMS ENHANCEMENTS	1	LSUM	$ 20,000.00	$ 20,000.00
ABA12	BUDGETARY ALLOWANCE FOR RAMP GATE AND ATTENUATOR WORK	1	LSUM	$ 80,000.00	$ 80,000.00
	NON-ROUTINE BUDGETARY ALLOWANCES SUB-TOTAL:				**$ 440,000.00**

ROUTINE MAINTENANCE SUB-TOTAL:	$	-
NON-ROUTINE MAINTENANCE SUB-TOTAL:	$	-
NON-ROUTINE MAINTENANCE BUDGETARY ALLOWANCES SUB-TOTAL:	$	440,000.00
TOTAL CONTRACT BID PRICE :		

2.0 TERMS AND REFERENCES

2.1 DEFINITIONS OF TERMS

AITC American Institute of Timber Construction

ANSI American National Standards Institute

ASMC Advanced Systems Maintenance Contract, or the Advanced Systems Maintenance Contractor

ASSIGNED PERSONNEL
When used herein shall refer to Contractor personnel whose daily work shall be normally assigned to the ASMC, and reported on the Daily Agenda.

AVL Automatic Vehicle Locator

AWPA American Wood Preservers Association

BEO Illinois Department of Transportation, Region 1, Bureau of Electrical Operations, IDOT Headquarters, 201 W. Center Ct., Schaumburg, IL. 60173

CMS Changeable Message Sign

COM CENTER Illinois Department of Transportation, Region 1, Bureau of Electrical Operations Communications Center (Com Center), IDOT Headquarters, 201 W. Center Ct.,Schaumburg, IL. 60173

DAMAGED EQUIPMENT
Any piece of equipment owned or maintained by the Department that is no longer capable of functioning as originally designed, or as since modified, or any piece of equipment that has deteriorated sufficiently in the opinion of the Engineer so that failure is imminent, or for which safety could be a concern

DBE Disadvantaged Business Enterprise

EFO Illinois Department of Transportation, Region 1, Bureau of Electrical Operations, Electrical Field Office, 101 W. Center Court, Schaumburg, IL. 60196

EMCMS Electrical Maintenance Call-out and Management System

EMERGENCY A condition which is a hazard to the public, or is designated by the Engineer to be a hazard of such severity that life and property are endangered and which requires Immediate Corrective Action

ENGINEER Region I Engineer or his designee for this Contract

EQUIPMENT SERVICE
Refers to the servicing and/or restoration of any equipment to normal operating condition and appearance necessitated by service equipment wear-out, failure, damage or loss
FROM ANY CAUSE WHATSOEVER

When used herein shall include any and all causes except those resulting in extensive damage from declared area wide disasters such as fires and floods, acts of the public enemy, or an Act of God. (The area wide disaster exclusion will be valid only for the time period and area as defined by a Governor's Disaster Declaration.)

GCM Gary-Chicago-Milwaukee Corridor

IDOT INSPECTOR

Employees of the Illinois Department of Transportation who are assigned duties on this contract

IMMEDIATE CORRECTIVE ACTION

Refers to all activity necessary to restore the safe operating integrity of a system or system element, without delay

KNOCKDOWN (KD)

Refers to a Motorist Caused Highway Damage (MCHD) Accident location, which results in the damage of REVLAC equipment.

MAINTENANCE SCHEDULE

A schedule prepared by the Engineer, or prepared by the Contractor at the direction and approval of the Engineer, showing starting and completion dates of work items to be performed on the various installations or systems

MANUAL ON TRAFFIC CONTROL (M.U.T.C.D.)

The State of Illinois "Manual on Uniform Traffic Control Devices for Streets and Highways"

MOTORIST CAUSED HIGHWAY DAMAGE (MCHD)

Refers to the State program, which provides funds for repair and/or replacement of damaged system equipment, if a Police Accident Report with Driver information can be matched to a specific damage.

NEC National Electrical Code

NON-ROUTINE WORK

Non-routine work shall refer to work which is not included under routine work, but which is authorized and paid separately. Methods of payment include use of contract pay items, established agreed prices for contract work and/or for the use of force account procedures.

OSHA Occupational Safety Health Administration

PATROL Refers to driving a pre-assigned route with a defined regular reoccurring time schedule to inspect ASMC installations and equipment.

PAY MEETING Monthly meeting held to discuss status of routine and non-routine work. The Contractor shall provide the properly numbered monthly invoice for routine maintenance work at this meeting.

PLC Programmable Logic Control

QA/QC Quality Assurance/Quality Control

RACS IL 38 Ramp Access Control System

RAMP An entire reversible lane entrance ramp, including, but not limited to, signs, outside gates, barrier, and inside gates. The highway pavement that transitions from one roadway element to another. In this contract, it may also refer to all access control equipment and systems associated with a particular ramp location.

REGION 1 Area within Cook, DuPage, Kane, Lake, McHenry, Will, and a portion of Kendall Counties (previously known as Region 1)

RESPONSE TIME
Amount of time from the initial notification to the Contractor until a repair person physically arrives at the location.

REVLAC Reversible Lane Control System for the Kennedy Expressway

ROUTINE MAINTENANCE
Refers to all work required to staff, equip, patrol, inspect and maintain the systems under this contract, whole and operational, at locations and as defined herein, except for work specifically excluded from routine maintenance coverage and paid separately as non-routine maintenance work. This generally covers monthly recurring and operational response activities.

RUS Rural Utilities Service, USDA

SPECIALTY SERVICE
Specialty Service, or Specialty Service Work shall refer to work performed by entities other than the Advanced Systems Maintenance Contractor who are not prequalified subcontractors but whose services are necessary because of specialized equipment, specialized expertise or the maintenance restrictions on a particular piece of system equipment. Examples of specialty service entities include motor repair shops, communication and/or electronics repair shops, manufacturer's authorized repair agents, software programmers/developers, and similar service providers. Such work is not restricted to in-shop work and such services may be field-performed. Such services will not be considered as materials. Refer to subcontracting requirements for additional information.

STANDARD SPECIFICATIONS
Illinois Department of Transportation's "Standards Specifications for Road and Bridge Construction"

SYSTEM When used herein refers to any or all the electrical systems or subsystems covered by this Contract or a specific defined collection of elements, as a system, as in the REVLAC System

THIRD PARTY Any entity other than IDOT or the Advanced Systems Maintenance Contractor

TICKET Maintenance record implemented by the Contractor on the IDOT EMCMS to record various types of malfunctions, failures, damages, knockdowns, vandalism, theft or various other concerns relating to safety matters and/or the reported follow-up response information which documents the temporary and/or permanent repairs and proper Contractor response within required timeframes, to assure Department personnel that the system equipment is operating in an acceptable manner.

TRAFFIC SPECIFICATIONS
The Illinois Department of Transportation's "Standard Specifications for Traffic Control Items"

TSC The Illinois Department of Transportation, Region 1, Bureau of Traffic, Traffic Systems Center, 445 W. Harrison, Oak Park, IL. 60304

WEEK A period of seven (7) consecutive calendar days. Any multiple of this term shall mean a corresponding multiple of number of calendar days.

WORKING DAY
The definition of a working day shall be in accordance with Article 108.04 of the Standard Specifications, with the exception that working days may be charged throughout the entire year.

WORK SCHEDULE
The work schedule shall provide details of work activity as to dates when the activity is planned to be performed by the Contractors forces

24/7 Refers to operations required twenty-four hours per day, seven days per week.

All definitions in referenced publications and standards shall apply, except as may be modified herein.

2.2 SPECIFICATIONS AND STANDARDS

The latest issue, at the bid date, of the following standards, including subsequent additions or revisions made prior to the bid date, shall apply to the work covered by this contract. In case of conflict with any or parts of the standards listed below the Special Provisions contained herein shall take precedence and shall govern. In case of conflict between referenced standards, the most stringent as determined by the Engineer, shall take precedence and shall govern.

Illinois Department of Transportation Standards and Specifications

- Standard Specifications for Road and Bridge Construction, current version
- Note: Article 801.02, Standards of Installation shall apply to all systems under this Contract and is not limited to Lighting
- Bureau of Design and Environment Manual, Chapter 56 published on Highway Lighting
- Flaggers' Handbook
- Highway Standards
- Manual on Uniform Traffic Control Devices
- Accommodating Utilities on Rights-of-Way of IL. State Highway System
- Safety Code
- Supplemental Specifications and Recurring Special Provisions indicated on the check sheet contained herein

- Traffic Control Plans for Daytime and Nighttime Traffic Operations
- Work Site Protection Manual

National Standards, Specifications and Regulations

- Insulated Cable Engineers Assn. and Underwriters Laboratories publications when applicable for cable and other materials
- National Electrical Manufacturers Association Standards, American National Standards Institute, where applicable, for signals, lamps, ballasts, and other accessories
- American National Standards Institute, where applicable, for ballasts, and other accessories
- ASTM Standards for materials
- All applicable manuals and policies of FHWA
- National Electrical Code, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269, approved by the American National Standards Institute, Publication #ANSI/C2, published by IEEE, 345 E. 47th Street, New York, NY 10017
- Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals AASHTO Publication
- Emergency Response Guidebook by U.S. Dept. of Transportation, latest version, for further assistance call National Response Center (NRC) 1-800-424-8802
- Hazardous Materials Regulations, Hazardous Materials Transportation Uniform Safety Act of 1990, Hazardous Materials Regulations and Motor Carrier Safety Regulating by U.S. Department of Transportation
- OSHA, all applicable regulations
- Federal Communications Commission

Add the following to Section 801 of the Standard Specifications:

Cable Identification. Each wire installed shall be identified with its complete circuit number at each termination, splice, junction box or other location where the wire is accessible.

Cable Fuse Installation. Standard fuse holders shall be used on non-frangible (non-breakaway) installations and quick-disconnect fuse holders shall be used on frangible (breakaway) installations. Wires shall be carefully stripped only as far as needed for connection to the device. Over-stripping shall be avoided. An oxide inhibiting lubricant shall be applied to the wire for minimum connection resistance before the terminals are crimped-on. Crimping shall be performed in accordance with the fuse holder manufacturer's recommendations. The exposed metal connecting portion of the assembly

shall be taped with two half-lapped wraps of electrical tape and then covered by the specified insulating boot. The fuse holder shall be installed such that the fuse side is connected to the pole wire (load side) and the receptacle side of the holder is connected to the line side.

Grounding of Electrical Systems. All electrical systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC, even though every detail of the requirements is not specified or shown. Good ground continuity throughout the electrical system shall be assured. All electrical circuit runs shall have a continuous equipment grounding conductor. IN NO CASE SHALL THE EARTH BE CONSIDERED AS AN ADEQUATE EQUIPMENT GROUNDING PATH. Where connections are made to painted surfaces, the paint shall be scraped to fully expose metal at the connection point and serrated connectors or washers shall be used. Where metallic conduit is utilized as the equipment grounding conductor, extreme care shall be exercised to assure continuity at joints and termination points. No wiring run shall be installed without a suitable equipment ground conductor. Where no equipment ground conductor is provided for in the plans and associated specified pay item, the Contractor is obligated to bring the case to the attention of the Engineer who will direct the Contractor accordingly. Work which is extra to the contract will be paid extra. All connections to ground rods, structural steel, reinforcing steel or fencing shall be made with exothermic welds. Where such connections are made to insulated conductors, the connection shall be wrapped with at least 4 layers of electrical tape extended 152.4 mm (six inches) onto the conductor insulation. Where a ground field of "made" electrodes is provided, the exact locations of the rods shall be documented by dimensioned drawings as part of the Record Drawings. Equipment ground wires shall be bonded, using a splice and pigtail connection, to all boxes and other metallic enclosures throughout the wiring system.

3.0 ASMC SYSTEMS AND LOCATIONS

3.1 IDOT SYSTEMS TO BE MAINTAINED

Unless noted specifically herein, the following systems shall be maintained under routine maintenance.

3.1.1 KENNEDY EXPRESSWAY REVERSIBLE LANE ACCESS CONTROL SYSTEM (REVLAC) (PAY ITEM A-1)

The REVLAC System operates to control access at the six entry ramps to the Kennedy Expressway Reversible Lanes. The REVLAC System includes, but is not limited to:

- All ramp gate and barrier equipment, including signage and dedicated CCTV
- All associated control buildings (A, C, D, and E) and associated equipment

  The remote control buildings adjacent to entry ramp locations house various types of electrical power apparatus, control systems, alarm systems, radio systems, including microwave cables and microwave towers/poles, transformers, lighting systems, power wiring, heating and ventilation systems, doors, locks, and all associated equipment and appurtenances owned by the State of Illinois and under the jurisdiction of the Department.

Each remote control building has an operational Supervisory Control Panel (SCP). These control building SCP stations differ from the IDOT Com Center SCP only in that the individual gate, sign, and barrier status indication is not available. Instead, a device group indication is provided. The control functionality is otherwise identical, as each of the control buildings can operate the entire system through the normal or abnormal events panels of its SCP. Remote panels may be used for system testing or may be used in the event of a power outage or disruption at the IDOT Com Center in order that the reversible lane control is not affected.

Buildings A, D and E have dual electrical services. Building C is fed from building D. Each of these three buildings route power through a UPS and have battery backup with associated chargers and inverters for critical controls and monitoring.

- All associated equipment and items at the Region 1 Headquarters Com Center in Schaumburg The IDOT Com Center equipment includes three separate SCP stations for the REVLAC system, which are available to the dispatchers who work in the Com Center to control the REVLAC system.

- State Police Facility Tower

  A tower and associated transmission equipment is located at the Illinois State Police District Chicago office in Des Plaines. It is a microwave repeater facility for the transmission of signals between the REVLAC control building E and Region 1 Headquarters, Schaumburg.

- Communications Buildings

  Communications buildings for communications equipment are located at the Nordic Tower, Schaumburg Tower, Foster Tower (future), Control buildings A, C, D, and E, Hillside Hub, IDOT Traffic Systems Center-Oak Park, Microwave repeater at the University of Illinois, and the I-55 hut.

- All interconnecting cable, Ethernet, and fiber systems

- The complete distributed control system

- All associated microwave communications and support systems

- Control building B and associated equipment and TSC equipment
  Building B is an Interconnect building which houses electrical connections for telephone for the Monitoring System (CCTV) feed to the IDOT Traffic Systems Center, 445 W. Harrison St., Oak Park. Equipment at TSC includes the CCTV monitoring system to provide real time images of the Kennedy Expressway for incident detection and verification.

While the reversible lanes on the Kennedy expressway extend from approximately the Ohio Street interchange on the south to the Edens/Kennedy junction on the north, (a distance of approximately 7.5 miles), the supporting control centers, signage and communications facilities extend beyond these limits and are all included as part of the system.

3.1.2 THE ROOSEVELT RAMP ACCESS CONTROL SYSTEM (RACS) AND RAMP GATES (PAY ITEM A-2)

The RACS System operates to control access at the single entry ramp from eastbound Roosevelt Road to eastbound I-290, with the ramp entry just east of York Road. Also the system includes ramp gates, which are being installed on the entrance of the expressways. The RACS Systems includes the complete distributed control system, but is not limited to:

- All ramp gate equipment, including signage and dedicated CCTV

- The Hillside RACS Hub and Roosevelt Ramp Control Buildings and associated equipment
  The Hub building is located at 5250 W. Harrison St., Hillside; the Ramp building is located at the IL 38 entrance to eastbound I-290. These buildings house various types of electrical power apparatus, control systems, alarm systems, fiber panels, radio systems, including microwave cables and microwave towers/poles, transformers, lighting systems, power wiring, heating and ventilation systems, doors, locks, and all associated equipment and appurtenances owned by the State of Illinois and under the jurisdiction of the Department.

- RACS Equipment at the IDOT Region 1 Headquarters Com Center Schaumburg
  The RACS includes three computer workstations, one CCTV workstation, and one datalogger computer system. The CISCO maintenance computer system and iMPATH video equipment are also located in the Com Center.

- Radar traffic detection equipment

- All Interconnecting cable and fiber systems

- All associated equipment and items at the Region Headquarters in Schaumburg

While the Roosevelt RACS is located at the Eastbound IL 38 (Roosevelt Road) entrance ramp to the eastbound I-290 supporting control centers, signage and communications facilities extend beyond this location and are all included as part of the system.

The ramp gates will be installed on the entrance ramps of the expressways in District 1, as described in Article 8 of the Contract.

3.1.3 CCTV SYSTEMS (PAY ITEM A-3)

The CCTV System consists of surveillance cameras (camera with pan-tilt-zoom, PTZ) on expressways, for construction areas and Accident Investigation Sites, and process cameras for REVLAC (without PTZ) and RACS, which provide a generalized overview of the urban expressway system. The cameras and their functionality are not dedicated solely to a particular operational system, such as RACS, but their views may be incorporated in the system functionality.

The cameras, which are existing and being installed under Construction projects, are as follows:

Expressway/Application	2006	2007
Bishop Ford Expressway	5	2
Dan Ryan Expressway	4	13
Edens Expressway	2	
Elgin-O'Hare Expressway	1	
Eisenhower Expressway	9	19
Stevenson Expressway	21	
I-57 Expressway	34	
Kingery Expressway	7	
Kennedy Expressway	35	
District 1 HQ	1	
REVLAC	41	
RACS	7	

CCTV associated equipment, i.e. video transceivers, codecs, video transmission and distribution. equipment, switching equipment, video servers, video work stations, wireless links fiber optic patch panels, fiber jumpers, etc. are at the following locations:

- equipment at the I-55/ Dan Ryan interchange
- equipment at I-57 North and South Huts and at I-57/I-294 hut (to be installed under Ryan contract)
- equipment at UIC Building
- equipment at REVLAC Buildings A, B, C, D, and E
- equipment at the Traffic Systems Center in Oak Park
- equipment at the Region 1 Headquarters Com Center in Schaumburg
- equipment at the Roosevelt Ramp Building, Hillside, Nordic and Schaumburg Towers
- equipment at IDOT Pump Station No. 5
- equipment at the ITS Office in Schaumburg
- Gary Chicago Milwaukee (GCM) Gateway Equipment in the Tollway facilities
- equipment at IL 53/I-290 at Schaumburg Road
- various microwave/fiber links between the equipment locations

The RACS cameras are mounted on the radio tower at the Hillside communications Hub (3) and the radio tower at the Nordic Tower, with pictures transmitted to a central camera selection, control and switching system at the Region 1 Headquarters Com Center. The cameras on Ryan, and Kingery expressways and few cameras on I-290 and Kennedy expressways are mounted on towers. The transceivers for I-55, I-57 and I-290 cameras (pole-mounted cameras) are located in the Surveillance System cabinets. The Contractor shall coordinate with the Electrical Maintenance Contractor for access to the Surveillance cabinets and for lowering devices for maintenance of the light tower mounted cameras. The central system has the capacity and provisions to add cameras Region-wide so that an overall common system for the cameras will be in place. Any new cameras, which are added to the system under the contract, shall be covered under routine maintenance for the remaining period of the Contract.

The CCTV system includes all of the above elements, including cameras, interconnecting fiber and cable, control and switching equipment, monitors, and all interfaces to communications network equipment.

CCTV field equipment is dispersed within the Region, at REVLAC locations, at RACS locations, at HQ and on expressways, with central control at the IDOT Region 1 Com Center and additional equipment at the Traffic Systems Center in Oak Park.

3.1.4 THE SONET AND AVL SYSTEMS (PAY ITEM A-4)

The SONET System is presently located primarily at Roosevelt RACS locations, including the Nordic site, (I-355 @ I-290 gore) as well as the Region 1 Headquarters Schaumburg, and REVLAC building E. As the needs arise, the system is expected to be expanded under Dan Ryan construction contracts.

The SONET System is the basic communications infrastructure established with construction of the RACS System. It incorporates Microwave Radio, Fiber Optic, Ethernet and SONET equipment to accept, transmit, and receive broadband digital data in a SONET ring that connects the Hillside Hub site (5250 W. Harrison St., Hillside) to the Region 1 Headquarters Schaumburg Com Center. The connection is accomplished via microwave through an intermediate hop at the Nordic site and via a fiber optic link through fiber of the Illinois State Toll Highway Authority System. This system has been expanded in 2004 with a new Sonet node at REVLAC building E with the upgraded microwave link between the Headquarters and Building .E with an intermediate repeater at ISP District Chicago Headquarters in Des Plaines.

Except as included in other systems, it includes:

- The tower, shed, equipment and connections at the Hillside Hub site
- The tower, shed, equipment and connections at the Nordic Tower site
- The tower, shed, equipment and connections at the Schaumburg Tower
- Department's microwave equipment at District Chicago ISP HQ
- Harris Megastar Microwave equipment at REVLAC Building E
- Associated equipment at the Region 1 Headquarters Com Center Schaumburg
- REVLAC Fiber Network, including Hirschmann Fiber Repeaters
- All associated interconnecting cable and non-ITSHA fiber
- Connections at various ITSHWA locations

The AVL (Automatic Vehicle Locator) is the system to track and locate the Department's vehicles for the safety of the personnel. It is also intended to be a tool to report highway incidents electronically. At present, District 1's Emergency Traffic Patrol vehicles are equipped with the AVL units. The system is expected to be expanded to include other Department's vehicles. The Contractor shall maintain, under routine maintenance, AVL units and mobile data radios in the vehicles, AVL server and clients in the Com Center and Multi-site base station controller in the Com Center. The routine of the system includes patrol, trouble response, and troubleshooting and investigation of the failures and replacement of the failed equipment with equipment from State stock.

3.1.5 INTEGRATION OF SYSTEMS

The systems defined herein are not completely independent and separate systems. Functionality and elements of one system may be dependent upon the availability of another. The description of the Region systems herein shall not be construed to separate their integrated functionality nor shall it service to omit some portion of an operating system due to either a shared operation or the lack of explicit inclusion with the generalized system definition. A failure or malfunction in one system that results in the failure, malfunction or reduced operation of another will be considered by the Department as a failure or malfunction in both systems.

3.2 COMMUNICATION SYSTEMS TO BE MAINTAINED

Unless noted specifically herein, the following systems shall be maintained under Routine Maintenance.

3.2.1 REVLAC AND RACS

The REVLAC and RACS system interactions rely on a communications exchange between the IDOT Com Center and the remote Control Buildings from which all devices are operated. Proper and continuous communications are necessary to control and provide status of individual ramps, device positions, and to prevent unsafe conditions on the reversible lane system.

The communications scheme is triple redundant (REVLAC only) to provide prompt and continuous communications in the event of a communications device failure. The three modes of communications are: fiber, microwave and telephone lines. The primary communications is conducted on the fiber system. The secondary communications system is the microwave network. The third means of communications is a dial-up modem system via the telephone lines. In the event of a fiber link failure, the microwave system will pick up the communications traffic and the telephone modem connections will be set up as a backup communication mode.

3.2.2 SONET RING NETWORK

The SONET network is used for video and data communication links between the IDOT Region 1 Headquarters Com Center and RACS, REVLAC, Traffic Systems Center and other facilities. The system is comprised of the microwave radio system with a fiber optic system to complete the SONET ring.

3.2.3 MICROWAVE SYSTEM (REVLAC)

The microwave radio system interconnects directly and indirectly all control nodes of the REVLAC system. The primary function of the microwave system is to provide reliable high-speed data transmission between all locations. The bandwidth of the microwave allows transmission of video from any site to any site by means of an elaborate switching network.

The long distance transmission to the IDOT Headquarters Com Center includes video (one way) and data (bi-directional) which is provided by a digital microwave link, repeated at the Illinois State Police Headquarters in Des Plaines to control building E.

All microwave paths are dual channel allowing redundant data paths, selected automatically, and can provide two real time video signals simultaneously from any site to any site.

The systems consist of 23 GHz analog links between the control buildings, 6 GHz digital links from building E to the IDOT Headquarters Schaumburg tower, a 6 GHz active repeater at ISP District Chicago in Des Plaines, dish antennas, coaxial cables, waveguides, power supplies, modulators, RF Heads, State owned radio towers, a network monitoring system, and a vast array of microwave technology to provide the desired service.

3.2.4 TELEPHONE SYSTEM (REVLAC)

Each nodal site has four 9600-baud smart modems interconnected between the sites. Each modem is dedicated and programmed for speed dial to another node. In the event of microwave failure, the modems interconnect and remain connected for the duration of path loss.

3.2.5 CONTROL SYSTEM (REVLAC)

The REVLAC Control System is a network of five sets of Allen Bradley PLC-5/60 and PLC-5/80 Programmable Logic Controllers (PLC). Each Remote Control Building and Com Center utilize a redundant processor in their PLC system. Each system coordinates the communications and control of that specific location. Normally all five units work as an interconnected system (network) through the communications links; however, each system may operate as a stand-alone unit for its ramp or operate the entire system in the event of a loss of communication to/from Schaumburg.

In addition to controlling various traffic devices such as barriers, changeable message signs and auxiliary signs, the REVLAC control system monitors and controls support systems such as swing gate heaters, weather station warning signals, CCTV monitoring systems, alarm systems, and various circuit breaker/power supply systems

3.2.6 CONTROL SYSTEM (RACS)

The RACS Control System is a network of Allen Bradley Control Logix 5000 series Programmable Logic Controllers (PLC). Each Remote Control Building (Hub and Ramp) utilizes a separate redundant CPU in its PLC system and the user interface software in the workstations in IDOT Com Center facilitate the remote control of the system. Each system coordinates the communications and control of that specific location. Normally all units work as an interconnected system (network) through the communications link; however, each system may operate as a stand-alone unit for its ramp or operate the entire system in the event of a loss of communication to/from Schaumburg. In addition to controlling various traffic devices such as barriers, changeable message signs and auxiliary signs, the RACS control system monitors and controls support systems such a traffic detector on the IL 38 ramp, CCTV monitoring systems, alarm systems, and various circuit breaker/power supply systems.

3.3 PHYSICAL EQUIPMENT TO BE MAINTAINED

(through routine or non-routine maintenance, as specified herein)

3.3.1 SWING GATES

The REVLAC system incorporates 117 swing gates and the RACS incorporates 10 swing gates manufactured by B & B Electromatic of Norwood, Louisiana. These swing gates direct the traffic away from closed ramps. Each swing gate can be operated remotely, locally, and with a manual hand crank. If there is damage to a swing gate which effects operation, the Contractor must provide an immediate response (arrive within 1 hour or less) and provide a temporary repair so operations may continue. Labor and equipment for all swing gate repairs shall be incidental to routine maintenance except as listed in Articles 6.1.6 Equipment Excluded From Routine Maintenance or 6.4.5 Motorist Caused Damage.

3.3.2 RESTRAINING BARRIERS (REVLAC ONLY)

The system incorporates six restraining barriers manufactured by the Entwistle Company of Hudson, Massachusetts. Each reversible entrance ramp has a barrier to prevent the entrance of vehicles when in the lowered (closed) position. Each barrier can be operated remotely, locally or by means of a built in 12V DC motor which can be powered from a the 12V DC automotive battery on an Emergency Traffic Patrol Truck.

3.3.3 AUXILIARY SIGNS

There are 42 auxiliary fiber optic and LED signs manufactured by the National Sign and Signal Co. of Battle Creek Michigan throughout the REVLAC System. They are operated remotely.

3.3.4 CHANGEABLE MESSAGE SIGNS (DRUM SIGNS)

There are 15 Changeable Message (drum signs) as manufactured by Lake Technologies. Each Changeable Message Sign can be operated remotely, locally, and with a manual hand crank. Of these 15 signs, 7 signs are critical signs which must operate in order to close a given ramp entrance. If there is a malfunction of one of the critical signs, the Contractor must provide an immediate response (arrive within 1 hour or less) and manually change the sign to facilitate a ramp closing sequence.

3.3.5 DYNAMIC MESSAGE SIGNS (LED)

There are 3 dynamic message signs, as manufactured by Voltron. Each sign can be operated remotely, or locally. Of these 3 signs, 2 signs are critical signs which must operate in order to close a given ramp entrance. If there is a malfunction of one of the critical signs, the Contractor must provide an immediate response (arrive within 1 hour or less) and manually change the sign to facilitate a ramp closing sequence.

3.4 LIST OF LOCATIONS

The following list is provided for Contractor reference, for EMCMS Tickets and Contractor monthly submittal of Motorist Caused Damage. All locations maintained under routine maintenance may not be listed here.

REVLAC BARRIERS AND BUILDINGS			
EMCMS CODE	**DESCRIPTION**	**OTHER INFO.**	**CRITICAL ?**
ABIE	Barrier, IB Edens	28” Wide	Yes
ABIS	Barrier, IB Slip Ramp	36.21’ Wide	Yes
ABIW	Barrier, IB West Leg	28.94’ Wide	Yes
ABOM	Barrier, OB Mainline	22.27’ Wide	Yes
ABOO	Barrier, OB Ontario	28’ Wide	Yes
ABOS	Barrier, OB Slip Ramp	35.85’ Wide	Yes
AA	Bldg. A, 950 W Ontario	OB Mainline	Yes
AB	Bldg. B, 1035 Grand Ave		
AC	2735 George St	OB Slip Ramp	Yes
AD	3002 N. Fransisco	IB Slip Ramp	Yes
AE	4755 Wilson Ave	OB Edens	Yes
ACOM	201 W Center Ct, Schamburg	D1 ComCenter	Yes
AISP	ISP District Chicago	Communications	

REVLAC CCTV CAMERAS (CC):			
EMCMS CODE	**DESCRIPTION**	**LOCATION**	**CRITICAL ?**
AOOCC1	I 90 94 Outbound Ontario	West of OOAS2	
AOOCC2	I 90 94 Outbound Ontario	East of Panel OORP1	
AOOCC3	I 90 94 Outbound Ontario	Between OO4 & OO5	
AOOCC4	I 90 94 Outbound Ontario	On OOB	
AOOCC5	I 90 94 Outbound Ontario	Between Ramp D & E	
AOOCC6	I 90 94 Outbound Ontario	Between Ramp D & E	
AOMCC1	I 90 94 Outbound Mainline	South of OMRP1	
AOMCC2	I 90 94 Outbound Mainline	Between OM3 & OM4	
AOMCC3	I 90 94 Outbound Mainline	Between OM6 & OM7	
AOMCC4	I 90 94 Outbound Mainline	Between OM6 & OM7	
AOMCC5	I 90 94 Outbound Mainline	On OMB	
AOMCC6	I 90 94 Outbound Mainline	South of OM12	
AOMCC7	I 90 94 Outbound Mainline	Between OM16 & OM17	
AOSCC1	I 90 94 Outbound Slip Ramp	Between OSAS1 & OSA2	
AOSCC2	I 90 94 Outbound Slip Ramp	Between OS2 & OS3	
AOSCC3	I 90 94 Outbound Slip Ramp	Between OS6 & OS7	
AOSCC4	I 90 94 Outbound Slip Ramp	Between OS6 & OS7	
AOSCC5	I 90 94 Outbound Slip Ramp	On OSB	
AOSCC6	I 90 94 Outbound Slip Ramp	On OSB	
AOSCC7	I 90 94 Outbound Slip Ramp	Between OS13 & OS14	
AISCC8	I 90 94 Inbound Slip Ramp	Between IS19 & IS18	
AISCC7	I 90 94 Inbound Slip Ramp	Between IS17 & IS16	
AISCC6	I 90 94 Inbound Slip Ramp	Between IS2 & ISB	
AISCC5	I 90 94 Inbound Slip Ramp	On ISB	
AISCC4	I 90 94 Inbound Slip Ramp	Between IS7 & IS6	
AISCC3	I 90 94 Inbound Slip Ramp	Between IS7 & IS6	
AISCC2	I 90 94 Inbound Slip Ramp	Between IS 4 & IS 3	
AISCC1	I 90 94 Inbound Slip Ramp	Between ISRP1 & ISAS2	
AIWCC7	I 90 94 Inbound West Leg	Between IW17 & IW16	
AIWCC6	I 90 94 Inbound West Leg	Between IW15 & IW14	
AIWCC5	I 90 94 Inbound West Leg	Across from IW11	
AIWCC4	I 90 94 Inbound West Leg	On IWB	
AIWCC3	I 90 94 Inbound West Leg	Between IW8 & IW7	
AIWCC2	I 90 94 Inbound West Leg	Between IW2 & IW1	
AIWCC1	I 90 94 Inbound West Leg	Between IWRP1 & IWAS2	
AIECC6	I 90 94 Inbound Edens	Between IE13 & IE12	
AIECC5	I 90 94 Inbound Edens	South of Wilson Ave Bridge	
AIECC4	I 90 94 Inbound Edens	Between IE7 & IE6	
AIECC3	I 90 94 Inbound Edens	Between IE7 & IE6	
AIECC2	I 90 94 Inbound Edens	Between IE3 & IE2	
AIECC1	I 90 94 Inbound Edens	Between IERP1 & IEAS2	

CHANGEABLE MESSAGE SIGN (DRUM) (ACM)			
EMCMS CODE	**DESCRIPTION**		**CRITICAL ?**
A CM OM1	Outbound Mainline	Changeable Message 1	
A CM OM2	Outbound Mainline	Changeable Message 2	
A CM OO3	Outbound Ontario	Changeable Message 3	YES
A CM OO4	Outbound Ontario	Changeable Message 4	
A CM OO5	Outbound Ontario	Changeable Message 5	
A CM OM6	Outbound Mainline	Changeable Message 6	YES
A CM OM7	Outbound Mainline	Changeable Message 7	YES
A CM OS8	Outbound Slip Ramp	Changeable Message 8	
A CM OS9	Outbound Slip Ramp	Changeable Message 9	YES
A CM IS10	Inbound Slip Ramp	Changeable Message 10	YES
A CM IS11	Inbound Slip Ramp	Changeable Message 11	
A CM IE12	Inbound Edens	Changeable Message 12	YES
A CM IE13	Inbound Edens	Changeable Message 13	
A CM IW14	Inbound West Leg	Changeable Message 14	YES
A CM IW15	Inbound West Leg	Changeable Message 15	

FIBER OPTIC AUXILIARY SIGN (AS)			
EMCMS CODE	**DESCRIPTION**		**CRITICAL ?**
A S IE1	Inbound Edens	Auxiliary Sign 1	YES
A S IE2	Inbound Edens	Auxiliary Sign 2	YES
A S IS1	Inbound Slip Ramp	Auxiliary Sign 1	YES
A S IS2	Inbound Slip Ramp	Auxiliary Sign 2	YES
A S IW1	Inbound West Leg	Auxiliary Sign 1	YES
A S IW2	Inbound West Leg	Auxiliary Sign 2	YES
A S OM1	Outbound Mainline	Auxiliary Sign 1	YES
A S OM2	Outbound Mainline	Auxiliary Sign 2	YES
A S OM3	Outbound Mainline	Auxiliary Sign 3	YES
A S OO1	Outbound Ontario	Auxiliary Sign 1	YES
A S OO2	Outbound Ontario	Auxiliary Sign 2	YES
A S OS1	Outbound Slip Ramp	Auxiliary Sign 1	YES
A S OS2	Outbound Slip Ramp	Auxiliary Sign 2	YES

FIBER OPTIC CHEVRON (AV)			
EMCMS CODE	**DESCRIPTION**		**CRITICAL ?**
AVIE1	Inbound Edens	Chevron 1	YES
AVIE2	Inbound Edens	Chevron 2	YES
AVIE3	Inbound Edens	Chevron 3	YES
AVIS1	Inbound Slip Ramp	Chevron 1	YES
AVIS2	Inbound Slip Ramp	Chevron 2	YES
AVIS3	Inbound Slip Ramp	Chevron 3	YES
AVIW1	Inbound West Leg	Chevron 1	YES
AVIW2	Inbound West Leg	Chevron 2	YES
AVIW3	Inbound West Leg	Chevron 3	YES
AVIW4	Inbound West Leg	Chevron 4	
AVIW5	Inbound West Leg	Chevron 5	
AVOM1	Outbound Mainline	Chevron 1	YES
AVOM2	Outbound Mainline	Chevron 2	YES
AVOM3	Outbound Mainline	Chevron 3	YES
AVOM4	Outbound Mainline	Chevron 4	
AVOO1	Outbound Ontario	Chevron 1	YES
AVOO2	Outbound Ontario	Chevron 2	YES
AVOO3	Outbound Ontario	Chevron 3	YES
AVOS1	Outbound Slip Ramp	Chevron 1	YES
AVOS2	Outbound Slip Ramp	Chevron 2	YES
AVOS3	Outbound Slip Ramp	Chevron 3	YES

FIBER OPTIC GORE SIGN			
EMCMS CODE	**DESCRIPTION**		**CRITICAL ?**
A G IE1	Inbound Edens	Gore Sign 1	YES
A G IS1	Inbound Slip Ramp	Gore Sign 1	YES
A G IW1	Inbound West Leg	Gore Sign 1	YES
A G OM1	Outbound Mainline	Gore Sign 1	YES
A G OO1	Outbound Ontario	Gore Sign 1	YES
A G OS1	Outbound Slip Ramp	Gore Sign 1	YES

FIBER OPTIC BARRIER X SIGN (AX)		
EMCMS CODE	**DESCRIPTION**	**CRITICAL ?**
A X IS1	Inbound Slip Ramp	Barrier X Sign 1
A X IW1	Inbound West Leg	Barrier X Sign 1
A X OM1	Outbound Mainline	Barrier X Sign 1
A X OO1	Outbound Ontario	Barrier X Sign 1
A X OS1	Outbound Slip Ramp	Barrier X Sign 1

ROADSIDE CONTRAL PANEL (AR)		
EMCMS CODE	**DESCRIPTION**	**CRITICAL ?**
A R IE1	Inbound Edens	Panel 1
A R IE2	Inbound Edens	Panel 2
A R IE3	Inbound Edens	Panel 3
A R IS1	Inbound Slip Ramp	Panel 1
A R IS2	Inbound Slip Ramp	Panel 2
A R IS3	Inbound Slip Ramp	Panel 3
A R IW1	Inbound West Leg	Panel 1
A R IW2	Inbound West Leg	Panel 2
A R IW3	Inbound West Leg	Panel 3
A R OM1	Outbound Mainline	Panel 1
A R OO1	Outbound Ontario	Panel 1
A R OO2	Outbound Ontario	Panel 2
A R OO3	Outbound Ontario	Panel 3
A R OO4	Outbound Ontario	Panel 4
A R OS1	Outbound Slip Ramp	Panel 1
A R OS2	Outbound Slip Ramp	Panel 2

SUPERVISORY CONTROL PANEL (ASC)		
EMCMS		
CODE	**DESCRIPTION**	
A SC 00	Schaumburg Com Center	Supervisory Control Panel 00
A SC 12	Schaumburg Com Center	Supervisory Control Panel 12

SWING GATES (ASW)				
EMCMS CODE	**DESCRIPTION**		**LENGTH IN FT**	**CRITICAL ?**
A SW IE 1	Inbound Edens	Swing Gate 1	5	YES
A SW IE 2	Inbound Edens	Swing Gate 2	9	YES
A SW IE 3	Inbound Edens	Swing Gate 3	12	
A SW IE 4	Inbound Edens	Swing Gate 4	16	
A SW IE 5	Inbound Edens	Swing Gate 5	17	
A SW IE 6	Inbound Edens	Swing Gate 6	17	
A SW IE 7	Inbound Edens	Swing Gate 7	17	
A SW IE 8	Inbound Edens	Swing Gate 8	17	
A SW IE 9	Inbound Edens	Swing Gate 9	17	YES
A SW IE 10	Inbound Edens	Swing Gate 10	10	YES
A SW IE 11	Inbound Edens	Swing Gate 11	9	YES
A SW IE 12	Inbound Edens	Swing Gate 12	22	YES
A SW IE 13	Inbound Edens	Swing Gate 13	16	
A SW IE 14	Inbound Edens	Swing Gate 14	8	
A SW IE 15	Inbound Edens	Swing Gate 15	5	
A SW IS 1	Inbound Slip Ramp	Swing Gate 1	12	YES
A SW IS 2	Inbound Slip Ramp	Swing Gate 2	15	YES
A SW IS 3	Inbound Slip Ramp	Swing Gate 3	18	
A SW IS 4	Inbound Slip Ramp	Swing Gate 4	21	
A SW IS 5	Inbound Slip Ramp	Swing Gate 5	23	
A SW IS 6	Inbound Slip Ramp	Swing Gate 6	23	
A SW IS 7	Inbound Slip Ramp	Swing Gate 7	23	
A SW IS 8	Inbound Slip Ramp	Swing Gate 8	23	
A SW IS 9	Inbound Slip Ramp	Swing Gate 9	23	YES
A SW IS 10	Inbound Slip Ramp	Swing Gate 10	14	YES
A SW IS 11	Inbound Slip Ramp	Swing Gate 11	14	YES
A SW IS 12	Inbound Slip Ramp	Swing Gate 12	23	YES
A SW IS 13	Inbound Slip Ramp	Swing Gate 13	23	
A SW IS 14	Inbound Slip Ramp	Swing Gate 14	23	
A SW IS 15	Inbound Slip Ramp	Swing Gate 15	23	
A SW IS 16	Inbound Slip Ramp	Swing Gate 16	23	
A SW IS 17	Inbound Slip Ramp	Swing Gate 17	23	
A SW IS 18	Inbound Slip Ramp	Swing Gate 18	22	
A SW IS 19	Inbound Slip Ramp	Swing Gate 19	21	
A SW IS 20	Inbound Slip Ramp	Swing Gate 20	18	
A SW IS 21	Inbound Slip Ramp	Swing Gate 21	16	
A SW IS 22	Inbound Slip Ramp	Swing Gate 22	14	
A SW IS 23	Inbound Slip Ramp	Swing Gate 23	12	YES
A SW IS 24	Inbound Slip Ramp	Swing Gate 24	10	YES
A SW IW 1	Inbound West Leg	Swing Gate 1	5	YES
A SW IW 2	Inbound West Leg	Swing Gate 2	9	YES
A SW IW 3	Inbound West Leg	Swing Gate 3	11	
A SW IW 4	Inbound West Leg	Swing Gate 4	14	
A SW IW 5	Inbound West Leg	Swing Gate 5	17	

A SW IW 6	Inbound West Leg	Swing Gate 6	17	
A SW IW 7	Inbound West Leg	Swing Gate 7	17	
A SW IW 8	Inbound West Leg	Swing Gate 8	17	
A SW IW 9	Inbound West Leg	Swing Gate 9	17	YES
A SW IW 10	Inbound West Leg	Swing Gate 10	8	YES
A SW IW 11	Inbound West Leg	Swing Gate 11	9	YES
A SW IW 12	Inbound West Leg	Swing Gate 12	20	YES
A SW IW 13	Inbound West Leg	Swing Gate 13	19	
A SW IW 14	Inbound West Leg	Swing Gate 14	14	
A SW IW 15	Inbound West Leg	Swing Gate 15	10	
A SW IW 16	Inbound West Leg	Swing Gate 16	6	
A SW IW 17	Inbound West Leg	Swing Gate 17	5	
A SW IW 18	Inbound West Leg	Swing Gate 18	5	
A SW IW 19	Inbound West Leg	Swing Gate 19	5	YES
A SW IW 20	Inbound West Leg	Swing Gate 20	5	YES
A SW OM 1	Outbound Mainline	Swing Gate 1	12	YES
A SW OM 2	Outbound Mainline	Swing Gate 2	12	YES
A SW OM 3	Outbound Mainline	Swing Gate 3	12	
A SW OM 4	Outbound Mainline	Swing Gate 4	15	
A SW OM 5	Outbound Mainline	Swing Gate 5	14	
A SW OM 6	Outbound Mainline	Swing Gate 6	14	
A SW OM 7	Outbound Mainline	Swing Gate 7	20	
A SW OM 8	Outbound Mainline	Swing Gate 8	20	
A SW OM 9	Outbound Mainline	Swing Gate 9	18	YES
A SW OM 10	Outbound Mainline	Swing Gate 10	6	YES
A SW OM 11	Outbound Mainline	Swing Gate 11	2	YES
A SW OM 12	Outbound Mainline	Swing Gate 12	16	YES
A SW OM 13	Outbound Mainline	Swing Gate 13	17	
A SW OM 14	Outbound Mainline	Swing Gate 14	17	
A SW OM 15	Outbound Mainline	Swing Gate 15	15	
A SW OM 16	Outbound Mainline	Swing Gate 16	13	
A SW OM 17	Outbound Mainline	Swing Gate 17	11	
A SW OM 18	Outbound Mainline	Swing Gate 18	7	
A SW OM 19	Outbound Mainline	Swing Gate 19	7	
A SW OM 20	Outbound Mainline	Swing Gate 20	9	YES
A SW OM 21	Outbound Mainline	Swing Gate 21	9	YES
A SW OO 1	Outbound Ontario	Swing Gate 1	12	YES
A SW OO 2	Outbound Ontario	Swing Gate 2	12	YES
A SW OO 3	Outbound Ontario	Swing Gate 3	13	
A SW OO 4	Outbound Ontario	Swing Gate 4	13	
A SW OO 5	Outbound Ontario	Swing Gate 5	13	
A SW OO 6	Outbound Ontario	Swing Gate 6	20	
A SW OO 7	Outbound Ontario	Swing Gate 7	20	YES
A SW OO 8	Outbound Ontario	Swing Gate 8	8	YES
A SW OO 9	Outbound Ontario	Swing Gate 9	8	YES
A SW OO10	Outbound Ontario	Swing Gate 10	20	YES
A SW OO 11	Outbound Ontario	Swing Gate 11	20	
A SW OO 12	Outbound Ontario	Swing Gate 12	16	
A SW OO 13	Outbound Ontario	Swing Gate 13	12	

A SW OO 14	Outbound Ontario	Swing Gate 14	6	
A SW OO 15	Outbound Ontario	Swing Gate 15	4	YES
A SW OO 16	Outbound Ontario	Swing Gate 16	4	YES
A SW OS 1	Outbound Slip Ramp	Swing Gate 1	6	YES
A SW OS 2	Outbound Slip Ramp	Swing Gate 2	10	YES
A SW OS 3	Outbound Slip Ramp	Swing Gate 3	14	
A SW OS 4	Outbound Slip Ramp	Swing Gate 4	16	
A SW OS 5	Outbound Slip Ramp	Swing Gate 5	20	
A SW OS 6	Outbound Slip Ramp	Swing Gate 6	21	
A SW OS 7	Outbound Slip Ramp	Swing Gate 7	21	
A SW OS 8	Outbound Slip Ramp	Swing Gate 8	21	
A SW OS 9	Outbound Slip Ramp	Swing Gate 9	21	
A SW OS 10	Outbound Slip Ramp	Swing Gate 10	21	YES
A SW OS 11	Outbound Slip Ramp	Swing Gate 11	13	YES
A SW OS 12	Outbound Slip Ramp	Swing Gate 12	14	YES
A SW OS 13	Outbound Slip Ramp	Swing Gate 13	23	YES
A SW OS 14	Outbound Slip Ramp	Swing Gate 14	23	
A SW OS 15	Outbound Slip Ramp	Swing Gate 15	23	
A SW OS 16	Outbound Slip Ramp	Swing Gate 16	23	
A SW OS 17	Outbound Slip Ramp	Swing Gate 17	23	
A SW OS 18	Outbound Slip Ramp	Swing Gate 18	21	
A SW OS 19	Outbound Slip Ramp	Swing Gate 19	20	
A SW OS 20	Outbound Slip Ramp	Swing Gate 20	18	YES
A SW OS 21	Outbound Slip Ramp	Swing Gate 21	16	YES

RACS SYSTEM – GATES (AG):

EMCMS CODE	DESCRIPTION	LENGTH IN FT
AG1	Roosevelt Ramp Swing Gate	14
AG2	Roosevelt Ramp Swing Gate	17
AG3	Roosevelt Ramp Swing Gate	17
AG4	Roosevelt Ramp Swing Gate	17
AG5	Roosevelt Ramp Swing Gate	17
AG6	Roosevelt Ramp Swing Gate	20
AG7	Roosevelt Ramp Swing Gate	21
AG8	Roosevelt Ramp Swing Gate	21
AG9	Roosevelt Ramp Swing Gate	21
AG10	Roosevelt Ramp Swing Gate	21

RACS SYSTEM – CAMERAS (ACC1)		
EMCMS CODE	**DESCRIPTION**	**LOCATION**
ACC1	Roosevelt Road Camera 1	¼ Mi West of York Rd
ACC2	Roosevelt Road Camera 2	West of York Rd
ACC3	Roosevelt Road Camera 3	East of York Rd
ACC4	Roosevelt Road Camera 4	East of I-88 Overpass
ACC5	Roosevelt Road Camera 5	West of I-88 Overpass
ACC6	Roosevelt Road Camera 6	Across Entrance of Ramp
ACC7	EB I-290 Ramp Camera 7	½ way down Entrance Ramp
ACC8	Hillside Hub Tower Camera 8	On Tower Leg
ACC9	Hillside Hub Tower Camera 9	On Tower Leg
ACC10	Hillside Hub Tower Camera 10	On Tower Leg
ACC11	Nordic Tower Camera 11	On Tower Leg

RACS SYSTEM – SIGNS		
EMCMS CODE	**DESCRIPTION**	**LOCATION**
AAS1	Auxiliary Sign	West of I-88
AAS2	Auxiliary Sign	West of I-88
AEBR1	Dynamic Message Sign	¼ Mile West of York Rd
AEBR3	Dynamic Message Sign	Between York Rd & I-88
AEBR4	Dynamic Message Sign	Ramp Entrance
ASC1	Chevron Auxiliary Sign	EB Left Shoulder
ASC2	Chevron Auxiliary Sign	EB Left Shoulder
ASC3	Chevron Auxiliary Sign	EB Left Shoulder
ASC4	Chevron Auxiliary Sign	EB Left Shoulder
ASC5	Chevron Auxiliary Sign	EB Left Shoulder
ASC6	Chevron Auxiliary Sign	EB Left Shoulder

SERVERS AND USER INTERFACE WORKSTATIONS

Hillside Hub
1 PLC Workstation
1 NetCams Workstation

Roosevelt Ramp Building
1 PLC Workstation
1 NetCams Workstation

Region 1 Headquarters Schaumburg
2 RACS Workstations
1 RACS Event Logger
1 Sonet Maintenance Workstation
1 NetCams Workstation
1 NetCams Server
1 Maintenance Workstation
1 REVLAC Event Logger
1 REVLAC Alarm Monitor
3 TLC Video Over IP Servers
1 1Rack Unit TLC Video Server
2 TLC Video over IP Servers
1 Sensoray Video Capture Server
1 SWARMS Workstation
1 AVL Server
2 AVL Workstations
1 Multi-site base station controller of AVL System
3 Dell Laptops for PLC Programming

REVLAC Building A, C, D and E
4 REVLAC Alarm Monitors, 1 in each Building

Other Miscellaneous Equipment
Cattron unit ETP vehicles
AVL units and data radios in Department's vehicles

4.0 GENERAL CONTRACT REQUIREMENTS

4.1 BASIC CONTRACT PROVISIONS

4.1.1 TERM OF CONTRACT

Once the Contract is executed and the insurance submittals have been approved, the Contractor shall begin preparations to assume routine and non-routine maintenance responsibilities as specified and shall perform work as required and as directed by the Engineer.

Certain prepatory work, such as transfer of state stock inventory, purchase of spare materials for System equipment repairs, and other items, as arranged with the Engineer, shall be performed and completed in advance of April 1, 2006.

Regular routine maintenance responsibilities, including patrols, street response and immediate corrective action response shall begin and be in full force from 12:00 a.m. on April 1, 2006, to 12:00 a.m. (midnight) on March 31, 2007, subject to cancellation provisions specified herein.

The contract shall remain in force, even following the end of the routine maintenance term, until all outstanding work items are completed and the contract is formally closed. All insurance required shall be in effect at the time of execution of this contract and shall remain in force until the contract is closed by IDOT.

4.1.2 COMPLETION OF WORK

Except as may be otherwise modified, this contract covers street response work over a defined one year term and other work which may span beyond this term. The Contractor shall make diligent efforts to complete all work within the same term as was authorized, or otherwise as soon as possible and practical.

The Contractor shall complete all routine work and non-routine work with in times specified. Incomplete routine or non-routine work, without an approved extension, may be subject to the assessment of liquidated damages or retainage of the routine maintenance payment, in accordance with terms as stated herein. If there is a heavy backlog of work or if the Contractor is falling behind in work in the opinion of the Engineer, as evidenced by requests for extensions and backlog of tickets, the Contractor shall then provide, at the request of the Engineer, additional crew to catch up and bring the backlog to acceptable levels.

In the final month of routine maintenance for the ASMC, the Engineer may withhold up to 75% of the final month's routine maintenance billing until all authorized routine and non-routine maintenance work is complete, but may progressively release portions of the retainage as the work is completed.

4.1.3 RENEWAL

The Department has the sole discretion to renew this contract for one (1) additional term. This option would extend the contract for one additional term from 12:00 A.M. April 1, 2007 to 12:00 A.M. (midnight) March 31, 2008. The contract renewal shall be at the same terms and conditions as the original contract.

Upon notification of the contract renewal by IDOT, the Contractor shall complete and submit IDOT's contract renewal form, within fifteen (15) days of notification together with documentation of the contract bond extension and copies of required insurance policies for the renewal year as well as any other documentation requested by the Department.

When the 1-year renewal provision is exercised by the State, each calendar year for street response shall define a separate and individual contract term for purposes of completion of work. The renewal shall not relieve the Contractor from the requirements to complete work from the first year in a timely fashion. The existence of a backlog from a prior year shall not be justification for delay of work in the renewal year.

The Contractor shall resubmit requests for sub-contractor approval, Form BC-260-A, for each Sub-Contractor prior to the start of the renewal year. The Contractor shall submit, for Engineer approval, for anticipated use of any new equipment or parts in the new term, which were not submitted and approved in the prior contract term.

The original contract term and the renewal term shall be considered independent with respect to completion of work, payment, and withholding of payment as well as all associated work documentation.

4.1.4 CANCELLATION

The Department reserves the right to cancel the contract, unilaterally, at any time during the term of the Contract, with a 60-day advance notice of cancellation of this Contract. In the event of cancellation, the Contractor shall be entitled to receive payment for services and work performed and materials or equipment furnished under the terms of the Contract prior to the effective date of

cancellation, but shall not be entitled to receive any damages on account of such cancellation or any further payment whatsoever. There shall be no payment for incomplete work. The Department or the Engineer may take possession of the incomplete work and all materials, associated special tools and appliances for any reason which he/she deems to be in the public interest and his/her decision shall be final.

4.2 CONTRACTOR PERFORMANCE

4.2.1 UNSATISFACTORY SERVICE

Failure to perform all functions in the manner specified and within any time limit specified may seriously jeopardize the welfare of the general motoring public. Should the Contractor refuse or fail to perform the work or any separable part thereof promptly and in the manner specified in this Contract with such diligence as will insure its satisfactory completion, the Engineer will advise the via a written transmittal regarding the nature of unsatisfactory service. The Contractor shall take necessary action in the most practical manner possible to correct the items listed. The Contractor shall respond back to the Engineer within five (5) working days from the time of receipt of the report, explaining the reasons for the improper service and the remedial action being taken to resolve the problem.

Should the situation warrant, the Engineer may take additional remedial action such as withholding of all or a portion of the monthly payment due to the Contractor, suspension of work, or deauthorization of non-routine work.

4.2.2 PAYMENT WITHHOLDING & RELEASE

The Engineer may withhold up to 100% of the total routine monthly payment for the incomplete or otherwise unsatisfactory performance of routine or non-routine maintenance.

After the previously uncompleted or deficient work has been subsequently completed to the satisfaction of the Engineer, the Contractor shall advise the Engineer in writing, requesting the release of funds previously withheld. The Engineer shall then approve the release of withheld funds through an authorization letter.

4.2.3 SUSPENSION OF WORK

If, in the opinion of the Engineer, any work performed under this Contract does not comply with the requirements of the Contract and/or as described in the Standard Specifications, the Engineer has the authority to order the immediate suspension of that work. The Contractor will be advised, in writing, of the suspension of work, explaining the work non-compliance or omission of work and the conditions to be satisfied before the work can be resumed. The Contractor must then satisfy these conditions and request, in writing, removal of the suspension, which, if granted, will similarly be written.

4.2.4 DEFAULT ON CONTRACT

If after two (2) written warnings, a work item is not in contract compliance, or work has not been completed per the agreed time frame, the Engineer may permanently suspend the Contractor's right to perform the requested task, per Article 108.10 of the Standard Specifications, and will authorize the work to be performed by an outside contractor, with the cost of that work deducted from the ASMC monthly routine maintenance payment.

It is at the Engineer's option to demand the Contractor pay another contractor, as approved by the Engineer, for all corrective work in accordance with Article 109.05, with the Contractor's mark-up deducted as liquidated damages, with full documentation of payment provided to the Engineer.

4.2.5 LIQUIDATED DAMAGES

Liquidated damages may be assessed for any work that is not performed satisfactorily to contract requirements, not completed for the month, or response time was not met, unless the Contractor can demonstrate, to the satisfaction of the engineer, that his efforts were deterred by the Department, or by other contractors employed by the Department or by unforeseeable causes beyond his control and without the fault or negligence of the Contractor. Unless specified in articles herein, the Contractor expressly agrees to have the Department deduct the sum of Five Hundred Dollars ($500.00) for each item of such unsatisfactory work, or work item remaining incomplete beyond the established completion date, or per incident. Such monies shall be deducted as liquidated damages to cover losses and expenses to the Department, and not as a penalty. The Contractor shall be liable to the Department for any costs incurred in excess of the liquidated damages collected by the Department.

The Department shall recover said liquidated damages by deducting the amount thereof from any monies due or that may become due to the Contractor. If said monies are insufficient to cover said damages, then the Contractor or the Surety shall pay such amount due.

4.3 SUBCONTRACTING OF WORK

4.3.1 GENERAL REQUIREMENTS

Except as modified herein, subcontracting of the contract work shall be in conformance with the requirements of the Standard Specifications and Supplements. The Contractor shall obtain approval of the Engineer for all subcontractors to be employed in the contract work, prior to commencement of work.

Functions that require a dispersed workforce and rapid response (immediate corrective action) shall not be subcontracted without specific written approval by the Engineer. Wholesale subcontracting of a system's maintenance will not be allowed.

The Contractor shall submit a Request for Approval of Subcontractor, Form BC260A for each subcontractor to:

Diane O'Keefe, P.E., Region I Engineer
Illinois Department of Transportation
Attn: Martin E. Anderson, P.E.
Bureau Chief of Electrical Operations
201 W. Center Court
Schaumburg IL 60196-1096

All requests for subcontractor approvals shall be accompanied by a written subcontract agreement which sets forth the scope of services to be subcontracted, the lump sum or unit price for such services and the signatures of the subcontracting parties. In addition, a certification from the Contractor will be required, stating that the required Federal and State provisions will be inserted in the final contract with the subcontractor. Initial submittals will be due at the Pre-Construction meeting.

4.3.2 SUBCONTRACTOR REPRESENTATIVES

Except for arrangements made in advance for subcontractors regularly engaged on a continuous basis in the contract work or as otherwise specifically agreed between the Engineer and the Contractor for special circumstances, the Contractor shall have a representative included in all interaction between his/her subcontractors and the Engineer.

Subcontractors assigned to regular, continuous work for the Contract shall have a single designated representative authorized to represent the subcontractor in dealings with the Contractor and the Engineer with respect to contract matters. This individual shall have a thorough knowledge of contract requirements and shall have the authority to commit resources for contract work.

4.3.3 SUBCONTRACTOR BILLING

For work performed by an approved subcontractor, as named on the invoice, the Contractor shall receive as administrative costs an amount equal to five percent of the total approved costs for the first $ 10,000, and one percent of any amount over $ 10,000 of the total approved costs.

Specialty service work as authorized and originated by the Department (non-routine vendor authorizations for expenses incurred by the Department) shall be considered as work by the Contractor, and not subcontracted work for purposes of billing.

4.4 CONTRACTOR TRANSITION

4.4.1 BASIC REQUIREMENTS

It is the obligation of the Contractor to make every effort to provide a seamless transition from the prior ASMC to this Contract. This may involve adjustments in ongoing operations to adjust to revised contract provisions or it may involve a startup of operations and the assumption of maintenance responsibility if there is a change in Contractor. The Contractor shall assure the Department that at 12:01 a.m. on April 1, 2006 the transfer is complete and transparent to the public, that the systems remain continuously operational, monitored and maintained.

It shall be recognized that the transfer and transition from one contract to the next will not be instantaneous with regard to all aspects of all systems. Certain work may remain incomplete at the time of transition, requiring coordination and system access to allow work completion after contract transfer. The Contractor shall cooperate fully to facilitate this transition period work.

Furthermore, this obligation extends to the transition from this contract to any subsequent contract. It is the obligation of the Contractor to cooperate fully to facilitate the transition period work, providing prompt communications and timely completion of authorized work. The fulfillment of these responsibilities will be among the contributing factors in the evaluation of Contractor's overall performance. The Contractor remains obligated for the completion of all outstanding routine work and all authorized non-routine work. All applicable contract requirements shall remain in force for this work, unless otherwise directed by the Engineer.

All necessary equipment and/or services required for the transitions shall be incidental to the contract routine maintenance unless otherwise noted herein as non-routine work.

4.4.2 CONTRACTOR SPARE PARTS AND STATE STOCK

Contractor Owned Spare Parts:
Following the award of this Contract, the Contractor shall procure the spare parts as needed for system maintenance and repairs within times specified (incidental to routine maintenance) such that at the time routine maintenance activities begin, adequate spare parts are on hand.

State Stock Transition:
Upon request of the Engineer, in March, 2006 (or March 2007 if this contract is not renewed), the Contractor shall:

- Provide a list of all (IDOT owned) state stock inventory and its location
- Make arrangements to transport and deliver all state stock inventory and/or other equipment or materials owned by IDOT to a contractor or locations designated by the Engineer, by a date to be specified by the Engineer during March 2006, (or March 2007 if this contract is not renewed).
- Replace missing stock in kind due to loss, theft, burglary, damage or destruction from any cause whatsoever, any and all such parts, materials, and equipment.

4.4.3 LOCKS AND KEYS

The Engineer will coordinate the turnover of system keys from the outgoing Contractor and provide the incoming Contractor (by March 15, 2006) with the keys to System equipment and any alarm keys so as to assure that at 12:01 A.M. on April 1, 2006, the maintenance transfer is complete and transparent to the public. The incoming Contractor shall change or re-key up to fifty locks of the facilities and equipment for security purposes, as specified by the Engineer. If additional locks are required, they shall be installed under non-routine maintenance.

At the end of the Contract term(s), the Contractor shall make arrangements to return the keys of the facilities and equipment to the Engineer. All existing, replacement and/or new locks and keys added to the electrical systems during the Contract, shall become the property of the Department.

4.4.4 EMCMS DOCUMENTATION

The Contractor shall complete all ticket work, preventive maintenance programs, and other routine and non-routine work and document/invoice all items on the EMCMS as required herein, before the Contract shall be considered closed.

4.5 CONTRACTOR COMMUNICATIONS

4.5.1 CONTRACT ADMINISTRATION

The ASMC will be administered by the IDOT Region 1 Bureau of Electrical Operations and most activities related to the contract shall be handled through the Bureau of Electrical Operations personnel located in the Electrical Operations Field Office in Schaumburg. The Contractor Project Manager shall communicate with the IDOT Resident Engineer on all contract matters. Contractor Supervisors and Administrative personnel shall normally communicate with the IDOT System Engineers and Technicians.

The Contractor shall address all matters of Contract interpretation or dispute at the lowest possible level. Issues which are not addressed to the Contractor's satisfaction at the Specialist/Foreman level may be raised to the IDOT Resident Engineer level. If not addressed at that level, the issue may next be addressed with the Contract Administrator, the Bureau Chief of Electrical Operations, Mr. Martin Anderson.

4.5.2 WORK PROGRESS MEETINGS

The Bureau of Electrical Operations engineers and technicians normally hold informal weekly work status meetings with the Contractor. A formal Pay Meeting is held the second Wednesday of each month to review the progress of routine and non-routine work. The Contractor presents the monthly non-routine maintenance invoice for payment at the monthly Pay Meeting. (Refer to Monthly Pay Meeting in Article 6.9.3).

4.5.3 FORMAL CORRESPONDENCE

All formal correspondence to IDOT regarding contractual matters shall only be submitted by the Principal or Project Manager and shall be addressed as follows:

Diane O'Keefe, P.E., Region I Engineer
Illinois Department of Transportation, Region 1
Attn: Martin E. Anderson, P.E.
Bureau Chief of Electrical Operations
201 W. Center Court
Schaumburg, Illinois 60196-1096

cc: H. Rao Vaitla, P.E. Resident Engineer

4.5.4 INFORMAL CORRESPONDENCE

Informal correspondence, related to day-to-day maintenance matters, shall be made by means of email, and may be made directly to the parties involved. All Contractor personnel who are assigned work on the ASMC shall have an email address. The Email service shall not be a service that attaches advertising to Email.

4.5.5 WIRELESS FIELD COMMUNICATION SYSTEMS

The Contractor shall provide and maintain adequate, reliable, continuous project-wide communications among the Contractor's forces and between the Contractor and the Department's designated representatives. The Contractor shall have in place, a Region-wide wireless field communications system with a central base established at the Contractor's Dispatch Center or other location approved by the Engineer.

To assure a consistent and reliable transmit and receive coverage throughout the geographic area of Region 1, the Contractor shall have a multiple-location-infrastructure based, digital wireless communications system (trunked radio system with integral cellular telephone capability) as offered by Nextel™ or an equivalent provider.

The Contractor shall provide units for all Contractor supervisor or management personnel, patrol personnel, and key ASMC positions as directed by the Engineer. All Contractor and Sub-contractor personnel utilized to perform any regular day-to-day work, especially damage and trouble-call response activities, shall be provided with them. In addition, to facilitate the Department's inspection of contract work, four (4) units and maximum of fourteen holders for

vehicle hands-free operations, equal to Alternative Wireless CCM roadster car kits, plus accompanying push to talk cables, shall be furnished for IDOT management and inspector personnel and/or base station location offices. The units shall be new and the model shall be approved by the Engineer prior to purchase or lease by the Contractor. Each communications device shall have a programmed, two or three-digit unit number, which shall serve as the call number. The list of assigned call numbers shall be furnished to the Engineer by March 1, 2006.

Units shall have digital radio one-to-one and telephone communications service allowing the capability to initiate and receive calls in a direct connection from party to party, dial telephone service, numbers assigned by the local exchange carrier, a name and number called display, a missed call indicator, a last number quick call, caller-id, audible alert for radio call, choice of ring or vibrate call notifications, voice messaging capability to store at least ten messages, and have the capability of storing at least ninety-nine (99) preset numbers. Also, each unit shall have a controlled keypad lockout feature such that, when activated, outbound dialing is restricted to the preset numbers or the capability to restrict telephone interconnect.

Cigarette lighter charger/adapters, AC recharging units in the form of cords or desktop units, largest Lithium-Ion battery available, separate carry case or protector, and belt carry attachment shall be provided for each unit. As these units are used for field work, it may be necessary for the Contractor to replace up to two inspector units, and furnish new parts, chargers, adapters, cables, or batteries to all units, as necessary, during each contract year. PC compatible software shall be furnished for the programming of numbers, name changes, and other programmable functions.

The system shall be in place, including installations for Department monitoring of the contract, by March 15, 2006. The Contractor shall submit catalog cuts of the proposed units and the proposed system at the Pre-Construction Meeting.

Any security access code associated with each Nextel™ or equivalent unit shall be kept secure by delivery direct from the equipment/service provider to the Engineer or his designee. Copies of telephone billing charges resulting from state inspector use of equipment shall be provided on a monthly basis to the Engineer.

4.5.6 EMCMS – ELECTRICAL MAINTENANCE CALL-OUT AND MANAGEMENT SYSTEM

General Requirements

The emergency call-out data base, and a timely, accurate flow of information regarding contract work and billing are very much instrumental to the successful performance of the Advanced Systems Maintenance Contract. The Electrical Maintenance Call-Out and Management System (EMCMS) consists of hardware, software, and an information database to support the Contract needs. The existing established IDOT EMCMS shall continue into this Contract to assure operational continuity. Bidders may obtain a list of required hardware from the current maintainer of the EMCMS, Xsys Inc., 653 Steele Drive, Valparaiso, IN. 46385, Telephone 219-477-4816.

Multiple maintenance contracts are managed through the current EMCMS. Due to security concerns, the Contractor is encouraged to use the current maintainer of EMCMS. However, should the Contractor intend to choose another maintainer, he shall submit the qualifications and references of the company for Department's review and approval to assure security and integrity of the system. Only Department approved maintainers may perform any changes on the EMCMS.

The Contractor is required to have a minimum of two workstations with Windows XP or 2000 OS and internet explorer, (one of which must be located in the Contractor's Dispatch facility), with sufficient speed and memory to run EMCMS software, and necessary T-1 phone lines, routers, etc, in place for inspection by the Engineer, by March 15, 2006. The connections and the set-up of the EMCMS servers for the new workstations shall be performed by the maintainer of the EMCMS.

In case of disruption of service, all Contractor EMCMS equipment, (all hardware, and communications lines between the IDOT headquarters computer and all remote terminals) shall be restored within eighteen (18) hours, except as otherwise permitted by the Engineer. The Contractor shall have sufficient staff or have a sub-contractor in place to maintain the EMCMS workstations and communications links.

The Contractor is responsible to have the approved maintainer of EMCMS to perform necessary programming corrections due to Contractor database entry errors or printing errors or other malfunctions during the course of his work. If the Contractor finds a need to modify or add tables, screens and reports in the EMCMS to aid him in contract management or to improve the productivity of his personnel, he may do so upon approval of the Engineer, but only through the approved maintainer.

In addition, the Contractor's maintainer of EMCMS shall modify and add parameter selection by the contract number to the existing reports to enable printing those reports by the contract number. These reports include all non-routine work processing reports; budget report; and authorization and quote letter reports. This work shall be completed by October 1, 2006.

Refer to Article 6.0 Work Documentation requirements for EMCMS data entry requirements. No other method of billing or work documentation shall be allowed. All costs for installation of EMCMS workstations, printers, their operation and maintenance, including revisions as described above, shall be borne by the Contractor and shall be included in the routine maintenance.

Site Inspection

As part of the site inspection visits offered by the Department prior to bidding, a limited tour of the EMCMS equipment and operations at the Electrical Operations Field Office in Schaumburg, IL, and the Region 1 Headquarters in Schaumburg will be offered to familiarize bidders with the procedures.

4.6 FACILITIES

4.6.1 GENERAL REQUIREMENTS

The Contractor shall have and maintain adequate facilities at all times for timely completion of work under this contract. At the time of bidding, the Contractor shall have an established business presence in the Region 1, preferably a headquarters, to assure the timeliness of the assumption of the contract work.

A minimum of one (1) Contractor facility, shall be a permanent building, strategically located geographically within the Region, to support the Contractor's work force, and shall meet all applicable building codes, and shall be equipped with adequate electric service, heat, air conditioning, telephone service, computer equipment for email communications, EMCMS equipment, a central-station security alarm system or equivalent, and restroom facilities. It is expected that the Contractor's dispatch center would be located at this facility (refer to Article 4.6.3). The Contractor may, however, implement other facility location(s) for the contract work and/or dispatching of personnel, subject to the approval of the Engineer.

The Engineer shall be allowed immediate access to all Contractor's facilities, or applicable portions thereof, at all reasonable times, for purposes of inspection of state-owned property or for monitoring of activities required under the contract.

All Contractor's facilities shall be complete and ready for operation no later than March 15, 2006, including all communications links, etc., ready for a demonstration inspection by the Engineer.

4.6.2 STORAGE OF STATE STOCK AND CONTRACTOR SPARE PARTS

Unless approved in writing by the Engineer, all Contractor storage facilities shall be indoor heated areas, which shall have adequate space for storage of all state stock materials which are not stored in the warehouse facility described elsewhere herein, and shall have space for all Contractor owned inventory as necessary, for use under the Contract.

The Contractor shall furnish sufficient storage boxes, cases, lockers, and shelving, as incidental to routine maintenance, to house the different types of materials and equipment so as to have an organized accessible storage area. The designated storage locations of all state stock shall be reviewed and approved by the Engineer, prior to the receipt and placement of materials and/or equipment into storage.

All storage areas shall be secure with screened, locked access. All State Stock Inventory in the Contractor's possession shall be clearly identified and kept physically separate from the storage of Contractor owned materials and equipment.

4.6.3 CONTRACTOR DISPATCH CENTER

The Contractor shall provide a dispatch center, staffed 24-hours/seven days per week. The dispatch center shall be located at a permanent facility owned or leased by the Contractor. It may be part of the contractor's headquarters operation, or another facility which meets the requirements of Article 4.6.1. Under no circumstances shall the Contractor have a separately contracted dispatch or answering service, or voice mail service. Contractor employed individuals shall dispatch personnel and perform all EMCMS entry requirements in the Dispatch Center. It will not be acceptable for the State to have to make more than one call to notify the Contractor and obtain response to maintenance or incident needs.

The dispatch center shall be equipped with EMCMS equipment to document, on an on-time basis, each call received, the personnel dispatched for response, time of arrival, action taken in response to the call, follow-up work, if necessary, etc. Refer also to Ticket requirements in Article 6.8.4.

4.7 CONTRACT PERSONNEL

4.7.1 GENERAL RESPONSIBILITIES

The Contractor shall, at all times, provide a force of qualified personnel, as approved by the Engineer, sufficient in number to simultaneously perform the routine maintenance work, non-routine work and any specialized work operations required and described herein, including emergency operations at all times of the day and night.

Except as otherwise restricted, the workforce employed on this contract need not be exclusive to this contract. However, it is the intent of this contract that Department of Transportation work shall take precedence over other work performed by the Contractor.

The Engineer may grant the Contractor authorization to postpone IDOT work to address emergency situations of others. but the shortage of workforce personnel, including subcontractor personnel, shall otherwise be insufficient grounds for the Contractor's failure to perform routine or other non-routine work within the prescribed time constraints.

The Contractor shall remain responsible for any and all union agreements applicable to his/her workforce on the Contract. Union jurisdictions and other union contract requirements shall not become grounds for failure to perform the contract work.

In order for the Contract to function effectively, specific personnel functions are required to provide quality maintenance service to the public. Required expertise must be available to the performance of the contract at all times.

The Contractor shall provide individual photo card identification for all personnel working on the Advanced Systems Maintenance Contract.

4.7.2 ORGANIZATIONAL DOCUMENTATION

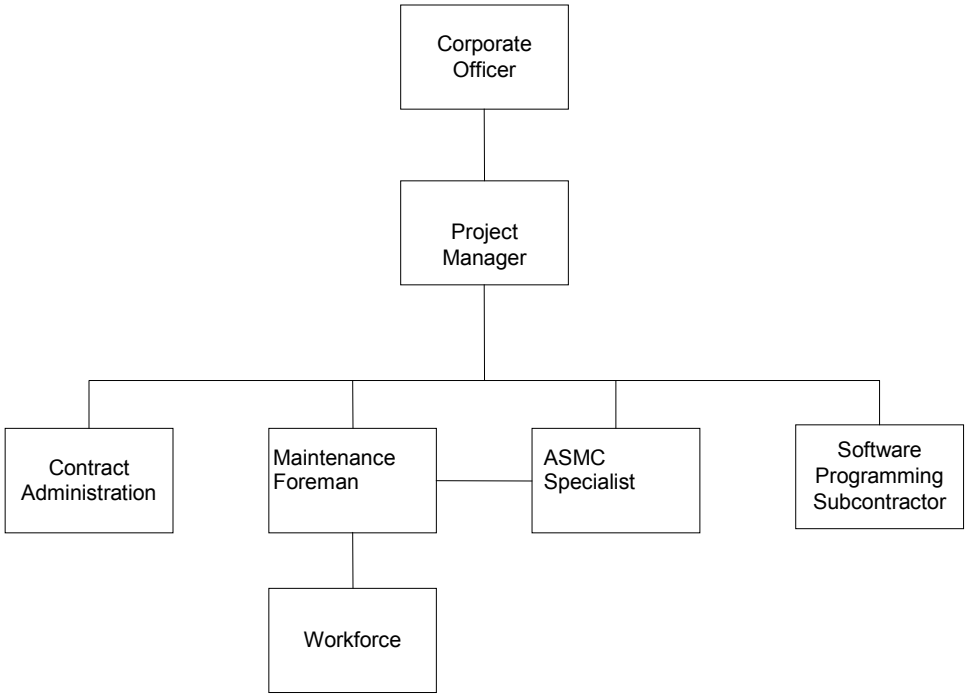
The Contractor shall produce an organization chart to document the chain of command and to demonstrate compliance with the requirements defined by the contract, including reporting relationships of field personnel.

At the Pre-Construction meeting the Contractor shall submit, for review by the Engineer, the organization chart, naming the Project Manager, Specialist, Maintenance Foreman and all electricians. Both emergency and non-emergency phone numbers, resumes and photo identification shall be supplied, sufficient to demonstrate compliance with contract requirements.

The Engineer retains the right to reject the Contractor's structure for management of the contract if the specific requirements defined herein are not addressed or if the proposed structure or staffing is such that the effective execution of contract performance is compromised. The Engineer may also reject the assignment of specific personnel to certain functions if the Contractor fails to demonstrate the qualifications matching personnel to defined responsibilities.

The submittal shall clearly define areas of responsibility and, in the case of supervisory personnel, the level of authority vested in each position. The Contractor may propose adjustments in the assignment of responsibilities as outlined herein, but staffing levels and overall accountabilities shall remain intact.

A typical Contractor's organizational structure is illustrated below:



4.7.3 CORPORATE OFFICER

The name and title of the ASMC Project Manager's direct supervisor shall be provided. If at any time the Engineer determines that a Project Manager has insufficient authority and flexibility to effectively manage the work under this Contract, the Engineer retains the right to demand a Corporate Officer be in charge of the Contract, with the appropriate attendance at Pay Meetings, status meetings, etc.

4.7.4 ASMC PROJECT MANAGER

The Contractor shall appoint one person a ASMC Project Manager who shall have full daily responsibility for all maintenance and modification work of the ASMC Project under this contract.

This individual shall have a minimum of five (5) years of management experience in electrical construction and maintenance, and have an acceptable knowledge of the operations of the systems covered by this Contract, and the integration of multi-technology subsystems. The Project Manager shall have the full authority to speak definitively for the Corporate Officer, relative to this Contract. This individual must meet the approval of the Engineer.

The ASMC Project Manager shall review all Tickets daily, prior to the sending of the Ticket Summary to Department personnel. This individual shall be responsible for the scheduling of all ASMC work, and the submittal, via email, of the daily agenda. Refer to Article 6.0 for Ticket and Daily Agenda requirements.

4.7.5 ASMC SPECIALIST/FOREMAN

The Contractor shall appoint an ASMC Specialist who shall have a minimum of five (5) years experience in basic electronics and electronic components, such as relays, switches, etc. This individual shall be certified to trouble-shoot Allen Bradley programmable logic controllers, PLC 5, and RS Logics 5000 controllers. A minimum two (2) years work experience with CCTV systems and fiber optic transceivers is also required. Electrical construction and maintenance experience would also be desirable. This individual must meet the approval of the Engineer. This individual may also serve as the ASMC Project Manager, with Engineer approval.

4.7.6 ASMC MAINTENANCE FOREMAN

The Contractor shall appoint an ASMC Maintenance Foreman who shall have a minimum of ten (10) years work experience in electrical construction and maintenance, and a minimum of five (5) years supervisory experience. This individual must meet the approval of the Engineer. This individual may also serve as the ASMC Project Manager, with Engineer approval.

The Maintenance Foreman shall supervise the Contractor employed core of electricians, and any maintenance or material sub-contractors responsible for maintenance and modifications on the ASMC systems.

4.7.7 GENERAL WORKFORCE

The Contractor shall employ a sufficient of trained personnel to perform all routine and non-routine maintenance and construction work concurrently, including inspections, equipment malfunction trouble-shooting, follow-up repairs, testing, and modification/replacement work. Skilled personnel shall be available 24/7 for immediate corrective response.

The Contractor's workforce shall possess the skills and knowledge necessary to perform all work in the proper manner. The workforce shall include personnel having certain special expertise, including, but not limited to the following:

- Materials Management
- General Electrical Power
- Building Wiring (Indoor Electrician)
- Motor Controls and Control Systems
- Various Types of Mechanical Work, particularly related to the gates and barriers
- Low Voltage Power Distribution Systems
- Roadway Electrical (Outdoor Lineman)
- Telemetry/Telecommunications
- Fiber Optic Cable Installation and Repairs
- Hardware/Software Trouble-Shooting
- Changeable Message Sign Technology
- PLC Repairs, Maintenance and Operation (Allen Bradley PLC systems)
- Ladder logic circuit troubleshooting
- Programmable logic controllers
- Communication equipment
- Office Administration
- Microwave Radio
- CCTV Systems

4.7.8 ASMC ADMINISTRATIVE SUPERVISOR

The Contractor shall appoint an ASMC Administrative Supervisor, who shall oversee all administrative functions of the Contract, including the monthly routine maintenance work documentation book, EMCMS work quotes and invoices, MCHD repair logs and statements, and timely payment documentation for specialty vendors. This individual should have a minimum of five (5) years experience with Windows 98 or better, and Excel spreadsheet software. This individual may also function as the Dispatch Center Supervisor.

4.7.9 ASMC DISPATCH PERSONNEL

The Contractor shall provide trained, courteous dispatchers, with the ability to speak clearly and distinctly, 24-hours/seven days per week, manning the Dispatch Center. The dispatch personnel shall be trained on the EMCMS and shall be made familiar with the ASMC locations. Prior to April 1, 2006, (or at the applicable hire date for the duration of the ASMC), the Contractor, with the Department's assistance, shall conduct a field tour of ASMC equipment for dispatch personnel. Training shall include watching a gate transition from the field observation area and a tour of IDOT Com Center.

Dispatch personnel respond to calls from Contractor personnel, Department and Com Center personnel, and various police and municipal agencies. Duties, other than normal dispatching, include real-time ticket entry, morning distribution of ticket summary reports, documentation of MCHD repairs, creation of MCHD statements, 3rd party damage reports, and other work as assigned. Since the success of ASMC operations hinges on the dispatcher performance, the Engineer reserves the right to periodically review the dispatcher performance for approval.

4.8 VEHICLE REQUIREMENTS

4.8.1 GENERAL REQUIREMENTS

The Contractor shall provide at all times sufficient vehicles and construction equipment to perform the routine and non-routine work and specialized operations required and described herein. The Contractor is expected to be familiar with the extent of systems to be maintained under this contract and the equipment necessary to provide the specified work response. Failure to have adequate equipment to perform the work shall not be sufficient grounds for the delay of routine or other authorized work.

The Contractor's equipment shall be in good working condition suitable for providing timely response on systems' maintenance. All vehicles used by the Contractor shall conform to all applicable laws and the Department safety Code and shall carry such lights and safety appurtenances as may be prescribed by the Department.

4.8.2 CONTRACTOR VEHICLES

The Contractor shall either own or lease sufficient vehicles to service the ASMC systems within the specified response times. The fleet vehicles shall have no more than 60,000 certified odometer miles at the beginning of the Contract, April 1, 2006. If this Contract is renewed for a second year, the fleet vehicles shall have no more than 110,000 certified odometer miles as of April 1, 2007. Each person assigned to response activities shall have an assigned vehicle so that the response is not impeded due to lack of vehicle access. The ASMC Specialist and ASMC Maintenance Foreman may be assigned SUV type vehicles or other suitable means of transportation, with no more than 60,000 miles at the beginning of the Contract, April 1, 2006.

As a minimum, the Contractor shall have in his possession, three (3) trucks with permanent mounted lifts of 30 to 70 feet, for the monthly preventive maintenance programs to service pole mounted cameras and rotating drum signs and REVLAC barriers.

4.8.3 EQUIPMENT VERIFICATION

Evidence of vehicle ownership or lease shall be provided to the Engineer at the Pre-Construction Meeting. Prior to the start of the contract period, the Contractor shall have all vehicles and equipment staged and available for inspection by the Engineer. The Contractor shall provide not less than five (5) calendar days advance notice to the Engineer of the desired inspection date.

4.8.4 IDENTIFICATION

All Contractor and Sub-Contractor service vehicles and equipment, including those items listed herein, shall be clearly identified with the Contractor's name, location, and telephone number. Each category of identification; name, location, and telephone number, shall have a decal, a minimum of 3 inches in height, readily visible on the exterior sides and rear of each vehicle. Removable magnetic signs or similar non-permanent identification is not permitted at any time.

4.8.5 ACCESSORIES

ASMC Vehicles for use on the highway such as pickup trucks, aerial trucks, truck cranes and special trucks shall be equipped with as minimum roof-mounted amber flashing warning lights. Automobiles for similar use shall be equipped with roof-mounted or interior amber warning flashers. Note that red flashers are not permitted under any circumstances.

4.8.6 SUBCONTRACTOR VEHICLES

Equipment utilized by subcontractors employed in day-to-day operations of this contract, either routine work or non-routine work, shall conform to the requirements noted herein for the general contractor and shall be available for inspection, complete with specified certifications, upon request by the Engineer.

4.9 VEHICLE AND TEST EQUIPMENT

4.9.1 VEHICLE EQUIPMENT

The Contractor shall own and maintain equipment for use on the ASMC systems by Contractor’s work crews and for the Engineer's use in inspecting the Contractor’s work. As a minimum each truck shall be equipped with a multi-meter, assorted tools including a socket set, SAE and metric, wire strippers, weather-proof tie wraps, and various fluids for cleaning and greasing.

4.9.2 SPECIAL TEST EQUIPMENT

The ASMC Specialist shall have use of a volt meter, fiber optic light meter and light source, (OTDR optional), digital micro-wave frequency counter, power meter and power head for 6 and 11 GHz and coaxial cable tester, Ideal Model #62-204 or equal. The Contractor shall provide the above equipment to IDOT when requested by the Engineer.

4.9.3 MAINTENANCE OF EQUIPMENT

The Contractor is expected to maintain all test equipment, in accordance with the manufacturer's specifications at all times, including certified calibration by a responsible test lab on not less than an annual basis. The equipment shall have the test lab’s most recent calibration ticket attached.

4.10 TRAFFIC CONTROL AND SAFETY PROGRAMS

4.10.1 TRAFFIC CONTROL AND SAFETY

The traffic control shall be in accordance with the applicable sections of the Standard Specifications, the Supplemental Specification, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plan, and the IDOT Region 1 Traffic Control Plan for the Electrical Maintenance Contract (EMC). The Contractor shall give special attention to Articles 107 and section 700 of the Standard Specifications.

The governing factor in the execution and staging of work is to provide the motoring public with the safest possible travel conditions on the expressway through the work zone. The Contractor shall arrange his operations to keep the closing of lanes and/or ramps to a minimum.

4.10.2 KEEPING THE EXPRESSWAY OPEN TO TRAFFIC

Whenever work is in progress on or adjacent to an expressway, the Contractor shall provide the necessary traffic control devices to warn the public and to delineate the work zone as required in these Special Provisions, the Standard Specifications, the State Standards and the Region Freeway details. All Contractor's personnel shall be limited to these barricaded work zones and shall not cross the expressway.

The Contractor shall request and gain approval from the Illinois Department of Transportation's Expressway Traffic Operations Engineer (847-705-4155) twenty-four (24) hours in advance of all daily lane, partial ramp and shoulder closures and seventy-two (72) hours in advance of all permanent and weekend closures on all Freeways and/or Expressways in Region One.

Shoulder closures will not be permitted on weekdays (Monday through Friday) from 5:00 a.m. to 9:00 a.m. and from 3:00 p.m. to 7:00 p.m. Lane closures hours, if needed, will be determined by the expressway Traffic Operations Engineer, and will be made a part of the Traffic Control Plan.

All daily lane closures shall be removed during adverse weather conditions such as rain, snow, and/or fog and as determined by the Engineer.

Additional lane closure hour restrictions may have to be imposed to facilitate the flow of traffic to and from major sporting events and/or other events.

Private vehicles shall not be parked in the work zone. Contractor's equipment and/or vehicles shall not be parked on the shoulders or in the median during non-working hours. The parking of equipment and/or vehicles on State right-of-way will only be permitted at the locations approved by the Engineer.

4.10.3 PAYMENT FOR TRAFFIC CONTROL

Traffic Control and protection will not be paid separately but shall be considered as incidental to the contract, and the cost for all work shall be included as part of the unit bid prices for the routine maintenance pay items. These contract unit prices for routine maintenance shall be payment in full for all labor, materials, transportation, handling and incidentals necessary to furnish, install, maintain, replace, relocate and remove all traffic control devices indicated in these specifications.

The Engineer may require additional traffic control and protection for certain authorized non-routine work requiring major lane or ramp closures for equipment modifications/construction. (Shoulder closures are excluded.) Additional payment will be made for this work in accordance with the applicable unit bid prices of the non-routine pay items included in this Contract.

4.10.4 DEFICIENCIES AND LIQUIDATED DAMAGES

Upon notification from the Engineer or Department Expressway/Traffic Operations personnel the Contractor shall dispatch qualified personnel immediately to make needed corrections of deficiencies that constitute an immediate safety hazard and/or the blocking of traffic lanes or ramps.

Should the Contractor fail to completely open and keep open all the traffic lanes to traffic or fails to restore the required traffic control and protection, in accordance with the limitations specified under the Special Provisions for "Keeping the Expressway Open to Traffic", the Engineer will impose daily monetary liquidated damages for each 15 minute interval (or portion thereof) that the deficiency exists. This time period will begin with the time of notification to the Contractor and end with the Resident Engineer's acceptance of the corrections.

$1000.00	Improper Use of Traffic Control (per instance)
$2000.00*	Blocking Lane or Ramp to Traffic
$5000.00*	Blocking Two Lanes to Traffic

*per each and every 15 minute interval or portion thereof that a lane is blocked outside the allowable time limitations

4.11 SAFETY PROGRAM

4.11.1 GENERAL REQUIREMENTS

The Contractor shall establish a formal Safety Program to assure overall safety of ASMC personnel, operations and the electrical systems maintained as they affect the safety of the motoring public and the public at large. The Contractor shall furnish an overall description of this program at the Pre-Construction Meeting.

As part of the Safety Program, the Contractor shall initiate a procedure that states: "When a circuit is de-energized, the Contractor shall meter the downstream circuits with an instrument to assure that they are de-energized and safe for working conditions." The Contractor shall be fully responsible for compliance with all OSHA requirements. Particular attention is directed to the lock-out/tag-out requirements to assure that systems undergoing maintenance work cannot be inadvertently energized, causing harm to maintenance person.

The Contractor shall assure that all personnel be trained in, and have knowledge of, approved equipment grounding methods for all work under this contract. The Contractor shall be fully responsible for compliance with all NEC requirements.

The Contractor shall keep all systems free of hazards to the work force and the public, all in conformance with Article 107 of the Standard Specifications. Special care shall be taken to assure that electrical systems are not left in an exposed or otherwise hazardous condition. All electrical boxes, cabinets, pole handholes, etc., which contain wiring, either energized or non-energized, shall be closed or shall have their covers in place and shall be locked when configured for locking, except when work is being done at the location at the moment. If the worksite is left, enclosures shall be closed and no potentially hazardous electrical situation shall be left unattended.

4.11.2 YEARLY SAFETY PRESENTATION

The Contractor shall hold a yearly safety presentation for all personnel and sub-contractor personnel working on the ASMC systems. The outline shall be approved by the Engineer.

5.0 CONTROL OF MATERIALS

5.1 MATERIAL REQUIREMENTS

5.1.1 MATERIAL SUBMITTALS FOR DEPARTMENT APPROVAL

The Contractor shall submit a listing of all manufacturers to be used by the ASMC at the Pre-Construction Meeting. In general, due to the highly specialized nature of this system, equipment used on this contract must be manufactured by the original equipment manufacturer, unless written approval is given by the Engineer. Within 60 days after contract execution, the Contractor shall submit, for approval, complete, approvable manufacturer's product data (for standard products and components) and detailed shop drawings (for fabricated equipment) to the Bureau of Electrical Operations. Submittals need not include all project equipment and materials in one submittal; however, the submittals for the equipment and materials for each individual pay item shall be complete in every respect. The Engineer may waive the requirements for shop drawings for certain original-manufactured fabricated equipment as long as original shop drawings on file remain valid for the equipment. It is the Contractor’s responsibility to coordinate accordingly.

The Contractor may request, in writing, permission to make a partial submittal or to defer a particular submittal. The Engineer will evaluate the circumstances of the request and may agree to review such a partial submittal; however, no additional compensation or extension of time will be allowed for extra costs or delays incurred due to partial or late submittals.

5.1.2 FORMS

All submittals shall be accompanied by the multi-part IDOT Submittal Record and Transmittal form. The form shall be signed by the Contractor and any subcontractor as applicable. The Department will furnish forms upon request. Submittals made without this form, or with an incomplete form, will be returned without review.

Prior to submittal to IDOT, the Contractor shall review the submittal material and shall affix a stamp of approval, with comments as applicable, signed by a responsible representative, to each appropriate submittal item. In the case of subcontractors' submittals, both the subcontractor and the general Contractor shall review and stamp the submittal. Submittals which are not Approved or Approved-As-Noted by the Contractor shall not be submitted to the Engineer.

5.1.3 CERTIFICATION REQUIREMENTS

Where certifications are specified, the information submitted for approval shall incorporate certification information. When a certification is available prior to equipment manufacture, the certification shall be included with the submittal information. When a certification is available only after equipment manufacture, the submittal shall include a statement of intent to furnish the certification after equipment approval and manufacture. Certifications involving inspections and/or tests of equipment shall be complete with all test data, dates and times.

5.1.4 SUBMITTAL REQUIREMENTS

Submittal information shall be complete and in sufficient detail to demonstrate compliance with all requirements of the contract documents. The receipt of submittal information from the Contractor will be construed as the Contractor's assurance that he has reviewed the submittal information and attests to the submittal's accuracy and conformance to the requirements of the contract documents. Submittals which include multiple pay items shall have all submittal material for each item or group of items covered by a particular specification grouped together and identified as to applicable pay item. Separate submittals shall be submitted for items covered by separate specifications so as to facilitate review and approval.

Unless otherwise indicated, manufacturer's guarantees, when required, shall be included with the submittal information. Incompleteness, inaccuracy or lack of coordination shall be grounds for rejection.

The Contractor shall clearly understand that no equipment or material shall be installed prior to approval by the Engineer and that any equipment or material installed prior to approval by the Engineer is subject to removal from the right-of-way solely at the Contractor's expense. Failure to have approvable submittals complete within the specified time shall be unsatisfactory performance and shall be grounds for withholding of remittance for monthly routine maintenance.

5.1.5 SAMPLES

The Engineer may request from the Contractor a sample of a specific item of a submittal for review and evaluation. The sample shall remain property of the Contractor and shall be returned after the review and evaluation with comments as applicable.

5.1.6 NOTIFICATION OF CHANGE OF SUPPLIER

If the Contractor changes the supplier of any materials for the contract, a new submittal for that item must be made for review and approval by the Engineer. The submittal shall be made as described elsewhere herein. Under no circumstances shall unapproved materials be utilized.

5.1.7 EXCEPTIONS, DEVIATIONS, AND SUBSTITUTIONS

In general, exceptions to and deviations from specified requirements, including substitutions, will not be allowed. The Contractor (including all supervising personnel) is expected to familiarize himself with all requirements with respect to proper materials, methods and procedures and failure to do so will not be justifiable grounds for lack of compliance with the contract requirements nor will such failure relieve the Contractor for the consequences arising from unsatisfactory service, including applicable liquidated damages. The Engineer retains the right to require the Contractor to remove un-authorized work at his/her own expense and to perform the work in conformance with contract requirements.

5.1.8 NEW MATERIALS INSPECTION REQUIREMENTS

The Contractor shall comply with the applicable requirements of Section 106 and 1000 of the Standard Specifications for Road and Bridge Construction. When underground materials are furnished, the Contractor shall notify the Department's Bureau of Materials personnel to provide proper inspection for the approval of the materials, prior to installation.

5.1.9 ADDITIONS TO ARTICLE 801.08(A) OF THE STANDARD SPECIFICATIONS

Engineer's Stamp

After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Information Only'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, or layout drawings by the Department's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.

Exceptions, Deviations and Substitutions

In general, exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.

Resubmittals

All submitted items reviewed and marked 'APPROVED AS NOTED', or 'DISAPPROVED' are to be resubmitted in their entirety to verify contract compliance unless otherwise indicated within the submittal comments.

5.2 STATE STOCK INVENTORY

5.2.1 GENERAL REQUIREMENTS

To facilitate timely repairs, the Contractor is responsible, under routine maintenance, for the storage and inventory reporting of the Department's stock of parts, materials, and equipment which is to be used exclusively in the maintenance of the Department's installations and systems. This will be hereafter referred to as State Stock Inventory. The Contractor shall use State Stock (new or used parts) only when directed and approved by the Engineer. Note the State Stock inventory is not sufficient to supply the Contractor with all materials necessary to carry out Contract provisions.

If the Engineer allows the Contractor to use State Stock parts and equipment which should be furnished by the Contractor through routine maintenance, the Contractor shall then replace the items used, and the costs and freight shall be incidental to routine maintenance. The Contractor shall provide invoices for all materials purchased to replace items taken from the State Stock inventory and the invoice shall show the entire cost of each item including separate freight charges.

As specified herein Article 6.0, certain parts and equipment are not the responsibility of the Contractor under routine maintenance. The Department shall furnish specific parts or equipment in State Stock inventory for Contractor use, however, the Contractor may not use any State Stock inventory for any work outside the scope of this contract.

The Contractor shall comply with the instructions given by the Engineer relating to the care, storage, and marking of State Stock inventory for identification purposes. Also review Article 4.6.2 Facilities requirements herein,. All State Stock inventory is to be kept in defined, separated areas from the Contractors owned stock of materials, parts, and equipment. The Engineer may require inside, locked, protected storage of specified equipment. The Engineer shall be allowed access to inspect State Stock inventory at the Contractor's designated sites or the official State Stock warehouse at any time.

The Contractor shall provide insurance coverage for all State Stock inventory in his possession, for losses due to fire, theft or vandalism.

At the Pre-Bid Meeting, the Department shall furnish all bidders with a list of equipment currently in State Stock.

5.2.2 STATE STOCK WAREHOUSE

To facilitate security, inventory control, physical separation of state materials from contractor materials, and to allow the potential for reduced costs of material transfer when there is a change of Contractor, certain select state materials may be kept at a commercial bonded warehouse provided for under a separate contract. Only materials in good working order and/or condition are placed in the State Stock warehouse; Combined Warehouse Co., 5000 South Central, Chicago, Illinois.

During the duration of this contract the location of the storage facility may change. If it is moved, the new location will be within the boundaries of Devon Avenue on the north, 87th Street on the south, Lake Shore Drive on the east, and the Tri-State Tollway on the west. All costs associated with a storage facility location change will not be the responsibility of this contract. The Contractor shall coordinate State Stock transfers with the current state electrical maintenance contractor representative, as directed by the Engineer.

5.2.3 DISBURSEMENT FROM STATE STOCK WAREHOUSE

If the Contractor wishes to use State Stock from the warehouse facility, he shall complete and fax the 'Warehouse State Stock Disbursement Request' to the Engineer, noting whether the equipment to be removed is for a routine or non-routine work project or motorist caused damages. Upon receiving an approved Warehouse State Stock Disbursement Request from the Engineer, the Contractor may then withdraw the equipment or materials from the state's electrical maintenance contractor. The Contractor shall not withdraw any State stock, until approved in writing by the Engineer. The Contractor is responsible for timely, safe transportation and handling of stock received from the State Stock warehouse. Copies of all warehouse disbursement requests for the month shall be included in the monthly documentation book. A copy of the Warehouse State Stock Disbursement Request will be available at the Pre-Construction meeting.

5.2.4 DISBURSEMENT FROM CONTRACTOR OWNED OR LEASED FACILITIES

The Contractor shall keep an accurate accounting of all his disbursements, on a monthly basis, of State Stock used from Contractor owned facilities. Copies of all Contractor Disbursement Records shall be submitted in the monthly documentation book. A copy of the Contractor Disbursement Record shall be available at the Pre-Construction Meeting.

5.2.5 RECEIPT REPORTING

All parts, materials and equipment furnished to the Contractor for State Stock shall be transported by the Contractor at his expense, to the State Stock warehouse, shops, or sites, where such materials and equipment are to be stored, repaired, or used. The Engineer may also require the Contractor to deliver State Stock materials to State owned property in Region 1, rather than to his own storage sites, or to transport items removed from a location to other state owned property within Region 1, and all such transport shall be made in a timely manner at no additional cost to the contract. Removed equipment deemed salvageable by the Engineer shall be stored in the Contractor's warehouse or yard and designated as State Stock, property of the State of Illinois, or shall be sent to the State Stock Warehouse, if approved by the Engineer. These parts, materials, and other equipment shall be noted on a Contractor ASMC Receipt when placed in State Stock storage. The Contractor shall keep an accounting of all Contractor Receipts, on a monthly basis, and they shall be submitted in the monthly documentation book. A copy of the Contractor State Stock Receipt shall be available at the Pre-Construction Meeting.

5.2.6 MATERIAL PURCHASES BY THE CONTRACTOR FOR STATE STOCK

The Engineer may direct the Contractor to procure materials for the Department State Stock inventory. Where the Contractor performs the service to obtain price quotation and assure the contract compliance of the materials, the Contractor will be eligible for the 15% material mark-up as described in Article 109.04 of the Standard Specifications. Where the Contractor is not required to obtain price quotations, or assure specification compliance, material procured for State Stock shall be treated as described in Article 8.0 herein, or Article 109.05 of the Standard Specifications with the Contractor allowed an administrative mark-up only.

5.2.7 INVENTORY DOCUMENTATION AND REPORTING

The Contractor shall maintain an Excel spreadsheet, a perpetual inventory of parts and equipment used in the maintenance of the system furnished him by the Department. This report shall be submitted in the monthly work documentation book. The report format will be given to all prospective bidders at the Pre-Bid Meeting, however, it will summarize material reservations, receipts, and disbursements and shall include information as to size, type, manufacturer, location (including all materials at the warehouse facility, shop facilities, etc.) and state of repair of all parts and equipment, as well as a record of where the prior months' stock was utilized, by staging area and/or Contract number. This report shall include copies of routine and non-routine work receipts and disbursements.

Each monthly inventory report prepared by the Contractor shall be signed by the person directly accountable for the accuracy of same and Project Manager with a statement attesting to the accuracy of the report and proper use of the inventory and submitted to the Engineer. The Contractor is required to retain all inventory records for a period of 5-years following the completion of the Contract. The Contractor’s ASMC inventory shall be reconciled with the warehouse storage report by a Department inspector. If any discrepancies are found the Contractor shall immediately research the problem to correct the accounting error.

5.2.8 DISPOSAL OF SCRAP

The Engineer shall make the sole determination as to whether material (equipment) is re-usable. Except as otherwise indicated herein, all removed items shall remain property of the state. The Contractor may not dispose (scrap) any materials without receiving prior approval from the Engineer in writing. For approval of items to be scrapped, the Contractor shall complete a State Scrap Transfer form and send it to the Engineer for approval. The state scrap transfer log must state the item name/model/type, condition, and location where item was located. If after inspection the materials are determined to be scrap, the Engineer shall sign the state scrap transfer log, and convey ownership of the scrap materials to the Contractor. Only upon receiving the transfer of ownership, the Contractor shall be responsible, at his expense, for the proper, legal disposal of all scrap items; materials, parts, equipment, etc. The estimated salvage value of scrap materials shall be reflected in the bid unit prices for routine maintenance items.

The Contractor shall keep an accounting of all State Scrap Transfers, on a monthly basis, and shall submit them in the monthly work documentation book. A copy of the State Scrap Transfer form shall be available at the Pre-Construction Meeting.

All lamps removed as part of re-lamping operations, outage repairs or other authorized work shall become property of the Contractor and shall be disposed of in full compliance with Environmental Protection Agency (EPA) regulations. The EPA Rule 40 CFR, part 273, finalized in May 1995 established a guideline for the recycling of lamps and the mercury from scrapped lamps. Fluorescent, high-intensity, low pressure sodium, and other lamps bearing mercury may be classified as a potential hazardous waste. The Contractor shall recycle removed lamps to the maximum extent possible and shall submit to the Engineer, for approval, the name and background of a qualified lamp recycling specialty service which shall be used for lamp recycling under this Contract. Over the course of the Contract, the Contractor shall provide documentation of all lamp recycling activity to the satisfaction of the Engineer. The Contractor shall provide the names of qualified facilities certified to dispose of used lamps at the Pre-Construction meeting.

5.2.9 END OF YEAR STATE STOCK INSPECTION

At the end of the one-year term for response coverage, a physical accounting of all ASMC State Stock material shall be made via inspection with a Contractor's representative and the Engineer, with sign off of final quantities by both parties. The Contractor shall be responsible for all materials in his charge and shall provide replacement of any missing or damaged State Stock items. Also review State Stock transition in Article 4.4.2.

6.0 ROUTINE MAINTENANCE WORK

6.1 SCOPE OF WORK

The routine maintenance pay item descriptions and locations are found in Article 3.0 and the work requirements are discussed herein Article 6.0. This work shall be paid at the contract unit price per month for:

ROUTINE MAINTENANCE OF REVLAC SYSTEM (A-1)
ROUTINE MAINTENANCE OF ROOSEVELT RAMP ACCESS CONTROL AND RAMP GATES(A-2)
ROUTINE MAINTENANCE OF CCTV SYSTEMS (A-3)
ROUTINE MAINTENANCE OF SONET AND AVL SYSTEMS (A-4)

which price shall be payment in full for the work as specified herein and as directed by the Engineer.

6.1.1 GENERAL REQUIREMENTS

The Contractor shall keep the ASMC systems operational at all times, both in manual or automatic mode. If necessary to keep the system operational, the Contractor shall provide personnel, equipment and materials to assist the normally utilized IDOT personnel in the operation of the system and such efforts shall extend to manually cranking signs into position, manually cranking swing gates, manning a control building if bypassing the PLC control, or if other wise necessary, manually covering prescribed malfunctioning signs, placing barrels, barricades for failed closure devices, using contractor owned vehicles in place of the barrier net and all such similar work as needed to produce essentially normal functionality of the ASMC systems to the Department and the motoring public.

The Contractor is obligated to document to the Engineer that the various items of equipment at all locations perform properly, that maintenance operations for the respective installations and systems prescribed by this contract are not to be interrupted, that maintenance completion dates as specified or agreed are met, and that repair work as performed on system equipment meets all codes and IDOT requirements.

All equipment shall be maintained in accordance with manufacturer specifications and recommendations. Routine maintenance equipment service schedules and work shall be executed in accordance with equipment operations and maintenance (O & M) manuals unless otherwise stated herein.

The Contractor is responsible to perform maintenance under this Contract which prevents operational problems, minimizes trouble calls, safeguards electrical safety and promotes operational safety and which prolongs the operations life of installed systems. Some of these maintenance activities will be initiated by the Engineer, some will be jointly developed between the Contractor and the Engineer, and some are expected routine maintenance obligations of the Contractor.

Failure to perform routine maintenance functions, support activities or required documentation shall all be viewed as unsatisfactory service and shall be grounds for assessing liquidated damages and withholding of the monthly routine maintenance payment as prescribed herein or other recourse open to the Department.

6.1.2 SPECIALTY SERVICES

Software Maintenance Support

For the duration of this Contract, the Contractor shall secure a commitment for software maintenance support specialty services with the original software developer, Engineered Software Products of Lawrenceville, GA (or an approved alternate) for the ASMC systems for emergency trouble shooting expertise and for the modification of the existing system as may be necessary.

The principal for Engineered Software Products is Mr. D. Grib Murphy, 770-682-8259. A letter of intent to provide these services is required from engineered Software Products (or an approved alternate) to comply with Article 2.7, Item 10, of the Bidder's Special Qualifications. These services shall be incidental to routine maintenance.

The following chart indicates software which shall be maintained and licenses renewed under this Contract , as incidental to routine maintenance.

Rockwell Part Number	Serial Number	Software Description	Version	Expiration Date	IDOT Use
9357DNETL3D	1235020855	RSNetworx for DeviceNet	4.01.00	31-Mar-06	RACS
9357DNETL3D	1235020856	RSNetworx for DeviceNet	4.01.00	31-Mar-06	RACS
9357DNETL3D	1235020866	RSNetworx for DeviceNet	4.01.00	31-Mar-06	RACS
9357DNETL3D	1235020854	RSNetworx for DeviceNet	4.01.00	31-Mar-06	RACS
9357CNETL3D	1163019247	RSNetworx for ControlNet	4.01.00	31-Mar-06	RACS
9357CNETL3D	1163019248	RSNetworx for ControlNet	4.01.00	31-Mar-06	RACS
9357CNETL3D	1163019258	RSNetworx for ControlNet	4.01.00	31-Mar-06	RACS
9357CNETL3D	1163019246	RSNetworx for ControlNet	4.01.00	31-Mar-06	RACS
9324RLD300ENED	1203023898	ControlLogix & RSLOGIX 5000	11.11.00	31-Mar-06	RACS
9324RLD300ENED	1203023899	ControlLogix & RSLOGIX 5000	11.11.00	31-Mar-06	RACS
9324RLD300ENED	1203023897	ControlLogix & RSLOGIX 5000	11.11.00	31-Mar-06	RACS
9324RLD300ENED	1203023909	ControlLogix & RSLOGIX 5000	11.11.00	31-Mar-06	RACS
9324RLD300ENED	1203023859	ControlLogix & RSLOGIX 5000	11.11.00	31-Mar-06	RACS
9701VWSCWAENE	2524000143	RSView SE Client	2.10.00	31-Mar-06	RACS
9701VWSCWAENE	2524000142	RSView SE Client	2.10.00	31-Mar-06	RACS
9701VWSCWAENE	2524000106	RSView SE Client	2.10.00	31-Mar-06	RACS
9701VWSCWAENE	2524000107	RSView SE Client	2.10.00	31-Mar-06	RACS
9701VWSCWAENE	2524000108	RSView SE Client	2.10.00	31-Mar-06	RACS
9701VWSS100AENE	2527000100	RSView SE Server 100 Display	2.10.00	31-Mar-06	RACS
9701VWSS100AENE	2527000101	RSView SE Server 100 Display	2.10.00	31-Mar-06	RACS
9701VWSTENE	2529000103	RSView Studio for RSView Enterprise	2.10.00	31-Mar-06	RACS
9355WABGWENS	1006010204	RSLinx Gateway Software	2.40.01	31-Mar-06	RACS
9324RL5300ENE	1112063372	RSLogix 5	5.20.10	31-Mar-06	REVLAC
9324RL5300ENE	1112063372	RSLogix 5 upgrade Ver. 6.0	6	31-Mar-06	RACS
9357CNETL3	1163019246	RSNetWorx Update	4.11.00	31-Mar-06	RACS
9357CNETL3	1163019247	RSNetWorx Update	4.11.00	31-Mar-06	RACS
9357CNETL3	1163019248	RSNetWorx Update	4.11.00	31-Mar-06	RACS
9357CNETL3	1163019258	RSNetWorx Update	4.11.00	31-Mar-06	RACS
9701VWSCWAENE	2524000142	RSView SE Client 3.00.01	3.00.01	31-Mar-06	RACS
9701VWSCWAENE	2524000143	RSView SE Client	3.00.01	31-Mar-06	RACS
9701VWSS100AENE	2527000100	RSView SE Server 100 display	3.00.01	31-Mar-06	RACS
9701VWSS100AENE	2527000101	RSView SE Server 100 display	3.00.01	31-Mar-06	RACS
9701VWSTENE	2529000103	RSV Studio for RSV Enterprise	3.00.01	31-Mar-06	RACS
930125E3353	1476004195	RSView32 Runtime 5k			REVLAC(S)
9355WABENE	1008079409	RSLinx Professional	2.41.00-ENE		REVLAC(S)
930125E3353	1476004196	RSView32 Runtime 5k			REVLAC(C)
9355WABENE	1008079415	RSLinx Professional	2.41.00-ENE		REVLAC(C)
930125E3353	1476003669	RSView32 Runtime 5k			REVLAC(A)
9355WABENE	1008084954	RSLinx Professional	2.41.00-ENE		REVLAC(A)
930125E3353	1476004198	RSView32 Runtime 5k			REVLAC(D)
9355WABENE	1008079417	RSLinx Professional	2.41.00-ENE		REVLAC(D)
930125E3353	1476004197	RSView32 Runtime 5k			REVLAC(E)
9355WABENE	1008079416	RSLinx Professional	2.41.00-ENE		REVLAC(E)

Key: S = Region 1 Com Center in Schaumburg
A = REVLAC Control Building A
C = REVLAC Control Building C
D = REVLAC Control Building D
E = REVLAC Control Building E

Extended Warranty and Maintenance Support

The Contractor shall obtain the extended warranty and maintenance agreements for the duration of this Contract for the following equipment and software:

1. AB Rockwell Software support and updates for REVLAC and RACS systems. Contact Revere Electric or Englewood Electric Supply for annual support agreements for the above listed Rockwell software.
2. Maintenance Agreements for Uninterruptible Power Supplies PS at Hillside Hub, Nordic Tower, and at Buildings A, C, D and E with next business day field response.
3. Software Extended Support Maintenance Agreement for CISCO Equipment (SmartNET), for SONET and GigE switches at Com Center, Hillside, Bldg. E, ITS Office, and ISTHA Plaza 19, Plaza 35 and Headquarters with field response at next business day level. Contact SBC, Attn: Ken Barnum, 217 527 2037, or any other Cisco authorized service vendor.
4. Maintenance Agreement for Storm Warning and Records Management System (SWARMS) with field response during business hours and 24/7 software support. Contact Time Business Systems, John Hatchko, 630 827-1800, X-129 or other Time Business Systems authorized vendor.
5. Two year extended warranty for the Department's microwave equipment, Harris MegaStar, at Hillside, Nordic, D1 HQ, Building E, and ISP District Chicago. If the Contract is not renewed for the second term, the second year extended warranty will be credited under the March '07 routine maintenance payment. Contact Harris Corp, Microwave Communications Division, 637 Davis Drive, Morrisville, NC, 27650, Attn.: John Kingsley, 630 762 3730, jkings01@harris.com or other Harris authorized vendor.

6.1.3 ENGINEER'S AUTHORITY

The Engineer appointed for this Contract will be responsible for the control of the work in conformance with Section 105 of the Standard Specifications for Road and Bridge Construction, and contract Special Provisions. The Engineer may make frequent investigations of Contractor work and periodic inspections of the respective systems and installations to determine if all maintenance operations are being performed satisfactorily and in the manner specified in the Contract.

6.1.4 PRIORITY OF WORK

For the Contractor's forces employed on this contract, the work on this contract shall take precedence over work performed for others, including other government agencies except as expressly permitted by the Engineer or specified herein. This requirement applies to work activities on a daily basis. The Engineer reserves the authority to re-direct the Contractor's work priorities in response to emergency situations, potential hazards, contract coordination and incomplete or deficient work and the Contractor will be allowed no additional compensation for priorities so redirected.

6.1.5 SYSTEMS SITE MAINTENANCE

The Contractor shall provide general site maintenance at ASMC locations, including, grass cutting, weed control, debris disposal, snow plowing and removal operations as required to provide safe access to buildings, and to maintain the sites in an aesthetically acceptable condition to the public. Grass cutting, weed control, tree/branch removal, and debris disposal work shall be performed in the fenced areas of Buildings A, B, C, D, E, the Hillside, Foster, Nordic and Schaumburg Tower Buildings, the Hillside RACS Ramp Building, along all sidewalks, paths, and driveways and around the outdoor electrical and communication equipment at these buildings. This maintenance shall be performed a minimum of twice per month in the months, April through October.

Maintenance to begin within 48 hours following a 1 inch snowfall:
The Contractor shall provide reasonable access to Buildings A, B, C, D, E, and the Hillside, Foster, Nordic and Schaumburg Tower Buildings, and the Hillside RACS Ramp Building, by shoveling and salting as necessary, all sidewalks and paths to entry doors.

Maintenance to begin within 48 hours following a 3 inch snowfall (or accumulation of 3 inches of snowfall:
The Contractor shall provide reasonable access to Buildings A, B, C, D, E, and the Hillside, Foster, Nordic and Schaumburg Tower Buildings, and the Hillside RACS Ramp Building, by shoveling and plowing as necessary, and salting, all sidewalks, paths, driveways and parking areas.

The Contractor shall submit a spreadsheet, noting the location, type of site maintenance, and date work was completed, in the monthly routine maintenance work documentation book.

6.1.6 EQUIPMENT AND/OR REPAIRS EXCLUDED FROM ROUTINE MAINTENANCE

The following items shall be furnished by the Department and are therefore excluded from routine maintenance. The Contractor shall, however, perform troubleshooting investigations, preventive maintenance such as cleaning, lubrication, adjustments, and inspections of the following named items under routine maintenance, and shall identify possible failures or equipment deterioration.

- Modification of Cattron Remote Control System
- Allen-Bradley PLC Component Procurement
- CCTV System Component Procurement
- Microwave Communications System Repair
- VAISALA Weather Station Repair
- Swing Gate Arms or Gate Arm Replacement
- Swing Gate Arm Proximity Switch
- Swing Gate Controller
- Swing Gate Drivetrain Assembly
- Swing Gate Arm Heater Replacement
- Swing Gate Arm Capstan and Mounting Bracket Assembly
- Expressway Ramp Gate Replacement
- LED Sign Replacement
- Restraining Barrier Energy Absorbing Tape Cartridge
- Restraining Barrier Crash Detector Assembly
- Restraining Barrier Dragnet Assembly
- Fence Repair
- Building Structural Repair
- Asphalt Patching/Repair

Non-Routine Pay Items or Budget Allowances have been provided for repairs and replacements of the above items. In addition, repairs to ASMC systems due to the following conditions shall not be considered a part of routine maintenance; however, the Contractor must promptly make necessary repairs and restore the systems:

- Lightning strikes and power surges
- Power Company outages

In the cases of lightning and power company events, the Contractor must provide reasonable evidence that the occurrence was caused by acts beyond the Contractor's control and not due to the Contractor's negligence or substandard maintenance.

The Contractor will be paid through a vendor letter per Article 109.05 of the Standard Specifications or will be required to furnish a quote for a non-routine agreed price payment.

6.1.7 CONTRACTOR FURNISHED PARTS/EQUIPMENT AND REPAIRS INCLUDED IN ROUTINE MAINTENANCE

Unless specified otherwise, repair of equipment not listed as non-routine pay items shall be incidental to routine maintenance. In addition, the following parts/equipment and labor necessary to install/removal are incidental to routine maintenance:

Shear pins and bushings, gate tips and reflective tapes
Decals, including those for gate numbering, cameras, poles, aux signs, and chevrons
Aluminum mounting plates for number/name decals for system equipment
Limit switches
Wire terminations
Circuit breakers less than 50A
Contactors less than 50A
Power Supplies
Fuses and switches
Indicator lights and lamps
Photo cells
Building lighting and lamps, inside and outside
Phone modems
Cleaning materials and solutions, power washing equipment
Removal/Installation of monitors, up to 17" in size
Labor for removal and replacement of defective equipment.
Miscellaneous items less than $500 each in value

6.2 RESPONSE MAINTENANCE DUTIES

6.2.1 GENERAL REQUIREMENTS

When equipment failures occur, damages disrupt the normal operation of the system, or when malfunctions or other conditions require contractor action to support on-time operation of the systems, a response activity is required.

The requirements that only authorized, contract-compliant work be billable under the contract shall not be construed to relieve the Contractor, in any way, from the performance of safe, timely and proper maintenance response activities, especially in emergency situations, as such performance shall be considered as a requirement under routine maintenance.

All damaged equipment, determined by the Contractor not to be re-usable, shall be removed from the state highway right-of-way within twenty-four (24) hours from the time of the notification of the incident.

Documentation of response times and all corrective actions is required via an EMCMS Contractor created Ticket. (Refer to Ticket documentation requirements in Article 6.8.4).

6.2.2 IMMEDIATE CORRECTIVE ACTION

When the following incidents occur, immediate corrective action is required by the Contractor, which is required 24-hours a day, seven days a week:

- Equipment identified as “critical” is damaged
- All motorist caused damage
- Halting malfunctions which suspend normal operations
- Intrusion alarms
- Power outages
- Live exposed voltage cables
- Changeable REVLAC drum signs
- Swing gates laying in roadway
- REVLAC process cameras
- Failures of REVLAC network (fiber, telephone, & microwave)
- Failure or damage to expressway ramp gates
- Events which pose a threat to safe, timely operations

When incidents occur which require immediate corrective action the Contractor’s dispatch center is notified and shall immediately dispatch Contractor personnel assigned to respond. There should be no excuse for any delay in this dispatching.

The dispatched personnel, supplied with proper repair equipment, shall arrive at the relevant system location within 60 minutes of notification of the incident, to make the system safe for traffic and/or to make the system operational. The defective equipment shall be permanently repaired as soon as possible, within 24 hours, unless approval is given by the Engineer.

If a failure to provide a response, a delayed response, or a delayed temporary repair results in the delayed traffic change of the reversibles, the Contractor shall be assessed liquidated damages as specified in Failure to Open Traffic Lanes to Traffic contained elsewhere herein.

6.2.3 NORMAL CORRECTIVE ACTION

The following incidents, and other events requiring response maintenance, which do not require Immediate Corrective Action, require Normal Corrective Action. The Contractor shall investigate these incidents within 24 hours of notification and correct the defective operation or equipment within 48 hours of the investigation, unless approval is given by the Engineer.

- Non-critical alarms (exception is motorist caused damage)
- Swing gate heater malfunctions
- Com Center console malfunctions
- CCTV and camera malfunctions
- GCM travel web page cameras
- Individual malfunctions of the REVLAC network (fiber, telephone & microwave)
- Cattrons
- AVL Equipment including the mobile units and modems

It is emphasized that the Com Center and the Department's personnel increasingly rely on the CCTV system for incident and traffic management and for real-time reporting of traffic conditions on the GCM website. Therefore, the Contractor must promptly respond and restore the system with in the time limits specified above, unless approved otherwise in writing by the Engineer. The Contractor shall prepare and maintain adequate level of spare parts to ensure restoration in the time limits set above. Lack of personnel or lack of equipment shall not be grounds for request for extensions.

For any failures of the AVL equipment, the Contractor shall promptly respond as described above, investigate and restore the failed equipment with spares from State stock.

6.2.4 TEMPORARY VS. PERMANENT REPAIRS

Whenever possible while still facilitating timely restoration of full system functionality, the Contractor shall make permanent repairs in his initial corrective action response. When the scheduled time to make permanent repairs will hinder timely operation of the system beyond a delay that the Department can accept, the Contractor shall perform temporary repairs as needed to restore functionality to the system in a manner acceptable to the Engineer, and then, as soon as possible, the Contractor shall perform permanent repairs. Depending upon the severity of the delay in making permanent repairs per Contract requirements herein, the Department may withhold the routine maintenance payment, or assess liquidated damages. All documentation of temporary and permanent repairs shall be recorded on an EMCMS Ticket. (Refer to Ticket documentation requirements in Article 6.8.4.)

6.3 SPECIAL RESPONSE SITUATIONS

6.3.1 UNAUTHORIZED ACCESS OR TAMPERING OF IDOT PROPERTY

If the Contractor sees an unauthorized individual at a site he shall immediately radio the dispatch center to call for police assistance, before confronting an individual.

6.3.2 INTRUSION OR THEFT AT FACILITIES/BUILDINGS

If an entry alarm is received, the Contractor dispatch center shall call for a police escort for the individual dispatched to the scene. If a break-in is confirmed, the Contractor shall notify the dispatch center to create a Ticket and shall forward all relevant information. The Contractor's representative shall wait for an IDOT representative to arrive on the scene and make thorough inspection of the facility to ascertain if anything is missing or damaged, before the Contractor files an official police theft report. The Contractor is responsible to obtain a copy of the official police report and fax a copy to the Engineer as soon as possible.

When, in judgment of the Engineer, damage or loss of system equipment is the result of extensive, specific theft activity affecting continuity of service, the Engineer may authorize non-routine maintenance payment of all or a portion of the permanent repair work, using contract pay items wherever applicable. The potential for the permanent work authorization, however, shall in no way relieve the Contractor from the responsibility to promptly respond and perform repairs.

6.3.3 VANDALISM AND GRAFFITI

If the Contractor arrives on the scene of major vandalism to IDOT property, the Engineer shall be notified to determine if a police report is necessary. Photos of major damage shall be taken by the Contractor and forwarded to the Engineer within 24 hours. (Also review ticket documentation

requirements herein.) All graffiti shall be properly removed from IDOT property within 48 hours of notification. Following incidents of tampering, vandalism, or theft, the Contractor shall notify the local police agency so they may more frequently monitor the area.

6.4 REPAIRS TO SYSTEM EQUIPMENT

6.4.1 REPAIR OF DAMAGED OR MALFUNCTIONING SYSTEM EQUIPMENT

Damaged equipment parts and materials shall be replaced with new equipment, previously approved by the Engineer, in equal quantities, which shall be identical to the original elements except as otherwise specified herein, or permitted by the Engineer. Materials used shall be suitable for the intended use.

All expressway, shoulder, or lane closures required for the response and repair of damaged System equipment is routine maintenance work and shall be in conformance with existing Departmental standards governing lane closures. (Review Article 4.0 for Traffic Control information.)

If a permanent repair delay is due to "parts on order" the Contractor shall furnish the corresponding material requisition and purchase order documentation for those parts or components of the system required to complete the repair. Parts on order shall be noted as a controlling item on the open EMCMS Ticket.

6.4.2 RESTORATION

The Contractor shall also be responsible for the restoration of the affected work area, under routine maintenance, for any and all work activities. Within 24 hours following the completion of work, the Contractor shall remove all debris, and restore the site to its former or better condition. Work sites shall always be left in a safe condition. If it is not possible to continue permanent restoration work due to circumstances beyond his control, the Contractor shall immediately notify the Engineer for review and approval.

6.4.3 DAMAGE CAUSED BY DEPARTMENT PERSONNEL

The Contractor shall abide by requirements of Article 6.4.1 herein, however, when damage to system equipment has been caused by Department personnel, in the performance of their assigned duties, any repair work necessary will be authorized under non-routine maintenance for the applicable system. The Engineer shall be immediately notified at the time of knowledge of the damage and a mutually agreed date established for a field inspection to ascertain the materials and/or parts necessary for the repair. (Review documentation requirements as specified herein.)

The Department reserves the right to furnish any or all of the materials or parts for any non-routine work, so no charge for items so furnished shall be made by the Contractor. Materials or parts furnished by the Department may be from the Department's state stock inventory or from other sources available to the Department.

6.4.4 CONSTRUCTION DAMAGE (3RD PARTY DAMAGE)

The Contractor shall abide by requirements of Article 6.4.1 herein, however, when damage to system equipment (Contractor maintained) has been caused by construction activity, the Contractor may invoice the offending third party for damage repairs, including incident clearing costs, if prior written approval has been received by the Engineer. (Review 3rd party damage documentation requirements herein.)

Examples of third parties include contractors working under contract with IDOT, contractors working on a construction project under permit issued by the Region's Traffic Permits Section or the Region's Design Utility Section, or municipal and county agency workers and their contractors. A date stamped, digital photo shall be taken at the damage scene when repair costs are estimated to be in excess of $5000.00. (Also review 3rd party damage documentation requirements herein.)

6.4.5 MOTORIST CAUSED DAMAGE

The Contractor shall respond to notifications of motorist caused damage, clear the site for safety if necessary, and perform repair work per Articles 6.2.2 and 6.4.1. A motorist caused damage ticket (MC) shall be created at the time of the notification of damage.

Whenever damage to ASMC equipment is caused by motorists, it is not considered 3rd party damage since the Contractor is not allowed to collect for damage repairs from licensed motorists who damage state property. The Department reserves the right to make normal damage cost recovery for all motorist caused highway damage.

The Contractor shall be paid by the Department through non-routine maintenance for motorist caused damage repairs if there is an incident reported to the Com Center and where bid items are applicable or per Article 6.1.6, Equipment and/or Repairs Excluded from Routine Maintenance**.**

At the end of each month, the Contractor shall submit a summary report by ticket number, of all non-routine pay items used to repair motorist caused damage. The Department shall issue a non-routine authorization letter for all approved work, for payment to the Contractor. (Also refer to MCHD repair documentation requirements in Article 6.8.6 and 6.9.2 herein.)

6.5 SYSTEM PATROLS AND QUALITY CONTROL PROGRAMS

6.5.1 DAYTIME PATROL INSPECTION

The Contractor shall submit his proposed patrol inspection report format and the schedule to the Engineer for approval at the Pre-Construction Meeting. The ASMC Specialist/Foreman (review Article 4.7.5) shall conduct, at minimum, two daytime patrol inspections per month (on the 1st and 3rd or 2nd and 4th weeks of every month), of the following locations:

- REVLAC Buildings A, C, D and E
- IDOT Com Center and Equipment Room
- Traffic Systems Center in Oak Park
- ISP District Chicago Communication Hut in Des Plaines (Only during the first inspection of the month)
- RACS Facilities – Hillside Hut, Hillside Auxiliary Hut, Roosevelt Ramp Building
- Video and Communication Facilities at Schaumburg HQ; Foster and Edens; Pump Station 5, I-290 and Nordic; I-57 and Parnell; I-57 and I-80; I-57 and I-294 (in 2007); Ryan and I-55 (2 huts); Ryan and Skyway (in 2007); I-80 and State line (in 2007).

If communications issues warrant or when requested by the Engineer, the Contractor shall patrol and inspect the following locations:

- UIC Building
- REVLAC Building B
- I-290 and Halsted Hut
- JRTC Communication Room

The following items, but not limited to, shall be inspected/checked at each inspection:

- Check/Adjust all HVAC for proper temperature settings
- Check/Replace all indicator lamps
- Check all Ethernet equipment
- Check all fiber optic transceivers
- Check all camera pictures on monitors for REVLAC and RACS systems
- Check all Allen Bradley PLC processors and all input and output cards for REVLAC and RACS
- Check all phone lines
- Check all modem communications
- Check all video transmission and distribution equipment, video controllers, including equipment at Traffic Systems Center/Oak Park
- Check all back-up power systems
- Check rodent infiltration into buildings, seal any holes found
- Check trash cans inside buildings and empty

Any deficiencies found shall be relayed to the Contractor dispatch center to create a ticket created and shall immediately correct them. Any deficiencies, found but not needing immediate correction, shall be corrected under normal corrective action, i.e., within 48 hours. Tickets are required for all problems found, including those repaired at the time of inspection. If it was found to the contrary by the IDOT Inspector, liquidated damages may be assessed for non-compliance.

6.5.2 REVLAC OPERATIONS PATROL

On approximately the same day per month, for each month of the Contract, during the daytime reversible change (approximately 11:30 a.m.) and for the night-time reversible change (approximately 11:30 p.m.), a Contractor representative shall follow an IDOT ETP (Emergency Traffic Patrol) foreman through the arming sequence at each REVLAC location in both for inbound and outbound directions, to check equipment for proper operations. Any operational deficiency shall be immediately relayed to the Contractor dispatch center to create a ticket. Corrective repairs shall be made within 48 hours.

6.5.3 NIGHT-TIME PATROL INSPECTION

The Contractor shall provide for a night-time patrol inspection of the lighting of the ASMC systems once per month, to be scheduled the same week of each month. It is expected, however, that only one (1) or two (2) nights of driving will be required.

The following locations shall be inspected:

- REVLAC Buildings A, C, D and E
- RACS Buildings at Hillside and Roosevelt ramp
- REVLAC Chevron signs, Auxiliary signs and Drum signs and lighting
- Video and Communication Huts at Schaumburg HQ; Foster and Edens; I-290 and Nordic; I-57 and Parnell.

Any operational deficiency shall be immediately relayed to the Contractor dispatch center to create a ticket. Normal repairs shall be completed within 48 hours. Also all Tower obstruction lights (red) shall be checked and, if not operational, the Engineer shall be immediately notified.

6.5.4 QUALITY CONTROL INSPECTIONS

The proper functioning of the ASMC systems and installations is essential to maintain the smooth, expeditious, and safe movements of traffic. It is imperative that all equipment in the systems and installations be serviceable and in good operating condition so as to insure maximum working efficiency and prevent unnecessary failures.

The Contractor shall assure that all components of the systems and installations operate essentially as originally installed, or as subsequently modified. The Contractor shall establish a program to initiate and conduct quality control preventive maintenance inspections (PM programs) to guard against and prevent equipment failures due to mechanical or electrical defects and to assure that the requirements of this Contract are known and implemented by the Contractor's workforce.

The quality control inspections/PM programs established by the Contractor shall be in addition to the PM programs already specified herein, but may be conducted in addition to regularly scheduled patrol inspections and/or scheduled work. Every month, the Contractor shall submit the next month's quality control/PM program schedule in the monthly routine maintenance work documentation book.

6.6 PREVENTIVE MAINTENANCE (PM) PROGRAMS

The Contractor is required to perform certain preventive maintenance (PM) work within certain regular intervals or within certain time limits. The following articles and PM forms in the Appendix provide as a basic guide for PM work, but shall not be construed as all inclusive. Preventive maintenance required by the manufacturers shall be performed in addition to these inspections. All PM work shall be in compliance with manufacturers' specifications.

The PLC programming laptops, described in Article 3.4 are more than five years old and are becoming obsolete. The Contractor shall replace one of these units in the first year of the Contract and another unit in the second year of the Contract, if renewed, and transfer the PLC programming software licenses to the new units. The replacement units shall be Dell Inspiron 9300 or approved equal, Intel Pentium M Processor 740 or better, 17" display, XP OS, 512 MB Memory, 60 GB Hard Drive, 24X CD Burner/DVD Combo Drive, Office Suite and Anti-Virus/Security suite for the duration of the Contract.

Schedules for start and completion of PM program work are important for the effectiveness of the overall system reliability. Every month, the Contractor shall submit the PM program for the following month in the monthly routine maintenance work documentation book. All PM work shall be completed within 30 days after starting, unless extensions are approved by the Engineer. All completed PM forms shall be submitted in the monthly routine maintenance submittal book.

6.6.1 RESTRAINING BARRIER PM

PM shall be conducted, as needed, or at least once per year (except as noted), in April.

- Open access covers in the towers and in the cross ramp structure and clean out any accumulation of bird and insect nests, dirt and dust, or corrosion.

- Clean all associated control cabinets and reflective strips with biodegradable detergent and water.
- Check for fluid leaks in the cabinet and correct, if any.
- Lubricate pillow block and idler sprocket bearings with multi-purpose lithium grease, NLGI No. 2, or equivalent.
- Check oil level in the drive reducer and fill with SAE No. 20 motor oil, if necessary.
- Lubricate drive chains semiannually using an aerosol chain lubricant spray (WD-40 or similar compounds are not acceptable).

The restraining barrier should run smoothly, without excess vibration or noise, stop quickly at its raised or lowered positions, and, when in remote operation, ensure prescribed status and warning light indications are working.

6.6.2 SWING GATES PM

Swing gate PM shall be performed twice a year, unless noted otherwise, in April and October. Lubrication shall be performed once per year as a minimum.

Open access covers and clean out any accumulation of bird and insect nests, dirt and dust, or corrosion. Use stiff bristled or wire brushes to remove debris. If there is a build-up of grease or heavy dirt, clean with a steam cleaner and a biodegradable detergent. All associated control cabinets shall be cleaned of all dirt and/or fluid leaks.

- Clean all associated control cabinets with biodegradable detergent and water.
- Check for fluid leaks in the cabinets and correct, if any.
- Pressure wash all gate arms and tips with biodegradable detergent and water.
- Check oil level in the drive train and top off as required by the manufacturer's requirements.
- Replace gate tip if more than 20% of the tip is damaged, or when directed by the Engineer.

The swing gates should extend and retract smoothly, without excess vibration or noise, stop quickly at it's extended or retracted positions, and, when in REMOTE operation, provide prescribed status indicator and warning light indications.

6.6.3 ROTATING DRUM SIGNS PM

All rotating drum signs shall be cleaned twice a year, unless noted otherwise, in the April and October.

- Open access covers and clean out any accumulation of bird and insect nests, dirt and dust, or corrosion.
- Clean all associated control cabinets. Clean all washable components with a cloth and wash with approved biodegradable detergent and water.
- Check for fluid leaks in the cabinet and correct, if any.
- Check oil level in the drive train and top off as required by manufacturer's specifications.
- Lubricate all bearing surfaces as needed, at least once per year.

6.6.4 REVLAC AND RACS LED AND FIBEROPTIC SIGN PM

All REVLAC and RACS auxiliary signs, dynamic message signs, Chevron signs, and fiber optic signs shall be inspected at least twice a year, in April and October:

- Open access covers and clean out any accumulation of bird and insect nests, dirt and dust, or corrosion.

- Clean all associated control cabinets with biodegradable detergent and water.
- Clean LED signs with a cloth and biodegradable detergent and water.
- Relamp fiber optic sign with halogen lamps and clean housing, once per year, at the time of April inspection.
- Inspect lamp housings for corrosion and damage and replace, if necessary.

6.6.5 CONTROL BUILDINGS, COMMUNICATION BUILDINGS, AND SYSTEMS PM

A preventive maintenance program shall be conducted once per year, in April, for the REVLAC Buildings A, B, C, D and E, RACS Roosevelt Ramp building, all video and communication huts, IDOT Headquarters, and ISP District Chicago Communication Buildings. During the PM, any corroded conduit, junction boxes and connectors; and damaged weather stripping and minor leaks shall be replaced or repaired, as applicable. The building layouts and PLC forms, where applicable, will be issued at the Pre-Bid Meeting. In addition, the following PM work shall be performed:

Cattron PM

The Contractor shall conduct a PM program twice per year, in April and October, for all Cattron remote controllers and their chargers at the Emergency Traffic Patrol (ETP) building. Since the units are needed daily by ETP for REVLAC operations, the PM shall be performed on a maximum of six units at any one time and with maximum turn-around time of one business day, returning the units the same evening. The units shall be tested for – battery voltage; transmitting and receiving ability; power; modulation; and RX sensibility. The batteries shall be replaced, as needed.

If any unit is found to be defective, the unit shall be replaced with a spare unit until the repairs are completed. Tickets shall be issued and the Com Center shall be notified for all defective units.

Miscellaneous Work at the Buildings

- Replace batteries in the surge arresters, building clocks, PLCs and other equipment, per manufacturers' specifications.
- Wet mop floors with water and biodegradable cleaner, in Buildings A, C, D and E.
- Check fire extinguishers and recharge them annually.

6.6.6 MICROWAVE PM

The Contractor shall perform a microwave preventive maintenance inspection at REVLAC buildings A, D, and E, ISP District Chicago communications building, and Hillside, Nordic Schaumburg buildings once per year, on a date as approved by the Engineer. The Contractor shall address any outstanding alarms and perform repairs as needed. The PM shall include the measurement and check, as applicable, of the following parameters by factory authorized and trained personnel:

- TX Crystal Frequency
- RX Crystal Frequency
- TX Output Power
- Gunn Current
- Input Voltage
- Video Input
- Audio Input
- AGC Level
- Receiver Frequency
- RX Carrier

6.6.7 GENERATOR PM

The Contractor shall perform generator preventive maintenance twice per year, in April and October. The Contractor shall change oil, all filters, check fan hub, pulley and water pump, check belts, check coolant, change the day tank breather, clean or replace the crankcase breather filter, change fuel filter, drain sediment from the fuel tank, clean accumulations of grease, oil and dirt on set, check circuit breaker and transfer switch, check battery charger and battery, and test equipment by simulating a power outage. Coolant should be changed if it does not meet manufacturer's specifications.

6.6.8 CCTV CAMERA PM

All CCTV cameras shall be inspected at least twice per year, unless noted otherwise, in April and October. No form is required, however, a summary of the camera trouble tickets shall be included in the monthly routine maintenance book.

- Clean camera lens and domes.
- Refill camera washers, if equipped
- Clean camera number labels, replace if damaged or missing.
- Verify camera operation and correct for picture and control functions

In addition, the domes of the cameras, mounted 25' or lower, shall be cleaned periodically, and when the images are not clear, or when requested by the Com Center or by ETP, under normal corrective action.

6.6.9 RAMP GATE PM

All gates installed on the entrance ramps to expressways shall be checked once per year, in October. No form is required; however, a summary of any tickets shall be included in the monthly routine maintenance book. During the duration of the Contract, any replacement equipment as necessary may be disbursed from State Stock, upon notification of the Engineer.

6.7 SYSTEM ACCESS

6.7.1 LOCATING CABLE OR OTHER COMPONENTS OF IDOT SYSTEMS

The Contractor shall be responsible for responding to all calls requesting a locate of ASMC equipment at all locations, and shall complete a locate form on the EMCMS, or Excel spreadsheet as approved by the Engineer. The Contractor shall locate and mark, as approved by the Engineer, underground cables or any other components of the ASMC systems to prevent damage and facilitate work by others. Such markings shall be given with a horizontal tolerance of at least one foot to either side. The marking shall be made to prevent damage and facilitate work by others, The Contractor shall promptly respond to locate calls within 24 hours, or immediately in emergency situations at the request of the Engineer. The Contractor is required to perform a locate of state underground cables or any other components, one time for each system location, per project or contract, as requested by the general contractor of the construction project. The cost for all locate services shall be included under routine maintenance.

6.7.2 PROVIDING SYSTEM SERVICES

Upon request of the Engineer, the Contractor is required to provide trained personnel for the following miscellaneous routine maintenance work:

- Provide system access to utility workers or inspectors approved by the Department

- Provide system access, open facilities, or provide tours for other contractors, consultants, or special State visitors, as approved by the Engineer
- Conduct an immediate System or component inspection upon notice of the Engineer
- Provide labor, transportation, and equipment, to assist IDOT inspectors in their inspection of any portion of a System(s)
- Provide additional special patrols, inspections, and tests to confirm proper system equipment operation
- Collect information to define the nature of repetitious or intermittent system malfunctions
- Provide occasional staff for monitoring (stand-by time) of hazardous or emergency situations

6.7.3 COORDINATION WITH ELECTRIC UTILITY COMPANIES, CONTRACTORS, AND OTHERS

The Contractor shall ensure the availability incoming power service and telephone service wiring and equipment, for all systems and facilities in proper condition at all times. The Contractor shall maintain contacts with the respective utilities and shall fully coordinate systems or facility access as required for utility company modification work as applicable, repair work as necessary, and other matters as necessary to assure continuity of service. The Engineer shall be promptly notified by email for cases such as the planned disruption of service power to system equipment.

6.8 WORK DOCUMENTATION

6.8.1 DAILY WORK AGENDA

The scheduling of daily work shall be a responsibility of the Contractor, but governed by established schedules and/or authorized work completion dates. The Contractor shall email the Engineer and each IDOT System Engineer/Inspector, a daily agenda which shall account for all scheduled repair work, both routine and non-routine work. The daily agenda shall be received by 8:30 a.m. on the specified workday or by 2:30 p.m. on Fridays when weekend work is scheduled by the Contractor. The Department will provide the Contractor the format for the daily agenda at the Pre-Construction Meeting. The daily agenda shall account for all personnel working that day or evening, listing their name, call number, description of work assignments, category of routine or non-routine work, and ticket number or authorization number if applicable.

If the Contractor's work/testing, as specified herein, requires the presence of an IDOT Engineer/Inspector, the Contractor shall give a minimum 24 hour notice to the appropriate Engineer/Inspector when that work is to be scheduled on the daily agenda. If the Contractor proceeds with the work without this pre-notification, the Contractor shall, by the decision of the Engineer, be required to either re-perform the work/test or shall be assessed liquidated damages.

When a special project and/or system modification warrants, the Engineer may direct the Contractor to create a separate special project agenda. The same issuance requirements apply for the special project agenda as for the daily agenda.

6.8.2 DISPATCH CENTER/STAFF ON-CALL SCHEDULE

On Friday of each week the Contractor shall provide the Engineer and each IDOT System Engineer/Inspector an email of the Contractor staff on-call weekend schedule and the dispatch center personnel work schedule for the weekend and following week. Names, call numbers, hours to be worked, and on-call supervisor cell and/or home telephone numbers shall be noted on this schedule.

6.8.3 PERSONNEL WORK DOCUMENTATION

The Contractor shall submit to the Engineer, weekly, via email an Excel spreadsheet report and monthly in the routine maintenance work documentation book:

1. Identification of employee, i.e., name and employee call (NEXTEL) number
2. Total weekly hours worked by the employee for the company
3. Total weekly hours worked on the ASMC, listing hours worked per system and category (routine and non-routine)

The Contractor shall maintain a current list of all personnel (including sub-contracting personnel) assigned work on the ASMC, applicable radio call numbers, cell and office telephone numbers. This list shall initially be furnished to the Engineer at the Pre-Construction meeting and the Contractor shall submit an updated list in the monthly routine maintenance work submittal book, with changes in personnel highlighted on each revised list.

6.8.4 ASMC TICKETS

All work related to the system equipment shall be documented by tickets in the EMCMS.

The Contractor shall immediately create a ticket on the EMCMS:

- When Contractor personnel finds malfunctions or damage to system equipment
- When IDOT personnel or any 3rd party reports malfunctions or damage to system equipment
- When any work in progress on equipment installation(s) is found not properly grounded and may endanger the public at large or other property of the State of Illinois
- When other incidents occur as noted herein

The Contractor shall, within 1 hour of receipt of information, record the following ticket information in the EMCMS:

- Name of informant and call-back number
- Time of dispatch of Contractor personnel
- Time of arrival at scene of Contractor personnel
- Problem found (including unit number of effected equipment)
- Time incident is cleared
- Description of work completed at scene
- Follow-up work, if necessary
- Police accident information, if known

If the IDOT Com Center contacts the ASMC dispatch center with an incident of system damage or malfunction, the Contractor shall immediately create an EMCMS ticket, noting the IDOT Com Center incident number and name of the Com Center Dispatcher. The Contractor is required to telephone the IDOT Com Center once the incident has been cleared for safety or work is complete. The Contractor shall also obtain the police accident number from the IDOT Com Center for any motorist caused damage.

The EMCMS shall be the source and control of ticket number assignments for selected work activities of all systems. A single series of numbers will be sequentially assigned from the EMCMS database and will be used for all work activities related to the original work assignment. A separate numbering system for tickets will not be allowed.

Here is the ticket history of the ASMC in the last three years. Note, however, that the number of installed cameras in 2004 will have doubled by 2005, and will have tripled by 2006.

Ticket Type	2002	2003	2004	3-Year Avg.
Barrier	5	8	1	5
CCTV	74	57	89	73
Changeable Message Signs	8	13	6	9
Control System	31	26	10	22
Damage	2	2	0	1
Equipment Problems	70	50	51	57
Fiber Optic Problems	9	7	5	7
Motorist Damage	15	22	37	25
Radio Control	4	7	1	4
Supervisory Control	4	7	1	4
Swing Gate Damage	52	35	1	35
Utility Problems	3	3	3	3
TOTAL	**275**	**231**	**226**	**244**

The Contractor shall provide the special paper as necessary and transmit the EMCMS ticket summary to the Engineer and IDOT Schaumburg Headquarters, by 8:30 A.M., Monday through Friday workdays. This report shall account for all tickets created from 7 a.m. the prior day to 7 a.m. the current day. The Monday daily ticket summary shall account for the time period from Friday 7 a.m. through Monday at 7 a.m. A sample of a Ticket shall be provided at the Pre-Bid meeting.

6.8.5 THIRD PARTY DAMAGE (CONSTRUCTION AREAS) REPAIR DOCUMENTATION

The Contractor is eligible to recover actual repair and/or construction costs for each incident of construction damage to system equipment from each respective third party, with Engineer approval, after following these procedures:

1. For Third Party Damage the Contractor shall create an EMCMS GB (general billing) ticket with name of Contractor at the scene, address, contract or permit number and contact name.

2. The applicable party shall be sent a written estimate of repair (or construction) costs.

3. The Contractor shall notify the IDOT Engineer/Inspector when the work is complete and ready for inspection by submitting to the Engineer, in the monthly routine maintenance work documentation book, a file on each 3rd party damage (or work) incident where permanent repairs have been completed. The file shall contain copies of the completed ticket, daily general billing log(s), all correspondence, and Contractor prepared original invoice. (Note: The 3rd party invoice number shall be the same as the ticket number.)

4. After the work has been inspected, and the Engineer has signed an approval on the original invoice, the Contractor may submit to the third party. If the work is inspected but not approved the unsigned invoice shall be returned with a corrective work list. Contractor shall not submit an invoice to a third party for damage to IDOT property without an IDOT approval signature.

6.8.6 MOTORIST CAUSED HIGHWAY DAMAGE (MCHD) DOCUMENTATION

In addition to the regular ticket screen entries, at the time of equipment re-installation, the Contractor shall create a document which lists work by the repair crew for each ticket, including equipment damaged and/or salvaged, equipment re-used, new equipment installed, (identifying state stock or contractor parts used), and total of labor repair time and vehicles used. This information is used by the Contractor to prepare statements for the Department's claim processing, per Article 6.9.2.

6.8.7 CONTRACTOR ADVISORY

If the Contractor identifies system elements, which, due to age or normal wear and tear have become prone to recurring or imminent failure, or which otherwise pose a significant liability or a safety risk, the Contractor may recommend replacement or repair by submitting an advisory inspection report in the monthly routine work documentation book.

The Engineer may respond to the Contractor in regards to the advisory inspection, and reserves the right to determine a course of action to rectify any identified condition. When the Engineer concurs with the Contractor's basic recommendations, a non-routine authorization will be issued for the material portion of the repair and this will reduce the Contractor's routine maintenance obligation to the labor necessary to replace the deteriorated system element. Should the Engineer determine, however, that a deteriorated condition is due to neglectful maintenance on the part of this Contractor, all remedial work shall be performed as routine maintenance.

In the absence of an advisory inspection report received and acknowledged by the Engineer, if system elements fail or are observed by the Engineer to be causing recurring failures or imminent safety hazards, then the Contractor is obligated for the full cost of replacement or repair under routine maintenance. Such obligation is not limited only to individual components but may extend to the multiples of components at a location(s).

6.8.8 MONTHLY ROUTINE WORK DOCUMENTATION BOOK

On the third day business day of each month, (May through April of each year) the Contractor shall submit to the Engineer a three ring binder, which contains the required documentation of the various items of routine maintenance work as required herein, for the prior month. These submittals include, but are not limited to:

Warehouse State Stock Disbursement Report - Refer to Article 5.2.4

ASMC State Stock Disbursement Reports - Refer to Article 5.2.5

Contractor State Stock Receipt Report - Refer to Article 5.2.6

State Stock Inventory Report Summary - Refer to Article 5.2.7

State Scrap Report - Refer to Article 5.2.8

Site Maintenance Work Summary - Refer to Article 6.1.5

Contractor Quality Control Schedule - Refer to Article 6.5.4

Contractor Completed PM Forms – Refer to Article 6.6

Contractor PM Schedule for Next Month - Refer to Article 6.6

Cable Locate Request Summary - Refer to Article 6.7.1

Personnel Work Documentation - Refer to Article 6.8.3

Third Party Invoices for Construction Damage Billing - Original Invoice ready to be signed by the Engineer (refer to Article 6.8.5)

Motorist Caused Highway Damage Statements (for MC tickets) - Refer to Article 6.8.6

Contractor Advisory Reports - Refer to Article 6.8.7

Vendor Payment Summary - Refer to Article 7.2.8

6.9 ROUTINE MAINTENANCE BILLING

6.9.1 DETERMINATION OF ROUTINE MAINTENANCE MONTHLY PAYMENT

The Contractor shall be sent via email, in advance of the Pay Meeting, the Department routine maintenance authorization for payment. This authorization for payment includes the total dollar amount of the monthly routine maintenance pay items, and any credits, debits, withholding, MCHD deductions, and applicable routine or non-routine work liquidated damages.

6.9.2 MOTORIST CAUSED HIGHWAY DAMAGE CLAIMS

The IDOT Claims Department, under the office of the Chief Counsel, processes incidents of motorist caused damage in order to obtain payment from the Motorist Caused Highway Damage Fund. The Department shall provide the Contractor with an IDOT Claim number for each ticket, where the equipment damage has been traced to a responsible party and matched to a police accident report, so a MCHD statement for the IDOT Claims Department may be created.

The Contractor shall prepare formal MCHD statements, on company letterhead, which document repair work and equipment replacement costs for each MC ticket, including the date of incident, date of repair, type or model of equipment replaced or repaired, labor time, and vehicle use. Each statement shall be signed, verifying completion of work to contract standards. The original MCHD statement and six (6) copies, with blank envelopes and address label/tape, as approved by the Engineer, shall be submitted within seven (7) days of the request of the Engineer.

The total dollar amount of the processed statements will be deducted from the Contractor's regular monthly routine maintenance payment and approximately forty five (45) days later payment shall be scheduled to the Contractor from the State of Illinois Motorist Caused Highway Damage Fund.

6.9.3 ROUTINE MAINTENANCE PAY MEETING

A routine maintenance Pay Meeting shall be held on the second Wednesday of each month (beginning May, 2006), at the IDOT Region 1 Headquarters or other location as determined by the Engineer. The ASMC Project Manager any other additional ASMC Personnel, as appropriate, shall meet with the Engineer, to review the maintenance work progress of the prior month. Work

completed in the prior month, and work planned for the current month shall be presented by the Contractor and reviewed at the Pay Meeting. In addition, the Engineer will identify any major work issues requiring Contractor attention and the Contractor shall present any problems noted with the systems which require a new work initiative.

The Contractor shall bring monthly routine invoice to the Pay Meeting and the payment shall match the Department authorization as previously sent via email. The Contractor invoice shall carry the same invoice number as the monthly authorization.

If the monthly routine maintenance work was not completed as agreed by the Engineer, or any documentation is received late, the Pay Meeting and monthly payment may be accordingly delayed. If the monthly invoice is incorrectly prepared it shall be returned to the Contractor and scheduling of the monthly payment delayed until such time as the corrected invoice is received.

The monthly routine maintenance payment to the Contractor is scheduled for payment in the Region 1 Headquarters, and the invoice sent to IDOT Springfield for payment. Payment is normally made to the Contractor within sixty (60) days, but delays have been known to occur.

7.0 NON-ROUTINE MAINTENANCE WORK

7.1 GENERAL REQUIREMENTS

7.1.1 DESCRIPTION OF WORK

Non-routine work under this Contract is specifically authorized work, not covered under the requirements of routine maintenance, for materials and work on the systems that tends to be irregular, event driven, or otherwise based on the selective direction of the Engineer in response to system needs. The Contractor shall also perform other non-routine work at State facilities, in connection with the systems being maintained under the Contract, at the request of the Department. Non-routine work shall include unit-priced (PAY ITEM) work, agreed price work, force-account work, and non-routine specialty service work.

An EMCMS authorization letter shall be received by the Contractor prior to the start of all non-routine work. Any non-routine maintenance work undertaken by the Contractor prior to receiving an approved authorization is done at the Contractor's own risk. The Department is under no obligation to pay for unauthorized work or work which is not in compliance with this contract. Contract provisions or practices employed under other contracts shall have no bearing on these constraints under this contract.

The Department reserves the right to furnish any or all of the materials or parts for non-routine work, in which case no charge for items so furnished, shall be made by the Contractor. Materials or parts furnished by the Department may be from the state stock inventory or from other sources available to the Department.

7.1.2 WORK COMPLETION REQUIREMENTS

The normal completion time for non-routine work shall be 90 calendar days from the IDOT transmittal date of the authorization letter, or as specified by the Engineer. The Contractor may contact the Engineer to request a later date, or the Engineer may request an earlier date from the Contractor. If the Contractor fails to seek a change in completion date, the work completion time will remain as initiated by the Engineer. The Contractor is urged to check the EMCMS to review all authorizations which have been transmitted.

7.1.3 UNIT PRICE AUTHORIZATIONS

Unit-priced (PAY ITEM), non-routine work shall consist of work which has been authorized based upon the unit prices (PAY ITEMS) bid on this contract for the various non-routine work items.

7.1.4 AGREED-PRICE AUTHORIZATIONS

Agreed-price, non-routine work shall consist of work for which bid unit prices are not applicable. The Contractor shall prepare, in accordance with Article 109.04 (a) of the Standard Specifications, and as directed by the Engineer, a quote for an agreed price. If acceptable to the Engineer the work shall be authorized based upon the agreed price. Once the Department issues an agreed-price authorization from a Contractor supplied quote, there will be no revision to the per hour labor costs effective on that date.

While the Contractor's quote of specialty service work may include an appropriate mark-up of necessary materials, in no case shall specialty service work, in its entirely be considered "materials" when a quote for this work is submitted to the Department.

In accordance with Article 109.04 (b)(7) of the Standard Specifications for Road and Bridge Construction, as hereby modified, when work is performed by an approved subcontractor, the Contractor shall be paid administrative costs of an amount equal to five (5) percent of the first $10,000, and the Department shall allow an additional one (1) percent of any amount over $10,000 of the total approved costs, on a individual work authorization.

7.1.5 FORCE ACCOUNT AUTHORIZATIONS

Force Account Work shall consist of work for which an agreed price cannot be established between the Engineer and the Contractor. The Engineer may direct the Contractor to perform any non-routine work as force account work which shall be measured and paid as described in Article 109.04(b) of the Standard Specifications for Road and Bridge Construction. A signed daily time/work accounting shall be kept on the daily general billing log, which shall be submitted to the Engineer within seven (7) working days following the completion of work. A general foreman's time will not be billable on force account work unless there are more than five (5) additional crew workers employed at any one time, place and job and then only with the prior approval of the Engineer. A mark-up of fifteen (15) percent is allowed for material costs, which shall include any shipping and handling fees. The Contractor shall not be allowed overtime and/or prime time billing unless prior approval is received from the Engineer.

7.1.6 EXPENSES INCURRED BY THE DEPARTMENT

In accordance with Article 109.05 of the Standard Specifications for Road and Bridge Construction, the Contractor shall be paid administrative costs of an amount equal to five (5) percent of the first $10,000, with a minimum of $ 100.00, and the Department shall allow an additional one (1) percent of any amount over $10,000 of the total approved costs, for an individual work authorization. The Contractor shall pay the expense incurred by the Department within seven (7) calendar days of the Engineer scheduling the Contractor's invoice for payment in the EMCMS. (Review payment to specialty vendors as specified herein.)

7.2 NON-ROUTINE WORK PAYMENT

7.2.1 UNIT QUANTITIES

Quantities included for bidding are only estimates and actual quantities may vary. The pace of construction activities within Region 1 as well as a number of other unpredictable factors will cause variances from these indicated quantities. The Contractor's unit prices are expected to be realistic and no additional compensation will be allowed due to a variance in quantities; however, the Engineer retains the right to seek a revised unit price where quantities exceed estimated quantities to the extend that additional economies of scale would be normal. The Engineer also retains the right to use force account procedures or use other procurement means available to the Department where unit prices reflect pricing significantly higher than Department project norms. The contractor is cautioned against unbalanced bidding and is directed to Article 102.01 of the Standard Specifications.

The Contractor shall first be issued an "estimated" EMCMS non-routine work authorization, as quantities are estimated. When the work is complete the Contractor shall fax or email the estimated work authorization to the Engineer, with corrections in quantities noted. The Engineer or IDOT Inspector shall inspect the work, verify the corrected quantities, and re-issue as a final EMCMS work authorization to the Contractor, so an EMCMS invoice may be prepared.

7.2.2 PROCEDURE FOR SUBMITTAL OF QUOTES

The Contractor shall enter all price quotes for agreed price or force account non-routine work authorizations in the EMCMS within five (5) working days of the Engineer request. The Contractor is required to enter clearly written concise quotes in the specified format of the EMCMS, and email or fax copies to the Engineer, but is not required to mail typed (hard copy) quotes. Quotes should follow the format of the EMCMS. If additional explanation is necessary the Contractor may, however, submit a formal letter to accompany any quote that explains complete details or provides justification of the work or price. One quote shall be necessary for each non-routine authorization letter.

If quantities are estimated the Contractor shall first prepare an "estimated" EMCMS non-routine work quote, to allow the Department to issue an estimated EMCMS work authorization and transmit to the Contractor. When the work is complete the Contractor shall fax or email the estimated work authorization to the Engineer, with any corrections in quantities noted. The Engineer or IDOT Inspector shall inspect the work and verify any corrected quantities so the Contractor may correct the quote in the EMCMS, if necessary. Note, however, once the Department issues an estimated agreed-price work authorization from a Contractor supplied quote, there will be no revision to the per hour labor costs effective on the transmitted date. The Contractor shall prepare an EMCMS invoice from the final EMCMS work authorization as issued by the Department.

7.2.3 CONTRACTOR EMCMS RESPONSIBILITIES

It is the Contractor's responsibility to review daily, on the EMCMS, the list of new authorizations which have been transmitted to the Contractor, and subsequently view and print the non-routine work authorization letters. The Contractor shall communicate with the Engineer regarding any questions about the work assignment. Any non-routine authorization letters which have been transmitted, but not entered as received by the Contractor on the EMCMS within seven (7) working days shall be subject to the assessment of liquidated damages. (Review liquidated damages as specified herein.)

7.2.4 WORK COMPLETION NOTIFICATION TO THE ENGINEER

Unless prior approval is given by the Engineer, the Contractor shall notify the Engineer one day, (24 hours), prior to the Contractor's completion of the authorized work project in order that a joint EMC/IDOT inspection of the work may be held. In addition, the Contractor shall submit record drawings of any changes to the system(s) prior to the completion of the work.

When the work is complete the Contractor shall enter the work completion date in the EMCMS authorization letter, print an EMCMS copy of the authorization letter, note any quantity changes, and email or fax to the Engineer. Note the Contractor must enter the work completion date in the EMCMS authorization letter before the Engineer can approve the work for invoicing.

7.2.5 EMCMS WORK INSPECTION APPROVAL

Following the field inspection of the work, if the proper documentation of work has been received, i.e., daily general billing logs (with field supervisor's acceptance/approval of completed work and proper documentation of time and materials used, or other required billing documents as specified herein) and the Contractor has entered the work completion date in the EMCMS, the Engineer shall enter the final pay item quantities, work inspection approval, and EMCMS Engineer approval in the EMCMS final authorization letter. After these procedures are completed the Contractor may create an EMCMS invoice for payment of the work.

The Engineer may waive the physical field inspection of any work if he believes the completion to be reasonably demonstrated by performance of the system, electronic monitoring, or other means. In such cases, the Engineer reserves the right to follow-up and/or selective spot inspections, and if evidence of prior incomplete or incorrect work is found, the Contractor shall remain responsible for corrective action and open to liquidated damages and/or payment withholding as provided elsewhere herein.

7.2.6 EMCMS CORRECTIVE WORK LIST

In cases where deficiencies are found at the IDOT inspection of the Contractor's work, the Engineer shall issue a corrective work list (CWL) on the EMCMS. The Contractor should view the EMCMS corrective work list summary report on a regular basis in order to promptly address any work deficiencies. When the Contractor has completed the work deficiencies the Contractor shall notify the Engineer that the work is ready to re-inspect. Once the work is approved the Contractor shall create an EMCMS invoice for payment of the work.

7.2.7 EMCMS NON-ROUTINE WORK INVOICING PROCEDURES

The Contractor shall prepare an EMCMS invoice for each Final Authorization letter. Each EMCMS invoice shall carry the same number as the authorization letter and shall be signed by a Principal of the Company, attesting that the work, as invoiced, has been completed and inspected in accordance with the provisions of the Contract and all applicable specifications. The invoice shall also show a notarized certification by an officer of the Company. The Engineer, prior to the start of the contract, must approve the style and format of the Contractor's EMCMS invoice.

All work billed for payment shall be complete, no billing for partially-completed work will be allowed. All invoices shall be submitted to the Department no later than 30 days following work completion approval by the Engineer.

For proper payment of completed work the Contractor shall submit to the Engineer an original signed invoice with two copies, and an original signed final authorization letter with two copies. (If an estimated authorization letter, rather than the final authorization letter is attached to the invoice it shall be promptly returned to the Contractor.) The Engineer will sign the invoice and authorization and will forward to the Region's Financial Services office personnel for scheduling of payment. Normal processing time for non-routine work payment to the Contractor is 6 to 8 weeks.

7.2.8 PAYMENT TO SPECIALTY VENDORS

Refer to Article 7.1.6 for a definition of non-routine work authorization for Expenses Incurred by the Department. Within seven days following the EMCMS entry of the date the work was scheduled for payment, the Contractor shall pay the specialty vendor invoice, and fax or e-mail a confirmation of the payment with check number to the Engineer. If this procedure is not followed the Contractor shall be subject to the assessment of liquidated damages. (Review liquidated damages as specified herein.)

8.0 NON-ROUTINE PAY ITEMS

AAA1 CLEAR DAMAGE

DESCRIPTION

This item shall consist of responding to the scene and moving (clearing and disposal) of any system equipment that is in the way of traffic and making safe any electrical connections to ensure safe travel for the motoring public. This item also includes removal (and disposal if necessary) of any swing gates, ramp gates, gate arm tips, and appurtenances in need of repair or replacement due to Motorist Caused Damage, which may or may not be in the way of traffic.

The Contractor shall also be responsible for the restoration of the affected circuit(s) or system components such that undamaged portions of the system are operational, and the Contractor shall leave the site in a safe condition, removing all debris and damaged equipment.

This item shall be authorized when the Contractor clears motorist caused damage.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **CLEAR DAMAGE** which price shall be payment in full for performing the work as specified herein and as directed by the Engineer.

This item will only be used if the Contractor actually performs the work. If non-Contractor forces move the equipment off the roadway, the Contractor will not receive any compensation.

AAM1 MICROWAVE UPGRADE FOR REVLAC, FURNISH AND INSTALL

DESCRIPTION

This item will consist of furnishing and installing a Harris MegaStar 155 OC3 microwave radio and obtain formal FCC license for the radio, to add one OC3 channel per segment to the existing Sonet system. The current configuration of the microwave radio is one OC3 channel. The upgrade will not require installation of waveguide or antennas.

LOCATION

Schaumburg Tower to ISP Des Plaines repeater is one segment; and ISP Des Plaines repeater to Chicago I90/94 Junction Building “E” is another segment.

TESTING

The item will include testing of upgraded microwave radios to manufacturer’s specifications and recommendations. Test results must be submitted for approval by the Engineer.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **MICROWAVE UPGRADE FOR REVLAC, FURNISH AND INSTALL**, which price shall be payment in full for furnishing and installing the materials as specified herein and as directed by the Engineer.

ACB1 MULTICONDUCTOR POWER CABLE, INSTALL ONLY

DESCRIPTION

This work shall consist of installing a multiconductor power cable in accordance with Section 820 of the Standard Specifications.

METHOD OF MEASUREMENT:

Electric cable in conduit, pull, remove, shall be counted, each, per foot.

BASIS OF PAYMENT
This work will be paid for at the contract unit price for **MULTICONDUCTOR POWER CABLE, INSTALL ONLY** per foot which price shall be payment in full for installing the electric cable complete. If two or more cables in a conduit are to be removed and reinstalled, each cable will be measured for payment separately

ACB2 MULTICONDUCTOR CONTROL CABLE, INSTALL ONLY

DESCRIPTION
This work shall consist of installing a multiconductor control cable in accordance with Section 820 of the Standard Specifications.

METHOD OF MEASUREMENT:
Electric cable in conduit, pull, remove, shall be counted, each, per foot.

BASIS OF PAYMENT
This work will be paid for at the contract unit price For **MULTICONDUCTOR CONTROL CABLE, INSTALL ONLY** per foot for, which price shall be payment in full for installing the electric cable complete. If two or more cables in a conduit are to be removed and reinstalled, each cable will be measured for payment separately

ACB3 EXISTING CABLE FROM CONDUIT, REMOVE ONLY

DESCRIPTION
This work shall consist of removing existing cable in accordance with the Standard Specifications.

METHOD OF MEASUREMENT:
Electric cable removed, shall be counted, per foot.

BASIS OF PAYMENT
This work will be paid for at the contract unit price for **EXISTING CABLE FROM CONDUIT, REMOVE ONLY** per foot for**,** which price shall be payment in full for the work described herein. If two or more cables in a conduit are to be removed, each cable will be measured for payment separately.

ACC1 CCTV CAMERA ASSEMBLY, COLOR, FIXED, FURNISH AND INSTALL

DESCRIPTION
This item shall consist of furnishing, and installing, a color CCTV camera assembly complete with housing and mounting adaptor, as manufactured by Bosch, assembly no. LTC 0620/61 camera, with LTC 3274/40 lens, LTC 9488/61 housing with sun shield and AH2000 mounting adaptor or as approved by the Engineer, compatible with the existing CCTV camera system in use. The item shall also consist of furnishing, and installing one pair of multimode fiber transceivers, GE Model 700VT-EST transmitter and Model 700VR-RST receiver, and one junction box (8”x8”x6”, NEMA 4, Stainless Steel) to house the new transmitter, or as approved by the Engineer, compatible with the existing CCTV camera system in use. Modifications to the existing wiring, multimode fiber and raceways and removal of the old camera and transceivers shall be incidental to this pay item.

INSTALLATION
The color CCTV camera shall be installed in accordance with the camera manufacturer's installation instructions except as noted herein.

REMOVAL
The old camera and its fiber transceivers shall be removed and salvaged, as directed by the Engineer.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **CCTV CAMERA ASSEMBLY, COLOR, FIXED CONTROL, FURNISH AND INSTALL,** which price shall be payment in full for furnishing and installing the camera and salvaging the old camera and associated equipment, as directed by the Engineer.

ACC2 CCTV CAMERA ASSEMBLY, REMOVAL AND SALVAGE

DESCRIPTION
This item shall consist of the removal, transportation to State Stock, and unloading as salvage, a CCTV camera and its appurtenances. The camera may be a fixed position camera or a camera with a PTZ mechanism, but not a dome camera. Dome cameras are covered under items ACC12-ACC14.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the CCTV cameras in complete conformance with the manufacturer's recommendations.

REMOVAL
The CCTV camera shall be removed in accordance with the CCTV camera manufacturer's instructions.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **CCTV CAMERA ASSEMBLY, REMOVAL AND SALVAGE,** which shall be payment in full for the work as described herein.

ACC3 CCTV CAMERA, FURNISH AND INSTALL\

DESCRIPTION
This item shall consist of furnishing and installing a CCTV Camera. The camera may be a fixed position camera or a camera with a PTZ mechanism, but not a dome camera. Dome cameras are covered under items ACC12-ACC14.

TRANSPORTATION
The Contractor shall transport and handle the CCTV cameras in complete conformance with the manufacturer's recommendations.

INSTALLATION
The CCTV camera shall be installed in accordance with the CCTV camera manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **CCTV CAMERA, FURNISH AND INSTALL**, which shall be payment in full for the work as described herein.

ACC4 CCTV CAMERA POLE, FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State Stock, a CCTV camera pole complete with CCTV camera mounting brackets as manufactured by Union Metal Inc., or as approved by the Engineer, identical to the existing CCTV camera poles in use.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **CCTV CAMERA POLE, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ACC5 CCTV CAMERA POLE, REMOVAL, SALVAGE

DESCRIPTION

This item shall consist of the removal, transportation to State Stock, and unloading as salvage, a CCTV camera pole.

TRANSPORTATION

The Contractor shall transport, handle, and store (as applicable) the CCTV camera poles in complete conformance with the manufacturer's recommendations.

REMOVAL

The CCTV camera pole shall be removed in accordance with the CCTV camera pole manufacturer's instructions.

BASIS OF PAYMENT

This item shall be paid at the contract unit price each for **CCTV CAMERA POLE, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ACC6 CCTV CAMERA POLE, INSTALL ONLY

DESCRIPTION

This item shall consist of retrieving from State Stock, loading, transporting and installing a CCTV Camera Pole.

TRANSPORTATION

The Contractor shall transport and handle the CCTV camera poles in complete conformance with the manufacturer's recommendations.

INSTALLATION

The CCTV camera pole shall be installed in accordance with the CCTV camera pole manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT

This item shall be paid at the contract unit price each for **CCTV CAMERA POLE, INSTALL ONLY**, which shall be payment in full for the work as described herein.

ACC7 CCTV CAMERA TRANSFORMER BASE, FURNISH ONLY

DESCRIPTION

This item shall consist of furnishing and delivering to State Stock a CCTV camera transformer base complete with all mounting as manufactured by Union Metal Inc., or as approved by the Engineer, identical to the existing CCTV camera transformer base in use.

BASIS OF PAYMENT

This item shall be paid at the contract unit price each for **CCTV CAMERA TRANSFORMER BASE, FURNISH ONLY**, which shall be payment in full for the work as described herein.

ACC8 CCTV CAMERA TRANSFORMER BASE, REMOVAL, SALVAGE

DESCRIPTION

This item shall consist of the removal, transportation to State Stock, and unloading as salvage, a CCTV Camera Transformer Base.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the CCTV camera transformer bases in complete conformance with the manufacturer's recommendations.

REMOVAL
The CCTV camera transformer base shall be removed in accordance with the CCTV camera transformer base manufacturer's instructions.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **CCTV CAMERA TRANSFORMER BASE, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ACC9 CCTV CAMERA TRANSFORMER BASE, INSTALL ONLY

DESCRIPTION
This item shall consist of retrieving from State Stock, loading, transporting and installing a CCTV Camera Transformer Base.

TRANSPORTATION
The Contractor shall transport and handle the CCTV camera transformer base in complete conformance with the manufacturer's recommendations.

INSTALLATION
The CCTV camera transformer base shall be installed in accordance with the CCTV camera transformer base manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **CCTV CAMERA TRANSFORMER BASE, INSTALL ONLY**, which shall be payment in full for the work as described herein.

ACC10 CCTV CAMERA LOWERING SYSTEM, FURNISH AND INSTALL

DESCRIPTION
This item shall consist of furnishing and installing a CCTV camera lowering system as directed by the Engineer.

The camera lowering system shall be designed to support and lower a standard closed circuit television camera, lens, housing, PTZ mechanism, cabling, connectors and other supporting field components without damage or causing degradation of camera operations. The lowering system shall consist of a suspension contact unit, divided support arm, and a pole adapter for attachment to a pole top tenon, pole top junction box, and camera connection box. The divided support arm and receiver brackets shall be designed to self-align the contact unit with the pole center line during installation and insure the contact unit cannot twist under high wind conditions. Round support arms are not acceptable. The camera-lowering device shall withstand wind forces of 100mph with a 30 percent gust factor using a 1.65 safety factor. The lowering device manufacturer, upon request, shall furnish independent laboratory testing documents certifying adherence to the stated wind force criteria utilizing, as a minimum, effective projected area of the camera system to be attached.

The suspension contact unit shall have a load capacity 200 lbs. with a safety factor of 4 and with a locking mechanism between the fixed and moveable components of the lowering device. This latching mechanism shall securely hold the device and its mounted equipment and relieve their weight from the lowering cable. The fixed unit shall have a heavy duty cast tracking guide and means to allow latching in the same position each time. The contact unit housing shall be weatherproof with a gasket provided to seal the interior from dust and moisture.

The camera-lowering device shall be operated by use of a portable lowering tool. The tool shall consist of a lightweight metal frame and winch assembly with cable as described herein, a quick release cable connector, an adjustable safety clutch and a variable speed industrial duty electric drill motor. This tool shall be compatible with accessing the support cable through the hand hole of the pole. The lowering tool shall attach to the pole with one single bolt. The tool will support itself and the load assuring lowering operations and provide a means to prevent freewheeling when loaded.

All electrical and video coaxial connections between the fixed and lowerable portion of the contact block shall be protected from exposure to the weather by a waterproof seal to prevent degradation of the electrical contacts. The electrical connections between the fixed and movable lowering device components shall be designed to conduct high frequency data bits and one (1) volt peak-to-peak video signals as well as the power requirements for operation of dome environmental controls.

The interface and locking components shall be made of stainless steel and or aluminum. All external components of the lowering device shall be made of corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coatings to withstand exposure to a corrosive environment.

The camera-lowering device shall be in production and in successful use for a highway application for a minimum of 3 years. The camera lowering device shall be the [MG]² Model CLDMG2-HYP-XXX or approved equal.

BASIS OF PAYMENT

This item shall be paid at the contract unit price each for a **CCTV CAMERA LOWERING SYSTEM**, **FURNISH AND INSTALL**, which shall be payment in full for the work as described herein.

ACC11 CCTV CAMERA MOUNT FOR LIGHT TOWER, RETROFIT

DESCRIPTION

This item shall consist of furnishing, retrofit as necessary, and install a CCTV camera mount on the tower ring, one fiber transceiver in an existing box at the base of the light tower, and terminate the camera wiring on the transceiver, as directed by the Engineer.

Modifications to the tower ring lowering assembly are not included in this item and shall be coordinated with the State's Electrical Maintenance Contractor.

The camera mount shall be designed to support and lower a standard closed circuit television camera, lens, housing, PTZ mechanism, cabling, connectors and other supporting field components without damage or causing degradation of camera operations.

BASIS OF PAYMENT

This item shall be paid at the contract unit price each for furnishing and installing a **CCTV CAMERA MOUNT FOR LIGHT TOWER, RETROFIT,** which shall be payment in full for the work as described herein.

ACC12 CCTV DOME CAMERA ASSEMBLY, COLOR, PTZ CONTROL, FURNISH ONLY

DESCRIPTION

This item shall consist of furnishing and delivering to State stock a Color CCTV dome camera assembly complete with housing as manufactured by Bosch, Inc. Model ENVE-26x-2460 with external transformer or approved equal suitable for integration into the existing system. The assembly shall include a high performance color camera with image stabilization, 26X optical zoom or better, and 12X digital zoom.

The assembly shall also include the pan, tilt and zoom mechanisms. An alternate camera manufacturer may be used provided that it is directly compatible with the existing CCTV camera system and with the approval of the Engineer.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **CCTV DOME CAMERA ASSEMBLY, COLOR, PTZ CONTROL, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ACC13 CCTV DOME CAMERA ASSEMBLY, COLOR, PTZ CONTROL, REMOVAL, SALVAGE

DESCRIPTION
This item shall consist of the removal, transportation to State Stock, and unloading as salvage, a CCTV dome camera assembly.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the CCTV dome cameras in complete conformance with the manufacturer's recommendations.

The Contractor shall be aware that the clear domes of these cameras are highly susceptible to scratching and scuffing. The Contractor shall use extreme care in handling the domes. Any damage to the dome will be corrected at no additional cost to the State including complete replacement on the clear dome.

REMOVAL
The CCTV dome camera shall be removed in accordance with the camera manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **CCTV DOME CAMERA ASSEMBLY, COLOR, PTZ CONTROL, REMOVAL, SALVAGE,** which shall be payment in full for the work as described herein.

ACC14 CCTV DOME CAMERA ASSEMBLY, COLOR, PTZ CONTROL, INSTALL ONLY

DESCRIPTION
This item shall consist of retrieving from State Stock, loading, transporting and installing a CCTV dome camera assembly, color, PTZ position.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the CCTV dome cameras in complete conformance with the manufacturer's recommendations.

The Contractor shall be aware that the clear domes of these cameras are highly susceptible to scratching and scuffing. The Contractor shall use extreme care in handling the domes. Any damage to the dome will be corrected at no additional cost to the State including complete replacement on the clear dome.

INSTALLATION
The CCTV dome camera assembly installation shall be installed in accordance with the CCTV dome camera manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **CCTV DOME CAMERA ASSEMBLY, COLOR, PTZ CONTROL, INSTALL ONLY**, which shall be payment in full for the work as described herein.

ACC15 CCTV COLOR MONITOR, 8.4", FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State Stock one, 8.4 inch, active matrix, CCTV Color monitor, Marshall Electronics V-R84P-SDI or approved equal, with the following characteristics.

Power Source	120 V AC, 60 Hz
Power Consumption	4 W (Approx.)
Input/Output	1 composite video, S-Video and SDI inputs with active loop through
TV System	NTSC
Resolution	800 x 600 dots with 1.44 million RGB pixels
Dot Pitch	.213 mm square pixel
Viewing Radius	130^0 Horizontal and vertical
Brightness (in cd/m^2)	350
Contrast Ratio	500:1
Actual Display Size (Approx.)	6.7" X 5.03" (8.4" diagonal)
Overall Size (Approx.)	8.74"W X 6.73"H X 2.65D
Stand Alone	Yes
Ambient Operating Temperature	-10°C to +50°C (+14°F to +122°F)
Ambient Operating Humidity	Less than 90%
Backlight Life	5 year /50,000 hours
Weight	3 lbs.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **CCTV COLOR MONITOR, 8.4", FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ACC16 CCTV COLOR MONITOR, 12", FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State Stock a 12.1", LCD, Color CCTV monitor, Marshall Electronics V-LCD12.1-SVGA or approved equal, with the following characteristics.

Power Source	120 V AC, 60 Hz
Power Consumption	40 W (Approx.)
Input/Output	Composite Video and S-Video
TV System	NTSC
Resolution	800 X 600 Pixels
Dot Pitch	0.3075 mm square pixels
Brightness	25 cd
Display	12.1" diagonal (9.62" X 7.25")
Overall Size (Approx.)	11.5" X 8.75" X 1.25"

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **CCTV COLOR MONITOR, 12", FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ACC17 CCTV LCD MONITOR, FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing and installing a 42 inch Color CCTV flat screen LCD monitor with the following characteristics.

Power Source	120 V AC, 60 Hz
Video Standards Supported	NTSC, PAL, SECAM, 4.43NTSC, PAL-60,, M-PAL, N-PAL
Input	Video Input: S-video, Composite, 2 Component Audio Input: 3 inputs L, R Computer Inputs: 15 pin, DVI-D (HDCP)
Display Type	LCD TFT Active Matrix
Color Depth	24-bit (16.7 million colors)
Resolution	1366 x 768
Screen Size	42" diagonal
Brightness	500 cd/m2
Viewing Angle	170 degrees Vertical and Horizontal
Pixel Pitch:	0.68 mm
Pixel Response Time	16 ms
Max V-Sync Rate	85 Hz
Aspect Ratio	16:9
Displayable Colors	16.7 million
Backlight Life	60,000 hours
Ambient Operating Temperature	32F to 104F degrees
Ambient Operating Humidity	Less than 90%
Speaker Output	0.5 W
EMC Regulations	FCC part-15 Class B, ICES-003, Class B, AS/NZS3548 Class B
Safety Regulations	UL 1950, CSA22.2 No. 950 (C-UL)

INSTALLATION

The monitor shall be ceiling mounted as are the existing monitors. All hardware and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **CCTV LCD MONITOR, FURNISH AND INSTALL**, which price shall be payment in full for furnishing and installing the monitor as specified herein and as directed by the Engineer.

ACC18 CCTV CAMERA FOR CONSTRUCTION AREAS, FURNISH AND INSTALL

SCOPE OF WORK

This item shall consist of furnishing and installing a complete roadside CCTV package, as specified herein, at a site designated by the Engineer. Acquisition and installation of the associated telephone lines and 120 VAC power drop shall be coordinated with the State's Electrical Maintenance Contractor.

DESCRIPTION OF WORK

The material and equipment to be supplied shall be compatible with the existing system in the Region 1 Com Center and identical to other sites already installed. The package shall include: 1) a 50 foot wooden pole, 2) a Philips Envirodome Camera with RS485 control, 3) a NEMA 4X TLC800 pole mounted outdoor codec assembly with associated environmental temperature controls and Multitech Multimodem II, 4) Lightening and Surge protection, and 5) all other wiring and appurtenances necessary for a fully operational installation.

The installation of the wooden pole shall include an in ground pole depth of no less than 10 feet with the remaining work in accordance with Article 808.03 of the current version of the Standard Specifications for Road and Bridge Construction. Also included shall be: 1) mounting and interconnecting all material and equipment on the pole in complete accordance with manufacturers recommendations, 2) all connections to associated telephone lines and 120 VAC power, and 3) site and Com Center software configuration by TLC Watch factory personnel to seamlessly integrate the new location into the existing system.

TRANSPORTATION, STORAGE AND HANDLING

All necessary transportation, storage and handling shall be in accordance with manufacturer's recommendations and these Special Provisions.

INSPECTION AND ACCEPTANCE

The Contractor and manufacturer personnel shall test and inspect the installation and performance of the system in the presence of the Engineer. No additional monies shall be allowed for any subsequent changes necessary to provide seamless integration and operation of the Construction Area CCTV package into the existing system.

BASIS AND PAYMENT

This item shall be paid at the contract unit price each for **CCTV CAMERA FOR CONSTRUCTION AREAS, FURNISH AND INSTALL** which shall be payment in full for the work described herein.

ACC19 CCTV CAMERA FOR CONSTRUCTION AREAS, REMOVAL, SALVAGE

DESCRIPTION

This item shall consist of the removal, transportation to State Stock, and unloading as salvage, a CCTV camera assembly for construction areas.

TRANSPORTATION

The Contractor shall transport, handle and store (as applicable) the CCTV cameras in complete conformance with the manufacturer's recommendations.

The Contractor shall use extreme care in handling the cameras. Any damage to the cameras will be corrected at no additional cost to the State.

REMOVAL
The CCTV dome camera shall be removed in accordance with the camera manufacturer's instructions, except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **CCTV CAMERA FOR CONSTRUCTION AREAS, REMOVAL, SALVAGE,** which shall be payment in full for the work as described herein.

ACC20 CCTV COLOR MONITOR, DUAL, 8.4", FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State Stock one dual screen, 8.4 inch Color TFT monitors, Marshall Electronics V-R82DP-2C or approved equal, with the following characteristics.

Power Source	120 V AC, 60 Hz
Power Consumption	10 W (Approx.)
Input/Output	Video (Input: 2 / Output: 2, loop through) -- composite video
TV System	NTSC
Resolution	800 x 600 dots with 1.44 million RGB pixels
Dot Pitch	.213 mm square pixel
Viewing Radius	130^0 Horizontal and vertical
Brightness (in cd/m^2)	350
Contrast Ratio	500:1
Actual Display Size (Approx.)	17 cm X 12.8 cm (8.4" diagonal)
Overall Size (Approx.)	25 cm (9-13/16") diagonal
19-type Rack-Mount	Yes, 4U Height
Ambient Operating Temperature	-10°C to +50°C (+14°F to +122°F)
Ambient Operating Humidity	Less than 90%
Backlight Life	5 year /50,000 hours
Dimensions (W x H x D)	486 x 175 x 38 mm (19-1/8" x 6-7/8" x 1-1/8")
Weight	2.4 kg (5.5 lbs.)

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **CCTV COLOR DUAL, 8.4", FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ACC21 CCTV COLOR MONITOR, QUAD, 4", FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State Stock four, 4" inch, active matrix, color monitors, Marshall Electronics V-R44P or approved equal, with the following characteristics.

Power Source	120 V AC, 60 Hz
Power Consumption	3 W (Approx.)
Input/Output	Video (Input:1 with active loop through)
TV System	NTSC
Resolution	480 x 234 pixels, 112,300 total
Dot Pitch	.171 mm X .264 mm pixel
Viewing Radius	130^0 Horizontal and vertical
Brightness (in cd/m^2)	300
Contrast Ratio	500:1
Actual Display Size (Approx.)	3.23" X 2.43" (4" diagonal)
Overall Size (Approx.)	19.125"W X 3.43"H X 1.9"D
19-type Rack-Mount	Yes, 2U High
Ambient Operating Temperature	-10°C to +50°C (+14°F to +122°F)
Ambient Operating Humidity	Less than 90%
Backlight Life	5 year /50,000 hours
Weight	3.5 lbs.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **CCTV COLOR QUAD, 4", FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ADMS1-3 ARTERIAL DYNAMIC MESSAGE SIGNS

DESCRIPTION

This item shall consist of furnishing, delivering to state stock, and vendor installation support for a NTCIP compliant amber LED Dynamic Message Sign suitable for installation on an arterial street, operationally compatible with the existing sign controller at the Traffic Systems Center. Within 14 days of contract execution, the Contractor shall submit the complete shop drawings and data sheets of the proposed signs for approval by the Engineer. Revised submittals shall be submitted with in 7 days of receipt of Engineer's comments.

METHOD OF MEASUREMENT

This item shall be measured as each, of the specific type. A sign unit shall be approved for payment when the device is delivered to a site designated by the Engineer, and is tested and shown to be in compliance with the description of the device.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **ARTERIAL DYNAMIC MESSAGE SIGNS,** of the type indicated, delivered to the designated location, which price shall be payment in full for the work as specified herein and as directed by the Engineer. There will be a 10% retainage to cover the installation support requirement. Once the sign is installed and operational, the retained payment will be released.

ADMS1 ARTERIAL DYNAMIC MESSAGE SIGNS, 8" CHARACTERS
ADMS2 ARTERIAL DYNAMIC MESSAGE SIGNS, 10" CHARACTERS
ADMS3 ARTERIAL DYNAMIC MESSAGE SIGNS, 12" CHARACTERS

DETAIL SPECIFICATIONS

The sign provided consists of a continuous matrix display, housing, NTCIP compliant controller, all cables and connections, and mounting hardware necessary to provide a complete operational display. The sign shall be a full matrix, 28 by 96 LED display, designed to display 3 lines of 19 characters. Characters shall be either 8, 10, or 12 inches high, consisting of a 4 by 7 font.

The DMS is capable of displaying ASCII characters 32 thru 126. Control of different character fonts include compressed, expanded, and double-stroke along with spacing options shall be provided.

The DMS shall be designed for a 20 year life.

The sign and all components provided shall be operational throughout the range of -50 to +185 degrees F, and constructed to withstand a wind load of 140 mph. The housing shall comply with NEMA 3R enclosure criteria for water resistance.

The assembly shall be ventilated with a minimum of two exhaust fans, operational when the ambient temperature exceeds 100 degrees F, and shall be sized to keep internal temperatures no higher than 140 degrees F with an ambient temperature of 115 degrees F or less. All ventilation air inlets shall include removable and filters replaceable from within the housing. Filters shall be standard size readily available.

Heaters shall be provided to prevent condensate within the housing.

A temperature and humidity sensor shall be used in conjunction with the ventilation and heaters to prevent face panel fog or frost when the internal temperature fall below 40 degrees F.

The sign assembly shall be constructed with front access, allowing full maintenance by tilting the face for access. The door shall be powder coated black to maximize contrast.

Display modules shall have the same vertical and horizontal pitch, with no discernable pitch difference between modules.

Display modules shall be mounted with a durable, non corrosive hardware assembly. Specialized tools for removal or servicing shall not be required.

The DMS functions so that if any display module is removed or failed, it will not impact the structural integrity, nor disrupt the performance of any other modules. Upon power up, or reset of the sign controller, a failed module shall not impact the ability of the controller to communicate with the central sign controller, nor inhibit the operation of the remaining modules.

All display modules shall have a conformal coating applied during the sub-assembly manufacturing process. LEDs are directly mounted to the LED pixel modules with no standoffs or alignment devices. The LED modules shall have copper solder pads on both sides, with plated thru holes. Failure of any LED within a pixel will not impact the ability to control the remaining LEDs in the same pixel.

LEDs shall have a viewing angle of 30 degrees, with a typical color spec of 592 nm, minimum intensity of 2 cd per LED. LEDs used shall have no discernable difference in intensity or color to the human eye. LEDs shall be rated for a half life of no less than 100,000 hours.

The intensity of the sign shall be controlled remotely, or locally by means of multiple photocell readings. The photocells measure the sunlight striking the face, rear, and the ambient light to determine the appropriate sign intensity level. The adjustment shall not cause blanked pixel to illuminate. Sign intensity is also controlled via remote commands from the central controller.

SIGN CONTROLLER

A controller shall be provided with each Dynamic Message Sign. The controller is a stand-alone microprocessor-based computer that runs on an embedded operating system.
The controller shall be fully compliant with NTCIP standards and with the NTCIP Class B (PMPP) communications profile, and be fully compliant with the NTCIP Class D dial-up (PPP) communications profile.
The sign controller shall incorporate a watchdog timer to detect an out-of-program condition and reset the microprocessor. The controller shall be designed for fail-safe prevention of improper information display in the case of malfunction. At a minimum, this includes an automatic blanking feature, which immediately clears the message displayed on the sign in the event of a communication failure or invalid transmission from the central controller.
The controller shall contain diagnostic routines capable of testing full sign operations. The controller shall perform all messaging operations, including but not limited to flashing on and off, inverse character display on and off, all pixels on checkerboard, and inverse checkerboard.
Controller operates throughout a temperature range of -40 degrees to +176 degrees F and a humidity range of 0 to 99%.
The controller shall contain both permanent and changeable memory. Permanent memory shall be in the form of flash-PROM integrated circuits that contain the executable sign controller software. Changeable memory shall be in the form of RAM integrated circuits. RAM circuits shall be backed-up by a lithium battery and shall retain their data memory for a minimum of one year following power failure. RAM memory shall be used for storage of message libraries, programmable operating parameters, downloading and uploading messages. All configuration parameters shall be stored in non-volatile memory and is not affected by complete loss of power at any point in its operation.
The controller shall have a minimum of two EIA/TIA-232E communication ports and an Ethernet port. One port is for remote communications via a dial-up modem (PPP) or direct (PMPP) connection with the central system control computer. One port is for local, direct communications with a laptop computer. Baud rates shall be in range of 9600 bits per second. All ports are active at all times.
Unit addressing shall be by means of dip switch selectable addressing and programmable IP addressing.
The controller shall have a UPS backup system which enables the controller to continue operation for a period up to two hours allowing the reporting of sign status and power failure. Restoration of commercial power shall not require a physical reset of the controller.

Provision shall be made for the inclusion of a wireless or cell phone enabled remote communication device, as designated by the engineer.

HOUSING

The housing shall be designed and constructed so all maintenance is performed from the front of the sign. The DMS housing is fabricated with 0.125 inch thick 5052-H32 aluminum alloy welded and inspected in accordance with ANSI standards by welders certified by AWS.

The housing shall protect internal components from ice, dust, rain, and corrosion in accordance with NEMA enclosure 3R standards. Weep holes for draining shall be provided and screened on the bottom of the housing. The housing shall be constructed with 3 120 VAC ground fault protected utility outlets.

The housing frame is constructed using aluminum extrusions made of alloy 6061-T6.

All structural hardware, brackets, nuts, bolts, washers shall be stainless steel or galvanized high strength steel. Mounting attachments shall be supplied with the sign assembly.

The sign face shall consist of a single front access door providing access to all internal components. The face panel shall be aluminum with openings sized to allow maximum light from the LED pixels without distortion. The face panel includes a polycarbonate panel to prevent water and other elements from entering the housing. The polycarbonate shall contain a UV light inhibitor to protect the LED modules, and premature aging of the polycarbonate sheet itself.

The front panel assembly shall be finished in flat black powder coat.

ELECTRICAL

DMS signal and power shall be protected from electrical spikes and transients with surge protection devices. The AC power shall be protected with a parallel device surge suppressor rated at no less than 10KA. The controller communications are protected by avalanche diodes connected between each signal line and ground. This protection shall be applied to all sensors and signaling within the housing.

NTCIP REQUIREMENTS

Definitions
The following terms shall apply within the scope of this specification:

DMS A Dynamic Message Sign, includes the sign display, controller, cabinet, and other associated field equipment.

FSORS Full Standardized Object Range Support. Full Standardized object Range Support – Support for, and proper implementation of all valid values of an object as defined within the object's OBJECT_TYPE macro in the NTCIP standard; this is defined in two distinct sub-requirements. (1) If ACCESS of the object is read-write, a Management System shall be able to set the object to any valid value as defined by SYNTAX and DESCRIPTION fields (except that the value of 'other' need not be supported when such a value is defined) and the indicated functionality shall be provided. (2) The value indicated by the object (e.g. in response to a get), regardless of the access shall reflect the current conditions per the rules specified in the object's DESCRIPTION.

Management System - A computer system used to control an NTCIP component. This includes any laptop software used for field control as well as the central software.

NTCIP Component – A DMS or management system.

NTCIP System – A management plus the various ASCs and DMSs controlled by the management system.

Response Time – The time to prepare and begin transmission of a complete response containing the requested application layer information. This is measured as the time from receipt of the closing flag of the request to the transmission of the opening flag of the response when the device has immediate access to transmit.

References.

This specification references several standards through their abbreviated names. Each DMS component shall support the most recent version of these standards, including all Recommended or Approved Amendments, currently in effect. The most recent versions of these standards and known Amendments are shown below. In many cases, the standards are more widely known by its original NEMA assigned number; in these cases the NEMA number is also identified. The content of the NEMA standard is identical to the NTCIP standard. It is the ultimate responsibility of the Manufacturer to monitor NTCIP actives to discover any recent documents.

Table 1: NTCIP Standards

Abbreviated Number	Full Number	Title	Known Amendments
NTCIP 1101	**NTCIP 1101:1997** (NEMA TS 3.2-1996)	Simple Transportation Management Framework	Amendment #1 Dated November 2, 1998
NTCIP 1201	**NTCIP 1201:1997** (NEMA TS 3.4-1996)	Global Object Definitions	Amendment #1 Dated November 2, 1998
NTCIP 1203	**NTCIP 1203:1997** (NEMA TS 3.6-1997)	Object Definitions for Dynamic Message Signs	
NTCIP 2001	**NTCIP 2001: 2000** (NEMA TS-3.3)	Class B Profile	Amendment #1 Dated Unknown
NTCIP 2101	**NTCIP 2101: 2000** (NEMA TS 3.PMP232-2000)	Subnet Profile for PMPP over RS-232	
NTCIP 2102	**NTCIP 2102V01.03: (Draft)**	Point-to Point Protocol using RS 232 Subnetwork Profile	
NTCIP 2104	NTCIP 2104 **v01.10**	National Transportation Communications for ITS Protocol Ethernet Subnetwork Profile	
NTCIP 2201	**NTCIP 2201**	Transportation Profile	
NTCIP 2301	**NTCIP 2301: 2000** (NEMA TS 3.STMF)	Application Profile	

General Requirements

1. Subnet Level

Each serial port on each NTCIP Component shall support NTCIP 2102 over a dial-up connection with a external modem with data rates of 28.8 kbps, 19.2 kbps, 14.4 kbps, 9600 bps, 2400bps, 1200 bps, 600 bps and 300bps. The NTCIP Component shall be capable to make outgoing and receive incoming calls as necessary and support the following modem command sets:

- Hayes AT – Command Set
- MNP5
- MNP10
- V.42bis

Each serial port on each NTCIP Component shall support NTCIP 2102 over a null-modem connection with data rates of 19.2 kbps, 14.4 kbps, 9600 bps, 4800 bps, 2400 bps, 1200 bps, 600 bps and 300 bps.

Each serial port on each NTCIP Component shall support NTCIP 2101 with data rates of 9600 bps, 4800 bps, 2400 bps, 1200 bps, 600 bps and 300 bps.

NTCIP Components may support additional Subnet Profiles at the Manufacturer's option. At any one time, only one Subnet Profile shall be active on a given serial port of the NTCIP Component. The NTCIP Component shall be configurable to allow the field technician to activate the desired Subnet Profile and shall provide a visual indication of the currently selected Subnet Profile.

2.Transport Level

Each NTCIP Component shall comply with NTCIP 2201 The transport layer shall be a NULL layer.

NTCIP Components may support additional Transportation Profiles at the Manufacturer's option. Response datagrams shall use the same Transport Profile used in the request. Each NTCIP Component shall support receipt of datagrams conforming to any of the identified Transport Profiles at any time.

3. Application Level

Each NTCIP Component shall comply with NTCIP 1101 and shall meet the requirements for conformance Level 1. Each NTCIP Component shall support STMP traps. An NTCIP Component may support additional Application Profiles at the Manufacturer's option. Responses shall use the sand Application Profile used by the request. Each NTCIP Component shall support the receipt of the Application data packets at any time allowed by the subject standards.

4. Information Level

Each NTCIP Component shall provide full Standardized Object Range Support of all objects required by this specification unless otherwise indicated below. The maximum response time for any object shall be 200 milliseconds.

The DMS shall support all mandatory objects of all Conformance Groups as defined in NTCIP 1201 and NTCIP 1203. Table 2 indicated the modified object requirements of these mandatory objects.

Table 2: Modified Object Ranges for Mandatory Objects

Object	Reference	Project Requirement
Module Table Entry	NTCIP 1201 Clause 2.2.3	Shall contain at least one row with module Type equal to 3 (software). The module make shall specify the name of the Manufacturer, the module model shall specify the Manufacturer" name of the component and the model version shall indicate the model version number of the component
Max Group Address	NTCIP 1201 Clause 2.7.1	Shall be at least 1
Community Name Address	NTCIP 1201 Clause 2.8.2	Shall be at least 3
dms Num Permanent Msg	NTCIP 1203 Clause 2.6.1.1.1.1	Shall be at least 1*
dms changeable Msg	NTCIP 1203 Clause 2.6.1.1.1.3	Shall be at least 21
dms Free Changeable Memory	NTCIP 1203 Clause 2.6.1.1.1.4	Shall be at least 20 when no message is stored
dms Message Multi String	NTCIP 1203 Clause 2.6.1.1.1.8.3	The DMS shall support any valid MULTI string containing any subset of those MULTI tags listed in table 4
dms Control Mode	NTCIP 1203 Clause 2.7.1.1.1.1	The DMS shall support any valid MULTI string containing any subset of those MULTI tags listed in Table 4.

Table 3: Content of Permanent Messages

Perm. Msg. Mum.	Description
1	Permanent Message #1 shall blank the display (ie. consist of an empty MULTI string). It shall have a run-time priority of one (1),

Table 4: Required Multi Tags

Code	Feature
f1	field 1 – time (12hr)
f2	field 2 – time (24hr)
f8	field 8 - day of month
f9	field 9 - month
f10	field 10 – 2 digit year
f11	field 11 – 4 digit year
fl (and/fl)	flashing text on a line by line basis with flash rates controllable in 0.1 second increments
fo	font
jl2	justification – line- left
jl3	justification – line-center
jl4	justification – line-right
jl5	justification – line-full
jp2	justification – page - top
jp3	justification – page -middle
jp4	justification – page -bottom
mv	moving text
nl	new line
np	new page, up to 2 instances in a message (ie., up to 3 pages/frames in a message counting first page)
pt	page times controllable in 0.1 second increments

The NTCIP Component shall also implement all mandatory objects of the following optional conformance groups.

(a) Time Management, as defined in NTCIP 1201

(b) Timebase Event Schedule, as defined in NTCIP 1201.

The following list indicates the modified object requirements of the conformance group.

Table 5: Modified Object Ranges for the Timebase Event Schedule Conformance Group

Object	Reference:	Project Requirements
max time base schedule entries	NTCIP 1201 clause 2.4.3.1	Shall be at least 28
max day plans	NTCIP 1201 clause 2.4.4.1	Shall be at least 20
max day plan events	NTCIP 1201 clause 2.4.4.2	Shall be at least 10

(c) Report, as defined in NTCIP 1201.

(d) PMPP

(e) The following list indicates the modified object requirements for this conformance group.

Table 6: Modified Object Ranges for the Report Conformance Group

Object	Reference	Project Requirements
max event log configs	NTCIP 1201 Clause 2.5.1	Shall be at least 50
Event configuration Mode	NTCIP 1201 Clause 2.4.3.1	The NTCIP Component shall support the following event configuration: on change greater than value smaller than value
Max event log size	NTCIP 1201 Clause 2.5.3	Shall be at least 200
Max event classes	NTCIP 1201 Clause 2.5.5	Shall be at least 7

(f) Font Configuration, as defined in the NTCIP 1203.
The following list indicated the modified object requirements for this conformance group.

Table 7: Modified Object Ranges for the Font Configuration Conformance Group

Object	Reference	Project Requirements
num Fonts	NTCIP 1203 Clause 2.4.1.1.1.1	Shall be at least 8
max Font Characters	NTCIP 1203 Clause 2.4.1.1.1.3	Shall be at least 255

Upon delivery, the first font shall be a standard 12-inch font, as described in the DMS Special Provision. The second font shall be a double-stroke 12-inch. The third font shall be a 19.8-inch font.

Upon delivery, the first three font sets shall be configured in accordance with ASCII character set for the following characters:

- . “A” thru “Z” – in both upper and lower cases
- “0” thru “9” – all decimal digits
- A blank or space
- Eight (8) directional arrows
- Punctuation marks, such as . , ! ? - ‘ ”
- Other characters, such as # & * / ( ) [ ] < >

(g) DMS configuration, as defined in NTCIP 1203

(h) Multi Configuration, as defined in the NTCIP 1203.

The following list indicates the modified object requirements for this conformance group.

Table 8: Modified Object Ranges for the MULTI Configuration Conformance Group

Object	Reference	Project Requirement
default Background color	NTCIP 1203 Clause 2.5.1.1.1.1	The DMS shall support the following background colors: black
default foreground color	NTCIP 1203 Clause 2.5.1.1.1.2	The DMS shall support the following foreground colors: • Amber
Default flash on	NTCIP 1203 Clause 2.5.1.1.1.3	The DMS shall support the full range of these objects.
Default flash off	NTCIP 1203 Clause 2.5.1.1.1.4	The DMS shall support the full range of these objects.
default justification line	NTCIP 1203 Clause 2.5.1.1.1.6	The DMS shall support the following forms of line justification: • left • center • right
default justification page	NTCIP 1203 Clause 2.5.1.1.1.7	The DMS shall support the following forms of page justification: • top • middle • bottom
default page on time	NTCIP 1203 Clause 2.5.1.1.1.8	The DMS shall support the full range of these objects with step sizes no larger than 0.5 seconds
default page off time	NTCIP 1203 Clause 2.5.1.1.1.9	The DMS shall support the full range of these objects with step sizes no larger than 0.5 seconds
default character set	NTCIP 1203 Clause 2.5.1.1.1.10	The DMS shall support the following character sets: eight bit

(i) Multi Error Configuration, as defined in NTCIP 1203

(j) Illumination/Brightness Control, as defined in NTCIP 1203.
The following list indicates the modified object requirements for the conformance group.

Table 9: Modified Object Ranges for Illumination/Brightness Control Conformance Group

Object	Reference	Project Requirement
dms illum control	NTCIP 1203 Clause 2.8.1.1.1.1	The DMS shall support the following illumination control modes: photocell timer manual
Dms illum num bright levels	NTCIP 1203 Clause 2.8.1.1.1.4	Shall be at least 16

(k) Scheduling as defined in the NTCIP 1203. The following text indicates the modified object requirements for this conformance group.

Table 10: Modified Object Ranges for Scheduling Conformance Group

Object	Reference:	Project Requirement
num action table entries	NTCIP 1203 Clause 2.9.1.1.1.1	Shall be at least 200

(l) Sign Status, as defined in NTCIP 1203

(m) Status Error, as defined in NTCIP 1203

(n) Pixel Error Status, as defined in NTCIP 1203

(o) Power Status, as defined in the NTCIP 1203

The NTCIP Component shall also implement the following optional objects:

Table 11: Optional Object Requirements

Object	Reference	Project Requirement
global set ID parameter	NTCIP 1201 Clause 2.2.1	FSORS
event config log OID	NTCIP 1201 Clause 2.5.4.7	FSORS
event config action	NTCIP 1201 Clause 2.5.4.8	FSORS
event class description	NTCIP 1201 Clause 2.5.6.4	FSORS
default flash on	NTCIP 1203 Clause 2.5.1.1.1.3	The DMS shall support the full range of these objects with step size no larger than 0.5 seconds
default flash off	NTCIP 1203 Clause 2.5.1.1.1.4	The DMS shall support the full range of these objects with step size no larger than 0.5 seconds
dms SW reset	NTCIP 1203 Clause 2.7.1.1.1.2	FSORS
dms message time remaining	NTCIP 1203 Clause 2.7.1.1.1.4	FSORS
dms short power recovery message	NTCIP 1203 Clause 2.7.1.1.1.8	FSORS
dms long power recovery message	NTCIP 1203 Clause 2.7.1.1.1.9	FSORS
dms short power loss time	NTCIP 1203 Clause 2.7.1.1.1.10	FSORS
dms reset message	NTCIP 1203 Clause 2.7.1.1.1.11	FSORS
dms communication loss message	NTCIP 1203 Clause 2.7.1.1.1.12	FSORS
dms time comm. loss	NTCIP 1203 Clause 2.7.1.1.1.13	FSORS
dms end duration message	NTCIP 1203 Clause 2.7.1.1.1.15	FSORS
dms memory mgmt	NTCIP 1203 Clause 2.7.1.1.1.16	The DMS shall support the following Memory Management Modes: clear changeable messages clear volatile messages
dms multi other error description	NTCIP 1203 Clause 2.7.1.1.1.20	If the vendor implements any vendor-specific MUTI tags, the DMS shall provide meaningful error messages with in the object whenever one of these tags generates an error.
dms illum light output status	NTCIP 1203 Clause 2.8.1.1.1.9	FSORS
watchdog failure count	NTCIP 1203 Clause 2.11.1.1.1.5	FSORS
dms stat door open	NTCIP 1203 Clause 2.11.1.1.1.6	FSORS
fan failure	NTCIP 1203 Clause 2.11.1.1.1.8	FSORS
fan test activation	NTCIP 1203 Clause 2.11.1.1.1.9	FSORS
temp min ctrl cabinet	NTCIP 1203 Clause 2.11.4.1.1.1	FSORS
temp max ctrl cabinet	NTCIP 1203 Clause 2.11.4.1.1.2	FSORS
temp min sign housing	NTCIP 1203 Clause 2.11.4.1.1.5	FSORS
temp max sign housing	NTCIP 1203 Clause 2.11.4.1.1.6	FSORS

AGR1 GROUP RELAMPING OF FIBER OPTIC SIGNS

DESCRIPTION

This item shall consist of relamping the fiber optic signs as specified herein and as directed by the Engineer.

PROCEDURE
The sign shall be relamped with MR16 tungsten-halogen lamps, 12 volt, 42 watt, ENL distribution. All sign and lamp manufacturer's recommendations shall be carefully followed.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **GROUP RELAMPING OF FIBER OPTIC SIGNS,** each, at the location specified, which price shall be payment in full for the work as specified herein and as directed by the Engineer.

ALC1 PADLOCK

DESCRIPTION
This item shall consist of furnishing and installing padlocks at ASMC sites, as directed by the Engineer.

MATERIALS
The padlock shall be commercial grade, weather resistant, rekeyable, five (5) pin locks, with a hardened boron alloy shackle, xenoy plastic cylinder cover, dual ball bearing locking, laminated steel body, high security cylinder with spool pins and removable cylinder. All locks shall have estane shackle seals and flow through debris channels. All locks shall be keyed alike, as specified by the Engineer. The Contractor shall submit a catalog cut of the proposed locks for Engineer's approval.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for PADLOCK, at the location specified, which price shall be payment in full for the work as specified herein and as directed by the Engineer.

ALD1 LED CHEVRON SIGN, FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State stock a LED chevron sign as manufactured by National Sign & Signal Company, reference National Sign Drawing No. B5450-592LED or as approved by the Engineer, compatible to the existing fiber optic chevron signs in use complete with heaters. The signs shall have built in thermostats as have the existing fiber optic chevrons.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **LED CHEVRON SIGN, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ALD2 LED AUXILIARY SIGN, FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State stock a LED auxiliary sign as manufactured by National Sign & Signal Company compatible to the existing fiber optic auxiliary signs in use complete with heaters. The auxiliary sign shall be of the following type as directed by the Engineer:

Type of Sign	National Sign Drawing No
"GATES CLOSING"	B5447-589LED
"STAY IN YOUR LANE"	B5448-590LED
red "X"	

The LED auxiliary sign shall include thermostats to control the heaters.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **LED AUXILIARY SIGN, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ALD3 LED LANE USAGE SIGN, FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State stock a LED Lane Usage sign compatible to the existing lane usage signs in use complete.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **LED LANE USAGE SIGN, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ALD4 LED OR FIBER OPTIC SIGN, REMOVAL, SALVAGE

DESCRIPTION
This item shall consist of the removal, transportation to State Stock, and unloading as salvage, a LED or fiber optic sign. This item does not apply to Pay Item ALD6 herein.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the fiber optic or LED signs in complete conformance with the manufacturer's recommendations.

INSTALLATION
The fiber optic or LED sign shall be installed in accordance with the sign manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **FIBER OPTIC OR LED SIGN, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ALD5 LED OR FIBER OPTIC SIGN, INSTALL ONLY

DESCRIPTION
This item shall consist of retrieving from State Stock, loading, transporting and installing a LED or fiber optic sign. This item does not apply to Pay Item ALD6 herein.

TRANSPORTATION
The Contractor shall transport and handle the fiber optic or LED signs in complete conformance with the manufacturer's recommendations.

INSTALLATION
The fiber optic or LED sign shall be installed in accordance with the sign manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **FIBER OPTIC OR LED SIGN, INSTALL ONLY,** which shall be payment in full for the work as described herein.

ALD6 LED GORE SIGN, FURNISH ONLY

DESCRIPTION

This work shall consist of furnishing and delivering to storage a LED gore sign as described herein. The LED shall be fully operationally equivalent to the existing fiber optic gore sign.

VENDORS

The LED system (sign, controller, related appurtenances) shall be manufactured by or approved equal:

Daktronics, Inc.	1-800-843-9879
Skyline Products:	(719) 392-9046
National Sign	(847) 543-9138

PAINT

Paint for the sign front and mask shall be a fluoropolymer-based coating system containing KYNAR 500 resin or equivalent.

DISPLAYS

The display shall be provided, utilizing 26mm diameter pixels, each consisting of identical clusters of LED's as per the requirements stated herein.

The signs shall have sufficient borders on all four sides for display clarity and background contrast, and shall be legible from a distance of 300 feet, within a minimum 17 degree cone of vision on each side of the centerline perpendicular to the width of the sign.

The minimum sign luminance shall be 4300 cd/sq m over the range of 8.5 degrees right and left of the vertical geometric center of the sign and 8.5 degrees below the horizontal geometric center of the sign.

All LED's shall conform to the following minimum requirements:

LED's shall be un-tinted, non-diffused, high-output, solid state lamps utilizing aluminum indium gallium phosphide (AlInGaP) LED technology. These lamps shall be as produced by Hewlett-Packard or approved equal and shall be fully interchangeable.

The MTBF at an ambient temperature of +85 degrees Celsius shall be a minimum of 500,000 hours. LED's shall have an operating temperature range of -13 to +185 degrees Fahrenheit (-25 to +85 Celsius).

LED's shall be of the size T-1 3/4 (5 mm).

Normalized intensity of an LED at an angle of 10 degrees off the center axis shall be no less than 50% of the normalized intensity at an off-axis angle of 0 degrees.

PIXELS

LED's shall be mounted in 26mm diameter pixels, each one consisting of 4 LED's.

Pixels shall be mounted on a printed circuit board, and shall be arranged into a seven (7) pixel high by five (5) pixel wide matrix. Characters formed by the VMS displays shall have a minimum of seven (7) pixels in height. The number of pixels making up the character width shall vary by character and shall be in accordance with the characters described herein. The pixel pitch, or center-to-center spacing, shall produce a character 18. in height (+/- 0.5%).

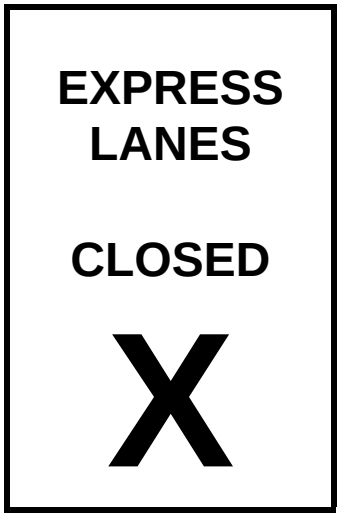
The LED printed circuit board shall be double-sided and shall be plated on both sides with a minimum of .002 inches of copper. The cathode pads shall be located on both the front and back sides of the board. Each cathode lead trace pad shall be a minimum of 0.40 square inches in size.

The LED printed circuit boards shall be coated on their front and back sides with a moisture-resistant acrylic conformal coating. The coating shall have a minimum cured thickness of 0.003 inches, except around the front of each LED pixel, where the coating shall be a minimum of 0.006 inches thick. Each pixel shall be protected from normal handling damage by a circular polycarbonate plastic ring that clips onto the printed circuit board and surrounds the LED's. The ring shall be 0.5 to 0.6 inches in height and have a minimum wall thickness of 0.050 inches.

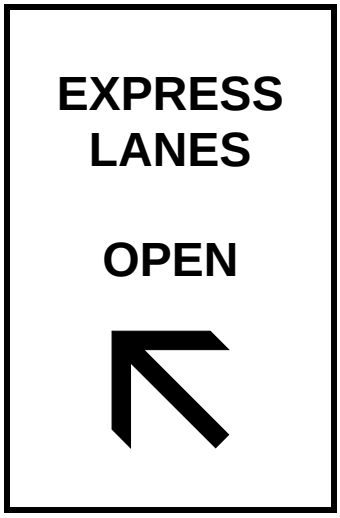
Each pixel printed circuit board shall attach mechanically to an aluminum module panel using standoffs and wing-nut fasteners. Each printed circuit board shall be removable from its module using simple hand tools or no hand tools. The front of the module panel shall be painted flat black.

Pixels shall have automatically variable brightness capabilities. Sign shall only operate at full brightness on cloudless days with full sunshine.

Pixels shall operate with no more that 20 mA of current at full intensity.



Ramp Closed



Ramp Open

Dimensions	
Sign Height	47”
Sign Width	40”
Height of **X**	30”
Character Height	6”

All dimensions are approximate

LED Colors	
Express Lanes	Amber
Closed	Red
X	Red
Open	Green
Arrow	Green

EXTERIOR HOUSING

Sign housings shall be constructed of aluminum, alloy 3003-H14, and shall not be less than 1/8 inch thick. Seams shall be continuously welded except for the sign face. Framing structural shapes shall be constructed of aluminum, alloy 6061-T6. Non-corrosive materials shall be used where possible and corrosion protection shall be provided between dissimilar metals. Sign cases shall be cleaned and deoxidized after welding.

The enclosure shall be thoroughly cleaned and then neutralized for priming. The housing shall then be treated with a phosphate coating solution and sealed as per Military Specification MIL-C-5541. The surface shall be prepared for priming per the primer manufacturer's recommended pretreatment procedure. A zincchromate primer shall be applied, 34 mills thick, followed by a top coat of epoxy-mastic based flat matte black paint. The primer and paint shall be compatible products from the same manufacturer.

Sign face shall be designed and developed in a manner that reduces or eliminates reflections from headlights or sunlight. Signs shall have ICYNAR 500 or equivalent polycarbonate sign face coverings. Coverings shall be weather tight, ultraviolet protected, and non-diffusing, with a thickness of 1/4 inch. Polycarbonate sign face shall be covered with a 0.040 inch minimum thickness aluminum mask. Aluminum mask shall provide openings directly in front of each pixel. Pixel openings shall be of sufficient size so as to not interfere with LED light output. Sign face shall be designed to minimize bowing.

Sign housing, windows, framing and mounting members shall be designed to withstand a wind velocity of 90 mph with a gust factor of 30 percent in accordance with AASHTO's “Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals" and certified by a registered Professional Structural Engineer.

Signs shall be constructed to present a clean, neat appearance; the equipment located therein shall be protected from moisture, dust, dirt and corrosion. Sign enclosures shall contain small weep holes for draining moisture accumulating in the signs from condensation. Weep holes shall be designed so as to protect against insect entrance.

Lifting eyes or other equivalent components shall be provided for moving and mounting signs. The sign housing shall be designed such that the sign can be shipped and temporarily stored without damage or undue stresses prior to installation. The sign shall be provided with a temporary storage support frame that will permit the storage of the sign in an above-ground vertical position without damage to the sign housing.

POWER SUPPLIES

Power supplies shall operate from 208 VAC power. The LED displays shall be operated at low internal DC voltage not exceeding 24 VDC. Power supplies shall be solid-state electronic switching regulated output. Two supplies shall be provided for each 1/3 of the display. Power supplies shall be wired in redundant parallel configuration for each section and shall provide equal amounts of current to each section. Power supplies shall be rated such that if one supply fails, the other can operate the entire LED section under full load conditions. Power supplies shall operate from -2 to +140 degrees F (-30 to +60 C).

Power supplies shall be short-circuit protected by DC power off and shall reset automatically after 5 seconds of AC power off. Power supplies shall also be short-circuit protected by a minimum overload allowance of 105% and have an efficiency rating of at least 75%. Power supply shall be UL listed.

Sign controller shall be capable of sensing the failure of each individual power supply. When one of the power supplies in a group has failed, the status of each supply shall be clearly displayed on the control computer screen.

TERMINAL BLOCKS AND CONNECTORS

Screw type terminal blocks and crimp-on spade terminals shall be used for all wire connections except plug connections. Telephone type knife connectors are not acceptable.

LIGHTNING PROTECTION

Surrestor SPA-300 or approved equal shall be provided on all external power lines.

TESTING

The Contractor shall deliver a sample of the character module to be used in the proposed sign. The module shall be capable of being turned fully on and fully off with all LEDs operating at full design brightness. A sample of the sign face material to be used, attached at the design distance from the character module, shall be included. If any deviations from these Special Provisions are discovered, the sample will be returned to the Contractor for modification, and resubmitted for testing.

SIGN PERFORMANCE TESTING

The signs being installed under this project shall be tested for operational completeness. Testing shall be performed in the presence of the Engineer and/or his/her designated representative and shall consist of a Pre-test check-out and a systems Sixty-day (60) Performance Test.

The Contractor shall state, in writing, that the sign is complete and ready for local testing. Within five (5) days upon receiving his notification the Authority shall begin the Pre-test Check-out.

Pre-test Check-out:

The Engineer and/or his/her representative shall thoroughly exercise the system, All hardware, and performance functions, including the maintenance and trouble shooting, shall be individually checked for compliance with the specifications.

Any portion of the project which does not meet these specifications shall be corrected by the Contractor and rechecked by the Engineer. The Contractor shall demonstrate that the field equipment can meet the local performance requirements.

Sign Sixty-day (60) Performance Test:

Following successful completion of the Pre-test Check-out, and the correction, repair and/or replacement of identified deficiencies, the Contractor shall demonstrate that the system satisfies the specified operational requirements as an integrated unit by operating the system continuously for ten consecutive days without malfunction or failure.

The Contractor shall notify the Authority, in writing, that the Sign Sixty-day (60) Performance Test will begin on a date and time mutually acceptable to all parties.

During the Sign Sixty-day (60) Performance Test, the Engineer shall exercise the system and document the performance of all specified features and any other events which could be expected to occur in an operational Traffic Management System. During the system exercise, the Sign Sixty-day Performance test may be suspended or terminated by the Engineer or the Contractor. Suspension is defined as halting

the test progress, the Contractor taking necessary corrective action, and the test being resumed from the point of suspension. Termination is defined as halting the test. In the event of termination, the Contractor shall take necessary corrective action, and the test shall be restarted from the beginning. Any corrective action shall be by mutual agreement between the Contractor and the Engineer.

The Sign Sixty-day (60) Performance Test may be suspended for the following reasons, including but not limited to:

Failure or interference due to conditions beyond the control of the Contractor, such as vandalism, traffic accidents, power failures and similar occurrences.

Failure of any support or diagnostic equipment necessary to successfully test the system.

The Sign Sixty-day (60) Performance Test may be terminated for the following reasons, including but not limited to:

Failure of any hardware or performance item to meet these Special Provisions.

Failure of any pixel.

Failure of more than 1% of the total number of LEDs in the sign at the end of the test.

Failure of any pixel to turn off or turn on.

The appearance of any problem which, in the opinion of the State, has a significant effect upon the reliability, safety or operation of the system.

CERTIFICATION

The Contractor shall furnish supplier documentation and certification for all individual components in the finished product, showing that the component manufacturer has established an MTBF rate and what the rate is. Payment will not be made for any sign installed without component certification.

The Contractor shall furnish the following submittal for approval before the delivery of any sign:

LED manufacturer's data sheet, stating the make and model of LED to be used, the luminance of the LED at a stated current, the maximum/minimum operating temperatures and other pertinent information.

Pixel Design - Include a detail drawing of the physical layout of the pixel, including the pixel size, number of LEDs, board detail, operating voltage and current, method of weather protection, orientation of the individual LEDs and the calculated luminance at the following points:

10° right and left of the vertical geometric center.

90° perpendicular to the pixel.

10° below the horizontal geometric center of the sign.

The module design, including mounting details.

The cabinet design and installation details of equipment in the cabinet.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **LED GORE SIGN, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ALD7 LED GORE SIGN, REMOVAL, SALVAGE

DESCRIPTION
This item shall consist of the removal, transportation to State Stock, and unloading as salvage, a LED Gore Sign.

INSPECTION AND ACCEPTANCE
The Contractor shall examine the sign in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each sign, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the signs in complete conformance with the manufacturer's recommendations.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for, **LED GORE SIGN, REMOVE AND INSTALL ONLY** which shall be payment in full for the work as described herein.

ALD8 LED GORE SIGN, INSTALL ONLY

DESCRIPTION
This item shall consist of the retrieving from State Stock, loading, transporting and installing a LED Gore Sign.

INSPECTION AND ACCEPTANCE
The Contractor shall examine the sign in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each sign, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport and handle the signs in complete conformance with the manufacturer's recommendations.

INSTALLATION
The sign shall be installed in accordance with the sign manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for, **LED GORE SIGN, INSTALL ONLY** which shall be payment in full for the work as described herein.

ARB1 RESTRAINING BARRIER TAPE CARTRIDGE, FURNISH ONLY

DESCRIPTION
This item is for furnishing and delivering to State Stock an Energy Absorbing Tape Cartridge complete with tape assembly for use with the Vehicle Restraining Mechanisms for the Kennedy Expressway REVLAC System.

MATERIALS
The energy absorbing tape cartridge assembly shall be Part No. EJ31256, Tape assembly and EJ41223, energy absorber, as manufactured by the Entwistle Company.

The energy absorbing device shall be model number MBF 4K-200-A as manufactured by The Entwistle Company. The following additional requirements shall be incorporated into the design of the barrier restraining mechanism:

The leading end of the energy absorbing device shall attach to one end of the restraining net with a removable connection.

The mounting of the energy absorbing device shall not degrade its FHWA-Approved operating characteristics.

The mounting of the energy absorbing device shall facilitate its replacement as a complete unit and also shall facilitate replacement only of the energy absorbing tape contained within its cartridge. In either case, replacement shall be from the ramp side of the unit

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **RESTRAINING BARRIER TAPE CARTRIDGE, FURNISH ONLY,** which price shall be payment in full for the work as described herein.

ARB2 RESTRAINING BARRIER TAPE CARTRIDGE, REMOVAL, SALVAGE

DESCRIPTION
This item shall consist of the removal, transportation to State Stock, and unloading as salvage a restraining barrier energy absorbing tape cartridge

INSPECTION AND ACCEPTANCE
The Contractor shall examine the restraining barrier energy absorbing tape cartridge in the presence of the Engineer and after accepting the cartridge shall be held responsible for preservation of the condition of each restraining barrier energy absorbing tape cartridge, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the restraining barrier energy absorbing tape cartridges in complete conformance with the manufacturer's recommendations.

REMOVAL
The restraining barrier energy absorbing tape cartridge shall be removed in accordance with the restraining barrier energy absorbing tape cartridge manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **RESTRAINING BARRIER TAPE CARTRIDGE, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ARB3 RESTRAINING BARRIER TAPE CARTRIDGE, INSTALL ONLY

DESCRIPTION

This item shall consist of retrieving from State Stock, loading, transporting and installing a restraining barrier energy absorbing tape cartridge.

INSPECTION AND ACCEPTANCE

The Contractor shall examine the restraining barrier energy absorbing tape cartridge in the presence of the Engineer and after accepting the cartridge shall be held responsible for preservation of the condition of each restraining barrier energy absorbing tape cartridge, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION

The Contractor shall transport, handle and store (as applicable) the restraining barrier energy absorbing tape cartridges in complete conformance with the manufacturer's recommendations.

INSTALLATION

The restraining barrier energy absorbing tape cartridge shall be installed in accordance with the restraining barrier energy absorbing tape cartridge manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT

This item shall be paid at the contract unit price each for **RESTRAINING BARRIER TAPE CARTRIDGE, INSTALL ONLY**, which shall be payment in full for the work as described herein.

ARB4 RESTRAINING BARRIER CRASH DETECTOR ASSEMBLY, FURNISH ONLY

DESCRIPTION

This item shall consist of furnishing and delivering to State Stock a complete restraining barrier crash detector assembly as manufactured by The Entwistle Company, compatible with the existing dragnet and barrier.

A position limit switch shall be provided at each end of the restraining net to indicate contact with and movement of the restraining net due to vehicle impact. When the restraining net is struck by a vehicle, an electrical contact shall be closed. All limit switches shall automatically reset upon correction of any control power failure. (Crash Detector Limit Switches LS-10, LS-11).

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **RESTRAINING BARRIER CRASH DETECTOR ASSEMBLY, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ARB5 RESTRAINING BARRIER CRASH DETECTOR ASSEMBLY, REMOVAL, SALVAGE

DESCRIPTION

This item shall consist of the removal, transportation to State Stock, and unloading as salvage, a restraining barrier crash detector assembly.

INSPECTION AND ACCEPTANCE

The Contractor shall examine the restraining barrier crash detector assembly in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each restraining barrier crash detector assembly, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the restraining barrier crash detector assemblies in complete conformance with the manufacturer's recommendations.

REMOVAL
The restraining barrier crash detector assembly, shall be removed in accordance with the restraining barrier manufacturer's installation instructions except as noted herein

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **RESTRAINING BARRIER CRASH DETECTOR ASSEMBLY, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ARB6 RESTRAINING BARRIER CRASH DETECTOR ASSEMBLY, INSTALL ONLY

DESCRIPTION
This item shall consist of retrieving from State Stock, loading, transporting and installing a restraining barrier crash detector assembly.

INSPECTION AND ACCEPTANCE
The Contractor shall examine the restraining barrier crash detector assembly in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each restraining barrier crash detector assembly, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the restraining barrier crash detector assemblies in complete conformance with the manufacturer's recommendations.

INSTALLATION
The restraining barrier crash detector assembly shall be installed in accordance with the restraining barrier crash detector assembly manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **RESTRAINING BARRIER CRASH DETECTOR ASSEMBLY, INSTALL ONLY**, which shall be payment in full for the work as described herein.

ARB7 RESTRAINING BARRIER DRAGNET ASSEMBLY, FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State stock a complete restraining barrier dragnet assembly as manufactured by The Entwistle Company, compatible with the existing dragnet and barrier. The dragnet assembly shall be of the following type as directed by the Engineer:

RAMP	Entwistle Part No.
OB Mainline	EJ41224-10
OB Ontario	EJ41224-20
IB Edens	EJ41224-20
IB JFK West Leg	EJ41224-30
OB Slip Ramp	EJ41225-10
IB Slip Ramp	EJ41225-20

The restraining net shall be the barrier Vendor's standard Highway Safety Net. The net shall consist of a minimum of two horizontal runs of stranded wire rope interlaced through a section of galvanized chain link fence or shall consist of a minimum of two horizontal runs of wire rope and wire rope vertical members spaced at approximately six inch centers. The restraining net shall be provided with removable connectors and with vertical stays and tensioning devices to maintain proper net tension and deployment. The Barrier Vendor shall submit complete details of the restraining net construction including sized, materials, and rated capacities of all components used. The restraining net shall be compatible with the energy absorbing devices, be FHWA-Approved, and be approved by the Engineer.

The net shall have a reflective material of eight inch wide, alternating red and white, diagonal stripes adhered to a semi-rigid, conformable, panel fastened to the net. The panel shall be capable of repeated impact without splintering, fracturing, or permanently deforming. The panel shall not alter the performance characteristics of the vehicle restraining mechanism.

REFLECTIVE MATERIAL FOR RESTRAINING NET

Reflective sheeting shall be used on both sides of the restraining barrier net as shown on the Contract Drawings. All sheeting requirements shall meet or exceed the standards as defined in AASHTO M 268-84, Retroreflective Sheeting for Traffic Control.

The sheeting shall be a minimum of Type III High Intensity with pre-coated pressure sensitive adhesive (Class 1), diagonal alternating red and sliver white stripes as shown on the Contract Drawings, angling down at 45° from the left to the right. The sheeting shall be oriented to take advantage of the directional reflectivity of the material as defined by the supplier of the reflective sheeting.

The preferred material for this application shall be **"Scotchlite" Reflective Sheeting Diamond Grade Series 3970G**, as manufactured by 3M, or approved equal. The retroreflective sheeting shall be installed strictly according to the manufacturer's instructions. Special attention to surface preparation and mounting of sheeting for proper bonding and adhesion shall be rigidly followed.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **RESTRAINING BARRIER DRAGNET ASSEMBLY, FURNISH ONLY,** of the location specified, which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ARB8 RESTRAINING BARRIER DRAGNET ASSEMBLY, REMOVAL, SALVAGE

DESCRIPTION

This item shall consist of removal, transportation to State Stock, and unloading as salvage, a restraining dragnet assembly.

INSPECTION AND ACCEPTANCE

The Contractor shall examine the restraining barrier dragnet assembly in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each restraining barrier dragnet assembly, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION

The Contractor shall transport, handle and store (as applicable) the restraining barrier dragnet assemblies in complete conformance with the manufacturer's recommendations.

REMOVAL

The restraining barrier dragnet assembly shall be removed in accordance with the manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **RESTRAINING BARRIER DRAGNET ASSEMBLY, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ARB9 RESTRAININGBARRIER DRAGNET ASSEMBLY, INSTALL ONLY

DESCRIPTION
This item shall consist of retrieving from State Stock, loading, transporting and installing a restraining dragnet assembly.

INSPECTION AND ACCEPTANCE
The Contractor shall examine the restraining barrier dragnet assembly in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each restraining barrier dragnet assembly, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport and handle the restraining barrier dragnet assemblies in complete conformance with the manufacturer's recommendations.

INSTALLATION
The restraining barrier dragnet assembly shall be installed in accordance with the restraining barrier dragnet assembly manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **RESTRAINING BARRIER DRAGNET ASSEMBLY, INSTALL ONLY**, which shall be payment in full for the work as described herein.

ARIA1 SAND MODULE IMPACT ATTENUATORS

DESCRIPTION
This work shall consist of furnishing, erecting and installing sand module impact attenuators and the construction of attenuator bases at the locations where ramp gates, described in Pay Items ARG1 and ARG2 are installed at the direction of the Engineer.

MATERIALS
Materials shall meet the requirements of the impact attenuator manufacturer and the following:

Impact Attenuators. Impact attenuators shall be the self purging sand module type. The modules shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 and shall be approved by the Department. The modules shall be preassembled to the greatest extent practicable so as to reduce to a minimum on-site installation time. The attenuator installation shall be located, oriented, and the modules assembled and filled to the nominal weights of 400 lbs. Sand for filling the modules shall conform to the requirements of Article 1003.01 of the Standard Specifications for FA-1 or FA-2 Class A quality. Unbagged sand containing not more than 5 percent moisture shall be used for filling modules.

Replacement. When the work specifies replacement of one or more individual sand module impact attenuators damaged by traffic, other than construction traffic, the following will apply. When damage to initial installation occurs, the damaged modules and the contents shall be removed completely and replaced with the required number of modules necessary to restore the installation to its original condition. The Contractor shall dispose of all damaged materials according to Article 202.03 of the

Standard Specifications, and furnish and install new sand modules as directed by the Engineer. Sand modules that are not damaged, but have been laterally shifted from their original position shall be realigned and relocated to their original locations, as directed by the Engineer. Any modules damaged by the Contractor's forces shall be replaced or relocated at his/her expense.

The Contractor shall respond within 12 hours to any call from the Engineer concerning replacement of the sand module impact attenuators and complete the replacement work within 36 hours after initial call from the Engineer.

Attenuator Bases. Attenuator bases shall be installed based on location at the direction of the Engineer. Prior to constructing attenuator bases, the subgrade shall be prepared to the satisfaction of the Engineer.

Attenuator bases may be constructed of either portland cement concrete or bituminous at the option of the Contractor. Portland cement concrete bases shall be 150 mm (6 in.) thick and conform to the applicable requirements of Section 424 of the Standard Specifications. Bituminous bases shall be 200 mm (8 in.) thick and conform to the applicable requirements of Section 408 of the Standard Specifications.

The surface of the base shall be slightly sloped or crowned to facilitate drainage. The perimeter of each module and the specified mass (weight) of sand in each module shall be painted on the surface of the base.

The costs for attenuator bases shall be paid for as indicated elsewhere.

METHOD OF MEASUREMENT
This work will be measured for payment as each, where each is defined as one complete installation.

BASIS OF PAYMENT
Impact attenuators and replacement will be paid for at the contract unit price per each for **SAND MODULE IMPACT ATTENUATOR**, of the test level specified and at locations specified by the Engineer. Attenuator bases and regarding of slopes, if necessary will be paid separately as described elsewhere.

ARG1-2 RAMP GATE ASSEMBLY, FURNISH ONLY

DESCRIPTION:

This item shall consist of the design, fabrication, procurement, delivery and vendor installation support for a manual vertical pivot gate arm type barrier, with the ability to be upgraded to an electrically actuated operator with local and remote operation of the type and quantity, as specified and as indicated. The ramp gates are planned to be installed on the entrance ramps to the inbound expressways in Cook County initially and may be expanded later.

MATERIALS:

This item shall be a provided as a complete operational unit with all specified features and construction, and shall be delivered in accordance the established schedule, all as specified.

METHOD OF MEASUREMENT:

This item shall be measured (counted) as each, of the specific type. A gate unit shall be counted for payment when all pre-installation submittals are approved by the Engineer and the unit is delivered to a location within District 1, as designated by the Engineer.

BASIS OF PAYMENT:

This item will be paid at the Contract Unit Price each of complete **RAMP GATE ASSEMBLY, FURNISH ONLY**, of the type indicated, delivered to the designated location, which price shall be payment in full for the work specified herein, less a 10% retainage to cover ramp gate vendor installation support. The retainage will be released upon installation of the gates.

ARG1 RAMP GATE ASSEMBLY, 17 FT., FURNISH ONLY
ARG2 RAMP GATE ASSEMBLY, 23 FT., FURNISH ONLY

DETAIL SPECIFICATIONS:

1. GENERAL DESCRIPTION:
   1.1. The Contractor, Ramp Gate Vendor and Engineer shall meet to discuss the submittal content and the complete ramp gate assembly proposed prior to submittal. Please contact the Engineer to arrange the meeting.
   1.2. Within 14 days of contract execution, complete submittal information, as required, shall be submitted for approval by the Engineer. Revised resubmittal information shall be resubmitted with 7 days of receipt of Engineer comments. Timeliness is of the utmost importance in the execution of the pay item. See schedule section for additional information.
   1.3. Each ramp rate shall consist of a fiberglass, reflectorized arm, attached to a mechanical pivoting device used as part of a coordinated system to open or close the ramps of the expressway. The vertical pivot gate shall be used to alert drivers that the ramp is closed, or is being closed, and to physically deny access to the ramps.
   1.4. The ramp gates shall be complete operational units with all specified features and construction, and shall be delivered in accordance with the established schedule, as specified herein. Unless otherwise indicated, all ramp gate assemblies shall be of uniform design and construction except for gate arm length. For each specific ramp gate assembly, the gate arm length, and orientation of the unit shall be as generally indicated by the Engineer.
   1.5. The ramp gates shall be furnished as complete operable assemblies in the quantities as shown. The work shall include, but not be limited to, furnishing all labor, material, and equipment required to design, detail, fabricate, assemble, coat, and deliver the ramp gate assemblies described herein.
   1.6. Each ramp gate assembly shall include, but not be limited to the following:
      1.6.1. Foundation Design/Coordination - A cast in place concrete foundation design and coordination with a helix type foundation manufacturer.
      1.6.2. Support Frame - A structural weldment to support the drive components and transfer the loads from the gate arm to the foundation.
      1.6.3. Arm - A crash rated, fiberglass barrier vertical pivot gate arm type barrier.
      1.6.4. Arm Receiver – A padlockable structural component of the overall gate system to receive the arm in the closed position.

1.6.5. Manual Crank Arm Assembly – A padlockable, manual hand crank to allow manual operation of the gate.

1.6.6. Future Actuator Drive and Motor Information – An electric actuator may be connected, in the future, which provides the torque required to raise the gate arm including controls and monitoring of the gates.

1.7. The ramp gate system shall be a unit designed specifically for freeway service. The ramp gates shall be vertical pivot gate arm type barriers. The units shall be an adaptation of a proven, standard design of the Ramp Gate Vendor, and shall be a generically similar model which has been in production and used on federally-funded highway projects for at least five years.

1.8. The proposed gate actuator shall operate smoothly within the range of weather conditions described herein. At no time shall there be any evidence of binding or “chattering” motion during rotation either with, or without, the gate arm assembled to the actuator.

1.9. The ramp gate shall be designed to operate outdoors, in the climatic conditions of the City of Chicago, within a temperature range of -20°F to +110°F. Ramp gate operation shall be unaffected by other environmental conditions such as dirt, dust, wind, rain, snow, salt spray, ice, or sleet. The ramp gate assembly shall be designed to overcome, and operate as described herein, with a wind load of 80 mph plus a 1.3 gust factor (approximately 22 psf) and a layer of ice .25 inches thick covering the entire gate arm and a cyclical gusting condition of 40 mph in both the deployed and stowed positions.

1.10. The barrier shall be designed to impede a 2000lbs vehicle at 25mph and hold the vehicle to within 10 feet of impact. A maximum deceleration of 10 Gs shall be experienced by the rear bumper of the vehicle on impact. The barrier shall be designed to increase this impact strength requirement with an additional field retrofit to achieve a barrier solution for a 4000lbs vehicle traveling 40mph. A maximum deceleration of 10 Gs shall be experienced by the rear bumper of the vehicle on impact. Manufacturer shall provide a complete technical description of the stopping media and its retrofit costs in the submittal documents.

1.11. Each ramp gate unit shall be equipped with all features and elements recommended by the Ramp Gate Vendor to achieve performance as specified or for proper operation of the unit under the specified conditions and indicated arrangement, whether not specifically called out or specified.

1.12. Vendor Qualifications

1.12.1. The ramp gate assembly shall be the product of a Vendor who is an established and qualified original equipment manufacturer. The Vendor shall have been in the business of the design and fabrication of like equipment for not less than ten (10) years. The Vendor shall have supplied similar equipment which is still in use on no fewer than 10 installations with a minimum of 150 Ramp Gate Units in the United States of America.

1.12.2. The Vendor shall have permanent full-time, in-house engineering staff having experience in the design, manufacture, and operation of ramp gate equipment. The Vendor shall have established space, equipment, tooling, personnel, and resources already in place at the time of bid to produce and support the ramp gate equipment in the quantities indicated and within the specified delivery schedule.

1.12.3. The Vendor shall submit information to fully document the required qualifications noted above together with general product data sufficient to demonstrate not only the qualifications of the Vendor, but also the general conformance of the Vendor's product to the specified equipment type and history.

1.12.3.1. For each installation noted above, this information shall include the project site, responsible agency, contact phone number, and system description.

1.12.3.2. List of Suppliers, and Sub-contractors to be used on this Contract

1.12.3.3. General Product Data and Overall Product Line

1.12.3.4. Concept Drawings of the Proposed Equipment, including future proposed mechanical and electrical diagrams, in sufficient detail as to fully convey the intent and function of the equipment to be provided and the general conformance with the specifications.

1.12.4. All materials and all components used in the ramp gate construction and appurtenances shall be new, of good workmanship and quality. Use of salvaged or short-dimension material, even though new, is unacceptable. The requirements of Section 106 of the Standard Specifications for Road and Bridge Construction shall also apply. Please note the requirements of domestically manufactured components as specified in the above-referenced specification.

1.13. The Contractor shall be fully responsible for and maintain an accurate inventory of all ramp gate units from the time of the Contractor's and Engineer's acceptance of delivery through the final acceptance of the ramp gate.

2. FOUNDATION DESIGN/COORDINATION:

2.1. Specific detailed information/coordination shall be provided as necessary for the support frame and receiver arm foundations (helical and concrete cast in place) to meet the required system loads described in paragraphs 1.9 and 1.10 as part of the complete assembly.

2.2. Specific helix foundation requirements and coordination with the manufacturer of the helix foundations shall be provided as required. The Ramp Gate Vender shall provide/coordinate specific support frame mounting requirements with the helix foundation manufacturer. The specific helix foundation information (manufacturer, diameter, depth, mounting plate, anchor bolts, etc.) shall be provided in the submittal documents and coordinated with the installing contractor as necessary.

2.3. Specific detailed design information for cast in place concrete foundations shall be provided. The specific cast in place concrete foundation information (diameter, depth, reinforcing, anchor bolts, anchor bolt pattern, etc.) shall be provided in the submittal documents and coordinated with the installing contractor as necessary.

2.4. The foundation design(s) shall be stamped as outlined in paragraph 17.1.8 and all calculations shall be submitted for documentation.

3. SUPPORT FRAME:

3.1. The frames shall be rigid structural weldments designed to withstand all operating loads imposed upon them by the ramp gates and shall transfer the loads into the proposed foundation (helical or concrete cast in place) via the anchor bolts. The frames shall be stress relieved after welding and prior to final assembly. The support frame shall be designed to resist the loads described in paragraphs 1.9 and 1.10 as part of the complete assembly.

3.2. The support frame for the ramp gate assembly shall be fabricated from ASTM A36 structural steel shapes and plates using standard structural shapes to the maximum extent possible. All steel used in frame fabrication, including the component mounting plates, shall be at least 0.375 inches thick.
3.3. The frames shall be drilled to match the anchor bolt patterns of the proposed foundation (helical or concrete cast in place) and/or shall be coordinated with the helical foundation manufacturer/foundation designer as necessary. Anchor bolt holes shall be coordinated with the helical foundation manufacturer/foundation designer to allow for field positioning.
3.4. Ease all exposed edges to a minimum radius of 1/32 inch. Corners, seams, and joints shall be welded continuously and shall comply with requirements specified in the Fabrication/Welding Section. Welding flux shall be removed immediately and exposed welds and surfaces shall be ground smooth and blended so that no roughness shows after finishing. Joints that may be exposed to the weather shall be fabricated to prevent the accumulation of water, dirt, and ice.
3.5. The frames shall be complete with all mounting requirements for installation of the gate, crank arm, and future gate actuators. Mounting plates shall be accurately drilled to match the components mounted. Torch cut holes are not acceptable. The frames shall be hot dip galvanized after fabrication as indicated below.
3.6. The frame shall incorporate removable lifting attachments used during initial installation and subsequent maintenance of the ramp gate assembly.
3.6.1. The lifting attachments shall be located for stable lifting, and shall be either stainless steel or galvanized to protect the lifting attachments from the elements.
3.6.2. The lifting lugs shall be removed after installation and provided to the Department.
3.6.3. Removable stainless steel, watertight and gasketed plugs shall be provided with each unit for installation upon removable of the lifting attachments.

4. ARM:
4.1. Gate arms shall consist of an assembly of, standardized design, standard length, connectors, and brackets, with an engineered non-metallic fiber reinforced epoxy pultrusion.
4.2. The arm shall incorporate energy absorbing bands to minimize the negative effects of rapid deceleration of the vehicle.
4.3. The impact zone, centerline of gate, shall be between 16 and 24 inches. Exact height shall be coordinated with the Engineer.
4.4. Each assembled gate arm shall be designed to resist the loads described in paragraphs 1.9 and 1.10 as part of the complete assembly.
4.5. Stainless steel nuts, bolts and washers shall be a minimum Type A304. One washer shall be placed under the bolt head, and a lock washer shall be placed under the nut. The nuts and bolts shall be hand tightened until snug, and then tightened with a hand wrench a minimum of ½ turn of the nut.
4.6. The barrier shall have a means to secure it in the deployed and the stowed position using a padlocking provision. The barrier and all peripheral support equipment shall have provisions to deter vandalism and specific barrier sabotage. At a minimum, critical barrier components shall be protected and require tamper proof hardware removal for access.

5. ARM RECEIVER:
   5.1. The arm receiver shall be an integral part of the overall design of the barrier system. Detailed installation requirements, include foundation requirements as outlined for the support frame, shall be provided for the arm receiver. The arm receiver shall be designed to resist the loads described in paragraphs 1.9 and 1.10 as part of the complete assembly.
   5.2. The arm receiver shall be comprised of similar materials and requirements as the support frame coordinated with the requirements of the gate.
   5.3. The arm receiver shall have padlocking provisions while in the deployed position.
6. REFLECTIVE MATERIAL FOR GATE ARMS:
   6.1. Both sides of each gate arm shall be covered with retroreflective sheeting or similar markings as approved by the engineer. All sheeting requirements shall meet or exceed the standards as defined in AASHTO M 268 Retroreflective Sheeting for Traffic Control.
   6.2. The sheeting shall be a minimum of Type III High Intensity with pre-coated pressure sensitive adhesive (Class 1) diagonal alternating red and silver white stripes, angling down at 45° from the left to the right. The sheeting shall be oriented to take advantage of the directional reflectivity of the material as defined by the supplier of the reflective sheeting.
   6.3. The material for this application shall be “Scotchlite” Reflective Sheeting Diamond Grade Series 3970G as manufactured by 3M, or approved equal. The sheeting shall be pre-striped of appropriate size and width to match the application surface. The retro-reflective sheeting shall be installed strictly according to the manufacturer’s instructions. Special attention to surface preparation and mounting of sheeting for proper bonding and adhesion shall be rigidly followed.
7. MANUAL CRANK ARM ASSEMBLY:
   7.1. The crank arm assembly shall be designed such that barrier deployment time will not exceed a maximum of 30 seconds to close the road, and 30 seconds to open. No tools shall be required to move the gate.
   7.2. The Crank arm assembly shall be padlockable to prevent the unauthorized operation of the unit.
   7.3. The crank arm assembly shall be coordinated with the proposed future motor actuator to minimize the modification required for the future installation of the motor actuator. Submittal information shall include all requirements for the modification from a manual to electric actuated gate. After modification to electric actuation, the gate shall have the ability to be manually operated with minimal effort.
   7.4. The manual hand crank shall be coordinated with the requirements of the future motor actuator drive as indicated below.
8. FUTURE ACTUATOR DRIVE AND MOTOR INFORMATION:
   8.1. The motor actuator drive will not be included under this pay item, however, specific information on the future retrofit of this device shall be included as indicated.
   8.2. The proposed actuator drive motor shall be produced by a manufacturer who regularly engages in the design, manufacture, assembly and production of motor operated actuators of the size and type required for not less than five years.

8.3. General: The electric ramp gate actuator shall include a motor, operator unit gearing, limit switch gearing, limit switches, torque switches, stem nut, de-clutch lever, and auxiliary hand wheel, reversing motor starter and space heaters, as a self-contained unit.

8.4. Enclosures: The ramp gate actuator motor and all electrical enclosures shall be NEMA 4 for the ramp gate.

8.5. Motor: The motor shall be 120 volts, single phase, 60 hertz specifically designed for actuator service and shall be of high starting torque, totally enclosed, non-ventilated construction. Motor leads shall be brought into the control compartment or limit switch compartment for external connections.

8.6. The motor shall be of sufficient size to open or close the ramp gate from any position and under any condition of operation the ramp gate may be subjected to. The motor duty rating shall be sufficient for one complete cycle (open-close-open, or reverse) without exceeding its temperature rating and shall not be less than 30 minutes continuous. The motor shall be prelubricated and all bearings shall be of the anti-friction type. The motor speed shall not exceed 188.5 radian per second (1,800 rpm).

8.7. Position Limit Switch: Position limit switches and associated gearing shall be an integral part of the ramp gate actuator. Limit switch gearing shall be of the intermittent type, made of bronze or stainless steel, grease-lubricated, and enclosed in its own gear case to prevent dirt and foreign matter from entering the gear train. The limit switches shall be geared to the driving mechanism and in step at all times whether in motor or manual operation. The trip points of the switches shall be adjustable over the entire range of the ramp gate travel. They shall not be subject to breakage or slippage due to over-travel. Limit switches shall be of the heavy duty, open contact type with a rotary wiping action.

8.8. Torque Switch: Each ramp gate actuator shall be equipped with a double torque switch which is responsive to loads encountered in both the opening and closing direction. Each side of the switch shall have a graduated dial and shall be adjustable. The torque switch shall operate during the complete ramp gate cycle without the use of auxiliary relays, linkages, latches, or other devices. The torque switch shall be designed to shut off the actuator motor in the event that abnormally high torque is realized in either direction of travel. The torque switch is utilized as a protective device in ramp gate applications requiring position seating.

8.9. Manual Operation: A hand wheel shall be provided for manual operation with an arrow to indicate "open" rotation. The hand wheel shall not rotate during motor operation. A fused motor shall not prevent manual operation. When in manual operating position, the unit will remain in this position until the motor is energized. The actuator will automatically return to electric operation when the motor is energized. The actuator will remain in motor position until hand wheel operation is desired. Movement from motor operation to hand wheel operation is accomplished by a positive de-clutching lever which disengages the motor and related gearing mechanically but not electrically with no damages to clutch a gear mechanism. It shall not be possible for the unit to be simultaneously in manual and motor operation.

8.10. Controls: Heavy duty industrial type control station, with local-off-remote selector switch, open-close-stop pushbuttons and open-closed indicating lights shall be provided. Terminal blocks shall be provided for all external wiring connections. Each terminal shall be properly marked.

8.11. Space Heater: Space heaters shall be provided in the enclosure or limit switch enclosure. The heaters shall be 120V, 60 Hz, with sufficient capacity to prevent condensation in the enclosures.

8.12. Power Input: The power input to the actuator shall be 120V, single phase, 60 Hertz.

8.13. The ratings, characteristics, materials, and construction of electric motors shall be in accordance with the latest applicable standards of ANSI, IEEE, and NEMA. The manufacturer's certification of the preceding shall be provided as a part of the submittal data.

8.14. Motor bearings shall be designed to withstand all axial thrust from the driven equipment.

8.15. Submittal data shall include complete manufacturer's specifications and descriptive bulletins for all equipment, size, capacity, description and make of motor. Motor data shall include:

8.15.1. Manufacturer
8.15.2. Nameplate Rated Horsepower
8.15.3. Rated Voltage
8.15.4. Full Load RPM
8.15.5. Full Load Current
8.15.6. NEMA Design Letter
8.15.7. NEC Code Letter or Inrush Current
8.15.8. Insulation Class
8.15.9. Service Factor
8.15.10. Recommended Starting Restrictions, including Allowable Starts Per Hour
8.15.11. Design Load Calculations

8.16. Submittal information shall include all necessary information including but not limited to the specific actuator to be utilized in the future, load requirements and calculations, specific mounting details, specific material and equipment required for the future installation retrofit, electrical wiring diagrams, and certification that the proposed actuator will properly work as intended.

9. HOT DIPPED GALVANIZING:

9.1. Prepare structural component surfaces in accordance with SSPC-SP6 - Commercial Blast Cleaning.

9.2. Zinc used for hot-dip galvanizing coating shall conform to the Standard Specifications for Slab Zinc (Spelter) ASTM Designation B6 and shall be at least equal to the grade designated as "Prime Western". Thickness of coatings shall conform to ASTM Specifications A123, A153, and A385, as applicable for items coated.

9.3. Quality of galvanizing shall be rigidly controlled and it shall be understood that any defects as mentioned below shall be just grounds for rejection.

9.4. Galvanized steel shall have no bare spots unless small and suitable for patching, pimples showing excessive contamination, flux, ash inclusions, or blisters.

9.5. Where cutting existing galvanized metal Work or attaching to existing galvanized metal Work, such as by welding, the connection or bore edges shall be cold galvanized.

10. FABRICATION/WELDING:
    10.1. Fabricate all member as outlined in AISC.
    10.2. Fabricating tolerances for finished parts shall comply with AISC Code of Standard of Practice.
    10.3. Fabricate items with joints tightly fitted and secured.
    10.4. Continuously seal joined members by continuous welds.
    10.5. Perform welding in accordance with AWS D1.1.
    10.6. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
    10.7. All fabrication and welding of structural shapes and components shall comply with the methods and procedures defined in the AWS and as modified by the AASHTO Standard Specifications and Article 505 of the Standard Specifications for Road and Bridge Construction.
11. SHIPPING AND STORAGE REQUIREMENTS:
    11.1. Each ramp gate assembly shall be shipped as a complete unit. The complete unit shall be crated to protect the unit from being scratched, marred, chipped, dented or damaged during shipment. Gate arms and the associated brackets, connectors, and hardware shall not be assembled to the ramp gate, but shall be packed, crated, and marked for shipment with the units being shipped. No other mechanical assembly shall be required to install each complete ramp gate.
    11.2. Cost of delivery, receiving, handling and storing as necessary for the ramp gate unit to an individual location within District 1, as approved by the Engineer, shall be included in the bid price of the respective ramp gate unit and no additional compensation shall be allowed. If installation is delayed, extended storing of the units shall be in State Stock. The units shall be delivered and unloaded to State Stock, as noted above, at the direction of the Engineer.
    11.3. As part of the Submittal information, identification of the recommended storage and handling requirements for the units shall be provided. Any specific or additional items which are required for proper storage and handling of the units shall be identified and submitted to the Engineer for approval.
12. RAMP GATE VENDOR'S TECHNICAL FIELD SERVICES FOR INSTALLATION:
    12.1. The Ramp Gate Vendor shall provide the services of competent, technical field service personnel, acceptable to the Engineer, to perform the services described herein. Field personnel shall be technicians from the Ramp Gate Vendor's plant and shall be thoroughly familiar with the design, fabrication, and operation of the ramp gate equipment. All costs associated with the provision of these services shall be included in the bid price of the respective ramp gate unit and will not be paid for separately.
    12.2. The following minimum services shall be provided by the Ramp Gate Vendor to support the installation of the Ramp Gates:

12.2.1. Provide on-site advisory support to the Installation Contractor for the first gate installation. Certification of installations of additional gates will be required as they are put into service as indicated below.

12.2.2. Provide on-site advisory support and witness of the field operational testing of the ramp gates.

12.2.3. Provide or perform field modifications to the ramp gates as necessary to correct deficiencies that were undetected or uncorrected fabrication to achieve proper operation as specified.

12.2.4. Provide written certification, on a ramp by ramp basis, that all ramp gates have been installed, tested, and modified as necessary, in accordance with the Ramp Gate Vendor's recommendations.

12.2.5. Certification/testing of the ramp gates, after the first gate installation and testing, may be done in coordinated groups, as approved by the Engineer.

13. RECOMMENDED INSTALLATION REQUIREMENTS:

13.1. The Ramp Gate Vendor shall submit its recommended installation and field operational testing requirements to the Engineer for review and approval.

13.2. The Ramp Gate Vendor shall provide written instruction manuals to the Installation Contractor, defining the proper installation procedures and methods to install each unit to the Ramp Gate Vendor's requirements, as approved by the Engineer.

13.3. The first production unit installed shall be field operational tested through its intended full operation in the presence of the Ramp Gate Vendor's representative and the Engineer, and with the Engineer's approval, shall be designated as the benchmark unit and the proper installation and operation of all subsequent units shall be judged based on this unit.

13.4. All equipment adjustments, modifications, and/or installation revisions required, as a result of factors under the Ramp Gate Vendor's control, or not corrected during Shop Testing, to obtain proper operation of the unit shall be made at the Ramp Gate Vendor's expense and recorded as a part of the field operational testing reports. The field operational test reports shall be certified by the Ramp Gate Vendor's representative and shall be submitted to the Engineer for record purposes after completion of the test.

13.5. After installation, each unit shall be field operational tested in accordance to the approved Ramp Gate Vendor's installation and testing requirements. Reports for the individual tests of each unit shall be submitted to the Engineer on a ramp by ramp basis. Each report shall contain the following minimum information:

13.5.1. Ramp identification

13.5.2. Gate identification number

13.5.3. Gate serial number

13.5.4. Certification of compliance with the Ramp Gate Vendor's installation requirements

13.5.5. Signature of the Contractors field representative.

13.5.6. Any deficiencies shall also be noted on the report.

13.6. All costs associated with providing the installation requirements and field operational testing shall be included in the bid price of the respective ramp gate unit and will not be paid for separately.

14. OPERATIONS AND MAINTENANCE:
    14.1. Routine maintenance instructions, operating procedures etc., as applicable, with appropriate diagrams, shall be provided to guide the State's maintenance personnel in performance of the activities shown below. The Ramp Gate Vendor shall submit the proposed instructions and format to the Engineer for approval, prior to proceeding with the production fabrication of the units. As a minimum, the following information shall be provided:
        14.1.1. Instructions for manual operation and hand cranking.
        14.1.2. Lubrication procedures.
        14.1.3. Instructions/information on the typical replacement procedure required for the ramp gate arm and associated components after a vehicle impact.
        14.1.4. Other routine maintenance procedures as necessary.
    14.2. The Ramp Gate Vendor shall submit all Maintenance and Operating procedures and instructions in the format intended, to the Engineer for approval, in accordance with the requirements stated in Data to be Filed with Owner.
    14.3. No special tools or equipment shall be required to maintain or repair the units.
    14.4. The Ramp Gate Vendor shall furnish the proper lubrication (including oil, grease, hydraulic fluid, etc.) required for testing, trouble shooting, and start-up. If lubrication must be drained for shipping or storage, the Ramp Gate Vendor shall furnish a fresh supply of lubrication for field installation.
    14.5. Local Authorized Service:
        14.5.1. As part of the submittal process, the Ramp Gate Vendor shall submit a contact for local service and contractors which upon completion of the training, shall be certified as Ramp Gate Vendor's Authorized Repair Agents. Upon successful completion of the training, the Contractors shall have the authority to perform warranty work and repair work on the equipment furnished. The procedure shall be submitted to the Engineer for approval. The actual training and of local service and repair contractors shall be considered separate from the instructional training provided to the State designated representatives, with all costs borne by the Contractors seeking qualification.

15. INITIAL OPERATIONS STOCK:
    15.1. The Ramp Gate Vendor shall certify that a stock of replacement parts will be maintained by the Ramp Gate Vendor for a period of at least ten years after final acceptance of the system.
    15.2. Spare gate arm and associated appurtenances as required for a typical vehicle impact shall be provided as spare. The cost for providing the spare arm and appurtenances shall be paid at the contract unit price per each Ramp Gate Arm, 17' or Ramp Gate Arm, 23'. Loading, delivery and unloading to State Stock within District 1 shall be included in this pay item.

16. SUBMITTALS AND CERTIFICATIONS:
    16.1. The submittal package shall include, at a minimum, the following specific items:
        16.1.1. Specified Standard Guarantees
        16.1.2. Complete Shop Drawings and details for all electrical and mechanical components supplied under this Contract and proposed for future upgrades.
        16.1.3. Material and component bulletins, performance data and certifications of compliance with these specifications for all mechanical and electrical devices, materials and components
        16.1.4. Complete descriptions, illustrations, and wiring diagrams of the proposed future local controls
        16.1.5. Complete information on the future Motor Data for actuator drive.
        16.1.6. Welding Details and procedures
        16.1.7. Letter of intent to provide specified weld inspection reports
        16.1.8. Structural design calculations, stamped by a Registered Structural/Professional Engineer, as applicable, of the State of Illinois (or having a reciprocal agreement with the State of Illinois for such registrations) for the foundations (both helical and cast in place concrete) gate arm, structural frame(s) and all load bearing or load transferring components along with coordination with the helical foundation manufacturer or cast ins place foundation designer.
        16.1.9. Letter of intent to provide manufacturer's representative during installation and to provide specified installation certification.
        16.1.10. Ramp Gate Vendor's recommended testing and installation requirements.
        16.1.11. Letter of intent to provide spare parts availability for 10 years and training of authorized repair agents.
        16.1.12. Letter of intent to provide four bound copies and one electronic (PDF) copy of operating and maintenance instructions and manuals, diagrams, parts lists, requirements and other information pertinent to equipment operation and future upgrades as indicated.
        16.1.13. Equipment drawings and erection drawings of adequate detail to provide the Department's representative with all dimensions necessary to verify conformance to clearances and the anchor bolt patterns coordinated with the helical foundation manufacturer or cast in place foundation designer.
        16.1.14. Installation instructions and testing procedures.
        16.1.15. Recommended list of spare parts to be kept on hand.
17. FINAL ACCEPTANCE:
    17.1. Only after the ramp gate unit has been delivered, field operationally tested and the Record Drawings and documentation reviewed and accepted by the Engineer, the Contractor may request final acceptance of the work by the Engineer.

17.2. Items which the Contractor must complete to the Department's satisfaction before final acceptance can be granted include but are not limited to, the following;

17.2.1. Certification that all ramp gates have been properly installed and field operationally tested.

17.2.2. Delivery spare parts.

17.2.3. Submittal of guarantees and warranties.

17.2.4. Certification that all equipment has been modified or adjusted based upon the benchmark unit.

17.2.5. Bound copies and electronic version of operating and maintenance instructions and other submittal data.

17.2.6. Receipt of written acceptance of all work from the Department. The written acceptance shall be included as part of the request for final payment.

18. DATA TO BE FILED WITH OWNER:

18.1. Certain data, as specified herein, shall be furnished to the Owner when installation and testing are complete, before final acceptance. The detailed specifications for equipment and systems, described in other Parts and Sections, may contain more specific descriptions of data to be furnished.

18.2. The data shall be compiled in 8½ x 11 inch format high quality heavy-weight, hard cover binders with piano-style metal hinges or in an alternate format approved by the Engineer. Large drawings and other materials which would be opened or removed for reading shall be provided with heavy-weight, clear plastic pouches within the binders. The number of binders shall be as required to hold all required material without over-filling. Various sections, as appropriate shall have suitable dividers. Each binder shall be labeled and provided with a table of contents.

18.3. All data shall be presented in a neat and orderly fashion and be clearly legible. The table of contents, tabulations of set points, and other record & test data shall be typed. Sloppy, illegible, inaccurate, or incomplete data will not be accepted. Four sets of the data files shall be provided and also in electronic (pdf) format and each set shall include the following data:

18.3.1. Corrected, approved, final shop drawings and product data for all equipment and materials incorporated in the work.

18.3.2. Operating and maintenance instructions, diagrams, parts lists, requirements and other information pertinent to equipment operation and maintenance.

18.4. Installation instructions, testing procedures, future equipment upgrades and other data as specified elsewhere herein.

18.5. Fully executed guarantees and warranties

19. GUARANTEES/WARRANTIES:

19.1. All equipment shall be furnished complete with the manufacturer's published standard trade guarantee/warranty or a guarantee/warranty for 6 months, whichever is greater, applicable to the Illinois Department of Transportation, from the date of final acceptance. Such guarantee/warranty information shall accompany submittal shop drawings and product data with the formal guarantee/warranty included as part of the request for final payment.

20. SCHEDULE:
    20.1. Timeliness is of the utmost importance with this item.
    20.2. A meeting between the Ramp Gate Vendor, Contractor and Engineer should be arranged as necessary to meet the required schedule.
    20.3. Within 14 days of execution of the contract, complete submittal information, as indicated, shall be submitted for Engineer's review.
    20.4. Revised resubmittals shall be resubmitted within 7 days of receipt of the Engineer's review comments.
    20.5. Within 5 days of approval, ramp gates shall be ordered. Documentation of purchase order shall be provided to the Engineer.

ARG3-4 RAMP GATE ASSEMBLY, INSTALL

DESCRIPTION:

This item shall consist of the foundation, foundation installation, ramp gate installation, testing and site restoration for a manual vertical pivot gate arm type barrier, with the ability to be upgraded to an electrically actuated operator with local and remote operation of the type and quantity, as specified and as indicated.

MATERIALS:

This item shall be provided as a complete operational unit with all specified features and construction, and shall be delivered in accordance the established schedule, all as specified.

METHOD OF MEASUREMENT:

This item shall be measured (counted) as each, of the specific type. A gate unit shall be counted for payment when the unit is fully operationally accepted as indicated and designated by the Engineer.

BASIS OF PAYMENT:

This item will be paid at the Contract Unit Price each of **RAMP GATE ASSEMBLY, INSTALL,** of the type indicated, for complete installation and testing of the ramp gate assemblies, which price shall be payment in full for the work specified herein.

ARG3 RAMP GATE ASSEMBLY, INSTALL WITH HELIX FOUNDATION
ARG4 RAMP GATE ASSEMBLY, INSTALL WITH CONCRETE FOUNDATION

DETAIL SPECIFICATIONS:

1. GENERAL DESCRIPTION:
    1.1. The ramp gate assembly will be obtained as a separate pay item, as complete operational units with all specified features and construction. They will be delivered and stored in accordance with the established schedule, as specified in the Ramp Gate, Furnish Only pay item section. Unless otherwise indicated, all ramp gate assemblies will be of uniform design and construction except for gate arm length. For each specific ramp gate assembly, the gate arm length and orientation of the unit shall be as indicated by the Engineer.

1.2. The Contractor shall install the foundations (helical or cast in place concrete as indicated) and the ramp gates as complete operable units upon the respective foundations at the locations as indicated by the Engineer on various ramps within District 1. Ramp gate installation shall include but not be limited to furnishing all labor, material, and equipment required to install foundation, transfer ramp gate units from storage to the job site including delivery from storage, receiving the ramp gates, unloading the ramp gates, inspection, security, protection, assembling the associated ramp gate components, setting and aligning the ramp gates to the foundation at the specified locations, placing identification labels, Field Operational Testing and restoring the site back to existing conditions.

1.3. Each ramp gate installed shall include but not be limited to the following major components: support frame, gate arm, gate arm receiver and local mechanical controls. For each specific ramp gate location, the gate arm length shall be as indicated by the Engineer.

1.4. The Contractor shall supply required anchor bolts, nuts and washers required for installation of the ramp gate as part of the installation pay item.

1.5. The Ramp Gate Vendor, under separate section, will provide Technical Field Support for Installation assistance to the Contractor. Any additional time or services required by the Contractor shall be included in the unit price for Ramp Gate, Installation Only at no additional cost to the State or the Ramp Gate Vendor.

2. MATERIALS:

2.1. All materials and all components used in the installation of the ramp gate and associated equipment shall be new, of good workmanship and quality, and their application shall be in compliance with the recommendations of their suppliers, including the Ramp Gate Vendor. Use of salvage or short- dimension material, even though new, is unacceptable. The requirements of Section 106 of the Standard Specifications shall also apply.

3. CONSTRUCTION REQUIREMENTS: The Contractor shall -

3.1. Examine, prior to installing the ramp gates, and verify the field conditions and exact positioning of the ramp gate with the Engineer.

3.2. Load, transfer, deliver and unload the ramp gate unit to the respective ramp job site from storage in District 1. The units shall be field stored in accordance with manufacturer’s recommendation until the installation. The cost of loading, transferring, delivering, unloading and field storage shall be included in the unit price for the ramp gate installation.

3.3. Install the ramp gate units in strict accordance with the Ramp Gate Vendor's installation and testing instructions, as described Ramp Gate, Furnish Only section.

3.4. Install each ramp gate, with the Ramp Gate Vendor's technical assistance, on a ramp by ramp basis in accordance with the Ramp Gate Vendor's installation requirements and as indicated and approved by the Engineer.

3.5. Install each ramp gate level, plumb, and true, at the location indicated or determined by the Engineer. The Contractor shall check each location prior to installation with a rigid template -- which fits over the anchor bolts, check the top of the level and smooth surface, and check the dimensional accuracy of the anchor bolt placement. The holes for the anchor bolts shall be the same size, pattern, and orientation as the base frame of the ramp gate unit. Any grinding, filling of concrete, shimming, anchor bolt realignment or replacement, or other actions or materials required to prepare the foundation for installing the ramp gates shall be included in the bid unit price for Ramp Gate, Installation Only, and no additional compensation will be allowed.

3.6. Install each ramp gate unit with a double nut mounting arrangement or as required by the Ramp Gate Vendor and approved by the Engineer. The bottom supporting nut shall have a flat washer between the nut and the bottom of the frame. The top nut shall have a lock washer between the frame and the nut. The double nut mounting shall allow for the leveling of the unit to the specific requirements of each location.
3.7. Note that no grouting of the Ramp gate bases will be permitted.
3.8. Torque the anchor bolt nuts, after setting and leveling the ramp gate on the barrier wall at the specified location, as recommended by the Ramp Gate Vendor or as required by ASTM A-325. The procedure and equipment shall be approved by the Engineer prior to setting the first ramp gate.
3.9. Attach the gate arm to the mounting bracket as recommended by the Ramp Gate Vendor. Field Operational Testing for each ramp gate shall not proceed until all components for the ramp gate are installed, and properly adjusted, and verified by the Ramp Gate Vendor's representative. Testing shall proceed on a ramp-by-ramp basis as described in this Section under Field Operational Testing.

4. TRAFFIC CONTROL:
4.1. Traffic Control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the Supplemental Specifications and the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways.
4.2. The Contractor shall contact the District One Bureau of Traffic at least 72 hours in advance of beginning work.
4.3. The cost for traffic control and protection shall not be paid for separately. The cost for traffic control and protection shall be included in the installation pay item as described herein.

5. IDENTIFICATION:
5.1. The Contractor shall furnish and install the identification labels on each ramp gate. The location of the labels shall be as directed by the Engineer.
5.2. Each ramp gate unit shall bear a unique, four digit, alphanumeric, identification code based upon its location on the expressway. The code for each ramp gate, and its position on the ramp, shall begin with the ramp identifier and be followed by a sequential number assigned to each ramp gate as directed by the Engineer.
5.3. The letters and numerals shall be composed of individual, black series “D” as described in the Federal Highway Administration’s “Standard Alphabets for Highway Signs”, screened onto silver-white, pressure sensitive, reflective, 4 ½ inch by 4 inch sheeting as described under section T 602.01 “Reflective Sheeting” in the Illinois Department of Transportation’s most recent publication of “Standard Specification for Traffic Control Items”. Prior to application of the sheeting, the receiving surface shall be cleaned and dried as recommended by the supplier of the reflective sheeting.

6. FIELD OPERATIONAL TESTING:
6.1. The Contractor shall test each unit according to the general requirements, as described in the Ramp Gate, Furnish Only section and as required by the Ramp Gate Vendor for proper installation and operation.

6.2. Each ramp gate shall be field tested by the Contractor to demonstrate proper field installation and functional operation.

6.2.1. The field Operational Testing shall be conducted with the technical assistance of the Ramp Gate Vendor's representative, as described in the Ramp Gate, Furnish Only section and in accordance with the Field Operational Testing procedures as approved by the Engineer.

6.2.2. The field operational tests shall verify proper functioning and adjustment of the complete ramp gate system as required by the Ramp Gate Vendor and as approved/directed by the Engineer.

6.2.3. All deficiencies identified during testing shall be corrected and identified in a test report. The testing for the unit shall be restarted from the beginning and continue until the Field Operational Test is completed and the Ramp Gate Vendor certifies that the unit is properly installed and operating. All installation deficiencies shall be corrected by the contractor at their expense. All ramp gate equipment deficiencies are to be corrected by the Ramp Gate Vendor.

6.3. The Contractor shall submit a test report to the Engineer as follows:

6.3.1. Each Ramp gate shall have a test report completed by the Contractor and the Ramp Gate Vendor's representative upon completion of the Field Operational Test of each ramp gate. The test reports shall be certified by the Ramp Gate Vendor and shall be submitted to the Engineer for record after completion of the tests on a ramp-by-ramp basis.

6.3.2. Acceptance of test report does not construe acceptance of the installation or approval for payment.

6.4. The Contractor shall install and test the first ramp gate unit according to the Ramp Gate Vendor's installation and testing recommendations. The first ramp gate unit shall be installed, tested, and operated through its intended full operation in the presence of both the Ramp Gate Vendor's representative and the Engineer.

6.5. After approval of the installation of the first unit, each subsequent unit shall be tested in accordance with the Ramp Gate Vendor's recommended procedures and as approved by the Engineer. Reports for the individual tests of each unit shall be submitted to the Engineer on a ramp by ramp basis. Each test report for the Field Operational Test of the Ramp gate units shall include but not be limited to the following information:

6.5.1. Ramp designation
6.5.2. Gate identification number
6.5.3. Gate serial number
6.5.4. Certification of compliance with the Ramp Gate Vendor's installation requirements
6.5.5. Signature of the Contractors field representative.
6.5.6. Any deficiencies shall also be noted on the report.

6.6. These testing requirements are included as part of the work specified and no separate payment shall be made for Field Operational Testing. All necessary test equipment shall be furnished and maintained by the Contractor. The cost of these requirements shall be included in the costs of the various bid items included in the work, as applicable.

7. ATTENUATORS/CRASH BARRELS. Attenuators, crash barrels or similar installation may be required on a ramp by ramp basis at the direction of the Engineer. Costs of furnishing and installing will be paid under other Pay Item.
8. SITE RESTORATION:
   8.1. Any site work disturbed by the Contractor's work shall be restored to the Engineer's satisfaction. All work shall be in accordance with the "Standard Specifications for Road and Bridge Construction", however, costs shall be included in the unit bid price for Ramp Gate, Installation Only.
9. SCHEDULE:
   9.1. The Contractor shall schedule with the Engineer to visit the specific ramp gate sites within 7 days of execution of the contract.
   9.2. The Contractor and Engineer shall determine the exact configuration and location of the gates. The Contractor shall document the specific ramp gate location/configuration and submit information to the Engineer for verification and approval.
   9.3. A specific schedule of installation of all of the proposed gates at the specific ramps shall be provided for Engineer's approval within 28 days of execution of the contract.
   9.4. Helix foundation(s) shall be ordered within 7 days of receipt of the approved foundation information from the Ramp Gate Vendor as directed by the Engineer. Documentation of purchase order shall be provided to the Engineer.
   9.5. The Contractor shall begin site preparation and foundation installation within 14 days of receipt of approved foundation design information and/or material.
   9.6. The Contractor shall begin installation of gates and appurtenances within 14 days of receipt of ramp gate material.

ARG5-6 RAMP GATE ARM, FURNISH ONLY

DESCRIPTION

This item shall consist of furnishing and delivering to State stock a replacement ramp gate arm for the ramp gate assemblies, specified in Pay Items ARG1 and ARG2. The arms shall be supplied by the OEM of the ramp gate assemblies.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **RAMP GATE ARM, FURNISH ONLY,** of the type indicated, which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ARG5 RAMP GATE ARM, 17 FT., FURNISH ONLY
ARG6 RAMP GATE ARM, 23 FT., FURNISH ONLY

ASG1 GATE ARM CAPSTAN AND BRACKET ASSEMBLY, FURNISH ONLY

DESCRIPTION

This item shall consist of furnishing and delivering to State stock a complete swing gate arm capstan and mounting bracket assembly Model No. HZ-64B as manufactured by B&B Electromatic, reference drawing numbers 0100DD0537 and 0064DD0072 latest revision.

MATERIALS

Gate Arm Capstan And Mounting Bracket:

The gate arm capstan shall be composed of two rotating shafts and one stationary support stanchion (tube) in a "shaft within a shaft" design.

The inner rotating shaft shall transfer the torque and rotary motion from the gate actuator crank arm to the outer rotating shaft which supports the gate arm. The upper end of the inner shaft shall extend through a flange bearing which is bolted to a support plate integral with the frame. Above the crank arm connection, the bearing shall be connected to the shaft with a Nyloc type set-screw. Spare set-screws shall be provided in the box provided for spare shear pins. Self Lubricating, all impregnated, radial bronze bushings shall be used to maintain concentric alignment of the inner shaft relative to a stationary support tube. The upper end of the shaft shall extend past the bearing to provide for the gate position sensors.

The torque and rotary motion shall be transmitted between the inner and outer shafts through a shear connection consisting of two adjacent circular plates of identical metallurgical composition located at the bottom of both shafts. The plates shall be linked by shear pins. The shear pin holes in the plates shall match each other in only one position. Alignment holes shall be provided in both plates to assist shear pin replacement. The adjacent faces of the shear plates shall be ground to a smooth finish and coated with Teflon pipe thread compound or similar material, as approved by the Engineer, to minimize friction and corrosion between the plates.

The inner rotating shaft shall be fabricated from ASTM-A193-B7 solid alloy steel, turned, ground, polished, and machined as required, with a nominal outside diameter of not less than two Inches. The upper end shall be connected to the crank arm using a key and two double set-screws placed 90 degrees apart (one cone point and one set point over top the cone point). The assembly to support the return spring and shear pins shall incorporate keys, rings, or other method approved by the Engineer, at the lower end of the inner shaft.

The stationary support tube shall be rigidly attached to the swing gate frame and incorporate a "keeper collar" to support both the support tube and the outer rotating shaft. The keeper collar shall be bolted through the support tube and into the frame of the swing gate. Self lubricating, oil impregnated, radial bronze bushings shall be located on the exterior at both ends of the support tube to maintain concentric alignment of the outer shaft and the support tube. A self lubricating, oil impregnated, bronze thrust bushing shall be located inside the keeper collar where the outer rotating shaft is supported, to maintain a smooth surface upon which the outer shaft shall ride.

The stationary support tube shall be fabricated from ASTM-A519 steel alloy, machined as required, with a nominal outside diameter of not less than 4.5 inches and a wall thickness of not less than 0.5 inches; it shall be rigidly bolted to the frame of the swing gate using ASTM A-325 bats, nuts and washers.

The outer rotating shaft shall be supported from the keeper collar of the support tube and shall extend to the shear plate of the inner rotating shaft. The gate arm mounting bracket shall attach to the exterior of the outer rotating shaft as described below.

The outer rotating shaft shall be fabricated from ASTM-A519 steel alloy seamless tubing, machined as required, with a nominal outside diameter of not less than six inches and a wall thickness of not less than 0.5 inches. A circular steel plate shall be fabricated from ASTM A656 GR80, welded to the lower end of the outer rotating shaft, and have the shear pin mounting holes drilled and reamed. The shear pin holes shall match the holes for the inner shaft in only one position. Another circular steel plate (ASTM A656 GR80) shall be welded to the upper end of the outer shaft to transfer all axial loads into the swing gate frame via the thrust bearing.

The gate arm mounting bracket shall be fabricated from ASTM A36 steel not less than 0.25 inches thick. The bracket shall be fabricated in two halves and shall be hot dip galvanized after complete fabrication. The halves shall be bolted together with a minimum of eight, 0.5 inch diameter, ASTM-A325 bolts, Type 1 or 2. The bracket shall be damped to the outer shaft of the capstan. The frictional force developed in the clamped connection shall be sufficient to hold the gate arm in position and resist all live and dead loads imposed on the gate. A teflon gasket shall be provided and installed at the end of the bracket, where the aluminum gate arm assembly attaches to the bracket, to isolate the dissimilar metals.

An adjustable disc shall be attached to the swing gate inner rotating shaft. Adjustable position sensing limit switches shall be used to stop the drive motor at the gate arm extended and retracted positions (ramp closed and ramp open).

A second adjustable disc shall be attached to the swing gate outer rotating shaft. Adjustable position sensing limit switches shall be furnished and installed to provide a control input for monitoring the gate position to -10 degrees of fully extended and +10 degrees of fully retracted, by the remote control system.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **GATE ARM CAPSTAN AND BRACKET ASSEMBLY, FURNISH ONLY,** for either a clockwise (COO) or counter-clockwise (CCW) operating unit, which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ASG2 GATE ARM CAPSTAN AND BRACKET ASSEMBLY, REMOVAL, SALVAGE

DESCRIPTION

This item shall consist of the removal, transportation to State Stock, and unloading as salvage a swing gate arm capstan and mounting bracket assembly.

INSPECTION AND ACCEPTANCE

The Contractor shall examine the swing gate arm capstan and mounting bracket assembly in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each swing gate arm capstan and mounting bracket, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION

The Contractor shall transport, handle and store (as applicable) the swing gate shear pin bases in complete conformance with the manufacturer's recommendations.

BASIS OF PAYMENT

This item shall be paid at the contract unit price each for **GATE ARM CAPSTAN AND BRACKET ASSEMBLY, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ASG3 GATE ARM CAPSTAN AND MOUNTING ASSEMBLY, INSTALL ONLY

DESCRIPTION

This item shall consist of retrieving from State Stock, loading, transporting and installing a swing gate arm capstan and mounting bracket assembly.

TRANSPORTATION

The Contractor shall transport, handle and store (as applicable) the swing gate shear pin bases in complete conformance with the manufacturer's recommendations.

INSTALLATION

The swing gate arm capstan and mounting bracket assembly shall be installed in accordance with the swing gate arm capstan and mounting bracket manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT

This item shall be paid at the contract unit price each for **GATE ARM CAPSTAN AND BRACKET ASSEMBLY, INSTALL ONLY**, which shall be payment in full for the work as described herein.

ASG4-9 SWING GATE ARM, FURNISH ONLY

DESCRIPTION

This item is for furnishing and delivering to State Stock swing gate arms of various lengths for the Kennedy Expressway REVLAC System as specified herein.

MATERIALS

The swing gate arm shall consist of an aluminum reflectorized area. The swing gate materials shall be compatible with swing gate controller Model Number HZ64B (Referenced drawing No. 0100DD0037 - latest version) as manufactured by B&B Electromatic, Norwood, Louisiana. The swing gate arms are constructed having the following standard lengths: 2 ft., 4 ft., 5 ft., 6 ft., 7 ft., 8 ft., 9 ft., 10 ft., 11 ft., 12 ft., 13 ft., 14 ft., 15 ft., 16 ft., 17 ft., 18 ft., 19 ft., 20 ft., 21 ft., 22 ft. and 23 ft.

SWING GATE ARMS

Gate arms shall consist of an assembly of standardized design, standard length, segmented truss structures, connectors, brackets, and a three foot long flexible gate tip. Gate arm truss assemblies, as shown on the Contract Drawings and as specified, shall include both the gate arm truss segments and the gate tips.

Each gate arm truss segment shall be 12 Inches high and configured as generally shown on the Contract Drawings. The truss segments shall form a welded structural fabrication of 6061-T6 extruded seamless aluminum tubing having a minimum allowable yield strength of 40,000 pounds per square inch (psi). The segments shall be constructed to prevent accumulation of water within the structural tubes. The minimum allowable size of the materials shall be as shown on the Contract Drawings.

The truss segments shall be interchangeable to permit assembling the gate arms to the specified lengths. The segments shall be provided with the reflective sheeting on both sides of the truss and the stripes properly oriented to allow either side to face the traffic.

Each assembled gate arm shall be designed to resist the loads described herein and meet the following additional requirements:

a) The free end of the assembled gate arm shall not sag more than 0.75 inches, below horizontal, under its own weight.

b) The longest gate arm assembly, excluding the flexible gate tip, shall not deflect more than 36 inches, horizontally, in the specified wind loads.

c) The free end of the longest gate arm assembly shall not sag more than two inches, below horizontal, when covered with ice as described elsewhere herein.

d) The maximum allowable design stress of the gate arm shall be calculated as 60 percent of the yield strength of the material (6061-T6 extruded seamless aluminum tubing has a yield strength of 40,000 psi; therefore, the design stress of the arm shall not exceed 24,000 psi).

e) The gate arms shall be free of harmonics and standing wave vibrations. Should any such harmonics and vibrations develop, the Swing Gate Vendor shall make all necessary corrections at his own cost.

A gate arm tress shall be connected to its mounting bracket via an aluminum connector assembly. The connector shall be fabricated from the same material as the gate arm truss segment and shall be bolted to the mounting bracket with stainless steel bolts, nuts and washers as described below. The attachment bracket may be shimmed, if required, to adjust for deflection caused by the weight of the gate arm assembly. The Swing Gate Vendor shall supply a shim pack, as needed, for each arm assembly. Shimming of a gate arm is limited by the physical constraints of the gate arm recess formed in the barrier wall. Whether shimmed or not, all gate arms shall completely retract into the barrier wall recess. Rubber bumpers shall also be provided with each gate arm to prevent the gate arms from damage when they are retracted. A Teflon gasket shall also be provided for the gate arm to mounting bracket connection.

The use of exterior supports or attachments (such as guy wires) to remove sag from the gate or for any other reason is unacceptable.

Gate arms shall be connected, with an aluminum Insert of the same material as the gate arm, as shown on the Contract Drawings. The insert shall be bolted to the truss segments with stainless steel bolts, nuts, and washers as described below.

Flexible gate tips shall be connected to the end truss segment using the connector assembly as shown on the Contract Drawings. The assembly, truss segment, and gate tips shall be bolted together with 0.5 inch diameter stainless steel bolts, nuts, and washers. One washer shall be placed under the bolt head and a lock washer shall be placed under the nut. The nuts and bolts shall be hand tightened until snug and further tightened with a wrench a minimum of 1/2 turn of the nut.

REFLECTIVE MATERIAL FOR GATE ARMS

Both sides of each gate arm, including both the truss and the flexible end, shall be covered with retro-reflective sheeting. All sheeting requirements shall meet or exceed the standards as defined In AASHTO M 268-84, Retroreflective Sheeting for Traffic Control.

The sheeting shall be a minimum of Type III High Intensity with pre-coated, pressure sensitive, adhesive (Class 1), diagonal alternating red and silver white stripes as shown on the Contract Drawings, angling down at 45° from left to right. The sheeting shall be oriented to take advantage of the directional reflectivity of the material as defined by the supplier of the reflective sheeting.

The material for this application shall be **"Scotchlite" Reflective Sheeting Diamond Grade Series 3970G** as manufactured by 3M, or approved equal. The sheeting shall be pre-striped of appropriate size and width to match the application surface. The retro-reflective sheeting shall be installed strictly according to the manufacturer's instructions. Provide special attention to surface preparation and mounting of sheeting for proper bonding and adhesion.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **SWING GATE ARM** for the length specified:

SWING GATE ARM, (2 FT.) TO (4 FT.), FURNISH ONLY (ASG4)
SWING GATE ARM, (5 FT.) TO (8 FT.), FURNISH ONLY (ASG5)
SWING GATE ARM, (9 FT.) TO (12 FT.), FURNISH ONLY (ASG6)
SWING GATE ARM, (13 FT.) TO (16 FT.), FURNISH ONLY (ASG7)

SWING GATE ARM, (17 FT.) TO (20 FT.), FURNISH ONLY (ASG8)
SWING GATE ARM, (21 FT.) TO (23 FT.), FURNISH ONLY (ASG9)

which price shall be payment in full for furnishing and delivery of the materials to State Stock.

ASG10 EXISTING SWING GATE ARM, RE-ASSEMBLE

DESCRIPTION

This item shall consist of reassembling and/or rebuilding existing swing gate arms that have been damaged by motorists. The re-built assembly shall consist of a swing gate with decals and a used gate tip. New gate tips are furnished and installed through Pay Item ASG11. Bushings for this item are furnished through State Stock.

If the gate rebuilder is not the OEM, the rebuilder shall be a OEM authorized rebuilder (with written authorization from the OEM), unless written approval is received from the Engineer.

The damaged gate shall be checked for warpage and the longest possible standard straight section of gate arm shall be salvaged. The Engineer shall determine if the gate arm is salvageable.

If a longer arm can be re-fabricated into a shorter one, the arm shall be cut and the salvaged arm segment shall then have new brackets welded onto one or both ends. Welding shall be in conformance with OEM welding requirements.

New reflective sheeting shall be provided in conformance with the specifications contained elsewhere herein, as may be required to restore good condition.

The rebuilt gate arm shall be inspected by the Engineer prior to placing into State Stock or re-installing in the field.

TRANSPORTATION

This item shall include all transportation and shipping costs associated with rebuilding the gate arms as specified herein.

Decals

	Article of Std. Specifications
Identification Decal	1069.02(1)
Aluminum mounting plate	1069.02(a)

The individual numerals shall be 10 inches high by 9 inches wide. The numeral mounting plate shall be 12” high X 24” wide, minimum. The mounting plate shall be attached to the end of the gate arm with stainless steel tamper proof bands at all four corners.

The numbers shall consist of two digits, single digit gate arms shall be preceded with an “0” (i.e. IS7 shall be numbered “07”. The ramp designations (i.e. OO, OM, IE etc.) shall not be placed on the number.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **EXISTING SWING GATE ARM, RE-ASSEMBLE,** which price shall be payment in full for transporting and rebuilding the swing gate arm and re-assembling for use in the field as specified herein and as directed by the Engineer.

ASG11 FIBERGLASS REINFORCED GATE TIP, FURNISH AND INSTALL

SCOPE OF WORK

This item is for furnishing and installing a Flexible Fiberglass Reinforced Gate Tip for use on the Swing Gate Arms furnished under a separate pay item.

MATERIALS

The gate tip shall be Model No. FGE-X-OM2, as supplied by W.E. Carlson Corporation, Elk Grove, IL., or approved equal.

The last three feet of the free, unsupported, end of each gate arm assembly shall have a flexible gate tip (gate tip) section bolted to the end truss segment. The gate tip shall be Model # FGE-X-OM2, as supplied by W.E. Carlson Corporation, Elk Grove, IL, or approved equal.

The gate tip shall be constructed using an internal "Z" shaped stay pattern of 1.5 inch by 0.125 inch ribbed fiberglass. The covering over the stay pattern shall be a 25 ounce polyvinyl sheeting sewn around the stays. The perimeter of the gate tip shall have one inch diameter, round, closed cell foam sewn into its top, front, and bottom edges and enclosed with the 25 ounce polyvinyl. The gate tip shall be supported and connected to the gate arm truss segment with two, back to back, structural aluminum angles, each 1.5 by 2.0 by 0.25 Inches. Spacers may be required to support the gate tip between the support angles. Refer to the Contract Drawings for additional information.

The gate tip shall be capable of repeatedly withstanding glancing blows, without fracturing or shattering, from vehicles weighing up to 4500 pounds and traveling at speeds up to 55 miles per hour. This capability shall be demonstrated based upon the tests as mutually agreed upon between the Swing Gate Vendor and the Engineer.

The gate tip shall be rigidly mounted to the gate arm, as shown on the Contract Drawings, and shall resist the design loads as specified elsewhere herein.

The gate tip shall resist the stated wind pressure and remain in a vertical position without twisting about the horizontal axis. Deflection about the vertical axis is permissible, but the gate tip shall not have a noticeable deflection under normal operating conditions.

The gate tip shall deflect in the direction of travel of the vehicles striking it; when no longer in contact with the striking vehicles, it shall automatically return to its original position. It shall also be sufficiently soft and flexible to minimize damage to vehicles.

The gate tip shall be unaffected by dirt, rain, sleet, snow, salt spray, ice, extremes of weather temperatures, and solar radiation and shall pose no threat to the environment. The gate tip shall not become brittle, crack, or be affected by the effects of UV radiation. Gate tips shall be designed to have a useful service life of not less than five years.

The gate tip shall have a series of diagonal reflective strips sewn to both faces. The diagonal striping shall extend the length of the face as shown on the Contract Drawings. The diagonal stripping shall be properly oriented as approved by the Engineer. The shop drawing shall clearly indicate the stripping on both sides of the tip.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **FIBERGLASS REINFORCED GATE TIP, FURNISH AND INSTALL,** which price shall be payment in full for furnishing and delivering the materials as directed by the Engineer.

ASG12 SWING GATE ASSEMBLY, INSTALL ONLY

DESCRIPTION

This item shall consist of loading, transporting from State Stock, and installing a swing gate assembly, consisting of arm, tip, shear pin, numbering the gate arm, or a ramp gate assembly and installing the gate assembly, or reinstalling a gate assembly, which had been previously knocked down by motorists. The assembly consists of the parts necessary for a functioning swing gate. Shear pins are incidental to this pay item. Bushings for this pay item are furnished through State Stock. The gate tip is furnished and installed through pay item ASG10 or ASG11.

TRANSPORTATION

The Contractor shall transport and handle the ramp gates, swing gate arms, gate tips, and shear pin/bushings in complete conformance with the manufacturer's recommendations.

SWING GATE INSTALLATION

The swing gate arm shall be installed in accordance with the swing gate arm manufacturer's installation instructions except as noted herein. The gate arm tip shall be installed in accordance with the gate arm tip manufacturer's installation instructions except as noted herein. Damaged gate arm bumpers shall be replaced with new gate arm bumper provided under this item at no additional cost. Any missing shims or spacers shall also be included in this item at no additional cost.

SHEAR PIN:

The shear pin shall be manufactured by B&B Electromatic in accordance with the plan detail drawing 0100AM0539, latest revision.

The shear pins shall be designed for easy, rapid, reinstallation or replacement by one person with no welding or special tools required. All shear pin holes shall contain hardened steel bushings with shoulders of the bushings installed in the opposite sides of the plates from the shear point. The shear pins shall be grooved to achieve a shear point diameter of not more than one-half the diameter of the pin. Each pin shall be notched at one end and locked in shear position by a keeper plate.

The Swing Gate Vendor shall provide certification and calculations, as part of the shop drawings, to show that the shear pins meet the following design criteria:

a. Resist the live and dead loads imposed on the unit during operation as specified.

b. Allowable shear of the pins to be sized for the design strength of the gate arms.

c. Impact of a 1400 pound vehicle traveling at 35 miles per hour shall cause the pins to shear below the yield strength of the gate arms.

SHEAR PIN INSTALLATION

The new swing gate shear pin shall be installed in accordance with the swing gate shear pin manufacturer's installation instructions except as noted herein.

BUSHING

The bushing shall be the same size as the existing bushing. The bushing shall be made of bronze case hardened steel or stainless steel as determined by the Engineer.

The bushing shall be removed or installed in accordance with the swing gate manufacturer's requirements. Excessive force shall not be used. Any components, other than the shear pin bushing, damaged during the replacement procedure shall be replaced in kind at no additional cost to the State.

Gate arm number materials, shear pins, gate tips and bushings: shall be furnished by the contractor through routine maintenance.

Gate Arm	Article of Std. Specifications
Identification Decal	1069.02 (1)
Aluminum mounting plate	1069.02 (a)

The individual numerals shall be 10 inches high by 9 inches wide. The numeral mounting plate shall be 12 inches high by a minimum of 24 inches wide. The mounting plate shall be attached to the end of the gate arm with stainless steel tamper proof bands at all four corners.

The numbers shall consist of two digits, single digit gate arms shall be preceded with an "0" (i.e. IS7 shall be numbered "07"). The ramp designations (i.e. OO, OM, IE etc.) shall not be placed on the number.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **SWING GATE ARM, TIP, SHEAR PIN, BUSHING, INSTALL AND NUMBER,** which shall be payment in full for the work described herein. Note: This pay item will be exercised for Motorist Caused Damage only.

ASG13 SWING GATE ARM PROXIMITY SWITCH, FURNISH ONLY

DESCRIPTION

This item shall consist of furnishing and delivering to State Stock a complete swing gate arm proximity switch assembly as manufactured by B&B Electromatic or approved equal.

Shear Pin Monitor Proximity Switch (PRX-1):

Electrical continuity, two piece magnet actuated reed proximity switch, shall be provided between the two flanges of the gate arm rotation shaft as a means of monitoring the status of the shear pins. If the shear pins break, permitting relative rotation between the two flanges, the continuity shall be broken causing a 125 VDC signal to be interrupted to the remote control system.

Proximity switch assembly (PRX-1), Mounted between gate arm inner and outer rotating shafts. PLC Input - Shear Pin Detection.

BASIS OF PAYMENT

This work shall be paid at the contract unit price each for **SWING GATE ARM PROXIMITY SWITCH, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ASG14 SWING GATE ARM PROXIMITY SWITCH, REMOVAL, SALVAGE

DESCRIPTION

This item shall consist of the removal, transportation to State Stock, and unloading as salvage a swing gate arm proximity switch assembly.

INSPECTION AND ACCEPTANCE

The Contractor shall examine the swing gate arm proximity switch in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each swing gate arm proximity switch, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the swing gate arm proximity switches in complete conformance with the manufacturer's recommendations.

INSTALLATION
The swing gate arm proximity switch shall be installed in accordance with the swing gate arm proximity switch manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **SWING GATE ARM PROXIMITY SWITCH, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ASG15 SWING GATE ARM PROXIMITY SWITCH, INSTALL ONLY

DESCRIPTION
This item shall consist of retrieving from State Stock, loading, transporting and installing a swing gate arm proximity switch assembly.

INSPECTION AND ACCEPTANCE
The Contractor shall examine the swing gate arm proximity switch in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each swing gate arm proximity switch, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport and handle the swing gate arm proximity switches in complete conformance with the manufacturer's recommendations.

INSTALLATION
The swing gate arm proximity switch shall be installed in accordance with the swing gate arm proximity switch manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **SWING GATE ARM PROXIMITY SWITCH, INSTALL ONLY**, which shall be payment in full for the work as described herein.

ASG16 SWING GATE CONTROLLER, FURNISH ONLY

SCOPE OF WORK
This item is for furnishing and delivering to State Stock, a complete Swing Gate controller, for the Kennedy Expressway Traffic Redirection and Access Control System as specified herein.

MATERIALS
The swing gate controller shall be Model Number HZ64B as manufactured by B&B Electromatic, Norwood, Louisiana and shall be a clockwise or counter-clockwise unit as designated by the Engineer without a gate arm or gate arm tip.

Support Frame
The frames shall be rigid structural weldments designed to withstand all operating loads imposed upon them by the swing gates and shall transfer the loads into the barrier walls via the anchor bolts.

The support frame for the swing gate assembly shall be fabricated from ASTM A36 structural steel shapes and plates using standard structural shapes to the maximum extent possible. All steel used in frame fabrication, including the component mounting plates, shall be at least 0.375 inches thick.

The configuration of all frames shall provide a rigid frame support for mounting additional items as described elsewhere herein.

The frames shall be drilled to match the anchor bolt patterns shown on the Contract Drawings with slotted anchor bolt holes, one inch diameter by two inches long, to allow for field positioning. The anchor bolt pattern shall match the anchor bolts installed under a previous contract.

Ease all exposed edges to a radius of 1/32 inch or more. Corners, seams, and joints shall be welded continuously and shall comply with requirements specified for welding. Welding flux shall be removed immediately and all exposed welds and surfaces shall be cleaned and ground to remove all scale, burrs, and sharp edges. Joints that may be exposed to the weather shall be fabricated to prevent the accumulation of water, dirt, and ice.

The frames shall be complete with all mounting requirements for installation of the gate actuators, controls, housing, and operational warning signs. Mounting plates shall be accurately drilled to match the components mounted. Torch-cut holes are not acceptable. The frames shall be hot dip galvanized after fabrication in compliance with Hot Dip Galvanizing.

The frame shall incorporate removable fitting attachments (lugs) for use during initial installation and for subsequent maintenance of the swing gate assembly. The lifting lugs shall be located on the top of the swing gate housing, as generally shown on the Contract Drawings, and shall be either stainless steel or galvanized to protect the lifting attachments from the elements. The threads of the lifting lugs shall penetrate the housing and engage threaded members welded to the support frame.

The lifting lugs shall be removed after installation and stored inside the swing gate housing in a rigid, non-metallic, re-sealable container, mounted to the inside of the swing gate housing.

Stainless steel bolts with watertight gasketed washers shall be provided with each unit to seal the lifting lug housing penetrations and to achieve an uncluttered appearance upon removal of the lifting lugs.

A stainless steel bottom plate, not less than 12 gauge thickness, shall fit against the bottom of the support frame to cover the opening in the top of the barrier wall at the location of the swing gate insert. Within the confines of the support frame the bottom plate shall cover the entire top area of the swing gate insert, not already covered by the swing gate cover plate (see drawings CP-01 and CP-02), and extend to the capstan end of the frame. Vertical lugs, welded to the upper side of the bottom plate, shall be used to secure the plate against the bottom of the support frame angles by bolting through the lugs and the vertical legs of the angles on three sides of the frame. The bottom of the support frame will vary between 0.875 and 1.75 Inches above the top of the swing gate insert frame (see Mounting Detail on SG series drawings). Provide an adjustable 12 gauge stainless steel skirt, extending the full width of the housing, to close the gap between the bottom plate and the top of swing gate insert. This skirt shall be located along the one edge of the bottom plate which has no support frame angle to fit against. The bottom plate and skirt shall be designed to exclude vermin, to prevent the accumulation of ice, snow, and water within the housing, and to provide safety and security. The bottom plate shall fit as closely as possible around the gate arm capstan. The Swing Gate Vendor shall submit design details for review.

Housing

The housing for the swing gate unit shall be fabricated to accurately fit over the support frame and bolt to the frame to form a weatherproof enclosure to prevent the accumulation of dust, dirt, water, ice, snow and prevent the entrance of vermin. The housing shall be removable and incorporate a positive locating design to facilitate positioning of the housing on the frame. Access doors shall be provided on three sides of the housing to provide maintenance access to each component within the enclosure.

Housings shall be fabricated from Type 302, or approved equal, stainless steel sheets of not less than 12 gauge thickness. Welding flux shall be removed immediately and all exposed welds and surfaces shall be cleaned to remove all scale, burrs, and sharp edges. All exterior welds and surfaces shall be ground smooth and blended to remove all roughness. Each housing shall have two large gasketed doors on the roadway side of the housing and one access door at each end of the housing to provide access for routine maintenance and for servicing of the swing gate assembly. The doors shall be fabricated from the same material as the housing, with a stamped raised frame/flange for rigidity, and be neoprene gasketed. Housing openings and doors shall be reinforced to eliminate deflection.

Doors shall be hung using bronze slip off hinges with stainless steel hinge pins and incorporate a three point door latch with provision for padlocking, and hold-open linkage. The two access doors on the roadway side of the unit shall be provided with heavy duty brass padlocks; all padlocks shall be keyed alike and each swing gate unit shall be provided with two keys. The two access doors at each end of the unit shall be opened from the inside of the unit. With access doors closed, no portion of the housing, including its latches and locks, may extend beyond the face of the barrier wall. In their open position, access doors may extend past the face of the barrier wall.

Each housing shall have a port opening fitted with a hinged, cast stainless steel cover held normally closed by gravity. The port opening shall be aligned with the extended output shaft of the transmission to permit Inserting the shaft of a hand crank through the opening and onto the end of the extended output shaft. Brackets shall be provided, within the housing, upon which to store the crank when not in use. The Swing Gate Vendor shall submit a sample cast cover for review by the Engineer.

The roof of housing shall be pitched to prevent build-up or ponding of water.

Each housing shall completely enclose the support frame and anchors bolts. The two end doors shall provide access to the anchor bolts for installation and maintenance of the unit:

The local controls for the swing gate mechanism shall be coordinated with the remote building Programmable Logic Control (PLC) system for the Reversible Lanes Traffic Redirection and Access Control System. Each swing gate shall be complete with local controls consisting of, but not limited to, the following:

a) Main Motor Circuit Protector with Auxiliary Contacts
b) Control Power Transformer
c) Motor Overloads with Auxiliary Contacts
d) Reversing Starter - minimum NEMA she 1
e) Terminal Blocks for both AC and DC Voltages
f) 125 Volt DC Coil, Remote Control Relays
g) Limit Switches - Cam Actuated
h) Limit Switches
i) Proximity Switch - two piece magnet actuated
j) Remote Control/Local Manual Control Maintained Correct Selector Switch
k) "Manual Open/Remote Control/Manual Close" Spring Return Selector Switch
l) "ON/OFF" Maintained Contact Rotary Pilot Switch

m) Circuit Breaker for the operation of the gate arm slot heater.
n) Circuit Breaker for the 120 VAC controller power
o) LED's for DC control indication.

All electrical components furnished shall be NEMA rated, U.L listed, readily available products of a national, USA manufacturer. Similar components shall be of the same manufacturer.

The entire local control system is to be serviceable from the roadway side of the unit. The local controls shall be enclosed within the swing gate housing and contained within a separate, self-supporting, single lever latch type NEMA 4X, enclosure. The enclosure shall not attach to the swing gate housing, but shall be attached to the swing gate housing support frame. All selector switches shall be mounted on the hinged door of the NEMA 4X enclosure which mounts inside of the swing gate housing. Switches shall be NEMA 4/13 type and installed with suitable gasketing to retain the NEMA 4 rating.

The local controls shall permit valid automatic operations to resume after manual positioning of the gate arm or switching from manual to automatic operation without requiring on-site resetting of the gate arm.

All wiring shall be through the use of pressure type terminal blocks and all control wires shall terminate in these blocks. Each terminal shall be clearly labeled (number or alpha-numeric), and ail wires shall be color coded based on their connected voltage. The wire numbers for the interconnection points to the remote control system shall be the same as shown on the Contract Drawings. The wiring diagram shall identify all colors and wire numbers. Wire all auxiliary contacts to the terminal block to permit transmission of the selector switch settings to the remote control system.

Where number of wires are trained through a box or wired to a hinged cover, they shall be grouped by circuit where applicable, bundled using appropriate cable ties, and supported to prevent pressure or strain on the cable insulation. Wire all selector switches, limit switches, auxiliary contacts, etc., including spare devices, to the terminal block.

Control Device Requirements

Motor Circuit Protector (CB-1):

The local controls at each swing gate shall include a three-pole motor circuit protector (MCP) for the incoming three-phase 480 volts.

Located inside of swing gate housing shall be a three-pole incoming MCP power circuit breaker with a normally open (N.O.) auxiliary contact to close on a "TRIP" or "OPEN" position. Contacts shall be rated not less than 0.5 amperes at 125 VDC.

Motor circuit protectors shall be manually operated and have a magnetic trip level adjustment. Trip ratings shown on the Contract Drawings are approximate and the trip rating provided shall be as recommended by the device manufacturer for the characteristics of the motor.

Motor circuit protectors shall be rated for an available fault current of 65,000 RMS symmetrical amperes.

Control Power Transformer (TR1):

Control power transformers shall be not less than 500 VA continuous duty and rated at 480V - 60 Hz primary to 120V single phase secondary. The control power transformer shall have a circuit breaker secondary and shall be sized adequately for the starter and all connected control devices. Control transformers shall be NEMA type AA, dry, with a temperature rise not to exceed 55 degrees C above a 40 degrees C ambient temperature at continuous rated load. Data submitted for approval shall include starter coil load data and total VA rating of control transformer.

Reversing Starter (MS-1):

Provide a reversing starter that is mechanically and electrically interlocked and rated for 480 Volts, 3 phase power, In a minimum NEMA size 1 configuration.

Starters shall be sized for the motor to be connected, but shall not be smaller than NEMA size 1. Starter size shall be carefully coordinated based on the motor characteristics of the motor to be connected and the manufacturer's starting ratings.

All starters shall be equipped with pull-apart terminal blocks for control and power wiring.

Starters shall be electrically operated, electrically held, with arc-extinguishing characteristics and renewable silver-to-silver contacts. Each starter shall have an overload relay as specified.

As a minimum each starter shall be equipped with two SPDT auxiliary contacts, with the N.C. contacts wired in as coil clearing contacts, in addition to the forward and reverse seal-in contacts. Provide two additional DPDT auxiliary contacts, one in each direction, as spares.

Provide an automatic reset non-compensated thermal overload relay with 480 V, 5 amp continuous duty contact rating. Provide additional auxiliary electrically isolated contacts rated at 120 V, 5 amp continuous duty, one normally dosed in motor control circuit and one normally open for monitoring by the Programmable Logic Controller. Relay shall be a NEMA B600 with three type B heater elements sized as required for the motor HP rating.

Motor control circuit shall operate at 120 volts derived from control transformer TR1, as specified.

Terminal Blocks (TB):

Terminal blocks shall be heavy duty corrosion resistant type rated at 600 volts AC & DC. AC and DC voltages shall be connected to color coded terminal blocks, separated and electrically isolated from each other. AC terminal housing shall be gray, and DC terminals shall be blue. Terminal block housing shall be manufactured from nylon capable of long term exposure of -40 degrees F to 180 degrees F, and all terminals shall be capable of terminating #22 through #6 AWG stranded or solid wire.

The current carrying metal body characteristics shall be as follows:

a. Modular design and construction.
b. Manufactured from a minimum of 85% copper alloy with locking screws manufactured from stress relieved brass.
c. 100% nickel plated.
d. Have self locking screws so that when wire is clamped into terminal, self loosening is not possible.
e. Have wire guides on base body.
f. Achieve "gas tight" termination, as wire is clamped into "serrated" metal body.
g. Have center bridgeability
h. Have no less than 3 milli-ohms of contact resistance.

The terminal blocks shall be as manufactured by Phoenix Contact or approved equal.

125 Volt DC Coil, Remote Control Relays (CR-1, CR-2, CR-3):

Provide electrically held, heavy duty relays rated at 300 V with a minimum of two normally open (N.O.) and two nominally closed (N.C.) independent electrically isolated contacts. The relay shall be hermetically sealed, with convertible, high reliability contact rates not less than 5 ampere resistive. Contact ratings shall be NEMA A300 AC, and NEMA P300 DC as per Contract Drawings.

Control Relay (CR-1), Located in the gate control enclosure. Interlace DC relay to allow remote ramp opening of the gate (PLC control or manual control from the Remote Control Building).

Control Relay (CR-2), Located in the gate control enclosure. Interface DC relay to allow remote ramp closing of the gate (PLC control or manual control from the Remote Control Building).

Control Relay (CR-3), Located in the gate control enclosure. Interface DC relay to allow remote PLC control of chevron sign. Shall be installed in each swing gate unit and connected in only selected swing gates.

Relays shall be as manufactured by Allen Bradley catalog #700-N or as approved by the Engineer.

Limit Switches - Cam Actuated (LS-5, LS-6, & spare LS-7, LS-8):

The gate cam actuated limit switch shall be a unit assembly containing a minimum of 4 individual switches each having one SPDT set of contacts. Contacts shall be totally enclosed and shall have a U.L rating of not less than 15 amperes at 220 volts AC. Each individual switch shall be controlled by an independent cam, which shall be adjustable with a single set screw. The limit switch body, cams and shaft shall be of corrosion resistant non-ferrous materials.

The multiple cam positron sensor assembly shall be operated from the drive transmission. Two of the switches normally closed (N.C.) (LS-5 & LS-6) shall function as motor overtravel limit switches. The other two switches shall be spares. Switches which are of different voltage type shall be isolated through the use of a spacer inserted between the switches.

Each switch shall be operated by an independent cam. The cams shall be position adjustable through 360 degrees of rotation. The signals from these position sensors shall de-energize the starting coils to the motor.

Cam Limit Switches shall be installed as shown on the Contract Drawings and as herein specified:

a) Limit Switch LS-5, with one normally closed (N.C.) contact located on the retract cam position opens and disconnects power to the retract starting coil when the drive travels past the retract position (indicates a broken chain on the cam).

b) Limit Switch LS-6, with one N.C. contact located on the extend cam position opens and disconnects power to the extend starting coil when the drive travels past the extend position (indicates a broken chain on the cam).

Standard Enclosed Limit Switches (LS-1A-1B, LS-2A-2B, LS-3, LS4, LS-9):

Standard Enclosed Limit Switches shall be NEMA 4 as required for outdoor installation (-40 to + 180 degrees F). Limit switches shall be heavy duty, Industrial type, oil and water tight, with a minimum 10 amp, 125 volt DC rating, and rated for one million operations. No electronic switches shall be used.

Standard Enclosed Limit Switches shall be installed as shown on the Contract Drawings and as herein specified:

a) Standard limit Switch LS-1, with one normally open (N.O.) (LS-1A) and one normally closed (N.C.) (LS-1B) independent electrically isolated contacts, located on gate arm inner rotating shaft. LS-1A contact is held closed when the gate is NOT in the retract position. When the gate arm moves to the retracted position (ramp open), the held closed N.O. LS-1A contact opens and disconnects power to the retract starting coil. And the held open N.C. LS-1 B contact closes signaling the Programmable Logic Controller that the Crank Arm is in the retracted (ramp open) position.

b) Standard Limit Switch LS-2, with one N.O.(LS-2A) and one N.C.(LS-2B) independent electrically isolated contacts, located on gate arm Inner rotating shaft. LS-2A contact is held closed when the gate is NOT in the extent position. When the gate arm moves to the extended position (ramp closed), the held closed N.O. LS-2A contact opens and disconnects power to the extend starting coil. And the held open N.C. LS-2B contact closes signaling the PLC that the Crank Arm is in the extended (ramp closed) position.

c) Standard limit switch LS-3, with one N.C. contact, located on the gate arm outer rotating it shaft. LS-3 Is held open when the gate arm is NOT in the retracted position. When the gate arm moves to the retracted position, the held open LS-3 contact closes and signals the PLC that the gate arm is in the retracted position (Input to PLC constant from + 10 degrees of fully retracted).

d) Standard Limit Switch LS-4, with one N.C. contact, located on the gate arm outer rotating shaft. LS-4 is held open when the gate arm is NOT in the extended position. When the gate arm moves to the extended position, the held open LS contact closes and signals the PLC that the gate arm is in the extended position (Input to PLC constant from -10 degrees of fully extended).

e) Standard Limit Switch LS-9, with two N.C. independent electrically isolated contacts (LS-9A & LS-9B), located at the hand crank opening. When the hand crank is inserted, LS-9A opens and disables the motor control circuit and LS-9B opens and disconnects signal to the PLC.

Standard Limit Switches shall be as manufactured by Allen Bradley Bulletin 802M or approved equal.

Remote/Local Control Selector Switch (SS-1):

Selector switch shall be NEMA 4/13 heavy duty type, two position maintained contact, rated at 600 volts AC. Provide and wire auxiliary contacts to the terminal block to permit transmission of the selector switch position to the remote control system.

Selector Switch (SS-1), Located on door of swing gate local control enclosure. Two position selector switch intended to be used for maintenance and local gate control. To allow the gate to be switched to local control (LOCAL MANUAL CONTROL), or to remote building control (REMOTE CONTROL).

Remote Control Switch (SS-2):

Remote control switch shall be NEMA 4/13 heavy duty type, three position spring return to center, rated at 600 volts AC. Provide and wire auxiliary contacts to the selector switch (SS-1) to permit transmission of the selector switch position to the remote/local control system.

Selector Switch (SS-2), Located on door of swing gate local control enclosure. Three Position, spring return to center, selector switch that allows (MANUAL OPEN), (MANUAL CLOSE), when SS-1 is in the "LOCAL MANUAL CONTROL" position.

Rotary ON/OFF Pilot Switch (SS-3):

Rotary Pilot switch shall be NEMA 4/13 heavy duty type, two position maintained contact, rated at 600 volts AC. Wire SS-3 auxiliary contacts to Selector switch (SS-1) via the Terminal strip.

Rotary Pilot Switch (SS-3), located on door of swing gate local control enclosure. Two position selector switch to turn DC power ON and OFF.

Circuit Breaker for the gate arm slot heater (CB-2):

A two-pole, 15 ampere, 600 volt circuit breaker shall be provided for the swing gate sandwich heater cable mounted on the barrier wall.

Circuit Breaker for 120 VAC control power (CB-3):

A two-pole, 5 ampere, 240 volt circuit breaker shall be provided on the secondary power feed, for the control power transformer TR1.

LED's:
Provide high intensity, long life (10 year average) solid state LED cartridges with built-in resistors/rectifiers rated for 125 VDC. Mount LED's in a grouped configuration into the NEMA 4 cabinet as shown on the Contract Drawings.

Wiring for Power and Control:
All wire shall be minimum number 14 AWG stranded copper, type MTW, 600 V insulation.

SEQUENCE OF OPERATIONS - AUTOMATIC:
Automatic Operation - Extent Gate (Close Ramp):

a. Beginning state - swing gate retracted, ramp open.

b. Requirements for automatic operation:

- Selector Switch SS-00 "PLC CONTROL/OFF PLC CONTROL" (located in the Remote Control Building) in "PLC CONTROL" Position
- Selector Switch SS-1 "REMOTE CONTROL/LOCAL MANUAL CONTROL" (located in the local swing gate control cabinet) in "REMOTE CONTROL" Position
- Selector Switch SS-3 "ON/OFF" (located in swing gate control cabinet) in "ON" position
- "Crank Arm Open Limit Switch" LS-1B Closed - PLC Input - Crank Arm in Open Position
- "Gate Retracted Limit Switch LS-3 Closed" - PLC Input - Gate in Retracted Position
- "Shear Pin Detector Proximity Switch" PRX-1 Closed - PLC Input - Shear Pin Detector Intact
- Motor Circuit Protector CB-1 Aux Contact Open, and Motor Overload Relay MOL Aux Contact Open - No fault input to PLC

c. PLC power output to swing gate terminal block #4, energize DC relay CR-3 and flashes Chevron Sign on and off. (PLC programmed logic turns relay on and off).

d. PLC applies power to swing gate terminal block #2, energize DC relay CR-2. CR-2 contact closes and energizes starting coil MS-1R.

e. The motor starts and the gate arm begins moving from the retracted to the extended position.

f. When the gate moves 10 degrees from fully retracted, limit switches LS-3 and LS-1B signal inputs to the PLC that the gate is no longer in the retracted position.

g. Power is continuous to relay CR-2, until limit switches LS-4 and LS-2B signal the PLC that the gate is in the extended position, or a pre-set time limit In the PLC has expired. Relay CR-3 is de-energized after all the gates are In the extended position, turning the chevron signs off.

Automatic Operation - Retract Gate (Open Ramp):

a. Beginning state - swing gate extended, ramp closed.

b. Requirements for automatic operation:

- Selector Switch SS-00 "PLC CONTROL/OFF PLC CONTROL" (located In the Remote Control Building) in "PLC CONTROL" Position
- Selector Switch SS-1 "REMOTE CONTROL/LOCAL MANUAL CONTROL" (located in the local swing gate control cabinet) in "REMOTE CONTROL" Position
- Selector Switch SS-3 "ON/OFF" (located in swing gate control cabinet) in "ON" position
- "Crank Arm Closed Limit Switch" LS-2B Closed - PLC Input - Crank Arm Closed
- "Gate Extended Limit Switch" LS-4 Closed - PLC Input - Gate Extended
- "Shear Pin Detector Proximity Switch" PRX-1 Closed PLC Input - Shear Pin Detector Intact
- Motor circuit Protector CB-1 Aux. Contact Open and Motor Overload Relay MOL Aux. Contact Open. No fault input to PLC

c. PLC applies power to swing gate terminal block #1, energize DC relay CR-1. CR-1 contact closes and energizes starting coil MS-1F.

d. The motor starts and the gate arm begins moving from the extended to the retracted position.

e. When the gate moves 10 degrees from fully extended, limit switches LS-4 and LS-2B signal inputs to PLC that the gate is no longer in the extended Position.

f. Power is continuous to relay CR-1, until limit switches LS-3 and LS-1B signal the PLC that the gate is in the retracted position, or a pre-set time limit in the PLC has expired. Relay CR-1 is then de-energized, turning the motor off.

Manual Operating Requirements (Local Control):

a. Open the housing access door.

b. Set selector switch SS-1 in "LOCAL MANUAL CONTROL" position. (disconnects PLC outputs from the remote control building).

c. Moving and holding the selector switch SS-2 in either the "MANUAL OPEN" or "MANUAL CLOSE" position, moves the gate arm in the extended or retract direction. Releasing the spring return switch stops all movement.

d. To return to remote control, SS-1 must be switched to the "REMOTE CONTROL" position.

e. Close the housing access door.

Manual Operating Requirements (Hand Cranking)

A hand crank shall be furnished with each swing gate to provide a means for manual operation of the gate arm in the event of a power or control failure, maintenance, or emergency operations. The hand crank shall connect to an extended output shaft from the transmission and shall require approximately 36 complete rotations to crank the gate arm 90 degrees. The crank arm shall not require more than 30 pounds of force per rotation. The following steps shall be required to position the hand crank for use:

a. Open the housing access door.

b. Open the port cover for crank arm.

c. From outside the housing, insert the shaft of the crank through the port and onto the end of the transmission shaft. Automatically disconnects motor control circuit from operating remotely (LS-9 Opens). Mechanically releases brake.

d. Crank the arm to the required position, until extended or retracted LED lights up, or until physical stop is reached.

e. Remove the crank arm. Automatically re-energizes the control circuit (LS-9 Closes), and engages the brake.

f. Replace the crank arm inside the housing, and close the access door.

CORROSION PROTECTION
Aluminum components shall not be treated with corrosion inhibitors.

The Swing Gate Vendor's names and data plates, machined ways, and other machined surfaces, bright metal work, lubrication points, oilers, and sumps shall be protected against entry of coatings, dirt, or cleaning agents during coating application.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **SWING GATE CONTROLLER, FURNISH ONLY,** for either a clockwise (COO) or counter-clockwise (CCW) operating unit, which price shall be payment in full for furnishing and delivering the materials to State Stock as directed by the Engineer.

ASG17 SWING GATE CONTROLLER, REMOVAL, SALVAGE

DESCRIPTION
This item shall consist of removal, transportation to State Stock, and unloading as salvage a swing gate controller.

INSPECTION AND ACCEPTANCE
The Contractor shall examine the swing gate controller in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each swing gate controller, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the swing gate controllers in complete conformance with the manufacturer's recommendations.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **SWING GATE CONTROLLER, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ASG18 SWING GATE CONTROLLER, INSTALL ONLY

DESCRIPTION
This item shall consist of retrieving from State Stock, loading, transporting and installing, a swing gate controller.

INSPECTION AND ACCEPTANCE
The Contractor shall examine the swing gate controller in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each swing gate controller, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the swing gate controllers in complete conformance with the manufacturer's recommendations.

INSTALLATION
The swing gate controller shall be installed in accordance with the swing gate controller manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **SWING GATE CONTROLLER, INSTALL ONLY**, which shall be payment in full for the work as described herein.

ASG19 SWING GATE ARM HAND CRANK, FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State Stock swing gate arm hank crank as manufactured by B&B Electromatic. The hank crank shall match the design and material of the existing hand cranks.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each for **SWING GATE ARM HAND CRANK, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ASG20 GATE DRIVETRAIN ASSEMBLY, FURNISH ONLY

DESCRIPTION
This item shall consist of furnishing and delivering to State Stock a complete swing gate actuator transmission, motor and crank arm, hereinafter referred to as a drivetrain assembly, as manufactured by B&B Electromatic, compatible with the existing swing gates.

MATERIALS

Transmission:
The gate actuator shall include but not be limited to a worm gear transmission with a double extended output shaft, reduction gears, and input shaft. The drive motor shall direct couple to the input shaft of the transmission. One of the output shafts of the transmission shall be connected to the swing gate crank arm assembly. The second output shaft shall be used for manual cranking of the gate arm.

The gate actuator transmission shall transfer the torque to the gate arm capstan via a linkage of the crank arm assembly which shall consist of two crank arms and an adjustable connecting rod having self-aligning ball ends. The crank arm assembly shall be factory pre-set for the specific gate location and gate arm angle. All linkage components shall be heavy-duty and shall permit field adjustment of the rotation of the gate arm from -5 to 95 degrees of rotation.

The gate actuator transmission shall be a totally enclosed unit designed and built for the required service. Gears shall conform with the requirements of AGMA and shall be oil bath lubricated with lightweight oil as applicable for the design temperatures. The transmission housing shall include, but not be limited to an oil fill plug and an oil drain plug. These items shall be located for easy access, from the ramp side access door during routine inspection and maintenance of the mechanism, without removing the housing or other components.

The connecting rod shall be fabricated from ASTM A311 Class B high strength steel.

The gate actuator shall incorporate sine wave motion to accelerate the gate arm smoothly from zero to maximum velocity at mid-stroke and then decelerate smoothly to zero velocity at full stroke. The drive shall be designed to rotate the gate arm through 90 degrees within 15 seconds and shall be capable of reversing of the direction of rotation from any point.

Actuator Drive Motors:
The drive motors shall be flange mounted to their transmission cases. The motors shall be double extended shaft type, suitable for harsh environment use, as specified herein. An electric, solenoid released, motor brake shall be mounted to the other end of the motor.

Motors shall be squirrel cage induction type, 460 volt, 3-phase, 60 Hertz, High Slip, High Torque (NEMA design D), Totally Enclosed Non Ventilated, and shall have Class F insulation. Horsepower rating shall be not less than twice that calculated by the Swing Gate Vendor to meet specified design parameters. Motors shall be capable of operating the driven equipment over the full range of operating load conditions without exceeding the nameplate rating. Motors shall be flange mounted, attached to the transmission with at least four bolts, and shall be of the instant reversing type to permit reversing the movement direction at any point of travel.

The ratings, characteristics, materials, and construction of electric motors shall be in accordance with the latest applicable standards of ANSI, IEEE, and NEMA The manufacturer's certification of the preceding shall be provided as a part of the submittal data.

Submittal data shall include complete manufacturer's specifications and descriptive bulletins for all equipment, size, capacity, description and make of motor. Motor data shall include the following:

a. Manufacturer
b. Nameplate Rated Horsepower
c. Rated Voltage
d. Full Load RPM
e. Full Load Current
f. NEMA Design Letter
g. NEC Code Letter or Inrush Current
h. Insulation Class
I. Service Factor
j. Recommended Starting Restrictions, including Allowable Starts Per Hour
k. Design Load Calculations

The motor shall be equipped with an electric solenoid actuated type brake which shall automatically release when the gate arm starts to move out of position under power and shall automatically set when the gate arm reaches the opened or closed position. The brake shall have the same operating voltage rating as the drive motor. A means shall be provided to mechanically release the brake, in the case of control power failure, to permit use of the hand crank for manual operation. The solenoid brake shall be sized to hold the gate arm in position under the forces produced by the wind loads as described elsewhere herein.

Motor bearings shall be designed to withstand all axial thrust from the driven equipment.

BASIS OF PAYMENT
This work shall be paid at the contract unit price each, for **GATE DRIVETRAIN ASSEMBLY, FURNISH ONLY,** which price shall be payment in full for furnishing and delivering the materials to State stock as specified herein and as directed by the Engineer.

ASG21 GATE DRIVETRAIN ASSEMBLY, REMOVAL, SALVAGE

DESCRIPTION
This item shall consist of the removal, transportation to State Stock, and unloading as salvage, a gate drivetrain assembly.

INSPECTION AND ACCEPTANCE
The Contractor shall examine the a swing drivetrain assembly in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each drivetrain assembly, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the a swing gate drivetrain assembly in complete conformance with the manufacturer's recommendations.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **SWING GATE DRIVETRAIN ASSEMBLY, REMOVAL, SALVAGE**, which shall be payment in full for the work as described herein.

ASG22 GATE DRIVETRAIN ASSEMBLY, INSTALL ONLY

DESCRIPTION
This item shall consist of retrieving from State Stock, loading, transporting and installing a gate drivetrain assembly.

INSPECTION AND ACCEPTANCE
The Contractor shall examine the a swing drivetrain assembly in the presence of the Engineer and after accepting them shall be held responsible for preservation of the condition of each drivetrain assembly, as it was at the time of acceptance, until the Final Acceptance Inspection.

TRANSPORTATION
The Contractor shall transport, handle and store (as applicable) the a swing gate drivetrain assembly in complete conformance with the manufacturer's recommendations.

INSTALLATION
The swing gate drivetrain assembly shall be installed in accordance with the swing gate drivetrain manufacturer's installation instructions except as noted herein.

BASIS OF PAYMENT
This item shall be paid at the contract unit price each for **SWING GATE DRIVETRAIN ASSEMBLY, INSTALL ONLY,** which shall be payment in full for the work as described herein.

ATC1-8 TRAFFIC CONTROL, DURING NON-ROUTINE WORK

DESCRIPTION:
This item of work shall include furnishing, installing, maintaining, replacing, relocating and removing all traffic control devices used for the purpose of regulating, warning or directing traffic during non-routine work. For routine maintenance work, the traffic control shall be incidental to routine maintenance and its cost shall be included in the respective pay item unit price.

The Contractor shall contact the Region One Bureau of Traffic at least 72 hours in advance of beginning work.

BASIS OF PAYMENT:
This work will be paid for at the contract unit price each for **TRAFFIC CONTROL, FOR NON-ROUTINE WORK,** of the closure type indicated, which price shall be payment in full for all labors to install, maintain, replace, relocate and remove all traffic control devices indicated in the plans and specifications, in construction areas.

Delays to the Contractor caused by complying with these requirements will be considered incidental to the item for:

TRAFFIC CONTROL FOR NON-ROUTINE WORK, 1 LANE EXPRESSWAY CLOSURE (DAY) (ATC1)
TRAFFIC CONTROL FOR NON-ROUTINE WORK, 1 LANE EXPRESSWAY CLOSURE (NIGHT) (ATC2)
TRAFFIC CONTROL FOR NON-ROUTINE WORK, 2 LANE EXPRESSWAY CLOSURE (DAY) (ATC3)
TRAFFIC CONTROL FOR NON-ROUTINE WORK, 2 LANE EXPRESSWAY CLOSURE (NIGHT) (ATC4)
TRAFFIC CONTROL FOR NON-ROUTINE WORK, 3 LANE EXPRESSWAY CLOSURE (DAY) (ATC5)
TRAFFIC CONTROL FOR NON-ROUTINE WORK, 3 LANE EXPRESSWAY CLOSURE (NIGHT) (ATC6)
TRAFFIC CONTROL FOR NON-ROUTINE WORK, RAMP CLOSURE (DAY) (ATC7)
TRAFFIC CONTROL FOR NON-ROUTINE WORK, RAMP CLOSURE (NIGHT) (ATC8)

which shall be payment in full for all labor, to install, maintain, replace, relocate and remove all traffic control devices indicated in the plans and specifications.

Delays to the Contractor caused by complying with these requirements will be considered incidental to the item for traffic control and no additional compensation will be allowed.

AVCE1-4 VIDEO CODEC, FURNISH AND INSTALL

DESCRIPTION
Video encoders and video decoders (codecs) shall be dedicated hardware devices, and except for differences between encoders and decoders they shall all of the same type from the same common manufacturer. The codecs may be either single or dual channel video type to transfer “full motion” 30 frame-per-second high quality color video via MPEG-2 video compression at 1 to 15 Megabits per second. The units shall operate to produce a robust data communications stream that shall allow for both video and audio transmission and shall be immune to timing disruptions in the IP multi-cast configuration.

The Codecs shall be the standard product of an established North American manufacturer. The manufacturer shall have been in business for a minimum of 7 years. The manufacturer shall provide a minimum of a twelve (12) month warranty from the date of installation. The manufacturer shall provide technical support via email, fax and telephone. The above forms of support shall be provided Monday through Friday, 8:00am to 5:00pm EST. The Manufacturer shall also have a repair facility within North America.

The encoders shall be NKF Electronics #C-15 E/IP or C-15/SA for 1 channel encoders and iMpath #VSG1000 for 2 channel encoders or approved equal to be compatible with the existing equipment.

The units shall be rack-mountable, complete with redundant power supplies as required for the rack configurations indicated on the plans, operating from a 120-volt single phase AC power input.

Encoder units shall accept NTSC video BNC inputs and Ethernet RJ-45 control/communications input connections.

The encoders shall interface the serial communications port of the CCTV camera assembly through the fiber optic video link. Using the Ethernet port on the encoder and its IP address, commands shall be exchanged between the camera control computer at the Video Control Points and the serial port of the CCTV camera. Each video channel shall have at least one dedicated data channel.

The codecs shall conform to the following:

Video

Analog Video	NTSC (30 fps)
Analog Video Connections	BNC, connector, 75 ohms; S-Video
Encoding Format	ISO/IEC 13818 MPEG-2
Decoding Format	NTSC
Encoding Rate	1 Mbps to 15 Mbps
Decoding Rate	1 Mbps to 15 Mbps
G.O.P. Structure	User Selectable: I; I&P; I,B&P
Intra-picture Distance	1 to 19 frames
Reference Distance	0 to 2 frames
Resolution	D1, 720 x 480
Codec Control	Web server, IP and HTML interface
MPEG-2 Stream Type	Transport

Low Speed Data Transmission

Interface	RS232, RS422, RS485
Connections	DB-9, RJ-45
Data Rate	1.2Kbps to 115.2 Kbps
Format	Serial , asynchronous, RS-422
Interface	IEEE 802.3 Ethernet
Network Connections	RJ-45
Data Rate	100 Mbps
Broadcast	Unicast / Multicast
Management	SNMP, Web server, C. L. I.

Physical Requirements

Operating Temperature	0º to +70º C
Relative Humidity	95% non-Condensing

Regulatory Requirements

UL 1950
FCC 47 CFR Part 15, Subpart B: 1999 Class A

The Encoders/Decoders must support firmware updates from a central site. Updates must be downloadable to a single unit or by bulk via a single command from a firmware utility application via the Ethernet network. The firmware utility application must provide confirmation of the successful and unsuccessful updates. Upon completing of the update, the units must resume to original configuration without the need to reload the unit configuration.

Special Submittal Requirements and Operational Demonstration

As a part of the product catalog cut submittal, the Engineer may request that the Contractor provide a demonstration of the codecs at the time of the initial product submittal. The manufacturer shall demonstrate the following interoperability with at least one other codec manufacturer. Compatibility shall also include successful transmission of PTZ commands. The demonstration shall be comprised of the following parts:

- **Codec CCTV camera PTZ compatibility.** The demonstration shall include a pair of the proposed codecs, a proposed CCTV camera, and a CCTV camera of another manufacturer other than the proposed CCTV which is of a manufacturer already installed in the District 1 Video Distribution System.
- **Video interoperability.** The demonstration shall demonstrate the following interoperability: The proposed encoder shall be capable of encoding a video stream that is decodable by at least one other Manufacturer compiling with this specification, or of a manufacturer which equipment is presently in use by IDOT District 1 at the time of bidding. The interoperability demonstration shall be conducted in multicast mode.
- **Software video decoding.** A software based video decoder with PTZ control shall be provided for viewing and controlling a video stream remotely over the IP network.

All costs for this demonstration shall be included in the cost of this pay item. It is the Contractor's responsibly to provide all hardware and software to perform the demonstrations as specified.

INSTALLATION

The installation shall include all work to install, wire, configure and test the complete system at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring and mounting brackets shall be included in this item and not paid separately.

METHOD OF MEASUREMENT

Video encoders or video decoders shall be counted, each.

BASIS OF PAYMENT

This work will be paid for at the contract unit price each of **VIDEO CODEC, FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AVCE1 VIDEO COMMUNICATION ENCODER, 1 CHANNEL, FURNISH AND INSTALL
AVCE2 VIDEO COMMUNICATION ENCODER, 2 CHANNEL, FURNISH AND INSTALL
AVCE3 VIDEO COMMUNICATION DECODER, 1 CHANNEL, FURNISH AND INSTALL
AVCE4 VIDEO COMMUNICATION DECODER, 2 CHANNEL, FURNISH AND INSTALL

AVCF1 VIDEO COMMUNICATION FIBER TRANSCEIVER, FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing and installing a video communication fiber transceiver, four channel, to convert video signal from coax to fiber. The transceiver shall be Meridian Networks Model PT-4500iR or PR-4500iR, as designated by the Engineer, or approved equal.

INSTALLATION

The installation shall include all work to install, wire, configure and test the complete system at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring, fiber patch cords and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price each for, **VIDEO COMMUNICATION FIBER TRANSCEIVER (AVCF1), FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AVCF2 VIDEO COMMUNICATION FIBER MEDIA CONVERTER, FURNISH AND INSTALL

AVCF3 VIDEO COMMUNICATION FIBER MEDIA CONVERTER LH, FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing and installing a video communication fiber transceiver, industrial grade, to convert 10/100 Ethernet from copper to single mode fiber. The media converter shall be Hirschmann Model MM3-2FXS2/2TX1, RS2-FX-SM/FX-LH for long haul or approved equal.

INSTALLATION

The installation shall include all work to install, wire, configure and test the complete system at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring, fiber patch cords and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price each for, **VIDEO COMMUNICATION FIBER MEDIA CONVERTER, FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

VIDEO COMMUNICATION FIBER MEDIA CONVERTER, FURNISH AND INSTALL AVCF2
VIDEO COMMUNICATION FIBER MEDIA CONVERTER LH, FURNISH AND INSTALL AVCF3

AVCF4 VIDEO COMMUNICATION FIBER SWITCH, FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing and installing a video communication fiber switches, industrial grade, with eight 10/100 Ethernet ports. The switch shall be Hirschmann Model MS2108-2, or approved equal.

INSTALLATION
The installation shall include all work to install, wire, configure and test the complete system at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:
This work will be paid for at the contract unit price each for, **VIDEO COMMUNICATION FIBER SWITCH, (AVCF4), FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AVCH1 VIDEO COMMUNICATION HUT, FURNISH AND INSTALL

DESCRIPTION
This item shall consist of furnishing and installing a video communication hut, precast concrete, 9'-3" X 14' interior dimensions. The equipment in the hut shall include 200 A Main Service Disconnect Switch and distribution panel, two three ton air conditioning units with lead-lag controller and 5 kW electric heater, smoke alarm, four 4' fluorescent fixtures, three convenience outlets, heavy duty 18 gauge metal door and frame with panic bar and door closer, emergency light and fire extinguisher. The hut shall be designed to withstand the following loads:

Floor Live Load: 250 PSF
Roof Load: 65 PSF
Wind Load 110 MPH

The hut shall comply with latest applicable codes. The hut shall be Oldcastle Precast Communications Model 1215, or approved equal.

INSTALLATION
The installation shall include all work to install a foundation, as per manufacturer's recommendation, and hut for a complete system at a location designated by the Engineer. All hardware, wiring and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:
This work will be paid for at the contract unit price each for, **VIDEO COMMUNICATION HUT, (AVCH1), FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AVCL1 VIDEO COMMUNICATION LINK, FURNISH AND INSTALL

DESCRIPTION
This item shall consist of furnishing and installing a video communication links, 5.8 GHz, unlicensed microwave radios, consisting of two radios with integrated antennas, two 50m long outdoor rated Ethernet cables, two sets of mounting hardware, two power injectors to transmit one full motion video and PTZ control channels over Ethernet link. The unit shall be Tsunami QuickBridge.11 Model 5054-R or approved equal.

INSTALLATION
The installation shall include all work to install, wire, configure and test the complete system at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:
This work will be paid for at the contract unit price each for, **VIDEO COMMUNICATION LINK, (AVCL1), FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AVCM1 VIDEO COMMUNICATION MUX, FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing and installing a video communication sonet mux, and configuring and mapping into the existing sonet network. The unit shall one Timing Communications Control Plus module, one 576 STS X-Connect module, one OC48 fiber media module, one chassis, two AIC controllers, and power supply and fan unit. The unit shall be CISCO, Model 15454, or approved equal.

INSTALLATION

The installation shall include all work to install, wire, configure and test the complete system at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring, fiber patch cords and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price each for, **VIDEO COMMUNICATION MUX, (AVCM1), FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AVCP1 VIDEO COMMUNICATION POLE, FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing and installing a video communication pole, steel, galvanized, 75' tall, suitable for a 4' dish with a projected area of 13 ft^2 with a wind loading of 170 MPH.

INSTALLATION

The installation shall include all work to install, the unit at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price each for, **VIDEO COMMUNICATION POLE, (AVCP1), FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AVCR1 VIDEO COMMUNICATION RACK, OPEN, FURNISH AND INSTALL

AVCR2 VIDEO COMMUNICATION RACK, ENCLOSED, FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing and installing one video communication rack, at a location specified by the Engineer. The rack shall be a self-supporting rack, 19" or 23" wide, 7' high, Chatsworth Corp, P/No. 463-83-503 with a horizontal ring, 11564-523 and a vertical cable manager, 12831-703. The enclosed rack shall be 42U high, beige, with sides, one door in front and split doors in the back and with wheels, with four shelves and with 4' power strip and shall be APC Netshelter VX42U or approved equal.

INSTALLATION

The installation shall include all work to install, the unit at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:
This work will be paid for at the contract unit price each for, **VIDEO COMMUNICATION RACK, FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

VIDEO COMMUNICATION RACK, OPEN, FURNISH AND INSTALL (AVCR1)
VIDEO COMMUNICATION RACK, ENCLOSED, FURNISH AND INSTALL (AVCR2)

AVCS1 VIDEO COMMUNICATION SWITCH, FURNISH AND INSTALL

DESCRIPTION
This item shall consist of furnishing and installing a video communication switch, Gigabit Ethernet, rackmount, with forty-eight switched 10/100 Ethernet ports (RJ45) for video inputs (WS-X4148-RJ); six switched 1000 Ethernet fiber ports (WS-X4306GB) with one 1000Base-ZX extended reach fiber module (WS-G5487) and one 1000Base-SX fiber module (WS-G5484) ; one Supervisor III processor (WS-X4014) in a 6-slot chassis (WS-C4506) with 1300 W AC power supply (PWR-C45-1300ACV), and blank covers for empty slots. The unit shall be Cisco Catalyst Series 4500 with IOS Enhanced Layer 3 (S4KL3E-12119EW) software or approved equal.

INSTALLATION
The installation shall include all work to install, the unit at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring, including fiber patch cords and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:
This work will be paid for at the contract unit price each for, **VIDEO COMMUNICATION SWITCH, FURNISH AND INSTALL, (AVCS1)** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AVCW1 VIDEO CONTROL WORKSTATION, FURNISH AND INSTALL

DESCRIPTION
This item shall consist of furnishing and installing a video control workstation with client software to select and control CCTV cameras. The video control workstation shall be a standard product of an established brand name company with a demonstrated track record of providing high-quality long-term maintenance and service. The company shall have been producing leading-edge PC based components for a minimum of five years prior to the bid. The company shall provide nationwide service and support on a 7 day a week, 24 hour a day basis and shall maintain an 800 customer support service. All major components such as the motherboard, power supply, processor, memory, hard disk, CD-ROM, integrated network interface card, audio and video components, shall be assembled and warranted by the computer's manufacturer. The workstation, as configured, shall be a standard model number of the manufacturer. Computers that are assembled from brand name components by system integrators or re-sellers will be considered "Clones" and are not acceptable.

Each workstation shall be equipped with the following as a minimum:

Operating System:	Windows XP Pro, including all available service packs, shall be provided as a full version on CDROM. System restoration disks are not acceptable.
Hard disk:	160 GB ATA-66/100 IDE (7200 rpm) or better.
Motherboard:	800 MHz bus clock speed with minimum of 4 dedicated PCI slots. All slots shall support bus-mastering. A single Pentium IV 3.0 GHz CPU with 2 MB cache, or better, shall be provided.

Memory:	Minimum of 1 GB of memory. At least one memory bank shall remain open for future expansion.
Optical:	2 Drives: one 48x CD-RW and one 16x DVD+/-RW or better
Video Card:	PCI Express 128 MB with DVI, VGA and TV output
Input Device:	A 3-button, optical mouse with wheel, and a full size keyboard.
Monitor:	One 17" flat-screen, anti-glare monitors shall be supplied for each work station. The monitor shall support resolution of 1600 x 1280 DPI at vertical refresh rate of minimum 100 Hz and horizontal refresh rate of 85 KHz. The monitor shall be energy star compliant. On-screen advanced control shall be supported.
Network Interface:	The workstation shall be supplied with an Integrated Network Interface Card (NIC) supporting 10/100/1000 MB/s and using 32-bit PCI bus-mastering technology. The card shall have a UTP (RJ-45) connector. The card shall be compliant with PCI local bus specification 2.0 and IEEE 802.3 for Ethernet. The card shall also support Netflex-3 technology.
Monitor:	The workstation shall be provided with a desk mount 17” active matrix TFT LCD monitor. The monitor shall have a resolution of 1280 x 1024 pixels and a response time of 25 milliseconds. The contrast ratio shall be a minimum of 500:1. The monitor shall have both analog and digital (DVI) inputs.
Software:	The Contractor shall furnish client software, install, provision, and test software to select and control the CCTV cameras. The software shall be identical to the client software being installed under the Dan Ryan reconstruction contract. The software shall also include software to provide the ability to view the selected camera directly on the workstation monitor.

INSTALLATION

The installation shall include all work to install, the unit at a location designated by the Engineer, so as to provide a completely operational package. All hardware, wiring, including fiber patch cords and mounting brackets shall be included in this item and not paid separately.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price each for, **VIDEO CONTROL WORKSTATION, FURNISH AND INSTALL,** of the type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AVL1-2 AUTOMATIC VEHICLE LOCATOR (AVL), FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing and installing a completely operational AVL, status and two-way text messaging units in a Department vehicle designated by the IDOT Engineer. The units shall include: 1) a wireless data transceiver, 2) GPS receiver and 3) Operator/vehicle interface. The units shall have been in use in highway and/or other similar vehicle tracking applications over the last three years with an installed base over 1000 units and shall have a warranty of two year parts and factory labor by the equipment manufacturer. The unit shall be PRI Model RDT-0195 or approved equal and shall be coordinated with equipment and software furnished under Pay Items for AVL equipment, specified elsewhere.

The units shall automatically send, based on a programmed criteria, and/or shall send, in response to a request from the central controller, the information about the vehicle's location, status, etc. The units shall transmit and receive information, time and date stamped, as follows, over the Department's radio communication network:

- Update and transmit location, speed and direction at every 5 minutes factory-set interval, which shall be user-adjustable from 2 minutes to 3 hours, either locally or remotely from the central controller.
- Transmit vehicle status messages, entered manually by the driver via keypad, up to 99 status messages, and transmit status inputs, up to 6, either from its input module or from the vehicle data ports, to indicate plow position, salt spreader activation, etc. However, furnishing and installing of these external devices is not included in the scope of this item.
- Receive the above status messages and show them on a 2 line 16 character display.
- Transmit radio call number and driver's name with each location/status message. This information will be entered via the swipe card reader and will be a combination of alpha numeric characters up to 20 characters long. The card reader shall comply with ANSI X4.13 and X4.16.

The communication protocol to be provided shall be based on the protocol used by the Department's radio communication network. Should there be a change in the protocol during the two-year warranty period, the manufacturer shall provide the necessary equipment and software for reprogramming for the new protocol at no additional charge.

All software and equipment costs shall be included in the bid price for the pay item. No subsequent licensing, leasing or subscription fees shall be required for the Department's continued use of the system.

INSTALLATION

The installation shall include all work in the Department vehicle necessary to install, wire and configure the complete system so as to provide a completely operational package. All hardware, antennas, interfaces, cables, wiring and mounting brackets shall be included in this item and not paid separately. Also included is the additional necessary system integration and coordination with the AVL System Controllers, specified elsewhere in the Contract. Systems shall be installed in the Department's Emergency Traffic Patrol Trucks, Maintenance Plows/Salt Spreaders, as well as any other type of automobile and/or pick-up truck designated by the engineer. Testing to ensure that the mobile system has been seamlessly integrated into the network is included and shall be done in the presence of the IDOT Engineer.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price each for **AUTOMATIC VEHICLE LOCATOR (AVL), FURNISH AND INSTALL,** of the mobile type indicated, which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

AUTOMATIC VEHICLE LOCATOR FOR UTILITY VEHICLES (AVL1)
AUTOMATIC VEHICLE LOCATOR FOR SNOW PLOWS (AVL2)

AVL3 AVL RADIO MODEM, FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing and installing a completely mobile data radio modem in the Department's vehicles for AVL units described in the Pay Items AVL1 and AVL2. The mobile data radios shall communicate over the Department's licensed radio frequency while interfacing directly with AVL equipment described Pay Items AVL 1-2. The radio unit shall include: 1) dual receiver with diversity reception, 2) transmit power of at least 40 watts, 3) operate on 13.8 volts dc, 4) RJ45 Ethernet 10 Base T

interface, and 5) RS232 serial port. Two antennas are required for this radio unit and shall be installed with antenna spacing as specified by the manufacturer. Radio frequency communications will be capable of a data transmission rate of 19.2kbps or greater. The radio frequency used will be provided by the Engineer.

INSTALLATION

The installation shall include all work necessary to install, wire, integrate, set-up all communications to the AVL server, configure the complete system so as to provide a completely operational AVL unit in the vehicle. Testing shall be done in the presence of the IDOT Engineer.

BASIS OF PAYMENT

This work shall be paid for at the contract unit price each for, **AVL3 RADIO MODEM, FURNISH AND INSTALL** which price shall be payment in full for furnishing, installing and testing the unit for a completely functional AVL unit in the vehicle, as specified herein and as directed by the Engineer.

AVL4 AVL SYSTEM WORKSTATION, FURNISH AND INSTALL

DESCRIPTION

This item shall consist of furnishing, installing and integrating a completely operational user workstation at locations specified by the Engineer and shall be coordinated and integrated with the AVL equipment specified elsewhere in the Contract. The workstation shall be initially configured to simultaneously interface with 150 AVL equipped vehicles with wireless AVL, Status and Two-Way Text messaging packages and shall be easily software configurable to interface with no less than 1,800 AVL equipped mobile units, and a network of up to 9 other workstations. The manufacturer shall provide a two-year parts, software and factory labor warranty. The manufacturer shall have provided such systems for at least 3 years and furnished at least 30 such controllers to other highway departments, airports or utility companies. The proposed controller shall have been previously distributed and must be a current version. All software licensing fees shall be included in the bid price for this pay item. No subsequent licensing, leasing fees shall be required for continued use of the system.

The workstation shall continuously collect vehicle location, speed, direction, status and other information from the mobile units. It shall provide the work station users with manufacturer's customary full complement of services that shall include: vehicle facility, landmark and other information overlaid on user selected maps in accordance with individual requests from each workstation; graphically representing vehicle location, speed, direction and status for all vehicles in the selected map area; graphically representing the same information in the selected map area for only selected radio call numbers; a map showing the location and nearby vehicles based on a query for a specific vehicle from a workstation; a graphical replay of a selected vehicle over a selected interval; and current historical reports by date, vehicle, locations, etc. The application software package shall be capable of being custom enhanced to obtain and display real time operational statistics such as the number of vehicles engaged in plowing and/or salting, percentage of routes completed, etc. Capability for other future graphical enhancements shall include real time tracking of routes plowed, salted, pot hole repaired, etc.

The controller hardware, Dell or approved equal, shall include as a minimum: Pentium 4, 2+ GHz, 1 GB RAM, 80 GB Hard Drive, Floppy Drive, 24X CD-ROM Drive, 100 Mbps NIC, 17" LCD monitor, PS/2 mouse, keyboard; software compatible with the Department's current choice of Microsoft and ESRI (ARC) suite of products for OS, DB, word processing, report generation, graphical user interface, mapping etc. For a client workstation; Ethernet switch; router; appropriate printer and application software, PRI Advantage or approved equal. The software shall also include a mapping software package to include Lake, McHenry, Cook, DuPage, Kane and Will counties plus ten mile perimeter extending into adjacent Illinois, Indiana and Wisconsin counties with subscription based update services.

INSTALLATION

The installation shall include all work necessary to install, integrate, wire, , set-up all software, configure the complete system so as to provide a completely operational package. Testing shall be done in the presence of the IDOT Engineer. All interfaces, cables, surge protecting power strips, hook-up wire, connectors, mounting brackets and other appurtenances shall be included for a completely operational system.

BASIS OF PAYMENT

This work shall be paid for at the contract unit price each for, **AUTOMATIC VEHICLE LOCATOR (AVL4) SYSTEM WORKSTATION, FURNISH AND INSTALL** which price shall be payment in full for furnishing and installing the unit as specified herein and as directed by the Engineer.

ABA1 BUDGETARY ALLOWANCE FOR REVLAC REMOTE CONTROL MODIFICATIONS

DESCRIPTION:

This item is to establish a budget account to allocate funds for the payment of modifications to the existing remote control radio system as manufacturer by Cattron and for partial activation control of the gates, auxiliary signs and Chevrons. The modification will involve PLC programming to turn on and turn off the radios only when needed and will involve replacing the existing gate control switches with a master control selector switch for each ramp. A budgetary allowance has been established since these modifications are not accurately or completely identifiable at the time of bidding.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $50,000 as indicated for Pay Item ABA1. For bidding purposes this amount shall be used.

ABA2 BUDGETARY ALLOWANCE FOR PLC CONTROL SYSTEM REPAIR

DESCRIPTION:

This item is to establish a budget account to allocate funds for the payment of repair to the existing Allen-Bradley PLC control system. A budgetary allowance has been established since it is unknown if repair will be needed.

This allowance will not be used to repair damage caused by the Contractor's operations. Damage caused by the Contractor's operations shall be repaired at not additional cost to the Contract.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $20,000 as indicated for Pay Item ABA2. For bidding purposes this amount shall be used.

ABA3 BUDGETARY ALLOWANCE FOR STATE STOCK PARTS

DESCRIPTION:

This item is to establish a budget account to allocate funds for the purchase of state stock parts to be used for the repair of motorist caused damage. A budgetary allowance has been established since it is unknown what the total cost would be for each situation.

This allowance will not be used to repair damage caused by the Contractor's operations. Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $50,000 as indicated for Pay Item ABA3. For bidding purposes this amount shall be used.

ABA4 BUDGET ALLOWANCE FOR REMOTE NETWORK MONITORING SYSTEM

DESCRIPTION

This item is to establish a budget account to allocate funds for the remote network monitoring system. A budgetary allowance has been established since the specifics are unknown at this time.

In general, this item shall consist of furnishing hardware and software as specified to allow remote monitoring of the REVLAC/RACS systems alarms and/or device history.

Engineering dial up notebook computers/printers shall be incorporated to the monitoring system to allow the Engineer to call into the system and view/download the alarm/device history. The remote monitoring dial up unit shall be approved by the Engineer.

All software and programming required for remote access shall be included as a part of this item (provided on CD ROM or floppy) and coordinated with the network monitor specified elsewhere herein.

To minimize wear and tear on the proposed remote network monitoring system any equipment furnished to the State shall not be used as a development platform by the Contractor, Subcontractor or software developer. The Contractor and/or software developer shall use a different unit to develop software and operational configurations. However, the equipment delivered to the State shall have all software loaded and be ready for use as specified.

The total estimated amount of the annual expenses for this system which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $15,000 as indicated for Pay Item ABA4. For bidding purposes, this amount shall be used.

ABA5 BUDGETARY ALLOWANCE FOR CCTV SYSTEM REPAIR

DESCRIPTION:

This item is to establish a budget account to allocate funds for the payment of repair to the existing CCTV system. A budgetary allowance has been established since it is unknown if repair will be needed.

This allowance will not be used to repair damage caused by the Contractor's operations. Damage caused by the Contractor's operations shall be repaired at not additional cost to the Contract.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $50,000 as indicated for Pay Item ABA5. For bidding purposes this amount shall be used.

ABA6 BUDGETARY ALLOWANCE FOR COMMUNICATION SYSTEM REPAIR

DESCRIPTION:

This item is to establish a budget account to allocate funds for the payment of repairs to the existing communication system. A budgetary allowance has been established since it is unknown if repair will be needed.

This allowance will not be used to repair damage caused by the Contractor's operations. Damage caused by the Contractor's operations shall be repaired at not additional cost to the Contract.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $20,000 as indicated for Pay Item ABA6. For bidding purposes, this amount shall be used.

ABA7 BUDGETARY ALLOWANCE FOR SWING GATE HEATER REPAIR

DESCRIPTION:

This item is to establish a budget account to allocate funds for the payment of repair to the existing swing gate arm heating system. A budgetary allowance has been established since it is unknown if repair will be needed.

This allowance will not be used to repair damage caused by the Contractor's operations. Damage caused by the Contractor's operations shall be repaired at not additional cost to the Contract.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $25,000 as indicated for Pay Item ABA7. For bidding purposes this amount shall be used.

ABA8 BUDGETARY ALLOWANCE FOR UPS AND OTHER BUILDING EQUIPMENT REPAIRS

DESCRIPTION:

This item is to establish a budget account to allocate funds for the payment of repairing or replacing UPS, and other equipment at REVLAC and RACS buildings and communication huts.

This allowance will not be used to repair damage caused by the Contractor's operations. Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $30,000 as indicated for Pay Item ABA8. For bidding purposes this amount shall be used.

ABA9 BUDGETARY ALLOWANCE FOR GATE DRIVETRAIN ASSEMBLY REPAIRS

DESCRIPTION:

This item is to establish a budget account to allocate funds for the repair of a gate drivetrain assembly from an approved vendor. A budgetary allowance has been established since it is unknown what the total cost would be for each situation.

This allowance will not be used to repair damage caused by the Contractor's operations. Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $50,000 as indicated for Pay Item ABA9. For bidding purposes this amount shall be used.

ABA10 BUDGETARY ALLOWANCE FOR MICROWAVE REPAIRS

DESCRIPTION:

This item is to establish a budget account to allocate funds for the repairs of all microwave equipment with the ASMC Contract. A budgetary allowance has been established since it is unknown what the total cost would be for each repair situation.

This allowance will not be used to repair damage caused by the Contractor's operations. Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $30,000 as indicated for Pay Item ABA10. For bidding purposes this amount shall be used.

ABA11 BUDGETARY ALLOWANCE FOR ASMC-EMCMS ENHANCEMENTS

DESCRIPTION:

This item is to establish a budget account to allocate funds for enhancements to the Electrical Maintenance Contract Management System (EMCMS) so that the system may also be used for the management of ASMC Contract. EMCMS is currently designed to handle only one system contract. The budgetary allowance has been established since the costs to redesign the system to manage multiple maintenance contracts is unknown at this time.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $20,000 as indicated for Pay Item ABA11. For bidding purposes this amount shall be used.

ABA12 BUDGETARY ALLOWANCE FOR RAMP GATE AND ATTENUATOR WORK

DESCRIPTION:

This item is to establish a budget account to allocate funds for regarding, surface preparation and other field discovered work during the installation of ramp gates and attenuators. The budgetary allowance has been established to allow for the field conditions discovered during installation.

The total estimated amount of the annual expenses for services performed which will be paid under Articles 7.1.4, 7.1.5 and 7.1.6, is $80,000 as indicated for Pay Item ABA12. For bidding purposes this amount shall be used.

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

Effective: September 1, 2000 Revised: June 22, 2005

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR part 26 and listed in the DBE Directory or most recent addendum.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100% state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100% state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor:

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE firms performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. This determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 10.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set forth in this Special Provision:

(a) The bidder documents that firmly committed DBE participation has been obtained to meet the goal; or

(b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders may consult the DBE Directory as a reference source for DBE companies certified by the Department. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's web site at www.dot.il.gov.

BIDDING PROCEDURES. Compliance with the bidding procedures of this Special Provision is required prior to the award of the contract and the failure of the as-read low bidder to comply will render the bid not responsive.

(a) In order to assure the timely award of the contract, the as-read low bidder shall submit a Disadvantaged Business Utilization Plan on Department form SBE 2026 within seven (7) working days after the date of letting. To meet the seven (7) day requirement, the bidder may send the Plan by certified mail or delivery service within the seven (7) working day period. If a question arises concerning the mailing date of a Plan, the mailing date will be established by the U.S. Postal Service postmark on the original certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service. It is the responsibility of the bidder to ensure that the postmark or receipt date is affixed within the seven (7) working days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Plan is to be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). It is the responsibility of the bidder to obtain confirmation of telefax delivery. The Department will not accept a Utilization Plan if it does not meet the seven (7) day submittal requirement and the bid will be declared not responsive. In the event the bid is declared not responsive due to a failure to submit a Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration or to extend the time for award.

(b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.

(c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. The signatures on these forms must be original signatures. All elements of information indicated on the said form shall be provided, including but not limited to the following:

(1) The name and address of each DBE to be used;

(2) A description, including pay item numbers, of the commercially useful work to be done by each DBE;

(3) The price to be paid to each DBE for the identified work specifically stating the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;

(4) A commitment statement signed by the bidder and each DBE evidencing availability and intent to perform commercially useful work on the project; and

(5) If the bidder is a joint venture comprised of DBE firms and non-DBE firms, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s).

(d) The contract will not be awarded until the Utilization Plan submitted by the bidder is approved. The Utilization Plan will be approved by the Department if the Plan commits sufficient commercially useful DBE work performance to meet the contract goal. The Utilization Plan will not be approved by the Department if the Plan does not commit sufficient DBE performance to meet the contract goal unless the bidder documents that it made a good faith effort to meet the goal. The good faith procedures of Section VIII of this special provision apply. If the Utilization Plan is not approved because it is deficient in a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no less than a five (5) working day period in order to cure the deficiency.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR part 26.55, the provisions of which govern over the summary contained herein.

(a) DBE as the Contractor: 100% goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE firm does not count toward the DBE goals.

(b) DBE as a joint venture Contractor: 100% goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

(c) DBE as a subcontractor: 100% goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE firm does not count toward the DBE goal.

(d) DBE as a trucker: 100% goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contact. Credit will be given for the full value of all such DBE trucks operated using DBE employed drivers. Goal credit will be limited to the value of the reasonable fee or commission received by the DBE if trucks are leased from a non-DBE company.

(e) DBE as a material supplier:

(1) 60% goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.

(2) 100% goal credit for the cost of materials or supplies obtained from a DBE manufacturer.

(3) 100% credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

GOOD FAITH EFFORT PROCEDURES. If the bidder cannot obtain sufficient DBE commitments to meet the contract goal, the bidder must document in the Utilization Plan the good faith efforts made in the attempt to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which could reasonably be expected to obtain sufficient DBE participation. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts are not good faith efforts; rather, the bidder is expected to have taken those efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

(a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.

(1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.

(2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.

(3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) a. Negotiating in good faith with interested DBE companies. It is the bidder’s responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE

participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.

(5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

(6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.

(7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.

(8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.

(b) If the Department determines that the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that a good faith effort has not been made, the Department will notify the bidder of that preliminary determination by contacting the responsible company official designated in the Utilization Plan. The preliminary determination shall include a statement of reasons why good faith efforts have not been found, and may include additional good faith efforts that the bidder could take. The notification will designate a five (5) working day period during which the bidder shall take additional efforts. The bidder is not limited by a statement of additional efforts, but may take other action beyond any stated additional efforts in order to obtain additional DBE commitments. The bidder shall submit an amended Utilization Plan if additional DBE commitments to meet

the contract goal are secured. If additional DBE commitments sufficient to meet the contract goal are not secured, the bidder shall report the final good faith efforts made in the time allotted. All additional efforts taken by the bidder will be considered as part of the bidder's good faith efforts. If the bidder is not able to meet the goal after taking additional efforts, the Department will make a pre-final determination of the good faith efforts of the bidder and will notify the designated responsible company official of the reasons for an adverse determination.

(c) The bidder may request administrative reconsideration of a pre-final determination adverse to the bidder within the five (5) working days after the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The pre-final determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issue of whether an adequate good faith effort was made to meet the contract goal. In addition, the request shall be considered a consent by the bidder to extend the time for award. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten (10) working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal.

(a) No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.

(b) All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the work of the terminated DBE with its own forces, those of an affiliate or those of another subcontractor, whether DBE or not, without first obtaining the written consent of the Bureau of Small Business Enterprises to amend the Utilization Plan. If a DBE listed in the Utilization Plan is terminated for reasons other than convenience, or fails to complete its work on the contract for any reason, the Contractor shall make good faith efforts to find another DBE to substitute for the terminated DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, but only to the extent needed to meet the contract goal or the amended contract goal. The Contractor shall notify the Bureau of Small Business Enterprises of any termination for reasons other than convenience, and shall obtain approval for inclusion of the substitute DBE in the Utilization Plan. If good faith efforts following a termination of a DBE for cause are not successful, the Contractor shall contact the Bureau and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Bureau will evaluate the good faith efforts in light of all circumstances surrounding the performance status of the contract, and determine whether the contract goal should be amended.

(c) The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefor to the DBE by the Contractor, but not later than thirty (30) calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Report on Department form SBE 2115 to the Regional Engineer. If full and final payment has not been made to the DBE, the Report shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Plan, the Department will deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages.

(d) The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

(e) Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of “Good Faith Effort Procedures” of this Special Provision, except a final

decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department.

PARTIAL PAYMENTS (BDE)
Effective: September 1, 2003

Revise Article 109.07 of the Standard Specifications to read:

"**109.07 Partial Payments.** Partial payments will be made as follows:

(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the amount of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than $1000.00 will be approved for payment other than the final payment.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved. Furthermore, progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c).

(b) Material Allowances. At the discretion of the Department, payment may be made for materials, prior to their use in the work, when satisfactory evidence is presented by the Contractor. Satisfactory evidence includes justification for the allowance (to expedite the work, meet project schedules, regional or national material shortages, etc.), documentation of material and transportation costs, and evidence that such material is properly stored on the project or at a secure location acceptable and accessible to the Department.
Material allowances will be considered only for nonperishable materials when the cost, including transportation, exceeds $10,000 and such materials are not expected to be utilized within 60 days of the request for the allowance. For contracts valued under $500,000, the minimum $10,000 requirement may be met by combining the principal (material) product of no more than two contract items. An exception to this two item limitation may be considered for any contract regardless of value for items in which material (products) are similar except for type and/or size.

Material allowances shall not exceed the value of the contract items in which used and shall not include the cost of installation or related markups. Amounts paid by the Department for material allowances will be deducted from estimates due the Contractor as the material is used. Two-sided copies of the Contractor's cancelled checks for materials and transportation must be furnished to the Department within 60 days of payment of the allowances or the amounts will be reclaimed by the Department."

PAYMENTS TO SUBCONTRACTORS (BDE)
Effective: June 1, 2000 Revised: September 1, 2003

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts no later than 30 days from the receipt of each payment made to the Contractor.

State law addresses the timing of payments to be made to subcontractors. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, generally requires that when a Contractor receives any payment from the Department, the Contractor is required to make corresponding, proportional payments to each subcontractor performing work within 15 calendar days after receipt of the state payment. Section 7 of the State Prompt Payment Act further provides that interest in the amount of 2% per month, in addition to the payment due, shall be paid to any subcontractor by the Contractor if the payment required by the Act is withheld or delayed without reasonable
cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

As progress payments are made to the Contractor in accordance with Article 109.07 of the Standard Specifications for Road and Bridge Construction, the Contractor shall make a corresponding partial payment within 15 calendar days to each subcontractor in proportion to the work satisfactorily completed by each subcontractor. The proportionate amount of partial payment due to each subcontractor shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors shall be paid in full within 15 calendar days after the subcontractor's work has been satisfactorily completed. The Contractor shall hold no retainage from the subcontractors.

This Special Provision does not create any rights in favor of any subcontractor against the State of Illinois or authorize any cause of action against the State of Illinois on account of any payment, nonpayment, delayed payment or interest claimed by application of the State Prompt Payment Act. The Department will neither determine the reasonableness of any cause for delay of payment nor enforce any claim to payment, including interest. Moreover, the Department will not approve any delay or postponement of the 15 day requirement. State law creates remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor’s payment bond in accordance with the Public Construction Bond Act, 30 ILCS 550.

FLAGGER VESTS (BDE)
Effective: April 1, 2003 Revised: January 1, 2006

Revise the first sentence of Article 701.04(c)(1) of the Standard Specifications to read:

> “The flagger shall be stationed to the satisfaction of the Engineer and be equipped with a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-2004 for Conspicuity Class 2 garments and approved flagger traffic control signs conforming to Standard 702001 and Article 702.05(e).”

Revise Article 701.04(c)(6) of the Standard Specifications to read:

"(6) Nighttime Flagging. Flaggers shall be illuminated by an overhead light source providing a minimum vertical illuminance of 108 lux (10 fc) measured 300 mm (1 ft) out from the flagger's chest. The bottom of any luminaire shall be a minimum of 3 m (10 ft) above the pavement. Luminaire(s) shall be shielded to minimize glare to approaching traffic and trespass light to adjoining properties.

The flagger vest shall be a fluorescent orange or fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 3 garments."

PAYROLLS AND PAYROLL RECORDS (BDE)
Effective: August 10, 2005

FEDERAL AID CONTRACTS. Add the following State of Illinois requirements to the Federal requirements contained in Section V of Form FHWA-1273:

"The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid.

The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form."

STATE CONTRACTS. Revise Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

"IV. COMPLIANCE WITH THE PREVAILING WAGE ACT

1. Prevailing Wages. All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.

2. Payroll Records. The Contractor and each subcontractor shall make and keep, for a period of three years from the date of completion of this contract, records of the wages paid to his/her workers. The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid. Upon two business days' notice, these records shall be available, at all reasonable hours at a location within the State, for inspection by the Department or the Department of Labor.

3. Submission of Payroll Records. The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

   Each submittal shall be accompanied by a statement signed by the Contractor or subcontractor which avers that: (i) such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Act; and (iii) the Contractor or subcontractor is aware that filing a payroll record that he/she knows to be false is a Class B misdemeanor.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor."

PERSONAL PROTECTIVE EQUIPMENT (BDE)
Effective: July 1, 2004

All personnel, excluding flaggers, working outside of a vehicle (car or truck) within 7.6 m (25 ft) of pavement open to traffic shall wear a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/.green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments. Other types of garments may be substituted for the vest as long as the garments have manufacturers tags identifying them as meeting the ANSI Class 2 requirement.

PORTABLE CHANGEABLE MESSAGE SIGNS (BDE)
Effective: November 1, 1993 Revised: April 2, 2004

Description. This work shall consist of furnishing, placing, and maintaining changeable message sign(s) at the locations(s) shown on the plans or as directed by the Engineer.

The sign(s) shall be trailer mounted. The message panel shall be at least 2.1 m (7 ft) above the pavement, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time. Character height shall be 450 mm (18 in.).

The message panel shall be of either a bulb matrix or disc matrix design controlled by an onboard computer capable of storing a minimum of 99 programmed messages for instant recall. The computer shall be capable of being programmed to accept messages created by the operator via an alpha-numeric keyboard and able to flash any six messages in sequence. The message panel shall also be capable of being controlled by a computer from a remote location via a cellular linkage. The Contractor shall supply the modem, the cellular phone, and the necessary software to run the sign from a remote computer at a location designated by the Engineer. The Contractor shall promptly program and/or reprogram the computer to provide the messages as directed by the Engineer.

The message panel shall be visible from 400 m (1/4 mile) under both day and night conditions. The letters shall be legible from 250 m (750 ft).

The sign shall include automatic dimming for nighttime operation and a power supply capable of providing 24 hours of uninterrupted service.

The Contractor shall provide all preventive maintenance efforts s(he) deems necessary to achieve uninterrupted service. If service is interrupted for any cause and not restored within 24 hours, the Engineer will cause such work to be performed as may be necessary to provide this service. The cost of such work shall be borne by the Contractor or deducted from current or future compensation due the Contractor.

When the sign(s) are displaying messages, they shall be considered a traffic control device. At all times when no message is displayed, they shall be considered equipment.

Basis of Payment. When portable changeable message signs are shown on the Standard, this work will not be paid for separately but shall be considered as included in the cost of the Standard.

For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN.

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)
Effective: April 2, 2005

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting in accordance with Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

WORK ZONE PUBLIC INFORMATION SIGNS (BDE)
Effective: September 1, 2002 Revised: January 1, 2005

Description. This work shall consist of furnishing, erecting, maintaining, and removing work zone public information signs.

Camera-ready artwork for the signs will be provided to sign manufacturing companies upon request by contacting the Central Bureau of Operations at 217-782-2076. The sign number is W21-I116-6048.

Freeways/Expressways. These signs are required on freeways and expressways. The signs shall be erected as shown on Highway Standard 701400 and according to Article 702.05(a) of the Standard Specifications.

All Other Routes. These signs shall be used on other routes when specified on the plans. They shall be erected in pairs midway between the first and second warning signs.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the Standard.

WORK ZONE SPEED LIMIT SIGNS (BDE)
Effective: April 2, 2004 Revised: January 1, 2006

Delete Article 702.05(c).

Revise Article 702.05(d) to read:

"(d) Work Zone Speed Limit Signs. Work zone speed limit sign assemblies shall be provided and located as shown on the plans. Two additional assemblies shall be placed 150 m (500 ft) beyond the last entrance ramp for each interchange or sideroad. The individual signs that make up an assembly may be combined on a single panel. The sheeting for the signs shall be reflective and conform to the requirements of Article 1084.02.

All permanent "SPEED LIMIT" signs located within the work zone shall be removed or covered. This work shall be coordinated with the lane closure(s) by promptly establishing a reduced posted speed zone when the lane closure(s) are put into effect and promptly reinstating the posted speed zone when the lane closure(s) are removed.

The work zone speed limit signs and end work zone speed limit signs shown in advance of and at the end of the lane closure(s) shall be used for the entire duration of the closure(s).

The work zone speed limit signs shown within the lane closure(s) shall only be used when workers are present in the closed lane adjacent to traffic; at all other times, the signs shall be promptly removed or covered. The sign assemblies shown within the lane closure(s) will not be required when the worker(s) are located behind a concrete barrier wall.

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)
Effective: January 1, 2003 Revised: November 1, 2004

Add the following to Article 702.01 of the Standard Specifications:

"All devices and combinations of devices shall meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 for their respective categories. The categories are as follows:

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, flexible delineators and plastic drums with no attachments. Category 1 devices shall be crash tested and accepted or may be self-certified by the manufacturer.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include drums and vertical panels with lights, barricades and portable sign supports. Category 2 devices shall be crash tested and accepted for Test Level 3.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions, truck mounted attenuators and other devices not meeting the definitions of Category 1 or 2. Category 3 devices shall be crash tested and accepted for either Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals and area lighting supports. Currently, there is no implementation date set for this category and it is exempt from the NCHRP 350 compliance requirement.

The Contractor shall provide a manufacturer's self-certification letter for each Category 1 device and an FHWA acceptance letter for each Category 2 and Category 3 device used on the contract. The letters shall state the device meets the NCHRP 350 requirements for its respective category and test level, and shall include a detail drawing of the device."

Delete the third, fourth and fifth paragraphs of Article 702.03(b) of the Standard Specifications.

Delete the third sentence of the first paragraph of Article 702.03(c) of the Standard Specifications.

Revise the first sentence of the first paragraph of Article 702.03(e) of the Standard Specifications to read:

"Drums shall be nonmetallic and have alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes."

Add the following to Article 702.03 of the Standard Specifications:

"(h) Vertical Barricades. Vertical barricades may be used in lieu of cones, drums or Type II barricades to channelize traffic."

Delete the fourth paragraph of Article 702.05(a) of the Standard Specifications.

Revise the sixth paragraph of Article 702.05(a) of the Standard Specifications to read:

> "When the work operations exceed four days, all signs shall be post mounted unless the signs are located on the pavement or define a moving or intermittent operation. When approved by the Engineer, a temporary sign stand may be used to support a sign at 1.2 m (5 ft) minimum where posts are impractical. Longitudinal dimensions shown on the plans for the placement of signs may be increased up to 30 m (100 ft) to avoid obstacles, hazards or to improve sight distance, when approved by the Engineer. "ROAD CONSTRUCTION AHEAD" signs will also be required on side roads located within the limits of the mainline "ROAD CONSTRUCTION AHEAD" signs."

Delete all references to "Type 1A barricades" and "wing barricades" throughout Section 702 of the Standard Specifications.

APPENDIX

PREVENTIVE MAINTENANCE (PM) PROGRAM FORMS

6.6 PREVENTATIVE MAINTENANCE (PM) PROGRAMS

6.6.1 Restraining Barrier PM
REVLAC

6.6.2 Swing Gates PM
REVLAC
RACS

6.6.3 Rotating Drum Signs PM
REVLAC

6.6.4 REVLAC and RACS LED & fiber optic SIGNS PM
RACS & REVLAC

6.6.5 Control and Communication Buildings, and Systems PM
REVLAC BUILDINGS
RACS BUILDINGS
BATTERY REPLACEMENT
RADIO CONTROL (CATTRONS)

6.6.6 Microwave PM
HARRIS MICROWAVE
MICROWAVE RADIO CORP.

6.6.7 Generator PM
SEMI-ANNUAL GENERATOR

6.6.8 CCTV Camera PM
No form included, submit Ticket Summary

6.6.9 Expressway Ramp Gates PM
No form included, submit Ticket Summary

PREVENTIVE MAINTENANCE PROGRAM -- REVLAC RESTRAINING BARRIERS

Date: _____ Conducted By: _____

Inspection performed once per year in April

Loc. #	Location Name	Width	Deficiency [List Letter(s)]	Ticke Numbe
ABIE	Inbound Edens @ Barrier	28 Ft		
ABIS	Inbound Slip Ramp @ Barrier	36.21 Ft		
ABIW	Inbound West Leg @ Barrier	28.94 Ft		
ABOM	Outbound Mainline @ Barrier	22.27 Ft		
ABOO	Outbound Ontario @ Barrier	28 Ft		
ABOS	Outbound Slip Ramp @ Barrier	35.85 Ft		

Inspect the following items, repair or clean as necessary:

A. Check net condition and positioning and check for damage or vandalism
B. Check that all cabinets are closed
C. Inspect all control cabinets, equipment access covers and hinged opening for proper closure (bolted or padlocked)
D. Check wire condition and terminations
E. Open tower cover doors and hinged openings, clean, check drive chain and sprocket alignment and wear, counterweight cable attachment and general condition and check for oil leaks
F. Check tower cover weather seal for wear or damage
G. Check limit switches and actuators; adjustments, clearances, and secure mounting
H. Check barrier net cables conditions, for tautness/tension and proper height
I. Check stabilizer foot pads (replace worn or missing pads)
J. Check inside of tower and cross ramp structure for accumulation of debris, dirt, dust, corrosion, animal nests, and excess grease
K. Replace missing or damaged reflective striping
L. Lubricate per maintenance manual section 4-5:

Pillow block bearings:	Lube only if seal failure is noticed.
Sprocket bearings:	Lube only if seal failure is noticed
Speed reducers:	Replace or repair reducer if it leaks
Drive chair	Clean and lubricate
Guide pins	Clean and lubricate

Rev.10/05

PREVENTIVE MAINTENANCE PROGRAM -- REVLAC SWING GATES

Date: _____ Conducted By: _____

To be performed twice per year, circle one: APRIL 1st Inspection October 2nd Inspection

LOC. #	Location Name		Length	Deficiency [List Letter(s)]	Ticket Number(s)	Critical ?
ASGIE1	Inbound Edens	Swing Gate 1	5 Ft			YES
ASGIE2	Inbound Edens	Swing Gate 2	9 Ft			YES
ASGIE3	Inbound Edens	Swing Gate 3	12 Ft			
ASGIE4	Inbound Edens	Swing Gate 4	16 Ft			
ASGIE5	Inbound Edens	Swing Gate 5	17 Ft			
ASGIE6	Inbound Edens	Swing Gate 6	17 Ft			
ASGIE7	Inbound Edens	Swing Gate 7	17 Ft			
ASGIE8	Inbound Edens	Swing Gate 8	17 Ft			
ASGIE9	Inbound Edens	Swing Gate 9	17 Ft			YES
ASGIE10	Inbound Edens	Swing Gate 10	10 Ft			YES
ASGIE11	Inbound Edens	Swing Gate 11	9 Ft			YES
ASGIE12	Inbound Edens	Swing Gate 12	22 Ft			YES
ASGIE13	Inbound Edens	Swing Gate 13	16 Ft			
ASGIE14	Inbound Edens	Swing Gate 14	8 Ft			
ASGIE15	Inbound Edens	Swing Gate 15	5 Ft			
ASGIS1	Inbound Slip Ramp	Swing Gate 1	12 Ft			YES
ASGIS2	Inbound Slip Ramp	Swing Gate 2	15 Ft			YES
ASGIS3	Inbound Slip Ramp	Swing Gate 3	18 Ft			

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ASGIS4	Inbound Slip Ramp	Swing Gate 4	21 Ft			
ASGIS5	Inbound Slip Ramp	Swing Gate 5	23 Ft			
ASGIS6	Inbound Slip Ramp	Swing Gate 6	23 Ft			
ASGIS7	Inbound Slip Ramp	Swing Gate 7	23 Ft			
ASGIS8	Inbound Slip Ramp	Swing Gate 8	23 Ft			
ASGIS9	Inbound Slip Ramp	Swing Gate 9	23 Ft			YES
ASGIS10	Inbound Slip Ramp	Swing Gate 10	14 Ft			YES
ASGIS11	Inbound Slip Ramp	Swing Gate 11	14 Ft			YES
ASGIS12	Inbound Slip Ramp	Swing Gate 12	23 Ft			YES
ASGIS13	Inbound Slip Ramp	Swing Gate 13	23 Ft			
ASGIS14	Inbound Slip Ramp	Swing Gate 14	23 Ft			
ASGIS15	Inbound Slip Ramp	Swing Gate 15	23 Ft			
ASGIS16	Inbound Slip Ramp	Swing Gate 16	23 Ft			
ASGIS17	Inbound Slip Ramp	Swing Gate 17	23 Ft			
ASGIS18	Inbound Slip Ramp	Swing Gate 18	22 Ft			
ASGIS19	Inbound Slip Ramp	Swing Gate 19	21 Ft			
ASGIS20	Inbound Slip Ramp	Swing Gate 20	18 Ft			
ASGIS21	Inbound Slip Ramp	Swing Gate 21	16 Ft			
ASGIS22	Inbound Slip Ramp	Swing Gate 22	14 Ft			
ASGIS23	Inbound Slip Ramp	Swing Gate 23	12 Ft			YES
ASGIS24	Inbound Slip Ramp	Swing Gate 24	10 Ft			YES
ASGIW1	Inbound West Leg	Swing Gate 1	5 Ft			YES
ASGIW2	Inbound West Leg	Swing Gate 2	9 Ft			YES
ASGIW3	Inbound West Leg	Swing Gate 3	11 Ft			

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ASGIW4	Inbound West Leg	Swing Gate 4	14 Ft			
ASGIW5	Inbound West Leg	Swing Gate 5	17 Ft			
ASGIW6	Inbound West Leg	Swing Gate 6	17 Ft			
ASGIW7	Inbound West Leg	Swing Gate 7	17 Ft			
ASGIW8	Inbound West Leg	Swing Gate 8	17 Ft			
ASGIW9	Inbound West Leg	Swing Gate 9	17 Ft			YES
ASGIW10	Inbound West Leg	Swing Gate 10	8 Ft			YES
ASGIW11	Inbound West Leg	Swing Gate 11	9 Ft			YES
ASGIW12	Inbound West Leg	Swing Gate 12	20 Ft			YES
ASGIW13	Inbound West Leg	Swing Gate 13	19 Ft			
ASGIW14	Inbound West Leg	Swing Gate 14	14 Ft			
ASGIW15	Inbound West Leg	Swing Gate 15	10 Ft			
ASGIW16	Inbound West Leg	Swing Gate 16	6 Ft			
ASGIW17	Inbound West Leg	Swing Gate 17	5 Ft			
ASGIW18	Inbound West Leg	Swing Gate 18	5 Ft			
ASGIW19	Inbound West Leg	Swing Gate 19	5 Ft			YES
ASGIW20	Inbound West Leg	Swing Gate 20	5 Ft			YES
ASGOM1	Outbound Mainline	Swing Gate 1	12 Ft			YES
ASGOM2	Outbound Mainline	Swing Gate 2	12 Ft			YES
ASGOM3	Outbound Mainline	Swing Gate 3	12 Ft			
ASGOM4	Outbound Mainline	Swing Gate 4	15 Ft			
ASGOM5	Outbound Mainline	Swing Gate 5	14 Ft			
ASGOM6	Outbound Mainline	Swing Gate 6	14 Ft			
ASGOM7	Outbound Mainline	Swing Gate 7	20 Ft			
ASGOM8	Outbound Mainline	Swing Gate 8	20 Ft			

ASGOM9	Outbound Mainline	Swing Gate 9	18 Ft			YES
ASGOM10	Outbound Mainline	Swing Gate 10	6 Ft			YES
ASGOM11	Outbound Mainline	Swing Gate 11	2 Ft			YES
ASGOM12	Outbound Mainline	Swing Gate 12	16 Ft			YES
ASGOM13	Outbound Mainline	Swing Gate 13	17 Ft			
ASGOM14	Outbound Mainline	Swing Gate 14	17 Ft			
ASGOM15	Outbound Mainline	Swing Gate 15	15 Ft			
ASGOM16	Outbound Mainline	Swing Gate 16	13 Ft			
ASGOM17	Outbound Mainline	Swing Gate 17	11 Ft			
ASGOM18	Outbound Mainline	Swing Gate 18	7 Ft			
ASGOM19	Outbound Mainline	Swing Gate 19	7 Ft			
ASGOM20	Outbound Mainline	Swing Gate 20	9 Ft			YES
ASGOM21	Outbound Mainline	Swing Gate 21	9 Ft			YES
ASGOO1	Outbound Ontario	Swing Gate 1	12 Ft			YES
ASGOO2	Outbound Ontario	Swing Gate 2	12 Ft			YES
ASGOO3	Outbound Ontario	Swing Gate 3	13 Ft			
ASGOO4	Outbound Ontario	Swing Gate 4	13 Ft			
ASGOO5	Outbound Ontario	Swing Gate 5	13 Ft			
ASGOO6	Outbound Ontario	Swing Gate 6	20 Ft			
ASGOO7	Outbound Ontario	Swing Gate 7	20 Ft			YES
ASGOO8	Outbound Ontario	Swing Gate 8	8 Ft			YES
ASGOO9	Outbound Ontario	Swing Gate 9	8 Ft			YES
ASGOO10	Outbound Ontario	Swing Gate 10	20 Ft			YES
ASGOO11	Outbound Ontario	Swing Gate 11	20 Ft			
ASGOO12	Outbound Ontario	Swing Gate 12	16 Ft			

ASGOO13	Outbound Ontario	Swing Gate 13	12 Ft			
ASGOO14	Outbound Ontario	Swing Gate 14	6 Ft			
ASGOO15	Outbound Ontario	Swing Gate 15	4 Ft			YES
ASGOO16	Outbound Ontario	Swing Gate 16	4 Ft			YES
ASGOS1	Outbound Slip Ramp	Swing Gate 1	6 Ft			YES
ASGOS2	Outbound Slip Ramp	Swing Gate 2	10 Ft			YES
ASGOS3	Outbound Slip Ramp	Swing Gate 3	14 Ft			
ASGOS4	Outbound Slip Ramp	Swing Gate 4	16 Ft			
ASGOS5	Outbound Slip Ramp	Swing Gate 5	20 Ft			
ASGOS6	Outbound Slip Ramp	Swing Gate 6	21 Ft			
ASGOS7	Outbound Slip Ramp	Swing Gate 7	21 Ft			
ASGOS8	Outbound Slip Ramp	Swing Gate 8	21 Ft			
ASGOS9	Outbound Slip Ramp	Swing Gate 9	21 Ft			
ASGOS10	Outbound Slip Ramp	Swing Gate 10	21 Ft			YES
ASGOS11	Outbound Slip Ramp	Swing Gate 11	13 Ft			YES
ASGOS12	Outbound Slip Ramp	Swing Gate 12	14 Ft			YES
ASGOS13	Outbound Slip Ramp	Swing Gate 13	23 Ft			YES
ASGOS14	Outbound Slip Ramp	Swing Gate 14	23 Ft			
ASGOS15	Outbound Slip Ramp	Swing Gate 15	23 Ft			
ASGOS16	Outbound Slip Ramp	Swing Gate 16	23 Ft			
ASGOS17	Outbound Slip Ramp	Swing Gate 17	23 Ft			
ASGOS18	Outbound Slip Ramp	Swing Gate 18	21 Ft			
ASGOS19	Outbound Slip Ramp	Swing Gate 19	20 Ft			
ASGOS20	Outbound Slip Ramp	Swing Gate 20	18 Ft			YES
ASGOS21	Outbound Slip Ramp	Swing Gate 21	16 Ft			YES

PREVENTIVE MAINTENANCE – RACS -- SWING GATES

Choose one: April – 1st Inspection October – 2nd Inspection

DATE: _____ CONDUCTED BY: _____

LOC. #	Item	Length	Location Name	Deficiency Noted	Ticket #
AG1	Swing Gate	14 ft	Roosevelt Ramp		
AG2	Swing Gate	17 ft	Roosevelt Ramp		
AG3	Swing Gate	17 ft	Roosevelt Ramp		
AG4	Swing Gate	17 ft	Roosevelt Ramp		
AG5	Swing Gate	17 ft	Roosevelt Ramp		
AG6	Swing Gate	20 ft	Roosevelt Ramp		
AG7	Swing Gate	21 ft	Roosevelt Ramp		
AG8	Swing Gate	21 ft	Roosevelt Ramp		
AG9	Swing Gate	21 ft	Roosevelt Ramp		
AG10	Swing Gate	21 ft	Roosevelt Ramp		

A. Check gate arm tip condition and positioning (look for damage).
B. Check that panel doors are closed and padlocked.
C. Check shear pin conditions.
D. Check proximity limit switch alignment and brackets condition.
E. Check electrical connectors and wiring condition.
F. Open control cabinet doors, clean, check inner safety closure.
G. Check condition of limit switches
H. Check drive and control components
I. Clean gate arm and tip (pressure wash w/cleaner/degreaser)

J. Review Manual Page 6-1
Flange bearings: Lube only if seal failure is noticed
Chain and sprocket: Lube only with light grade aerosol chain lube
Speed reducers: Replace or repair reducer if it leaks oil

K. Check swing gate operation using the local control and hand crank for smooth operation and that the required status indicator lights are illuminated.

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PREVENTIVE MAINTENANCE – REVLAC -- DRUM SIGNS

Choose one: April – 1st Inspection October – 2nd Inspection

DATE: _____ CONDUCTED BY: _____

LOC. #			Deficiency Noted	Ticket #
ACMOM1	Outbound Mainline	Changeable Message 1		
ACMOM2	Outbound Mainline	Changeable Message 2		
ACMOO3	Outbound Ontario	Changeable Message 3		
ACMOO4	Outbound Ontario	Changeable Message 4		
ACMOO5	Outbound Ontario	Changeable Message 5		
ACMOM6	Outbound Mainline	Changeable Message 6		
ACMOM7	Outbound Mainline	Changeable Message 7		
ACMOS8	Outbound Slip Ramp	Changeable Message 8		
ACMOS9	Outbound Slip Ramp	Changeable Message 9		
ACMIS10	Inbound Slip Ramp	Changeable Message 10		
ACMIS11	Inbound Slip Ramp	Changeable Message 11		
ACMIE12	Inbound Edens	Changeable Message 12		
ACMIE13	Inbound Edens	Changeable Message 13		
ACMIW14	Inbound West Leg	Changeable Message 14		
ACMIW15	Inbound West Leg	Changeable Message 15		

SIGNS

A. Sign Housing: Clean and inspect interior and exterior

B. Coupling: Observe operation on the coupling, tighten all bolts and set screws as required.

CONTROL CABINET

A. Inspect and clean

B. Operate sign in “LOCAL” mode and look for malfunctioning relays, timers, etc.

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PREVENTIVE MAINTENANCE – RACS & REVLAC -- LED SIGNS

Choose one: April – 1st Inspection October – 2nd Inspection

DATE: _____ CONDUCTED BY: _____

RACS LOCATIONS:			**Deficiency Noted**	**Ticket #**
AAS1	Aux Sign	West of I 88		
AAS2	Aux Sign	West of I 88		
AEBR1	Variable Message Sign	1/4 Mile West of York Rd		
AEBR3	Variable Message Sign	Between York Rd & I 88		
AEBR4	Variable Message Sign	Roosevelt Ramp Entrance		
ASC1	Chevron Aux Sign	Eastbound Roosevelt left shoulder		
ASC2	Chevron Aux Sign	Eastbound Roosevelt left shoulder		
ASC3	Chevron Aux Sign	Eastbound Roosevelt left shoulder		
ASC4	Chevron Aux Sign	Eastbound Roosevelt left shoulder		
ASC5	Chevron Aux Sign	Eastbound Roosevelt left shoulder		
ASC6	Chevron Aux Sign	Eastbound Roosevelt left shoulder		
REVLAC LOCATIONS:				

SIGNS

A. Sign Housing: Clean and inspect interior and exterior

B. Power Supply: Check and adjust voltage to LED's

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REVLAC BUILDING PREVENTIVE MAINTENANCE FORM

DATE: _____

Circle One: Conducted By: _____

AA	Building A	AD	Building D	AISP	ISP Comm. Building
AC	Building C	AE	Building E	ACOM	IDOT ComCenter

Complete Work as Applicable:

Refrigeration (not applicable for ISP building)

____ Clean or replace air filter
____ Inspect and clean indoor coil, drain pan, and condensation drain line
____ Inspect and clean blower motor and wheel
____ Check electrical connections for tightness
____ Check controls for proper orientation
____ Inspect refrigerant tubing connections

Notes: _____ Ticket # _____

Fans

____ Inspect and tighten bolts and set screws
____ Inspect belt wear and alignment
____ Clean exterior surfaces
____ Clean or replace filters
____ Inspect and lubricate bearings if needed
____ Check for proper control/line voltage and operation on supply/exhaust fan starters

Notes: _____ Ticket # _____

Switchboards

____ Manually open and close breakers
____ Check for torque values in secondary section of bus splices and connections
____ Check for proper ammeter/voltmeter values

Notes: _____ Ticket # _____

Panelboards

____ Inspect for moisture damage
____ Replace any deteriorated insulation material
____ Clean any accumulation of dust or dirt
____ Inspect all connections for heat or other damage of loose connections
____ Operate mechanical components
____ Clean and dress copper electrical contacts
____ Operate circuit breakers
____ Replace burned out indicating lights

Notes: _____ Ticket # _____

Transformers (not applicable for ISP building)

____ Clean excessive dirt on windings & insulators

Notes:_____ Ticket #_____

REVLAC BUILDING PREVENTIVE MAINTENANCE FORM (Cont'd) **Page: 2**

Automatic Transfer Switches (not applicable for ISP building)

____ Inspect wiring and connections for tracking, overheating, and deterioration
____ Tighten control circuit wiring terminals
____ Check for free movement and contact continuity in manual switches
____ Adjust time delay settings as necessary
____ Clean or replace main, arcing, and auxiliary contacts
____ Tighten lug connections and mounting insulation bolts
____ Perform transfer operation
____ Calibrate phase and voltage sensitive relays
____ Clean and remove accumulated dust and dirt
____ Check for proper operation or door closure, locking bars, and mechanism

Notes: _____ Ticket # _____

Batteries

____ Check voltage and tighten nuts/bolts
____ Clean surfaces
____ Check AC/DC power converter charger (if applicable)

Notes: _____ Ticket # _____

6 GHz Microwave System

___ Clean outside and front panel of case
____ Tighten cable connections
____ Measure and record operating parameters
____ Measure and record transmitter RF frequency
____ Measure and record receiver IF frequency
____ Measure and record receiver AGC voltage
____ Check dehydrator

Notes: _____ Ticket # _____

23 GHz Microwave System (no ISP building)

___ Measure and record AGC voltage level
____ Measure and record transmitter output power and frequency
____ Tighten loose fasteners and replace missing hardware
____ Check and replace indicator lamps
____ Inspect cable for wear or fraying
____ Clean painted surfaces and repair as necessary
____ Check mounting hardware and guy wires of antennas, masts, or towers
____ Measure and record transmitter gun current

Notes: _____ Ticket # _____

Modems Microwave System

____ Remove dust from internal components with soft brush and low pressure air/vac

Notes: _____ Ticket # _____

REVLAC BUILDING PREVENTIVE MAINTENANCE FORM (Cont'd) **Page: 3**

Antennas Microwave

____ Check tightness of hardware on mount, shroud, radome, and feed
____ Inspect antenna and repair when necessary

Notes: _____ Ticket # _____

Remote Control (Cattron) System (not applicable for ISP building)

____ Check fuse resistance and replace when necessary
____ Check fuse holders for corrosion and clean when necessary
____ Check primary power source for proper readings
____ Check control transmitter,receiver/decoder,relayoutput rack for loose bolts/screws/clamps
____ Check fuses, holders, resistors, and transformers for over heating
____ Visually check antenna, mounting devices, cables and connectors
____ Confirm receiver and transmitter in the system are aligned on the same frequency

Notes: _____ Ticket # _____

Weather System (not applicable for ISP building)

____ Confirm smooth rotations in anemometer bearings and wind vane
____ Clean rain detector
____ Wipe lenses and clean surfaces of visibility meter
____ Clean road and surface sensors

Notes: _____ Ticket # _____

Gate Arm Heating System (not applicable for ISP building)

____ Check for proper settings, operation, and LED indication

Notes: _____ Ticket # _____

CCTV (not applicable for ISP building)

____ Inspect camera housing for moisture and dry out when necessary
____ Tope off washer reservoir

Notes: _____ Ticket # _____

COATED FLOORS SHALL BE WET MOPPED WITH APPROVED CLEANER FOR:

____ Building A

____ Building C

____ Building D

____ Building E

REVLAC BUILDING PREVENTIVE MAINTENANCE FORM (Cont'd) **Page: 4**

Site Report	Choose Building (circle)			
Building E	Enclosures:	RA0AN8CA	RA0AN8CB	RA0AN8CC
Building A	Enclosures:	RA0AN8CE	RA0AN8CF	RA0AN8CG
Building C	Enclosures:	RA0AN8CI	RA0AN8CJ	RA0AN8CK
Building D	Enclosures:	RA0AN8CM	RA0AN8CN	RA0AN8CO
ComCenter	Enclosures:	RA0AN8CT	RA0AN8CU	RA0AN8CV
		RA0AN8CQ	RA0AN8CR	

___ ___ ___ Blow dirt out of programmable controllers, I/O modules and power supplies with compressed air.

___ ___ ___ Brush dust & construction debris off of the I/O racks, wire troughs, & horizontal surfaces.

___ ___ ___ Wipe dirt off of edges of doors and door frames

___ ___ ___ Vacuum dust and construction debris out of cabinet.

___ ___ ___ Check ground bus connections and bonding wires and lugs for tightness and integrity.

___ ___ ___ Check screws on 1771-I/O swing-arms for tightness.

___ ___ ___ Check screws on terminal boards for tightness.

Notes: _____ Ticket # _____

Building E	**Enclosure: RA0AN8CD**	**Building C**	**Enclosure: RA0AN8CL**
Building A	**Enclosure: RA0AN8CH**	**Building D**	**Enclosure: RA0AN8CP**
		ComCenter	**Enclosure: RA0AN8CS**

Site Report Functions to Perform:

_____ Test Random Access Memory (RAM) function.
_____ Verify alarms are updating properly.
_____ Verify hard drive is functioning normally.
_____ Verify screen brightness is within normal parameters.
_____ Verify PLC-5 program backup is current and password protected.
_____ Clean and inspect air filter.
_____ Blow dirt out of T-60 with compressed air.
_____ Brush dust and construction debris off of the T-60 and other horizontal surfaces.
_____ Wipe dirt off of edges of doors and door frames.
_____ Vacuum dust and construction debris out of cabinet.
_____ Check bonding wires and lugs for tightness and integrity.
_____ Check communication cable integrity.

Notes: _____ Ticket # _____

BATTERY REPLACEMENT **Completed By (name)** _____

Surge Arrestors Batteries (9V) are all to be replaced at the time of the Inspection (April)

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RACS BUILDING PREVENTIVE MAINTENANCE FORM

DATE: _____

Circle One: **Conducted By:** _____

ARACSHH	Hillside Hub	ACOM	IDOT ComCenter
ARACSHT	Hillside Tower	ARACSRR	Roosevelt Road
ARACSNH	Nordic Hut	ARACSSH	Schaumburg Hut
ARACSNT	Nordic Tower	ARACSST	Schaumburg Tower

CONDUCT WORK AS FOLLOWS:

Refrigeration

____ Clean or replace air filter
____ Inspect and clean indoor coil, drain pan, and condensation drain line
____ Inspect and clean blower motor and wheel
____ Check electrical connections for tightness
____ Check controls for proper orientation
____ Inspect refrigerant tubing connections

Notes: _____ Ticket # _____

Fans

____ Inspect and tighten bolts and set screws
____ Inspect belt wear and alignment
____ Clean exterior surfaces
____ Clean or replace filters
____ Inspect and lubricate bearings if needed

Notes: _____ Ticket # _____

Switchboards

____ Manually open and close breakers
____ Check for torque values in secondary section of bus splices and connections
____ Check for proper ammeter/voltmeter values

Notes: _____ Ticket # _____

Panelboards

____ Inspect for moisture damage
____ Replace any deteriorated insulation material
____ Clean any accumulation of dust or dirt
____ Inspect all connections for heat or other damage of loose connections
____ Operate mechanical components
____ Clean and dress copper electrical contacts
____ Operate circuit breakers
____ Replace burned out indicating lights

Notes: _____ Ticket # _____

Transformers

____ Clean excessive dirt on windings & insulators

Notes:_____ Ticket #_____

RACS BUILDING PREVENTIVE MAINTENANCE FORM (Cont'd) **Page: 2**

Automatic Transfer Switches (not applicable for ROOSEVELT RAMP building)

____ Inspect wiring and connections for tracking, overheating, and deterioration
____ Tighten control circuit wiring terminals
____ Check for free movement and contact continuity in manual switches
____ Adjust time delay settings as necessary
____ Clean or replace main, arcing, and auxiliary contacts
____ Tighten lug connections and mounting insulation bolts
____ Perform transfer operation
____ Calibrate phase and voltage sensitive relays
____ Clean and remove accumulated dust and dirt
____ Check for proper operation or door closure, locking bars, and mechanism

Notes: _____ Ticket # _____

Batteries

____ Check voltage and tighten nuts/bolts and clean surfaces
____ Check AC/DC power converter charger (if applicable)

Notes: _____ Ticket # _____

Ethernet Network

____ Check Cisco Mux
____ Clean and remove accumulated dust and dirt
____ Clean filter

Notes: _____ Ticket # _____

6 GHz Microwave System

___ Clean outside and front panel of case
____ Tighten cable connections
____ Measure and record operating parameters
____ Measure and record transmitter RF frequency
____ Measure and record receiver IF frequency
____ Measure and record receiver AGC voltage
____ Check dehydrator

Notes: _____ Ticket # _____

Antennas Microwave

____ Check tightness of hardware on mount, shroud, radome, and feed
____ Inspect antenna and repair when necessary

Notes: _____ Ticket # _____

CCTV

____ Check Impath Encorder
____ Check camera monitors
____ Check MPC controller and pre-set panel
____ Check Vicon switcher and cameras
____ Check Netcam computer
____ Check IFS equipment (for Ramp Building and Hillside Hub)

Notes: _____ Ticket # _____

RACS BUILDING PREVENTIVE MAINTENANCE FORM (Cont'd) **Page: 3**

Generator (not applicable for Roosevelt Ramp Building)

____ Start and check engine readings
____ Inspect block and battery heater

Notes: _____ Ticket # _____

Tower lights (not applicable for Roosevelt Ramp Building)

____ Check and clean Honeywell controller

Notes:_____ Ticket # _____

PLC Server (Ramp Building & Hillside Hub)

____ Check working as designed

Notes:_____ Ticket # _____

DMS Signs (Ramp Building & Hillside Hub)

____ Check media converter
____ Check fiber transceiver

Notes: _____ Ticket # _____

Site Report Functions to Perform:

____ Blow dirt out of programmable controllers, I/O modules and power supplies with compressed air.

____ Brush dust & construction debris off of the I/O racks, wire troughs, & horizontal surfaces.

____ Wipe dirt off of edges of doors and door frames

____ Vacuum dust and construction debris out of cabinet.

____ Check ground bus connections and bonding wires and lugs for tightness and integrity.

____ Check screws on terminal boards for tightness.

Notes: _____ Ticket # _____

BATTERY INSPECTION AND REPLACEMENT

Batteries in the PLC are to be replaced at the time of the 1st Inspection (April)

- Clean Battery and check bolts for tightness.
- Check for Leaks. Yes or No ? If yes, provide Ticket number _____ Rev. 10/05

BUILDING BATTERY REPLACEMENT

Date:_____

BUILDING: **CONDUCTED BY:**

Battery	Leaks	Voltage	Clean	Bolt Tightness
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

Main Equipment Batteries

1				
2				
3				
4				

BUILDING PREVENTIVE MAINTENANCE PROGRAM

Radio Control System (Cattrons) Inspection

DATE: _____ **CONDUCTED BY**: _____

Location	Model #	Serial #	Batt. Volts	Transmit	Receive	Power	Mod.	RX Se

Comments/Tickets: Note: When taking unit for repair, replace with spare.

MICROWAVE PREVENTIVE MAINTENANCE (HARRIS MICROWAVE)

Farion Rack #_____ Radio#/ID[Ex:A,A1]_____ Location_____

Coordinating Site_____ Initial Measurement Date_____ (for this contrac

What to measure	Where to measure	Radio Assy	Initial Level	YEAR AFTER INITIAL INSTALLATION			
				1st YEAR	2nd YEAR	3rd YEAR	4
TX Crystal Frequency	MON jack on Transmit PLS in RFU	TX A1					
		TX A2					
		TX B1					
		TX B2					
RX Crystal Frequency	MON jack on Receiver PLS in RFU	RX A1					
		RX A2					
		RX B1					
		RX B2					
TX Output Power	Use FarScan. See page 3-8.	TX A1					
		TX A2					
		TX B1					
		TX B2					
NOTES:							

MICROWAVE PREVENTIVE MAINTENANCE (MICROWAVE RADIO CORPORATION)

DATE: _____ Conducted By: _____

Coordinating Site Initial Measurement Date Today's Date:

What to measure	Where to measure	Initial Level	Present Value	YEAR AFTER INITIAL INSTALLA		
				1st YEAR	2nd YEAR	3rd YEAR
TX Frequency	RF Head					
Gunn Current	Panel Meter					
V+	Rear Panel White					
V+	Rear Panel Red					
Video Input	Rear Panel					
Audio Input 1	Rear Panel					
Audio Input 2	Rear Panel					
Gunn Current	Front Led					
Power	Front Led					

Receiver Duplex System **Duplex System Vertical Power Outlet Level**

What to measure	Where to measure	Initial Level	Present Value	YEAR AFTER INITIAL INSTALLAT		
				1st YEAR	2nd YEAR	3rd YEAR
AGC	RG-6 Coax					
AGC	Panel Meter					
V+	Rear Panel White					
V+	Rear Panel Red					
V-	Rear Panel Green					
RX Frequency						
Video Out	Rear Panel					
Audio 1 Out	Rear Panel					
Audio 2 Out	Rear Panel					
Rcvr IF	RG-6 Coax					
Gunn Current	Front Panel LED					
Power	Front Panel LED					
RX Carrier	Level from Graph					
RX Fade to threshold						

Receiver Duplex System **Duplex System Horizontal Power Outlet Level**

What to measure	Where to measure	Initial Level	Present Value	YEAR AFTER INITIAL INSTALLATION			
				1st YEAR	2nd YEAR	3rd YEAR	4th YEAR
AGC	RG-6 Coax						
AGC	Panel Meter						
V+	Rear Panel White						
V+	Rear Panel Red						
V-	Rear Panel Green						
RX Frequency							
Video Out	Rear Panel						
Audio 1 Out	Rear Panel						
Audio 2 Out	Rear Panel						
Rcvr IF	RG-6 Coax						
Gunn Current	Front Panel LED						
Power	Front Panel LED						
RX Carrier	Level from Graph						
RX Fade to threshold							

ANTENNA AND SUPPORT STRUCTURE INSPECTION

Condition Good or Poor (G or P)		NOTES/TICKET #
Antenna & Shroud		
Mounting Hardware		
Transmission Lines Flex		
Control Cables		
RF heads		

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Location:	**GENERATOR SEMI-ANNUAL PM**	**Date:**
With Generator On. Freq.: Cycles		
With Generator On AC: Volts Amps		
Status of the Safety Ear Muffs Good ☐ Fair ☐ Poor ☐ Qty ☐		

Battery Check	Cell Inspection	Comments

Generator Oil Level		
Fuel Tank Level		
Generator Total Hours Run Time:		
Any Fluid/Fuel Leaks: Yes ☐ No ☐ (If Yes, Please Comment)		

Air cleaner restrictor (air filter)	Exhaust system
Block heater operation	Coolant level/don't check with block heater hot
Battery charging system	Drain condensation trap
Meters, gauges, and indicator lamps	Control panel and transfer switch operation
Run generator for 15 minutes	

Comments:
Semi-Annual Engine Maintenance
1. Check and change oil
2. Check and change the following: filters in coolant condition-circuit, crank case breather, air filter, fuel, oil filter, and bypass filters.
3. Check and change belts and coolant
4. Check for hub, pulley and water pump
5. Clean any debris on set
6. Check and operate circuit breaker
7. Check and operate transfer switch

ILLINOIS DEPARTMENT OF LABOR

PREVAILING WAGES FOR VARIOUS COUNTIES EFFECTIVE DECEMBER 2005

The Prevailing rates of wages are included in the Contract proposals which are subject to Check Sheet #5 of the Supplemental Specifications and Recurring Special Provisions. The rates have been ascertained and certified by the Illinois Department of Labor for the locality in which the work is to be performed and for each craft or type of work or mechanic needed to execute the work of the Contract. As required by Prevailing Wage Act (820 ILCS 130/0.01, et seq.) and Check Sheet #5 of the Contract, not less than the rates of wages ascertained by the Illinois Department of Labor and as revised during the performance of a Contract shall be paid to all laborers, workers and mechanics performing work under the Contract. Post the scale of wages in a prominent and easily accessible place at the site of work.

If the Illinois Department of Labor revises the prevailing rates of wages to be paid as listed in the specification of rates, the contractor shall post the revised rates of wages and shall pay not less than the revised rates of wages. Current wage rate information shall be obtained by visiting the Illinois Department of Labor web site at http://www.state.il.us/agency/idol/ or by calling 312-793-2814. It is the responsibility of the contractor to review the rates applicable to the work of the contract at regular intervals in order to insure the timely payment of current rates. Provision of this information to the contractor by means of the Illinois Department of Labor web site satisfies the notification of revisions by the Department to the contractor pursuant to the Act, and the contractor agrees that no additional notice is required. The contractor shall notify each of its subcontractors of the revised rates of wages.

Cook County Prevailing Wage for December 2005

Trade Name	RG	TYP	C	Base	FRMAN	*M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
ASBESTOS ABT-GEN		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
ASBESTOS ABT-MEC		BLD		23.300	24.800	1.5	1.5	2.0	7.860	4.910	0.000	0.000
BOILERMAKER		BLD		36.820	40.140	2.0	2.0	2.0	6.920	6.260	0.000	0.210
BRICK MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
CARPENTER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
CEMENT MASON		ALL		36.600	37.850	2.0	1.5	2.0	6.110	4.920	0.000	0.150
CERAMIC TILE FNSHER		BLD		27.200	0.000	2.0	1.5	2.0	5.400	5.200	0.000	0.100
COMM. ELECT.		BLD		31.440	33.940	1.5	1.5	2.0	6.300	5.290	0.000	0.700
ELECTRIC PWR EQMT OP		ALL		34.950	40.720	1.5	1.5	2.0	7.420	8.730	0.000	0.260
ELECTRIC PWR GRNDMAN		ALL		27.260	40.720	1.5	1.5	2.0	5.790	6.820	0.000	0.210
ELECTRIC PWR LINEMAN		ALL		34.950	40.720	1.5	1.5	2.0	7.420	8.730	0.000	0.260
ELECTRICIAN		ALL		35.150	37.750	1.5	1.5	2.0	8.680	6.850	0.000	0.750
ELEVATOR CONSTRUCTOR		BLD		38.995	43.870	2.0	2.0	2.0	7.275	3.420	2.340	0.370
FENCE ERECTOR		ALL		24.840	26.090	1.5	1.5	2.0	6.650	6.740	0.000	0.000
GLAZIER		BLD		31.400	32.400	1.5	2.0	2.0	6.490	9.050	0.000	0.500
HT/FROST INSULATOR		BLD		32.800	34.550	1.5	1.5	2.0	7.860	8.610	0.000	0.310
IRON WORKER		ALL		36.250	37.750	2.0	2.0	2.0	8.970	10.77	0.000	0.300
LABORER		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
LATHER		BLD		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
MACHINIST		BLD		35.630	37.630	2.0	2.0	2.0	3.880	4.750	2.460	0.000
MARBLE FINISHERS		ALL		25.750	0.000	1.5	1.5	2.0	6.070	7.020	0.000	0.580
MARBLE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.580
MILLWRIGHT		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
OPERATING ENGINEER		BLD	1	39.550	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	2	38.250	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	3	35.700	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	4	33.950	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		FLT	1	42.700	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		FLT	2	41.200	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		FLT	3	36.650	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		FLT	4	30.500	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		HWY	1	37.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	2	37.200	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	3	35.150	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	4	33.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	5	32.550	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
ORNAMNTL IRON WORKER		ALL		33.600	35.350	2.0	2.0	2.0	7.250	10.09	0.000	0.750
PAINTER		ALL		33.550	37.560	1.5	1.5	1.5	5.800	5.400	0.000	0.340
PAINTER SIGNS		BLD		25.530	28.660	1.5	1.5	1.5	2.600	2.040	0.000	0.000
PILEDRIVER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
PIPEFITTER		BLD		36.100	38.100	1.5	1.5	2.0	7.910	6.100	0.000	0.800
PLASTERER		BLD		32.100	33.600	1.5	1.5	2.0	6.240	6.600	0.000	0.400
PLUMBER		BLD		38.400	40.400	1.5	1.5	2.0	7.170	3.940	0.000	0.790
ROOFER		BLD		32.800	34.800	1.5	1.5	2.0	5.570	3.000	0.000	0.330
SHEETMETAL WORKER		BLD		33.400	36.070	1.5	1.5	2.0	6.460	7.850	0.000	0.590
SIGN HANGER		BLD		23.750	24.600	1.5	1.5	2.0	3.880	2.000	0.000	0.000
SPRINKLER FITTER		BLD		34.500	36.500	1.5	1.5	2.0	7.000	5.550	0.000	0.500
STEEL ERECTOR		ALL		36.250	37.750	2.0	2.0	2.0	8.970	10.77	0.000	0.300
STONE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
TERRAZZO FINISHER		BLD		27.950	0.000	1.5	1.5	2.0	6.150	5.560	0.000	0.220
TERRAZZO MASON		BLD		32.050	35.050	1.5	1.5	2.0	6.150	7.140	0.000	0.120
TILE MASON		BLD		33.000	37.000	2.0	1.5	2.0	5.400	6.400	0.000	0.180
TRAFFIC SAFETY WRKR		HWY		22.800	24.400	1.5	1.5	2.0	3.078	1.875	0.000	0.000
TRUCK DRIVER	E	ALL	1	28.700	29.350	1.5	1.5	2.0	5.000	3.700	0.000	0.000
TRUCK DRIVER	E	ALL	2	28.950	29.350	1.5	1.5	2.0	5.000	3.700	0.000	0.000
TRUCK DRIVER	E	ALL	3	29.150	29.350	1.5	1.5	2.0	5.000	3.700	0.000	0.000
TRUCK DRIVER	E	ALL	4	29.350	29.350	1.5	1.5	2.0	5.000	3.700	0.000	0.000
TRUCK DRIVER	W	ALL	1	28.700	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000

TRUCK DRIVER	W	ALL	2	28.850	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TRUCK DRIVER	W	ALL	3	29.050	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TRUCK DRIVER	W	ALL	4	29.250	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TUCKPOINTER		BLD		34.500	35.500	1.5	1.5	2.0	4.710	6.340	0.000	0.400

Legend:

M-F>8 (Overtime is required for any hour greater than 8 worked each day, Monday through Friday.

OSA (Overtime is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

Explanations

COOK COUNTY

TRUCK DRIVERS (WEST) - That part of the county West of Barrington Road.

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial/Decoration Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration such as the day after Thanksgiving for Veterans Day. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.
ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor

surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS ELECTRICIAN - Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound vision production and reproduction, telephone and telephone interconnect, facsimile, data apparatus, coaxial, fibre optic and wireless equipment, appliances and systems used for the transmission and reception of signals of any nature, business, domestic, commercial, education, entertainment, and residential purposes, including but not limited to, communication and telephone, electronic and sound equipment, fibre optic and data communication systems, and the performance of any task directly related to such installation or service whether at new or existing sites, such tasks to include the placing of wire and cable and electrical power conduit or other raceway work within the equipment room and pulling wire and/or cable through conduit and the installation of any incidental conduit, such that the employees covered hereby can complete any job in full.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all mateiral that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installatin of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and experiors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and experior which sare installed in a similar manner.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

TRAFFIC SAFETY

Work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION - EAST & WEST

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; TEamsters Unskilled dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

OPERATING ENGINEERS - BUILDING

Class 1. Mechanic; Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson attachment; Batch Plant; Benoto; Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, one, two and three Drum; Hoists, Two

Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes; Squeeze Cretes-screw Type Pumps; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-form Paver; Straddle Buggies; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Bobcat (over 3/4 cu. yd.); Boilers; Brick Forklift; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Greaser Engineer; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, inside Freight Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (self-propelled); Rock Drill (truck mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination - Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators - (Rheostat Manual Controlled); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 small Electric Drill Winches; Bobcat (up to and including 3/4 cu. yd.).

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

OPERATING ENGINEERS - FLOATING

Class 1. Craft foreman (Master Mechanic), diver/wet tender, engineer (hydraulic dredge).

Class 2. Crane/backhoe operator, mechanic/welder, assistant engineer (hydraulic dredge), leverman (hydraulic dredge), and diver tender.

Class 3. Deck equipment operator (machineryman), maintenance of crane (over 50 ton capacity) or backhoe (96,000 pounds or more), tug/launch operator, loader, dozer and like equipment on barge, breakwater wall, slip/dock or scow, deck machinery, etc.

Class 4. Deck equipment operator (machineryman/fireman), (4 equipment units or more) and crane maintenance 50 ton capacity and under or backhoe weighing 96,000 pounds or less, assistant tug operator.

OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Craft Foreman; Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted): Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Hammerhead, Linden, Peco & Machines of a like nature; Crete Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dowell machine with Air Compressor; Dredges; Field Mechanic-Welder; Formless Curb and Gutter Machine; Gradall and Machines of a like nature; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Mounted; Hoists, One, Two and Three Drum; Hydraulic Backhoes; Backhoes with

shear attachments; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Roto Mill Grinder; Slip-Form Paver; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Trenching Machine; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole; Drills (Tunnel Shaft); Underground Boring and/or Mining Machines; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Greaser Engineer; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; All Locomotives, Dinky; Pump Cretes; Squeeze Cretes-Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotory Snow Plows; Rototiller, Seaman, etc., self-propelled; Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Fireman on Boilers; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper - Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Hydro-Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Bobcats (all); Brick Forklifts, Oilers.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 618/993-7271 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

Du Page County Prevailing Wage for December 2005

Trade Name	RG	TYP	C	Base	FRMAN	*M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
ASBESTOS ABT-GEN		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
ASBESTOS ABT-MEC		BLD		23.300	24.800	1.5	1.5	2.0	7.860	4.910	0.000	0.000
BOILERMAKER		BLD		36.820	40.140	2.0	2.0	2.0	6.920	6.260	0.000	0.210
BRICK MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
CARPENTER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
CEMENT MASON		ALL		31.750	33.000	2.0	1.5	2.0	6.300	9.650	0.000	0.130
CERAMIC TILE FNSHER		BLD		27.200	0.000	2.0	1.5	2.0	5.400	5.200	0.000	0.100
COMMUNICATION TECH		BLD		29.200	31.300	1.5	1.5	2.0	7.000	9.790	0.000	0.440
ELECTRIC PWR EQMT OP		ALL		26.940	34.540	1.5	1.5	2.0	3.750	7.440	0.000	0.130
ELECTRIC PWR GRNDMAN		ALL		20.970	34.540	1.5	1.5	2.0	3.750	5.760	0.000	0.100
ELECTRIC PWR LINEMAN		ALL		31.980	34.540	1.5	1.5	2.0	3.750	8.850	0.000	0.160
ELECTRIC PWR TRK DRV		ALL		21.640	34.540	1.5	1.5	2.0	3.750	5.950	0.000	0.110
ELECTRICIAN		BLD		31.500	34.650	1.5	1.5	2.0	8.000	11.35	3.470	0.470
ELEVATOR CONSTRUCTOR		BLD		38.995	43.870	2.0	2.0	2.0	7.275	3.420	2.340	0.370
FENCE ERECTOR	NE	ALL		24.840	26.090	1.5	1.5	2.0	6.650	6.740	0.000	0.000
FENCE ERECTOR	W	ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
GLAZIER		BLD		31.400	32.400	1.5	2.0	2.0	6.490	9.050	0.000	0.500
HT/FROST INSULATOR		BLD		32.800	34.550	1.5	1.5	2.0	7.860	8.610	0.000	0.310
IRON WORKER	E	ALL		36.250	37.750	2.0	2.0	2.0	8.970	10.77	0.000	0.300
IRON WORKER	W	ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
LABORER		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
LATHER		BLD		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
MACHINIST		BLD		35.630	37.630	2.0	2.0	2.0	3.880	4.750	2.460	0.000
MARBLE FINISHERS		ALL		25.750	0.000	1.5	1.5	2.0	6.070	7.020	0.000	0.580
MARBLE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.580
MILLWRIGHT		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
OPERATING ENGINEER		BLD	1	39.550	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	2	38.250	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	3	35.700	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	4	33.950	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	1	37.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	2	37.200	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	3	35.150	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	4	33.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	5	32.550	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
ORNAMNTL IRON WORKER	E	ALL		33.600	35.350	2.0	2.0	2.0	7.250	10.09	0.000	0.750
ORNAMNTL IRON WORKER	W	ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
PAINTER		ALL		33.330	34.330	1.5	1.5	1.5	5.150	5.000	0.000	0.250
PAINTER SIGNS		BLD		25.150	28.240	1.5	1.5	1.5	2.600	2.010	0.000	0.000
PILEDRIVER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
PIPEFITTER		BLD		35.010	37.010	1.5	1.5	2.0	7.800	7.440	0.000	0.900
PLASTERER		BLD		32.000	33.500	1.5	1.5	2.0	6.450	6.770	0.000	0.570
PLUMBER		BLD		35.010	37.010	1.5	1.5	2.0	7.800	7.440	0.000	0.900
ROOFER		BLD		32.800	34.800	1.5	1.5	2.0	5.570	3.000	0.000	0.330
SHEETMETAL WORKER		BLD		35.030	37.030	1.5	1.5	2.0	6.470	7.440	0.000	0.540
SPRINKLER FITTER		BLD		34.500	36.500	1.5	1.5	2.0	7.000	5.550	0.000	0.500
STEEL ERECTOR	E	ALL		36.250	37.750	2.0	2.0	2.0	8.970	10.77	0.000	0.300
STEEL ERECTOR	W	ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
STONE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
TERRAZZO FINISHER		BLD		27.950	0.000	1.5	1.5	2.0	6.150	5.560	0.000	0.220
TERRAZZO MASON		BLD		32.050	35.050	1.5	1.5	2.0	6.150	7.140	0.000	0.120
TILE MASON		BLD		33.000	37.000	2.0	1.5	2.0	5.400	6.400	0.000	0.180
TRAFFIC SAFETY WRKR		HWY		22.800	24.400	1.5	1.5	2.0	3.078	1.875	0.000	0.000
TRUCK DRIVER		ALL	1	28.700	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TRUCK DRIVER		ALL	2	28.850	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TRUCK DRIVER		ALL	3	29.050	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TRUCK DRIVER		ALL	4	29.250	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TUCKPOINTER		BLD		34.500	35.500	1.5	1.5	2.0	4.710	6.340	0.000	0.400

Legend:

M-F>8 (Overtime is required for any hour greater than 8 worked each day, Monday through Friday.

OSA (Overtime is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

Explanations

DUPAGE COUNTY

IRON WORKERS AND FENCE ERECTOR (WEST) - West of Route 53.

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial/Decoration Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration such as the day after Thanksgiving for Veterans Day. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.
ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor

surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS TECHNICIAN

Low voltage installation, maintenance and removal of telecommunication facilities (voice, sound, data and video) including telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all mateiral that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installatin of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and experiors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and experior which sare installed in a similar manner.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION
Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics

Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters Unskilled dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yeards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

OPERATING ENGINEERS - BUILDING

Class 1. Mechanic; Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson attachment; Batch Plant; Benoto; Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, one, two and three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes; Squeeze Cretes-screw Type Pumps; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-form Paver; Straddle Buggies; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Bobcat (over 3/4 cu. yd.); Boilers; Brick Forklift; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Fortlist Trucks; Greaser Engineer; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, inside Freight Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (self-propelled); Rock Drill (truck mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination - Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators - (Rheostat Manual Controlled); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300

ft.); Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 small Electric Drill Winches; Bobcat (up to and including 3/4 cu. yd.).
Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION
Class 1. Craft Foreman; Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted): Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Hammerhead, Linden, Peco & Machines of a like nature; Crete Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dowell machine with Air Compressor; Dredges; Field Mechanic-Welder; Formless Curb and Gutter Machine; Gradall and Machines of a like nature; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Mounted; Hoists, One, Two and Three Drum; Hydraulic Backhoes; Backhoes with shear attachments; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Roto Mill Grinder; Slip-Form Paver; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Trenching Machine; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole; Drills (Tunnel Shaft); Underground Boring and/or Mining Machines; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Greaser Engineer; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; All Locomotives, Dinky; Pump Cretes; Squeeze Cretes-Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotory Snow Plows; Rototiller, Seaman, etc., self-propelled; Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Fireman on Boilers; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper - Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Hydro-Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Bobcats (all); Brick Forklifts, Oilers.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 618/993-7271 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

Kane County Prevailing Wage for December 2005

Trade Name	RG	TYP	C	Base	FRMAN	*M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
ASBESTOS ABT-GEN		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
ASBESTOS ABT-MEC		BLD		23.300	24.800	1.5	1.5	2.0	7.860	4.910	0.000	0.000
BOILERMAKER		BLD		36.820	40.140	2.0	2.0	2.0	6.920	6.260	0.000	0.210
BRICK MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
CARPENTER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.320	0.000	0.490
CEMENT MASON		ALL		33.300	36.630	1.5	1.5	2.0	5.900	8.460	0.000	0.050
CERAMIC TILE FNSHER		BLD		27.200	0.000	2.0	1.5	2.0	5.400	5.200	0.000	0.100
COMMUNICATION TECH	N	BLD		29.960	31.760	1.5	1.5	2.0	5.842	6.290	0.000	0.375
COMMUNICATION TECH	S	BLD		29.680	31.480	1.5	1.5	2.0	5.390	6.830	0.000	0.590
ELECTRIC PWR EQMT OP		ALL		26.940	34.540	1.5	1.5	2.0	3.750	7.440	0.000	0.130
ELECTRIC PWR GRNDMAN		ALL		20.970	34.540	1.5	1.5	2.0	3.750	5.760	0.000	0.100
ELECTRIC PWR LINEMAN		ALL		31.980	34.540	1.5	1.5	2.0	3.750	8.850	0.000	0.160
ELECTRIC PWR TRK DRV		ALL		21.640	34.540	1.5	1.5	2.0	3.750	5.950	0.000	0.110
ELECTRICIAN	N	ALL		37.730	41.500	1.5	1.5	2.0	8.112	8.678	0.000	0.472
ELECTRICIAN	S	BLD		37.400	41.140	1.5	1.5	2.0	8.230	8.600	0.000	0.750
ELEVATOR CONSTRUCTOR		BLD		38.995	43.870	2.0	2.0	2.0	7.275	3.420	2.340	0.370
FENCE ERECTOR		ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
GLAZIER		BLD		31.400	32.400	1.5	2.0	2.0	6.490	9.050	0.000	0.500
HT/FROST INSULATOR		BLD		32.800	34.550	1.5	1.5	2.0	7.860	8.610	0.000	0.310
IRON WORKER		ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
LABORER		ALL		30.150	30.900	1.5	1.5	2.0	6.600	4.200	0.000	0.170
LATHER		BLD		35.320	37.320	1.5	1.5	2.0	6.760	5.320	0.000	0.490
MACHINIST		BLD		35.630	37.630	2.0	2.0	2.0	3.880	4.750	2.460	0.000
MARBLE FINISHERS		ALL		25.750	0.000	1.5	1.5	2.0	6.070	7.020	0.000	0.580
MARBLE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.580
MILLWRIGHT		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.320	0.000	0.490
OPERATING ENGINEER		BLD	1	39.550	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	2	38.250	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	3	35.700	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	4	33.950	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	1	37.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	2	37.200	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	3	35.150	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	4	33.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	5	32.550	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
ORNAMNTL IRON WORKER		ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
PAINTER		ALL		33.330	34.330	1.5	1.5	1.5	5.150	5.000	0.000	0.250
PAINTER SIGNS		BLD		25.150	28.240	1.5	1.5	1.5	2.600	2.010	0.000	0.000
PILEDRIVER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.320	0.000	0.490
PIPEFITTER		BLD		35.010	37.010	1.5	1.5	2.0	7.800	7.440	0.000	0.900
PLASTERER		BLD		32.100	33.600	1.5	1.5	2.0	6.240	6.600	0.000	0.400
PLUMBER		BLD		35.010	37.010	1.5	1.5	2.0	7.800	7.440	0.000	0.900
ROOFER		BLD		32.800	34.800	1.5	1.5	2.0	5.570	3.000	0.000	0.330
SHEETMETAL WORKER		BLD		35.030	37.030	1.5	1.5	2.0	6.470	7.440	0.000	0.540
SIGN HANGER		BLD		26.070	27.570	1.5	1.5	2.0	3.800	3.550	0.000	0.000
SPRINKLER FITTER		BLD		34.500	36.500	1.5	1.5	2.0	7.000	5.550	0.000	0.500
STEEL ERECTOR		ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
STONE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
TERRAZZO FINISHER		BLD		27.950	0.000	1.5	1.5	2.0	6.150	5.560	0.000	0.220
TERRAZZO MASON		BLD		32.050	35.050	1.5	1.5	2.0	6.150	7.140	0.000	0.120
TILE MASON		BLD		33.000	37.000	2.0	1.5	2.0	5.400	6.400	0.000	0.180
TRAFFIC SAFETY WRKR		HWY		22.800	24.400	1.5	1.5	2.0	3.078	1.875	0.000	0.000
TRUCK DRIVER		ALL	1	28.700	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TRUCK DRIVER		ALL	2	28.850	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TRUCK DRIVER		ALL	3	29.050	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TRUCK DRIVER		ALL	4	29.250	29.250	1.5	1.5	2.0	5.900	3.300	0.000	0.000
TUCKPOINTER		BLD		34.500	35.500	1.5	1.5	2.0	4.710	6.340	0.000	0.400

Legend:

M-F>8 (Overtime is required for any hour greater than 8 worked each day, Monday through Friday.

OSA (Overtime is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

Explanations

KANE COUNTY

ELECTRICIANS AND COMMUNICATIONS TECHNICIAN (NORTH) - Townships of Burlington, Campton, Dundee, Elgin, Hampshire, Plato, Rutland, St. Charles (except the West half of Sec. 26, all of Secs. 27, 33, and 34, South half of Sec. 28, West half of Sec. 35), Virgil and Valley View CCC and Elgin Mental Health Center.

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial/Decoration Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration such as the day after Thanksgiving for Veterans Day. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and

other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS TECHNICIAN

Construction, installation, maintenance and removal of telecommunication facilities (voice, sound, data and video), telephone, security systems, fire alarm systems that are a component of a multiplex system and share a common cable, and data inside wire, interconnect, terminal equipment, central offices, PABX and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area network), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all mateiral that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installatin of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and experiors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and experior which sare installed in a similar manner.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal

of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION
Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yeards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

OPERATING ENGINEERS - BUILDING

Class 1. Mechanic; Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson attachment; Batch Plant; Benoto; Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, one, two and three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes; Squeeze Cretes-screw Type Pumps; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-form Paver; Straddle Buggies; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Bobcat (over 3/4 cu. yd.); Boilers; Brick Forklift; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Greaser Engineer; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, inside Freight Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (self-propelled);

Rock Drill (truck mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination - Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators - (Rheostat Manual Controlled); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 small Electric Drill Winches; Bobcat (up to and including 3/4 cu. yd.).

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Craft Foreman; Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted): Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Hammerhead, Linden, Peco & Machines of a like nature; Crete Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dowell machine with Air Compressor; Dredges; Field Mechanic-Welder; Formless Curb and Gutter Machine; Gradall and Machines of a like nature; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Mounted; Hoists, One, Two and Three Drum; Hydraulic Backhoes; Backhoes with shear attachments; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Roto Mill Grinder; Slip-Form Paver; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Trenching Machine; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole; Drills (Tunnel Shaft); Underground Boring and/or Mining Machines; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Greaser Engineer; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; All Locomotives, Dinky; Pump Cretes; Squeeze Cretes-Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotory Snow Plows; Rototiller, Seaman, etc., self-propelled; Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over);

Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Fireman on Boilers; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper - Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Hydro-Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Bobcats (all); Brick Forklifts; Oilers.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 618/993-7271 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

Lake County Prevailing Wage for December 2005

Trade Name	RG	TYP	C	Base	FRMAN	*M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
ASBESTOS ABT-GEN		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
ASBESTOS ABT-MEC		BLD		23.300	24.800	1.5	1.5	2.0	7.860	4.910	0.000	0.000
BOILERMAKER		BLD		36.820	40.140	2.0	2.0	2.0	6.920	6.260	0.000	0.210
BRICK MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
CARPENTER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
CEMENT MASON		ALL		33.000	34.250	1.5	2.0	2.0	6.130	8.550	0.000	0.050
CERAMIC TILE FNSHER		BLD		27.200	0.000	2.0	1.5	2.0	5.400	5.200	0.000	0.100
COMMUNICATION TECH		BLD		29.390	31.490	1.5	1.5	2.0	7.990	7.350	1.470	0.430
ELECTRIC PWR EQMT OP		ALL		26.940	34.540	1.5	1.5	2.0	3.750	7.440	0.000	0.130
ELECTRIC PWR GRNDMAN		ALL		20.970	34.540	1.5	1.5	2.0	3.750	5.760	0.000	0.100
ELECTRIC PWR LINEMAN		ALL		31.980	34.540	1.5	1.5	2.0	3.750	8.850	0.000	0.160
ELECTRIC PWR TRK DRV		ALL		21.640	34.540	1.5	1.5	2.0	3.750	5.950	0.000	0.110
ELECTRICIAN		BLD		34.020	37.420	1.5	1.5	2.0	8.510	9.520	1.700	0.480
ELEVATOR CONSTRUCTOR		BLD		38.995	43.870	2.0	2.0	2.0	7.275	3.420	2.340	0.370
FENCE ERECTOR		ALL		24.840	26.090	1.5	1.5	2.0	6.650	6.740	0.000	0.000
GLAZIER		BLD		31.400	32.400	1.5	2.0	2.0	6.490	9.050	0.000	0.500
HT/FROST INSULATOR		BLD		32.800	34.550	1.5	1.5	2.0	7.860	8.610	0.000	0.310
IRON WORKER		ALL		36.250	37.750	2.0	2.0	2.0	8.970	10.77	0.000	0.300
LABORER		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
LATHER		BLD		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
MACHINIST		BLD		35.630	37.630	2.0	2.0	2.0	3.880	4.750	2.460	0.000
MARBLE FINISHERS		ALL		25.750	0.000	1.5	1.5	2.0	6.070	7.020	0.000	0.580
MARBLE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.580
MILLWRIGHT		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
OPERATING ENGINEER		BLD	1	39.550	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	2	38.250	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	3	35.700	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	4	33.950	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		FLT	1	42.700	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		FLT	2	41.200	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		FLT	3	36.650	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		FLT	4	30.500	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		HWY	1	37.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	2	37.200	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	3	35.150	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	4	33.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	5	32.550	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
ORNAMNTL IRON WORKER		ALL		33.600	35.350	2.0	2.0	2.0	7.250	10.09	0.000	0.750
PAINTER		ALL		33.550	37.560	1.5	1.5	1.5	5.800	5.400	0.000	0.340
PAINTER SIGNS		BLD		25.530	28.660	1.5	1.5	1.5	2.600	2.040	0.000	0.000
PILEDRIVER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.310	0.000	0.490
PIPEFITTER		BLD		36.100	38.100	1.5	1.5	2.0	7.910	6.100	0.000	0.800
PLASTERER		BLD		31.700	32.700	1.5	1.5	2.0	6.130	8.590	0.000	0.050
PLUMBER		BLD		36.000	38.000	1.5	1.5	2.0	7.250	5.500	0.000	0.390
ROOFER		BLD		32.800	34.800	1.5	1.5	2.0	5.570	3.000	0.000	0.330
SHEETMETAL WORKER		BLD		33.400	36.070	1.5	1.5	2.0	6.460	7.850	0.000	0.590
SIGN HANGER		BLD		23.750	24.600	1.5	1.5	2.0	3.880	2.000	0.000	0.000
SPRINKLER FITTER		BLD		34.500	36.500	1.5	1.5	2.0	7.000	5.550	0.000	0.500
STEEL ERECTOR		ALL		36.250	37.750	2.0	2.0	2.0	8.970	10.77	0.000	0.300
STONE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
TERRAZZO FINISHER		BLD		27.950	0.000	1.5	1.5	2.0	6.150	5.560	0.000	0.220
TERRAZZO MASON		BLD		32.050	35.050	1.5	1.5	2.0	6.150	7.140	0.000	0.120
TILE MASON		BLD		33.000	37.000	2.0	1.5	2.0	5.400	6.400	0.000	0.180
TRAFFIC SAFETY WRKR		HWY		22.800	24.400	1.5	1.5	2.0	3.078	1.875	0.000	0.000
TRUCK DRIVER		ALL	1	28.150	28.700	1.5	1.5	2.0	4.950	4.800	0.000	0.000
TRUCK DRIVER		ALL	2	28.300	28.700	1.5	1.5	2.0	4.950	4.800	0.000	0.000
TRUCK DRIVER		ALL	3	28.500	28.700	1.5	1.5	2.0	4.950	4.800	0.000	0.000
TRUCK DRIVER		ALL	4	28.700	28.700	1.5	1.5	2.0	4.950	4.800	0.000	0.000

TUCKPOINTER BLD 34.500 35.500 1.5 1.5 2.0 4.710 6.340 0.000 0.400

Legend:

M-F>8 (Overtime is required for any hour greater than 8 worked each day, Monday through Friday.

OSA (Overtime is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

Explanations

LAKE COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial/Decoration Day, Fourth of July, Day, Veterans Day, Thanksgiving Day, Christmas Day. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration such as the day after Thanksgiving for Veterans Day. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand

and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATION TECHNICIAN

Low voltage construction, installation, maintenance and removal of telecommunication facilities (voice, sound, data and video) including outside plant, telephone, security systems and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area network), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all mateiral that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installatin of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and experiors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and experior which sare installed in a similar manner.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors;

Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

OPERATING ENGINEERS - BUILDING

Class 1. Mechanic; Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson attachment; Batch Plant; Benoto; Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, one, two and three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes; Squeeze Cretes-screw Type Pumps; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-form Paver; Straddle Buggies; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Bobcat (over 3/4 cu. yd.); Boilers; Brick Forklift; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Greaser Engineer; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, inside Freight Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (self-propelled); Rock Drill (truck mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination - Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators - (Rheostat Manual Controlled); Hydraulic Power Units (Pile Driving, Extracting,

and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 small Electric Drill Winches; Bobcat (up to and including 3/4 cu. yd.).

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

OPERATING ENGINEERS - FLOATING

Class 1. Craft foreman (Master Mechanic), diver/wet tender, engineer (hydraulic dredge).

Class 2. Crane/backhoe operator, mechanic/welder, assistant engineer (hydraulic dredge), leverman (hydraulic dredge), and diver tender.

Class 3. Deck equipment operator (machineryman), maintenance of crane (over 50 ton capacity) or backhoe (96,000 pounds or more), tug/launch operator, loader, dozer and like equipment on barge, breakwater wall, slip/dock or scow, deck machinery, etc.

Class 4. Deck equipment operator (machineryman/fireman), (4 equipment units or more) and crane maintenance 50 ton capacity and under or backhoe weighing 96,000 pounds or less, assistant tug operator.
OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION
Class 1. Craft Foreman; Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted): Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Hammerhead, Linden, Peco & Machines of a like nature; Crete Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dowell machine with Air Compressor; Dredges; Field Mechanic-Welder; Formless Curb and Gutter Machine; Gradall and Machines of a like nature; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Mounted; Hoists, One, Two and Three Drum; Hydraulic Backhoes; Backhoes with shear attachments; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Roto Mill Grinder; Slip-Form Paver; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Trenching Machine; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole; Drills (Tunnel Shaft); Underground Boring and/or Mining Machines; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Greaser Engineer; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; All Locomotives, Dinky; Pump Cretes;

Squeeze Cretes-Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotory Snow Plows; Rototiller, Seaman, etc., self-propelled; Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Fireman on Boilers; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper - Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Hydro-Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Bobcats (all); Brick Forklifts; Oilers.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 618/993-7271 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

Mchenry County Prevailing Wage for December 2005

Trade Name	RG	TYP	C	Base	FRMAN	*M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
ASBESTOS ABT-GEN		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
ASBESTOS ABT-MEC		BLD		23.300	24.800	1.5	1.5	2.0	7.860	4.910	0.000	0.000
BOILERMAKER		BLD		36.820	40.140	2.0	2.0	2.0	6.920	6.260	0.000	0.210
BRICK MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
CARPENTER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.320	0.000	0.490
CEMENT MASON		ALL		33.300	36.630	1.5	1.5	2.0	5.900	8.460	0.000	0.050
CERAMIC TILE FNSHER		BLD		27.200	0.000	2.0	1.5	2.0	5.400	5.200	0.000	0.100
COMMUNICATION TECH		BLD		29.960	31.760	1.5	1.5	2.0	5.842	6.290	0.000	0.375
ELECTRIC PWR EQMT OP		ALL		26.940	34.540	1.5	1.5	2.0	3.750	7.440	0.000	0.130
ELECTRIC PWR GRNDMAN		ALL		20.970	34.540	1.5	1.5	2.0	3.750	5.760	0.000	0.100
ELECTRIC PWR LINEMAN		ALL		31.980	34.540	1.5	1.5	2.0	3.750	8.850	0.000	0.160
ELECTRIC PWR TRK DRV		ALL		21.640	34.540	1.5	1.5	2.0	3.750	5.950	0.000	0.110
ELECTRICIAN		ALL		37.730	41.500	1.5	1.5	2.0	8.112	8.678	0.000	0.472
ELEVATOR CONSTRUCTOR		BLD		38.995	43.870	2.0	2.0	2.0	7.275	3.420	2.340	0.370
FENCE ERECTOR	E	ALL		24.840	26.090	1.5	1.5	2.0	6.650	6.740	0.000	0.000
FENCE ERECTOR	S	ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
GLAZIER		BLD		31.400	32.400	1.5	2.0	2.0	6.490	9.050	0.000	0.500
HT/FROST INSULATOR		BLD		32.800	34.550	1.5	1.5	2.0	7.860	8.610	0.000	0.310
IRON WORKER	E	ALL		36.250	37.750	2.0	2.0	2.0	8.970	10.77	0.000	0.300
IRON WORKER	S	ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
IRON WORKER	W	ALL		30.660	32.190	2.0	2.0	2.0	6.650	14.32	0.000	0.550
LABORER		ALL		30.150	30.900	1.5	1.5	2.0	6.600	4.200	0.000	0.170
LATHER		BLD		35.320	37.320	1.5	1.5	2.0	6.760	5.320	0.000	0.490
MACHINIST		BLD		35.630	37.630	2.0	2.0	2.0	3.880	4.750	2.460	0.000
MARBLE FINISHERS		ALL		25.750	0.000	1.5	1.5	2.0	6.070	7.020	0.000	0.580
MARBLE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.580
MILLWRIGHT		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.320	0.000	0.490
OPERATING ENGINEER		BLD	1	39.550	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	2	38.250	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	3	35.700	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	4	33.950	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	1	37.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	2	37.200	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	3	35.150	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	4	33.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	5	32.550	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
ORNAMNTL IRON WORKER	E	ALL		33.600	35.350	2.0	2.0	2.0	7.250	10.09	0.000	0.750
ORNAMNTL IRON WORKER	S	ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
PAINTER		ALL		33.330	34.330	1.5	1.5	1.5	5.150	5.000	0.000	0.250
PAINTER SIGNS		BLD		25.150	28.240	1.5	1.5	1.5	2.600	2.010	0.000	0.000
PILEDRIVER		ALL		35.320	37.320	1.5	1.5	2.0	6.760	5.320	0.000	0.490
PIPEFITTER		BLD		36.100	38.100	1.5	1.5	2.0	7.910	6.100	0.000	0.800
PLASTERER		BLD		32.100	33.600	1.5	1.5	2.0	6.240	6.600	0.000	0.400
PLUMBER		BLD		36.000	38.000	1.5	1.5	2.0	7.250	5.500	0.000	0.390
ROOFER		BLD		32.800	34.800	1.5	1.5	2.0	5.570	3.000	0.000	0.330
SHEETMETAL WORKER		BLD		35.030	37.030	1.5	1.5	2.0	6.470	7.440	0.000	0.540
SIGN HANGER		BLD		26.070	27.570	1.5	1.5	2.0	3.800	3.550	0.000	0.000
SPRINKLER FITTER		BLD		34.500	36.500	1.5	1.5	2.0	7.000	5.550	0.000	0.500
STEEL ERECTOR	E	ALL		36.250	37.750	2.0	2.0	2.0	8.970	10.77	0.000	0.300
STEEL ERECTOR	S	ALL		34.100	35.810	2.0	2.0	2.0	7.690	13.11	0.000	0.230
STONE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
TERRAZZO FINISHER		BLD		27.950	0.000	1.5	1.5	2.0	6.150	5.560	0.000	0.220
TERRAZZO MASON		BLD		32.050	35.050	1.5	1.5	2.0	6.150	7.140	0.000	0.120
TILE MASON		BLD		33.000	37.000	2.0	1.5	2.0	5.400	6.400	0.000	0.180
TRAFFIC SAFETY WRKR		HWY		22.800	24.400	1.5	1.5	2.0	3.078	1.875	0.000	0.000
TRUCK DRIVER		ALL	1	28.150	28.700	1.5	1.5	2.0	4.950	4.800	0.000	0.000
TRUCK DRIVER		ALL	2	28.300	28.700	1.5	1.5	2.0	4.950	4.800	0.000	0.000
TRUCK DRIVER		ALL	3	28.500	28.700	1.5	1.5	2.0	4.950	4.800	0.000	0.000

TRUCK DRIVER	ALL	4	28.700	28.700	1.5	1.5	2.0	4.950	4.800	0.000	0.000
TUCKPOINTER	BLD		34.500	35.500	1.5	1.5	2.0	4.710	6.340	0.000	0.400

Legend:

M-F>8 (Overtime is required for any hour greater than 8 worked each day, Monday through Friday.

OSA (Overtime is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

Explanations

MCHENRY COUNTY

IRONWORKERS (EAST) - That part of the county East of Rts. 47 and 14.

IRONWORKERS (SOUTH) - That part of the county South of Route 14 and East of Route 47.

IRONWORKERS (WEST) - That part of the county West of Route 47.

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial/Decoration Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration such as the day after Thanksgiving for Veterans Day. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable

tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS TECHNICIAN

Construction, installation, maintenance and removal of telecommunication facilities (voice, sound, data and video), telephone, security systems, fire alarm systems that are a component of a multiplex system and share a common cable, and data inside wire, interconnect, terminal equipment, central offices, PABX and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area network), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all mateiral that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installatin of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and experiors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and experior which sare installed in a similar manner.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION
Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yeards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

OPERATING ENGINEERS - BUILDING

Class 1. Mechanic; Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson attachment; Batch Plant; Benoto; Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, one, two and three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes; Squeeze Cretes-screw Type Pumps; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-form Paver; Straddle Buggies; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Bobcat (over 3/4 cu. yd.); Boilers; Brick Forklift; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Greaser Engineer; Highlift

Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, inside Freight Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (self-propelled); Rock Drill (truck mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination - Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators - (Rheostat Manual Controlled); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 small Electric Drill Winches; Bobcat (up to and including 3/4 cu. yd.).

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Craft Foreman; Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted): Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Hammerhead, Linden, Peco & Machines of a like nature; Crete Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dowell machine with Air Compressor; Dredges; Field Mechanic-Welder; Formless Curb and Gutter Machine; Gradall and Machines of a like nature; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Mounted; Hoists, One, Two and Three Drum; Hydraulic Backhoes; Backhoes with shear attachments; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Roto Mill Grinder; Slip-Form Paver; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Trenching Machine; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole; Drills (Tunnel Shaft); Underground Boring and/or Mining Machines; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Greaser Engineer; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; All Locomotives, Dinky; Pump Cretes; Squeeze Cretes-Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotory Snow Plows; Rototiller, Seaman, etc., self-propelled; Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Fireman on Boilers; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper - Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Hydro-Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Bobcats (all); Brick Forklifts; Oilers.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 618/993-7271 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

Will County Prevailing Wage for December 2005

Trade Name	RG	TYP	C	Base	FRMAN	*M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
ASBESTOS ABT-GEN		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
ASBESTOS ABT-MEC		BLD		23.300	24.800	1.5	1.5	2.0	7.860	4.910	0.000	0.000
BOILERMAKER		BLD		36.820	40.140	2.0	2.0	2.0	6.920	6.260	0.000	0.210
BRICK MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
CARPENTER		ALL		33.650	37.020	2.0	2.0	2.0	4.650	8.760	0.000	0.490
CEMENT MASON		ALL		33.600	34.850	2.0	2.0	2.0	5.900	8.280	0.000	0.050
CERAMIC TILE FNSHER		BLD		27.200	0.000	2.0	1.5	2.0	5.400	5.200	0.000	0.100
COMMUNICATION TECH		BLD		29.210	30.710	1.5	1.5	2.0	7.770	8.680	0.000	0.290
ELECTRIC PWR EQMT OP		ALL		34.950	40.720	1.5	1.5	2.0	7.420	8.730	0.000	0.260
ELECTRIC PWR GRNDMAN		ALL		27.260	40.720	1.5	1.5	2.0	5.790	6.820	0.000	0.210
ELECTRIC PWR LINEMAN		ALL		34.950	40.720	1.5	1.5	2.0	7.420	8.730	0.000	0.260
ELECTRICIAN		BLD		34.500	37.610	1.5	1.5	2.0	7.920	10.53	0.000	0.350
ELEVATOR CONSTRUCTOR		BLD		38.995	43.870	2.0	2.0	2.0	7.275	3.420	2.340	0.370
GLAZIER		BLD		31.400	32.400	1.5	2.0	2.0	6.490	9.050	0.000	0.500
HT/FROST INSULATOR		BLD		32.800	34.550	1.5	1.5	2.0	7.860	8.610	0.000	0.310
IRON WORKER	N	ALL		30.650	31.650	2.0	2.0	2.0	7.690	13.12	0.000	0.550
IRON WORKER	S	ALL		28.500	31.350	2.0	2.0	2.0	6.020	10.49	0.000	0.050
LABORER		ALL		30.150	30.900	1.5	1.5	2.0	6.860	3.940	0.000	0.170
LATHER		ALL		33.650	37.020	2.0	2.0	2.0	4.650	8.760	0.000	0.490
MACHINIST		BLD		35.630	37.630	2.0	2.0	2.0	3.880	4.750	2.460	0.000
MARBLE FINISHERS		ALL		25.750	0.000	1.5	1.5	2.0	6.070	7.020	0.000	0.580
MARBLE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.580
MILLWRIGHT		ALL		33.650	37.020	2.0	2.0	2.0	4.650	8.760	0.000	0.490
OPERATING ENGINEER		BLD	1	39.550	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	2	38.250	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	3	35.700	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		BLD	4	33.950	43.550	2.0	2.0	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		FLT	1	42.700	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		FLT	2	41.200	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		FLT	3	36.650	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		FLT	4	30.500	42.700	1.5	1.5	2.0	6.050	4.850	1.800	0.000
OPERATING ENGINEER		HWY	1	37.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	2	37.200	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	3	35.150	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	4	33.750	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
OPERATING ENGINEER		HWY	5	32.550	41.750	1.5	1.5	2.0	6.450	5.150	1.800	0.650
PAINTER		ALL		33.550	37.730	1.5	1.5	2.0	5.800	5.400	0.000	0.340
PAINTER SIGNS		BLD		25.150	28.240	1.5	1.5	1.5	2.600	2.010	0.000	0.000
PILEDRIVER		ALL		33.650	37.020	2.0	2.0	2.0	4.650	8.760	0.000	0.490
PIPEFITTER		BLD		36.100	38.100	1.5	1.5	2.0	7.910	6.100	0.000	0.800
PLASTERER		BLD		32.100	33.600	1.5	1.5	2.0	6.240	6.600	0.000	0.400
PLUMBER		BLD		36.000	38.000	1.5	1.5	2.0	6.000	8.000	0.000	0.610
ROOFER		BLD		32.800	34.800	1.5	1.5	2.0	5.570	3.000	0.000	0.330
SHEETMETAL WORKER		BLD		35.030	37.030	1.5	1.5	2.0	6.470	7.440	0.000	0.540
SPRINKLER FITTER		BLD		34.500	36.500	1.5	1.5	2.0	7.000	5.550	0.000	0.500
STONE MASON		BLD		33.250	36.580	1.5	1.5	2.0	6.450	7.020	0.000	0.440
TERRAZZO FINISHER		BLD		27.950	0.000	1.5	1.5	2.0	6.150	5.560	0.000	0.220
TERRAZZO MASON		BLD		32.050	35.050	1.5	1.5	2.0	6.150	7.140	0.000	0.120
TILE MASON		BLD		33.000	37.000	2.0	1.5	2.0	5.400	6.400	0.000	0.180
TRAFFIC SAFETY WRKR		HWY		22.800	24.400	1.5	1.5	2.0	3.078	1.875	0.000	0.000
TRUCK DRIVER		ALL	1	32.040	32.590	1.5	1.5	2.0	5.830	3.680	0.000	0.000
TRUCK DRIVER		ALL	2	32.190	32.590	1.5	1.5	2.0	5.830	3.680	0.000	0.000
TRUCK DRIVER		ALL	3	32.390	32.590	1.5	1.5	2.0	5.830	3.680	0.000	0.000
TRUCK DRIVER		ALL	4	32.590	32.590	1.5	1.5	2.0	5.830	3.680	0.000	0.000
TUCKPOINTER		BLD		34.500	35.500	1.5	1.5	2.0	4.710	6.340	0.000	0.400

Legend:

M-F>8 (Overtime is required for any hour greater than 8 worked each day, Monday through Friday.

OSA (Overtime is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

Explanations

WILL COUNTY

IRONWORKERS (SOUTH) - That part of the county South of a diagonal line through Braidwood and Goodenow.

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial/Decoration Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration such as the day after Thanksgiving for Veterans Day. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation,

installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS TECHNICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice, sound and vision production and reproduction, telephone and telephone interconnect, facsimile, equipment and appliances used for domestic, commercial, educational and entertainment purposes, pulling of wire through conduit but not the installation of conduit.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all mateiral that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installatin of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and experiors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and experior which sare installed in a similar manner.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION
Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement

Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yeards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

OPERATING ENGINEERS - BUILDING

Class 1. Mechanic; Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson attachment; Batch Plant; Benoto; Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, one, two and three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes; Squeeze Cretes-screw Type Pumps; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-form Paver; Straddle Buggies; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Bobcat (over 3/4 cu. yd.); Boilers; Brick Forklift; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklist Trucks; Greaser Engineer; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, inside Freight Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (self-propelled); Rock Drill (truck mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination - Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators - (Rheostat Manual Controlled); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 small Electric Drill Winches; Bobcat (up to and including 3/4 cu.

yd.).

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

OPERATING ENGINEERS - FLOATING

Class 1. Craft foreman (Master Mechanic), diver/wet tender, engineer (hydraulic dredge).

Class 2. Crane/backhoe operator, mechanic/welder, assistant engineer (hydraulic dredge), leverman (hydraulic dredge), and diver tender.

Class 3. Deck equipment operator (machineryman), maintenance of crane (over 50 ton capacity) or backhoe (96,000 pounds or more), tug/launch operator, loader, dozer and like equipment on barge, breakwater wall, slip/dock or scow, deck machinery, etc.

Class 4. Deck equipment operator (machineryman/fireman), (4 equipment units or more) and crane maintenance 50 ton capacity and under or backhoe weighing 96,000 pounds or less, assistant tug operator.

OPERATING ENGINEERS - HEAVY AND HIGHWAY CONSTRUCTION
Class 1. Craft Foreman; Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted): Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Hammerhead, Linden, Peco & Machines of a like nature; Crete Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dowell machine with Air Compressor; Dredges; Field Mechanic-Welder; Formless Curb and Gutter Machine; Gradall and Machines of a like nature; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Mounted; Hoists, One, Two and Three Drum; Hydraulic Backhoes; Backhoes with shear attachments; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Roto Mill Grinder; Slip-Form Paver; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Trenching Machine; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole; Drills (Tunnel Shaft); Underground Boring and/or Mining Machines; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Greaser Engineer; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; All Locomotives, Dinky; Pump Cretes; Squeeze Cretes-Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotory Snow Plows; Rototiller, Seaman, etc., self-propelled;

Scoops - Tractor Drawn; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper; Scraper - Prime Mover in Tandem (Regardless of Size); Tank Car Heater; Tractors, Push, Pulling Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Fireman on Boilers; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper - Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Hydro-Blaster; Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Tractaire; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. Bobcats (all); Brick Forklifts; Oilers.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 618/993-7271 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.