

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 than 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.

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RETURN WITH BID

| |
|-----------------------|
| Proposal Submitted By |
| Name |
| Address |
| City |

Letting January 18, 2008

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



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. 83980
COOK County
Section 05-00083-00-FP (Schaumburg)
Route FAU 1338 (Wise Road)
Project M-8003(512)
District 1 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

- A Bid Bond is included.
- A Cashier's Check or a Certified Check is included

Prepared by

F

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

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|--|--------------|
| 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. 83980
COOK County
Section 05-00083-00-FP (Schaumburg)
Project M-8003(512)
Route FAU 1338 (Wise Road)
District 1 Construction Funds**

1.74 miles of roadway reconstruction to include earth excavation and pavement removal, construct storm sewers and drainage structures, HMA binder and surfaces courses, traffic signal improvements, street lighting and landscaping on Wise Road from Roselle Road to Plum Grove Road in the village of Schaumburg.

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:

| <u>Amount of Bid</u> | | <u>Proposal Guaranty</u> | <u>Amount of Bid</u> | | <u>Proposal Guaranty</u> | |
|----------------------|----------------------|--------------------------|----------------------|----|--------------------------|-------------|
| 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)

RETURN WITH BID

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.

STATE JOB # - C-91-195-05
 PPS NBR - 1-20357-0000

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 83980
 ECMS002 DTGECM03 ECMR003 PAGE 1
 RUN DATE - 12/10/07
 RUN TIME - 183254

| | | | | | |
|-------------|------|------|-----------------------------|----------------|----------|
| COUNTY NAME | CODE | DIST | SECTION NUMBER | PROJECT NUMBER | ROUTE |
| COOK | 031 | 01 | 05-00083-00-FP (SCHAUMBURG) | M-8003/512/000 | FAU 1338 |

| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE DOLLARS | CENTS | TOTAL PRICE DOLLARS | CTS |
|-------------|-----------------------|-----------------|-----------|--------------------|-------|---------------------|-----|
| A2002924 | T-CELLTIS OCCID 3 | EACH | 4.000 | | | | |
| A2004820 | T-GLED TRI-I SK 2-1/2 | EACH | 4.000 | | | | |
| C2007224 | S-ROSA KNOCKOUT 24 | EACH | 67.000 | | | | |
| C2007924 | S-ROSA WEIPTAC 24 | EACH | 69.000 | | | | |
| C2011936 | S-VIBURN DEN R S 3' | EACH | 4.000 | | | | |
| D2C00624 | E-JUNIPER CHIN SG 2'C | EACH | 12.000 | | | | |
| E20150G5 | V-HYDRAN ANA PET 5G | EACH | 18.000 | | | | |
| K1005481 | SHRED BARK MULCH 3 | SQ YD | 1,305.000 | | | | |
| XX000613 | MODULAR BLOC RET WALL | SQ FT | 540.000 | | | | |
| XX000810 | CONCRETE PAVERS | SQ FT | 9,683.000 | | | | |
| XX000882 | WOOD FENCE | FOOT | 106.000 | | | | |
| XX000959 | TRASH RECEPTACLES | EACH | 8.000 | | | | |
| XX001249 | ORNAMENTAL FENCE | FOOT | 109.000 | | | | |
| XX002029 | SAN SEW REMOV 8 | FOOT | 18.000 | | | | |
| XX002136 | PRESSURE CONNECTION | EACH | 19.000 | | | | |

FAU 1338
 05-00083-00-FP (SCHAUMBURG)
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 83980
 ECMS002 DTGECM03 ECMR003 PAGE 2
 RUN DATE - 12/10/07
 RUN TIME - 183254

| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE | | TOTAL PRICE | CTS |
|-------------|--------------------------------|-----------------|-----------|------------|-------|-------------|-----|
| | | | | DOLLARS | CENTS | | |
| XX003532 | WAT SER CONN 1.5 | EACH | 11.000 | = | | | |
| XX003848 | GYP SUM PLACEMENT | POUND | 3,524.000 | = | | | |
| XX004801 | BIT BIKE PATH REM | SQ YD | 44.000 | = | | | |
| XX004911 | SIGN PANEL TAZ REF SH | SQ FT | 30.000 | = | | | |
| XX005166 | HYDRANGEA ARBOR ANNA SMOOTH 2' | EACH | 1.000 | = | | | |
| XX005167 | RIBES ALPN GRMD 24 | EACH | 88.000 | = | | | |
| XX005283 | BRICK PAVER CROSSWALK | SQ FT | 1,255.000 | = | | | |
| XX005656 | INLET FILTER CLEANING | EACH | 308.000 | = | | | |
| XX005962 | BENCH | EACH | 4.000 | = | | | |
| XX005995 | SHRUB SUMMER SW 5 GAL | EACH | 12.000 | = | | | |
| XX006159 | MEDIAN SOIL MIX F & P | CU YD | 598.000 | = | | | |
| XX006642 | SS WM REQ T2 15 | FOOT | 20.000 | = | | | |
| XX007169 | NON-PRESSURE CONN | EACH | 2.000 | = | | | |
| XX007172 | HMA DRIVE PVMT 4 1/4 | SQ YD | 113.000 | = | | | |
| XX007173 | HMA DRIVE PVMT 7 | SQ YD | 207.000 | = | | | |

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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 83980

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 RUN DATE - 12/10/07
 RUN TIME - 183254

| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE | | TOTAL PRICE |
|-------------|-----------------------|-----------------|------------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| XX007174 | CONC HEADER BAND 6 | FOOT | 1,536.000 | = | | |
| XX007175 | CONC HEADER BAND 12 | FOOT | 400.000 | = | | |
| XX007176 | AGG SUBGRADE 10 | SQ YD | 36,227.000 | = | | |
| XX007177 | CB TA 4 DIA T1F CL SP | EACH | 1.000 | = | | |
| XX007178 | INLETS TA T1F CL SPL | EACH | 5.000 | = | | |
| XX007179 | INLETS TB T1F CL SPL | EACH | 1.000 | = | | |
| XX007180 | SAN MH REC T1F CL SPL | EACH | 1.000 | = | | |
| XX007181 | VERTICAL IDENTIFIER | EACH | 15.000 | = | | |
| XX007182 | WELD ALUMINUM TRELLIS | EACH | 4.000 | = | | |
| XX007183 | COMB CC&G TM3.12 | FOOT | 3,142.000 | = | | |
| XX007184 | RPZ BKFL PREV 1.5 T1 | EACH | 2.000 | = | | |
| XX007185 | RPZ BKFL PREV 1.5 T2 | EACH | 9.000 | = | | |
| XX007186 | QUICK COUPLE | EACH | 18.000 | = | | |
| XX007187 | VALVE BOX (LARGE) | EACH | 2.000 | = | | |
| XX007188 | REMOVE IRRIGATION SYS | EACH | 1.000 | = | | |

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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 CONTRACT NUMBER - 83980

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 RUN DATE - 12/10/07
 RUN TIME - 183254

| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE | | TOTAL PRICE |
|-------------|-----------------------|-----------------|-----------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| XX007189 | T-PYRUS C ACP TF 3 | EACH | 3.000 | | | |
| XX007190 | T-PYRUS C AB CP TF 3 | EACH | 6.000 | | | |
| XX007191 | T-QUERCUS IMBR SO 3 | EACH | 2.000 | | | |
| XX007192 | E-THUJA OCC DG A 8 C | EACH | 3.000 | | | |
| XX007193 | P HOS SUM N SUB 2 GAL | EACH | 10.000 | | | |
| XX007194 | DEC LT 100W 12MH | EACH | 35.000 | | | |
| XX007195 | LT P A TB 30MH12MA MO | EACH | 2.000 | | | |
| XX007196 | LT P A TB 40MH12MA MO | EACH | 2.000 | | | |
| XX007197 | DEC LT 100W 12MH MO | EACH | 2.000 | | | |
| XX007217 | PAVER BLOCKS SPL | SQ FT | 90.000 | | | |
| XX007218 | SAN MAN RECONST SPL | EACH | 2.000 | | | |
| XX011700 | WATER MAIN FITTINGS | POUND | 2,000.000 | | | |
| X0301407 | PERENNIAL PLT-GAL POT | UNIT | 2,540.000 | | | |
| X0301766 | DRILL-GROUT #6 T-BAR | EACH | 825.000 | | | |
| X0321556 | SANITARY MANHOLE ADJ | EACH | 18.000 | | | |

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE | | TOTAL PRICE |
|-------------|-----------------------|-----------------|-----------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| X0322256 | TEMP INFO SIGNING | SQ FT | 133.000 | = | | |
| X0322859 | WEED CONTR PRE-EM GRN | POUND | 27.000 | = | | |
| X0323381 | SS WM REQ T1 12" | FOOT | 575.000 | = | | |
| X0323382 | SS WM REQ T1 15" | FOOT | 103.000 | = | | |
| X0323383 | SS WM REQ T1 18" | FOOT | 133.000 | = | | |
| X0323430 | SS WM REQ T1 24" | FOOT | 51.000 | = | | |
| X0323449 | REM EX WATER VALVE | EACH | 2.000 | = | | |
| X0323863 | SS WM REQ T2 12" | FOOT | 20.000 | = | | |
| X0323973 | SED CONT SILT FENCE | FOOT | 1,072.000 | = | | |
| X0323974 | SED CONT SILT FN MAIN | FOOT | 550.000 | = | | |
| X0325105 | IRRIGATION SYSTEM | SQ YD | 1,305.000 | = | | |
| X0487700 | SAN SEW REMOV 10 | FOOT | 50.000 | = | | |
| X4021000 | TEMP ACCESS- PRIV ENT | EACH | 21.000 | = | | |
| X4022000 | TEMP ACCESS- COM ENT | EACH | 2.000 | = | | |
| X4023000 | TEMP ACCESS- ROAD | EACH | 16.000 | = | | |

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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 RUN DATE - 12/10/07
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| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE | | TOTAL PRICE | |
|-------------|-----------------------|-----------------|-----------|------------|-------|-------------|----------|
| | | | | DOLLARS | CENTS | DOLLARS | CTS |
| X8050015 | SERV INSTALL POLE MT | EACH | 1.000 | | | | |
| X8210155 | LUM SV HOR MT 250W MO | EACH | 2.000 | | | | |
| X8620020 | UNINTER POWER SUPPLY | EACH | 1.000 | | | | |
| X8730027 | ELCBL C GROUND 6 1C | FOOT | 697.000 | | | | |
| X8730250 | ELCBL C 20 3C TW SH | FOOT | 356.000 | | | | |
| Z0001050 | AGG SUBGRADE 12 | SQ YD | 1,204.000 | | | | |
| Z0013798 | CONSTRUCTION LAYOUT | L SUM | 1.000 | | | | |
| Z0015200 | CURB STOPS 1 1/2 | EACH | 11.000 | | | | |
| Z0022800 | FENCE REMOVAL | FOOT | 116.000 | | | | |
| Z0056900 | SAN SEW 8 | FOOT | 18.000 | | | | |
| Z0057000 | SAN SEW 10 | FOOT | 50.000 | | | | |
| Z0076600 | TRAINEES | FOOT | | | | | |
| 20100110 | TREE REMOV 6-15 | HOUR | 2,000.000 | | 0.80 | | 1,600.00 |
| 20101000 | TEMPORARY FENCE | UNIT | 136.000 | | | | |
| 20101100 | TREE TRUNK PROTECTION | FOOT | 6,960.000 | | | | |
| | | EACH | 173.000 | | | | |

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE | | TOTAL PRICE | CTS |
|-------------|-----------------------|-----------------|------------|------------|-------|-------------|-----|
| | | | | DOLLARS | CENTS | | |
| 20101200 | TREE ROOT PRUNING | EACH | 173.000 | = | | | |
| 20101300 | TREE PRUN 1-10 | EACH | 86.000 | = | | | |
| 20101350 | TREE PRUN OVER 10 | EACH | 44.000 | = | | | |
| 20200100 | EARTH EXCAVATION | CU YD | 11,580.000 | = | | | |
| 20201200 | REM. & DISP UNS MATL | CU YD | 5,373.000 | = | | | |
| 20400800 | FURNISHED EXCAV | CU YD | 1,227.000 | = | | | |
| 20700420 | POROUS GRAN EMB SUBGR | CU YD | 5,373.000 | = | | | |
| 20800150 | TRENCH BACKFILL | CU YD | 1,560.000 | = | | | |
| 21001000 | GEOTECH FAB F/GR STAB | SQ YD | 16,120.000 | = | | | |
| 21101615 | TOPSOIL F & P 4 | SQ YD | 20,675.000 | = | | | |
| 21101805 | COMPOST F & P 2 | SQ YD | 1,305.000 | = | | | |
| 21300010 | EXPLOR TRENCH SPL | FOOT | 725.000 | = | | | |
| 25000400 | NITROGEN FERT NUTR | POUND | 244.000 | = | | | |
| 25000500 | PHOSPHORUS FERT NUTR | POUND | 244.000 | = | | | |
| 25000600 | POTASSIUM FERT NUTR | POUND | 244.000 | = | | | |

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| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE | | TOTAL PRICE |
|-------------|-----------------------|-----------------|------------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| 25000750 | MOWING | ACRE | 4.000 | = | | |
| 25200110 | SODDING SALT TOLERANT | SQ YD | 19,613.000 | X | | |
| 25200200 | SUPPLE WATERING | UNIT | 299.000 | X | | |
| 28000250 | TEMP EROS CONTR SEED | POUND | 383.000 | X | | |
| 28000500 | INLET & PIPE PROTECT | EACH | 29.000 | X | | |
| 28000510 | INLET FILTERS | EACH | 154.000 | X | | |
| 31101400 | SUB GRAN MAT B | SQ YD | 4,714.000 | X | | |
| 40600100 | BIT MATLS PR CT | GALLON | 24,853.000 | X | | |
| 40600300 | AGG PR CT | TON | 72.000 | X | | |
| 40600625 | LEV BIND MM N50 | TON | 476.000 | X | | |
| 40600982 | HMA SURF REM BUTT JT | SQ YD | 195.000 | X | | |
| 40603310 | HMA SC "C" N50 | TON | 1,011.000 | X | | |
| 40603340 | HMA SC "D" N70 | TON | 583.000 | X | | |
| 40701861 | HMA PAVT FD | SQ YD | 31,374.000 | X | | |
| 42000501 | PCC PVT 10 JOINTED | SQ YD | 591.000 | X | | |

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|-------------|-----------------------|-----------------|------------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| 42001200 | PAVEMENT FABRIC | SQ YD | 1,058.000 | = | | |
| 42001300 | PROTECTIVE COAT | SQ YD | 11,835.000 | = | | |
| 42300700 | PCC DRIVEWAY PVT 5 SP | SQ YD | 1,726.000 | = | | |
| 42300800 | PCC DRIVEWAY PVT 8 SP | SQ YD | 159.000 | = | | |
| 42400200 | PC CONC SIDEWALK 5 | SQ FT | 12,614.000 | = | | |
| 42400430 | PC CONC SIDEWALK 5 SP | SQ FT | 22,096.000 | = | | |
| 42400800 | DETECTABLE WARNINGS | SQ FT | 867.000 | = | | |
| 44000100 | PAVEMENT REM | SQ YD | 31,145.000 | = | | |
| 44000157 | HMA SURF REM 2 | SQ YD | 5,206.000 | = | | |
| 44000198 | HMA SURF REM VAR DP | SQ YD | 4,223.000 | = | | |
| 44000200 | DRIVE PAVEMENT REM | SQ YD | 2,338.000 | = | | |
| 44000300 | CURB REM | FOOT | 12.000 | = | | |
| 44000500 | COMB CURB GUTTER REM | FOOT | 14,883.000 | = | | |
| 44000600 | SIDEWALK REM | SQ FT | 69,425.000 | = | | |
| 44003100 | MEDIAN REMOVAL | SQ FT | 8,748.000 | = | | |

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|-------------|-----------------------|-----------------|-----------|--------------------|-------|---------------------|-----|
| 44200966 | CL B PATCH T1 10 | SQ YD | 3.000 | X | = | | |
| 44201713 | CL D PATCH T1 6 | SQ YD | 111.000 | X | = | | |
| 44201717 | CL D PATCH T2 6 | SQ YD | 927.000 | X | = | | |
| 44201721 | CL D PATCH T3 6 | SQ YD | 1,206.000 | X | = | | |
| 44201723 | CL D PATCH T4 6 | SQ YD | 390.000 | X | = | | |
| 44300100 | AREA REF CR CON TREAT | SQ YD | 9,429.000 | X | = | | |
| 48203045 | HMA SHOULDERS 12 | SQ YD | 176.000 | X | = | | |
| 550A0050 | STORM SEW CL A 1 12 | FOOT | 1,905.000 | X | = | | |
| 550A0070 | STORM SEW CL A 1 15 | FOOT | 569.000 | X | = | | |
| 550A0090 | STORM SEW CL A 1 18 | FOOT | 64.000 | X | = | | |
| 550A0110 | STORM SEW CL A 1 21 | FOOT | 82.000 | X | = | | |
| 550A0130 | STORM SEW CL A 1 27 | FOOT | 169.000 | X | = | | |
| 550A0140 | STORM SEW CL A 1 30 | FOOT | 258.000 | X | = | | |
| 550A0180 | STORM SEW CL A 1 42 | FOOT | 32.000 | X | = | | |
| 550A0340 | STORM SEW CL A 2 12 | FOOT | 842.000 | X | = | | |

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|-------------|----------------------|-----------------|-----------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| 550A0360 | STORM SEW CL A 2 15 | FOOT | 642.000 | X | = | |
| 550A0400 | STORM SEW CL A 2 21 | FOOT | 125.000 | X | = | |
| 550A0410 | STORM SEW CL A 2 24 | FOOT | 8.000 | X | = | |
| 550A0420 | STORM SEW CL A 2 27 | FOOT | 247.000 | X | = | |
| 550A0430 | STORM SEW CL A 2 30 | FOOT | 116.000 | X | = | |
| 550A0450 | STORM SEW CL A 2 36 | FOOT | 8.000 | X | = | |
| 550B0010 | STORM SEW CL B 1 4 | FOOT | 8.000 | X | = | |
| 55100100 | STORM SEWER REM 4 | FOOT | 8.000 | X | = | |
| 55100200 | STORM SEWER REM 6 | FOOT | 144.000 | X | = | |
| 55100300 | STORM SEWER REM 8 | FOOT | 18.000 | X | = | |
| 55100400 | STORM SEWER REM 10 | FOOT | 4.000 | X | = | |
| 55100500 | STORM SEWER REM 12 | FOOT | 1,356.000 | X | = | |
| 55100700 | STORM SEWER REM 15 | FOOT | 430.000 | X | = | |
| 55100900 | STORM SEWER REM 18 | FOOT | 79.000 | X | = | |
| 55101100 | STORM SEWER REM 21 | FOOT | 87.000 | X | = | |

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| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE DOLLARS | CENTS | TOTAL PRICE DOLLARS | CTS |
|-------------|------------------------|-----------------|----------|--------------------|-------|---------------------|-----|
| 55101200 | STORM SEWER REM 24 | FOOT | 444.000 | X | = | | |
| 55101300 | STORM SEWER REM 27 | FOOT | 8.000 | X | = | | |
| 55101400 | STORM SEWER REM 30 | FOOT | 55.000 | X | = | | |
| 55101600 | STORM SEWER REM 36 | FOOT | 26.000 | X | = | | |
| 55101800 | STORM SEWER REM 42 | FOOT | 37.000 | X | = | | |
| 56103000 | D I WATER MAIN 6 | FOOT | 174.000 | X | = | | |
| 56103100 | D I WATER MAIN 8 | FOOT | 50.000 | X | = | | |
| 56105000 | WATER VALVES 8 | EACH | 2.000 | X | = | | |
| 56106300 | ADJ WATER MAIN 6 | FOOT | 40.000 | X | = | | |
| 56106400 | ADJ WATER MAIN 8 | FOOT | 40.000 | X | = | | |
| 56106810 | ADJ WATER MAIN 20 | FOOT | 200.000 | X | = | | |
| 56200500 | WATER SERV LINE 1 1/2 | FOOT | 108.000 | X | = | | |
| 56300300 | ADJ WATER SERV LINES | FOOT | 150.000 | X | = | | |
| 56400500 | FIRE HYDNITS TO BE REM | EACH | 13.000 | X | = | | |
| 56400600 | FIRE HYDRANTS | EACH | 19.000 | X | = | | |

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|-------------|-----------------------|-----------------|-----------|--------------------|-------|---------------------|-----|
| 56400820 | FIRE HYD W/AUX V & VB | EACH | 2,000 | X | = | | |
| 56500600 | DOM WAT SER BOX ADJ | EACH | 65,000 | X | = | | |
| 56500800 | DOM WAT SER BOX | EACH | 8,000 | X | = | | |
| 60107600 | PIPE UNDERDRAINS 4 | FOOT | 1,000,000 | X | = | | |
| 60200205 | CB TA 4 DIA T1F CL | EACH | 4,000 | X | = | | |
| 60200805 | CB TA 4 DIA T8G | EACH | 4,000 | X | = | | |
| 60201105 | CB TA 4 DIA T11F&G | EACH | 3,000 | X | = | | |
| 60202710 | CB TA 4 DIA W/SPL F&G | EACH | 34,000 | X | = | | |
| 60205620 | CB TA 5 DIA W/SPL F&G | EACH | 7,000 | X | = | | |
| 60207605 | CB TC T8G | EACH | 1,000 | X | = | | |
| 60209510 | CB TC W/SPL F&G | EACH | 1,000 | X | = | | |
| 60218400 | MAN TA 4 DIA T1F CL | EACH | 8,000 | X | = | | |
| 60220230 | MAN TA 4 DIA SPL F&G | EACH | 2,000 | X | = | | |
| 60221000 | MAN TA 5 DIA T1F OL | EACH | 2,000 | X | = | | |
| 60221100 | MAN TA 5 DIA T1F CL | EACH | 8,000 | X | = | | |

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|-------------|----------------------|-----------------|----------|------------|-------|-------------|-----|
| | | | | DOLLARS | CENTS | | |
| 60223800 | MAN TA 6 DIA T1F CL | EACH | 2.000 | X | | | |
| 60234200 | INLETS TA T1F OL | EACH | 1.000 | X | | | |
| 60236200 | INLETS TA T8G | EACH | 9.000 | X | | | |
| 60238700 | INLETS TA W/SPL F&G | EACH | 30.000 | X | | | |
| 60240301 | INLETS TB T8G | EACH | 3.000 | X | | | |
| 60240310 | INLETS TB T11F&G | EACH | 1.000 | X | | | |
| 60240385 | INLETS TB W/SPL F&G | EACH | 2.000 | X | | | |
| 60249400 | VALVE BOXES 6 | EACH | 16.000 | X | | | |
| 60250200 | CB ADJUST | EACH | 8.000 | X | | | |
| 60255500 | MAN ADJUST | EACH | 6.000 | X | | | |
| 60255800 | MAN ADJ NEW T1F CL | EACH | 1.000 | X | | | |
| 60257900 | MAN RECONST | EACH | 3.000 | X | | | |
| 60258800 | MAN RECON NEW T8G | EACH | 1.000 | X | | | |
| 60260050 | SAN MAN RECONST | EACH | 7.000 | X | | | |
| 60260100 | INLETS ADJUST | EACH | 1.000 | X | | | |

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|-------------|-----------------------|-----------------|-----------|--------------------|-------|---------------------|-----|
| 60261000 | INLETS ADJ NEW T8G | EACH | 1.000 | | = | | |
| 60262510 | INLET ADJ NEW F&G SPL | EACH | 1.000 | X | = | | |
| 60265700 | VV ADJUST | EACH | 10.000 | X | = | | |
| 60266100 | VV RECONST | EACH | 8.000 | X | = | | |
| 60500040 | REMOV MANHOLES | EACH | 20.000 | X | = | | |
| 60500050 | REMOV CATCH BAS | EACH | 18.000 | X | = | | |
| 60500060 | REMOV INLETS | EACH | 31.000 | X | = | | |
| 60500205 | FILL CATCH BAS | EACH | 2.000 | X | = | | |
| 60600605 | CONC CURB TB | FOOT | 143.000 | X | = | | |
| 60603800 | COMB CC&G TB6.12 | FOOT | 691.000 | X | = | | |
| 60605000 | COMB CC&G TB6.24 | FOOT | 6,816.000 | X | = | | |
| 60605400 | COMB CC&G TB6.24 SPL | FOOT | 3,725.000 | X | = | | |
| 60605900 | COMB CC&G TB9.12 | FOOT | 45.000 | X | = | | |
| 60608300 | COMB CC&G TM2.12 | FOOT | 392.000 | X | = | | |
| 60618400 | CONC MED TC4 | SQ FT | 4,201.000 | X | = | | |

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|-------------|-----------------------|-----------------|------------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| 60622800 | CONC MED TSM6.12 | SQ FT | 592.000 | X | = | |
| 60624600 | CORRUGATED MED | SQ FT | 2,672.000 | X | = | |
| 63200310 | GUARDRAIL REMOV | FOOT | 578.000 | X | = | |
| 67000400 | ENGR FIELD OFFICE A | CAL MO | 9.000 | X | = | |
| 67100100 | MOBILIZATION | L SUM | 1.000 | X | = | |
| 70101700 | TRAF CONT & PROT | L SUM | 1.000 | X | = | |
| 70101900 | TRAF CONT & PROT D1 | L SUM | 1.000 | X | = | |
| 70102000 | TRAF CONT & PROT D2 | L SUM | 1.000 | X | = | |
| 70106800 | CHANGEABLE MESSAGE SN | CAL MO | 6.000 | X | = | |
| 70300100 | SHORT-TERM PAVT MKING | FOOT | 411.000 | X | = | |
| 70300510 | PAVT MARK TAPE T3 L&S | SQ FT | 73.000 | X | = | |
| 70300520 | PAVT MARK TAPE T3 4 | FOOT | 1,038.000 | X | = | |
| 70300610 | TEMP PT PAVT MK L&S | SQ FT | 582.000 | X | = | |
| 70300625 | TEMP PT PVT M LINE 4 | FOOT | 29,709.000 | X | = | |
| 70300635 | TEMP PT PVT M LINE 6 | FOOT | 2,848.000 | X | = | |

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|-------------|-----------------------|-----------------|------------|--------------------|-------|---------------------|-----|
| 70300645 | TEMP PT PVT M LINE 12 | FOOT | 687.000 | | = | | |
| 70300660 | TEMP PT PVT M LINE 24 | FOOT | 781.000 | | = | | |
| 70301000 | WORK ZONE PAVT MK REM | SQ FT | 830.000 | | = | | |
| 78000100 | THPL PVT MK LTR & SYM | SQ FT | 364.000 | | = | | |
| 78000200 | THPL PVT MK LINE 4 | FOOT | 17,490.000 | | = | | |
| 78000400 | THPL PVT MK LINE 6 | FOOT | 2,285.000 | | = | | |
| 78000600 | THPL PVT MK LINE 12 | FOOT | 559.000 | | = | | |
| 78000650 | THPL PVT MK LINE 24 | FOOT | 355.000 | | = | | |
| 78001100 | PT PVT MK LTRS & SYMB | SQ FT | 153.000 | | = | | |
| 78001110 | PAINT PVT MK LINE 4 | FOOT | 1,983.000 | | = | | |
| 78001130 | PAINT PVT MK LINE 6 | FOOT | 930.000 | | = | | |
| 78001150 | PAINT PVT MK LINE 12 | FOOT | 395.000 | | = | | |
| 78001180 | PAINT PVT MK LINE 24 | FOOT | 107.000 | | = | | |
| 78100100 | RAISED REFL PAVT MKR | EACH | 439.000 | | = | | |
| 78300100 | PAVT MARKING REMOVAL | SQ FT | 750.000 | | = | | |

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|-------------|-----------------------|-----------------|-----------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| 78300200 | RAISED REF PVT MK REM | EACH | 50.000 | | | |
| 80400100 | ELECT SERV INSTALL | EACH | 1.000 | | | |
| 80400200 | ELECT UTIL SERV CONN | L SUM | 1.000 | 10,000 | 00 | 10,000 00 |
| 81000600 | CON T 2 GALVS | FOOT | 926.000 | | | |
| 81000700 | CON T 2 1/2 GALVS | FOOT | 92.000 | | | |
| 81001000 | CON T 4 GALVS | FOOT | 1,573.000 | | | |
| 81001100 | CON T 5 GALVS | FOOT | 52.000 | | | |
| 81018500 | CON P 2 GALVS | FOOT | 464.000 | | | |
| 81018600 | CON P 2 1/2 GALVS | FOOT | 106.000 | | | |
| 81018900 | CON P 4 GALVS | FOOT | 448.000 | | | |
| 81019000 | CON P 5 GALVS | FOOT | 225.000 | | | |
| 81400100 | HANDHOLE | EACH | 6.000 | | | |
| 81400200 | HD HANDHOLE | EACH | 4.000 | | | |
| 81400300 | DBL HANDHOLE | EACH | 1.000 | | | |
| 81603025 | UD 2#4 #4G XLPUSE | FOOT | 2,550.000 | | | |

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|-------------|-----------------------|-----------------|------------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| 81603085 | UD 3#4#4GXLPUSE 1 1/4 | FOOT | 20,250.000 | X | = | |
| 81702460 | EC C XLP USE 3-1C 3/0 | FOOT | 150.000 | X | = | |
| 81900200 | TR & BKFIL F ELECT WK | FOOT | 12,273.000 | X | = | |
| 82102250 | LUM SV HOR MT 250W | EACH | 43.000 | X | = | |
| 82102400 | LUM SV HOR MT 400W | EACH | 4.000 | X | = | |
| 82106700 | LUM SV HOR MT 400W MO | EACH | 2.000 | X | = | |
| 82500505 | LIGHT CONTROLLER SPL | EACH | 1.000 | X | = | |
| 83020500 | LT P A TB 30MH 12MA | EACH | 39.000 | X | = | |
| 83022500 | LT P A TB 40MH 12MA | EACH | 8.000 | X | = | |
| 83600215 | LIGHT POLE FDN 24D OS | FOOT | 120.000 | X | = | |
| 83600310 | LIGHT POLE FDN 30D SP | FOOT | 12.000 | X | = | |
| 83600400 | POLE FOUNDATION METAL | EACH | 72.000 | X | = | |
| 84200500 | REM EX LT UNIT SALV | EACH | 24.000 | X | = | |
| 84200700 | LIGHTING FDN REMOV | EACH | 25.000 | X | = | |
| 84400105 | RELOC EX LT UNIT | EACH | 1.000 | X | = | |

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|-------------|-----------------------|-----------------|-----------|------------|-------|-------------|
| | | | | DOLLARS | CENTS | |
| 84500120 | REMOV ELECT SERV INST | EACH | 14.000 | X | = | |
| 85000200 | MAIN EX TR SIG INSTAL | EACH | 1.000 | X | = | |
| 85700200 | FAC T4 CAB | EACH | 1.000 | X | = | |
| 87301215 | ELCBL C SIGNAL 14 2C | FOOT | 759.000 | X | = | |
| 87301225 | ELCBL C SIGNAL 14 3C | FOOT | 1,139.000 | X | = | |
| 87301245 | ELCBL C SIGNAL 14 5C | FOOT | 1,184.000 | X | = | |
| 87301255 | ELCBL C SIGNAL 14 7C | FOOT | 2,337.000 | X | = | |
| 87301305 | ELCBL C LEAD 14 1PR | FOOT | 3,427.000 | X | = | |
| 87301805 | ELCBL C SERV 6 2C | FOOT | 59.000 | X | = | |
| 87502500 | TS POST GALVS 16 | EACH | 4.000 | X | = | |
| 87700160 | S MAA & P 24 | EACH | 1.000 | X | = | |
| 87700170 | S MAA & P 26 | EACH | 3.000 | X | = | |
| 87800100 | CONC FDN TY A | FOOT | 16.000 | X | = | |
| 87800150 | CONC FDN TY C | FOOT | 4.000 | X | = | |
| 87800400 | CONC FDN TY E 30D | FOOT | 60.000 | X | = | |

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|-------------|-----------------------|-----------------|--------------|--------------------|-------|---------------------|-----|
| 87900200 | DRILL EX HANDHOLE | EACH | 1.000 X | | | | |
| 88030020 | SH LED 1F 3S MAM | EACH | 3.000 X | | | | |
| 88030110 | SH LED 1F 5S MAM | EACH | 5.000 X | | | | |
| 88030220 | SH LED 2F 5S BM | EACH | 1.000 X | | | | |
| 88030240 | SH LED 2F 1-3 1-5 BM | EACH | 3.000 X | | | | |
| 88102710 | PED SH LED 1F BM | EACH | 4.000 X | | | | |
| 88200210 | TS BACKPLATE LOU ALUM | EACH | 8.000 X | | | | |
| 88500100 | INDUCTIVE LOOP DETECT | EACH | 10.000 X | | | | |
| 88600100 | DET LOOP T1 | FOOT | 1,038.000 X | | | | |
| 88700200 | LIGHT DETECTOR | EACH | 2.000 X | | | | |
| 88700300 | LIGHT DETECTOR AMP | EACH | 1.000 X | | | | |
| 88800100 | PED PUSH-BUTTON | EACH | 4.000 X | | | | |
| 89000100 | TEMP TR SIG INSTALL | EACH | 1.000 X | | | | |
| 89502300 | REM ELCBL FR CON | FOOT | 21,586.000 X | | | | |
| 89502375 | REMOV EX TS EQUIP | EACH | 1.000 X | | | | |

FAU 1338
 05-00083-00-FP (SCHAUMBURG)
 COOK

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 83980
 ECMS002 DTGECM03 ECMR003 PAGE 22
 RUN DATE - 12/10/07
 RUN TIME - 183254

| ITEM NUMBER | PAY ITEM DESCRIPTION | UNIT OF MEASURE | QUANTITY | UNIT PRICE | | TOTAL PRICE | |
|-------------|----------------------|-----------------|----------|------------|-------|-------------|-----|
| | | | | DOLLARS | CENTS | DOLLARS | CTS |
| 89502380 | REMOV EX HANDHOLE | EACH | 10.000 | X | = | | |
| 89502385 | REMOV EX CONC FDN | EACH | 9.000 | X | = | | |
| | | | | TOTAL \$ | | | |

NOTE:

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.
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 MAY BE DECLARED UNACCEPTABLE IF NEITHER A UNIT PRICE NOR A TOTAL PRICE IS SHOWN.

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 \$171,000.00. Sixty percent of the salary is \$102,600.00.

RETURN WITH BID

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.

RETURN WITH BID

(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.**

NA - FEDERAL

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.

L. Executive Order Number 1 (2007) Regarding Lobbying on Government Procurements

The bidder hereby warrants and certifies that they have complied and will comply with the requirements set forth in this Order. The requirements of this warrant and certification are a material part of the contract, and the contractor shall require this warrant and certification provision to be included in all approved subcontracts.

M. Disclosure of Business Operations in Iran

Public Act 95-0616 provides that each bid, offer, or proposal submitted for a State contract shall include a disclosure of whether or not the Company acting as the bidder, offeror, or proposing entity, or any of its corporate parents or subsidiaries, within the 24 months before submission of the bid, offer, or proposal had business operations that involved contracts with or provision of supplies or services to the Government of Iran, companies in which the Government of Iran has any direct or indirect equity share, consortiums or projects commissioned by the Government of Iran, or companies involved in consortiums or projects commissioned by the Government of Iran and either of the following conditions apply:

- (1) More than 10% of the Company's revenues produced in or assets located in Iran involve oil-related activities or mineral-extraction activities; less than 75% of the Company's revenues produced in or assets located in Iran involve contracts with or provision of oil-related or mineral-extraction products or services to the Government of Iran or a project or consortium created exclusively by that government; and the Company has failed to take substantial action.
- (2) The Company has, on or after August 5, 1996, made an investment of \$20 million or more, or any combination of investments of at least \$10 million each that in the aggregate equals or exceeds \$20 million in any 12-month period, which directly or significantly contributes to the enhancement of Iran's ability to develop petroleum resources of Iran.

The terms "Business operations", "Company", "Mineral-extraction activities", "Oil-related activities", "Petroleum resources", and "Substantial action" are all defined in the Act.

Failure to make the disclosure required by the Act shall cause the bid, offer or proposal to be considered not responsive. The disclosure will be considered when evaluating the bid, offer, or proposal or awarding the contract. The name of each Company disclosed as doing business or having done business in Iran will be provided to the State Comptroller.

Check the appropriate statement:

Company has no business operations in Iran to disclose.

Company has business operations in Iran as disclosed the attached document.

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 check the following certification statement indicating that the information previously submitted by the bidder is, as of the date of submission, current and accurate. Before checking this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder checks 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)



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 \$102,600.00? YES ___ NO ___
3. Does anyone in your organization receive more than \$102,600.00 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 \$102,600.00? 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. Note: *Checking the NOT APPLICABLE STATEMENT on Form A does not allow the bidder to ignore Form B. Form B must be completed, checked, 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 check 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:

RETURN WITH BID/OFFER

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 \$102,600.00 (60% of the Governor's salary as of 7/1/07). (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 \$102,600.00, (60% of the Governor's salary as of 7/1/07) provide the name the State agency for which you are employed and your annual salary.

RETURN WITH BID/OFFER

- 3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$102,600.00, (60% of the Governor's salary as of 7/1/07) 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 \$102,600.00, (60% of the Governor's salary as of 7/1/07) are you and your spouse or minor children entitled to receive (i) more than 15% in 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 for 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 \$102,600.00, (60% of the Governor's salary as of 7/1/07) provide the name of the 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 \$102,600.00, (60% of the salary of the Governor as of 7/1/07) 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 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 \$102,600.00, (60% of the Governor's salary as of 7/1/07) are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from 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 State 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: _____ Date _____
Signature of Individual or Authorized Representative

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.

_____ Date _____
Signature of Authorized Representative

RETURN WITH BID/OFFER

**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 CHECKED

| | | |
|--------------------------|--|-------|
| <input type="checkbox"/> | _____ | _____ |
| | Signature of Authorized Representative | Date |

RETURN WITH BID

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

Contract No. 83980
COOK County
Section 05-00083-00-FP (Schaumburg)
Project M-8003(512)
Route FAU 1338 (Wise Road)
District 1 Construction Funds

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 | | | | | | | | | | | | | |
|---|-----------------|---|--------------------|---|----------|---|---------------|---|-------------|---|---------------------|---|--|
| JOB CATEGORIES | TOTAL EMPLOYEES | | MINORITY EMPLOYEES | | | | | | TRAINEES | | | | |
| | | | BLACK | | HISPANIC | | *OTHER MINOR. | | APPRENTICES | | ON THE JOB TRAINEES | | |
| | 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 B

| CURRENT EMPLOYEES TO BE ASSIGNED TO CONTRACT | | | | | |
|--|---|--------------------|---|---|---|
| TOTAL EMPLOYEES | | MINORITY EMPLOYEES | | | |
| | | | | | |
| M | F | M | F | M | F |
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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 | | | | | | | | |

| |
|-------------------------|
| FOR DEPARTMENT USE ONLY |
|-------------------------|

*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

RETURN WITH BID

**Contract No. 83980
COOK County
Section 05-00083-00-FP (Schaumburg)
Project M-8003(512)
Route FAU 1338 (Wise Road)
District 1 Construction Funds**

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

ADDITIONAL FEDERAL REQUIREMENTS

In addition to the Required Contract Provisions for Federal-Aid Construction Contracts (FHWA 1273), all bidders make the following certifications.

- A. By the execution of this proposal, the signing bidder certifies that the bidding entity has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This statement made by the undersigned bidder is true and correct under penalty of perjury under the laws of the United States.
- B. **CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY:**
1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause. YES _____ NO _____
 2. If answer to #1 is yes, have you filed with the Joint Reporting Committee, the Director of OFCC, any Federal agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements of those organizations? YES _____ NO _____

RETURN WITH BID

**Contract No. 83980
COOK County
Section 05-00083-00-FP (Schaumburg)
Project M-8003(512)
Route FAU 1338 (Wise Road)
District 1 Construction Funds**

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.

(IF AN INDIVIDUAL) Firm Name _____
Signature of Owner _____
Business Address _____

(IF A CO-PARTNERSHIP) Firm Name _____
By _____
Business Address _____
Name and Address of All Members of the Firm: _____

(IF A CORPORATION) Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____

(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW) Attest _____
Signature _____
Business Address _____

(IF A JOINT VENTURE) Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____

Attest _____
Signature _____
Business Address _____

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

RETURN WITH BID



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)
By: (Signature & Title) By: (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



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. 83980
COOK County
Section 05-00083-00-FP (Schaumburg)
Project M-8003(512)
Route FAU 1338 (Wise Road)
District 1 Construction Funds**



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 18, 2008. 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. 83980
COOK County
Section 05-00083-00-FP (Schaumburg)
Project M-8003(512)
Route FAU 1338 (Wise Road)
District 1 Construction Funds**

1.74 miles of roadway reconstruction to include earth excavation and pavement removal, construct storm sewers and drainage structures, HMA binder and surfaces courses, traffic signal improvements, street lighting and landscaping on Wise Road from Roselle Road to Plum Grove Road in the village of Schaumburg.

- 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

Milton R. Sees, Secretary

BD 351 (Rev. 01/2003)

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2008

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-07) (Revised 1-1-08)

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RECURRING SPECIAL PROVISIONS

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

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|-------------|-------------|---|------------------|----------------|
| LR SD 12 | | Slab Movement Detection Device | Nov. 11, 1984 | Jan. 1, 2007 |
| LR SD 13 | | Required Cold Milled Surface Texture | Nov. 1, 1987 | Jan. 1, 2007 |
| LR 102 | | Protests on Local Lettings | Jan. 1, 2007 | |
| LR 105 | 163 | X Cooperation with Utilities | Jan. 1, 1999 | Jan. 1, 2007 |
| LR 107-2 | | Railroad Protective Liability Insurance for Local Lettings | Mar. 1, 2005 | Jan. 1, 2006 |
| LR 107-3 | | Disadvantaged Business Enterprise Participation | Jan. 1, 2007 | |
| LR 107-4 | 166 | X Insurance | Feb. 1, 2007 | Aug. 1, 2007 |
| LR 108 | | Combination Bids | Jan. 1, 1994 | Mar. 1, 2005 |
| LR 212 | | Shaping Roadway | Aug. 1, 1969 | Jan. 1, 2002 |
| LR 355-1 | | Asphalt Stabilized Base Course, Road Mix or Traveling Plant Mix | Oct. 1, 1973 | Jan. 1, 2007 |
| LR 355-2 | | Asphalt Stabilized Base Course, Plant Mix | Feb. 2, 1963 | Jan. 1, 2007 |
| LR 400-1 | | Bituminous Treated Earth Surface | Jan. 1, 2008 | |
| LR 400-2 | | Bituminous Surface Mixture (Class B) | Jan. 1, 2008 | |
| LR 400-3 | | Pavement Rehabilitation by the Heat-Scarify-Overlay Method | Jan. 1, 2008 | |
| LR 402 | | Salt Stabilized Surface Course | Feb. 20, 1963 | Jan. 1, 2007 |
| LR 403-2 | | Bituminous Hot Mix Sand Seal Coat | Aug. 1, 1969 | Jan. 1, 2007 |
| LR 406 | | Filling HMA Core Holes with Non-shrink Grout | Jan. 1, 2008 | |
| LR 420 | | PCC Pavement (Special) | May 12, 1964 | Jan. 2, 2007 |
| LR 442 | | Bituminous Patching Mixtures for Maintenance Use | Jan. 1, 2004 | Jun. 1, 2007 |
| LR 451 | | Crack Filling Bituminous Pavement with Fiber-Asphalt | Oct. 1, 1991 | Jan. 1, 2007 |
| LR 503-1 | | Furnishing Class SI Concrete | Oct. 1, 1973 | Jan. 1, 2002 |
| LR 503-2 | | Furnishing Class SI Concrete (Short Load) | Jan. 1, 1989 | Jan. 1, 2002 |
| LR 542 | | Pipe Culverts, Type _____ (Furnished) | Sep. 1, 1964 | Jan. 1, 2007 |
| LR 663 | | Calcium Chloride Applied | Jun. 1, 1958 | Jan. 1, 2007 |
| LR 702 | | Construction and Maintenance Signs | Jan. 1, 2004 | Jun. 1, 2007 |
| LR 1004 | | Coarse Aggregate for Bituminous Surface Treatment | Jan. 1, 2002 | Jan. 1, 2007 |
| LR 1013 | | Rock Salt (Sodium Chloride) | Aug. 1, 1969 | Jan. 1, 2002 |
| LR 1032-1 | | Penetrating Emulsions | Jan. 1, 2007 | Feb. 1, 2007 |
| LR 1032-2 | | Multigrade Cold Mix Asphalt | Jan. 1, 2007 | Feb. 1, 2007 |
| LR 1102 | | Road Mix or Traveling Plan Mix Equipment | Jan. 1, 2007 | |

BDE SPECIAL PROVISIONS
For the January 18 and March 7, 2008 Lettings

The following special provisions indicated by an "x" are applicable to this contract. An * indicates a new or revised special provision for the letting.

| <u>File Name</u> | <u>Pg#</u> | <u>Special Provision Title</u> | <u>Effective</u> | <u>Revised</u> |
|------------------|------------|--|------------------|----------------|
| 80099 | | Accessible Pedestrian Signals (APS) | April 1, 2003 | Jan. 1, 2007 |
| 80186 | 167 | X Alkali-Silica Reaction for Cast-in-Place Concrete | Aug. 1, 2007 | |
| 80108 | | Asbestos Bearing Pad Removal | Nov. 1, 2003 | |
| 72541 | | Asbestos Waterproofing Membrane and Asbestos Hot-Mix Asphalt Surface Removal | June 1, 1989 | Jan. 2, 2007 |
| * 80192 | | Automated Flagger Assistance Device | Jan. 1, 2008 | |
| 80173 | 170 | X Bituminous Materials Cost Adjustments | Nov. 2, 2006 | Jan. 2, 2007 |
| 50261 | | Building Removal-Case I (Non-Friable and Friable Asbestos) | Sept. 1, 1990 | Jan. 1, 2007 |
| 50481 | | Building Removal-Case II (Non-Friable Asbestos) | Sept. 1, 1990 | Jan. 1, 2007 |
| 50491 | | Building Removal-Case III (Friable Asbestos) | Sept. 1, 1990 | Jan. 1, 2007 |
| 50531 | | Building Removal-Case IV (No Asbestos) | Sept. 1, 1990 | Jan. 1, 2007 |
| 80166 | 173 | X Cement | Jan. 1, 2007 | Nov. 1, 2007 |
| * 80193 | | Concrete Barrier | Jan. 1, 2008 | |
| 80177 | | Digital Terrain Modeling for Earthwork Calculations | April 1, 2007 | |
| 80029 | 176 | X Disadvantaged Business Enterprise Participation | Sept. 1, 2000 | Jan. 1, 2007 |
| * 80178 | 184 | X Dowel Bars | April 1, 2007 | Jan. 1, 2008 |
| 80167 | 185 | X Electrical Service Installation – Traffic Signals | Jan. 1, 2007 | |
| 80190 | | Engineer's Field Office (Long Distance Bill) | Nov. 1, 2007 | |
| 80179 | 186 | X Engineer's Field Office Type A | April 1, 2007 | |
| 80175 | | Epoxy Pavement Markings | Jan. 1, 2007 | |
| * 80189 | 187 | X Equipment Rental Rates | Aug. 2, 2007 | Jan. 2, 2008 |
| 80180 | 189 | X Erosion and Sediment Control Deficiency Deduction | April 1, 2007 | |
| 80169 | | High Tension Cable Median Barrier | Jan. 1, 2007 | |
| * 80194 | 190 | X HMA – Hauling on Partially Completed Full-Depth Pavement | Jan. 1, 2008 | |
| 80181 | 192 | X Hot-Mix Asphalt – Field Voids in the Mineral Aggregate | April 1, 2007 | |
| * 80136 | | Hot-Mix Asphalt Mixture IL-4.75 | Nov. 1, 2004 | Jan. 1, 2008 |
| * 80195 | | Hot-Mix Asphalt Mixture IL-9.5L | Jan. 1, 2008 | |
| 80109 | | Impact Attenuators | Nov. 1, 2003 | Jan. 1, 2007 |
| 80110 | | Impact Attenuators, Temporary | Nov. 1, 2003 | Jan. 1, 2007 |
| * 80196 | 194 | X Mast Arm Assembly and Pole | Jan. 1, 2008 | |
| 80045 | | Material Transfer Device | June 15, 1999 | Jan. 1, 2007 |
| 80165 | | Moisture Cured Urethane Paint System | Nov. 1, 2006 | Jan. 1, 2007 |
| 80082 | 196 | X Multilane Pavement Patching | Nov. 1, 2002 | |
| 80129 | | Notched Wedge Longitudinal Joint | July 1, 2004 | Jan. 1, 2007 |
| 80182 | | Notification of Reduced Width | April 1, 2007 | |
| * 80069 | | Organic Zinc-Rich Paint System | Nov. 1, 2001 | Jan. 1, 2008 |
| 80022 | 197 | X Payments to Subcontractors | June 1, 2000 | Jan. 1, 2006 |
| 80134 | | Plastic Blockouts for Guardrail | Nov. 1, 2004 | Jan. 1, 2007 |
| 80119 | | Polyurea Pavement Marking | April 1, 2004 | Jan. 1, 2007 |
| 80170 | 199 | X Portland Cement Concrete Plants | Jan. 1, 2007 | |
| 80171 | 201 | X Precast Handling Holes | Jan. 1, 2007 | |
| 80015 | | Public Convenience and Safety | Jan. 1, 2000 | |
| 34261 | | Railroad Protective Liability Insurance | Dec. 1, 1986 | Jan. 1, 2006 |
| 80157 | | Railroad Protective Liability Insurance (5 and 10) | Jan. 1, 2006 | |
| 80172 | 203 | X Reclaimed Asphalt Pavement (RAP) | Jan. 1, 2007 | Aug. 1, 2007 |

| File Name | Pg# | | Special Provision Title | Effective | Revised |
|-----------|-----|---|--|---------------|---------------|
| 80183 | 209 | X | Reflective Sheeting on Channelizing Devices | April 1, 2007 | |
| * 80151 | 210 | X | Reinforcement Bars | Nov. 1, 2005 | Jan. 2, 2008 |
| 80164 | | | Removal and Disposal of Regulated Substances | Aug. 1, 2006 | Jan. 1, 2007 |
| 80184 | 212 | X | Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs | April 1, 2007 | |
| 80131 | | | Seeding | July 1, 2004 | Aug. 1, 2007 |
| 80152 | 218 | X | Self-Consolidating Concrete for Cast-In-Place Construction | Nov. 1, 2005 | Jan. 1, 2007 |
| 80132 | 223 | X | Self-Consolidating Concrete for Precast Products | July 1, 2004 | Jan. 1, 2007 |
| * 80197 | 225 | X | Silt Filter Fence | Jan. 1, 2008 | |
| 80127 | 226 | X | Steel Cost Adjustment | April 2, 2004 | April 1, 2007 |
| 80153 | | | Steel Plate Beam Guardrail | Nov. 1, 2005 | Aug. 1, 2007 |
| 80191 | 230 | X | Stone Gradation Testing | Nov. 1, 2007 | |
| 80143 | 231 | X | Subcontractor Mobilization Payments | April 2, 2005 | |
| 80075 | | | Surface Testing of Pavements | April 1, 2002 | Jan. 1, 2007 |
| * 80087 | 232 | X | Temporary Erosion Control | Nov. 1, 2002 | Jan. 1, 2008 |
| 80176 | 233 | X | Thermoplastic Pavement Markings | Jan. 1, 2007 | |
| 80161 | 235 | X | Traffic Signal Grounding | April 1, 2006 | Jan. 1, 2007 |
| 20338 | 237 | X | Training Special Provisions | Oct. 15, 1975 | |
| 80185 | | | Type ZZ Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs | April 1, 2007 | |
| 80162 | | | Uninterruptable Power Supply (UPS) | April 1, 2006 | Jan. 1, 2007 |
| 80149 | | | Variable Spaced Tining | Aug. 1, 2005 | Jan. 1, 2007 |
| 80163 | 240 | X | Water Blaster with Vacuum Recovery | April 1, 2006 | Jan. 1, 2007 |
| 80071 | | | Working Days | Jan. 1, 2002 | |

The following special provisions have been **deleted** from use:

80187 Legal Requirements to be Observed

The following special provisions are in the 2008 Supplemental Specifications and Recurring Special Provisions:

| File Name | Special Provision Title | New Location | Effective | Revised |
|-----------|--|------------------------------|---------------|--------------|
| 80168 | Errata for the 2007 Standard Specifications | Supplemental | Jan. 1, 2007 | Aug. 1, 2007 |
| 80142 | Hot-Mix Asphalt Equipment, Spreading and Finishing Machine | Article 1102.3 | Jan. 1, 2005 | Jan. 1, 2007 |
| 80148 | Planting Woody Plants | Section 253 | Jan. 1, 2006 | |
| 80160 | Reflective Crack Control Treatment | Section 443, Article 1062.04 | April 1, 2006 | Jan. 1, 2007 |
| 80154 | Turf Reinforcement Mat | Section 251 | Nov. 1, 2005 | Jan. 1, 2007 |

The following special provisions require additional information from the designer. The additional information needs to be included in a separate document attached to this check sheet. The Project Development and Implementation section will then include the information in the applicable special provision. The Special Provisions are:

- Building Removal-Case I
- Building Removal-Case II
- Building Removal-Case III
- Building Removal-Case IV
- DBE Participation
- Material Transfer Device
- Railroad Protective Liability Insurance
- Training Special Provisions
- Working Days

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2007 (hereinafter referred to as the "Standard Specifications"); the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways"; and the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included herein; all of which apply to and govern the construction of F.A.U. Route 1338 (Wise Road), Section 05-00083-00-FP, Project: M-8003(512), and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

Location of Project

This project is located along Wise Road and Plum Grove Road in the Village of Schaumburg in Cook County. The limits of the project on Wise Road are from Roselle Road on the west to approximately 1,310 feet east of Plum Grove Road. The project has a gross and net length of 6,559 feet (1.242 mile) on Wise Road. The limits of the project on Plum Grove Road are from approximately 560 feet south of Wise Road to approximately 576 feet north of Wise Road. The project has a net and gross length of 1,136.4 feet (0.215 mile) on Plum Grove Road. This project also includes work on the following cul-de-sacs: Crest Court, Jamestown Court, Durham Court, Rothbury Court, Hampshire Court, and Blackhawk Court. The project has a net and gross length on the cul-de-sacs of 1,500 feet (0.284 mile). The overall project net and gross length is 9,195.4 feet (1.741 mile).

Description of Project

This is primarily a roadway reconstruction project, and the work to be performed under this contract consists of earth excavation and pavement removal, construction of storm sewers and drainage structures, combination concrete curb and gutter, hot-mix asphalt surface removal, hot-mix asphalt binder and surface courses, hot mix asphalt and p.c.c. driveway reconstruction, traffic signal improvements, pavement markings, street lighting, landscape planting and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein. Median removal and p.c.c. pavement construction to extend the left turn lanes on Plum Grove Road is also included.

Contract Interim Completion Dates, Substantial Completion Dates, and Completion Dates

It is the intent of the Village that this project be constructed in an orderly and timely manner. Toward this end, the Contractor shall take special note of the provisions of Article 105.06, Article 108.01 paragraph 2, and Article 108.02 of the Standard Specifications which shall be adhered to.

The Contractor shall coordinate all work between their forces and subcontractors to enable completion within the interim completion dates and the contract completion date.

Interim Completion for Stage 1:

The Contractor shall complete all work included in Stage 1 within 21 calendar days of the start of detouring eastbound traffic at Roselle Road. This shall include all of the work required to have the

eastbound curb and gutter and pavement completed and open to traffic with the exception of surface course from Roselle Road to Indian Hill Drive.

Interim Completion Date For Stage 2:

The Contractor shall complete all Stage 2 work as depicted on the plans on or before July 31, 2008. This shall include all of the work required to have the curb and gutter and pavement completed at the intersection of Wise Road and Summit Drive (Sta. 35+50 to Sta. 37+50). This includes all lanes (both eastbound and westbound) on Wise Road and all lanes (both northbound and southbound) on Summit Drive. The interim completion does not include surface course placement within the limits of Stage 2.

Substantial Completion:

The Contractor shall schedule his operations so as to substantially complete the project on or before November 28, 2008. Definition of substantially complete is the completion of the construction of all permanent roadway pavement, all concrete curb and gutter, all sewer and utility construction, all embankment, all sidewalks and bike paths, modular block retaining walls, street lighting, all paved median surfaces, topsoil and sod placement.

Should permanent pavement markings not be completed as of November 28, 2008, the Contractor shall provide temporary pavement markings and maintain these markings until permanent pavement marking can be installed.

The items left to be completed following the substantial completion date may be permanent pavement markings and permanent traffic signals at the intersection of Wise Road and Plum Grove Road. Median soil mix furnish and place, all planting materials, and all trees will not be installed until the commencement of the growing season in 2009, at the direction of the Engineer. All 2009 plantings shall be installed prior to June 1, 2009 to be eligible for inspection following the period of establishment.

Completion Date

The Contractor shall complete all work under this contract, to include punch list items, no later than May 31, 2009.

Failure to Complete the Work on Time (Interim Completion for Stage 1)

Should the Contractor fail to complete the work identified as included in "Interim Completion for Stage 1" on or before the calendar days specified or within such extended time allowed by the Village, the Contractor shall be liable to the Village in the amount of \$1,710, not as a penalty but as liquidated and ascertained damages, for each calendar day beyond the interim completion calendar days or extended time as may be allowed. Such damages may be deducted by the Village from any monies due the Contractor.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Village's actual loss, in the event of delay, cannot be predetermined, would be difficult to ascertain, and a matter of argument and unprofitable litigation. The Village shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is each day of a seven day week, starting at 12:00 midnight and ending the following midnight, twenty four hours later. Any portion of a day will be counted as a full day.

Failure to Complete the Work on Time (Interim Completion Date for Stage 2)

Should the Contractor fail to complete the work identified as included in "Interim Completion Date for Stage 2" on or before the specified date of completion or within such extended time allowed by the Village, the Contractor shall be liable to the Village in the amount of \$1,710, not as a penalty but as liquidated and ascertained damages, for each calendar day beyond the interim completion date or extended time as may be allowed. Such damages may be deducted by the Village from any monies due the Contractor.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Village's actual loss, in the event of delay, cannot be predetermined, would be difficult to ascertain, and a matter of argument and unprofitable litigation. The Village shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is each day of a seven day week, starting at 12:00 midnight and ending the following midnight, twenty four hours later. Any portion of a day will be counted as a full day.

Failure to Complete the Work on Time (Substantial Completion)

Should the Contractor fail to complete the work identified as included in "Substantial Completion" on or before the specified date of completion or within such extended time allowed by the Village, the Contractor shall be liable to the Village in the amount of \$1,710, not as a penalty but as liquidated and ascertained damages, for each calendar day beyond the substantial completion date or extended time as may be allowed. Such damages may be deducted by the Village from any monies due the Contractor.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Village's actual loss, in the event of delay, cannot be predetermined, would be difficult to ascertain, and a matter of argument and unprofitable litigation. The Village shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is each day of a seven day week, starting at 12:00 midnight and ending the following midnight, twenty four hours later. Any portion of a day will be counted as a full day.

Failure to Complete the Work on Time

Failure to complete the work on or before the completion date stipulated herein, or within such extended time as may have been allowed, will result in liquidated damages as specified in Article 108.09 of the "Standard Specifications" and as modified herein.

Should the Contractor fail to complete the work on or before the specified date of completion or within such extended time allowed by the Village, the Contractor shall be liable to the Village in the amount of \$1,710, not as a penalty but as liquidated and ascertained damages, for each calendar day beyond the substantial completion date or extended time as may be allowed. Such damages may be deducted by the Village from any monies due the Contractor.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Village's actual loss, in the event of delay, cannot be predetermined, would be difficult to ascertain, and a matter of argument and unprofitable litigation. The Village shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is each day of a seven day week, starting at 12:00 midnight and ending the following midnight, twenty four hours later. Any portion of a day will be counted as a full day.

Progress Schedule

Time is of the essence of the contract. It may be necessary for the Contractor to work longer hours, use additional crews and work during weekends in order to complete work within the required time limit. The Contractor shall submit a Critical path Method (CPM) Progress Schedule, or other such project schedule meeting the approval of the Engineer, the schedule itself being approved by the Engineer before work can be started.

Should the Contractor fall three (3) days behind in approved progress schedule, the Contractor shall work seven (7) days a week at extended hours in order to meet the specified completion date, with the approval of the Engineer.

The Contractor will not be allowed any extra compensation for working longer hours or using extra shifts, working on weekends or during holidays, during winter months, etc., to meet the specified completion date.

Maintenance of Roadways

Effective: September 30, 1985

Revised: November 1, 1996

Beginning on the date that work begins on this project, the Contractor shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Engineer, but shall not include snow removal operations. Traffic control and protection for maintenance of roadways will be provided by the Contractor as required by the Engineer.

If items of work have not been provided in the contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the Engineer, will be paid for in accordance with Article 109.04 of the "Standard Specifications".

Traffic Control Plan

Effective: September 30, 1985

Revised: January 1, 2007

Traffic Control shall be according to the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and

Highways", any special details and Highway Standards contained in the plans, and the Special Provisions contained herein.

Special attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

The Contractor shall contact the District One Bureau of Traffic at least 72 hours in advance of beginning work.

STANDARDS:

701421-01, 701422-01, 701501-03, 701701-04, 701801-03, 701901

DETAILS:

Traffic Control and Protection for Side Roads, Intersections & Driveways
Temporary Information Signing
Pavement Marking Letters and Symbols for Traffic Staging

SPECIAL PROVISIONS:

LRS 3: Work Zone Traffic Control
LRS 4: Flaggers in Work Zones
"Traffic Control and Protection"
"Temporary Information Signing"
"Maintenance of Roadways"
"Keeping Roads Open to Traffic"

Traffic Control and Protection

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 construction or maintenance of this improvement.

Traffic Control and Protection shall be provided as called for in the plans, these Special Provisions, applicable Highway Standards, and applicable sections of the Standard Specifications.

The governing factor in the execution and staging of work for this project is to provide the motoring public and pedestrian public with the safest possible travel conditions through the construction zone.

All traffic control devices used on this project shall conform to the plans, Special Provisions, Traffic Control Standards, Traffic Specifications and the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD).

Traffic Control Devices include signs and their supports, signals, pavement markings, barricades with sand bags, channelizing devices, warning lights, arrowboards, flaggers, or any other device used for the purpose of regulating, detouring, warning or guiding traffic through or around the construction zone.

Only signs, barricades, vertical panels, drums and cones that meet the requirements of the Department's "Quality Standard for Work-Zone Traffic Control Devices - 1998" shall be used on this project. Copies of this publication are available from the Bureau of Traffic for the Contractor's use prior to the initial set-up. At the time of the initial set-up or at the time of major stage changes, 100 percent of each type of device (cones, drums, barricades, vertical panels or signs) shall be acceptable as defined by the referenced publication. Throughout the duration of the project, the percentage of acceptable devices may decrease to 75 percent only as a result of damage and/or deterioration during the course of work. Work shall not begin until a determination has been made that the traffic control devices meet the quality required in this standard.

The Contractor is required to conduct routine inspections of the worksite at a frequency that will allow for the prompt replacement of any traffic control device that has become displaced, worn or damaged to the extent that it no longer conforms to the shape, dimensions, color and operational requirements of the MUTCD, the Traffic Control Standards or will no longer present a neat appearance to motorists. A sufficient quantity of replacement devices, based on vulnerability to damage, shall be readily available to meet this requirement.

The Contractor shall be responsible for the proper location, installation and arrangement of all traffic control devices. Special attention shall be given to advance warning signs during construction operations in order to keep lane assignment consistent with barricade placement at all times. The Contractor shall immediately remove, cover or turn from the view of the motorists all traffic control devices which are inconsistent with detour or lane assignment patterns and conflicting conditions during the transition from one construction stage to another. When the Contractor elects to cover conflicting or inappropriate signing materials used shall totally block out reflectivity of the sign and shall cover the entire sign. The method used for covering the signing shall meet with the approval of the Engineer.

When directed by the Engineer, the Contractor shall remove all traffic control devices which were furnished, installed and maintained by him under this contract, and such devices shall remain the property of the Contractor. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the Engineer.

The Contractor shall ensure that all traffic control devices installed by him are operational, functional and effective 24 hours a day, including Sundays and holidays.

Signs. All signs except those referring to daily lane closures shall be post mounted in accordance with Standard 702001 for all projects that exceed four days.

Construction signs referring to daytime lane closures during working hours shall be removed, covered or turned away from the view of the motorists during non-working hours.

Prior to the beginning of construction operations, the Contractor will be provided a sign log of all existing signs within the limits of the construction zone. The Contractor is responsible for verifying the accuracy of the sign log. All provisions of Article 107.25 of the Standard Specifications shall apply except the third paragraph shall be revised to read: "The Contractor shall maintain, furnish and replace at his own expense, any traffic sign or post which has been damaged or lost by the Contractor or a third party. The Contractor will not be held liable for third party damage to large freeway guide signs".

Placement and Removal of Signs and Barricades. Placement of all signs and barricades shall proceed in the direction of flow of traffic. Removal of all signs and barricades shall start at the end of the construction areas and proceed toward oncoming traffic unless otherwise directed by the Engineer.

Public Safety and Convenience. The Contractor shall provide the Engineer a telephone number where a responsible individual can be contacted on a 24-hour-a-day basis to receive notification of any deficiencies regarding traffic control and protection. The Contractor shall dispatch men, materials and equipment to correct any such deficiencies. The Contractor shall respond to any call from the Engineer concerning any request for improving or correcting traffic control devices and begin making the requested repairs within two hours from the time of notification.

When traveling in lanes open to public traffic, the Contractor's vehicle shall always move with and not against or across the flow of traffic. These vehicles shall enter or leave work areas in a manner which will not be hazardous to, or interfere with, traffic and shall not park or stop except within designated work areas. Personal vehicles shall not park within the right of way except in specific areas designated by the Engineer.

Basis of Payment. All traffic control and protection (except traffic control pavement marking) indicated on the maintenance of traffic plans and specified in the Special Provisions, and/or required by the Engineer, will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, which price shall be payment in full for all labor, materials, equipment, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required, as indicated on the plans and approved by the Engineer.

Traffic Control and Protection (Detour 1)

When traffic is to be directed over a detour route, the Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the details shown in the plans. This pay item applies to the detour shown for Stage 1

Basis of Payment. This work will be paid for at the contract unit price lump sum for TRAFFIC CONTROL AND PROTECTION (DETOUR 1), which price shall be payment in full for all labor, materials, equipment, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required, as indicated on the plans and approved by the Engineer.

Traffic Control and Protection (Detour 2)

When traffic is to be directed over a detour route, the Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the details shown in the plans. This pay item applies to the detour shown for Stages 2 and 3

Basis of Payment. This work will be paid for at the contract unit price lump sum for TRAFFIC CONTROL AND PROTECTION (DETOUR 2), which price shall be payment in full for all labor, materials, equipment, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required, as indicated on the plans and approved by the Engineer.

Temporary Information Signing

Effective: November 13, 1996
Revised: January 2, 2007

Description. This work shall consist of furnishing, installing, maintaining, relocating for various states of construction and eventually removing temporary informational signs. Included in this item may be ground mount signs, skid mount signs, truss mount signs, bridge mount signs, and overlay sign panels which cover portions of existing signs.

Materials. Materials shall be according to the following Articles of Section 1000 – Materials:

| <u>Item</u> | <u>Article/Section</u> |
|---------------------------------|------------------------|
| a. Sign Base (Notes 1 & 2)..... | 1090 |
| b. Sign Face (Note 3)..... | 1091 |
| c. Sign Legends..... | 1092 |
| d. Sign Supports..... | 1093 |
| e. Overlay Panels (Note 4)..... | 1090.02 |

Note 1. The Contractor may use 5/8-inch instead of 3/4-inch plywood.

Note 2. Type A sheeting can be used on the plywood base.

Note 3. All sign faces shall be Type A except all orange signs shall meet the requirements of Article 1106.01.

Note 4. The overlay panels shall be 0.08-inch thick.

GENERAL CONSTRUCTION REQUIREMENTS

Installation. The sign sizes and legend sizes shall be verified by the Contractor prior to fabrication.

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Articles 701.14 and 720.04. The signs shall be 7 feet above the near edge of the pavement and shall be a minimum of 2 feet beyond the edge of the paved shoulder. A minimum of 2 posts shall be used.

The attachment of temporary signs to existing sign structures or sign panels shall be approved by the Engineer. Any damage to the existing signs due to the Contractor's operations shall be repaired or signs replaced, as determined by the Engineer, at the Contractor's expense.

Signs which are placed on overhead bridge structures shall be fastened to the handrail with stainless steel bands. These signs shall rest on the concrete parapet where possible. The Contractor shall furnish mounting details for approval by the Engineer.

Method Of Measurement. This work shall be measured for payment in square feet (square meters) edge to edge (horizontally and vertically).

All hardware, posts or skids, supports, bases for ground mounted signs, connections, which are required for mounting these signs will be included as part of this pay item.

Basis Of Payment. This work shall be paid for at the contract unit price per square foot (square meter) for TEMPORARY INFORMATION SIGNING.

Keeping Roads Open to Traffic

Prior the start of Stage 1, the Contractor may close traffic to one lane of traffic (because of construction) on Wise Road only between the hours of 9:00 a.m. and 3:00 p.m, when approved by the Engineer.

When necessary to close lanes of the roadway, the Contractor shall maintain one-way traffic during the restricted hours with the use of signs and flaggers as shown on the Traffic Control Standards. Four lanes of traffic on Wise Road and two lanes on all side streets will be maintained between 3:00 p.m. and 9:00 a.m. and when no construction activities are being carried on. The Engineer may waive the lane closure time restriction at his discretion.

The Contractor shall limit any drop-off between lanes to 1-1/2" during any overnight period.

Status of Utilities to be Adjusted

Effective: January 30, 1987 Revised: July 1, 1994

Utility companies involved in this project have provided the following estimated dates:

| Name of Utility | Type | Location | Estimated Dates for Start and Completion of Relocation or Adjustments |
|---|--------------------------|----------|---|
| NICOR Constance Lane 1844 Ferry Rd Naperville, IL 60563 (630)388-3830 | Underground main | Various | During Construction |
| ComED Terri Bleck 1500 Franklin Blvd Libertyville, IL 60048 | Underground lines | Various | During Construction |
| AT&T Jim Fredericks 929 Child St Wheaton, IL 60187 (630)462-2481 | Underground lines | Various | During Construction |
| Comcast Cornelio DeLaCerde Construction Coordinator 688 Industrial Dr Elmhurst, IL 60126 (847)346-3221 | Underground and overhead | Various | During Construction |
| Wide Open West Brian Hurd | Underground and overhead | Various | During Construction |

1674 Frontenac Rd
Naperville, IL 60563
(630)536-3127

The above represents the best information available to the Department and is included for the convenience of the bidder. The applicable portions of Articles 105.07 and 107.31 of the Standard Specifications shall apply.

Removal of Miscellaneous Items

Regarding the removal and disposal of any existing fences, gates, signs (except traffic and street name signs) or other miscellaneous items which may interfere with construction operations, the Contractor shall, with the approval of the Engineer, remove and dispose of these items outside the limits of the right-of-way at locations provided by him and, if pay items for such removal are not included in the contract, the work shall be considered incidental to the contract.

However, if any fences, gates, signs (except traffic and street name signs) or other miscellaneous items are to be removed and replaced as directed by the Engineer, the Contractor will be paid in accordance with Article 109.04 of the "Standard Specifications".

Concrete Breakers

When removing curb and gutter, pavement or any other structure, the Contractor shall take every precaution necessary to ensure that there will be no damage to underground public or private utilities. Under no circumstances will the use of a frost ball concrete breaker be allowed.

Disposal of Surplus Material

The Contractor is prohibited from burning any material within or adjacent to the project limits.

All excess or waste material shall be either hauled away from the project site by the Contractor and deposited at locations provided by him, or disposed of within the right-of-way in a manner other than burning, subject to the approval of the Engineer.

No extra compensation will be allowed the Contractor for any expense incurred by complying with the requirements of this Special Provision.

Earth Excavation and Furnished Excavation

All placement of Furnished Excavation shall be in accordance with Sections 204 and 205 of the Standard Specifications with the following exception:

The quantities of Furnished Excavation have been calculated assuming that all material excavated under the pay item Earth Excavation will be removed from the job site. If the Contractor excavates suitable material and places it in areas of the project requiring embankment under the pay item Earth Excavation, as described in Section 202 of the Standard Specifications and as approved by the Engineer, the

applicable deduction to the Furnished Excavation quantity shall be made as defined by Article 204.07(b), except that a shrinkage factor of 15% shall be used. The Contractor shall not be allowed a change in the unit prices for Earth Excavation or Furnished Excavation based on these changes to the quantities.

The volumes of Furnished Excavation shown on the plans are the compacted volumes. The volumes shown on the plans have not been adjusted to account for shrinkage due to compaction.

Basis of Payment. This work shall be paid for at the contract unit price per cubic yard for FURNISHED EXCAVATION.

Porous Granular Embankment, Subgrade

Effective: September 30, 1985
 Revised: January 1, 2007

This work consists of furnishing, placing, and compacting porous granular material to the lines and grades shown on the plans or as directed by the Engineer in accordance with applicable portions of Section 207. The material shall be used as a bridging layer over soft, pumpy, loose soil and for placing under water and shall conform with Article 1004.04 except the gradation shall be as follows:

1. Crushed Stone, Crushed Blast Furnace Slag, and Crushed Concrete

| <u>Sieve Size</u> | <u>Percent Passing</u> |
|-------------------|------------------------|
| *6 in. (150 mm) | 97 ± 3 |
| *4 in. (100 mm) | 90 ± 10 |
| 2 in. (50 mm) | 45 ± 25 |
| No. 200 (75 µm) | 5 ± 5 |

2. Gravel, Crushed Gravel and Pit Run Gravel

| <u>Sieve Size</u> | <u>Percent Passing</u> |
|-------------------|------------------------|
| *6 in. (150 mm) | 97 ± 3 |
| *4 in. (100 mm) | 90 ± 10 |
| 2 in. (50 mm) | 55 ± 25 |
| No. 4 (4.75 mm) | 30 ± 20 |
| No. 200 (75 µm) | 5 ± 5 |

*For undercut greater than 18 inches (450 mm) the percent passing the 6 inch (150 mm) sieve may be 90 ± 10 and the 4 inch (100 mm) sieve requirements eliminated.

The porous granular material shall be placed in one lift when the total thickness to be placed is 2 feet (600 mm) or less or as directed by the Engineer. Each lift of the porous granular material shall be rolled with a vibratory roller meeting the requirements of Article 1101.01(g) to obtain the desired keying or interlock and compaction. The Engineer shall verify that adequate keying has been obtained.

A 3 inch (75 mm) nominal thickness top lift of capping aggregate having a gradation of CA 6 will be required when Aggregate Subgrade is not specified in the contract and Porous Granular Embankment, Subgrade will be used under the pavement and shoulders. Capping aggregate will not be required when

embankment meeting the requirements of Section 207 or granular subbase is placed on top of the porous granular material.

Construction equipment not necessary for the completion of the replacement material will not be allowed on the undercut areas until completion of the recommended thickness of the porous granular embankment subgrade.

Full depth subgrade undercut should occur at limits determined by the Engineer. A transition slope to the full depth of undercut shall be made outside of the undercut limits at a taper of 1 foot (300 mm) longitudinal per 1 inch (25 mm) depth below the proposed subgrade or bottom of the proposed aggregate subgrade when included in the contract.

Method of Measurement. This work will be measured for payment in accordance with Article 207.04. When specified on the contract, the theoretical elevation of the bottom of the aggregate subgrade shall be used to determine the upper limit of Porous Granular Embankment, Subgrade. The volume will be computed by the method of average end areas.

Basis of Payment. This work shall be paid for at the contract unit price per cubic yard (cubic meter) for POROUS GRANULAR EMBANKMENT, SUBGRADE which price shall include the capping aggregate, when required.

The Porous Granular Embankment, Subgrade shall be used as field conditions warrant at the time of construction. No adjustment in unit price will be allowed for an increase or decrease in quantities from the estimated quantities shown on the plans.

Exploration Trench, Special

This item shall consist of excavating a trench at locations designated by the Engineer for the purpose of locating existing tile lines or other underground facilities within the limits of the proposed improvement. The trench shall be deep enough to expose the line but not more than one foot deeper than the line, and the width of the trench shall be sufficient to allow proper investigation to determine if the line needs to be replaced.

The exploration trench shall be backfilled with gradation CA 6 stone, the cost of which shall be included in the item of Exploration Trench, Special.

Basis of Payment. This work will be paid for at the contract unit price per foot for EXPLORATION TRENCH, SPECIAL, regardless of the depth required, and no extra compensation will be allowed for any delays, inconveniences or damages sustained by the Contractor in performing the work.

Inlet and Pipe Protection

This work shall be in conformance with Section 280 of the Standard Specifications and the following:

The inlet and pipe protection shall consist of silt filter fence placed around the perimeter of the structure to be protected. The silt filter fence shall be supported by 1 inch x 2 inch wooden stakes with a minimum length of 3 feet. The stakes shall be spaced no more than 3 feet apart, and shall be driven into the ground a minimum of 8 inches. The filter fabric shall be installed in a backfilled trench 6 inches

deep, and securely attached to the posts by any method approved by the Engineer. The rim elevation of the casting shall be temporarily set a minimum of 6 inches above the adjacent grade. This elevation may vary to avoid any flooding conditions as determined by the Engineer. The cost to temporarily adjust the rim and subsequently adjust the rim to the final elevation shall be included in the cost of INLET AND PIPE PROTECTION.

Basis of Payment. This work will be paid for at the contract unit price per each for INLET AND PIPE PROTECTION, regardless of the size and type of structure being protected.

Anti-strip Additive for HMA (District One)

Effective: May 1, 2007

Revise the first sentence of the sixth paragraph of Article 406.14 of the Standard Specifications to read:

“If an anti-stripping additive is required for any HMA in accordance with Article 1030.04(c), the cost of the additive will not be paid for separately, but shall be considered as included in the contract unit price bid for the HMA item(s) involved.”

Fine Aggregate for Hot-Mix Asphalt (HMA) (District One)

Effective: May 1, 2007

Revise Article 1003.03 (c) to read:

“Gradation. The fine aggregate gradation for all HMA shall be FA1, FA 2, FA 20, or FA 21. When Reclaimed Asphalt Pavement (RAP) is incorporated in the HMA design, the use of FA 21 Gradation will not be permitted.

Temperature Control for Concrete Placement (District One)

Effective: May 1, 2007

Delete the second and third sentences of the second paragraph of Article 1020.14(a) of the Standard Specifications.

Portland Cement Concrete Driveway Pavement, 5 Inch, Special

Description. This work shall consist of the construction of Portland Cement Concrete driveways at the locations designated on the plans in accordance with Section 423 of the Standard Specifications.

Materials. Materials shall comply with the requirements of Section 1020 and 1051 of the Standard Specifications for Class SI concrete as herein modified: the concrete shall be “High Early Strength”.

Construction Method. The new driveway shall be poured to a minimum thickness of five (5) inches unless otherwise directed by the Engineer. The existing aggregate subbase shall be replaced with 2" of Sub-Base Granular Material, Type B.

Measurement. Measurement for concrete driveway shall be per square yard.

Payment. Payment for PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 5 INCH, SPECIAL shall be made at the contract unit price per square yard. Payment shall be full compensation for all materials including sub-base granular material, excavation, labor, equipment and incidentals to complete the item as shown on the plans and as specified. Removal of the existing driveway pavement shall be paid for as DRIVEWAY PAVEMENT REMOVAL.

Portland Cement Concrete Driveway Pavement, 8 Inch, Special

Description. This work shall consist of the construction of Portland Cement Concrete driveways at the locations designated on the plans in accordance with Section 423 of the Standard Specifications.

Materials. Materials shall comply with the requirements of Section 1006, 1020 and 1051 of the Standard Specifications for Class SI concrete as herein modified: the concrete shall be "High Early Strength".

Construction Method. The new driveway shall be poured to a minimum thickness of eight (8) inches unless otherwise directed by the Engineer. The existing aggregate subbase shall be replaced with 2" of Sub-Base Granular Material, Type B.

6 inch X 6 inch - #6 welded wire mesh shall be placed 3" below the surface of the concrete.

Measurement. Measurement for concrete driveway shall be per square yard.

Payment. Payment for PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH, SPECIAL shall be made at the contract unit price per square yard. Payment shall be full compensation for all materials including sub-base granular material, excavation, labor, equipment and incidentals to complete the item as shown on the plans and as specified. Removal of the existing driveway pavement shall be paid for as DRIVEWAY PAVEMENT REMOVAL.

Portland Cement Concrete Sidewalk 5 Inch

Description. This work shall consist of the construction of Portland Cement Concrete sidewalks at the locations shown on the plans in accordance with Section 424 of the Standard Specifications except as noted herein.

Materials. Materials shall comply with the requirements of Section 1006, 1020 and 1051 of the Standard Specifications for Class SI concrete.

Construction Methods. The proposed sidewalk shall be poured to a minimum thickness as specified on the plans unless otherwise directed by the Engineer. The sidewalk shall be placed on a 2-inch aggregate base consisting of compacted CA-6. In locations where existing sidewalk is to be removed and replaced, the existing base course may be used if approved by the Engineer. If the existing base course is uneven,

soft, or unstable, the Contractor shall remove 2" of the existing base course and provide 2" of aggregate leveling course. This work shall also be considered included in the cost of PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH.

All crosswalks shall be poured with curb ramps accessible to the disabled per the requirements of the Standard Specifications.

Measurement. Measurement for sidewalk shall be per square foot for the actual length of sidewalk multiplied by the width of sidewalk placed.

Payment. Payment for the PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH shall be made at the contract unit price per square foot. Payment shall be full compensation for all materials, labor, excavation, aggregate base, equipment and incidentals to complete the item as shown on the plans and as specified herein.

Portland Cement Concrete Sidewalk 5 Inch, Special

Description. This work shall consist of the construction of Portland Cement Concrete sidewalks at the locations shown on the plans in accordance with Section 424 of the Standard Specifications except as noted herein.

Materials. Materials shall comply with the requirements of Section 1006, 1020 and 1051 of the Standard Specifications for Class SI concrete as herein modified: the concrete shall be "High Early Strength".

Construction Methods. The proposed sidewalk shall be poured to a minimum thickness as specified on the plans unless otherwise directed by the Engineer. The sidewalk shall be placed on a 2-inch aggregate base consisting of compacted CA-6. In locations where existing sidewalk is to be removed and replaced, the existing base course may be used if approved by the Engineer. If the existing base course is uneven, soft, or unstable, the Contractor shall remove 2" of the existing base course and provide 2" of aggregate leveling course. This work shall also be considered included in the cost of PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL.

All crosswalks shall be poured with curb ramps accessible to the disabled per the requirements of the Standard Specifications.

Measurement. Measurement for sidewalk shall be per square foot for the actual length of sidewalk multiplied by the width of sidewalk placed.

Payment. Payment for the PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH, SPECIAL shall be made at the contract unit price per square foot. Payment shall be full compensation for all materials, labor, excavation, aggregate base, equipment and incidentals to complete the item as shown on the plans and as specified herein.

Hot-Mix Asphalt Surface Removal, Variable Depth

This work shall consist of the removal of the existing bituminous surface and shall be performed in accordance with Section 440 of the Standard Specifications with the following exception:

The typical depth of milling shall be 1.5". At locations determined by the Engineer the depth of the milling may be increased or decreased in order to provide the proper cross slope or to allow for the minimum lift thickness of leveling binder or hot-mix asphalt surface course. The additional milling may require multiple passes with the milling machine on multiple days. This additional milling depth shall be included in the cost of the pay item HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.

Method of Measurement. Hot-mix asphalt surface removal shall be measured for payment in place and the area computed in square yards. If multiple passes are required to mill to the required depth, only the first pass shall be measured.

Basis of Payment. This work shall be paid for at the contract unit price per square yard for HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH, regardless of the depth of surface removed.

Median Removal

This work shall consist of the removal of the concrete or bituminous median, regardless of depth, at locations shown on the plans and/or as directed by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per square foot for MEDIAN REMOVAL.

Storm Sewer Removal

Description. This work shall consist of the removal of existing storm sewer pipe and pipe culverts as indicated in the plans or as directed by the Engineer. The work shall be performed in accordance with the applicable portions of Section 551 of the Standard Specifications except that the storm sewer pipe removed shall not be reused. Trench backfill required due to removal of storm sewer shall be considered part of this work.

Method of Measurement and Basis of Payment. This work will be measured and paid for at the contract unit price per lineal foot for STORM SEWER REMOVAL of the size indicated in the plans.

Storm Sewer Wyes and Tees

This work shall consist of furnishing and installing storm sewer wyes and tees at locations shown on the plans.

This item shall include the excavation of the trench, removal of enough of the existing sewer to make the connection, furnishing and installing the tee or wye section, furnishing and installing the required non-shear mission coupling, the trench backfill necessary to backfill the excavation, and all other work necessary to complete the work as shown on the details in the plans. Removal and reinstallation of existing storm sewer adjacent to the proposed wye or tee section, for the purposes of facilitating the installation of the wye or tee section, will not be paid for separately but shall be considered included in the cost of the storm sewers being constructed.

Basis of Payment. This work will not be paid for separately, but will be included in the cost of the storm sewers being constructed.

Water Main

A. Description

The Contractor shall furnish and install the proposed water main of the diameter specified at the locations shown on the plans or as directed by the Engineer. The water main shall include excavation, granular bedding, installation of the water main, testing and chlorination of the water main, backfill and compaction of the trench and all incidental items required for a complete and operational water main.

B. Materials

Water main pipe, unless otherwise specified shall be of the following materials:

Ductile iron pipe shall conform to AWWA specifications C151-65. Pipe shall be furnished in nominal eighteen foot (18') laying lengths.

Ductile iron pipe shall be bituminous coated cement mortar lined as specified in section 51-8.2 of AWWA specification C151-65, class 52. The ductile iron pipe shall be coated on the outside as specified in section 15.8.1 with the exceptions that the thickness of the coating shall be an average of two (2) to four (4) mils and a minimum of two (2) mils. Each pipe shall have the weight and class designation conspicuously painted on it. In addition, the manufacturer's mark and year in which the pipe was made shall be distinctly cast or stamped on the bell.

All fittings shall be connected to sections of water main pipe by means of a positive restrained joint consisting of mechanical joints with retainer gland, or Megalug or approved equal joints.

Water main Joints - Sections of water main pipe shall be connected by means of slip joints, consisting of bells cast integrally with the pipe, which have interior angular recesses conforming to the shape and dimension of a rubber sealing gasket. The interior dimension of which is such that it will admit the insertion of the spigot end of the joining pipe in a manner that will compress the gasket tightly between the bell of the pipe and the inserted spigot, thus securing the gasket and sealing the joint. Such slip joints shall be of the following makes or type or its equivalent:

- (1) Super Belltite - as supplied by Griffin
- (2) Fastite - as supplied by American Cast Iron Pipe Co.
- (3) Tyton - as supplied by the U.S. Pipe and Foundry Co, or the Clow Valve Co.

The lubricant used in conjunction with the push-on joints shall be of material that is recommended by the suppliers specified above, or an acceptable commercially processed animal fat or vegetable shortening.

Mechanical joint pipe shall meet the requirement of ASA specification A-U 11. Bolting materials shall meet the requirements of the manufacturer.

C. Construction Methods

The water main shall be installed as detailed on the plans and in accordance with the applicable provisions of the Standard Specifications for Water and Sewer Main Construction in Illinois. The water

main shall be installed to the grades shown on the plans and shall have a nominal minimum depth of cover of five feet six inches (5'-6"). The excavation for the water main should be made using trench equipment or other suitable excavating equipment. The trench for the pipe shall be excavated at least twelve inches (12") wider than the external diameter of the pipe and not more than eighteen inches (18") wider than the diameter of the pipe at the top of the pipe.

Bell holes of sufficient depth shall be provided across the bottom of the trench to accommodate the bell of the pipe to provide sufficient room for joint making and to ensure bearing for the pipe.

Where a firm foundation is not found to exist for the bottom of the trench at the required depth, due to soft, spongy or other unsuitable soil, such unsuitable soil shall be removed for the full width of the trench and replaced with well compacted unwashed gravel or an equal substitute thereof, or crushed stone if such compacted material proved unsatisfactory. The cost of this work shall not be paid for separately, but shall be included in the pay item DUCTILE IRON WATERMAIN.

Sheeting and bracing shall be placed in the trench, as may be necessary, for the safety of the work and public, for the protection of the workmen, adjacent properties, or structures and for the proper installation of the work.

Sheeting and/or bracing shall be progressively removed as the backfill is placed in such a manner as to prevent the caving in of the sides of the trench or excavation and to prevent damage to the work.

Sheeting which is placed for the protection of the public, adjacent properties or structures, shall not be removed until the backfill has been placed and thoroughly compacted. While sheeting is being withdrawn, all vacancies shall be carefully filled with sand free from silt and compacted.

The Contractor shall keep the trench free from water while the water main is being placed and until the pipe joint has been sealed to the satisfaction of the Engineer.

Granular bedding shall be placed along the entire length of all water main from four (4) inches below the water main to a point level with the top of the water main. Material shall be class I in accordance with ASTM 2321. The bedding material shall be incidental to the water main. The filling shall be carried up evenly on both sides. Care shall be taken that no rock, frozen material, or other hard substances are placed in contact with the pipe. The pipe shall then be covered at least eighteen inches (18") with clean, dry material.

If the excavation has been made deeper than necessary, the water main shall be laid at the lower depth, and no additional cost shall be charged for the extra excavation, trench backfill, or for subsequent adjustments to fire hydrants, valve vaults or house services. All excavated materials not needed for backfilling the trenches shall be disposed of by the Contractor.

The Contractor shall not backfill above the top of the pipe, until grade, alignment and the pipe joints have been made available for checking by the Engineer.

Unless otherwise directed, all trenches and excavations shall be backfilled as soon as possible and the work shall be prosecuted expeditiously after it has commenced.

The remainder of the trench shall be backfilled by using the material originally excavated from the trench to a height slightly above the original elevation of the ground. Trenches constructed in open cut

across or within two feet (2') of any existing or proposed pavements, existing driveway and sidewalks, shall be backfilled to subgrade with Trench Backfill.

After backfill is completed all trenches shall be compacted by jetting and watersoaking in accordance with Section 20-2.21B of the Standard Specifications for Water and Sewer Main Construction in Illinois, or by other approved methods set forth in said Standard Specifications.

Where possible, the water main must be laid at least 10 feet horizontally from any sewer. In the event this is not possible, less than 10 feet is permissible provided the water main invert is at least 18 inches above the crown of the sewer in a separate trench, or on a shelf of undisturbed earth in the same trench.

Where proper clearance, as described above, is not possible to obtain, the sewer must be of ductile iron or PVC-SDR-26 pipe pressure tested to the maximum expected surcharge head to assure watertightness before backfilling. This work, if required, will be paid for as STORM SEWER REMOVAL, of the size required and STORM SEWER (WATER MAIN REQUIREMENTS), of the size and type required.

Where a water main must cross a sanitary service or sewer, the invert of the water main shall be a minimum of 18 inches above the crown of the sewer for at least 10 feet each side of the crossing.

Where proper vertical separation is not obtainable or the water main must pass under a sewer, the sewer must be of ductile iron or PVC-SDR-26 pipe or installed in a 1/4" steel pipe or PVC-SDR-26 casing pipe for a minimum distance of 10 feet each side of the crossing. In making such crossing, a length of water main pipe shall be centered over the sewer so that the joints will be equidistant from the sewer. Where the water main must cross under a sewer, a vertical separation of 18 inches must be maintained between the pipes, along with the means to support larger sized sewer lines to prevent their settling and breaking the water main.

Separation from sewers shall conform to Sections 41-2.01B through 41-2.01D of the "Standard Specifications for Water and Sewer Main Construction in Illinois," Fifth Edition.

Water in the trench shall be removed during pipe laying and jointing operations. Provisions shall be made to prevent floating of the pipe. Trench water shall not be allowed to enter the pipe at any time.

Adequate provisions shall be made for safely storing and protecting all water pipe prior to the actual installation in the trench. Care shall be taken to prevent damage to the pipe castings, both inside and out. Provisions shall be made to keep the inside of the pipe clean throughout its storage period and to keep mud and/or debris from being deposited therein. All pipe shall be thoroughly cleaned on the inside before laying. Proper equipment shall be used for the safe handling, conveying and laying of the pipe. All pipe shall be carefully lowered into the trench, piece by piece, by means of suitable tools or equipment, in such a manner as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main material be dropped or dumped into the trench.

The pipe shall be inspected for defects. All lumps, blisters and excess coal tar coating shall be removed from the ends of each pipe, and the inside of the bell.

When connecting joints, all portions of the joining materials and the socket and spigot ends of the joining pipe shall be wiped clean of all foreign materials. The actual assembly of the joint shall be in accordance with the manufacturer's installation instructions. During the construction and until joining operations are complete, the open ends of all pipes shall be at all times protected and sealed with temporary water tight plugs. Unless otherwise specified, all water mains shall be laid with a minimum

depth of five and one-half (5-1/2) feet, measured from the established grade shown on the drawings to the top of the pipe.

The entire section of the pipe shall be pushed forward to seat the spigot end into the bell. After the section of pipe is inserted into the bell (when joining pipe to mechanical joint fittings) the gasket shall then be pressed into place within the bell, being careful to have the gasket evenly located around the entire joint.

The cutting of pipe for inserting valves, fitting or closure pieces shall be done in a neat and workmanlike manner without damage to cement lining and so as to leave a smooth end at right angles to the axis of the pipe.

When machine cutting is not available for cutting pipe twenty inches (20") in diameter or larger, the electric arc cutting method will be permitted, using a carbon or steel rod. Only qualified and experienced workmen shall be used on this work. The flame cutting of pipe by means of an oxyacetylene torch shall not be allowed.

When the proposed watermain is connected to the existing watermain at a new connection point, the existing tee shall be abandoned by capping. Work shall include all materials and labor required for capping the existing water main prior to placing the water main back in service. Included in this item are the costs of excavating, blocking and installing a cap or plug on the water main. All caps or plugs shall be ductile iron or cast iron designed to fit water main of the size indicated on the plans with mechanical joints rated 250 psi per AWWA C110/ANSI 21.10. All caps or plugs shall have retainer glands and thrust blocking installed to keep them in place. Thrust blocks shall be poured Class SI concrete of the dimensions shown on the details in, and in accordance with the provisions of, the Standard Specifications for Water and Sewer Main Construction in Illinois. When poured, care shall be taken so that the cement does not interfere with access to joints or with hydrant drainage.

D. Pressure Testing and Disinfection of Water Main

When a stretch of pipe and appurtenances have been completed the Contractor shall furnish proper appliances and facilities for testing and draining the same, without injury to the work or surrounding territory. He shall test by filling the pipe with clean water under a minimum hydrostatic pressure of one hundred fifty (150) pounds per square inch for not less than one hour and not more than six (6) hours. Water for making tests shall be furnished by the Contractor at his expense. All testing shall be in conformance with Sections 41-2.13 and 41-2.14 of the "Standard Specifications for Water and Sewer Main Construction in Illinois," Fifth Edition. The section of water main shall pass if the pressure loss in the pipe is not greater than fifteen (15) pounds per square inch during the first hour of the test.

Each section of pipe to be tested, as determined by the Engineer, shall be slowly filled with water and the specified test pressure shall be applied by means of a pump connected to the pipe in a satisfactory manner. The pump pipe connection and all necessary apparatus including gauges and meter shall be furnished by the Contractor. Before applying the specified test pressure, all air shall be expelled from the pipe. To accomplish this, taps shall be made, if necessary at point of highest elevation and afterward tightly plugged. Any cracked or defective pipes, fitting, valves, or hydrants discovered in consequence of this pressure test shall be removed and replaced by the Contractor with sound material and the test shall be repeated until satisfactory to the Engineer. Provisions of AWWA C-600 and C-603, where applicable, shall apply.

The Contractor shall notify the Schaumburg Public Works Department a minimum of forty eight (48) hours in advance to schedule this test. In no instance shall the Contractor draw water from an existing water main or operate any valves on an existing water main without the express permission of the Public Works Department.

After completion of the pressure test the Contractor shall conduct a leakage test to determine the quantity of water lost by leakage under the specified test pressure. "Test pressure" is defined as the maximum operating pressure of the section under test and is based on the elevation of the lowest point in the line or section under test corrected to the elevation of the test gauge. Applicable provision of AWWA C-600 and C-603 shall apply. Duration of each leakage test shall be a minimum of one hour in addition to the pressure test period. Allowable leakage in gallons per hour for ductile iron water main shall not be greater than the values contained in Section 151 of the Village of Schaumburg Code of Ordinance.

Any defects, cracks or leakage that may develop or may be discovered, either in the joints or in the body of the castings, shall be promptly repaired by the Contractor at his own expense.

Prior to chlorination, the main shall be flushed as thoroughly as possible with the water pressure and outlets available. Flushing shall be done after the pressure test is made. It must be understood that such flushing removes only the lighter solids and cannot be relied upon to remove heavy material allowed to get into the main during laying. If no hydrant is installed at the end of the main, a tap should be provided large enough to effect a velocity in the main of at least 2.5 feet per second.

Sterilization: The preferred point of application of the chlorinating agent shall be at the beginning of the pipeline extension or any valved section of it and through a corporation stop in the top of the newly laid pipe. The water injector for delivering the chlorine bearing water into the pipe should be supplied from a tap on the pressure side of the gate valve controlling the flow into the pipeline extension.

Water from the existing distribution system or other source of supply shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall be at least fifty (50) ppm, or enough to meet the requirements during the retention period. A convenient method of determining the rate of flow of water into the line to be treated is to start with the line full of water and measure the rate of discharge at a hydrant with a Pitot tube. Great flexibility is made possible by providing a series of orifices to give good gauge readings at high and low flows.

Valves shall be manipulated so that the strong chlorine solution in the line being treated will not flow back into the line supplying the water.

Treated water shall be retained in the pipe long enough to destroy all spore forming bacteria. This retention period should be at least twenty four (24) hours. After the chlorine treated water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative points should be at least ten (10) ppm.

In the process of chlorinating newly laid pipe, all valves or other appurtenances shall be operated while the pipeline is filled with the chlorinating agent.

Final Flushing And Testing: Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipeline at its extremities until the replacement water, throughout its length shall, upon test, be approved as safe water by the department of public works. This quality of water delivered by the new main should continue for a period of at least two (2) consecutive full days as demonstrated by

laboratory examination of samples taken from a tap located and installed in such a way as to prevent outside contamination. Samples should never be taken from an unsterilized hose or from a fire hydrant, because such samples seldom meet current bacteriological standards.

(1) Repetition Of Procedures: Should the initial treatment fail to result in the conditions specified, the chlorination procedure shall be repeated until such results are obtained.

(2) Sampling Tap: Three-quarter inch (3/4") bronze corporation cocks shall be installed in all water mains at intervals not exceeding one thousand feet (1,000').

The contractor must notify the public works department at least forty eight (48) hours in advance to arrange for appropriate pressure testing and water samplings. The contractor is to provide the public works department with sampling bottles at the time of sampling. All samples will be sent to the Cook County department of health or to a state of Illinois approved testing lab for analysis.

E. Measurement

Water main (of the diameters specified) will be measured per foot in place. Water mains shall be measured along the center line of the water main from the center of the valve to the center of the valve, fittings, or end of the pipe.

F. Payment

Payment for water main shall be made at the contract unit price per foot for WATER MAIN of the appropriate diameter. Payment shall be full compensation for excavation, removal of existing water main or abandoning existing water main, capping existing tees, bedding, installation of water main, backfill, fittings, thrust blocking, bends, jetting, pressure testing, chlorination, abandonment, removal and all labor, materials, equipment and incidentals as shown on the plans and as specified herein to construct a complete and operational water main except as noted below.

Payment for Trench Backfill shall be made at the contract unit price bid per cubic yard for TRENCH BACKFILL.

Restoration of sidewalk, driveways and landscaping shall be measured for payment under their respective bid items. Granular bedding as specified shall be incidental to the cost of the water main.

Water Valves

Description. This work shall include furnishing and installing water valves at the locations shown on the plans or as directed by the Engineer. This work shall be performed in accordance with the applicable portions of Section 561 of the Standard Specifications and Section 42 of the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

Materials. Gate valves shall conform to the provisions of Section 42 of the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition. For valves fourteen inches (14") and larger, rubber seated butterfly valves conforming to the provisions of AWWA standard C504 shall be used. If used, such valves shall be equipped with manual operators designed for submersible service in vaults and provided with two inch (2") standard AWWA nut. All butterfly valves shall be flange end style.

The bodies of the valves shall be of the best quality of cast iron, bronze mounted and the stems of the valves shall be of the best quality of bronze. Each valve shall be constructed of the best material and shall withstand, without leaking, a three hundred (300) pound per square inch hydraulic pressure and a one hundred fifty (150) pound per square inch working pressure.

All valves shall open by turning counterclockwise.

All valves produced by the following manufacturer or valves of equal quality are acceptable valves:

Mueller Company, Decatur, Illinois

Kennedy Valve Manufacturing, Inc., Elmira, New York

American Flow Control, Chicago, Illinois

Basis of Payment. This work will be paid for at the contract unit price per each for WATER VALVE of the size specified, which price shall include all labor, material, and equipment required to complete the work as specified herein.

Adjusting Watermain

This work shall consist of adjusting existing water mains when directed by the Engineer where they are in conflict with new improvements or where the proposed construction will reduce the cover over the watermain. All materials used in adjusting water mains shall meet the requirements of the owning agency's standards and shall be in accordance with the Standard Specification for Water and Sewer Main Construction in Illinois, latest edition. All adjustment in the line or grade of the existing water main shall be approved by the Engineer.

All materials, labor, and equipment necessary to adjust the watermain shall be on hand before shutdown and cutting of the existing main. The Contractor shall take every precaution to hold the interruption of service to a minimum.

A minimum clearance of eighteen inches (18") shall be maintained between the adjusted main and improvement for which the adjustment was made. A downward adjustment will be required unless 5.5' of cover can be maintained for an upward adjustment or as approved by the Engineer.

Adequate precautions shall be taken to prevent contaminants from entering the existing main. The inside surface of all new materials used in the adjustment shall be cleaned of all foreign materials and swabbed with a solution of efficient bactericide before assembly. The adjusted section shall then be flushed with potable water.

Thrust blocking of Class SI concrete shall also be placed where required and as directed by the Engineer.

Forty-eight (48) hours prior to shutting down the existing main for the adjustments, the facility owner and all users that will be affected shall be notified in writing. The Contractor shall distribute notices of the shut down to the residents affected. The Contractor shall cooperate with the local agency personnel to locate valves necessary to isolate the work area. All valves will be operated by personnel from the owning agency.

Basis of Payment. This work will be paid for at the contract unit price per foot for ADJUSTING WATERMAIN of the size specified. This price shall include the cost of all materials, pipe, adapters,

joint materials, fittings, blocking, trench backfill, removal and disposal of existing main, and all work and equipment necessary to make a complete and finished installation.

Water Service Line, 1 1/2"

Description. This work shall consist of furnishing and installing 1 1/2" Type K copper water service line piping at the locations indicated on the plans between the curb stop and RPZ backflow preventer or as directed by the Engineer. Water service line shall be Type K copper manufactured in accordance with ASTM B88 and B251 or approved equal. The pipe shall be marked with the manufacturer's trade name or trade mark and a mark indicative of the type of pipe.

All piping beneath pavement, sidewalk, or curb & gutter shall be run within and protected by 3" diameter PVC sleeves. The Contractor will be required to push the sleeve at a minimum depth of 36" under any existing pavement, sidewalk or curb & gutter so as not to disturb the same. Sleeve lengths shall extend the full width of the street plus not less than twenty-four (24) inches beyond the backs of the median curbs and not less than twenty-four (24) inches beyond the outside lane curbs. The cost of furnishing and installing the conduit sleeves shall be included in the cost of this pay item.

General Requirements. The water service line shall meet or exceed the minimum requirements set forth by the American Society of Testing Materials (ASTM) and the American Water Works Association (AWWA). All work shall be in accordance with applicable Village standards and the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois.

After shallow backfilling (leaving all joints exposed to view), the Water Service Line 1 1/2" shall be subjected to hydrostatic pressure testing using only water. Compressed air or gases shall not be used for testing. Removal of the temporary end cap, after completion of all testing, shall be included

An initial low-pressure test, of sufficient duration, shall be conducted to ensure that no leaks occur anywhere in the system. The line shall remain under low-pressure while it is visually inspected in its entirety. After repair of any leaks, the line shall be more heavily backfilled but still leaving the joints exposed, and then be subjected to full water pressure for not less than twelve hours.

The Contractor shall notify the Engineer seventy-two (72) hours before this work commences so that the Engineer can oversee this work. Installation and testing of the Water Service Line 1 1/2" shall be made in a manner meeting the approval of the Village.

A tracing wire, 1/C # 14 cable shall be run continuously through the sleeves alongside the full length of the copper piping.

Horizontal and vertical separation requirements between water and sewer lines shall be in accordance with IEPA requirements.

Any required trench backfill for the Water Service Line 1 1/2" shall be in accordance with Section 208 of the Standard Specifications. Trench backfill and any de-watering or sheeting required to do the work as specified will not be paid for separately, but shall be included in the contract unit price of this work.

Method of Measurement and Basis of Payment. This work shall be measured and paid for at the contract unit price per foot for WATER SERVICE LINE 1 1/2" which price shall include all pushing,

excavation and trench backfill, all 1 1/2" Type K copper piping and fittings, tracing wire, 3" diameter PVC sleeves, hydrostatic testing, all permits and associated fees, and all other incidentals required to complete this work as specified herein and as shown on the plans.

Fire Hydrant to be Removed

This work shall consist of the removal of existing fire hydrants, modifying the auxiliary valve and capping the downstream end of the valve at location shown on the Plans. This work is to be accomplished without shutting off the watermain to which the fire hydrant is attached.

This work shall conform to the applicable sections of the Standard Specifications for Water and Sewer Main Construction in Illinois. The Contractor shall excavate below the existing fire hydrant to be removed to expose the auxiliary valve. The auxiliary valve shall be shut off completely and the riser stem removed. The valve box shall be modified to remain around the valve but no higher than the top of the valve or the remaining portion of the riser stem, whichever is higher. The connector pipe from the valve to the fire hydrant shall be detached from the valve and a cap installed on the downstream end of the valve. An alternative is to leave a short section of connector pipe attached to the downstream end of the valve and this short section of pipe shall be capped. The cap shall be permanently attached to prevent leakage.

The Contractor shall remove the connector pipe and the fire hydrant and deliver them to the Village of Schaumburg Public Works Department, or dispose of them if the Public Works Department does not want them.

The Contractor shall backfill the excavation with CA-6 or appropriate backfill, as approved by the Engineer, to the existing grade elevation.

Basis of Payment. This work shall be paid for at the contract unit price per each for FIRE HYDRANT TO BE REMOVED, which price shall include all labor, equipment and material necessary to complete the work as specified herein.

Fire Hydrants

Description. This item shall consist of furnishing fire hydrants and installing them at the locations shown on the plans and in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois.

All material and construction methods shall conform to the specification for FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX, except that the auxiliary valve and box will be installed as part of the pay item PRESSURE CONNECTION.

Measurement. Measurement for the fire hydrant shall be measured on a per each basis at each location.

Six (6) inch watermain connections pipe between the fire hydrant and the valve shall be measured for payment on a per foot basis under DUCTILE IRON WATER MAIN 6".

Payment. Payment for furnishing and installing the fire hydrant, drainage stone, thrust block, all appurtenances and backfilling shall be at the contract unit price per each for FIRE HYDRANTS.

Fire Hydrant With Auxiliary Valve and Valve Box

Description. This item shall consist of furnishing fire hydrants with auxiliary valves and valve boxes and installing them at the locations shown on the plans and in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois.

Materials

1. Fire Hydrants

Fire hydrants shall conform to AWWA Standard C-502 with break away traffic flange. They shall have a valve opening of five and one-fourth inches (5 1/4 ") and shall be equipped with two (2) 2 1/2-inch hose connections and one 4 1/2-inch male pumper connection. The outside diameter of the male thread on the two and one-half inch (2 1/2") hose connections shall be "national standard" threads. Hose caps shall be fastened to barrel with steel chain of at least one-eighth inch (1/8") thickness.

A suitable tee of the quality and kind herein specified shall be placed in the watermain opposite each of the fire hydrants and shall be connected with the hydrant by means of the valve and connecting pipe.

Each hydrant shall be provided with a drip that will leave no water standing in the barrel of the hydrant when the hydrant is closed. This drip shall close tightly before the hydrant begins to open. The hose and steamer connections shall be securely leaded and locked into the hydrant and each shall be provided with a suitable cast iron threaded cover fastened securely.

All fire hydrants shall be equipped with an auxiliary valve and cast iron valve box. The auxiliary valve shall be a six inch (6") valve and the pipe connecting the hydrant to the main shall be six inch (6") ductile iron water pipe (class 52).

Fire hydrants shall be the break flange type Mueller hydrant, type A-423 as manufactured by the Mueller Manufacturing Company, Decatur, Illinois, or Clow Medallion F-2545 as manufactured by the Clow Valve Company, Oskaloosa, Iowa, or approved equal.

All hydrants and any required fittings shall receive one (1) coat of red paint as recommended by the manufacturer prior to final acceptance.

2. Auxiliary Valves and Valve Box

Auxiliary valves shall be "Double Face Valves" in accordance with the following: These valves shall come complete with a cast iron valve box and cover produced by the same manufacturer producing the valve. The auxiliary valves shall be six (6) inches in diameter. The word "Water" shall be imprinted on the valve box cover (Mueller 1H-10360 or Clow 1F-2454). All valves shall be rated for 300 psi test pressure and 150 working pressure.

Valves shall conform to Underwriters' Laboratories, Inc., UL-262, Standard for Gate Valves for Fire Protection, and Factory Mutual Research FM Approval Standard Class Numbers 1120 and 1130, for Fire Service Water Control Valves.

Wedges shall be constructed of ductile iron, fully encapsulated in nitrile rubber except for guide and wedge nut areas.

Wedge rubber shall be molded in place and bonded to the ductile iron portion, and shall not be mechanically attached with screws, rivets, or similar fasteners.

Wedge shall seat against seating surfaces arranged symmetrically about the centerline of the operating stem, so that seating is equally effective regardless of direction of pressure unbalance across the wedge.

All seating surfaces in body shall be inclined to the vertical at a minimum angle of 32 degrees (when stem is in a vertical position) to eliminate abrasive wear of rubber sealing surfaces. The stem shall be sealed by at least two O-rings; all stem seals shall be replaceable with valve fully open and while subjected to full pressure. Waterway shall be smooth and shall have no depressions or cavities in seat area where foreign material can lodge and prevent closure or sealing.

Construction Methods. Each hydrant shall be set on a concrete thrust block not less than 24 inches by 24 inches by 4 inches in thickness. A minimum of 1/2 cubic yard of gravel shall be placed around the base of the hydrant in order to provide drainage for the hydrant drain.

All hydrants shall be set plumb and shall have their nozzles parallel with edge of pavement, the steamer connection shall be facing the edge of pavement. The height of the nut on a four and one-half inch (4 1/2") steamer connection shall be no less than twenty four inches (24") or more than thirty six inches (36") above finished grade at the hydrant. All hydrant leads between the tee and the hydrant shall be a positively restrained connection.

The bowl of each hydrant shall be well braced against undisturbed earth at the end of trench with stone slabs or concrete backing, or it shall be tied to the pipe with suitable rods or clamps.

Fire hydrant extensions shall only be used with the approval of the Engineer. Should fire hydrant extensions be required due to improper construction methods by the Contractor, the extensions will be installed but will not be measured for payment.

Auxiliary valves shall be installed in the vertical position, supported on a concrete pedestal. It shall be the Contractor's responsibility to assure that the finished elevation of the box is flush with the adjacent proposed ground line. Valve box installation shall meet the requirements of Section 44 of the Standard Specifications for Water and Sewer Main Construction in Illinois.

All excavation around the fire hydrant and auxiliary valve shall be backfilled to the natural line or finished grade as rapidly as possible. The backfill material shall consist of the excavated material or trench backfill as herein specified. All backfill material shall be deposited in the excavation in a manner that will not cause damage to the fire hydrant or auxiliary valve. Any depressions which may develop within the area involved in a construction operation due to settlement of backfill material shall be filled in a manner consistent with standard practice.

Method of Measurement. Measurement for the fire hydrant with auxiliary valve and box complete and including all appurtenances shall be measured on a per each basis at each location.

Six (6) inch watermain connection pipe as specified shall be measured for payment on a per foot basis under DUCTILE IRON WATER MAIN 6".

Basis of Payment. Payment for furnishing and installing the fire hydrant with auxiliary valve and box, drainage stone, thrust block, all appurtenances and backfilling shall be at the contract unit price per each for FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX.

Domestic Water Service Boxes to be Adjusted

This item shall consist of the adjustment of existing domestic water service boxes to match the proposed surface grade, or as otherwise directed by the Engineer. In order to make the necessary adjustments, the Contractor may have to provide either slide-type or screw type extensions for the existing facility. It shall be the responsibility of the Contractor to ascertain the type of existing facility, and the necessary extension piece required to perform the adjustment. The installation of the extension pieces or the proper manipulation of existing slide or screw type devices will be the only adjustment allowed, and the use of physical force to raise or lower the existing domestic water service boxes will not be permitted. This work shall be performed to the satisfaction of the Engineer.

Method of Measurement. Domestic Water Service Boxes to be Adjusted shall be measured per each.

Basis of Payment. This item shall be paid for at the contract unit price each for DOMESTIC WATER SERVICES BOXES TO BE ADJUSTED, which price shall include all labor, equipment and materials.

Domestic Water Service Boxes

Description. This work shall include furnishing and installing a curb box at the locations shown on the plans or as directed by the Engineer.

Materials. Curb boxes shall be Minnesota type pattern according to Mueller H-10302 or approved equal.

Construction Requirements. Curb boxes shall be installed in the vertical position, supported on a concrete pedestal. It shall be the Contractor's responsibility to assure that the finished elevation of the box is flush with the adjacent proposed ground line. Curb box installation shall meet the requirements of Section 44 of the Standard Specifications for Water and Sewer Main Construction in Illinois.

Basis of Payment. This item shall be paid for at the contract unit price each for DOMESTIC WATER SERVICE BOXES, which price shall include all labor, equipment, and materials.

Catch Basin, Manhole, Inlet with Special Frame and Grate

This work shall be done in accordance with the applicable portions of Section 602 except as follows:

Special frames and grates shall consist of Neenah frame R-3222-C, Neenah grate R-3222-1A, and Neenah curb box 3222-L or approved equal. The words "Dump No Waste" and "Drains to Waterways" shall be cast into the top of the curb box.

Basis of Payment. When new construction is specified, this work will be paid for at the contract unit price per each for CATCH BASINS, MANHOLES, or INLETS, of the type or type and diameter specified, and WITH SPECIAL FRAME AND GRATE.

When adjustment or reconstruction is specified and new frames and grates are to be used, this work will be paid for at the contract unit price per each for INLETS TO BE ADJUSTED WITH NEW SPECIAL FRAME AND GRATE.

Flat Slab Top

This item shall consist of the installation of a flat slab top in place of a cone section on proposed structures where a cone section cannot be placed due to depth restrictions.

For structures having Type 8 grates, a 24-inch inside diameter by 4-inch (minimum) high riser shall be installed on the flat slab to provide earth cover over the slab for vegetation.

This work shall not be paid for but shall be considered incidental to the structure requiring the flat slab top.

Valve Boxes 6"

Description. This work shall include furnishing and installing valve boxes at the locations shown on the plans or as directed by the Engineer.

Valve boxes shall be made of high strength plastic suitable for turf irrigation purposes. Boxes shall be constructed to the dimensions shown on the detail included in the plans. Extension sections will be used as appropriate to the depth of piping. Valve box base shall be #182001 as manufactured by Armor Access Boxes or approved equal. Valve box lid shall be #182002 in turf areas or #182008 in mulched areas, as manufactured by Armor Access Boxes or approved equal.

Basis of Payment. This work will be paid for at the contract unit price each for VALVE BOXES 6" which price shall include all labor, equipment, and materials necessary to perform said work.

Sanitary Manholes to be Reconstructed

This work shall consist of reconstructing existing sanitary manholes at locations indicated on the plans. This work shall be performed in accordance with Section 602 of the Standard Specifications with the following addition:

A new external chimney seal which fully encompasses the rings and castings shall be installed after the frame has been adjusted to the final elevation. The Contractor shall obtain the Engineer's approval of the chimney seal prior to its installation.

Basis of Payment. This work shall be measured and paid for at the contract unit price per each for SANITARY MANHOLES TO BE RECONSTRUCTED which price shall include all labor, equipment, and materials necessary to perform said work.

Combination Concrete Curb and Gutter, Type B-6.24 (Special)

Description. This work shall consist of the construction of combination concrete curb and gutter, type B-6.24 at the locations designated on the plans in accordance with Section 508 and 606 of the Standard Specifications.

Materials. Materials shall comply with the requirements of Section 1006, 1020 and 1051 of the Standard Specifications for Class SI concrete as herein modified: the concrete shall be "High Early Strength."

Method of Measurement. Measurement for curb and gutter shall be per foot for the actual length of curb and gutter constructed.

Basis of Payment. This work shall be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (SPECIAL) which price shall include all labor, equipment, and materials necessary to perform said work.

Concrete Median, Type C-4

Description. This work shall consist of the construction of a concrete median, type C-4 at the locations designated on the plans in accordance with Section 508 and 606 of the Standard Specifications and the detail included in the plans. The pavement fabric shown on the details shall be paid for separately as PAVEMENT FABRIC.

Method of Measurement. Concrete median will be measured for payment in place and the area computed in square feet.

Basis of Payment. This work shall be paid for at the contract unit price per square foot for CONCRETE MEDIAN, TYPE C-4 which price shall include all labor, equipment, and materials necessary to perform said work.

Aggregate Subgrade

This work shall be done in accordance with the applicable portions of Section 207 of the Standard Specifications. The material shall conform to Article 1004.04 of the Standard Specifications except as follows:

1. Crushed Stone, Crushed Blast Furnace Slag, and Crushed Concrete will be permitted. Steel slag and other expansive materials as determined through testing by the Department will not be permitted.

| <u>Sieve Size</u> | <u>Percent Passing</u> |
|-------------------|------------------------|
| 6 inches | 97±3 |
| 4 inches | 90±10 |
| 2 inches | 45±25 |
| #200 | 5±5 |

2. Gravel, Crushed Gravel, and Pit Run Gravel

| <u>Sieve Size</u> | <u>Percent Passing</u> |
|-------------------|------------------------|
| 6 inches | 97±3 |
| 4 inches | 90±10 |
| 2 inches | 55±25 |
| #4 | 30±20 |
| #200 | 5±5 |

3. Crushed Concrete with Bituminous Materials**

| <u>Sieve Size</u> | <u>Percent Passing</u> |
|-------------------|------------------------|
| 6 inches | 97±3 |
| 4 inches | 90±10 |
| 2 inches | 45±25 |
| #4 | 20±20 |
| #200 | 5±5 |

**The bituminous material shall be separated and mechanically blended with the crushed concrete so the bituminous material does not exceed 40% of the final product. The top size of the bituminous material in the final product shall be less than 100 mm (4 inches) and shall not contain more than 10.0% steel slag RAP or any material that is considered expansive by the Department.

The Aggregate Subgrade, 10" shall be placed in two lifts consisting of a 7 inch and variable nominal thickness lower lift and a 3 inch nominal thickness top lift of capping aggregate having a gradation of CA 6. The Aggregate Subgrade, 12" shall be placed in two lifts consisting of a 9 inch and variable nominal thickness lower lift and a 3 inch nominal thickness top lift of capping aggregate having a gradation of CA 6. The CA 6 may be blended as follows. The bituminous materials shall be separated and mechanically blended with interlocking feeders with crushed concrete or natural aggregate, in a manner that the bituminous material does not exceed 40% of the final product. This process shall be approved by the engineer prior to start of production. The top side of the bituminous material in the final products shall be less than 1 ½ inches and shall not contain any material considered expansive by the department. Reclaimed Asphalt Pavement (RAP) (having a maximum of 10% steel slag RAP) meeting the requirements of Article 1004.07 and having 100% passing the 3 inch sieve and well graded down through fines may also be used as capping aggregate. IDOT testing of the RAP material will be used in determining the percent of steel slag of Expansive Material. When the contract specifies that an aggregate subbase is to be placed on the Aggregate Subgrade, the 3 inches of capping aggregate will be eliminated. A vibratory roller meeting the requirements of Article 1101.01(g) shall be used to roll each

lift of material to obtain the desired keying or interlock and necessary compaction. The Engineer will verify that adequate keying has been obtained.

When a recommended remedial treatment for unstable subgrades is included in the contract, the lower lift of Aggregate Subgrade may be placed simultaneously with the material for Porous Granular Embankment, Subgrade when the total thickness to be placed is 2 feet or less.

Method of Measurement.

Contract Quantities. Contract quantities shall be in accordance with Article 202.07.

Measured Quantities. Aggregate subgrade will be measured in place and the area computed in square yards.

Basis of Payment. This work will be paid for at the contract unit price per square yard for AGGREGATE SUBGRADE, of the thickness specified.

Curb Stops

Description. This work consists of furnishing and installing curb stops, of the size specified, at the locations shown on the plans or where determined by the Engineer.

Materials. Curb stops shall be Minnesota type pattern according to Mueller H-15154, Ford B44-444, or approved equal.

Construction Requirements. Curb stops shall rest upon a concrete brick or block. Within 2 ft of any existing or proposed paved surfaces, the excavation shall be backfilled with CA-6 and properly compacted.

Basis of Payment. This work will be paid for at the contract unit price per each for CURB STOPS of the size specified.

Fence Removal

Description. This work shall consist of the complete removal and proper disposal of fencing (regardless of type), gates, posts and foundations where indicated on the plans or directed by the Engineer.

Method of Measurement and Basis of Payment. This work shall be measured and paid for per lineal foot for FENCE REMOVAL, which price shall include all equipment, labor and material required to complete the work regardless of the type of fence being removed.

Sanitary Sewer

Description. All sanitary sewers shall be constructed in accordance with the provisions of division II and division III of the "Standard Specifications For Water And Sewer Main Construction In Illinois",

latest edition, as modified and/or more specifically defined in these paragraphs and sections. In case of conflict, the provisions of the following paragraphs shall apply.

Type 2 bedding, consisting of at least four inches (4") of clean uniformly graded granular aggregate, shall be furnished and placed across the trench bottom under all sewer pipe, except ductile iron. Material shall be placed and formed as described in ASTM specifications C12-64.

The locations of the sanitary sewer spot repairs have been shown in the plans based on video tapes of the sewer provided by the Village. The contractor shall video tape the sanitary sewer in order to confirm the location of the spot repair prior to beginning this work. The video taping shall be included in the cost of SANITARY SEWER.

The Contractor shall be responsible for securing all MWRDGC permits necessary prior to starting this work.

Allowable Materials:

(1) Sewer Pipe: Proposed sewer pipe shall be the same as the type of existing sewer being replaced. It shall be the Contractor's responsibility to determine the type of pipe required prior to starting this work.

(a) Truss pipe - shall conform to the requirements of ASTM D2680-68T.

(b) Extra strength concrete sewer pipe (ESCSP) - conforming to the requirements of ASTM C-14 or C-76.

(c) Ductile iron main - shall conform to AWWA specification C151-65.

(d) Thick walled PVC pipe - shall conform to the requirements of ASTM D-3034, SDR 26. SDR or standard dimension ratio is the ratio of the pipe OD to the minimum wall thickness ($SDR=D/t$). The structural stability and supporting strength of the pipe decrease with the increase of SDR. The pipe shall not exceed twenty feet (20') in laying length. Installation and selection of bedding material shall conform to the requirements of ASTM specifications D-2321.

(2) Pipe Joints:

(a) Rubber Gasket Joints: On tongue and groove type of pipe joints, rubber gaskets may be used. The gasket shall consist of a special rubber ring of a size to fit snugly over the tongue of each size of pipe. The gasket shall be circular, elliptical or of the manufacturer's special design cross section fabricated out of a special composition or rubber specifically designed to resist the hardening action of the sulphur compounds in sewage and to prevent disintegration from sewage or water over long periods.

A ring shall be fitted over the tongue of each pipe to be laid at its outer end. The tongue shall be inserted into the groove of the pipe previously laid and the pipe pulled home.

Joints shall be made up in strict conformance with the manufacturer's recommendations and directions. Rubber gasket material shall conform to ASTM designation C425, type I or III ("O" ring gasket).

(b) Cast Iron Pipe: Sections of cast iron pipe shall be connected by means of slip joints consisting of bells cast integrally with the pipe, which have interior angular recesses conforming with the shape and dimension of a rubber scaling gasket, the interior dimension of which is such that it will

admit the insertion of the spigot end of the joining pipe in such manner as to compress the gasket tightly between the bell of the pipe and the inserted spigot, thus securing the gasket and sealing the joint. Such slip joints shall be any one of the following make or type or equal:

1. Super Bellite - as supplied by James B. Clow and Son.
2. Fastite - as supplied by the American Cast Iron Pipe Company.
3. Tyton - as supplied by the U.S. Pipe and Foundry Company.

The lubricant used in conjunction with the slip joints be that recommended by the suppliers, or commercially processed animal fat or vegetable shortening as approved by the director of engineering.

(c) Diaper Type: Joints between consecutive bell and spigot pipe shall be made by placing a burlap diaper between the bell and spigot and crimping the diaper tight to the pipe. Once the diaper is secure it shall be filled with bentonite.

(d) Thick Walled PVC Joint: The pipe joint shall conform to the requirements of ASTM D-3212 or D-2855. The joint shall consist of a bell that is an integral part of the pipe, stiffened to securely lock a solid cross sectional rubber ring into position. A "home" mark shall be provided on the spigot end of the pipe. The joint shall be able to withstand an internal hydrostatic pressure of twenty five (25) psi for one hour and leakage during that time shall be considered a failure of test and joint.

(e) Truss Pipe Joint: The pipe joint shall conform to the requirements of ASTM D-2680.

(3) Pipe Sleeves For Augering Or Tunneling:

(a) Steel sleeves - shall be three-eighths inch (3/8") thick of the diameter specified, with a continuous, circular one-half inch (1/2") bead weld and shall meet the requirements of ASTM A-120.

(b) Concrete sleeves (alternate) - if selected in place of the steel sleeves specified above, shall be reinforced concrete pipe, tongue and groove type, conforming to the requirements of ASTM C-76-57, table IV - class designation 3,000 D.

(D) Construction Requirements:

(1) Excavation And Foundation: The trench shall be excavated so that the flow line of the finished sewer shall be at the depth and grade established by the Engineer. The trench for the pipe shall be excavated at least twelve inches (12") wider than the external diameter of the pipe. The width of the trench shall not exceed the external diameter of the pipe by more than eighteen inches (18") at the top of the pipe.

The pipe foundation shall be bedding material consisting of road gravel or one-quarter inch (1/4") to three-quarters inch (3/4") crushed stone of the depth. Where pipes with bells or hubs are used, cross trenches shall be excavated to prevent nonuniform loading at the joints. The cross trenches shall not be more than two inches (2") wider than the width of the bell or hub.

If the excavation has been made deeper than necessary, the foundation shall be brought to proper grade by the addition of well compacted bedding material. Where a firm foundation is not encountered at the grade established, due to soft, spongy or other unsuitable soil, all such unsuitable

soil under the pipe and for the width of the trench shall be removed and replaced with well compacted bedding material.

Where it is necessary to tunnel, the width shall be the same as for trenches. Where sheeting and shoring is necessary, this width shall be between the faces of said sheeting or shoring. The ends of a tunnel shall be at a distance equal but not less than the depth of the trench from the edge of pavements where tunneling is done under pavements. Ends of tunnels under trees, driveways, walks and other obstacles shall be of sufficient distance from them to give ample protection to them. The sides and roof shall be braced sufficiently to support roadways and other obstacles and to prevent caving, bulging and settlement. It is preferred that open trenching be used in all cases under pavements, walks and driveways except where they exist of concrete. Where trenches are dug through pavement, walks and driveways, the Contractor shall provide substantial bridges over same so that traffic can be maintained and access to occupied properties is assured.

Access must be left to all fire hydrants, valves and to private drives at all times.

(2) Sheetting And Bracing: Sheetting and bracing shall be placed in the ditch, as may be necessary for the safety of the work and public, for the protection of the workmen, adjacent properties, pavement or structures and for the proper installation of the work. In any event, the minimum protection shall conform to the recommendations in OSHA safety and health standard for construction. A sandbox or trench shield may be used in place of sheetting as permitted by OSHA. When close sheetting is used, it shall be driven so as to prevent adjacent soil from entering the trench either below or through such sheetting.

Sheetting and/or bracing shall be progressively removed as the backfill is placed in such a manner as to prevent the caving in of the sides of the trench or excavation and to prevent damage to the work.

Sheetting which is placed for the protection of the public, adjacent properties, pavement or structures, shall not be removed until the backfill has been placed and thoroughly compacted. While being drawn, all vacancies left by this sheetting shall be carefully filled with sand free silt, rammed into place, puddled or otherwise firmly compacted.

(3) Dewatering: Dewatering sufficient to maintain the water level at or below the surface of trench bottom or base of the bedding course, shall be accomplished prior to pipe laying and jointing, if not prior to excavation and placing of the bedding as called for in other sections of the specifications or special provisions. The dewatering operation, however accomplished, shall be carried out so that it does not destroy or weaken the strength of the soil under or alongside the trench. The normal water table shall be restored to its natural level in such a manner as to not disturb the pipe and its foundation.

(4) Pipe Laying: The laying of pipes in finished trenches shall be started at the outlet end with the spigot ends pointing in the direction of flow and shall proceed toward the inlet end with pipes abutting and shall be true to line and grade. The ends of the pipes shall be carefully cleaned before the pipes are lowered into the trenches and the pipes shall be lowered in such a manner that unnecessary handling in the trench will be avoided. As each length of pipe is laid, the mouth of the pipe shall be properly protected to prevent the entrance of earth or the bedding material. The pipe shall be fitted and matched so that when laid in the work, they will form a sewer with a smooth, uniform invert.

All jointing material shall be used in accordance with the recommendations of the manufacturer. Each pipe shall be pushed or pulled as tightly as possible to the section in place to ensure tight joints.

Sewer pipe shall not be dropped from trucks or cars. All pipe must be lowered into the trench with suitable apparatus for the purpose; in no case shall it be dropped or thrown.

(5) Connections: Connections of new sewers to existing sewers shall be made through the use of stainless steel banded mission couplings or by other methods when approved by the Engineer.

When connections are made with sewers carrying sewage or water, special care must be taken that no part of the work is built under water; a flume or dam must be installed and bypass pumping maintained, to keep the new work dry until completed and concrete or mortar has been set up.

(6) Wyes: Wyes, for existing or future lateral connection, shall be inserted in the sewer at the appropriate location as required by the Engineer. Wyes shall be constructed so as to be an integral part of the main sewer pipe. Where risers are to be provided, the wye bell shall be placed at the top of the pipe perpendicular to the main sewer flow line. When risers are not required, the wye bell shall be placed midway between the top of the pipe and the horizontal centerline of the pipe at an angle of approximately forty five degrees (45°) to sixty degrees (60°), with the upstream face of the pipe.

Wyes not put in service at the time of construction (of the sewer) shall be plugged in such a manner as to be watertight and to facilitate future removal without injury to the wye.

The contractor shall keep an accurate record of the location of the wyes, as constructed. This record should be the measurement to, and the identification (stationing) of the nearest grade stake or the measurement to the nearest downstream manhole.

(7) Replacement of existing services: Existing services shall be reconnected to the mainline sewer at proposed wyes. Sewer service pipe shall consist of thick walled PVC or ductile iron pipe, matching the diameter of the existing service. It shall be the Contractor's responsibility to determine the size of service required. Services shall be laid in as straight a line as possible. The minimum gradient allowable for sewer services shall be one-quarter inch ($1/4''$) per foot of length. The proposed sewer service shall be reconnected to the existing service with the use of stainless steel banded mission couplings.

(8) Backfilling: The contractor shall not backfill sewers above the top of the pipe until the sewer elevations, gradient, alignment and the pipe joints have been made available for checking by the Engineer.

All trenches and excavations shall be backfilled as soon as joints have acquired a suitable degree of hardness. Concrete joints shall be protected to prevent drying and cracking of the joints.

All sewer pipe, as soon as laid, shall have the space between the pipe and the bottom and sides of the trench above the pipe foundation packed full with sand, grade 9 gravel, or dry earth by hand and thoroughly tamped with a shovel hoe, or light tamper, as soon as placed, up to the level of the middle of the pipe. The filling shall be carried up evenly on both sides. Care shall be taken that no rock, frozen material, or other hard substances are placed in contact with the pipe. In areas where clean fine and dry sand is used for backfill to top of the pipe, tamping will not be required.

The trench shall be backfilled by using the material originally excavated from the ditch (except for conditions hereafter defined) to a height slightly above the original elevation of the ground. Backfilling shall not be left unfinished more than three hundred feet (300') behind the completed masonry or pipe work.

No heavy rock shall be dropped into the trench nor placed within three feet (3') of the sewer pipe. In depositing rock into the trench, care must be taken that the rock does not injure the structure.

All voids existing between the outside of the pipe and the limits of a tunnel excavation or lining shall be filled with sand free of silt thoroughly rammed or flushed into place, or with concrete composed of one part Portland cement, three (3) parts of fine aggregate and five (5) parts of coarse aggregate thoroughly packed into place.

Sewers constructed in open cut across any existing or proposed pavements, driveways and sidewalks (where locations are known), and all trenches where the inner edge of the trench is closer than two feet (2') to the edge of the existing or proposed pavement, shall be backfilled with Trench Backfill, thoroughly flushed and jetted or tamped in nine inch (9") lifts in place.

Basis of Payment. This work will be paid for at the contract unit price per lineal foot for SANITARY SEWER, of the diameter specified which price shall include all labor; excavation, sheeting and bracing; materials, including pipe, service connections, fittings and bedding; backfilling, compacting and removal of spoils; dewatering; bypass pumping; and equipment necessary to complete the work as specified herein.

Wood Fence

Description. This work shall include the furnishing and installing of a 6' tall wood fence at the locations shown on the plans. This work shall be performed in accordance with Section 641 of the Standard Specifications.

Materials. The Contractor shall provide a sample of the wood fence for approval by the Engineer prior to starting this work. The intent of this work is to provide a fence that is similar in size, shape, color, and wood type as the existing fence that is to remain on the private property.

Installation. The wood fence shall be installed according to the IDOT Highway Standard 641001 except that the panels shall be installed in a straight line, rather than the offset pattern shown in the detail.

Basis of Payment. This work will be paid for at the contract unit price per foot for WOOD FENCE which price shall include all materials, equipment, and labor necessary to complete the work as specified.

Modular Block Retaining Wall

This work shall consist of the construction of a precast block retaining wall in accordance with the manufacturer's specifications at the location shown on the plans or as directed by the Engineer. The Contractor shall use a Unilock PISA II wall, sand color, or an approved equal for walls in excess of 2.5 feet tall. The Contractor shall use a Unilock Garden Stone, sand color, or an approved equal for work less than 2.5 feet tall. For this project, it is anticipated that the walls to be constructed are under 2.5 feet tall. The retaining wall shall be designed by the retaining wall fabricator and supplier.

The proposed wall location shall be excavated to a minimum depth of 12" below finished grade on the face of the wall. The subgrade below the aggregate base shall not be disturbed. Over-excavation will not be paid for, and replacement with compacted fill and/or wall system components will be required at the Contractor's expense. The foundation soil shall be examined by the Engineer prior to wall construction. Soils not meeting required strength shall be removed and replaced with acceptable material. A leveling pad consisting of a minimum 6" of CA6 aggregate shall be placed within the excavation. Once the leveling base is in place, the blocks shall be placed on the base per the manufacturer's recommendations. The base shall be prepared to insure complete contact of retaining wall units with the base. Gaps between the unit and base shall not be allowed. A 4" PVC perforated drain pipe with silt-sock shall be placed as detailed by the manufacturer. The Contractor shall backfill both the front (face of the wall) and back in 6" lifts and compact to 95% density. The backfill material shall consist of approved embankment material on both sides of the wall up to finished grade, allowing for 4" of topsoil and sod. However, the Contractor shall place a 12" wide aggregate fill adjacent to the back of the wall consisting of CA7 or CA11 aggregate to within 12" of the finished grade. A 12" thick impervious fill shall be placed over the drainage fill and throughout the excavated area. The impervious fill cap shall be graded to drain runoff laterally along the wall alignment. Capping units shall be placed on top of the final wall layer and fastened per the manufacturer's specifications.

The Contractor shall submit color samples and manufacturer's specifications a minimum of 30 days prior to construction to the Engineer for approval. All wall material shall be of uniform color and manufactured on the same day. The Engineer reserves the right to reject material based on color differences. The Contractor shall obtain technical assistance, if necessary, from the supplier during wall erection and shall include any cost related to this technical assistance in the Unit Bid Price.

Method of Measurement and Basis of Payment. This work will be paid for at the contract unit price per square foot of wall face from the top of block line to the theoretical top of the leveling pad for the length of the wall in a vertical plane for MODULAR BLOCK RETAINING WALL, which price shall include all material, equipment, and labor necessary to complete this item. The price shall include excavation, 4" PVC wall drain, aggregate base, and aggregate and embankment backfill.

Concrete Pavers

General. The Contractor shall provide all labor and materials necessary to install concrete pavers at locations, and in accordance with the details, included in the plans. The Contractor shall submit product literature and specifications along with a sample of the paver brick product to be used by the Engineer for approval prior to the installation of any material.

Materials. The concrete base shall comply with the requirements of Section 1020 of the Standard Specifications for Class SI Concrete. The paving bricks shall be UNILOCK, of the type, size and color shown on the paver detail or approved equal. The paving bricks shall be of the nominal sizes, shapes, and colors shown on the plans. A sample of the bricks to be used shall be submitted to the Engineer for approval of the size, shape, and color. The pavers shall meet the requirements set forth in ASTM C-936, "Specification of interlocking concrete paving units". Minimum average compressive strength shall be 8,500 p.s.i.; minimum average absorption rates shall be 5%; and the maximum average weight loss after 50 freeze/thaw cycles shall be 1%. The Engineer shall approve the materials and installation of the sand bedding system. The joint sand shall consist of a natural or manufactured sand conforming to ASTM C-33 for fine aggregates. Sand must be free from clay, organic matter, and other deleterious material. Mason sand will not be permitted. The joint sand stabilizer shall be SB-1370, Surebond Safebond Ecology Sealer & Joint Sand Stabilizer or approved equal.

Installation. The concrete base pad shall include placing and compacting the aggregate base course material on prepared subgrade, installing 6X6 - #6 welded wire fabric, and placing Portland Cement Concrete slab to a minimum thickness of 5 inches. The welded wire fabric shall conform to the requirements of Article 1006.10b of the Standard Specifications. Weep holes shall be provided in the base pad at the location of the low point of the paver field to allow water to drain to the base course material, with use of 3/4" PVC pipe. This work shall be constructed in accordance with Sections 351 and 424 of the Standard Specifications.

The paver bricks shall be installed after the P.C.C. sidewalk, header band, and concrete base has been installed and the forms removed. The Contractor shall then place the filter fabric and sand bedding on the concrete base. The paving bricks shall be installed according to the pattern shown on the plans. Once installed, the pavers shall be compacted with a plate compactor outfitted with a rubber pad. After the first pass spread a thin, uniform layer of joint sand over the top of the pavers and compact pavers again. Sweep additional sand into joints until they are full to within 1/16" from the bevel edge of paver or the joint surface. All excess sand shall be removed from the paver surface. This process shall be repeated after 48 hours.

After all excess sand has been removed from the paver surface, the joint sand stabilizer shall be liberally and evenly applied as to coat the pavers and joints by using a low pressure regulated sprayer not to exceed 25 pounds per square inch. The joint sand stabilizer shall be applied at a coverage rate of approximately 120 SF per gallon. The excess material shall be simultaneously drawn off the surface with a soft squeegee to ensure that all joints are adequately coated and that no surplus material is left on the surface. The application of the joint sand stabilizer shall be organized in such a manner so that the operation is carried out in each area before the stabilizer has a chance to dry by doing suitable increments at a time. The work shall be undertaken when the weather is appropriate and shall cease when inclement weather, including rain or strong winds, will affect the stabilizing operation. Joint sand stabilizer shall not be applied if temperatures will fall below 45° Fahrenheit during the application or curing time of the stabilizer. If the pavement has become saturated with water, work shall not commence until the joint sand has dried out sufficiently to allow for proper penetration of the stabilizer. In extremely dry, hot conditions, when midday temperatures rise above 90° Fahrenheit, it may be necessary to adjust the application methods to retard drying and facilitate the proper spreading of the stabilizer. If these circumstances apply, consult with the Engineer before proceeding with stabilization operation. All areas treated with sand joint stabilizer shall be protected from rain or moisture until stabilizer is dry and should not be trafficked for a minimum of 24 hours after completion of the stabilization operation.

Method of Measurement. Concrete Pavers will be measured for payment in square feet of paver fields in place.

Basis of Payment. This work shall be paid for at the contract unit price per square foot for CONCRETE PAVERS, which price shall include all materials, labor, and equipment necessary to complete the work as described and as shown on the details in the plans.

Trash Receptacles

Description. This item shall include furnishing and installing trash receptacles at locations indicated on the plan. The trash receptacle shall be placed on a 3' x 3' concrete pad. The concrete pad shall meet the specifications for PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH, SPECIAL. The trash

receptacle shall be fastened to the concrete pad using stainless steel anchor bolts approved by the Engineer. This work shall be included in this item.

The trash receptacle shall be a Forms and Surfaces, Urban Renaissance Receptacle, Side Opening with integrated recycling bin, 36 gallon, Vista grillwork (Model #SLURB-36RBV). The color of the trash receptacle shall be custom RAL powdercoat, dark green. The Contractor shall supply a 4" square paint chip sample for color approval by the Engineer and Village.

Basis of Payment. This work will be paid for at the contract unit price per each for TRASH RECEPTACLES. The concrete pad shall be paid for separately as PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL.

Ornamental Fence

General. This work shall be in accordance with Section 664 of the Standard Specifications except as follows. Refer to the detail in the contract plans for dimensions and design details. Fence post installation in soil will be done using concrete foundations as per the detail in the plans.

Submittal. Shop drawings and specifications shall be submitted to the Engineer for approval prior to manufacturing of the fence.

Fabrication

A. Pickets, rails, and posts shall be precut to specified lengths.

B. Completed panels shall be capable of supporting a 600 lb. load (applied at midspan) without permanent deformation.

C. The ornamental fence shall be powder coated. The color of the aluminum portion of the ornamental fence shall be Pantone 412C. Contractor shall supply a 4" square paint chip sample for color approval purposes.

All areas of the fence which are deemed inaccessible by means of welding or those areas where welding would cause unavoidable warping shall be filled using caulk to prevent water from becoming trapped and corroding adjacent exposed metal surfaces. The caulk shall not be used in place of proper welds. All metal work shall be inspected and areas to receive caulk approved by the Engineer prior to being powder coated unless specifically approved by the Engineer. The caulk material shall be Vulkem 116 by Tremco, or approved equal. The caulk material shall be installed per the manufacturer's directions. All necessary caulking shall be considered incidental to the cost of the fence.

Installation

The fence shall be designed such that the fence posts are spaced no further apart than 6'.

Method of Measurement and Basis of Payment. This work shall be measured and paid for at the contract unit price per foot for ORNAMENTAL FENCE, including all fence connections, concrete foundations, and electric grounding.

Sanitary Sewer Removal

Description. This work shall consist of removing and disposing of the existing sanitary sewer at the locations shown on the plans. This work shall be performed in accordance with the application portions of Section 551 of the Standard Specifications.

Basis of Payment. This work shall be paid for at the contract unit price per foot for SANITARY SEWER REMOVAL, of the size specified, which price shall include all labor, materials and equipment to complete work as described above.

Pressure Connection

Description. This work shall consist of installing a valve and valve box under pressure on the existing water main at locations shown on plans so as not to disrupt service to the existing main. The connection shall be constructed in accordance with all applicable portions of Section 561 of the "Standard Specifications" and Section 46 of the "Standard Specifications of Water and Sewer Main Construction in Illinois" with the following materials:

- 1) The MJ tapping sleeve shall meet or exceed all material specifications as listed below and be suitable for use with standard mechanical joint x mechanical joint resilient wedge gate valves per ANSI/AWWA C609-94. The mechanical joint outlet shall be a one-piece casting having a plain end and a mechanical joint gland TIG and MIG welded a full 360 degrees.
- 2) The tapping sleeve shall have a Mechanical Joint Outlet Gasket, Branch Sealing Gasket, and complete Circle Gasket attached to the sleeve at the factory.
- 3) The Branch Sealing Gasket and Complete Circle Gasket shall be contained within stainless steel Retaining Rings.
- 4) The tapping sleeve shall incorporate Drop-in, Square-Neck, Track-Head bolts with a minimum of two (2) longer starter bolts.
- 5) A minimum quantity of 16 drop-in bolts and 6 mechanical joint outlet bolts shall be provided.
- 6) The Branch opening shall be larger in diameter than nominal to allow the use of a full size cutter.
- 7) All welding shall be passivated so as to return the welded stainless steel to its original corrosion resistant state.
- 8) There shall be no Paper or Plastic adhesive labels attached to the tapping sleeve, any information appearing on the sleeve shall be stenciled.
- 9) The tapping sleeve shall be Factory Hydrostatically Tested on pipe to a minimum of 300 psi to verify proper fit and weld integrity with zero leakage allowed.
- 10) Sleeves shall be the PowerSeal Model 3490MJ stainless steel tap sleeve with mechanical joint outlet as manufactured by PowerSeal Corporation or an approved equal.

Material Specifications

- 1) The shell shall be 304 (18-8) stainless steel.
- 2) Mechanical joint outlet gland and plain end shall be per ANSI / AWWA – Cluo I A21.10 as applicable and cast of 304 (18-8) stainless steel.
- 3) The Armor Plate shall be 304 (18-8) stainless steel.
- 4) The Lugs shall be 304 (18-8) stainless steel. The Lugs shall be welded (GMAW) to the shell.

- 5) The Nuts shall be Heavy-Hex, of 304 (18-8) stainless steel and lubricated to prevent galling or seizing.
- 6) The Bolts shall be 304 (18-8) stainless steel, or equal, 5/8" NC thread.
- 7) The Gaskets shall be of virgin Nitrile (Buna-N, NBR), or equal, compounded for water service.
- 8) The gate valve used as part of the pressure connection shall be a resilient wedge epoxy coated gate valve either Mueller A2360, Watrous 2500, or approved equal. All buried hardware shall be non-Ferrous material.
- 9) Valve boxes shall conform to the requirements listed in the special provision FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX.

Installation. After the surface disinfection, the tapping sleeve shall be mounted to the main and tapping valve to form a pressure-tight connection. The installation shall be pressure tested at operating pressure plus 50 percent, to insure the integrity of the installation. This shall be a hydrostatic test, introduced through a port on the tapping machine, or through a tapped mechanical joint plug on the outlet side of the tapping valve. The tapping machine and the tapping valve and sleeve assembly shall be externally supported so that no additional weight is placed upon the main.

Basis of Payment. This work will be paid for at the contract unit price per each for PRESSURE CONNECTION, which price shall be payment in full for all labor, equipment, and materials necessary to complete the work specified herein including water tapping valves and valve boxes.

Bituminous Driveway Pavement

This work shall consist of the construction of driveway entrances at locations and in accordance with the details included in the plans. The work shall be in accordance with Sections 351 and 406 of the "Standard Specifications" except as modified herein.

Private entrances shall consist of a minimum 2 inches of Hot-Mix Asphalt Surface Course, Mix "C", N50 and 2 ¼ inches of Hot-Mix Asphalt Binder Course, IL-19.0, N50 placed on a minimum of 6 inches of compacted Sub-Base Granular Material, Type B. Commercial entrances shall consist of a minimum 2 inches of Hot-Mix Asphalt Surface Course, Mix "C", N50 and 5 inches of Hot-Mix Asphalt Binder Course, IL-19.0, N50 placed on a minimum of 4 inches of compacted Sub-Base Granular Material, Type B.

The Contractor shall machine-saw a perpendicular joint between that portion of a driveway to be removed and that which is to remain in place. If the Contractor removes or damages the existing driveway or parking area outside the limits designated by the Engineer for removal and replacement, he will be required to repair or replace that portion at his own expense to the Engineer's satisfaction. All required excavation shall be included in the contract unit price for this item. Removal of the existing driveway pavement will be paid for separately.

Basis of Payment. This work will be paid for at the contract unit price per square yard for **HOT-MIX ASPHALT** DRIVEWAY PAVEMENT, of the thickness specified.

Bituminous Bike Path Removal

Description. This work shall consist of the removal and disposal of the existing bituminous bike path as directed by the Engineer. This work shall be performed in accordance with Section 440 of the Standard Specifications.

Method of Measurement. Bituminous bike path removal will be measured for payment in place and the area computed in square yards.

Basis of Payment. This work will be paid for at the contract unit price per square yard for BITUMINOUS BIKE PATH REMOVAL regardless of the depth of existing material.

Paver Blocks, Special

General. The Contractor shall provide all labor and materials necessary to install custom concrete pavers at locations, and in accordance with the details, included in the plans. The Contractor shall submit shop drawings to the Engineer for approval prior to the installation of any material.

Materials. The pavers shall be of the size and color shown on the paver detail or approved equal. The pavers shall meet the requirements set forth in ASTM C-936, "Specification of interlocking concrete paving units". Minimum average compressive strength shall be 8,000 p.s.i.; minimum average absorption rates shall be 5%; and the maximum average weight loss after 50 freeze/thaw cycles shall be 1%. The Engineer shall approve the materials and installation of the sand bedding system. The joint sand shall consist of a natural or manufactured sand conforming to ASTM C-33 for fine aggregates. Sand must be free from clay, organic matter, and other deleterious material. Mason sand will not be permitted. The joint sand stabilizer shall be SB-1370, Surebond Safebond Ecology Sealer & Joint Sand Stabilizer or approved equal.

Installation. The concrete base pad shall include placing and compacting the aggregate base course material on prepared subgrade, installing 6X6 - #6 welded wire fabric, and placing Portland Cement Concrete slab to a minimum thickness of 5 inches. The welded wire fabric shall conform to the requirements of Article 1006.10b of the Standard Specifications. Weep holes shall be provided in the base pad at the location of the low point of the paver field to allow water to drain to the base course material, with use of 3/4" PVC pipe. This work shall be constructed in accordance with Sections 351 and 424 of the Standard Specifications.

The paver blocks shall be installed after the P.C.C. sidewalk, header band, and concrete base has been installed and the forms removed. The Contractor shall then place the filter fabric and sand bedding on the concrete base. The paving bricks shall be installed according to the pattern shown on the plans. Once installed, the pavers shall be compacted with a plate compactor outfitted with a rubber pad. After the first pass spread a thin, uniform layer of joint sand over the top of the pavers and compact pavers again. Sweep additional sand into joints until they are full to within 1/16" from the bevel edge of paver or the joint surface. All excess sand shall be removed from the paver surface. This process shall be repeated after 48 hours.

After all excess sand has been removed from the paver surface, the joint sand stabilizer shall be liberally and evenly applied as to coat the pavers and joints by using a low pressure regulated sprayer not to

exceed 25 pounds per square inch. The joint sand stabilizer shall be applied at a coverage rate of approximately 120 SF per gallon. The excess material shall be simultaneously drawn off the surface with a soft squeegee to ensure that all joints are adequately coated and that no surplus material is left on the surface. The application of the joint sand stabilizer shall be organized in such a manner so that the operation is carried out in each area before the stabilizer has a chance to dry by doing suitable increments at a time. The work shall be undertaken when the weather is appropriate and shall cease when inclement weather, including rain or strong winds, will affect the stabilizing operation. Joint sand stabilizer shall not be applied if temperatures will fall below 45° Fahrenheit during the application or curing time of the stabilizer. If the pavement has become saturated with water, work shall not commence until the joint sand has dried out sufficiently to allow for proper penetration of the stabilizer. In extremely dry, hot conditions, when midday temperatures rise above 90° Fahrenheit, it may be necessary to adjust the application methods to retard drying and facilitate the proper spreading of the stabilizer. If these circumstances apply, consult with the Engineer before proceeding with stabilization operation. All areas treated with sand joint stabilizer shall be protected from rain or moisture until stabilizer is dry and should not be trafficked for a minimum of 24 hours after completion of the stabilization operation.

Method of Measurement. Paver Blocks, Special will be measured for payment in square feet of paver fields in place.

Basis of Payment. This work shall be paid for at the contract unit price per square foot for PAVER BLOCKS, SPECIAL, which price shall include all materials, labor, and equipment necessary to complete the work as described and as shown on the details in the plans.

Sign Panel – Type AZ Reflectorized Sheeting

Description. This work shall consist of furnishing sign panels, complete with reflectorized sign faces and legends, and installing them on previously erected sign supports, sign structures, traffic signal standards, light standards, concrete surface, telescoping steel sign supports or dual adjustable angle sign support brackets.

Materials: Materials shall be as specified in Table AZ Sheeting of the BDE Special Provision "Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs" included herein. In addition, all sign panels shall be at least 0.080 inches thick. All process paste and clear coating, where recommended by the manufacturer shall be in accordance with the sheeting manufacturer's recommendation.

Installation Requirements: Sign panels shall be installed using all required supporting channels, brackets and mounting hardware in accordance with the details shown in the plans or as directed by the Engineer. Nylon flat washers shall be used and tightened from behind to prevent damage to sign face reflective sheeting.

Following the completion of the sign installation, the protrusion of the 5/16" diameter stainless steel, zinc or cadmium plated steel hex bolt on the back of the installation shall be bent to prohibit its removal.

Method of Measurement: Sign panels shall be measured for payment in square meters (square feet). The area used for measurement shall be the area of the smallest rectangle that will circumscribe each individual sign panel with the exception of the NO PASSING ZONE sign, W14-3, which shall be the actual sign face area.

Basis of Payment: The work shall be paid for at the contract unit price per square meter (square foot) for SIGN PANEL - TYPE AZ REFLECTORIZED SHEETING, which price shall include furnishing the sign, complete with required supporting channels, brackets and mounting hardware, installing it on previously erected sign support(s), sign structures, traffic signal standard, light standard, concrete surface, telescoping steel sign support or dual adjustable angle sign support.

Brick Paver Crosswalk

Description. This work shall consist of furnishing all materials, labor and equipment necessary to install brick paver crosswalks at locations and in accordance with the details included in the plans and as directed by the Engineer.

Materials. The concrete base shall comply with the requirements of Section 1020 of the Standard Specifications for Class SI Concrete. The paving bricks shall be UNILOCK, of the type, size and color shown on the paver detail or approved equal. The paving bricks shall be of the nominal sizes, shapes, and colors shown on the plans. A sample of the bricks to be used shall be submitted to the Engineer for approval of the size, shape, and color. The pavers shall meet the requirements set forth in ASTM C-936, "Specification of interlocking concrete paving units". Minimum average compressive strength shall be 8,500 p.s.i.; minimum average absorption rates shall be 5%; and the maximum average weight loss after 50 freeze/thaw cycles shall be 1%. The Engineer shall approve the materials and installation of the sand bedding system. The joint sand shall consist of a natural or manufactured sand conforming to ASTM C-33 for fine aggregates. Sand must be free from clay, organic matter, and other deleterious material. Mason sand will not be permitted. The joint sand stabilizer shall be SB-1370, Surebond Safebond Ecology Sealer & Joint Sand Stabilizer or approved equal.

Installation. The brick paver crosswalk shall not be installed until the Aggregate Subgrade and Hot-Mix Asphalt Binder Course have been constructed. The pavement shall be saw cut to the dimensions shown on the plans and the pavement removed to the subgrade elevation. The removal of the pavement shall be paid for separately as PAVEMENT REMOVAL. The top lift of the Aggregate Subgrade shall be repaired, as determined by the Engineer, and recompact. This work shall be included in the pay item BRICK PAVER CROSSWALK.

The concrete base pad shall include installing 6X6 - #6 welded wire fabric and placing Portland Cement Concrete slab to a minimum thickness of 6 inches as specified in the plan details. The welded wire fabric shall conform to the requirements of Article 1006.10b of the Standard Specifications. Materials shall comply with the requirements of Section 1020 and 1051 of the Standard Specifications for Class SI Concrete.

The paver bricks shall be installed after the header band and concrete base has been installed and the forms removed. The Contractor shall then place the filter fabric and sand bedding on the concrete base. The paving bricks shall be installed according to the pattern shown on the plans. Once installed, the pavers shall be compacted with a plate compactor outfitted with a rubber pad. After the first pass spread a thin, uniform layer of joint sand over the top of the pavers and compact pavers again. Sweep additional sand into joints until they are full to within 1/16" from the bevel edge of paver or the joint surface. All excess sand shall be removed from the paver surface. This process shall be repeated after 48 hours.

After all excess sand has been removed from the paver surface, the joint sand stabilizer shall be liberally and evenly applied as to coat the pavers and joints by using a low pressure regulated sprayer not to exceed 25 pounds per square inch. The joint sand stabilizer shall be applied at a coverage rate of approximately 120 SF per gallon. The excess material shall be simultaneously drawn off the surface with a soft squeegee to ensure that all joints are adequately coated and that no surplus material is left on the surface. The application of the joint sand stabilizer shall be organized in such a manner so that the operation is carried out in each area before the stabilizer has a chance to dry by doing suitable increments at a time. The work shall be undertaken when the weather is appropriate and shall cease when inclement weather, including rain or strong winds, will affect the stabilizing operation. Joint sand stabilizer shall not be applied if temperatures will fall below 45° Fahrenheit during the application or curing time of the stabilizer. If the pavement has become saturated with water, work shall not commence until the joint sand has dried out sufficiently to allow for proper penetration of the stabilizer. In extremely dry, hot conditions, when midday temperatures rise above 90° Fahrenheit, it may be necessary to adjust the application methods to retard drying and facilitate the proper spreading of the stabilizer. If these circumstances apply, consult with the Engineer before proceeding with stabilization operation. All areas treated with sand joint stabilizer shall be protected from rain or moisture until stabilizer is dry and should not be trafficked for a minimum of 24 hours after completion of the stabilization operation.

The Contractor shall be required to protect the newly installed pavers and Header Band from staining due to Prime Coat and final surfacing operations. This includes when the prime coat is applied and also from wheel traffic over the pavers. The method of protection will be determined by the Contractor and approved by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per square foot for BRICK PAVER CROSSWALK, which price shall include the concrete pavers, sand setting bed, joint sealant, filter fabric, 6" concrete bed, welded wire fabric, pvc drain pipes, and all reinforcement bars required. The concrete header bands and the removal of the existing pavement will be paid for separately.

Inlet Filter Cleaning

Description. This work shall consist of cleaning sediment from each assembled inlet filter. The Engineer will designate the need for cleaning based on the rate of debris and silt collected at each inlet filter location.

Cleaning of the inlet filter shall consist of inspecting and cleaning (includes removal and proper disposal of debris and silt that has accumulated in the filter fabric bag) by vactoring, removing and dumping or any other method approved by the Engineer.

Method of Measurement. Cleaning of the inlet filter shall be measured for payment each time that the cleaning work is performed at each of the inlet filter locations.

Basis of Payment. The work will be paid for at the contract unit price per each for INLET FILTER CLEANING, which price shall include all costs for labor, materials, equipment, and incidentals necessary to perform the work.

Bench

Description. This item shall include furnishing and installing a metal bench at locations indicated on the plan according to the details included in the plans. The bench shall be placed on a 4' x 10' concrete pad. The concrete pad shall meet the specifications for PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH, SPECIAL. The bench shall be fastened to the concrete pad using stainless steel anchor bolts approved by the Engineer. This work shall be included in this item.

The bench shall be a Landscape Forms, Scarborough Bench, backed, woven metal, 6' long. The color of the bench shall be custom RAL powdercoat, dark green. The Contractor shall supply a 4" square paint chip sample for color approval purposes.

Basis of Payment. This work shall be paid for at the contract unit price per each for BENCH. The concrete pad shall be paid for separately as PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL.

Storm Sewers, Water Main Requirements

Description. This work shall consist of the installation of watermain quality pipe in areas where the storm sewer line crosses above the watermain. All work shall be performed in accordance with Section 550 of the Standard Specifications and Section 40 of the Water and Sewer Specifications.

Materials. All pipe materials shall conform to Section 40-2 of the Water and Sewer Specifications, except PVC pipe will not be allowed. Ductile iron pipe shall meet the minimum requirements of Thickness Class 50. The materials shall be approved by the Engineer prior to their installation. The watermain quality pipe shall be connected to the storm sewer pipe on both ends by use of non-shear mission couplings with stainless steel bands or a method approved by the Engineer. The cost of these connections shall be included in the cost of STORM SEWERS, (WATER MAIN REQUIREMENTS).

Basis of Payment. This work shall be measured and paid for at the contract unit price per foot of the size and type specified for STORM SEWERS, (WATER MAIN REQUIREMENTS) which price shall include all labor, equipment, and materials necessary to perform said work.

Water Main Fittings

Description. This work shall consist of furnishing and installing all tees, wyes, crosses, bends, plugs and reducers necessary to complete the water main installation as shown on the plans. It shall be done in accordance with the applicable portions of Section 46 of the Water and Sewer Specifications and the following.

Materials. Fittings shall be ductile iron meeting requirements of ANSI/AWWA C153/A21.10 and ANSI/AWWA C111/A21.11.

Construction Requirements. All fittings shall be installed using "cor-ten" bolts. Testing and disinfecting of fittings shall be as specified elsewhere herein. Any fittings not shown on the plans, but

which in the opinion of the Engineer, are necessary, will also be measured for payment. The Contractor will be required to maintain a list of all items used and provide an invoiced weight for payment purposes.

Method of Measurement. Water main fittings will be measured by weight in pounds of actual fittings installed including glands, gaskets and bolts. In lieu of weighing the fittings at the job site, the fittings may be delivered with a letter from the manufacturer certifying the weight of each type and size of fitting, subject to the review of the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per pound for WATER MAIN FITTINGS, which price shall be payment in full for all labor, equipment, and material, including testing and disinfecting, to complete the work as specified herein.

Drill and Grout #6 Tie Bars

This item shall consist of furnishing and installing tie bars at locations where proposed concrete base, curb and gutter or median abuts existing concrete pavement, at locations shown on the plans and/or as directed by the Engineer.

The bars shall be #6 epoxy-coated, 24" long, conforming to Article 1006.06 of the "Standard Specifications" for dowel rods. The grout shall be either as specified in Article 1024.01 of the "Standard Specifications" or one of the approved chemical adhesives as listed by the I.D.O.T. Bureau of Materials and Physical Research, except that epoxy adhesive will not be allowed.

The bars shall be located on 30" centers. Individual bar locations shall be shifted at least 5 inches away from existing cracks, joints or unsound concrete. Holes for the bars shall be drilled with equipment suitable for this purpose to a diameter large enough to allow grouting around the bar. The grout shall be allowed to cure before the new abutting concrete is poured.

Basis of Payment. This work will be paid for at the contract unit price each for DRILL AND GROUT #6 TIE BARS.

Sanitary Manholes to be Adjusted

This work shall consist of adjusting existing sanitary manholes at locations indicated on the plans. This work shall be performed in accordance with Section 602. of the Standard Specifications with the following addition:

A new external chimney seal which fully encompasses the rings and castings shall be installed after the frame has been adjusted to the final elevation. The Contractor shall obtain the Engineer's approval of the chimney seal prior to its installation.

Basis of Payment. This work shall be measured and paid for at the contract unit price per each for SANITARY MANHOLES TO BE ADJUSTED which price shall include all labor, equipment, and materials necessary to perform said work.

Remove Existing Water Valve

Description. This work shall consist of the removal and disposal of existing water valves at locations shown on the plans or as directed by the Engineer. The Engineer shall approve all locations of removal prior to the start of this work by the Contractor. All water in the valve vault, including storm water and water from the shut-down mains that enters the valve vault, shall be pumped out by the Contractor.

Basis of Payment. This work shall be paid for at the contract unit price each for REMOVE EXISTING WATER VALVE, regardless of the size of the valve, which price shall include all labor, equipment, disposal of the valve, dewatering of valve vault, and all materials necessary to complete the work as specified herein.

Sediment Control, Silt Fence

This Special Provision revises Section 280 and Section 1080 of the Standard Specifications for Road and Bridge Construction to eliminate the use of Perimeter Erosion Barrier and create two new items, one for Sediment Control, Silt Fence, and another for Sediment Control, Silt Fence Maintenance.

280.02 Materials. Revise Article 280.02 (f) to read:

“(f) Silt FenceArticle 1080.02”

1080.02 Geotextile Fabric. Add the following to Article 1080.02:

“Sediment Control, Silt Fence fabric shall conform to the specifications of AASHTO M288-00 for Temporary Silt Fence, < 50% elongation, unsupported. This fabric shall be 90 cm (36 in) in width.

Certification. The manufacturer shall furnish a certification with each shipment of silt fence material, stating the amount of product furnished, and that the material complies with these requirements.

Sediment Control, Silt Fence support posts shall be of 5x5 cm (2x2 in) nominal hardwood, a minimum of 1.2 m (48 in) long.”

280.04 Temporary Erosion Control Systems. Delete Article 280.04 (b) and replace with:

“(b) Sediment Control, Silt Fence. This silt fence shall consist of a continuous silt fence adjacent to an area of construction to intercept sheet flow of water borne silt and sediment, and prevent it from leaving the area of construction.

The silt fence shall be supported on hardwood posts spaced on a maximum of 2.4 m (8 ft) centers. The bottom of the fabric shall be installed in a backfilled and compacted trench a minimum of 150 mm (6 in) deep and securely attached to the hardwood post by a method approved by the Engineer. The minimum height above ground for all silt fence shall be 760 mm (30 in).”

280.05 Maintenance. Add the following to Article 280.05:

“Sediment Control, Silt Fence Maintenance shall consist of maintaining silt fence that has fallen down or become ineffective as a result of natural forces. This work shall include the removal of sediment buildup

from behind the silt fence when the sediment has reached a level of half the above ground height of the fence, or as directed by the Engineer.

Silt fence damaged by the Contractor's operations or negligence shall be repaired at the Contractor's expense, or as directed by the Engineer."

280.06 Method of Measurement. Revise Article 280.06 (c) to read:

"(c) Sediment Control, Silt Fence. This work will be measured for payment in meters (feet) in place and removed. Silt fence designated not to be removed, by either the plans or the Engineer, will be measured for payment by this item also.

Sediment Control, Silt Fence Maintenance. This work will be measured for payment, each incident, in meters (feet) of silt fence cleaned, reerected, or otherwise maintained."

280.07 Basis of Payment. Revise Article 280.07 (c) to read:

"(c) Sediment Control, Silt Fence. This work will be paid for at the contract unit price per meter (feet) for SEDIMENT CONTROL, SILT FENCE.

Sediment Control, Silt Fence Maintenance. This work will be paid for at the contract unit price per meter (feet) for SEDIMENT CONTROL, SILT FENCE MAINTENANCE."

Irrigation System

This item of work shall consist of providing a design and shop drawings to the Engineer and the Village, as well as all labor, material, equipment, permits and services required to construct the approved shop drawings in accordance with sections 561, 562, 563, and 565 of the Standard Specifications and the Standard Construction Details, except as herein modified. The areas to be irrigated are shown in the Contract Plans. The irrigation systems to be installed shall consist of drip irrigation only.

Codes and Standards

The following Codes, Regulations, Reference Standards, and Specifications apply to work included in this section: ASTM: D2241, D2464, D2466, D2564, and D855. Unless otherwise noted on the plans, all materials shall be new and unused.

Design

The design and required shop drawings shall be completed, reviewed, and signed by a **Licensed Professional Engineer or a Licensed Plumber or a Licensed Irrigation Company** with at least five (5) years experience in the installation of commercial irrigation systems. The design will follow these guidelines:

1. Run Times: The system must achieve 1 1/2" of precipitation per week given 3-8 hour watering run times per week. (When drip is required the run times may be increased 3-24 hour watering run times per week).
2. Wiring size: calculations must be made to account for voltage drops and any splicing must be reflected on the shop drawings.

3. Pump sizes: must be the most efficient.

Submittals

The Contractor shall submit shop drawings or manufacturer's "cut sheet" for each type of pipe, controller, valves, check valve assemblies, valve boxes, wire, conduit, fittings, drip lines and all other types of fixtures and equipment which he proposes to install on the job. The submittal shall include the manufacturer's name, model number, equipment capacity, and manufacturer's installation recommendation, if applicable, for each proposed item.

No partial submittal will be accepted and submittals shall be neatly bound into a brochure and logically organized. After the submittal has been approved, substitutions will not be allowed except by written consent of the Engineer. Shop drawings shall include dimensions, elevations, construction details, arrangements, and capacity of equipment, as well as manufacturer's installation recommendations.

"Approved Equal" Substitutions

Several items in this section and on the plans are specified by a manufacturer's brand name and catalog number, followed by the phrase "or approved equal". This is not intended to unduly restrict competitive procurements or bidding, but is done to assure a minimum standard of quality which is believed to be best for the item specified. For maintenance purposes, the Village of Schaumburg will require the use of Rain Bird spray heads, valves, and controllers. The Village Engineer shall be the sole determinant as to whether a substitution will be allowed.

Codes/Permits

All work under this section shall comply with the provisions of these Specifications, as illustrated on the accompanying drawings, or as directed by the Engineer and shall satisfy all applicable local codes, ordinances, or regulations of the governing bodies and all authorities having jurisdiction over this Project.

Installation of equipment and materials shall be done in accordance with requirements of the National Electrical Code, Village of Schaumburg Plumbing Code, and standard plumbing procedures. The drawings and these Specifications are intended to comply with all the necessary rules and regulations; however, some discrepancies may occur. The Contractor shall immediately notify the Engineer in writing of the discrepancies and apply for an interpretation. Should the discovery and notification occur after the execution of a Contract, any additional work required for compliance with the regulations shall be paid for as covered by these Contract documents.

The Contractor shall give all necessary notices, obtain all permits, and pay all costs in connection with his work; file with all governmental departments having jurisdiction; obtain all required certificates of inspection for his work and deliver to the Engineer.

The Contractor shall include in the work any labor, materials, services, apparatus, or drawings in order to comply with all applicable laws, ordinances, rules, and regulations whether or not shown on the drawings and/or specified.

Existing Utilities Location and Elevation

Locations and elevations of various utilities included with the scope of this work have been obtained from the most reliable sources available and should serve as a general guide without guarantee of accuracy. The Contractor shall examine the site and verify to his own satisfaction the locations and elevation of all utilities and availability of utilities and services required. The Contractor shall inform himself as to their relation to the work and the submission of bids shall be deemed as evidence thereof.

The Contractor shall repair, at his own expense, and to the satisfaction of the Engineer for damage to any utility shown or not shown on the plans.

Should utilities not shown on the plans be found during excavations, the Contractor shall promptly notify the Engineer for instructions as to further action.

The Contractor shall make necessary adjustments in the layout as may be required to connect to existing stub outs, should such stub outs not be located exactly as shown and as may be required to work around existing work, at no increase in cost to the Owner. All such work will be recorded on record drawings and turned over to the Engineer prior to final acceptance.

Record Drawings

Record dimensioned locations and depths for each of the following:

1. Point of connection.
2. Sprinkler pressure line routing (provide dimensions for each 100 lineal feet (maximum) along each routing, and for each change in directions).
3. Gate valves.
4. Sprinkler control valves (buried only).
5. Control wire routing.
6. Other related items as may be directed by the Engineer.

Locate all dimensions from 2 permanent points (buildings, monuments, sidewalks, curbs, or pavements). Record all changes which are made from the Contract drawings, including changes in the pressure and non pressure lines. Record all required information on a set of blackline prints of the Contract drawings. Do not use these prints for any other purpose.

Maintain information daily. Keep Contract drawings at the work site at all times and available for review by the Engineer.

When record drawings have been approved by the Engineer, transfer all information to a set of reproducible mylars using permanent India ink. Changes using ballpoint pen are not acceptable. Make dimensions accurately at the same scale used on original drawings, or larger. If photo reduction is required to facilitate controller chart housing, notes or dimension must be a minimum 1/4" in size.

Reproducible mylars will be furnished by the Engineer at cost for printing and handling.

Controller Charts

Do not prepare charts until record drawings have been approved by the Engineer. Provide 1 controller chart for each automatic controller installed. Chart may be a reproduction of the record drawing, if the scale permits fitting the controller door. If photo reduction prints are required, keep reduction to maximum size possible to retain full legibility.

Chart shall be blackline print of the actual system, showing the area covered by that controller.

Identify the area of coverage of each remote control valve, using a distinctly different pastel color, drawn over the entire area of coverage.

Following approval of charts by the Engineer, they shall be hermetically sealed between 2 layers of 20

mil. thick plastic sheet. Charts must be completed and approved prior to final acceptance of the irrigation system.

Operating and Maintenance Manuals

Provide individual bound manuals detailing operating and maintenance requirements for irrigation systems. Manuals shall be delivered to the Engineer no later than 10 days prior to completion of work. Provide descriptions of all installed materials and systems in sufficient detail to permit maintenance personnel to understand, operate, and maintain the equipment.

Provide the following in each manual:

1. Index sheet, stating Irrigation Contractor's name, address, telephone number, and name of person to contact.
2. Equipment list providing the following for each item:
 - a. Manufacturer's name.
 - b. Make and model number.
 - c. Name and address of local manufacturer's representative.
 - d. Spare parts list in detail.
 - e. Detailed operating and maintenance instructions of major equipment.

Checklist

Provide a signed and dated checklist, and deliver to the Engineer prior to final acceptance of the work.

Use the following format:

1. Plumbing permits: if none required, so note.
2. Material approvals: approved by and date.
3. Pressure line tests: by whom and date.
4. Record Drawings: received by and date.
5. Controller charts: received by and date.
6. Materials furnished: received by and date.
7. Operation and maintenance manuals: received by and date.
8. System and equipment operation instructions: received by and date.
9. Manufacturer's warranties if required: received by and date.
10. Lowering of heads in lawn areas: if incomplete, so state.

Excavation and Trenching

The Contractor shall perform all excavation to the depth indicated in these Specifications and Contract drawings. The banks of trenches shall be kept as nearly vertical as practicable. Trenches shall be wide enough to allow a minimum of 4" between parallel pipelines or electrical wiring. Where rock excavation is required, or where stones are encountered in the bottom of the trench that would create a concentrated pressure on the pipe, the rock or stones shall be removed to a depth of 6" minimum below the trench depth indicated. The overdepth rock excavation and all excess trench excavation shall be backfilled with loose, moist earth or sand, thoroughly tamped. Whenever wet or otherwise unstable soil that is incapable of properly supporting the pipe is encountered in the trench bottom, such shall be removed to a depth and length required, and the trench backfilled to trench bottom grade as hereinafter specified, with course sand, fine gravel, or other suitable material.

Bottom of trench grade shall be continued past ground surface deviations to avoid air pockets and low collection points in the line. The minimum cover specifications shall govern regardless of variations in ground surface profile and the occasional deeper excavation required at banks and other field conditions. Excavation shall be such that a uniform trench grade variation will occur in all cases where variations are necessary.

Trench excavation shall comprise the satisfactory removal and disposition of all materials, and shall include all shoring and sheeting required to protect the excavation and to safeguard employees.

During excavation, material suitable for backfilling shall be stockpiled in an orderly manner a sufficient distance back from edge of trenches to avoid overloading and prevent slides or cave-ins. Material unsuitable for backfilling shall be wasted as directed by the Engineer. When excavated material is of a rocky nature and the topsoil or any other layer of excavated material is suitable for pipe bedding and backfill in the vicinity of the pipe, such material shall be separately stockpiled for use in such bedding and pipe backfill operations, unless satisfactory imported material is used. All excavations and backfill shall be unclassified and covered in the basic bid. No additional compensation shall be allowed for rock encountered.

Restore all surfaces, existing underground installations, etc., damaged or cut as a result of the excavations to their original conditions in a manner acceptable to the Village Engineer.

Hydrostatic Tests

Pressure Test: After the pipe is laid, the joints completed, and the trench partially backfilled, leaving the joints exposed for examination, the newly laid piping or any valved section of main pressure line piping shall, unless otherwise specified, be subjected for 4 hours to a hydrostatic pressure test of normal city water pressure. Each valve shall be opened and closed during the test. Enclosed pipe, joints, fittings, and valves shall be carefully examined during the partially open trench test. Joints showing visible leakage shall be replaced or remade, as necessary. Cracked or defective pipe, joints, fittings, or valves discovered in consequence of this pressure test shall be repeated until the test results are satisfactory. All replacement and repair shall be at Contractor's cost.

A test will be taken of the static pressure on the upstream and downstream sides of the RPZ valve. A pressure reading is to be taken at each zone while each zone is running. The flow rate is to be recorded from the water meter at each running zone for a 5 minute period. This information shall be recorded on the As-Built drawings.

Water For Testing

Unless noted otherwise on the plans or elsewhere, furnish all water necessary for testing, flushing, and jetting.

Backfill and Compaction

After system is operating and required tests and inspections have been made, the irrigation trenches shall be carefully backfilled with the excavated materials approved for backfilling, consisting of earth, loam, sandy clay, sand, gravel, soft shale, or other approved materials, free from large clods of earth or stone. Rock, broken concrete, or pavement, and large boulders shall not be used as backfill material. The backfill shall be thoroughly compacted and evened with the adjacent soil level.

Compact trenches in areas to be planted by thoroughly flooding the backfill. Compact all other areas by flooding or hand tamping. The jetting process may be used in areas when flooding. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to a minimum of 90% density. Any trenches improperly backfilled, or where settlement occurs, shall be reopened to the depth required for compaction, then refilled and compacted with the surface restored to the required grade and left in a completed surface condition as described above.

Specifically tamp backfill under heads and around the flange of heads for 1' by a suitable means after trench backfill has dried from flooding to prevent heads loosening in the ground.

Irrigation pipe trenches made within 2' of pavement or in the shoulder pavement shall be backfilled with granular material and compacted to the satisfaction of the Engineer. All labor and material necessary to complete the backfilling operations shall be considered included in the Contract Unit Price for IRRIGATION SYSTEM.

Final Adjustment

After installation has been completed, make final adjustment of sprinkler system prior to Engineer's final inspection. Completely flush system to remove debris from lines by removing nozzle from heads on ends of lines and turning on system. Check each section for operating pressure and balance to other sections by use of flow adjustment on top of each valve. Check nozzling for proper coverage. Prevailing wind conditions may indicate that arc or angle of spray should be other than as shown on drawings. In this case, change nozzles to provide correct coverage and furnish record data to the Engineer with each change.

Valve and Valve Box Placement

All manual, electric, and quick coupling valves shall be in boxes, and shall be set with a minimum of 6" of space between their top surface and the bottom of the valve box. Valves shall be fully opened and fully closed to ensure that all parts are in operating condition. Valve boxes shall be set plumb, vertical, and concentric with the valve stem. Any valve box which has moved from this required position so as to prevent the use of the operating wheel of the valve shall be reset by the Contractor at his own expense. A minimum of 9" of gravel shall be placed below all valve boxes. The cost of the gravel shall be included in the cost of the valve box being installed. All valve boxes not specifically called out on the plans shall be considered included in the cost of IRRIGATION SYSTEM.

Cleanup

The work site shall be thoroughly cleaned of all waste materials and all unused or salvaged materials, equipment, tools, etc. After completion of the work, areas disturbed shall be leveled and the work site shall be raked clean and left in an orderly condition.

Polyvinyl Chloride (PVC) Pipe

PVC pipe shall be manufactured in accordance with ASTM Standards noted herein.

- Marking and Identification: PVC pipe shall be continuously and permanently marked with following information: Manufacturer's name, size, type of pipe, and material, SDR number, Product Standard number, and the NSF (National Sanitation Foundation) Seal.
- PVC pipe fittings: Shall be of the same material as the PVC pipe specified and compatible with PVC pipe furnished. Solvent weld type shall be Schedule 40.
- Lateral PVC Pipe: Shall be Class 200 solvent weld, SDR21, PS 2270 for all sizes 3/4 - 2".
- Mainline PVC Pipe: Shall be SDR 80 for all sizes 3" and greater.
- Flexible PVC Risers (Nipples): All flexible PVC nipples shall be made from virgin PVC material, and shall comply with ASTM D2287, shall be tested at 200 P.S.I. static pressure for 2 hours and have a quick burst rating of a minimum 400 P.S.I. Flexible PVC pipe nipples shall be factory assembled only.

Design Pressure: This irrigation system shall be designed to operate with a minimum static inlet water pressure of 50 psi at the point of connection. The Contractor shall take a pressure reading prior to beginning construction. If the pressure reading is less than above, the Contractor shall notify the Engineer.

Contractor Responsibility: The Contractor shall not willfully install the irrigation system as shown on the shop drawings when it is obvious in the field that obstructions, grade differences or discrepancies in equipment usage, area dimensions, or water pressure exist that might not have been considered in the engineering. Such obstructions or differences shall be brought to the attention of the Engineer in writing. In the event this notification is not performed, the Contractor shall assume full responsibility for any revision necessary.

Piping Layout: Piping layout is diagrammatic. Route piping around existing trees and shrubs in such a manner as to avoid damage to plantings. Do not dig within the ball of newly planted trees or shrubs.

In areas where trees are present, trenches will be adjusted on site to provide a minimum clearance of 4 times the trunk diameter of the tree (at its base) between any tree and any trench.

All material and equipment shall be delivered to the worksite in unbroken reels, cartons, or other packaging to demonstrate that such material is new and of a quality and grade in keeping with the intent of these specifications.

Pipe Installation

- **Sprinkler Mains:** Sprinkler mains are that portion of piping from water source to electric valves. This portion of piping is subject to surges since it is a closed portion of the sprinkler system. Sprinkler mains shall be installed in a trench with a minimum of 18" of cover.

- **Lateral Piping:** Lateral piping is that portion of piping from electrical valve to drip lines. This portion of piping is not subject to surges since it is an "open end" portion of the sprinkler system. Lateral piping shall be installed in a trench with a minimum of 12" of cover.

Where the Contract plans call for continuous irrigation pipe to be placed beneath the roadway or sidewalk, the Contractor shall furnish and install by directional bore, a continuous PVC Schedule 40 pipe or IDOT approved jointed pipe under the roadway structure. The pipe shall be a minimum of 30" below the surface of the pavement. The Contractor shall determine the required size of pipe. The irrigation pipe shall also be approved by the Engineer prior to installation.

Remove lumber, rubbish, and rocks from trenches. Provide firm, uniform bearing for entire length of each pipeline to prevent uneven settlement. Wedging or blocking of pipe will not be permitted. Remove foreign matter or dirt from inside of pipe before welding, and keep piping clean during and after laying pipe.

PVC pipe shall not be installed where there is water in the trench, nor shall PVC pipe be laid when temperature is 40° F or below or when rain is imminent. PVC pipe will expand and contract as the temperature changes. Therefore, pipe shall be snaked from side to side of trench bottom to allow for expansion and contraction.

PVC Pipe and Fitting Assembly

- **Solvent:** Use only solvent recommended by manufacturer to make solvent welded joints following standards noted herein. Thoroughly clean pipe and fittings of dirt, dust, and moisture with an approved PVC primer before applying solvent.

- **PVC to Metal Connection:** Work metal connections first. Use a non hardening pipe dope such as Permatex No. 2 or "Teflon" tape on threaded PVC to metal joints. Use only light wrench pressure.

- Threaded PVC Connections: Where required, use threaded PVC adapters into which pipe may be welded.

Installation Main & Lateral Piping

All sprinkler main lines shall be installed by open trench method using either a chain type trencher or hand excavated. Trenches shall be excavated so as to provide sufficient depth and width to permit proper handling and installation of pipe and fittings. Excavate the trench deep enough to provide a minimum of 18" of cover over the pipe. Ensure that the bottom of the trench is clean and smooth with all rock, loose soil and organic matter removed. Trench bottom must provide a smooth and continuous bearing surface to support the pipe.

When preparing pipe for installation, pipe shall be cut clean and square with all burrs removed prior to solvent welding. Pipe must be free of all dust, dirt, moisture, grease, oil or any other foreign material. Pipe shall be joined by solvent welding method using a quality primer and cement applied according to the manufacturer's recommendation. Excess solvent shall be wiped clean from the pipe and fittings.

Sprinkler lateral piping may be installed by either open trench method or with an approved "vibratory plow". Where the open trench method is employed, the above specifications that in both the "open trench" method and the "vibratory plow" method, the minimum depth of cover for the lateral lines shall be 18".

Where the "vibratory plow" method is used, the "mole" or "bullet" of the plow that precedes the pipe and is used to form the opening for the pipe shall not be less than 1" larger diameter than the outside diameter of the pipe. Starting and finishing holes shall be of sufficient size to allow for proper connection of the required fittings.

For polyethylene pipe, the insert fittings are to be clamped with stainless steel clamps. All fittings are to be double clamped securely over the barbs on fittings.

Identification

Detectable Warning Tape will be over all pipes. The tape will be placed so that it is 6" above the top of the pipe. Polyethylene film warning tape manufactured for marking and identifying underground utilities, 4" wide and 5 mils thick minimum continuously inscribed with "Irrigation" detectable by metal detector when tape is buried up to 2'6" deep.

Electric Remote Control Valve

Electric remote control valves shall have plastic bodies and covers and shall be globe type diaphragm valves of normally closed design. Electric remote control valves shall be Rain Bird PEB series electric valves, per Village standards. Electric valves operated by the TBOS controller shall be installed with the TBOS latching solenoid.

Operation shall be accomplished by means of integrally mounted 9V TBOS latching AC solenoid. Solenoid coil shall be potted in epoxy resin within a plastic coated stainless steel housing. Solenoids shall be completely waterproof, suitable for direct underground burial. A flow stem adjustment shall be included in each valve.

Electric remote control valves shall be located and sized as shown on the plans. All electrical connections shall be made when the weather is dry with connection kits as specified, in strict accordance

with manufacturer's recommended procedures. All remote control valves shall be installed in a horizontal position, in accordance to the manufacturer's published installation instructions.

Electric Controller

The electric irrigation controllers shall be capable of operating the number of stations as indicated on the drawings. The system is designed to operate only 1 section valve at a time, unless otherwise noted. Electric controllers shall be Rain Bird Control Units with latching solenoids and rain shutoffs, per Village standards. Power source shall be a standard 9V alkaline battery for the TBOS controller. The 9V battery shall be furnished by the Contractor. Operation of the controller shall be full automatic, incorporating 1- 24 hour clock and 14 day calendar per controlled number of electric valves shown on the plan to start the sprinkling cycle any hour or hours of the day or night of any day or days over a repeating 14 day period. The controller shall be capable of repeating watering cycles as required with a maximum delay between the ending of 1 cycle and the beginning of the next not to exceed 2 hours. Control shall provide optional semiautomatic operation whereby the automatic cycle may be started independent of the clock and manual operation whereby any station may be operated by hand independent of all timing mechanism. The choice of automatic day or hour programming shall be available to the operator on the face of the control panel without the use of tools. The automatic controller shall be equipped with rain proof housing.

The system is designed to operate only 1 section at a time, unless otherwise noted on the plans in strict accordance with the manufacturer's published installation instructions.

The controller shall be mounted on the side of the valve box so that it is above the expected water level. The controller and all associated valves shall be placed in the same vault.

Multiple controllers may be required for each irrigation system. Additional controllers shall be included in the cost of IRRIGATION SYSTEM.

Low Voltage Wire

All wire shall be single strand solid copper, minimum 14 gauge with type UF insulation which is Underwriters Laboratory approved for direct underground burial when used in a National Electrical Code Class 2 Circuit (30 volts or less) as per Articles 725 and 300. Voltage drop shall be taken into consideration.

All wire shall be color coded so that the common wire shall have white insulation and the signal wires shall have red insulation. All wire connectors shall have a 2 piece PVC housing which, when filled with resin epoxy and pressed together, forms a permanent, 1 piece, moisture proof wire splice. All connectors shall be UL listed, rated 600 volt, for PVC insulated wire. No wire splices shall be buried.

Low voltage wire shall be installed between the irrigation controllers and the electric valves. It shall be the responsibility of the Contractor to furnish and install the proper size wire with the required number of conductors on each of the low voltage circuits from the master control center to the various electric remote control valves. Consideration shall be given to each circuit for allowance of voltage drop and economy consistent with accepted practices of electrical installation.

All control wire less than 500' in length shall be continuous without splices or joints from the controller to the valves. Connections to the electric valves shall be made within 18" of the valve using connectors specified, unless otherwise approved by the Engineer in writing.

All control wires shall be installed at least 18" deep. The Contractor shall obtain the Engineer's approval for wire routing when installed in a separate ditch. Control wires may be installed in a common ditch with piping; however, wires must be installed a minimum of 4" below or to 1 side of piping. All wire passing under existing or future paving, sidewalk, construction, etc., shall be encased in PVC Schedule 40 conduit extending at least 2' beyond edges of paving, sidewalks, or construction.

Field Transmitter

The field transmitter shall be a handheld remote transmitting unit capable of operating the number and kind of stations indicated. The transmitter shall be Rain Bird TBOS, per Village standards.

Two (2) hand-held controllers will be provided for this project.

Valve Boxes

Valve Access Boxes shall be constructed of a combination of polyolefin and fibrous inorganic components (Superflexon Plastic) which is chemically inert and normally unaffected by moisture, corrosion and the effects of temperature change. Valve Boxes shall have a tensile strength of 3,400 psi. For the automatic control valves, the Valve Box Base shall be #170101 and Valve Box Lid shall be #173145 as manufactured by Armor Access Boxes or approved equal. The lids and boxes will be green for turfed areas and brown for mulched areas.

Installation of Valve Boxes

Each automatic control valve shall be installed in a valve box. A minimum of two valve boxes shall be stacked. The valve boxes shall be installed so that the valve is centered in the box allowing sufficient room for servicing of the valves. Clearance between the highest part of the valve and the bottom of the valve box lid shall be 2" minimum. The lid must not be too deep for convenient service. Clearance between the top of the piping and the bottom of the valve box shall be a minimum of 1". The valve box must rest on the pipe. Each valve box is to be installed flush and plumb with the existing soil grade. As a part of the valve box installation 3 to 4 inches of ½ to 1 inch stone, free of fines should be placed so that the top of the stone is 2" below the valve.

Drip Lines

The drip system shall include all necessary components for a drip system such as, filter for solenoid, drip tubing, check valves, air vacuum relief valve, lateral piping, line flush valve and fittings.

The drip tubing is to have a root barrier which makes it resistant to root intrusion. The drip tubing is to be Netafim Techline pipe, or approved equal, with a dripper flow rate of 0.9 GPH part # TLDL 9-1210 with 12" on center spacing for the drippers.

Drip Lines Installation

The drip tubing will be installed in rows of 12" to 16". The rows closest to the curb of the landscaped median shall be 2" to 4" from the edge of the curb. The drip tubing shall be laid on the finished grade of the soil mixture. The drip tubing must be secured a minimum of every 3 feet with Techline Staples TLS6 or approved equal. The drip tubing must be installed in a straight line in the same direction as the landscaped median. If the drip tubing needs to go around a plant or obstacle, the tubing must return to its original line as soon as possible. The installation must be complete prior to mulch installation.

When possible the system shall use a center feed layout. The drip tubing shall feed from a PVC or Polyethylene supply header in a grid layout. The exhaust header and the supply header shall form a continuous loop with PVC or Polyethylene piping. The maximum distance between each supply header and exhaust header is 70 feet. The furthest distance in each direction of the solenoid valve shall contain

a Netafim Line Flushing Valve, model TLFV-1, or approved equal. The flush valve will be below grade in a valve box with a sump. A filter shall be installed down stream of the solenoid valve with the appropriate filter mesh in accordance with Techline design manual. An air vacuum relief valve is to be installed at the highest points of each zone. The air vacuum relief valve is to be installed in a valve box. A single micro-spray head is required for each zone. The spray head is required to indicate that a zone is on and working. It should not be used as a main watering source for an area.

In situations where the slope is $\geq 4\%$ install the drip tubing perpendicular to the slope. Check valves must be installed to prevent water from draining to the lower elevations.

Demonstration

Demonstrate to Owner's maintenance personnel operation of equipment, sprinklers, specialties, and accessories. Review operating and maintenance information. Provide 7 days notice to all parties in advance of each demonstration.

Method of Measurement

IRRIGATION SYSTEM will be measured per square yard of planter area.

Basis of Payment

This work will be paid for at the contract unit price per square yard of planted area for IRRIGATION SYSTEM which price shall be payment in full for all labor, material, equipment, and services necessary for providing the landscape irrigation systems in a serviceable, fully operational manner, including, but not limited to, excavation and backfilling, furnishing and installing the piping system including drip irrigation lines, micro-spray heads, wiring, solenoid control valves, isolation valves, valve boxes and automatic controls, electrical connections, system testing and maintenance, owner personnel training, piping and equipment identification, plumbing permits and inspection fees, valve tags and charts, and all supports, sleeves, fittings, valves, meters, and accessories.

When the irrigation installation work is performed by a subcontractor, this delay in acceptance shall not delay acceptance of the entire project and final payment due if the Contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the irrigation quantities listed in the contract, multiplied by their contract unit prices. The bond shall be executed prior to acceptance and final payment of the non-irrigation items and shall be in full force and effect until final inspection and acceptance of all irrigation including replacement parts. Execution of the third party bond shall be the option of the prime Contractor.

Aggregate Surface Course for Temporary Access

Revise Article 402.10 of the Standard Specifications to read:

"402.10 For Temporary Access. The contractor shall construct and maintain aggregate surface course for temporary access to private entrances, commercial entrances and roads according to Article 402.07 and as directed by the Engineer.

The aggregate surface course shall be constructed to the dimensions and grades specified below, except as modified by the plans or as directed by the Engineer.

- (a) Private Entrance. The minimum width shall be 3.6 m (12 ft). The minimum compacted thickness shall be 150 mm (6 in.). The maximum grade shall be eight percent, except as required to match the existing grade.
- (b) Commercial Entrance. The minimum width shall be 7.2 m (24 ft). The minimum compacted thickness shall be 230 mm (9 in.). The maximum grade shall be six percent, except as required to match the existing grade.
- (c) Road. The minimum width shall be 7.2 m (24 ft). The minimum compacted thickness shall be 230 mm (9 in.). The grade and elevation shall be the same as the removed pavement, except as required to meet the grade of any new pavement constructed.

Maintaining the temporary access shall include relocating and/or regrading the aggregate surface course for any operation that may disturb or remove the temporary access. The same type and gradation of material used to construct the temporary access shall be used to maintain it.

When use of the temporary access is discontinued, the aggregate shall be removed and utilized in the permanent construction or disposed of according to Article 202.03.”

Add the following to Article 402.12 of the Standard Specifications:

“Aggregate surface course for temporary access will be measured for payment as each for every private entrance, commercial entrance or road constructed for the purpose of temporary access. If a residential drive and commercial entrance is to be constructed under multiple stages, the aggregate needed to construct the second or subsequent stages will not be measured for payment but shall be included in the cost per each of the type specified.”

Revise the second paragraph of Article 402.13 of the Standard Specifications to read:

“Aggregate surface course for temporary access will be paid for at the contract unit price per each for TEMPORARY ACCESS (PRIVATE ENTRANCE), TEMPORARY ACCESS (COMMERCIAL ENTRANCE) or TEMPORARY ACCESS (ROAD).

Partial payment of the each amount bid for temporary access, of the type specified, will be paid according to the following schedule:

- (a) Upon construction of the temporary access, sixty percent of the contract unit price per each, of the type constructed, will be paid.
- (b) Subject to the approval of the Engineer for the adequate maintenance and removal of the temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access.”

Concrete Header Band

Description. This work shall consist of the installation of concrete header bands on each side of the proposed brick crosswalks and concrete paver sidewalks, at the locations and in accordance with the details included in the plans.

Materials. Materials shall comply with the requirements of Section 1020 and 1051 of the Standard Specifications for Class SI Concrete.

Basis of Payment. This work will be paid for at the contract unit price per foot for CONCRETE HEADER BAND, of the width specified, which price shall include the reinforcement bars, dowel bars and joint filler at construction joints. Protective Coat applied to the tops of the bands will be paid for separately.

Inlets, Type A, Type 1 Frame, Closed Lid (Special)

Inlets, Type B, Type 1, Frame, Closed Lid (Special)

Catch Basins, Type A, 4'-Diameter, Type 1 Frame, Closed Lid (Special)

This work shall be done in accordance with the applicable portions of Section 602 except as follows:

Type 1 Frame, Closed Lid shall be in accordance with Highway Standard 604001-02 except that the height of the frame shall be 4".

Basis of Payment. This work will be paid for at the contract unit price per each for CATCH BASINS or INLETS, of the type or type and diameter specified, and with TYPE 1 FRAME, CLOSED LID (SPECIAL).

Sanitary Manholes to be Reconstructed (Special)

This work shall consist of reconstructing existing sanitary manholes at locations indicated on the plans. This work shall be performed in accordance with Section 602 of the Standard Specifications with the following addition:

A new external chimney seal which fully encompasses the rings and castings shall be installed after the frame has been adjusted to the final elevation. The Contractor shall obtain the Engineer's approval of the chimney seal prior to its installation.

The opening of the manhole shall be rotated as directed by the Engineer. The Contractor shall remove the existing manhole steps by a method approved by the Engineer. New steps meeting the requirements of Section 602.08 of the Standard Specifications shall be installed beneath the relocated opening. The Contractor shall obtain the Engineer's approval of the method for installing the steps prior to the start of this work.

Basis of Payment. When reconstruction is specified and existing frames and lids are to be used, this work shall be measured and paid for at the contract unit price per each for SANITARY MANHOLES TO BE RECONSTRUCTED (SPECIAL) which price shall include all labor, equipment, and materials, including external chimney seal and steps, necessary to perform said work. When reconstruction is specified and new frames and lids are to be used, this work shall be measured and paid for at the contract unit price per each for SANITARY MANHOLES TO BE RECONSTRUCTED (SPECIAL) WITH NEW TYPE 1 FRAME, CLOSED LID which price shall include all labor, equipment, and materials, including external chimney seal and steps, necessary to perform said work.

Vertical Identifier

Description. This item shall include all materials and labor necessary to construct, powder coat, deliver and install a welded aluminum vertical identifier, a precast concrete base, and a cast-in-place concrete foundation at the locations shown on the plans. The precast concrete base shall be manufactured by Wausau Tile or approved equal. The base shall have a sand color and weatherstone finish. The contractor shall provide a sample with the texture and color for approval by the Engineer prior to fabrication.

The vertical identifier shall be constructed of aluminum welded together per dimensions shown on the vertical identifier detail. Shop drawings and construction details of the vertical identifier and pre-cast concrete base will be required to be submitted to the Engineer for review and approval before manufacturing of the vertical identifier may begin. The "flowering vine" pattern shown in the details will require further design work by the fabricator.

All areas of the aluminum portion of the vertical identifier which are deemed inaccessible by means of welding or those areas where welding would cause unavoidable warping shall be filled using caulk to prevent water from becoming trapped and corroding adjacent exposed metal surfaces. The caulk shall not be used in place of proper welds. All metal work shall be inspected and areas to receive caulk approved by the Engineer prior to being powder coated unless specifically approved by the Engineer. The caulk material shall be Vulkem 116 by Tremco, or approved equal. The caulk material shall be installed per the manufacturer's directions. All necessary caulking shall be considered incidental to the cost of the vertical identifier.

The vertical identifier shall be powder coated. The color of the aluminum portion of the vertical identifier shall be Pantone 412C. Contractor shall supply a 4" square sample for color approval purposes.

The vertical identifier shall be carefully delivered to the site and installed in place. All transportation, excavation, installation and anchoring costs shall be considered included in the cost of the vertical identifier. Any touch-up painting deemed necessary by the Engineer shall be at the Contractor's expense. No additional compensation will be given for repainting of the vertical identifier.

The vertical identifier shall be installed on the cast-in-place concrete foundation as shown on the details. The concrete foundation shall be constructed in accordance with Section 836 of the Standard Specifications except that the cost of the foundation construction shall be included in the pay item VERTICAL IDENTIFIER.

Method of Measurement: This work will be paid for at the contract unit price per each for VERTICAL IDENTIFIER, which price shall include all materials, equipment, and labor necessary to complete the work as specified.

Welded Aluminum Trellis

Description. This item shall include all materials and labor necessary to construct, power coat, deliver and install a welded aluminum trellis and cast-in-place concrete foundations at the locations shown on the plans. The trellis shall be constructed of aluminum welded together per dimensions shown on the trellis detail. Shop drawings of the trellis and construction details will be required to be submitted to the

Engineer for review and approval before manufacturing of the trellis may begin. The "flowering vine" pattern shown in the details will require further design work by the fabricator.

All areas of the aluminum trellis which are deemed inaccessible by means of welding or those areas where welding would cause unavoidable warping shall be filled using caulk to prevent water from becoming trapped and corroding adjacent exposed metal surfaces. The caulk shall not be used in place of proper welds. All metal work shall be inspected and areas to receive caulk approved by the Engineer prior to being powder coated unless specifically approved by the Engineer. The caulk material shall be Vulkem 116 by Tremco, or approved equal. The caulk material shall be installed per the manufacturer's directions. All necessary caulking shall be considered incidental to the cost of the trellis.

The trellis shall be powder coated. The color of the aluminum portion of the vertical identifier shall be Pantone 412C. Contractor shall supply a 4" square sample for color approval purposes.

The trellis shall be carefully delivered to the site and installed in place. All transportation, excavation, installation and anchoring costs shall be considered included in the cost of the trellis. Any touch-up painting deemed necessary by the Engineer shall be at the Contractor's expense. No additional compensation will be given for repainting of the trellis.

The trellis shall be installed on the cast-in-place concrete foundation as shown on the details. The concrete foundation shall be constructed in accordance with Section 836 of the Standard Specifications except that the cost of the foundation construction shall be included in the pay item WELDED ALUMINUM TRELLIS.

Method of Measurement: This work will be paid for at the contract unit price per each for WELDED ALUMINUM TRELLIS, which price shall include all materials, equipment, and labor necessary to complete the work as specified.

Non-Pressure Connection

Description. This work shall consist of the connection of new water main and fire hydrant leads to existing water main that can be shut down. This work shall be performed in accordance with the applicable portions of Section 41 of the Water and Sewer Specifications with the following clarifications.

Materials. Water main and fitting shall conform to the special provisions for Ductile Iron Water Main and Water Main Fittings. The work includes a material allowance of 15 liner feet of ductile iron pipe (of the diameter of the existing watermain) and 500 pounds of fittings. Trench backfill shall meet the requirement for CA-6 listed in Article 1004.01.

Construction Requirements. Connections shall be accomplished by the use of mechanical joint fittings and lengths of pipe to make the most direct vertical and horizontal adjustment necessary to complete the connection. This may include cut-ins to the existing main or connections to existing valves or fittings. This work will require water to be shut off, which shall be coordinated with the Village's maintenance personnel. The new main shall be disinfected in accordance with the DUCTILE IRON WATER MAIN special provision.

Basis of Payment. This work will be measured and paid for at the contract unit price per each for NON-PRESSURE CONNECTION, which price shall include all labor, equipment, ductile iron pipe water

main (up to 15 linear feet), water main fittings (up to 500 pounds), disinfection, testing, backfill and thrust blocking required to make the connection. If the quantity allowance for ductile iron water main and/or water main fittings are exceeded, quantities in excess of the allowance will be paid for under the items for DUCTILE IRON WATER MAIN and WATER MAIN FITTINGS.

Combination Concrete Curb and Gutter, Type M-3.12

Description. This work shall consist of the construction of combination concrete curb and gutter, type M-3.12 at the locations designated on the plans in accordance with Section 508 and 606 of the Standard Specifications and the detail included in the plans.

Materials. Materials shall comply with the requirements of Section 1006, 1020 and 1051 of the Standard Specifications for Class SI concrete as herein modified: the concrete shall be "High Early Strength."

Method of Measurement. Measurement for curb and gutter shall be per foot for the actual length of curb and gutter constructed.

Basis of Payment. This work shall be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE M-3.12 which price shall include all labor, equipment, and materials necessary to perform said work.

Water Service Connection, 1 1/2"

Description. This work shall consist of installing new water service line for the irrigation system from the existing water main, including the tapping of the proposed main, installation of the corporation stop, and the length of Type K Copper Water Piping required between the proposed corporation stop and the proposed curb stop. The size of the water main to be tapped shall be verified by the Contractor. This work shall be done in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois", latest edition

Water service connections shall be Type K Copper Water Piping meeting specifications of ASTM B-88 and B-251. All taps made into cast iron watermain 4" in diameter shall incorporate an approved tapping clamp. All copper connections shall be made with flared joints. Compression type joints shall be allowed underground off the corporation stop and roadway key stop. All water services shall have a minimum of 5'6" of cover over the service. At the time of construction, all water services shall be left completely exposed until a representative of the Village of Schaumburg has inspected same.

Twenty-four hours notice is required for such inspection. At the time the inspection is made, a representative of the Contractor shall be present. The Contractor shall give 24 hours notice to the Water Department of the Village, before any water main is to be tapped. At the time the tap is made, a representative of the Contractor shall be present.

When a water service is installed beneath existing roadways, sidewalks, and driveways which are not being reconstructed, the pipe shall be installed by pushing or augering a hole beneath said roadway, sidewalk, and driveway and installing the water service pipe through the hole. Under no circumstances will a service be allowed under the length of a sidewalk or driveway. Steel casing of water service may be required under the direction of the Director of Public Works or his authorized representative.

The corporation stop shall be Mueller Company H-1500, Oraseal, Ford F-600, or approved equal and shall be installed by tapping the water main with an approved tapping machine. The tap shall be made in the upper third of the main, as close to 45° angle as is practical. A tap into the top of the main will not be permitted.

Any excavation, shoring and backfill required to install this item shall be included.

Trench backfill shall be in accordance with section 208 of the Standard Specifications but shall be included in the cost of this item.

Basis of Payment: This work shall be paid for at the contract unit price per each for WATER SERVICE CONNECTION, 1 1/2", which price shall include all labor, excavation, backfill, materials, equipment, connections and adjustments, and trench backfill as directed by the Engineer necessary to complete the work. Any dewatering or sheeting required to do the work as specified shall not be paid for separately but will be incidental to the contract unit price of the item.

RPZ Backflow Preventer

Description. This item shall consist of the installation of ASSE Standard backflow preventers, of size indicated for maximum flow rate. **This work shall also include the installation of 1 1/2" Type K copper piping from the Backflow Preventer to the Quick Couple as shown on the drawings.**

General Requirements:

A double gate valve, double check assembly shall be located and sized as shown on the plans. The backflow preventer shall be Febco, model 825YA, or approved equal. Construction shall be all brass for sizes 3/4- 2 inches. This assembly shall conform to the Village Plumbing Codes.

The Contractor shall provide Heavy Duty case hardened locks for all backflow preventer (RPZ) enclosures. All locks shall be fixed to a universal key. Four (4) copies of the key shall be provided to the Engineer.

Backflow Preventer Enclosure

This item shall include an enclosure constructed of fiberglass to completely cover and protect the backflow preventer and associated plumbing. The enclosure shall be sized appropriately to allow for additional space around backflow preventer for routine maintenance.

The backflow preventer enclosure for RPZ BACKFLOW PREVENTER, 1 1/2", TYPE 1 shall be Hot Box, model HB1, color green, or approved equal. The backflow preventer enclosure for RPZ BACKFLOW PREVENTER, 1 1/2", TYPE 2 shall be Hot-Box, PolyRock, PHR2, brown color, or approved equal.

The enclosure shall be mounted on a 4" Class S1 concrete pad poured with expansion joints around the piping. The concrete pad shall be installed such that the top of the pad is level with the adjacent grade. The concrete pad shall be poured on top of 3" of compacted sub-base granular material. The enclosure shall be attached to the pad using stainless steel anchor bolts.

Trench backfill required for the copper piping shall be in accordance with section 208 of the Standard Specifications but shall be included in the cost of this item.

Method of Measurement. This work will be measured per each RPZ BACKFLOW PREVENTER, 1 ½", of the type indicated.

Basis of Payment. This work shall be paid for at the contract unit price for each RPZ BACKFLOW PREVENTER, 1 ½" of the type indicated. Price shall include backflow preventer (RPZ), enclosure, concrete base, locks, keys, pipe caps, installation of 1 ½" Type K copper piping from the Backflow Preventer to the Quick Couple, and all other work required to complete this item. Any dewatering or sheeting required to do the work as specified shall not be paid for separately but will be incidental to the contract unit price of the item.

Quick Couple

Description. This work shall include the furnishing and installation of a quick connect valve at the locations shown on the plans or as directed by the Engineer. **This work shall also include the installation of 1 1/2" Type K copper piping from the Quick Couple to the Irrigation System as shown on the drawings. At locations where the Quick Couple is installed downstream of the irrigation controller, the required connection to the irrigation piping shall be included.**

Quick coupling valves shall be composed of a bronze cast body with a weighted metal cover. The valve shall accept a single lug ¾ inch bronze valve key for operation. Each valve shall consist of a Western AG 1", #4V100-R-Y, coupler and 1 No. 10 hose swivel elbow, or approved equal. The quick couple valves shall be secured with a 2" x 2" Redwood stake with stainless steel gear clamps or approved equivalent. All quick coupler valves shall be mounted on a prefabricated triple swing joint assembly. Clearance between the highest part of the valve and the bottom of the valve box lid shall be 2" minimum.

Basis of Payment. This work shall be paid for at the contract unit price each for QUICK COUPLE which price shall include all labor, equipment, and materials necessary to perform said work.

Large Valve Box

Description. This work shall include furnishing and installing valve boxes at the locations shown on the plans or as directed by the Engineer.

Valve boxes shall be made of high strength plastic suitable for turf irrigation purposes. Boxes shall be constructed to the dimensions shown on the detail included in the plans. Extension sections will be used as appropriate to the depth of piping. All valve box covers shall bolt down or have locking mechanisms and shall be colored green or brown as selected by Engineer. Valve box base shall be #1170101 as manufactured by Armor Access Boxes or approved equal. Valve box lid shall be #173142 as manufactured by Armor Access Boxes or approved equal.

A minimum of 3" of washed gravel shall be placed inside the valve box to provide drainage around the Quick Couple and Curb Box Extension.

Basis of Payment. This work will be paid for at the contract unit price each for VALVE BOX, LARGE which price shall include all labor, equipment, and materials necessary to perform said work.

Remove Existing Irrigation System

Description. This work shall consist of the complete removal of an existing irrigation system. The Contractor shall expose the connection between the irrigation system and the existing watermain. All work required to locate this connection shall be included. The Contractor shall close the corporation stop and disconnect the water service line. The remaining trench shall be backfilled in a manner meeting the approval of the Engineer. Trench backfill will be required if the trench is beneath existing or proposed paved surfaces. The trench backfill will not be paid for separately, but will be included in the cost of REMOVE EXISTING IRRIGATION SYSTEM.

The Contractor shall deliver the controller and spray heads to the Village of Schaumburg Public Works Department, or dispose of them if the Public Works Department does not want them. The Contractor shall dispose of the irrigation lines, valves, valve boxes, and all other items not requested by the Public Works Department.

Basis of Payment. This work shall be paid for at the contract unit price each REMOVE EXISTING IRRIGATION SYSTEM, which price shall include all labor, equipment, and materials necessary to perform said work.

Landscaping / Planting

General. The following Landscaping Special Provisions and Detailed Specifications supplement the "Standard Specifications for Road and Bridge Construction", Adopted January 1, 2007 and the "American Standard for Nursery Stock ANSI Z60.1-1996", Approved November 6, 1996 in effect on the date of invitation of bids. In case of conflict with any part or parts of said Specifications, the said Special Provisions or Detailed Specifications shall take precedence and shall govern.

Approval at place of growth does not preclude inspection and right of rejection at the site. Rejected plants or materials shall be removed immediately from the site and promptly replaced with plants and materials meeting the specified requirements, as determined by the Engineer.

The Contractor shall deliver all standard products in the manufacturer's original containers with seals unbroken, labeled with manufacturer's names, product names, and analysis where applicable.

All work shall be performed by a firm specializing in landscaping. The Contractor shall use an adequate number of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

Nomenclature. The botanical and common name of all plant materials shown on the drawings and required under this section are in conformance with the approved names given in "Standardized Plant Names" prepared by the American Committee on Horticultural Nomenclature. Names and varieties not included therein shall conform generally with names accepted in the nursery trade. In all cases, botanical names take precedence over common names.

Durable, legible labels stating in weather resistant ink or in an embossed process, the correct plant name, and plant size shall be securely attached to at least 1 plant from each bundle or lot.

All tags, seals, and other markers shall not be removed by the Contractor until after the final inspection and acceptance is made by the Engineer. Once the project is accepted, the Contractor shall remove all tags, seals, and other markers.

Submittals. The Contractor shall submit the following samples with copies of the manufacturer's specifications to the Engineer for approval prior to installation of any plants or materials.

- Specified Soil Mixes
- Soil Mixture Additives
- Hardwood Bark Mulch
- Topsoil

Materials for Planting. Add the following to the end of Article 1081.01(c), Inspection of Plant Material:

All plant materials shall be subject to inspection and approval at the place of growth, and upon delivery for conformity to specification requirements. Approval at the place of growth shall not impair the right of the inspection and rejection upon delivery at the site or during the progress of the work for size and condition of ball, roots, canopy, diseases, insects, and latent defects or injuries. Rejected plants shall be removed immediately from the site.

Upon award of this Contract, the Contractor shall inform the Engineer of his intended sources of plant material. The Contractor shall provide the Engineer 30 calendar days advance notice of the plant material to be inspected. The Engineer will visit these sources with the Contractor to select and identify all woody plants for the project. All trees (deciduous, evergreen) and shrubs will be selected and tagged by the Engineer. The selection of materials by the Engineer shall in no way relieve the Contractor from his obligation to provide healthy plants as specified herein.

Add the following to the end of Article 1081, Materials for Planting:

Before commencing the work, all plant material shall be on order and the Contractor shall examine the site to determine that it is free of conditions which might be detrimental to proper and timely completion of the work. Start of work shall indicate acceptance of all the site conditions.

Protection During Work and Maintenance. The Contractor shall provide adequate protection during the construction period for planted areas against trespassing, erosion, and damage. Protect adjacent surfaces from damage and soiling during the work.

Tree Preservation

Add the following to the end of Article 201.05(a), Temporary Fencing:

The Contractor shall install temporary barriers necessary for the preservation of existing plant materials (not to be removed) before any work takes place at the project site. The protective fencing shall be installed in accordance with Village Ordinance 154.135(C)(4). Wooden snow fencing or brightly colored plastic construction fencing shall be installed at the periphery of the drip line of the tree or beyond to prevent the storage of vehicles or materials, and the encroachment of grading and construction equipment. All protective fencing shall be maintained to the satisfaction of the Engineer.

In the event that a tree is damaged by the Contractor during construction, the Contractor shall replace such tree with a tree of a species listed in Section IX, Item C-2 of the Village of Schaumburg Subdivision Control Ordinance #1639 as specified by the Engineer, and having a diameter not less than the tree destroyed (not to exceed 6 inches, measured at 6 inches above the ground level). Any tree that is replaced out of the neglect of the Contractor shall be replaced at no cost to the Village. In addition, all tree trimming, liming, root pruning, and tree preservation shall be approved by the Engineer.

Topsoil and Compost

Add the following to Article 211, Topsoil and Compost:

The Contractor shall inform the Engineer of his intended source for topsoil. The Engineer will inspect the topsoil to ensure that it meets with the requirements of the specifications.

Median Soil Mix Furnish and Place

Description. Work under this item shall be performed in accordance with Section 200 of the Standard Specifications for Road and Bridge Construction except as modified herein. This work shall consist of testing, preparing, furnishing, and placing median soil including finish grading.

General Requirements. In general, the Median Soil Mix shall be 2 parts pulverized top soil and 1 part

coarse sand. The sand shall be added and mixed during the pulverization process only. The sand shall be of an F2 gradation.

Submittals. Soil Testing: No median soil mix shall be delivered to the site until the Engineer has reviewed test results and has accepted the median soil mix. The Contractor shall employ a soil testing agency, acceptable to the Engineer, which uses methods approved by the Association of Agricultural Chemists. A minimum of 3 samples shall be taken from different locations of the proposed median soil source.

The median soil test report shall include the following, and the appropriate ranges are as follows:

| Chemical Analysis: | HIGH | LOW |
|---------------------|------|-----|
| • pH | 7.0 | 6.5 |
| Mechanical Analysis | | |
| • % clay | 25% | 0% |
| • % silt | 77% | 45% |
| • % sand | 33% | 25% |

Additionally, the following variables are required:

- cation exchange capacity (CEC)
- soluble salts
- organic matter
- phosphorous
- available potassium
- nutrients
- residual chemicals
- recommendations to mitigate any issues from the results in items 3a through 3g.

The mechanical analysis should show that the % sand, % silt, and the % clay must yield a silt loam soil.

Inspections. The Engineer retains the right to visually inspect the Median Soil Mix on site before placement. The Engineer may ask that the material suspected of not meeting specification be removed from the site.

The Engineer will take samples of the Median Soil Mix after it has been placed. A sample will be taken every 300' or every median. The same chemical and mechanical test will be performed. If the Median Soil Mix in place does not meet specification, then that area or median will not be paid for. The Contractor shall remedy any discrepancies per the soil test recommendations, so that full payment can be made.

Preparation and Placement. Structure Adjustments: perform or coordinate final adjustments of any utility structure.

- Clean medians of all trash and debris before placement of the Median Soil Mix. Remove and legally dispose of debris off site. Repair to the satisfaction of the Engineer any portion of the pipe underdrain.
- Place, spread, and rough grade specified Median Soil Mix to depths specified in all areas to be planted. Place the Median Soil Mix in 2 level lifts. The first lift shall contain 2/3 of the median soil depth. After placing each lift, moisten the surface at a rate of 1 gallon of water per square foot. Allow the water to thoroughly percolate through the soil before placing the next lift. Allow for settling, and place additional planting soil as necessary. Allow for placement and

mixing of compost in perennial planting areas, but place enough soil mix to meet finish grades within specified tolerances.

- Rake smooth and finish grade all planted areas. The removal of excess material or the addition of median soil may be required prior to landscaping. This shall be included in the unit price for MEDIAN SOIL MIX FURNISH AND PLACE. Grading will be to a tolerance of +/- .10 foot of design grades. Grade disturbed by irrigation installation shall be restored to finish grade and raked smooth.
- All debris, litter, tire tracks, dirt, and unintended materials shall be removed, raked, swept or washed off all landscape, hard median surfaces, and pavement on a daily basis.

Method of Measurement. Median Soil Mix Furnish and Place will be measured for payment in cubic yards at the locations shown in the plans and as directed by the Engineer.

Basis of Payment. Median Soil Mix Furnished and Placed will be paid for at the Contract Unit Price per cubic yard for MEDIAN SOIL MIX FURNISH AND PLACE.

Compost Furnish and Place

Description. Work under this item shall be performed in accordance with Section 200 of the Standard Specifications for Road and Bridge Construction except as modified herein. This work shall consist of furnishing, transporting, spreading, and incorporating landscape compost into soil in areas shown on the plans and as directed by the Engineer. The Contractor shall submit a sample of the compost for approval prior to installation.

Materials. Add the following to Article 1081.05(b) Topsoil and Compost:

The Contractor shall inform the Engineer of his intended source for the landscape compost. The Engineer will inspect the landscape compost to ensure that it meets with the requirements of the specifications. The compost shall be a mixture of decomposed grass clippings, small branches, and leaves. Said mixture shall be screened and free of refuse, stone, clumps, roots, large branches, clay, and other foreign material. The compost shall be of such consistency that it can be readily incorporated with the topsoil.

Compost shall not be placed until the area designated has been shaped, trimmed, and finished in accordance with Section 212 of the Standard Specifications, and any required placement of topsoil has been completed. Prior to compost placement, the area shall be disked or raked to a minimum depth of 2" and all debris and loose stones removed. The grades and condition of the area must be approved by the Engineer prior to Compost Placement.

The compost shall be placed in the planting beds to the depth specified and shall meet finish grades within specified tolerances. After the Engineer verifies that the proper compost depth has been applied, the Contractor shall completely incorporate the compost into the soil to a minimum depth of 6" by raking, disking or rototilling to amend the existing topsoil.

After the compost has been incorporated into the soil, any debris or piles of unincorporated material shall be immediately removed from the finished area to the lines and grades shown on the plan and approved by the Engineer. Disposal of material shall be done in accordance with Article 202.03.

Method of Measurement. Compost Furnish and Place will be measured in square yards at the locations shown in the plans and listed in the special provisions and as directed by the Engineer prior to incorporation into the soil.

Basis of Payment. This work will be paid for at the Contract Unit Price per square yard for COMPOST FURNISH AND PLACE, 2". Payment shall include all costs for materials, equipment, and labor required to complete the work specified herein, including the cost of removing and disposing of any debris.

Gypsum Placement

Description. This work shall consist of furnishing, transporting, spreading, and incorporating Gypsum into the soil in areas shown on the plans and as directed by the Engineer.

Materials. The Gypsum shall be an approved commercial grade.

Gypsum soil conditioner shall not be placed until the area designated has been shaped, trimmed, and finished in accordance with Section 212 of the Standard Specifications and any required placement of Topsoil has been completed. Prior to Gypsum placement, the area shall be disked or raked to a minimum depth of 4" and all debris and loose stones removed. The grades and condition of the area must be approved by the Engineer prior to Gypsum Placement.

The Gypsum shall be used in accordance with the manufacturer's direction on the package. Apply the Gypsum using a rotary-type spreader designed to apply granular products. Calibrate application equipment prior to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the Gypsum at the rate of 30 lbs. per 100 square feet. After the Engineer verifies that the proper amount of Gypsum has been applied, the Contractor shall completely incorporate the Gypsum into the soil to a minimum depth of 6" by raking, disking, or rototilling to amend the existing topsoil.

After the Gypsum has been incorporated into the soil, any debris or piles of unincorporated material shall be immediately removed from the right-of-way and the area finished to the lines and grades shown of the plan and approved by the Engineer. Disposal of material shall be done in accordance with Article 202.03.

Method of Measurement. Gypsum Placement will be measured by weight of actual product used at the locations shown in the plans and listed in the special provisions, and as directed by the Engineer prior to incorporation into the soil.

Basis of Payment: This work will be paid for at the Contract Unit Price per pound for GYPSUM PLACEMENT. Payment shall include all costs for materials, equipment, and labor required to complete the work specified herein, including the cost of removing and disposing of any debris.

Sodding

Description. Work under this item shall be performed in accordance with Section 252 of the Standard Specifications for Road and Bridge Construction except as modified herein.

Add the following to Article 1081.03, Sod:

Sod shall be cleanly cut, either by hand or machine, to a minimum uniform thickness of 1" but of not more than 2", to a uniform width of 18", and in strips of not less than 3'-0" nor more than 6'-0" in length. Edges of sod shall be straight.

Add the following to Article 252.04, Sodding Time:

Sod shall be delivered to the site within 24 hours of harvest at the sod nursery. All sod installation shall be complete within 36 hours of harvest from the sod nursery. The Contractor shall submit a ticket from the sod nursery clearly stating the date and time of day that harvest took place.

Add the following to Article 252.05, Transportation:

Care shall be taken to retain the native soil on the roots during the process of stripping, transporting, and placing sod. Sod shall be cut and transported only when moisture conditions are favorable for correct handling, and shall be protected by a suitable canvas or other wind-resistant material while in transit. Dumping of sod from vehicles on the areas of delivery will not be permitted. Sod shall be delivered within 24 hours from time of cutting. Sod which has been damaged in transit or in handling, including drying out, shall be rejected and removed from the site immediately.

Delete paragraph 1 of Article 252.06, Placing Sod and substitute the following:

Sod shall be of type specified, laid smoothly, edge to edge in close contact on the prepared surface, with joints staggered. Sod shall be pressed into setting bed immediately by tamping or rolling with approved equipment to eliminate air pockets and to produce an even surface. Where grades are such that the flow of water will be over sodded areas and onto paved areas, after compaction, the sod shall be placed flush with the pavement or drainage structures.

Add the following to article 252.11, Inspection:

Sod shall have been grown on a well-drained, fertile, sandy loam (not peat) soil. Sod shall be cut or stripped from living thickly matted turns of firmly rooted specified turf type. The consistency of adherent soil shall be such that it will not break, crumble, or tear during handling and placing of the sod.

Maintenance of Sodded Areas: Add the following to Article 252, Sodding:

Maintenance of sodded areas by the Contractor shall consist of watering, weeding, 3 mowings, repair of erosion, spraying the sodded areas to keep them free of insects and diseases, and re-sodding as necessary to establish a uniform stand of turf. The Contractor shall provide general care for sodded areas until the time of knitting, or a period of not less than 6 weeks. Prior to acceptance, sodded areas shall be mowed at least 3 times by the Contractor to maintain healthy vigorous growth. At no time shall the turf be mowed shorter than 2" or the average height allowed to become more than 4". Debris encountered during the mowing and/or overseeding operation shall be removed and disposed in accordance with Article 250.05. Damage to the seeded areas, such as ruts or wheel tracks more than 2" in depth, shall be

repaired by the Contractor to the satisfaction of the Engineer. If noxious weeds start growth which threatens to smother the species grass, they shall be removed or sprayed as directed by the Engineer, and the vacant spots filled with new sod, if necessary. All necessary weed control applications and re-sodding are included in the cost for sodding.

Add the following to Article 252.12, Method of Measurement:

Payment for maintenance of sodded areas shall be included in the Contract Unit Price of SODDING, SALT TOLERANT.

Planting Woody Plants

Description. Work under this item shall be performed in accordance with Section 253 of the Standard Specifications for Road and Bridge Construction except as modified herein.

Layout of Planting: Add the following to Article 253.07, Layout of Planting:

The configuration of all plant beds shall be staked or laid out by the Contractor and verified by the Engineer prior to commencing with plant bed preparation.

Planting Procedures: Add the following to Article 253.10, Planting Procedures:

When planting shrubs and trees in bed areas as shown on the plans or as directed by the Engineer, the following work shall be performed prior to planting:

- All existing ground cover vegetation shall be cut out 2" below the existing soil line and disposed of as specified in Article 202.03, or killed using RoundUp at the Manufacturer's suggested rate 14 days prior to planting.
- Compost shall be placed on the planting beds to a depth of 2" then tilled into the soil to a depth of 6" to amend the existing topsoil.
- Fertilizer nutrients shall be added and tilled into the soil to a depth of 6" in the following 5:3:2 ratio:
 - Nitrogen Fertilizer Nutrients 90 lbs./acre
 - Phosphorus Fertilizer Nutrients 54 lbs./acre
 - Potassium Fertilizer Nutrients 36 lbs./acre
- All plant beds and individual tree saucers with a minimum diameter of 5' shall receive a hand tooled edge. Using a garden spade, the edge shall be cleanly trenched to a minimum depth of 3" with one vertical side toward the lawn areas.

Mulch Cover: Omit Article 253.11, Mulch Cover and substitute with the following:

Within 48 hours after planting, shredded hardwood bark mulch shall be placed around all plants in the entire mulched bed or saucer area specified to a depth of 3". The shredded hardwood bark shall be: free of leaf material, standard size with a minimum particle size of 1/4" and a maximum size of 1 1/4". In all areas within the project limits where there is existing plant material, all trees, shrubs, and planting beds shall be mulched according to the specifications for new plant material, incidental to Contract. No weed barrier fabric will be required for tree and shrub planting. Pre-emergent herbicide will be used instead of weed barrier fabric. The pre-emergent herbicide shall be applied according to the Special Provision for Weed Control, Pre-emergent Granular Herbicide.

Wrapping of Tree Trunks: Delete Article 253.12 of the Standard Specifications and substitute the following:

Wrapping of all deciduous trees (shade trees and ornamentals) shall be done immediately after planting. Trees shall be inspected for injury to trunks, disease, insect infestation, and improper pruning before wrapping. The Contractor shall be responsible for the condition of this wrapping throughout the life of this Contract. Any damage resulting from the improper installation or maintenance of this wrapping shall be the responsibility of the Contractor and such damaged trees shall be replaced by the Contractor at his expense.

Period of Establishment. Revise the first and second paragraphs of Article 253.14 of the Standard Specifications to read:

“253.14 Period of Establishment. Prior to being accepted, the plants shall endure a period of establishment. This period shall begin in June and end in September of the same year. To qualify for inspection, plants shall have been in place, in a live healthy condition, on or before June 1 of the year of inspection. To be acceptable, plants shall be in a live healthy condition, representative of their species, at the time of inspection in the month of September.

When the planting work is performed by a subcontractor, this delay in inspection and acceptance of plants shall not delay acceptance of the entire project and final payment due if the Contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the planting quantities listed in the contract, multiplied by their contract unit prices. The bond shall be executed prior to acceptance and final payment of the non-planting items and shall be in full force and effect until final inspection and acceptance of all plants including replacements. Execution of the third party bond shall be the option of the prime Contractor.”

Revise Article 253.16 of the Standard Specifications to read:

“253.16 Method of Measurement. This work will be measured for final payment, in place, after the period of establishment. Trees, evergreens, and shrubs will be measured as each individual plant”

Mulch placement will be measured for payment in square yards of the thickness specified.

Fertilizer nutrients will be measured for payment as specified in Article 250.09.

Compost will be measured for payment as specified in the special provision COMPOST FURNISH AND PLACE, 2”.

Gypsum will be measured for payment as specified in the special provision GYPSUM PLACEMENT.

Revise Article 253.17 of the Standard Specifications to read:

“253.17 Basis of Payment. This work will be paid for at the contract unit price per each for TREES, EVERGREENS, and SHRUBS, of the species, root type, and plant size specified.

(a) Initial Payment. Upon planting, 75 percent of the pay item(s) will be paid.

(b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third party bond, the remaining 25 percent of the pay item(s) will be paid."

Mulch placement will be paid for at the contract unit price per square yard for SHREDDED BARK MULCH, 3".

Fertilizer will be paid as specified in Article 250.09.

Compost will be paid for as specified in COMPOST FURNISH AND PLACE, 2".

Pre-emergent herbicide will be paid for as specified in PRE-EMERGENT GRANULAR HERBICIDE.

Gypsum will be paid for as specified in GYPSUM PLACEMENT.

Perennial Plants

Description. Work under this item shall be performed in accordance with Section 254 of the Standard Specifications for Road and Bridge Construction except as modified herein.

Layout of Planting: Add the following to Article 254.06, Layout of Planting:

The configuration of all plant beds shall be staked or laid out by the Contractor and verified by the Engineer prior to commencing with plant bed preparation.

Planting Procedures: Add the following to Article 254.07, Planting Procedures:

When planting perennials in bed areas shown on the plans or as directed by the Engineer, the following work shall be performed prior to planting:

- All existing turf shall be cut out 2" below the existing soil line, and disposed of as specified in Article 202.03, or killed using RoundUp at the manufacturer's suggested rate 14 days prior to planting.
- Compost shall be placed on the planting beds to a depth of 2" then tilled into the soil to a depth of 6" to amend the existing topsoil.
- Fertilizer nutrients shall be added and tilled into the soil to a depth of 6" in the following 5:3:2 ratio:
 - Nitrogen Fertilizer Nutrients 90 lbs./acre
 - Phosphorus Fertilizer Nutrients 54 lbs./acre
 - Potassium Fertilizer Nutrients 36 lbs./acre
- Gypsum shall be placed on the planting beds at the rate specified then tilled into the soil to a depth of 6" to amend the existing soil.

Mulch Cover: Omit Article 254.08, Mulch Cover and substitute with the following:

Within 48 hours after planting, shredded hardwood bark mulch shall be placed around all plants in the entire mulched bed or saucer area specified to a depth of 3". The shredded hardwood bark shall be: free of leaf material, standard size with a minimum particle size of 1/4" and a maximum size of 1 1/4". In all

areas within the project limits where there is existing plant material, all trees, shrubs, and planting beds shall be mulched according to the specifications for new plant material, incidental to Contract. No weed barrier fabric will be required for perennial. Pre-emergent herbicide will be used instead of weed barrier fabric. The pre-emergent herbicide shall be applied according to the Special Provision for Weed Control, Pre-emergent Granular Herbicide.

Revise Article 254.10 of the Standard Specifications to read:

“254.10 Method of Measurement. Grasses, vines, and perennials specified as one gallon container size will be measured for payment in units, where 1 unit is equal to 1 container. Vines and perennials specified as over one gallon container size will be measured for payment as each container, of the size specified. Measurement for payment of this work will not be performed until at the end of the 30 day establishment period for the replacement planting. Only plants that are in place and alive at the time of measurement will be measured for payment, except that if fewer than 25 percent of the plants are acceptable, a quantity equal to 25 percent of the number of units of plants originally planted will be considered measured for payment.

Mulch placement will be measured for payment in square yards of the thickness specified.

Fertilizer nutrients will be measured for payment as specified in Article 250.09.

Compost will be measured for payment as specified in the special provision COMPOST FURNISH AND PLACE, 2”.

Gypsum will be measured for payment as specified in the special provision GYPSUM PLACEMENT.

“254.11 Basis of Payment. Grasses, vines, and perennials specified as one gallon container size will be paid for at the contract unit price per unit for PERENNIAL PLANTS, GALLON POT regardless of the species. Vines and perennials specified as over one gallon container size will be paid for at the contract unit price per each for VINES and PERENNIALS, of the species and plant size specified.

Mulch placement will be paid for at the contract unit price per square yard for SHREDDED BARK MULCH, 3”.

Fertilizer will be paid as specified in Article 250.09.

Compost will be paid for as specified in COMPOST FURNISH AND PLACE, 2”.

Pre-emergent herbicide will be paid for as specified in PRE-EMERGENT GRANULAR HERBICIDE.

Gypsum will be paid for as specified in GYPSUM PLACEMENT

Weed Control, Pre-Emergent Granular Herbicide

Description: This work shall consist of spreading a pre-emergent granular herbicide in areas as shown on the plans or as directed by the Engineer. This item will be used in mulched plant beds and mulch rings.

Materials: The pre-emergent granular herbicide (Snapshot 2.5 TG or equivalent) shall contain the chemicals Trifluralin 2% active ingredient and Isoxaben with 0.5% active ingredient. The herbicide label shall be submitted to the Engineer for approval at least seventy-two (72) hours prior to application.

Method: The pre-emergent granular herbicide shall be used in accordance with the manufacturer's directions on the package. The granules are to be applied prior to mulching.

Apply the granular herbicide using a drop or rotary-type designed to apply granular herbicide or insecticides. Calibrate application equipment to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or crop injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the granular herbicide at the rate of 100 lbs/acre (112 kg/ha) or 2.3 lbs/1000 sq. ft. (11.2 kg/1000 sq. meters).

Method of Measurement: Pre-emergent granular herbicide will be measured in place in Pounds (Kilograms) of Pre-emergent Granular Herbicide applied. Areas treated after mulch placement shall not be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price per pound (kilogram) of WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE which price shall include all materials, equipment, and labor necessary to complete the work as specified.

Supplemental Watering

Description. This work will include watering turf, trees, shrubs, and perennial plants at the rates specified and as directed by the Engineer.

Watering must be completed in a timely manner. When the Engineer directs the Contractor to do supplemental watering, the Contractor must begin the watering operation within 48 hours and must apply a minimum of 10 units of water per day until the watering directed is complete. Damage to plant material that is a result of the Contractor's failure to water in a timely way must be repaired or replaced at the Contractor's expense.

Source of Water. The Contractor shall notify the Engineer of the source of water used and provide written certification that the water does not contain chemicals harmful to plant growth.

Rate of Application: The normal rates of application for watering are as follows. The Engineer will adjust these rates as needed depending upon weather conditions.

- Turf and Perennial Plants: 3 gallons per square yard.
- Trees: 10 gallons per tree.
- Shrubs: 3 gallons per shrub.

Method of Application. A spray nozzle that does not damage small plants must be used when watering perennial plants or turf. An open hose may be used to water trees and shrubs if mulch and soil are not displaced by watering. The Contractor must supply metering equipment as needed to assure the specified application rate of water.

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Method of Measurement. Supplemental watering will be measure in units of 1,000 gallons of water applied as directed.

Basis of Payment. This work will be paid for at the Contract Unit Price per unit of SUPPLEMENTAL WATERING, measured as specified. Payment will include the cost of all water, equipment, and labor needed to complete the work as specified.

General Electrical Requirements

Effective: January 1, 2007

Add the following to Article 801 of the Standard Specifications:

“Maintenance transfer and Preconstruction Inspection:

General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a maintenance transfer and preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting and/or traffic control systems which may be affected by the work. The request for the maintenance transfer and preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date. The maintenance transfer and preconstruction inspection shall:

Establish the procedures for formal transfer of maintenance responsibility required for the construction period.

Establish the approximate location and operating condition of lighting and/or traffic control systems which may be affected by the work

Marking of Existing Cable Systems. The party responsible for maintenance of any existing lighting and/or traffic control systems at the project site will, at the Contractor's request, mark and/or stake, once per location, all underground cable routes owned or maintained by the State. A project may involve multiple "locations" where separated electrical systems are involved (i.e. different controllers). The markings shall be taken to have a horizontal tolerance of at least 304.8 mm (one (1) foot) to either side. The request for the cable locations and marking shall be made at the same time the request for the maintenance transfer and preconstruction inspection is made. The Contractor shall exercise extreme caution where existing buried cable runs are involved. The markings of existing systems are made strictly for assistance to the Contractor and this does not relieve the Contractor of responsibility for the repair or replacement of any cable run damaged in the course of his work, as specified elsewhere herein. Note that the contractor shall be entitled to only one request for location marking of existing systems and that multiple requests may only be honored at the contractor's expense. No locates will be made after maintenance is transferred, unless it is at the contractor's expense.

Condition of Existing Systems. The Contractor shall conduct an inventory of all existing electrical system equipment within the project limits, which may be affected by the work, making note of any parts which are found broken or missing, defective or malfunctioning. Megger and load readings shall be taken for all existing circuits which will remain in place or be modified. If a circuit is to be taken out in its entirety, then readings do not have to be taken. The inventory and test data shall be reviewed with and approved by the Engineer and a record of the inventory shall be submitted to the Engineer for the record. Without such a record, all systems transferred to the Contractor for maintenance during construction shall be returned at the end of construction in complete, fully operating condition.”

Delete Articles 801.11 and 801.12 of the Standard Specifications.

Revise the 6th paragraph of Article 801.05(a) of the Standard Specifications to read:

"Resubmittals. All submitted items reviewed and marked 'APPROVED AS NOTED'; or 'DISAPPROVED' are to be resubmitted in their entirety with a disposition of previous comments to verify contract compliance at no additional cost to the state unless otherwise indicated within the submittal comments."

Revise Article 801.11(a) of the Standard Specifications to read:

"Lighting Operation and Maintenance Responsibility. The scope of work shall include the assumption of responsibility for the continuing operation and maintenance of existing, proposed, temporary, sign and navigation lighting, or other lighting systems and all appurtenances affected by the work as specified elsewhere herein."

Add the following to Section 801.11(a) of the Standard Specifications:

"Energy and Demand Charges. The payment of basic energy and demand charges by the electric utility for existing lighting which remains in service will continue as a responsibility of the Owner, unless otherwise indicated. Unless otherwise indicated or required by the Engineer duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously at the Owner's expense and lighting systems shall not be kept in operation during long daytime periods at the Owner's expense. Upon written authorization from the Engineer to place a proposed new lighting system in service, whether the system has passed final acceptance or not, (such as to allow temporary lighting to be removed), the Owner will accept responsibility for energy and demand charges for such lighting, effective the date of authorization. All other energy and demand payments to the utility shall be the responsibility of the Contractor until final acceptance."

Add the following to Section 801 of the Standard Specifications:

"Lighting 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."

"Lighting Cable Fuse Installation. Standard fuse holders shall be used on non-frangible (non-breakaway) light pole installations and quick-disconnect fuse holders shall be used on frangible (breakaway) light pole 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."

Revise the 2nd and 3rd sentences of the second paragraph of Article 801.02 of the Standard Specifications to read:

"Unless otherwise indicated, materials and equipment shall bear the UL label, or an approved equivalent, whenever such labeling is available for the type of material or equipment being furnished."

Electric Service Installation

Effective: January 1, 2007

Description. This item shall consist of all material and labor required to extend, connect or modify the electric services, as indicated or specified, which is over and above the work performed by the utility. Unless otherwise indicated, the cost for the utility work, if any, will be reimbursed to the Contractor separately under ELECTRIC UTILITY SERVICE CONNECTION. This item may apply to the work at more than one service location and each will be paid separately.

Materials. Materials shall be in accordance with the corresponding material Articles for the materials being used under this pay item.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work not covered by contract pay items required to complete the electric service work in complete compliance with the requirements of the utility.

No additional compensation will be allowed for work required for the electric service, even though not explicitly shown on the Drawings or specified herein

Method Of Measurement. Electric Service Installation shall be counted, each.

Basis Of Payment. This work will be paid for at the contract unit price each for ELECTRIC SERVICE INSTALLATION which shall be payment in full for the work specified herein.

Electric Utility Service Connection (ComEd)

Effective: January 1, 2002

Revised February 1, 2005

Description. This item shall consist of payment for work performed by ComEd in providing or modifying electric service as indicated. THIS MAY INVOLVE WORK AT MORE THAN ONE ELECTRIC SERVICE. For summary of the Electrical Service Drop Locations see the schedule contained elsewhere herein.

CONSTRUCTION REQUIREMENTS

General. It shall be the Contractor's responsibility to contact ComEd. The Contractor shall coordinate his work fully with the ComEd both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement. **Please contact ComEd, New Business Center Call Center, at 866 NEW ELECTRIC (1-866-639-3532) to begin the service connection process. The Call Center Representatives will create a**

work order for the service connection. The representative will ask the requestor for information specific to the request. The representative will assign the request based upon the location of project.

The Contractor should make particular note of the need for the earliest attention to arrangements with ComEd for service. In the event of delay by ComEd, no extension of time will be considered applicable for the delay unless the Contractor can produce written evidence of a request for electric service within 30 days of execution.

Method Of Payment. The Contractor will be reimbursed to the exact amount of money as billed by ComEd for its services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as \$10,000

Basis Of Payment. This work will be paid for at the contract lump sum price for ELECTRIC UTILITY SERVICE CONNECTION which shall be reimbursement in full for electric utility service charges.

Underground Raceways
Effective: January 1, 2007

Revise Article 810.03 of the Standard Specifications to read:

“Installation. All underground conduit shall have a minimum depth of 30-inches (700 mm) below the finished grade.”

Add the following to Article 810.03 of the Standard Specifications:

“All metal conduit installed underground shall be Rigid Steel Conduit unless otherwise indicated on the plans.”

Add the following to Article 810.03 of the Standard Specifications:

“All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum of 300 mm (12”) or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped. The ends of rigid metal conduit to be capped shall be threaded, the threads protected with full galvanizing, and capped with a threaded galvanized steel cap. The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 3 mm (0.125”) thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring.”

Add the following to Article 810.03(c) of the Standard Specifications:

“Coilable non-metallic conduit shall be machine straightened to remove the longitudinal curvature caused by coiling the conduit onto reels prior to installing in trench, encasing in concrete or embedding in structure. The straightening shall not deform the cross-section of the conduit such that any two measured outside diameters, each from any location and at any orientation around the longitudinal axis along the conduit differ by more than 6 mm (0.25”).” The longitudinal axis of the straightened conduit shall not deviate by more than 20 mm per meter (0.25” per foot” from a straight line. The HDPE and straightening mechanism manufacturer operating temperatures shall be followed.

Wire and Cable

Effective: January 1, 2007

Revise the second sentence of the first paragraph of Article 1066.02(a) to read:

“The cable shall be rated at a minimum of 90°C dry and 75°C wet and shall be suitable for installation in wet and dry locations, and shall be resistant to oils and chemicals.”

Revise the second paragraph of Article 1066.02(b) to read:

“Uncoated conductors shall be according to ASTM B3, ICEA S-95-658/NEMA WC70, and UL Standard 44. Coated conductors shall be according to ASTM B 33, ASTM B 8, ICEA S-95-658/NEMA WC70 and UL Standard 44.”

Revise the third paragraph of Article 1066.02(b) to read:

“All conductors shall be stranded. Stranding meeting ASTM B 8, ICEA S-95-658/NEMA WC70 and UL Standard 44. Uncoated conductors meeting ASTM B 3, ICEA S-95-658/NEMA WC70 and UL Standard 44.”

Revise the first sentence of Article 1066.03(a)(1) to read:

“General. Cable insulation designated as XLP shall incorporate cross-linked polyethylene (XLP) insulation as specified and shall meet or exceed the requirements of ICEA S-95-658, NEMA WC70, U.L. Standard 44.”

Add the following to Article 1066.03(a)(1) of the Standard Specifications:

“The cable shall be rated 600 volts and shall be UL Listed Type RHH/RHW/USE.”

Revise the Aerial Electric Cable Properties table of Article 1066.03(a)(3) to read:

Aerial Electric Cable Properties

| Phase Conductor | | Messenger wire | | | |
|-----------------|-----------|------------------------------|------|------------------|-----------|
| Size AWG | Stranding | Average Insulation Thickness | | Minimum Size AWG | Stranding |
| | | mm. | mils | | |
| 6 | 7 | 1.1 | (45) | 6 | 6/1 |
| 4 | 7 | 1.1 | (45) | 4 | 6/1 |
| 2 | 7 | 1.1 | (45) | 2 | 6/1 |
| 1/0 | 19 | 1.5 | (60) | 1/0 | 6/1 |
| 2/0 | 19 | 1.5 | (60) | 2/0 | 6/1 |
| 3/0 | 19 | 1.5 | (60) | 3/0 | 6/1 |
| 4/0 | 19 | 1.5 | (60) | 4/0 | 6/1 |

Revise the first paragraph of Article 1066.03(b) to read:

“EPR Insulation. Cable insulation shall incorporate ethylene propylene rubber (EPR) as specified and the insulation shall meet or exceed the requirements of ICEA S-95-658, NEMA Standard Publication No. WC70, and U.L. Standard 44, as applicable.”

Add the following to Article 1066.03(b) of the Standard Specifications:

“Cable sized No. 2 AWG and smaller shall be U.L. listed Type RHH/RHW and may be Type RHH/RHW/USE. Cable sized larger than No. 2 AWG shall be U.L. listed Type RHH/RHW/USE.”

Revise Article 1066.04 to read:

“Aerial Cable Assembly. The aerial cable shall be an assembly of insulated aluminum conductors according to Section 1066.02 and 1066.03. Unless otherwise indicated, the cable assembly shall be composed of three insulated conductors and a steel reinforced bare aluminum conductor (ACSR) to be used as the ground conductor. Unless otherwise indicated, the code word designation of this cable assembly is “Palomino”. The steel reinforced aluminum conductor shall conform to ASTM B-232. The cable shall be assembled according to ANSI/ICEA S-76-474.”

Revise the second paragraph of Article 1066.05 to read:

“The tape shall have reinforced metallic detection capabilities consisting of a woven reinforced polyethylene tape with a metallic core or backing.”

Revise Article 1066.08 to read:

“Electrical Tape. Electrical tape shall be all weather vinyl plastic tape resistant to abrasion, puncture, flame, oil, acids, alkalies, and weathering, conforming to Federal Specification MIL-I-24391, ASTM D1000 and shall be listed under UL 510 Standard.

Thickness shall not be less than 0.215 mm (8.5 mils) and width shall not be less than 20 mm (3/4-inch).”

Luminaire

Effective: January 1, 2007

Add the following to first paragraph of Article 1067(c) of the Standard Specifications:

“The reflector shall not be altered by paint or other opaque coatings which would cover or coat the reflecting surface. Control of the light distribution by any method other than the reflecting material and the aforementioned clear protective coating that will alter the reflective properties of the reflecting surface is unacceptable”

Add the following to Article 1067(e) of the Standard Specifications:

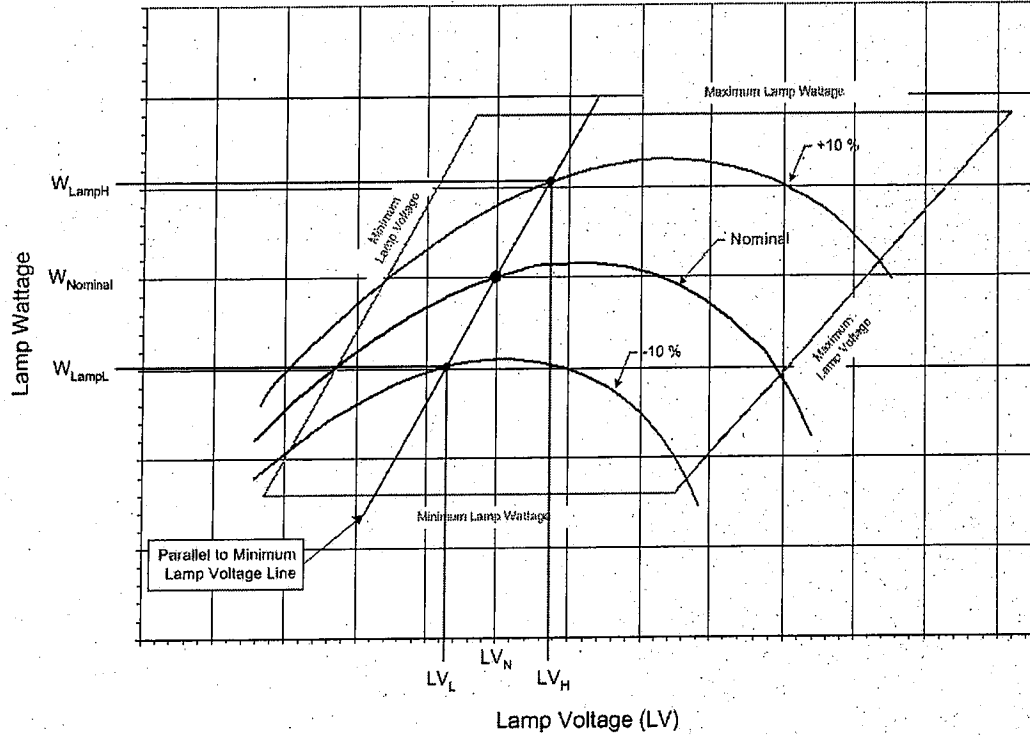
“The ballast shall be a High Pressure Sodium, high power factor, constant wattage auto-regulator, lead type (CWA) for operation on a nominal 240 volt system.”

Revise Article 1067(e)(1) of the Standard Specifications to read:

“The high pressure sodium, auto-regulator, lead type (CWA) ballast shall be designed to ANSI Standards and shall be designed and rated for operation on a nominal 240 volt system. The ballast shall provide positive lamp ignition at the input voltage of 216 volts. It shall operate the lamp over a range of input voltages from 216 to 264 volts without damage to the ballast. It shall provide lamp operation within lamp specifications for rated lamp life at input design voltage range. Operating characteristics shall produce output regulation not exceeding the following values:

| Nominal Ballast Wattage | Maximum Ballast Regulation |
|-------------------------|----------------------------|
| 750 | 25% |
| 400 | 26% |
| 310 | 26% |
| 250 | 26% |
| 150 | 24% |
| 70 | 18% |

For this measure, regulation shall be defined as the ratio of the lamp watt difference between the upper and lower operating curves to the nominal lamp watts; with the lamp watt difference taken within the ANSI trapezoid at the nominal lamp operating voltage point parallel to the minimum lamp volt line:



$$\text{Ballast Regulation} = \frac{W_{LampH} - W_{LampL}}{W_{LampN}} \times 100$$

where:

W_{LampH} = lamp watts at +10% line voltage when Lamp voltage = LV_H

W_{LampL} = lamp watts at -10% line voltage when lamp voltage = LV_L

W_{LampN} = lamp watts at nominal lamp operating voltage = LV_N

| Wattage | Nominal Lamp Voltage, LV_N | LV_L | LV_H |
|---------|------------------------------|--------|--------|
| 750 | 120v | 115v | 125v |
| 400 | 100v | 95v | 105v |
| 310 | 100v | 95v | 105v |
| 250 | 100v | 95v | 105v |
| 150 | 55v | 50v | 60v |
| 70 | 52v | 47v | 57v |

Ballast losses, based on cold bench tests, shall not exceed the following values:

| Nominal Ballast Wattage | Maximum Ballast Losses |
|-------------------------|------------------------|
| 750 | 14.0% |
| 400 | 17.0% |
| 310 | 19.0% |
| 250 | 19.0% |
| 150 | 26.0% |
| 70 | 34.0% |

Ballast losses shall be calculated based on input watts and lamp watts at nominal system voltage as indicated in the following equation:

$$\text{Ballast Losses} = \frac{W_{\text{Line}} - W_{\text{Lamp}}}{W_{\text{Lamp}}} \times 100$$

where:

W_{line} = line watts at nominal system voltage

W_{lamp} = lamp watts at nominal system voltage

Ballast output to lamp. At nominal system voltage and nominal lamp voltage, the ballast shall deliver lamp wattage with the variation specified in the following table. Example: For a 400w luminaire, the ballast shall deliver 400 watts $\pm 2.5\%$ at a lamp voltage of 100v for the nominal system voltage of 240v which is the range of 390w to 410w.

| Nominal Ballast Wattage | Output to lamp variation |
|-------------------------|--------------------------|
| 750 | $\pm 2.0\%$ |
| 400 | $\pm 2.5\%$ |
| 310 | $\pm 2.5\%$ |
| 250 | $\pm 4.0\%$ |
| 150 | $\pm 4.0\%$ |
| 70 | $\pm 4.0\%$ |

Ballast output over lamp life. Over the life of the lamp the ballast shall produce average output wattage of the nominal lamp rating as specified in the following table. Lamp wattage readings shall be taken at 5-volt increments throughout the ballast trapezoid. Reading shall begin at the lamp voltage (L_v) specified in the table and continue at 5 volt increments until the right side of the trapezoid is reached. The lamp wattage values shall then be averaged and shall be within the specified value of the nominal ballast rating. Submittal documents shall include a tabulation of the lamp wattage vs. lamp voltage readings. Example: For a 400w luminaire, the averaged lamp wattage reading shall not exceed the range of $\pm 3\%$ which is 388 to 412 watts"

| Nominal Ballast Wattage | LV Readings begin at | Maximum Wattage Variation |
|-------------------------|----------------------|---------------------------|
| 750 | 110v | ± 3% |
| 400 | 90v | ± 3% |
| 310 | 90v | ± 3% |
| 250 | 90v | ± 4% |
| 150 | 50v | ± 4% |
| 70 | 45v | ± 5% |

Add the following to Article 1067(f) of the Standard Specifications:

“Independent Testing. Independent testing of luminaires shall be required whenever the quantity of luminaires of a given wattage and distribution, as indicated on the plans, is 50 or more. For each luminaire type to be so tested, one luminaire plus one luminaire for each 50 luminaires shall be tested. Example: A plan quantity of 75 luminaires would dictate that 2 to be tested; 135 luminaires would dictate that three be tested.” If the luminaire performance table is missing from the contract documents, the luminaire(s) shall be tested and the test results shall be evaluated against the manufacturer’s published data. The test luminaire(s) results shall be equal to or better than the published data. If the test results indicated performance not meeting the published data, the test luminaire will be designated as failed and corrective action as described herein shall be performed.

The Contractor shall be responsible for all costs associated with the specified testing, including but not limited to shipping, travel and lodging costs as well as the costs of the tests themselves, all as part of the bid unit price for this item. Travel, lodging and other associated costs for travel by the Engineer shall be direct-billed to or shall be pre-paid by the Contractor, requiring no direct reimbursement to the Engineer or the independent witness, as applicable”

The Contractor shall select one of the following options for the required testing with the Engineer's approval:

- a. Engineer Factory Selection for Independent Lab: The Contractor may select this option if the luminaire manufacturing facility is within the state of Illinois. The Contractor shall propose an independent test laboratory for approval by the Engineer. The selected luminaires shall be marked by the Engineer and shipped to the independent laboratory for tests.
- b. Engineer Witness of Independent Lab Test: The Contractor may select this option if the independent testing laboratory is within the state of Illinois. The Engineer shall select, from the project luminaires at the manufacturer’s facility or at the Contractor's storage facility, luminaires for testing by the independent laboratory.
- c. Independent Witness of Manufacturer Testing: The independent witness shall select from the project luminaires at the manufacturers facility or at the Contractor's storage facility, the luminaires for testing. The Contractor shall propose a qualified independent agent, familiar with the luminaire requirements

and test procedures, for approval by the Engineer, to witness the required tests as performed by the luminaire manufacturer.

The independent witness shall as a minimum meet the following requirements:

- ▶ Have been involved with roadway lighting design for at least 15 years.
- ▶ Not have been the employee of a luminaire or ballast manufacturer within the last 5 years.
- ▶ Not associated in any way (plan preparation, construction or supply) with the particular project being tested.
- ▶ Be a member of IESNA in good standing.
- ▶ Provide a list of professional references.

This list is not an all inclusive list and the Engineer will make the final determination as to the acceptability of the proposed independent witness.

- d. **Engineer Factory Selection and Witness of Manufacturer Testing:** The Contractor may select this option if the luminaire manufacturing facility is within the state of Illinois. At the Manufacturer's facility, the Engineer shall select the luminaires to be tested and shall be present during the testing process. The Contractor shall schedule travel by the Engineer to and from the Manufacturer's laboratory to witness the performance of the required tests."

Add the following to Article 1067.02(a)(1) of the Standard Specifications:

"The beam of maximum candlepower for luminaires specified or shown to have a 'medium' distribution shall be at 70 degrees from the horizontal \pm 2.5 degrees. Submittal information shall identify the angle."

Revise Article 1067.06(a)(1) of the Standard Specifications to read:

"The lamps shall be of the clear type and shall have a color of 1900° to 2200° Kelvin."

Revise Article 1067.06(a)(4) of the Standard Specifications to read:

| Lamp Wattage | Initial Lumens | Mean Lumens | Rated Life (Hours) | Lamp Voltage |
|--------------|----------------|-------------|--------------------|--------------|
| 50 | 4,000 | 3,600 | 24,000 | 52 |
| 70 | 6,300 | 5,450 | 24,000 | 52 |
| 100 | 9,400 | 8,000 | 24,000 | 55 |
| 150 | 15,800 | 13,800 | 24,000 | 55 |
| 200 | 21,400 | 19,260 | 24,000 | 100 |
| 250 | 27,000 | 24,300 | 24,000 | 100 |
| 310 | 37,000 | 33,300 | 24,000 | 100 |
| 400 | 50,000 | 45,000 | 24,000 | 100 |
| 750 | 105,000 | 94,500 | 24,000 | 120 |

Add the following table(s) to Article 1067 of the Standard Specifications:

IDOT DISTRICT 1 LUMINAIRE PERFORMANCE TABLE

| GIVEN CONDITIONS | | |
|------------------------|--|---------------|
| ROADWAY DATA | Pavement Width | 44 (ft) |
| | Number of Lanes | 4 |
| | I.E.S. Surface Classification | R3 |
| | Q-Zero Value | .07 |
| LIGHT POLE DATA | Mounting Height | 30 (ft) |
| | Mast Arm Length | 12 (ft) |
| | Pole Set-Back From Edge of Pavement | 7.5 (ft) |
| LUMINAIRE DATA | Lamp Type | HPS |
| | Lamp Lumens | 28,000 |
| | I.E.S. Vertical Distribution | Medium |
| | I.E.S. Control Of Distribution | Semi - Cutoff |
| | I.E.S. Lateral Distribution | Type III |
| | Total Light Loss Factor | 0.7 |
| LAYOUT DATA | Spacing | 300 (ft) |
| | Configuration | Staggered |
| | Luminaire Overhang over edge of pavement | 7.5 (ft) |

NOTE: Variations from the above specified I.E.S. distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

| PERFORMANCE REQUIREMENTS | | |
|---|---|-----------------------|
| NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above. | | |
| ILLUMINATION | Ave. Horizontal Illumination, E_{AVE} | 0.9 Fc |
| | Uniformity Ratio, E_{AVE}/E_{MIN} | 4.0 (Max) |
| LUMINANCE | Average Luminance, L_{AVE} | 0.6 Cd/m ² |
| | Uniformity Ratio, L_{AVE}/L_{MIN} | 3.5 (Max) |
| | Uniformity Ratio, L_{MAX}/L_{MIN} | 6.0 (Max) |
| | Veiling Luminance Ratio, L_V/L_{AVE} | 0.4 (Max) |

Add the following table(s) to Article 1067 of the Standard Specifications:

IDOT DISTRICT 1 LUMINAIRE PERFORMANCE TABLE

| GIVEN CONDITIONS | | |
|------------------------|--|---------------|
| ROADWAY DATA | Pavement Width | 55 (ft) |
| | Number of Lanes | 5 |
| | I.E.S. Surface Classification | R3 |
| | Q-Zero Value | .07 |
| LIGHT POLE DATA | Mounting Height | 30 (ft) |
| | Mast Arm Length | 12 (ft) |
| | Pole Set-Back From Edge of Pavement | 7.5 (ft) |
| LUMINAIRE DATA | Lamp Type | HPS |
| | Lamp Lumens | 28,000 |
| | I.E.S. Vertical Distribution | Medium |
| | I.E.S. Control Of Distribution | Semi - Cutoff |
| | I.E.S. Lateral Distribution | Type III |
| | Total Light Loss Factor | 0.7 |
| LAYOUT DATA | Spacing | 290 (ft) |
| | Configuration | Staggered |
| | Luminaire Overhang over edge of pavement | 7.5 (ft) |

NOTE: Variations from the above specified I.E.S. distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

| | | |
|---------------------|---|-----------------------|
| ILLUMINATION | Ave. Horizontal Illumination, E_{AVE} | 0.9 Fc |
| | Uniformity Ratio, E_{AVE}/E_{MIN} | 4.0 (Max) |
| LUMINANCE | Average Luminance, L_{AVE} | 0.6 Cd/m ² |
| | Uniformity Ratio, L_{AVE}/L_{MIN} | 3.5 (Max) |
| | Uniformity Ratio, L_{MAX}/L_{MIN} | 6.0 (Max) |
| | Veiling Luminance Ratio, L_V/L_{AVE} | 0.4 (Max) |

Add the following table(s) to Article 1067 of the Standard Specifications:

IDOT DISTRICT 1 LUMINAIRE PERFORMANCE TABLE

| GIVEN CONDITIONS | | |
|------------------------|--|---------------|
| ROADWAY DATA | Pavement Width | 69 (ft) |
| | Number of Lanes | 6 |
| | I.E.S. Surface Classification | R3 |
| | Q-Zero Value | .07 |
| LIGHT POLE DATA | Mounting Height | 30 (ft) |
| | Mast Arm Length | 12 (ft) |
| | Pole Set-Back From Edge of Pavement | 5.5 (ft) |
| LUMINAIRE DATA | Lamp Type | HPS |
| | Lamp Lumens | 28,000 |
| | I.E.S. Vertical Distribution | Medium |
| | I.E.S. Control Of Distribution | Semi - Cutoff |
| | I.E.S. Lateral Distribution | Type III |
| | Total Light Loss Factor | 0.7 |
| LAYOUT DATA | Spacing | 190 (ft) |
| | Configuration | Opposite |
| | Luminaire Overhang over edge of pavement | 9.5 (ft) |

NOTE: Variations from the above specified I.E.S. distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

| | | |
|---------------------|---|-----------------------|
| ILLUMINATION | Ave. Horizontal Illumination, E_{AVE} | 0.9 Fc |
| | Uniformity Ratio, E_{AVE}/E_{MIN} | 4.0 (Max) |
| LUMINANCE | Average Luminance, L_{AVE} | 0.6 Cd/m ² |
| | Uniformity Ratio, L_{AVE}/L_{MIN} | 3.5 (Max) |
| | Uniformity Ratio, L_{MAX}/L_{MIN} | 6.0 (Max) |
| | Veiling Luminance Ratio, L_V/L_{AVE} | 0.4 (Max) |

Ground Rod

Effective: January 1, 2007

Description. This item shall consist of furnishing, installing and connecting ground rods for the grounding of service neutral conductors and for supplementing the equipment grounding system via connection at poles or other equipment throughout the system. All materials and work shall be in accordance with Article 250 of the NEC.

Materials. Materials shall be according to the following Articles of Section 1000 - Materials

| Item | Article/Section |
|---|-----------------|
| (a) Grounding Electrodes..... | 1087.01(b) |
| (b) Grounding Electrode Conductors..... | 1087.01(a) |
| (c) Access Well..... | 1087.01(c) |

CONSTRUCTION REQUIREMENTS

General. All connections to ground rods, structural 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.

Ground rods shall be driven so that the tops of the rod are 609.6 mm (24 inches) below finished grade. Where indicated, ground wells shall be included to permit access to the rod connections.

Where indicated, ground rods shall be installed through concrete foundations.

Where ground conditions, such as rock, preclude the installation of the ground rod, the ground rod may be deleted with the approval of the Engineer.

Where a ground field of "made" electrodes is provided, such as at control cabinets, the exact locations of the rods shall be documented by dimensioned drawings as part of the Record Drawings.

Ground rod connection shall be made by exothermic welds. Ground wire for connection to foundation steel or as otherwise indicated shall be stranded uncoated bare copper in accordance the applicable requirements of ASTM Designation B-3 and ASTM Designation B-8 and shall be included in this item. Unless otherwise indicated, the wire shall not be less than No. 2 AWG.

Where connections are made to epoxy coated reinforcing steel, the epoxy coating shall be sufficiently removed to facilitate the exothermic weld.

Method Of Measurement. Ground rods shall be counted, each. Ground wires and connection of ground rods at poles shall be included in this pay item.

Basis Of Payment. This item will not be paid for separately, but shall be included in the cost of the item for which it is installed. If additional rods are needed, their installation and testing will be paid for according to Article 109.04.

Light Pole Foundation, 24" Diameter, Offset

This work shall consist of excavating, constructing, and backfilling offset light pole foundations in accordance with Section 836 of the Standard Specifications, this special provision, and the details shown in the plans. Offset foundations shall be installed at locations where the utility conflict can be resolved by laterally offsetting the drilled shaft of the foundation by a distance less than or equal to 4'-6".

The determination of foundation type shall be made in the field by the Engineer, based upon the actual locations of utilities. Payment will be made according quantity of each foundation type installed, and no additional compensation will be allowed for subtractions or additions to contract quantities for the various foundation types.

Excavation, including shoring, material disposal, and pumping, bailing or otherwise draining the excavated area shall not be paid for separately, but shall be included in the contract unit price for offset foundations.

Backfilling and thoroughly compacting material conforming to Article 1004, gradation CA-6, shall not be paid for separately, but shall be considered as included in the contract unit price for offset foundations. Concrete shall cure in accordance with Article 1020.13 before being backfilled.

Basis of Payment:

Offset foundations shall be measured for payment in accordance with Article 836.04 of the Standard Specifications, and paid at the contract unit price per foot for LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET.

Lighting Controller, Special

Description. This item shall consist of furnishing and installing a Lighting Controller complete with all circuit breakers and appurtenances as shown on the plans, in accordance to NEC and as specified herein.

Cabinets shall be installed at least 12 inches from the edge of a sidewalk. The side of the cabinet with the door shall be oriented opposite of traffic and the contractor shall confirm with the Engineer prior to installing the foundation.

The lighting controller shall be installed on concrete foundation. The controller shall be mounted plumb and level on the foundation. The controller shall be fastened to the foundation with anchor rods using hot dipped galvanized or stainless steel nuts and washers. The base of the controller cabinet shall be caulked with silicone where it meets the foundation. All conduit entrances shall be sealed with a pliable waterproof material.

The controller cabinet shall be a single door type fabricated from 0.125 inch type 5052-H32 aluminum or AISI 304 stainless steel. The cabinet shall have a vent designed to keep moisture, dirt and insects out. The cabinet door frame shall be double flanged on all four sides. All external hardware shall be stainless steel. The cabinet shall have a NEMA 3R rating. The door shall be equipped with a three point latching mechanism with nylon rollers top and bottom. The handle shall be stainless steel and have a provision for a padlock. The door shall be sealed with a neoprene gasket. The hinge shall be a continuous hinge with a 1/4" diameter stainless steel hinge pin. The door shall have a linkage arm system capable of

holding the door in a wide open position. The lock shall be a rain and ice resistant standard traffic signal lock with two keys.

Stainless steel enclosures shall not be painted. Aluminum enclosures shall be painted per the manufacturer's recommendations. Color shall be determined and approved by the director of engineering.

The cabinet door shall have a stainless steel name plate as shown in the contract documents.

The lighting controller shall have the components shown in the contract documents. The type of wire in the lighting controller is #12 AWG, 600V type 'SIS' strand copper gray switch board wire. Components shall be sized properly for the given load. All controllers shall have provisions for the installation of four additional circuits at a future date.

A ground rod shall be provided at the controller. Grounding of the electric system shall be in conformance with the applicable requirements of the National Electrical Code (NEC) and the Village of Schaumburg electrical code.

Submittal of Drawings. The Contractor shall furnish, prior to any shop work or fabrication, complete and detailed drawings as to dimensions, type of material and method of fabrication for the control cabinet, equipment mounting panel, arrangement of equipment of panels, bus bar sizes, wire or cable sizes for connections between main breaker, automatic switches, photo electric cell, circuit breakers, H-O-A switch, all appurtenances as shown on the plans, and any other equipment as may be necessary for proper operation and control of the lighting system.

Basis of Payment. This work will be paid for at the contract unit price each for LIGHTING CONTROLLER, SPECIAL which price shall be payment in full for furnishing and placing Class "SI" concrete foundation with rigid steel conduit for cable entrance and grounding of equipment; Class "SI" concrete pad; furnishing and placing ground rod, furnishing and placing fabricated cabinet complete with equipment panels and all necessary switch gear, appurtenances and wiring of same as indicated on the plans; furnishing, installing and connecting the photo-electric cells, and shall include all labor, materials, tools and incidentals necessary to complete and test the operation of the control cabinet as herein specified and as shown on the plans.

Light Pole Foundation, 30" Diameter, Special

Description. This work shall consist of constructing a light pole foundation according to Section 836 of the Standard Specifications, this special provision and the details shown in the plans. The existing lighting unit at the Jewel driveway on Wise Road will be relocated to the proposed light pole foundation, 30" diameter, special. The proposed shall match existing foundation with exposed foundation 2 feet above finished grade and the exposed foundation shall be painted the same color. The bolt circle shall match existing.

Excavation, including shoring, material disposal, and pumping, bailing or otherwise draining the excavated area shall not be paid for separately, but shall be included in the contract unit price for light pole foundation, 30" diameter, special.

Backfilling and thoroughly compacting material conforming to Article 1004, gradation CA-6, shall not be paid for separately, but shall be considered as included in the contract unit price for light pole

foundation, 30" diameter, special. Concrete shall cure in accordance with Article 1020.13 before being backfilled.

Basis of Payment. This item will be paid for at the contract unit price each for LIGHT POLE FOUNDATION, 30" DIAMETER, SPECIAL, and shall include all materials, labor, paint and equipment necessary to perform the work in accordance to the Standard Specifications, the plan documentations and as herein specified.

Pole Foundation, Metal

Description. This work shall consist of furnishing and installing a metal light pole foundation according to Section 836 of the Standard Specifications and the details shown in the contract plans.

Basis of Payment. This item will be paid for at the contract unit price each for POLE FOUNDATION, METAL, and shall include all materials, labor, and equipment necessary to perform the work in accordance to the Standard Specifications, the plan documentations and as herein specified.

Decorative Lighting Unit, 100 watt HPS, 12' M.H.

Description. This work shall consist of furnishing and installing a luminaire and light pole complete with all hardware and accessories required according to Section 821 and 830 of the Standard Specifications.

Material. The luminaire shall be Spectra SP1 DBL model manufactured by Architectural Area Lighting or approved equal. The fixture housing is cast aluminum. The ballast is mounted internally and accessed by loosening two captive bolts and lifting off the top of the fixture. The lens element will be frosted glass diffuser and the hood finish will be stainless steel.

The decorative light pole shall be C4P model by Architectural Area Lighting or approved equal. The C4P model is a four post pole design for post top mounted fixtures with a large cavity for wiring in the cast aluminum base.

Basis of Payment. This item shall be paid for at the contract unit price each for DECORATIVE LIGHTING UNIT, 100 WATT HPS, 12' M.H., and shall include all materials, labor and equipment necessary to perform the work in accordance with the Standard Specifications, the plan documentations and as herein specified.

Luminaire, Sodium Vapor, Horizontal Mount, 250 watt (Material Only)
Luminaire, Sodium Vapor, Horizontal Mount, 400 watt (Material Only)

Description. This work shall consist of furnishing Luminaires of the lamp type, mount type and wattage specified and shown in the detail plans be deliver to the Village of Schaumburg Public Works Department or as directed by the Engineer.

Basis of Payment. This item shall be paid for at the contract unit price each for LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT (MATERIAL ONLY) OR LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT (MATERIAL ONLY).

Light Pole, Aluminum, Transformer Base, 30 ft. M.H., 12 ft. Mast Arm (Material Only)
Light Pole, Aluminum, Transformer Base, 40 ft. M.H., 12 ft. Mast Arm (Material Only)

Description. This work shall consist of furnishing Light Poles of the material type, base type, mounting height and arm type specified and shown in the detail plans be deliver to the Village of Schaumburg Public Works Department or as directed by the Engineer.

Basis of Payment. This item shall be paid for at the contract unit price each for LIGHT POLE, ALUMINUM, TRANSFORMER BASE, 30 FT. M.H., 12 FT. MAST ARM (MATERIAL ONLY) OR LIGHT POLE, ALUMINUM, TRANSFORMER BASE, 40 FT. M.H., 12 FT. MAST ARM (MATERIAL ONLY).

Decorative Lighting Unit, 100 watt HPS, 12' M.H. (Material Only)

Description. This work shall consist of furnishing Decorative Lighting Unit as specified and deliver to the Village of Schaumburg Public Works Department or as directed by the Engineer.

Material. The luminaire shall be Spectra SP1 DBL model manufactured by Architectual Area Lighting or approved equal. The fixture housing is cast aluminum. The ballast is mounted internally and accessed by loosening two captive bolts and lifting off the top of the fixture. The lens element will be frosted glass diffuser and the hood finish will be stainless steel.

The decorative light pole shall be C4P model by Architectual Area Lighting or approved equal. The C4P model is a four post pole design for post top mounted fixtures with a large cavity for wiring in the cast aluminum base.

Basis of Payment. This item shall be paid for at the contract unit price each for DECORATIVE LIGHTING UNIT, 100 WATT HPS, 12' M.H. (MATERIAL ONLY).

**Cook County Highway Department
Traffic Signal Work Special Provision Checklist**

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Information that has been changed or added from 2007A Special Provision is generally noted with vertical lines in the right outside margin.

Special Provision

Traffic Signal Work General

All work and equipment performed and installed under this contract, shall be governed and shall comply to the State of Illinois "Standard Specifications for Road and Bridge Construction" latest edition, herein referred to as the Standard Specifications; the State of Illinois "Manual on Uniform Traffic Control Devices for Streets and Highways", latest edition; the "National Electrical Code" latest edition herein referred to as the NEC; the National Electrical Manufacturers Association, herein referred to as NEMA (all publications for traffic control items) latest editions; the International Municipal Signal Association, herein referred to as IMSA "Official Wire & Cable Specifications Manual" latest edition; the Institute of Transportation Engineers, herein referred to as the ITE, Technical Report No.1, "A Standard for Adjustable Face Vehicular Traffic Control Heads"; AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals" and the "Supplemental Specifications" and "Recurring Special Provisions" noted herein.

The following Special Provisions supplement the above specifications, manuals, and code. The intent of these Special Provisions is to prescribe the materials and construction methods commonly used for traffic signal installations. All material furnished shall be new. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer. In case of conflict with any part or parts of said documents, these Special Provisions shall take precedence and shall govern.

In order to reduce possible vehicular conflicts with fixed objects and avoid public criticism, it is necessary to require that no posts, poles, heads, or controller cabinets be installed until all traffic signal control equipment is brought to and located on the job site.

The construction, installation and/or removal work shall be accomplished at the following intersection(s):

Wise Road at Roselle Road
Wise Road at Plum Grove Road

Description of Work

The work to be done under this contract consists of furnishing and installing all traffic signal work as specified on the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Restoration

All areas and plant material damaged by the installation of Traffic Signal posts, mast arm poles, underground cables or conduits, handholes and control cabinets shall be replaced as follows:

- **Grass Areas:** Replace top soil to a depth of four (4) inches (100 mm), re-grade shoulders, ditch slopes, and open areas back to former existing grades, fertilize, seed and mulch all damaged areas.
- **Sod Areas (areas adjacent to residential, commercial and industrial properties and any other areas as directed by the engineer):** Fertilize and re-sod damaged areas.
- **Plant Materials:** Remove and replace damaged trees, shrubs and vines with the same varieties that existed prior to damage.
- **Shoulders other than Stabilized and Backslopes, medians, sidewalks, pavement, etc.:** Replace shoulder to original condition and restore edge of backslope to original lines and grades. Medians, sidewalks and pavement shall be replaced in kind.

All damaged landscape shall be replaced in accordance with Section 250 through 254 of the Standard Specifications.

Any damage, due to the installation of traffic signal equipment; or necessary removal at handholes, jacking pits, and inspection openings, of sidewalks, curbs, gutters, median and island paving, and/or pavement, shall be repaired or replaced by the Contractor. Repair or replacement shall be made with a like material of like thickness to the existing surface. Restoration of traffic signal work area shall be included in related pay items foundation, conduit, handhole, trench and backfill, etc.

Control of Traffic Signal Materials

All work shall meet the requirements of the "Standard Specifications for Road and Bridge Construction", except as follows:

The controller and all control equipment shall be of a manufacturer that is approved by this Department. The manufacturer shall have a representative located in the six (6) county Chicago areas.

The intent of this Section is to prescribe the materials and construction methods commonly used for traffic signal installations. All material furnished shall be new. Traffic materials and equipment shall bear the U.L. label whenever such labeling is available.

Before any signal equipment, including mast arm assemblies, poles, controller cabinets, all control equipment and signal heads, are delivered to the job site, the Contractor shall obtain and forward to the Engineer a certified, notarized statement from the manufacturer, containing the catalog numbers of the equipment and/or material, guaranteeing that the equipment and/or material, after manufacture, comply in all respects with the requirements of the Specifications and these Special Provisions.

All material approval requests shall be within thirty (30) consecutive calendar days after the Contract is awarded, or at the pre-construction meeting, whichever is first.

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices, under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements that have been installed on the job will be done at the Contractor's own risk and may be subject to removal and disposal at the Contractor's expense.

The Contractor must submit the following for approval by the Engineer:

- Three (3) complete set of manufacturer's descriptive literature, drawings, and specifications of the traffic signal equipment, handholes, junction box, cable, conduit and all associated items that will be installed on the contract. Partial or incomplete submittal will be returned without review.
- The contractor shall supply samples of all wire and cable, and shall make up and supply samples of each type of cable splice proposed for use in the work for the-Engineer's approval.
- Seven(7) complete shop drawings of the mast arm assemblies and poles, showing in detail the fabrication, anchor bolts, and reinforcing materials. Certain non-standard mast arm poles and assemblies will require additional review. The Contractor shall account for additional review time in their schedule.
- Seven(7) copies of a letter from the Traffic Signal Contractor on company letterhead listing contract number or permit number, project location limits, pay item number and description and listing the manufacturer's name and model numbers of the proposed equipment to be supplied and stating that the proposed equipment meets all Contract requirements. The letter will be reviewed by the Engineer

to determine whether the equipment to be used is approved. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.

- Five (5) copies of a letter from the Traffic Signal Contractor listing the System Coordination and Timing (SCAT) consultant's name shall be supplied. The letter will be reviewed by the Engineer to determine whether the SACT consultant to be used is approved. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.
- Where certifications are specified and/or warranties. Certifications involving inspections and/or tests of material shall be complete with all test data, dates and times.
- All above shall be stamped with the Section Number, Permit Number, or Contract Number and Intersection(s) name(s). Pay item numbers shall also be included. If the above required information is not on each sheet of the above literature or letters, the equipment and material cuts will not be reviewed and shall be returned to the Contractor.
- 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.
- After the engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status. Since the Engineer review is for conformance with 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, layout drawings, or other documents by the Departments approval thereof. The Contractor must be in full compliance with contract and specification requirements.

Maintenance and Responsibility

Revise Article 801.11 to read as follows.

- a) Existing traffic signal installations and/or any electrical facilities at all or various locations may be altered or reconstructed totally or partially as part of the work on this Contract. The Contractor is hereby advised that all traffic control equipment, presently installed at these locations, may be the property of the State of Illinois, Department of Transportation, Division of Highways, Cook County Highway Department, Private Developer, or the Municipality in which they are located. Once the Contractor has begun any work on any portion of the project all traffic signals within the limits of this contract or those which have the item "Maintenance of Existing Traffic Signal Installation", "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation", shall become the full responsibility of the Contractor. The Contractor shall supply the engineer and the Department's Electrical Maintenance Contractor a 24-hour emergency contact name and telephone number.
- b) When the project has a pay item for "Maintenance of Existing Traffic Signal Installation", "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation", the Contractor must notify both the Design Engineer at (312) 603-1730 and the Department's Electrical Maintenance Contractor, of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. If work is started prior to an inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at no cost to the owner of the traffic signal. Final repairs or replacement of damaged

equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted.

- c) Projects which call for the storage and re-use of existing traffic signal equipment shall meet the requirements of Article 801.15(C) of the Standard Specifications, which call for a 30 day test period prior to project acceptance.
- d) Contracts such as pavement grinding or patching which result in the destruction of traffic signal loops do not require maintenance transfer, but require a notification of intent to work and an inspection. A minimum of seven (7) working days prior to the loop removal, the Contractor shall notify the Design Engineer at (312) 603-1730 and the Department's Electrical Maintenance Contractor, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection. See additional requirements in these specifications under Inductive Loop Detector.
- e) The Contractor is further advised that the existing traffic signal(s), and/or the existing temporary installation(s), must remain in operation during all construction stages except for the most essential down time. Any shutdown of the traffic signal installation(s), for a period to exceed fifteen (15) minutes, must have the prior approval of the Engineer. Such approval will generally only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns will not be allowed during inclement weather or during Holiday periods. Any other traffic signal shutdown, either for periods in excess of one (1) hour or outside of the 10:00 a.m. to 3:00 p.m. weekday period must have prior approval of the Engineer. The Contractor, prior to the commencement of his work, shall notify the State Electrical Maintenance Contractor, the Cook County Electrical Maintenance Contractor, or the concerned Municipality, of his intent to perform this work.
- f) The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals. Any inquiry, complaint or request by the Department, the Department's Electrical Maintenance Contractor or the public, shall be investigated and repairs begun within one hour. Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The Department's Electrical Maintenance Contractor may inspect any signaling device on the Department's highway system at any time without notification.
- g) Any damaged equipment or equipment not operating properly from any cause whatsoever shall be repaired with new equipment provided by the contractor at no additional cost to the Contract and/or owner of the traffic signal system all as approved by the Engineer. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal will not be accepted. Cable splices outside the controller cabinet will not be allowed.

Traffic Signal Inspection (Turn - On)

Revise Article 801.15b to read as follows.

- a) The Contractor must have all electric work completed, the electrical service installation connected by the utility company and equipment field tested by the Vendor prior to the Department's "turn-on" field inspection. If in the event the Engineer determines the work is not complete and the inspection will require more than two (2) hours to complete, the inspection shall be canceled and the Contractor will be required to reschedule at another date. The maintenance of the traffic signals will not be accepted until all punch list work is corrected and re-inspected. The Department will not grant a field inspection until written certification is provided from the Contractor stating the equipment has been field tested and the intersection is operating according to Contract requirements.

- b) When the road is open to traffic, except as otherwise provided in Section 850, the Contractor may request a turn-on and inspection of the completed traffic signal installation at each separate location. This request must be made to the Design Engineer at (312) 603-1730 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will not grant a field inspection until notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Department's facsimile number is (312) 603-9956. The Contractor must invite local fire department personnel to the turn-on when Emergency Vehicle Pre-emption (EVP) is included in the project.
- c) The Contractor must have all traffic signal work completed and the electrical service installation connected by the utility company prior to requesting an inspection and turn-on of the traffic signal installation. The Contractor shall be responsible to provide a Police Officer to direct traffic at the time of testing.
- d) The Contractor shall provide a representative from the control Equipment Vendor's office to attend the traffic signal inspection for both permanent and temporary traffic signal turn-ons. Upon demonstration that the signals are operating and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The Agency that is responsible for the maintenance of each traffic signal installation will assume the maintenance upon successful completion of this inspection.
- e) Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal turn-on. If approved, traffic signal acceptance shall be verbal at the turn-on inspection followed by written correspondence from the Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until Departmental acceptance is granted.
- f) All equipment and/or parts to keep the traffic signal installation operating shall be furnished by the Contractor. No spare traffic signal equipment is available from the Department.
- g) All punch list work shall be completed within two (2) weeks after the final inspection. The Contractor shall notify the Design Engineer at (312) 603-1730 to inspect all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of \$500 per month per incident.
- h) All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices under which the subject materials and signal equipment are paid and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements that have been installed on the job will be at the Contractor's own risk and shall be subject to removal and disposal at the Contractor's expense.
- i) The Contractor shall furnish the Cook County Highway Department with any special tools or wrenches that may be required for assembling or maintaining the control equipment and traffic control signal head assemblies.
- j) All control cable, when complete in place but before permanent connection, shall be subject to insulation tests at the discretion of the Engineer. The tests shall be made with approved insulation resistance testing equipment rated at 500 volts D.C. and witnessed by the Engineer. Results of these tests shall be submitted to the Department in written form, bearing the Engineer's signature and shall become part of the project records. A final inspection of the traffic signal installation shall not be held until results of this insulation test have been received.
- k) All equipment such as new controllers and allied central equipment with the exception of cable, conduit, and other materials which require the use of the State of Illinois Materials Testing Laboratories, shall be built in the suppliers shop and inspected by a representative of this Department prior to the installation of such equipment, and upon approval of this equipment an inspection ticket will be issued to the Contractor by the inspection agency (State of Illinois Material Testing Laboratory or the Cook County Highway Mechanical-Electrical Section). The controller and allied control equipment shall be prepared in the suppliers shop and run under a load of a minimum of 500 watts

per phase for at least 48 hours before it is inspected for proper operation and sequencing. After it passes this test an inspection ticket will be issued by the Cook County Highway Mechanical-Electrical Section representative and it can then be delivered to the job site for installation.

- l) Upon completion of the installation, a final inspection will be carried out by qualified representatives of the Highway Agencies involved.
- m) If the Contractor fails to comply with any of the aforementioned requirements, the County shall impose such sanction as it may determine to be appropriate including but not limited to withholding all payments to the Contractor on this contract until the provisions of this special provision are complete with and/or implementation of article 108.10 of the standard specifications.

At the final inspection it will be required that the Contractor will have submitted to the Engineer all necessary inspection tickets for all new equipment and materials installed under this Contract. If the Contractor has not obtained the inspection tickets on any portion of the new equipment and materials, the representative of this Department will have the authority to postpone the final inspection until such time as the above has been satisfied. Any postponement of the final inspection for this reason shall not relieve the Contractor of his full maintenance responsibilities until such time as the installation is re-inspected and accepted by the County..

The County requires the following from the Contractor at traffic signal turn-ons.

1. The Contractor shall, at the turn-on furnish one set of signal plans (24"x36") of record with field revisions marked in red ink to the maintaining agency.
2. Notification from the Contractor and the Equipment Vendor of satisfactory field testing.
3. A knowledgeable representative of the controller equipment supplier shall be required at the permanent and temporary traffic signal turn-on. The representative shall be knowledgeable of both cabinet design and controller functions and shall have sufficient test and spare equipment to make the traffic signal installation operational.
4. A copy of the approved material letter.
5. One (1) copy of the operation and service manuals of the signal controller and associated control equipment.
6. Five (5) copies 11" x 17" (280 mm X 430 mm) of the cabinet wiring diagrams and cable logs.
7. The controller manufacturer shall supply a printed form, not to exceed 11" x 17" (280 mm x 430 mm), for recording the traffic signal controller's timings; coordination splits, offsets, cycles; TBC; Time of Day, week and year programs; traffic responsive program, detector phase assignment, type and detector switching; and any other functions programmable from the keyboard. The form shall include a location, date, manufacturers name, controller model and software version. The form shall be approved by the Engineer and a minimum of three (3) copies must be furnished at each turn-on. The manufacturer must provide all programming information used within the controller at the time of turn-on.

Location of Underground State and County Maintained Facilities

Revise Article 803 to read as follows.

If this contract requires the services of an electrical contractor, the Contractor shall be responsible at his/her own expense for locating existing IDOT and CCHD facilities prior to performing any work. If this contract does not require the services of electrical contractor, the Contractor may request one free locate for existing IDOT and CCHD electrical facilities from the Electrical Maintenance Contractor(s) prior to the start of any work. Additional requests may be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

The exact location of all utilities shall be field verified by the Contractor before the installation of any components of the traffic signal system. For locations of utilities the local Counties or Municipalities may need to be contacted, in the City of Chicago contact D.I.G.G.E.R. at (312) 744-7000 and for all other locations contact J.U.L.I.E. at 1-800-892-0123.

Basis of Payment: This work will not be paid for directly but shall be considered as incidental to the contract.

If the Contractor fails to comply with any of the aforementioned requirements, the County shall impose such sanctions as it may determine to be appropriate including but not limited to withholding of all payments to the Contractor on this Contract until the provisions of this Special Provision are complied with and/or implementation of Article 108.10 of the Standard Specifications.

Special Provision

Signal Head, Optically Programmed Signal Head and Pedestrian Signal Head

The installation of a signal head, optically programmed signal head and pedestrian signal head shall meet the applicable requirements of Sections 880, 881 and 1078 of the Standard Specifications, except as follows:

All signal and pedestrian heads shall provide 12" (300 mm) displays with glossy yellow or black polycarbonate housings. All head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all signal and/or pedestrian heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (black) or galvanized. A corrosive resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on. Post top mounting collars are required on all posts, and shall be constructed of the same material as the brackets.

All connecting hardware and mounting brackets shall be of the with post top mounting collars, with black polycarbonate or galvanized brackets. **Aluminum mounting hardware will not be allowed.** All metal to metal joints to have anti-seize compound applied. The anti-seize compound shall be visible to the inspector at the signal turn-on. Bracket mounted signal heads shall be mounted with stainless steel bands at both the top and bottom of the head.

The signal visors that are furnished with a signal head shall be made of the same kind of material as the signal head.

Signal heads shall be positioned according to the "District 1 Standard Traffic Signal Design Details."

A signal head mounted to a signal post or a mast arm pole shall have a minimum clearance of ten (10) feet (3 m) above the pavement. Optically Programmed signal heads used for distance limiting shall have a minimum clearance of twelve (12) feet (3.6 m) above the pavement. These standard mounting heights shall apply unless otherwise specified.

Pedestrian signal head lenses shall be furnished with the international symbolic "Walking Person" and "Upraised Palm". The visor shall be of the tunnel type. Egg crate sun shields are not permitted. The normal mounting height shall be seven (7) feet (2.1 m) above the pavement or sidewalk.

Lamps shall be manufactured by Duratest, Sylvania, or an approved equal.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **SIGNAL HEAD, OPTICALLY PROGRAMMED SIGNAL HEAD, OR PEDESTRIAN SIGNAL HEAD** of the type specified, which price shall be payment in full for furnishing and installing the signal head, optically programmed signal head, or pedestrian signal head complete. If a signal head with both conventional and optically programmed signal faces is required, it will be paid for as a **COMBINATION SIGNAL HEAD**.

The type specified shall indicate the number of signal faces, the number of signal sections in each signal face and the method of mounting. The sizes of the lenses shall be as indicated on the Plans. For example: **SIGNAL HEAD, 1-FACE, 4-SECTION, BRACKET MOUNTED** or **PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED**.

Special Provision**Signal Head, Light Emitting Diode**

This work shall consist of furnishing and installing a traffic signal head or pedestrian signal head with light emitting diodes (LED) of the type specified in the plan or retrofitting an existing traffic signal head with a traffic signal module or pedestrian signal module with LEDs as specified in the plans.

LED signal heads (All Face and Section Quantities), (All Mounting Types) shall conform fully to the requirements of Sections 880 and 881 and Articles 1078.01 and 1078.02 of the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2007, and amended herein:

1. The LED signal modules shall be replaced or repaired if an LED signal module fails to function as intended due to workmanship or material defects within the first 60 months from the date of delivery. LED signal modules which exhibit luminous intensities less than the minimum values specified in Table 1 of the ITE Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement (June 27, 2005) [VTSCH] or show signs of entrance of moisture or contaminants within the first 60 months of the date of delivery shall be replaced or repaired. The manufacturer's written warranty for the LED signal modules shall be dated, signed by an Officer of the company and included in the product submittal to the County.
2. Each module shall consist of an assembly that utilizes LEDs as the light source in lieu of an incandescent lamp for use in traffic signal sections.

(a) Physical and Mechanical Requirements

1. Modules can be manufactured under this specification for the following faces:
 - a. 12 inch (300 mm) circular, multi-section
 - b. 12 inch (300 mm) arrow, multi-section
 - c. 12 inch (300 mm) pedestrian, 2 sections
2. The maximum weight of a module shall be 4 lbs. (1.8 kg).
3. Each module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.
4. Material used for the lens and signal module construction shall conform to ASTM specifications for the materials.
5. The lens of the module shall be tinted with a wavelength-matched color to reduce sun phantom effect and enhance on/off contrast. The tinting shall be uniform across the lens face. Polymeric lens shall provide a surface coating or chemical surface treatment applied to provide abrasion resistance. The lens of the module shall be integral to the unit, convex with a smooth outer surface and made of plastic. The lens shall have a textured surface to reduce glare.
6. The use of tinting or other materials to enhance ON/OFF contrasts shall not affect chromaticity and shall be uniform across the face of the lens.
7. Each module shall have a symbol of the type of module (i.e. circle, arrow, etc.) in the color of the module. The symbol shall be 1 inch (25.4 mm) in diameter. Additionally, the color shall be written out in 1/2 inch (12.7mm) letters next to the symbol.

(b) Photometric Requirements

1. The minimum initial luminous intensity values for the modules shall conform to the values in Table 1 of the VTCSH (2005) for circular signal indications, and as stated in Table 3 of these specifications for arrow and pedestrian indications at 25°C.
2. The modules shall meet or exceed the illumination values stated in Article 1078.01(3)c of the "Standard Specifications for Road and Bridge Construction," Adopted January 1, 2007 for circular signal indications, and Table 3 of these specifications for arrow and pedestrian indications, throughout the useful life based on normal use in a traffic signal operation over the operating temperature range.
3. The measured chromaticity coordinates of the modules shall conform to the chromaticity requirements of Section 4.2 of the VTCSH (2005).
4. The LEDs utilized in the modules shall be AlInGaP technology for red, yellow, Portland orange (pedestrian) and white (pedestrian) indications, and GaN for green indications, and shall be the ultra bright type rated for 100,000 hours of continuous operation from -40°C to +74°C.

(c) Electrical

1. Maximum power consumption for LED modules is per Table 2.
2. LED modules will have EPA Energy Star compliance ratings, if applicable to that shape, size and color.
3. Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.
4. The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).
5. When a current of 20 mA AC (or less) is applied to the unit, the voltage read across the two leads shall be 15 VAC or less.
6. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.
7. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

(d) Retrofit Traffic Signal Module

1. The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superseded in this section.
2. Retrofit modules can be manufactured under this specification for the following faces:
 - a. 12 inch (300 mm) circular, multi-section
 - b. 12 inch (300 mm) arrow, multi-section
 - c. 12 inch (300 mm) pedestrian, 2 sections
3. Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.
4. The maximum weight of a Retrofit module shall be 4 lbs. (1.8 kg).

5. Each Retrofit module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.
 6. Electrical conductors for modules, including Retrofit modules, shall be 39.4 inches (1m) in length, with quick disconnect terminals attached.
 7. The lens of the Retrofit module shall be integral to the unit, shall be convex with a smooth outer surface and made of plastic or of glass.
- (e) The following specification requirements apply to the 12 inch (300 mm) arrow module only. All general specifications apply unless specifically superseded in this section.
1. The arrow module shall meet specifications stated in Section 9.01 of the Equipment and Material Standards of the Institute of Transportation Engineers (November 1998) [ITE Standards], Chapter 2 (Vehicle Traffic Control Signal Heads) for arrow indications.
 2. The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs.
- (f) The following specification requirement applies to the 12 inch (300 mm) PV module only. All general specifications apply unless specifically superseded in this section.
1. The module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.
- (g) The following specification requirements apply to the 12 inch (300 mm) Pedestrian module only. All general specifications apply unless specifically superseded in this section.
1. Each pedestrian signal LED module shall provide the ability to actuate the solid upraised hand and the solid walking person on one 12 inch (300mm) section.
 2. Two (2) pedestrian sections shall be installed. The top section shall be wired to illuminate only the upraised hand and the bottom section shall be the walking man.
 3. "Egg Crate" type sun shields are not permitted. All figures must be a minimum of 9 inches (225mm) in height and easily identified from a distance of 120-feet (36.6m).

Basis of Payment:

This item shall be paid for at the contract unit price **EACH** for **SIGNAL HEAD, LED, or OPTICALLY PROGRAMMED SIGNAL HEAD, LED**, of the type specified, which price shall be payment in full for furnishing the equipment described above including signal head, LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition.

The type specified will indicate the number of signal faces, the number of signal sections, and the method of mounting.

Pedestrian head(s) shall be paid for at the contract unit price **EACH** for **PEDESTRIAN SIGNAL HEAD, LED**, of the type specified and of the particular kind of material when specified.

The type specified will indicate the number of faces and the method of mounting.

When installed in an existing signal head, this item shall be paid for at the contract unit price **EACH** for **SIGNAL HEAD, LED, OPTICALLY PROGRAMMED SIGNAL HEAD, LED**, of the type specified, **RETROFIT**, which price shall be payment in full for furnishing the equipment described above including LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition.

The type specified will indicate the number of signal faces, the number of signal sections, and the method of mounting.

When installed in an existing signal head, this item shall be paid for at the contract unit price **EACH** for **PEDESTRIAN SIGNAL HEAD, LED**, of the type specified, **RETROFIT**, which price shall be payment in full for furnishing the equipment described above including LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition.

The type specified will indicate the number of faces and the method of mounting.

TABLES

Table 2 Maximum Power Consumption (in Watts)

| | Red | | Yellow | | Green | |
|---------------------------|----------------------|------|--------------|------|-------|------|
| | 25°C | 74°C | 25°C | 74°C | 25°C | 74°C |
| 12 inch (300 mm) circular | 11 | 17 | 22 | 25 | 15 | 15 |
| 12 inch (300 mm) arrow | 9 | 12 | 10 | 12 | 11 | 11 |
| | Hand-Portland Orange | | Person-White | | | |
| Pedestrian Indication | 6.2 | | 6.3 | | | |

Table 3 Minimum Initial & Maintained Intensities for Arrow and Pedestrian Indications (in cd/m²)

| | Red | Yellow | Green |
|------------------|-------|--------|--------|
| Arrow Indication | 5,500 | 11,000 | 11,000 |

Special Provision

Traffic Signal Backplate

The furnishing and installation of this item shall meet the requirements of Section 882 and 1078.03 of the Standard Specifications, except as follows:

Backplates shall be aluminum and louvered with a minimum thickness of 0.05 inch (1.3 mm).

The surface of the backplate shall provide openings (louvers) to allow wind to penetrate and thereby reduce the wind loading on the mast arm and pole. The louver openings shall cover a minimum of twenty (20) percent of the surface area of the backplate. The louvers shall be designed not to deter the purpose of the backplate, which is to shield the signal lens from sunlight. The louvers shall be spaced symmetrically on the backplate in such a way as not to adversely affect its structural integrity.

When more than one backplate is mounted on a pole or post, their louvered symmetry shall be the same.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM**, which price shall be payment in full for furnishing and installing the traffic signal backplate complete.

Special Provision

Illuminated Sign, Light Emitting Diode

The furnishing and installation of this item shall meet the requirements of section 891 except as follows.

Description: This work shall consist of furnishing and installing an illuminated sign with light emitting diodes.

General. The light emitting diode (LED) blank out signs shall be manufactured by National Sign & Signal Company, or an approved equal and consist of a weatherproof housing and door, LEDs and transformers.

Display. The LED blank out sign shall provide the correct symbol and color for "NO LEFT TURN" OR "NO RIGHT TURN" indicated in accordance with the requirements of the "Manual on Uniform Traffic Control Devices". The message shall be formed by rows of LEDs.

The message shall be clearly legible. The message shall be highly visible, anywhere and under any lighting conditions, within a 15 degree cone centered about the optic axis.

The sign face shall be 24 inches (600 mm) by 24 inches (600 mm). The sign face shall be completely illegible when not illuminated. No symbol shall be seen under any ambient light condition when not illuminated.

All LEDs shall be T-1 3/4 (5mm) and have an expected lamp life of 100,000 hours. Operating wavelengths will be Red-626nm, Amber-590nm, and Bluish/Green-505nm. Transformers shall be rated for the line voltage with Class A insulation and weatherproofing. The sign shall be designed for operation over a range of temperatures from -35F to +165 F (-37C to +75C).

The LED module shall include the message plate, high intensity LEDs and LED drive electronics. Door panels shall be flat black and electrical connections shall be made via barrier-type terminal strip. All fasteners and hardware shall be corrosion resistant stainless steel.

Housing: The housing shall be constructed of extruded aluminum. All corners and seams shall be heli-arc welded to provide a weatherproof seal around the entire case. Hinges shall be continuous full-length stainless steel. Signs shall have stainless steel hardware and provide tool free access to the interior of the sign. Doors shall be 0.125-inch thick extruded aluminum with a 3/16-inch x 1-inch neoprene gasket and sun hood. The sign face shall have a polycarbonate, matte clear, lexan face plate. Drainage shall be provided by four drain holes at the corners of the housing. The finish on the sign housing shall include two coats of exterior enamel applied after the surface is acid-etched and primed with zinc-chromate primer.

Mounting hardware shall be black polycarbonate or galvanized steel and similar to mounting Signal Head hardware and brackets specified herein.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **ILLUMINATED SIGN, L.E.D.** which price shall be payment in full for furnishing and installing the light emitting diode illuminated sign complete.

Special Provision

**Traffic Signal Post
Pedestrian Pushbutton Post**

The furnishing and installation of this item shall meet the requirements of Sections 875, 876, 1077.01 and 1077.02 of the Standard Specifications, except as follows:

All posts, bases, and related mounting hardware shall be hot-dipped galvanized in accordance with AASHTO M 111. A magnetic field tester may be utilized at any time to determine the thickness of galvanization. Average galvanization thickness shall be 2.0 oz. per square foot and minimum thickness shall be 1.8 oz. per square foot. The Contractor shall use a fabric post tightener to attach the post to the base. If the galvanization on the post is removed using a chain post tightener exposing bare metal, the post shall be rejected and replaced with a new post.

If the Department approves painting, powder coating by the manufacturer will be required over the galvanization.

If the fabricator elects to cut and thread the post after the galvanization process, the bare metal shall immediately be cleaned to remove all cutting solvents and oils, then sprayed with two (2) coats of "Brite Zinc" galvanized compound manufactured by Brite Products, or an approved equal. Any scratches shall be repaired with "Brite Zinc". If the Department approves painting, powder coating by the manufacturer will be required over the galvanizing.

Bases shall be cast iron and octagonal in shape, approximately 15 inches (375 mm) high and 16 inches (400 mm) across the flat sides at the bottom. All bases shall be designed to accept four (4) 5/8" (15.6 mm) diameter anchor bolts evenly spaced in a 12-1/2" (312 mm) diameter circle.

Welded extensions onto the post shall not be permitted.

Posts are to be erected plumb and no shims are allowed between the bottom of the base and the foundation.

When a new post is installed on an existing foundation, the foundation shall be plumbed before the post is installed. It shall not be paid for separately but shall be included in cost for TRAFFIC SIGNAL POST or PEDESTRIAN PUSH-BUTTON POST.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **TRAFFIC SIGNAL POST, GALVANIZED STEEL**, of the length specified or **PEDESTRIAN PUSH-BUTTON POST; GALVANIZED STEEL, TYPE I or TYPE II**, which price shall be payment in full for furnishing and installing the traffic signal post, base, foundation for pedestrian post, nuts and washers, and pipe cap complete.

Special Provision**Steel Mast Arm Assembly and Pole
and/or Steel Combination Mast Arm Assembly and Pole**

The furnishing and installation of a steel mast arm assembly and pole and/or steel combination mast arm assembly and pole shall meet the requirements of Section 877 and 1077.03 of the Standard Specifications, Plans, and the Standard Drawings for Mast Arm Assembly and Pole, except as follows:

If the Department approves painting, powder coating by the manufacturer will be required over the galvanization.

Prior to the final acceptance of any steel mast arm assembly and pole and/or steel combination mast arm assembly and pole, the Contractor must furnish to the Engineer a certified, notarized mill analysis of the material used in the steel mast arm assembly and pole and/or steel combination mast arm assembly and pole complete including any other requirements in the Special Provision or Specifications.

The steel mast arm assembly and pole and/or steel combination mast arm assembly and pole furnished shall conform to the following bolt circles. The base of a pole with a mast arm assembly of 16 feet (4.87 m) to 20 feet (6.10 m) in length must fit on a fifteen-inch (380 mm) diameter bolt circle. The base of a pole with a mast arm assembly of 22 feet (6.71 m) to 40 feet (12.20 m) in length must fit on an eighteen-inch (450 mm) diameter bolt circle. The base of a pole with a mast arm assembly of 42 feet (12.80 m) to 55 feet (16.80 m) in length must fit on an twenty one-inch (535 mm) diameter bolt circle. The Anchor Rod size shall refer to the STANDARD 877001-02, 877006-02 or 877011-02. The manufacturer will be allowed to slot the base plate in which other bolt circles may fit, providing that these slots do not affect the integrity of the pole. The traffic signal mast arms shall be of one-piece construction, unless otherwise approved by the Engineer. All poles shall be galvanized.

All bolts on the mast arm assembly and pole and foundation to have a minimum exposure of at least one thread outside the nut when fully tightened.

The components of a steel mast arm assembly and pole and/or steel combination mast arm assembly and pole shall be assembled and erected in accordance with the details shown on the plans. The pole shall be erected vertically on a concrete foundation. The Contractor shall furnish and install leveling and locking nuts and required washers for mounting and plumbing the pole on the anchor bolts. Prior to the approval of the installation, the Contractor shall brush or spray on two (2) coats of "Brite Zinc" galvanized compound to any scratched areas. The pole shall be grounded to a ground rod in accordance with the details shown on the plans.

The base of the mast arm pole shall be protected by a galvanized steel or extruded aluminum shroud for protection of the mast arm pole base plate similar to the dimensions detailed in the "District 1 Standard Traffic Signal Design Details." The shroud shall be of sufficient strength to deter pedestrian and vehicular damage. The shroud shall allow air to circulate throughout the mast arm but not allow manifestation of insects or other animals. The shroud shall be constructed, installed and designed not to be hazardous to probing fingers and feet. All mounting hardware shall be stainless steel. The Shroud shall not be paid for separately but shall be included in the cost of the mast arm assembly and pole.

The steel mast arm assembly and pole and/or steel combination mast arm assembly and pole shall be designed to support one 80 pound (36 kg) signal with a projected area of 14.7 square feet (1.37 m²) at the free end of the mast arm, one 80-pound (36 kg) signal with a projected area of 14.7 square feet (1.37 m²), 12 feet (3.6 m) inward (or as shown on the plans), another, one 80-pound (36 kg) signal with a projected area of 14.7 square feet (1.37 m²), 12 feet (3.6 m) inward (for arms 36 feet 10.97 m or longer or as shown on the plans) on the mast arm and one 125-pound (56 kg) signal with a projected area of 7.6 square feet (0.71 m²) mounted 12 feet (3.6 m) high on the shaft or one 160-pound (72 kg) signal with a projected area of 7.6 square feet (0.71 m²) mounted 12 feet (3.6 m) high on the shaft of dual mast arms and one 55-pound (25 kg) luminaire with a projected area of 1.6 square feet (0.15 m²) at the end of the luminaire arm and one 9.9 pound (4.5 kg) camera or detector with a projected area of 1 square feet (0.09 m²) at the end of truss type luminaire mast arm, or the signal, camera detector and luminaire loading shown on the

plans, whichever is greater, based on a 80 mile per hour (130 km/h) wind velocity plus 30 percent gust factor.

In addition to the signal loading, the steel mast arm assembly and pole, and/or steel combination mast arm assembly and pole shall be structurally adequate to support a maximum of two (2) sign panels 30" x 72" (750 mm x 1,800 mm) in size mounted back to back, one LED street sign 48 5/8" x 22 5/16" with 62 pounds, one LED street sign 72 5/8" x 22 5/16" with 77 pounds or one LED street sign 96 5/8" x 22 5/16" with 92 pounds and one (1) sign panels 30" x 24" (750 mm x 600 mm) in size mounted from 3 feet (900 mm) from end of the mast arm. The actual size and number of the sign panel(s) to be furnished and installed and the details of mounting shall be as shown on the plan sheet "Mast Arm Mounted Street Name Signs".

Signs attached to poles or posts (such as mast arm signs) shall have mounting brackets and sign channels which are equal to and completely interchangeable with those used by the Department. Signfix Aluminum Channel Framing System is currently recommended, but other brands of mounting hardware are acceptable based upon the Department's approval.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **STEEL MAST ARM ASSEMBLY AND POLE**, and/or **STEEL COMBINATION MAST ARM ASSEMBLY AND POLE** of the size(s) specified which price shall be payment in full for furnishing and installing the steel mast arm assembly and pole and/or steel combination mast arm assembly and pole, anchor bolts, nuts, washers, and connected to a ground rod as shown on the Standard, complete.

Special Provision**Traffic Actuated Controller
Traffic Actuated Controller with Cabinet
Inductive Loop Detector**

The furnishing and installation of a traffic actuated controller and an inductive loop detector shall meet the requirements of Section 857, 885, 1073, 1074.03 and 1079.01 of the Standard Specifications, except as revised with this Special Provision.

The new and/or temporary controller and all control equipment shall be of a manufacturer that is approved by this Department. The manufacturer shall have a representative located in the six (6) county Chicago areas. The Controller shall be NEMA TS2 type 1 Econolite ASC/2S-1000 or Eagle M41 unless specified otherwise on the plans or elsewhere on these specifications. The controller shall be the most recent model and software version supplied by the manufacturer at the time of the approval. The traffic signal controller shall provide features to inhibit simultaneous display of a circular yellow ball and a yellow arrow display. Individual load switches shall be provided for each vehicle, pedestrian, and right turn over lap phase. The controller shall prevent phases from being skipped during program changes and after all pre-emption events.

The malfunction monitor unit shall be an EDI Model MMU-16E or equivalent.

Contracts requiring new cabinets shall provide for rack mounted detector amplifiers. Loop amplifiers shall be provided with LCD displays with loop frequency, inductance and change of inductance readings. When calling detectors are called for on the plans, the amplifier shall have the capability of providing vehicle calls to a particular phase when that phase is not in use.

The cabinet shall provide a minimum of sixteen (16) pre-wired load bays for eight (8) phases of vehicular, four (4) phases of pedestrian and four (4) phases of overlap operation and pedestrian pushbutton isolation. Isolation cards will be required for all pedestrian pushbuttons.

- Cabinets – Provide 1/8" (3.2 mm) thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.
- Controller Harness – Provide a TS2 Type 2 "A" wired harness in addition to the TS2 Type 1 harness.
- Surge Protection – EDCO Model 1210 IRS with failure indicator.
- BIU – Containment screw required.
- Transfer Relays – Solid state or mechanical flash relays are acceptable.
- Switch Guards – All switches shall be guarded.
- The controller cabinet must have two (2) porcelain light fixtures with metal cage protection controlled by a separate toggle switch, and a thermostat.
- Plan & Wiring Diagrams – 12" x 16" (305 mm x 406 mm) moisture sealed container attached to door.
- Detector Racks – Fully wired and labeled for four (4) channels of emergency vehicle pre-emption and sixteen channel (16) of vehicular operation.
- Field Wiring Labels – All field wiring shall be labeled.
- Field Wiring Termination – Approved channel lugs required.
- Power Panel – Provide a nonconductive shield.
- Circuit Breaker – The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 amps.
- Police Door – Provide wiring and termination for plug in manual phase advance switch.
- Railroad Pre-Emption Test Switch – Eaton 8830K13 SHA 1250 or equivalent.

Controller and cabinet interconnected with railroads shall be new and NEMA TS2 type 1. In addition to the aforementioned equipment specifications, the following shall apply to railroad interconnected equipment:

- Railroad interconnected controllers and cabinets shall be supplied and assembled only by an approved IDOT District One closed loop traffic signal equipment manufacturer supplier. The equipment shall be tested and approved in the equipment supplier's IDOT District One facility prior to field installation.
- A preemptor interlock relay shall be installed as a component of the supervision system.
- Pedestrian clearance during railroad pre-emption will be limited to a flashing don't walk interval equal in length to the vehicle yellow clearance interval and shall time concurrently with the vehicle yellow clearance interval.
- The controller shall provide for immediate track clearance green re-service upon receipt of each subsequent pre-empt demand. During this re-service all normal vehicle clearance intervals, including red revert, will be respected.
- Terminal facility shall be wired so as to provide supervision of all essential pre-emption components. This wiring shall cause the facility to transfer to or remain in flashing operation in the event any critical component is missing, not connected or failed. Interface relays shall be wired so as to be in the energized state during normal (non pre-empt) operation. Failure of a relay coil shall open the supervision loop and cause the intersection to transfer to flashing operation. Each critical element such as controller harnesses and interface relays shall be wired to form a series loop which must be complete for normal operation.
- A method of supervising the three (3) conductor cable interconnecting the traffic and railroad facilities shall provide flashing operation during failed cable conditions. Upon detection of a failed railroad interconnect the controller shall provide one (1) track clearance green interval and shall enter flashing operation at the end of track clearance yellow interval. Such flashing operation must be manually reset. The supervision circuit shall, within reason, be capable of detecting failure of the supervision circuit components themselves, and shall provide fail-safe operation upon such failure.
- Interconnect to railroad facility shall be such that demand for pre-emption begins when the railroad flashers begin to flash and ends when the railroad gates begin to rise.
- An IDOT approved method of controller security shall be implemented to assure data integrity and to preclude changes to critical data. The method shall include a means for the controller to continuously verify controller/cabinet CRC match. The CRC will be developed based on pre-emptor entries, unit data (including phases in use, sequence and ring structure, etc.), overlap assignment and timing, firmware version, and any special memory content necessary to proper operation. Where data is stored in a data module a spare data module shall be provided to the Engineer.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **INDUCTIVE LOOP DETECTOR**, and/or **FULL-ACTUATED CONTROLLER AND CABINET** or **RAILROAD, FULL ACTUATED CONTRALLER AND CABINET** (if required) of the type specified, which price shall be payment in full for furnishing and installing the inductive loop detector complete with all harnesses and connections for proper operation, and/or for furnishing and installing the controller complete, including malfunction monitor unit, load switches, flashers, flash transfer relays, etc. in a new cabinet or an existing cabinet as specified, with the necessary connections for proper operation.

Special Provision**Master Controller**

The installation consist of a master controller shall meet Section 860 of the Standard Specifications except as revised with this Special Provision.

The Manufacturer of the master controller shall be as approved by the Agency that will Maintain the closed loop system. Cook County currently approves only Econolite and Eagle NEMA TS2 Type 1 closed loop systems. If some other Agency will be maintaining the closed loop system the Contractor will contact that Agency to determine what Brand of Equipment is acceptable. The latest model and software version of master controller shall be supplied.

Functional requirements in addition to those in section 860, 863 and 1073.04 of the Standard Specification include:

- The system commands shall consist of, as a minimum, six (6) cycle lengths, five (5) offsets, three (3) splits, and four (4) special functions. The system commands shall also include commands for free or coordinated operation.
- Traffic Responsive operation shall consist of the real time acquisition of system detector data, data validation, and the scaling of acquired volumes and occupancies in a deterministic fashion so as to cause the selection and implementation of the most suitable traffic plan.
- Full duplex communication between the master and its local controllers is recommended, but at this time not required. The data rate shall be 1200 baud MINIMUM and shall be capable of speeds to 38,400 or above as technology allows. The controller, when installed in an Ethernet topology, may operate non-serial communications.
- The cabinet shall be provided with a Siecor CAC 3000, or equivalent, Outdoor Network Interface for termination of the telephone service. It shall be mounted to the inside of the cabinet in a location suitable to provide access for termination of the telephone service. The CAC 3000 shall be equipped with a standard Three Electrode Heavy Duty Gas Tube Surge Arrestor.
- The cabinet shall be equipped with a 9600 baud, auto dial/auto answer, modem. It shall be a US robotics 33.6K baud rate or equal.
- Each master shall be delivered with up to three (3) complete sets of the latest edition of registered remote monitoring software with full manufacturer's support. Each set shall consist of software on suitable media (CD), and a bound set of manuals containing loading and operating instruction. One copy of the software and support data shall be delivered to the Agency in charge of system operation. One of these three sets will be provided to the Maintaining Agency's Signal Maintenance Contractor for his use in monitoring the system.
- The contractor shall be required to set-up graphic displays and all software parameters for every intersection to be interconnected under this contract, including complete viewing and control capabilities from the Maintaining Agency's remote monitor.
- The approved manufacturer of equipment shall loan CCHD one (1) master controller and two (2) intersection controllers of the most recent models and the newest software version to be used for instructional purposes in addition to the equipment to be supplied for the contract.
- The Master Controller shall provide a background timer which will prevent phases from being skipped during program changes.
- The Contractor shall arrange to install a standard voice-grade dial-up telephone line to the master controller. This shall be accomplished through the following process:

- As soon as practical or within one week after the contract has been awarded, the Contractor shall contact (via phone) the CCHD Design Engineer at (312) 603-1730 to request a phone hook-up.
- A follow-up fax transmittal to the CCHD Design Engineer at (312) 603-9956 with all required information pertaining to the phone installation is required from the Contractor as soon as possible or within one week after the initial request has been made. The required information to be supplied on the fax shall include (but not limited to): A street address for the new traffic signal controller (or nearby address); what type of telephone service is needed. the name and number of the Contractor's employee for the telephone company to contact regarding site work and questions. The phone line installation will then be requested from the County Central Services Office.
- The usual time frame for the activation of the phone line is 8 weeks after the CCHD Design Engineer has received the Contractor supplied fax. It is, therefore, imperative that the phone line conduit and pull-string be installed by the Contractor in anticipation of this time frame. On jobs which include roadway widening in which the conduit cannot be installed until this widening is completed, the Contractor will be allowed to delay the phone line installation request until a point in time that is 8 weeks prior to the anticipated completion of the traffic signal work. The contractor shall provide the CCHD Design Engineer with an expected installation date considering the 8 week processing time.
- The telephone line shall be installed and activated one month before the system final inspection.
- All costs associated with the telephone line installation and activation (not including the contract specified conduit installation between the point of telephone service and the traffic signal controller cabinet) shall be paid for by the CCHD Central Services Office (i.e., this will be a CCHD phone number not a Contractor phone number).

Basis of Payment: The master controller shall be paid for at the contract unit price **EACH** for **MASTER CONTROLLER**, which price shall be payment in full for furnishing and installing the master controller complete with necessary connections for proper operation.

Special Provision

Detector Loop

This work shall consist of furnishing and installing detector loop in accordance with the requirements of Section 886 of the Standard Specifications, except as follows:

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall have the proposed loop locations marked and contact the CCHD Design Engineer at (312) 603-1730 to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the pouring of the portland cement concrete surface, using the same notification process as above.

Each loop lead-in shall be placed in a separate conduit from edge of pavement to handhole. Loop detectors shall be installed according to the requirements of the "District 1 Standard Traffic Signal Design Details". Saw-cuts (homerun on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement when possible in order to minimize the length of the saw cut (homerun on preformed detector loops) unless directed otherwise by the Engineer or as shown on the plans. Spacing between the lead-ins (holes drilled in the pavement) shall not be less than one (1) foot (300 mm) and shall be located one (1) foot (300 mm) from the edge of pavement. Loop lead-in wires should be twisted to provide a minimum of five (5) turns per foot (fifteen [15] turns per meter) from the loop to the splice.

The cable splice connection of the detector loop and the lead-in cable to the controller shall conform to Section 873 of the Standard Specifications or the requirements set forth in the "District 1 Standard Traffic Signal Design Details".

Each loop detector lead-in wire shall be labeled in the handhole using a Panduit 250W175C water proof tag or approved equal secured to each wire with nylon ties. The lead-in wire, including all necessary connections for proper operation, from the edge of pavement to the handhole shall be incidental to the price of the detector loop.

The detector loop cable insulation shall be labeled with the cable specifications.

Resistance to ground shall be a minimum of 100 megohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be greater than 5.

Type 1:

- All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement or the curb shall be cut with a 1/4" (6.3 mm) x 4" (100 mm) long sawcut to mark the location of each loop lead-in.
- Loop sealant shall be a two-component thixotropic chemically cured polyurethane either Chemque Q-Seal 295, Perol Elastic Cement A/C Grade or an approved equal. The sealant shall be installed 1/8" (3 mm) below the pavement surface, if installed above the surface the overlap shall be removed immediately.
- Detector loop measurements shall include the sawcut and the length of the loop lead-in leading to the edge of pavement. The lead-in wire, including all necessary connections for proper operations, from the edge of pavement to the handhole, shall be incidental to the price of the detector loop. Unit duct, trench and backfill, and drilling of pavement or handholes shall be incidental to detector loop quantities.
- The corners of all loops shall be core drilled with a two (2) inch (50 mm) bit. All joints and cracks in the pavement that the loop crosses must be core drilled.

Preformed:

- This work shall consist of furnishing and installing a rubberized heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:
- Preformed detector loops shall be installed in new pavement constructed of portland cement concrete using mounting chairs or tied to re-bar or the preformed detector loops may be placed in the sub-base. Loop lead-ins shall extend to a temporary enclosure near the proposed handhole location with ends capped and sealed against moisture and other contaminants to the satisfaction of the Engineer.
- Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. Non-metallic coillable duct, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to the handhole.
- Preformed detector loops shall be factory assembled. Homeruns and interconnects shall be pre-wired and shall be an integral part of the loop assembly. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 11/16" (17.2 mm) outside diameter (minimum), 3/8" (9.5 mm) inside diameter (minimum) Class A oil resistant synthetic cord reinforced hydraulic hose with 250 psi (1,720 kpa) internal pressure rating. Hose for the loop and homerun assembly shall be one continuous piece. No joints or splices shall be allowed in the hose except where necessary to connect homeruns or interconnects to the loops. This will provide maximum wire protection and loop system strength. Hose tee connections shall be heavy duty high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking. The wire used shall be #16 THWN stranded copper. The number of turns in the loop shall be application specific. Homerun wire pairs shall be twisted a minimum of four turns per foot. No wire splices will be allowed in the preformed loop assembly. The loop and homeruns shall be filled and sealed with a flexible sealant to insure complete moisture blockage and further protect the wire. The preformed loops shall be constructed to allow a minimum of 6.5 feet of extra cable in the handhole.

Six foot (1.8 m) round loop(s) may be substituted for six foot (1.8 m) by six foot (1.8 m) square loop(s) and shall be paid for as 24 feet (7.2 m) of detector loop.

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER) of DETECTOR LOOP, TYPE I or PREFORMED DETECTOR LOOP**, as specified in the plans, which price shall be payment in full and for furnishing, installing and testing the Detector Loop and all related connections for proper operation.

Special Provision

Video Detection System for Temporary Traffic Signal Installation

This specification sets forth the minimum requirements for a system that detects vehicles on a roadway using only video images of vehicle traffic. In addition to the requirements described below, the video detection system shall meet or exceed the specifications of the Autoscope or the Iteris Vantage Plus systems.

1) General

a) System Hardware

The video detection system shall consist of one to six video cameras, a video detection processor (VDP) capable of processing from one to six video sources, and a pointing device.

b) System Software

The system shall include software that detects vehicles in multiple lanes using only the video image. Detection zones shall be defined using only an on board video menu and a pointing device to place the zones on a video image. Up to 144 detection zones shall be available.

2) Functional Capabilities

- a) The VDP shall process video from up to 6 video sources simultaneously. The sources can be video cameras or S-VHS video tape players. The video shall be input to the VDP in R5170 format and shall be digitized and analyzed in real time. A separate microprocessor for each video input shall be used.
- b) The VDP shall detect the presence of vehicles in up to 24 detection zones per camera. A detection zone shall be approximately the width and length of one car.
- c) Detection zones shall be programmed via an on board menu displayed on a video monitor and a pointing device connected to the VDP. The menu shall facilitate placement of the detection zones quickly and easily.
- d) The VDP shall store up to three different detection zone patterns. The VDP can switch to any one of the three different detection patterns within 1 second of user request via menu selection with the pointing device.
- e) The VDP shall detect vehicles in real time as they travel across each detection zone.
- f) The VDP shall have an RS232 port for communications with an external computer. The VDP RS232 port shall be multi-drop capable.
- g) The VDP shall accept new detection patterns from an external computer through the RS232 port when the external computer uses the correct communications protocol for downloading detection patterns.
- h) The VDP shall send its detection patterns to an external computer through the RS-232 port when requested when the external computer uses the correct communications protocol for uploading detection patterns.

3) Vehicle Detection

- a) Up to 144 detection zones shall be supported and each detection zone can be sized to suit the site and the desired vehicle detection region.
- b) Detection zones shall be capable of being Or'ed or ANDed together to indicate vehicle presence on a single detector output channel.
- c) Placement of detection zones shall be done by using only a pointing device, and a graphical interface built into the YDP and displayed on a video monitor, to draw the detection zones on the video image from each video camera.
- d) Up to 3 detection zone patterns shall be saved for each camera within the VDP memory and this memory shall prevent loss during power outages.
- e) The selection of the detection zone pattern for current use shall be done through a menu. It shall be possible to activate a detection zone pattern from VDP memory and have that detection zone pattern available within 1 second of activation.
- f) When a vehicle is detected crossing a detection zone, the corners of the detection zone will flash on the video overlay display to confirm the detection of the vehicle.
- g) Detection shall be at least 98% accurate in good weather conditions, with slight degradation possible under adverse weather conditions (e.g. rain, snow, or fog) which reduce visibility. Detection accuracy is dependent upon camera placement, camera quality and detection zone location, and these accuracy levels do not include allowances for occlusion or poor video due to camera location or quality. See section 5.12 for recommended camera placement.
- h) The VDP shall provide 32 channels of detection through either a NEMA TS 1 port or a NEMA TS2 port.
- i) The VDP shall provide dynamic zone reconfiguration (DZR). DZR enables normal operation of existing detection zones when one zone is being added or modified during the setup process. The VDP shall output a constant call on any detector channel corresponding to a zone being modified.
- j) Detection zones shall be directional to reduce false detection from objects traveling in directions other than the desired direction of travel in the detection area.
- k) Detection zone setup shall not require site specific information such as latitude and longitude to be entered into the system.
- l) Detection zone setup shall not require temporal information such as date and time.
- m) The VDP shall process the video input from each camera using a separate microprocessor at 30 frames per second.
- n) The VDP shall output a constant call for each enabled detector output channel if a loss of video signal occurs. The VDP shall output a constant call during the background learning period.

Basis of Payment: Payment in full for furnishing, installing and setting up the video detection system, with necessary connections and programming for proper operation shall be included in the pay item for **TEMPORARY TRAFFIC SIGNAL INSTALLATION.**

Special Provision

Pedestrian Pushbutton

The installation of a Pedestrian Pushbutton shall meet Section 888 and 1074.02 of the Specifications except as revised with this Special Provision.

This item shall consist of furnishing and installing a pushbutton assembly which shall be ADA compliant, highly vandal resistant, be pressure activated with minimal movement and can not be stuck in a closed or constant call position. A red LED and audible tone shall be provided for confirmation of an actuation call. The pushbutton housing shall be solid 6061 aluminum and power coated yellow, unless otherwise noted on the plans. The actuator shall be stainless steel with a solid state electric PIEZO switch rated for a minimum of 20 million cycles with no moving plunger or moving electrical contacts. The operating voltage shall be 12-24V AC/DC.

Pedestrian stations shall be designed to mount directly to a post, mast arm pole or wood pole. The station shall be aluminum and accept a 3-inch round pushbutton assembly and 5x7 ¾ inch R10-3b or R10-3d sign. A larger station will be necessary to accommodate the sign R10-3e for a countdown pedestrian signal.

Basis of Payment: This work shall be paid for at the contract unit price **EACH** for **PEDESTRIAN PUSH-BUTTON**, which price shall be payment in full for furnishing and installing the pushbutton assembly complete.

Special Provision

Conduit

The installation of a conduit shall meet the requirements of Sections 810 of the Standard Specifications, except as revised with this Special Provision.

Pavement, driveways, and curbs shall not be removed to install electrical conduits.

All conduit installed underground shall have a minimum depth of two feet six inches (2'-6" [760 mm]) except under railroad tracks where the conduit shall be a minimum of five feet (5' [1.52 m]) as measured to the outside diameter of the conduit on the top side.

All conduit splices shall be solid threaded couplings. Conduit terminating in junction and pull boxes shall be terminated with hubs, integral box hubs, or integral box bosses.

Directional boring or plowing will be allowed in place of trenched and backfilled or pushed conduit, but no additional compensation will be allowed.

All conduit attached to a structure shall have a minimum of one (1) expansion joint placed within the length of the attached conduit. At each end of the structure the Contractor shall install a weatherproof galvanized cast iron box with a minimum size of 8" (200 mm) x 8" (200 mm) x 6" (150 mm) deep. The installation of these two (2) boxes and any required expansion joints shall be considered incidental to the unit price for conduit attached to structure.

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)** for **CONDUIT** of the type and size specified, which price shall be payment in full for furnishing and installing the conduit and fittings complete. Trench and Backfill will be paid for separately.

Special Provision**Unit Duct, Without Cable, in Trench**

This work shall consist of furnishing and installing unit duct, without cable, in trench of the type and size specified. The installation of a duct shall meet all applicable requirements of the Standard Specifications of Section 810. All installation of unit duct shall be incidental to the contract and not paid for separately. Polyethylene unit duct shall be used for all detector loop raceways to handholes. All duct shall be placed a minimum depth of 30 inches (750 mm) or as shown on the contract plans or standard details.

The duct shall be a plastic duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The duct and its manufacture shall conform to the standards of NEMA Publication TC7, ASTM Standard Specifications D3485 and NEC Article 343.

On temporary traffic signal installations with detector loops, polyethylene unit duct shall be used for detector loop raceways from the saw-cut to 10 feet (3 m) up the wood pole, unless otherwise shown on the plans.

Material: The duct shall be manufactured from high density polyethylene complying with ASTM D1248, Type III, Class C and the requirements listed in Table 2-1 of NEMA TC7. Submittal information shall demonstrate compliance with the details of these requirements.

Construction: Duct dimensions shall conform to the standards listed in Table 2-2 of NEMA TC7. Submittal information shall demonstrate compliance with these requirements.

As specified in NEMA TC7, the duct shall be clearly and durably marked at least every 10 feet (3 meters) with the material designation (HDPE for high density polyethylene), nominal size of the duct and the name and/or trademark of the manufacturer.

Freeze-up Test: A ten foot length of the duct bent into an upright "U" shape shall be filled with water and then placed in a low temperature cabinet and maintained at -20 degrees C for 24 hours. The duct shall not crack or burst during the test.

Compression Test: The test shall be conducted on a six inch (150 mm) sample of the duct. Samples are placed between six inch (150 mm) plates and compressed at the rate of one-half inch (12.5 mm) per minute until the distance between the plates is reduced by 50%, recording the load required to compress the duct. The samples are then removed and allowed to stand for exactly 5 minutes. The load required to compress the sample shall be equal to or greater than that listed below and the duct shall have returned to not less than 85% of its original diameter at the end of the 5 minutes.

| Nominal Size | | Load |
|--------------|-------|----------|
| ¾ inch. | 20 mm | 122 lbs. |
| 1 inch. | 25 mm | 167 lbs. |
| 1 ¼ inch. | 30 mm | 243 lbs. |
| 1 ½ inch. | 40 mm | 297 lbs. |
| 2 inch. | 50 mm | 387 lbs. |

Tests: All of the tests referred to above and the applicable tests in the cited ASTM Standards shall be performed on the duct at the manufacturer's plant and certified copies of the reports of the results of these tests shall be submitted to the Engineer prior to the installation of the duct.

Special Provision

Trench and Backfill for Electrical Work

The constructing and backfilling of a trench shall meet the requirements of Section 819 of the Standard Specifications, except as follows:

The Trench shall not be less than two (2) feet six (6) inches (760 mm) in depth.

All trenches shall be backfilled as soon as possible after the installation of the conduit or cable. Any material excavated from the trenches, that in the opinion of the Engineer is satisfactory backfilling material, may be used for backfilling of trenches. Cinders, rocks or other deleterious materials will not be permitted in the backfilling material. Trenches under pavement, paved shoulders, curb, gutter, or sidewalk shall be backfilled with sand or stone screenings.

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)**, measured in place, for **TRENCH AND BACKFILL FOR ELECTRICAL WORK**, which price shall include the cost of all excavation, furnishing and placing all backfill material, and the disposal of surplus excavations.

Special Provision**Electric Cable**

The installation of an electric cable shall meet the requirements of Section 873 and 1076.04 of the Standard Specifications, except as follows:

The jacket for electric cable in this contract shall be of the polyvinyl chloride type meeting the requirements of IMSA 19-1. (Traffic signal cable shall be solid copper No. 14 unless otherwise specified in the plans or these Special Provisions). No other type of jacket will be allowed, except as follows:

The service cable may have a XLP jacket.

Communications and lead-in cable shall have a gray or chrome jacket.

Electric cable sized No. 12 AWG and smaller shall be solid.

The length of cable slack shall be in accordance with the following schedule:

| Location | Cable Slack | | Location | Vertical Slack | |
|--------------------|-------------|-------|-------------------------------|----------------|-----------|
| | ft. | m | | ft. | m |
| Handhole | 6.5 ft. | 2 m | All Foundations | 3.5 ft. | 1.1 m |
| Double Handhole | 13 ft. | 4 m | Mast Arm Length to Signal = L | 20 + L ft. | 6.1 + L m |
| Signal Post | 2 ft. | 0.6 m | Bracket Mounted | 13 ft. | 4 m |
| Controller cabinet | 1 ft. | 0.3 m | Ped. Pushbutton | 4 ft. | 1.2 m |
| Fiber Optic | 13 ft. | 4 m | Electric Service | 13.5 ft. | 4.1 m |
| Electric Service | 1 ft. | 0.3 m | Service to Ground | 13.5 ft. | 4.1 m |
| Ground Cable | 1 ft. | 0.3 m | Post Mounted | 6 ft. | 1.8 m |

The cable splice connection of the detector loop and the lead-in cable to the controller shall conform to Section 873 of the Standard Specifications or to the requirements set forth in the "District 1 Standard Traffic Signal Design Details".

Heat shrink splices shall be used according to "District 1 Standard Traffic Signal Design Details".

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)** for **ELECTRIC CABLE** of the type, size and number of conductors as specified, which price shall be payment in full for furnishing the material and making all electrical connections and installing the cable complete, measured as specified.

Special Provision**System Ground and Grounding Cable**

System Ground: Grounding of all traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the National Electrical Code. See IDOT District 1 traffic signal detail plan sheets.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations where measured resistance exceeds 25 ohms. Ground rods are included in the applicable foundation pay item and will not be paid for separately. All steel ground rods shall be copper clad, a minimum of 10' (3.0 m), and 3/4" (20mm) in diameter.

Testing shall be according to Section 801.13(a) (4) and (5).

- a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.
- b) The equipment grounding conductor shall be green color coded. The following is in addition to Section 801.04 of the Standard Specifications.
 - 1) Equipment grounding conductors shall be XLP insulated 600V No.6 gauge copper, unless otherwise noted on the plans, and bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.
 - 2) Equipment grounding conductors shall be bonded, using a listed grounded connector (Burdny type KC/K2C, as applicable or approved equal), to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pushbutton posts, pull boxes, handhole frames and covers and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. Bonding shall be made with a splice and pigtail connected using a sized compression type copper sleeve, sealant tape and heat shrinkable cap. A listed electrical joint compound shall be applied to all conductor terminations, connector threads and contact points. Bonding to existing handhole frames and covers shall be paid for separately.
 - 3) All metallic and non-metallic raceways containing traffic signal circuit runs shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.
 - 4) Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full heat shrink shall be provided over individual conductor heat shrinks.
- c) The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, listed pressure connectors, listed clamps or other approved listed means.

GROUNDING CABLE

The cable shall meet the requirements of Section 817.02(b) of the "Standard Specifications".

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)** for **ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6, 1C**, which price shall be payment in full for furnishing labor and material including grounding clamps, cable, splicing, exothermic welds, grounding connectors and hardware. All ground rods shall be incidental to the cost of associated items for Concrete Foundations and Service Installation.

Special Provision**Service Installation Pole Mounted**

The installation of a service installation shall meet the requirements of Section 805 of the Standard Specifications, except as follows:

All installations shall meet the requirements of the details in the "District 1 Standard Traffic Signal Design Details" and applicable portions of the Specifications. The electrical service installation shall be the electric service disconnecting means and it shall be identified as suitable for use as service equipment.

Materials:

1. General. The completed control panel shall be constructed in accordance with UL Std. 508A, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.
2. The cabinet shall be UL 50, NEMA Type 4X, unfinished single door design, fabricated from minimum 0.080-inch (2.03 mm) thick Type 5052 H-32 aluminum. Seams shall be continuous welded and ground smooth. Stainless steel screws and clamps shall secure the cover and assure a watertight seal. The cover shall be removable by pulling the continuous stainless steel hinge pin. The cabinet shall have an oil-resistant gasket and a lock kit shall be provided with an internal O-ring in the locking mechanism assuring a watertight and dust-tight seal. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 14-inches (350 mm) high, 9-inches (225 mm) wide and 8-inches (200 mm) in depth is required. The cabinet shall be channel mounted to a wooden utility pole using assemblies recommended by the manufacturer.
3. Surge Protector. Overvoltage protection, with LED indicator, shall be provided for the 120 volt load circuit by the means MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of -40C to +85C. The surge protector shall be UL 1449 Listed.
4. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes, otherwise noted on the plans, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.
5. Fuses, Fuseholders and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.
6. Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.
7. The Contractor shall notify the Commonwealth Edison Marketing Representative a minimum of 30 working days prior to the anticipated date of hook-up. This 30 day advance notification will begin only after the Commonwealth Edison Marketing Representative has received service charge payments from the Contractor. Prior to contacting the Commonwealth Edison marketing representative for service connection, the service installation, controller cabinet and cable must be installed for inspection by Commonwealth Edison.

8. Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10' (3.0 meters) in length, and 3/4" (20 mm) in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary additional rods shall be installed to meet resistance requirements at no additional cost to the contract.

Installation:

1. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.
2. Brackets designed for pole mounting shall be used. All mounting hardware shall be stainless steel. Mounting height shall be as noted on the plans or as directed by the Engineer.

The Commonwealth Edison Marketing Representative for this project is:

Mr. Michael Bell

Telephone: (630) 691-4529

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **SERVICE INSTALLATION, POLE MOUNTED**, which shall be payment in full for furnishing and installing the service installation complete. **SERVICE INSTALLATION, POLE MOUNTED** shall include the 3/4" (20 mm) grounding conduit, ground rod, and pole mount assembly. Any charges by the utility company to provide electrical services to the service installation will be paid for in accordance with Article 109.05 of the Standard Specifications.

Special Provision

Handhole

The installation of a handhole shall meet the requirements of Section 814 of the Standard Specifications, except as follows:

All concrete handholes are to be cast in place against undisturbed earth. No pre-cast concrete handholes will be accepted.

The handholes shall have an inside dimension of 21-1/2" (549 mm) minimum. Frames and lid openings shall match this dimension.

The cover of the handhole shall be labeled "TRAFFIC SIGNALS" with legible raised letters.

All conduits will enter the handhole at a depth of 30" (760 mm) except for the conduits between the curb and handhole for detector loops when the handhole is less than five (5) feet (1.52 m) from the detector loop.

All cable hooks are to be hot dipped galvanized in accordance with AASHTO Specification M111.

For grounding purposes the handhole frame shall have provisions for a 7/16" (15.875 mm) diameter stainless bolt cast into the frame. The covers shall have a stainless steel threaded stint extended from the eye hook assembly for the purpose of attaching the grounding conductor to the handhole frame and cover.

The minimum wall thickness for heavy duty hand holes shall be 12 inches (300 mm).

Steel cable hooks shall be coated with hot-dipped galvanization in accordance with AASHTO Specification M111. Hooks shall be a minimum of 1/2 inch (12.7mm) with two 90 degree bends diameter and extend into the handhole at least 6 inches (150 mm). Hooks shall be placed a minimum of 12 inches (300 mm) below the lid or lower if additional space is required.

The French drain shall be constructed of crushed stone or gravel, Gradation CA 5 or CA 7, and according to Section 601 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **HANDHOLE, HEAVY-DUTY HANDHOLE, or DOUBLE HANDHOLE**, which price shall be payment in full for all necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

Special Provision**Concrete Foundation**

The installation of a concrete foundation shall meet the requirements of Section 878 of the Standard Specifications and the Standard Drawing for Concrete Foundations, except as follows:

All anchor bolts shall be according to Section 1006.09, except all anchor bolts shall be hot dipped galvanized the full length of the anchor bolt including the hook.

Concrete foundation, type A, for traffic signal posts shall provide anchor bolts meeting the requirements of Section 1006.09 of the Standard Specifications, with the bolt pattern specified within the "District 1 Standard Traffic Signal Design Details". All Type A foundations shall be a minimum depth of 48" (1.22 m).

Concrete Foundations, Type "C" for Traffic Signal Cabinets with Uninterruptible Power Supply (UPS) cabinet installations shall be a minimum of 48 inches (1.22 m) long and 31 inches (790 mm) wide. All Type "C" foundations shall be a minimum depth of 48 inches (1.22 m). An integral concrete pad to support the UPS cabinet shall be constructed a minimum of 20 inches (510 mm) long and a minimum depth of 10 inches (250 mm). The concrete apron in front of the Type IV or V cabinet shall be 36 in. x 48 in. x 5 in. (910 mm X 1220 mm X 130 mm). The concrete apron in front of the UPS cabinet shall be 36 in. x 31 in. x 5 in. (910 mm X 790 mm X 130 mm). Anchor bolts shall provide bolt spacing as required by the manufacturer.

Concrete foundation, type D, for traffic signal cabinets shall be a minimum of 48" (1.22 m) long and 31" (790 mm) wide. The concrete apron shall be 36" X 48" X 5" (910 mm X 1220 mm X 130 mm). Anchor bolts shall meet the requirements of Section 1006.09 of the Standard Specifications with bolt spacing as required by the manufacturer. All Type D foundations shall be a minimum depth of 48" (1.22 m).

Concrete foundation, type E, for mast arm and combination mast arm poles shall meet the following requirements:

| Mast Arm Length | Foundation Depth * | Foundation Diameter | Spiral Diameter | Quantity of No. 15 (No. 5) Bars |
|--|--------------------|---------------------|-----------------|---------------------------------|
| Less than 9.1 m (30') | 3.0 m (10'-0") | 750mm (30") | 600mm (24") | 8 |
| Greater than or equal to 9.1 m (30') and less than 12.2 m (40') | 4.1 m (13'-6") | 750mm (30") | 600mm (24") | 8 |
| | 3.4 m (11'-0") | 900mm (36") | 750mm (30") | 12 |
| Greater than or equal to 12.2 m (40') and less than 15.2 m (50') | 4.0 m (13'-0") | 900mm (36") | 750mm (30") | 12 |
| Greater than or equal to 15.2 m (50') and up to 16.8 m (55') | 4.6 m (15'-0") | 900mm (36") | 750mm (30") | 12 |

- * These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average unconfined Compressive Strength (Q_u) > 100kPa (1.0 tsf). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Design & Structure Division should be contacted for a revised design if other conditions are encountered.

No foundation is to be poured until the Resident Engineer gives approval as to the depth of the foundation.

Concrete Foundations, Type "E" for Combination Mast Arm Poles shall be 36 inch (900 mm) diameter, regardless of mast arm length. Foundations used for Combination Mast Arm Poles shall provide an extra 2-1/2 inch (65 mm) raceway.

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)** of depth for:

- CONCRETE FOUNDATION, TYPE A**
- CONCRETE FOUNDATION, TYPE C**
- CONCRETE FOUNDATION, TYPE D**
- CONCRETE FOUNDATION, TYPE E - 30" (750 mm) Dia.**
- CONCRETE FOUNDATION, TYPE E - 36" (900 mm) Dia.**

which price shall be payment in full for all necessary excavating or drilling, back filling, disposal of unsuitable material, form work, ground rods and furnishing all materials within the limits of the foundation, except anchor bolts for type E foundation.

Special Provision

Remove Existing Traffic Signal Equipment

The removal of existing traffic signal equipment shall meet the requirements of Section 895.05 of the Standard Specifications, except as follows:

This work shall consist of removing the existing traffic signal equipment at an intersection as listed and as shown on the plans.

All equipment to be returned to an Agency shall be delivered by the Contractor to the Agency's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the Agency's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within 30 days of removing it from the traffic signal installation. The Contractor shall provide 5 copies of a list of equipment that is to remain the property of the Agency, including model and serial numbers, where applicable. A list of equipment shall be signed by the Agency's Electrical Maintenance Contractor and fax to the County Engineer at (312) 603-9956. He shall also provide a copy of the contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned with these requirements, it will be rejected by the Agency's Electrical Maintenance Contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time he takes maintenance of the signal installation until the acceptance of a receipt drawn by the Agency's Electrical Maintenance Contractor indicating the items have been returned in good condition.

The traffic signal equipment which is to be removed and is to become the property of the Contractor shall be disposed of by them outside the right-of-way at their expense.

All equipment is to be disassembled so as to make for easy loading and storage into Agency stock as per the Engineers instructions.

Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these Specifications.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT** per intersection which price shall be payment in full for removing the equipment, and storing and/or disposing of it as required. The salvage value of the equipment retained by the Contractor shall be reflected in this contract unit price.

Special Provision**Temporary Traffic Signal Installation**

This item shall consist of furnishing, installing, maintaining and removing a temporary traffic signal installation at an existing intersection as shown on the plans and as described herein. The energy charges for the operation of the traffic signal installation shall be paid for by others if the installation is replacing an existing signal. Otherwise charges shall be paid for under Section 109.05 of the Road Specifications.

Only an approved Equipment Vendor will be allowed to assemble the temporary traffic signal cabinet. Only controllers supplied by an approved Equipment Vendor will be approved for use on temporary traffic signals. Only an approved Closed Loop Equipment Vendor shall assemble and test a temporary railroad interconnected traffic signal cabinet. (Refer to Traffic Actuated Controller Specification). A representative of the approved control Equipment Vendor shall be present at the temporary traffic signal turn-on inspection.

All "railroad interconnected" temporary traffic signal controllers and cabinets shall be newly constructed. Only controllers and cabinets supplied by one of the IDOT District 1 approved closed loop Equipment Manufacturers will be allowed.

The installation of a temporary traffic signal installation shall meet the requirements of Section 890 and 801.11 of the Standard Specifications and the Standard Drawings, except as follows:

Equipment: The Contractor shall provide the following:

- All control equipment for the temporary traffic signal shall be furnished by the Contractor unless otherwise stated in the plans. On projects with multiple temporary traffic signal installations, all controllers shall be of the same manufacturer brand and model number with current software installed.
- Only controllers supplied by one of the Cook County Highway Department approved closed loop equipment manufacturers will be approved for use at temporary signal locations. Controllers used for temporary traffic signals shall be fully actuated NEMA microprocessor based with RS232 data entry ports compatible with approved CCHD or District 1 monitoring software installed in NEMA TS1 or TS2 cabinets with 8 phase back panels, capable of supplying 255 seconds of cycle length and individual phase length settings up to 99 seconds. On projects with one lane open and two way traffic flow, such as bridge deck repairs, the temporary signal controller shall be capable of providing an adjustable all red clearance setting of up to 30 seconds in length.
- All temporary traffic signal controllers shall meet or exceed the requirements of section 857 with regards to internal time coordination and preemption. The controller settings shall be set in the field as directed by the Engineer.
- All temporary traffic signal cabinets shall have a closed bottom made of aluminum alloy. The bottom shall be sealed along the entire perimeter of the cabinet base to ensure a water, dust and insect-proof seal. The bottom shall provide a minimum of two (2) 100 mm (4 inch) diameter holes to run the electric cables through. The 100 mm (4 inch) diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.
- Grounding shall be provided for the temporary traffic signal cabinet meeting or exceeding the applicable portions of the National Electrical Code, Section 807 of the Standard Specifications and shall meet the requirements of the District 1 and Cook County Traffic Signal Specifications for "Grounding of Traffic Signal Systems".
- All traffic signal sections and pedestrian signal sections shall be of the 12" (300 mm) type. Traffic signal section shall be LED with expandable view, unless otherwise approval by the Engineer. The temporary traffic signal heads shall be placed as indicated on the temporary traffic signal plan or as

directed by the Engineer. The Contractor shall furnish enough cable slack to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.

- The existing system interconnect is to be maintained as part of the Temporary Traffic Signal Installation specified for on the plan. The interconnect shall be installed into the temporary controller cabinet as per the notes or details on the plans. If the Master Controller is at this location it and its associated phone line(s) shall be maintained either in this cabinet or with patch cables as shown in the plans. All labor and equipment required to install and maintain the existing interconnect as part of the temporary traffic signal installation shall be included in the item Temporary Traffic Signal Installation.
 1. The temporary traffic signal interconnect shall maintain interconnect communications throughout the entire signal system for the duration of the project. Temporary traffic signal interconnect shall be provided using fiber optic cable or wireless interconnect technology as specified in the plans or approved by the Engineer. If wireless interconnect is used, and in the opinion of the engineer, it is not viable, or if it fails during testing or operations, the Contractor shall be responsible for installing all necessary poles, fiber optic cable, and other infrastructure for providing temporary fiber optic interconnect at no cost to the contract.
 2. Temporary wireless interconnect, compete. The radio interconnect system shall be compatible with Eagle or Econolite controller closed loop systems. This item shall include all materials, labor and testing to provide the completely operational closed loop system as shown on the plans. The radio interconnect system shall include the following components:
 - a. Rack or Shelf Mounted RS-232 Frequency Hopping Spread Spectrum (FHSS) Radio
 - b. Software for Radio Configuration (Configure Frequency and Hopping Patterns)
 - c. Antennas (Omni Directional or Yagi Directional)
 - d. Antenna Cables, LMR400, Low Loss. Max. 100-ft from controller cabinet to antenna
 - e. Brackets, Mounting Hardware, and Accessories Required for Installation
 - f. RS232 Data Cable for Connection from the radio to the local or master controller
 - g. All other components required for a fully functional radio interconnect system

All controller cabinet modifications and other modifications to existing equipment that are required for the installation of the radio interconnect system components shall be included in this item.

The radio interconnect system may operate at 900Mhz (902-928) or 2.4 Ghz depending on the results of a site survey. The telemetry shall have an acceptable rate of transmission errors, time outs, etc. comparable to that of a hardwire system.

The proposed master controller and telemetry module shall be configured for use with the radio interconnect at a minimum rate of 9600 baud.

The radio interconnect system shall include all other components required for a complete and fully functional telemetry system and shall be installed in accordance to the manufacturers recommendations.

The following radio equipment is currently approved for use in Cook County: Encon Model 5100 and Intuicom Communicator II.

- All existing street name and intersection regulatory signs shall be removed from existing poles and relocated and securely fastened to the signal span wire. If new mast arm assembly and poles and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost.
- All emergency vehicle preemption equipment (light detectors, light detector amplifiers, confirmation beacons, etc.) as shown on the temporary traffic signal plans shall be provided by the Contractor. It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of

emergency vehicle preemption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. All light operated systems shall operate at a uniform rate of 14.035 Hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the County. All labor and material required to install and maintain the emergency vehicle pre-emption installation shall be included in the item Temporary Traffic Signal Installation.

- All temporary traffic signal installations shall have vehicle detection shall be installed as shown on the plans, or as directed by the Engineer. Pedestrian push buttons shall be provided for all pedestrian signal heads/phases as shown on the plans or as directed by the Engineer. All approaches shall have vehicular detection provided by Video Vehicle Detection System as shown on the plans or as directed by the Engineer. The video vehicle detection system shall be approved by CCHD before furnishing and installing. The Contractor shall install, wire, and adjust the alignment of the video vehicle detection system in accordance to the manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the microwave vehicle sensor or video vehicle detection system for all construction staging changes and for maintaining proper alignment throughout the project. A representative of the approved control equipment vendor and the video detection vendor shall be present and assist the contractor in setting up and maintaining the video vehicle detection system. An in-cabinet video monitor shall be provided with all video vehicle detection systems and shall be included in the item Temporary Traffic Signal Installation.

All labor and material required to comply with these requirements shall be considered incidental to the bid price of temporary traffic signal installation.

Maintenance Procedures: The Contractor shall perform the following maintenance procedures for each temporary installation designated to remain in operation during construction.

The Contractor Shall:

- Have on staff electricians with IMSA Level II certification to provide signal maintenance.
- Patrol and inspect each installation every two (2) weeks for proper alignment of signal heads, light detectors, lamp failures, and general operation of the traffic signal.
- Check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to insure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment.
- Provide immediate corrective action to replace burned out lamps or damaged sockets. When lamps are replaced, the reflector and lens shall be cleaned. All replacement lamps shall meet the approval of the Engineer. The Contractor shall repair or replace all defective equipment from any cause whatsoever.
- Maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.
- Provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. A near right signal must also be maintained. When repairs at a signalized intersection require that the controller be disconnected and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor is required to place stop signs (R1-1-36) at each approach to the intersection as a temporary means of regulating traffic. At approaches, where a Yellow Flashing indication is necessary, as directed by the Engineer, stop signs will not be required. The Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations with a sufficient number of Stop Signs as

specified herein. The Contractor shall maintain sufficient number of spare Stop Signs in stock at all times to replace Stop Signs which may be damaged or stolen.

- Replace defective or damaged equipment. If the proper sequence with full detection cannot be obtained immediately, a controller which will provide the proper sequence and full detection shall be installed within twelve (12) hours of removal of the original controller.
- The Contractor shall be required to maintain the existing type of equipment and sequence of operations during the period of time that the original control equipment is being overhauled
- Provide the Engineer with the names, addresses, and telephone numbers of two (2) persons qualified and assigned to the maintenance of the traffic signal installation. These people must be made available 24 hours per day, each and every day of the year for emergency calls by the Engineer.
- Respond to all emergency calls from the Department or municipality within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the State or County. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the temporary traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's or the County's Electrical Maintenance Contractor perform the maintenance work required. The State's or County's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor.

When temporary traffic signals are to be installed at locations where existing signals are presently operating, the Contractor shall be fully responsible for the maintenance of the existing signal installation as soon as any physical work begins on the contract or any portion thereof until which time the temporary signals are functioning and the existing signals are removed. Maintenance responsibility of the existing signals shall be included in the item for Temporary Traffic Signal Installation. In addition, seven days prior to assuming maintenance of the existing traffic signal installation(s) under this contract, the Contractor shall request that the Resident Engineer contact the Design Engineer at (312) 603-1730 for an inspection of the Installation(s). The Design Engineer shall establish a date and time of inspection and at this time shall check the installation to determine if any corrective work should be done by the State's or County's Electrical Maintenance Contractor or the Municipalities Contractor prior to the Contractor taking over maintenance of the installation. The Resident Engineer, Engineer, and the Contractor shall mutually agree on the date of maintenance transfer to the Contractor for this section.

Temporary Traffic Signals for bridge projects shall follow the State Standards, Standard Specifications, Cook County Specifications and any plans for Bridge Temporary Traffic Signals included in the plans. The installation shall meet the above requirements for "Temporary Traffic Signal Installation". In addition all electric cable shall be aurally suspended, at a minimum height of 18 feet (5.5 m), on temporary wood poles (Class 5 or better) of 45 feet (13.7 m), minimum height. The signal heads shall be span wire mounted or bracket mounted to the wood pole or as directed by the Engineer. The Controller cabinet shall be mounted to the wood pole or as directed by the Engineer. Microwave vehicle sensors or video vehicle detection may be used in place of the detector loops as approved by the Engineer.

Temporary Portable Traffic Signal for Bridge Projects.

1. Unless otherwise directed by the Engineer, temporary portable traffic signals shall be restricted to use on roadways of less than 8000 ADT that have limited access to electric utility service, shall not be installed on projects where the estimated need exceeds ten (10) weeks, and shall not be in operation during the period of November through March. The Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract if the bridge project or Engineer requires temporary traffic signals to remain in operation into any part of period of November through March. If, in the opinion of the engineer, the reliability and safety of the

temporary portable traffic signal is not similar to that of a temporary span wire traffic signal installation, the Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract.

2. The controller and LED signal displays shall meet the above requirements for "Temporary Traffic Signal Installation".
3. Work shall be according to Article 701.18(b) of the Standard Specifications except as noted herein.
4. General.
 - a. The temporary portable bridge traffic signals shall be trailer-mounted units. The trailer-mounted units shall be set up securely and level. Each unit shall be self-contained and consist of two signal heads. The left signal head shall be mounted on a mast arm capable of extending over the travel lane. Each unit shall contain a solar cell system to facilitate battery charging. There shall be a minimum of 12 days backup reserve battery supply and the units shall be capable of operating with a 120 V power supply from a generator or electrical service.
 - b. All signal heads located over the travel lane shall be mounted at a minimum height of 17 feet (5m) from the bottom of the signal back plate to the top of the road surface. All far right signal heads located outside the travel lane shall be mounted at a minimum height of 8 feet (2.5m) from the bottom of the signal back plate to the top of the adjacent travel lane surface.
 - c. The long all red intervals for the traffic signal controller shall be adjustable up to 250 seconds in one-second increments.
 - d. As an alternative to detector loops, temporary portable bridge traffic signals may be equipped with microwave sensors or other approved methods of vehicle detection and traffic actuation.
 - e. All portable traffic signal units shall be interconnected using hardwire communication cable. Radio communication equipment may be used only with the approval of the Engineer. If radio communication is used, a site analysis shall be completed to ensure that there is no interference present that would affect the traffic signal operation. The radio equipment shall meet all applicable FCC requirements.
 - f. The temporary portable bridge traffic signal system shall meet the physical display and operational requirements of conventional traffic signals as specified in Part IV of the Manual on Uniform Traffic Control Devices (MUTCD). The signal system shall be designed to continuously operate over an ambient temperature range between -30 °F (-34 °C) and 120 °F (48 °C). When not being utilized to inform and direct traffic, portable signals shall be treated as nonoperating equipment according to Article 701.11.
 - g. Basis of Payment. This work will be paid for according to Article 701.20(c).

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **TEMPORARY TRAFFIC SIGNAL INSTALLATION, TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION or TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION**, which price shall include all costs for the modifications required for traffic staging, changes in signal phasing as required in the Contract plans, microwave vehicle sensors, video vehicle detection system, any maintenance or adjustment to the microwave vehicle sensors/video vehicle detection system, all material required, the installation and complete removal of the temporary traffic signal. Sixty percent of the bid price will be paid following approval of each installation. The remaining 40 percent will be paid following removal of each installation.

Special Provision**Maintenance of Existing Traffic Signal Installation**

This item shall consist of maintaining the existing traffic signal installation at an intersection as shown on the plans and as described herein. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the contract or any portion thereof. The energy charges for the operation of the traffic signal installation shall be paid for by others. The maintenance of an existing traffic signal installation shall meet the requirements of Section 801.11 and 850 of the Standard Specifications except as follows:

This item shall include maintenance of all traffic signal equipment at the intersection, including emergency vehicle pre-emption equipment, master controllers, uninterruptible power supply (UPS and batteries) telephone service installations, communications cables and conduit to adjacent intersections.

Seven days prior to assuming maintenance of the existing traffic signal installation(s) under this contract, the Contractor shall request that the Resident Engineer contact the Cook County Design Engineer at (312) 603-1730 for an inspection of the installation(s). The Design Engineer shall establish a date and time of inspection and at this time shall check the installation to determine if any corrective work should be done by the State, the County, or the Municipalities Electrical Maintenance Contractor prior to the Contractor taking over the maintenance of the installation(s). The Resident Engineer, the Design Engineer, and the State, County, or Municipality Maintenance Contractor and the Contractor shall mutually agree on the date of maintenance transfer to the Contractor for this contract.

Maintenance Procedures: The Contractor shall perform the following maintenance procedures for each existing installation designated to remain in operation during construction:

- Have on staff electricians with IMSA Level II certification to provide signal maintenance.
- Patrol and inspect each installation every two (2) weeks for proper alignment of signal heads, light detectors, lamp failures, and general operation of the traffic signal.
- Check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to insure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment.
- Provide immediate corrective action to replace burned out lamps or damaged sockets. When lamps are replaced, the reflector and lens shall be cleaned. All replacement lamps shall meet the approval of the Engineer. The Contractor shall repair or replace all defective equipment from any cause whatsoever.
- Maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.
- Provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. A near right signal must also be maintained. When repairs at a signalized intersection require that the controller be disconnected and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor is required to place stop signs (R1-1-36) at each approach to the intersection as a temporary means of regulating traffic. At approaches, where a Yellow Flashing indication is necessary, as directed by the Engineer, stop signs will not be required. The Contractor shall furnish and equip all his vehicles assigned to the maintenance of traffic signal installations with a sufficient number of Stop Signs as specified herein. The Contractor shall maintain sufficient number of spare Stop Signs in stock at all times to replace Stop Signs which may be damaged or stolen.

- Replace defective or damaged equipment. If the proper sequence with full detection cannot be obtained immediately, a controller which will provide the proper sequence and full detection shall be installed within twelve (12) hours of removal of the original controller.
- The Contractor shall be required to maintain the existing type of equipment and sequence of operations during the period of time that the original control equipment is being overhauled
- Provide the Engineer with the names, addresses, and telephone numbers of two (2) persons qualified and assigned to the maintenance of the traffic signal installation. These people must be made available 24 hours per day, each and every day of the year for emergency calls by the Engineer.
- Respond to all emergency calls from the Department or municipality within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the State or County. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the temporary traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's or the County's Electrical Maintenance Contractor perform the maintenance work required. The State's or County's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these Specifications.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION**, which price shall be payment in full for all materials, equipment, and labor necessary to maintain the existing traffic signals as shown on the plans. Each intersection shall be paid for separately.

Special Provision

Emergency Vehicle Priority System

The installation of an emergency vehicle priority system shall meet Sections 887 and 1072 of the Standard Specifications, except as revised with this Special Provision.

It shall be the Contractor's responsibility to contact the municipality or Fire District to verify the brand of emergency vehicle pre-emption equipment to be installed prior to the Contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. A letter from the Agency is to be included with equipment submittals indicating what brand of equipment is acceptable to the Agency.

All new installations shall be equipped with confirmation beacons as shown on the "District 1 Standard Traffic Signal Design Details". The confirmation beacon shall consist of a 6 watt Par 38 flood lamp with a 30 degree light spread, maximum 6 watt energy consumption at 120V and a 2000 hour warranty for each direction of pre-emption. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. Holes drilled into signal poles, mast arms, or posts shall require rubber grommets. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signalized by a flashing indication at the rate specified by Section 4D-11 of the "Manual On Uniform Traffic Control Devices". The stopped pre-empted movements shall be signalized by a continuous indication.

All light operated systems shall include security and transit preemption software and operate at a uniform rate of 14.035 Hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the County.

The pre-emption detector amplifier shall be paid for on a basis of one (1) each per intersection controller and shall provide operation for all movements required in the pre-emption phase sequence.

Basis Of Payment: The transmitting unit, the detector unit, and the phasing unit will be paid for at the Contract unit price **EACH** for **LIGHT TRANSMITTER, LIGHT DETECTOR, or LIGHT DETECTOR AMPLIFIER** which price shall be payment in full for furnishing and installing the light transmitter, light detector, or light detector amplifier complete, with necessary connections for proper operation. The furnishing and installing of a confirmation beacon shall be considered incidental to the pay item for **LIGHT DETECTOR**.

The lead-in cable will be paid for at the contract unit price per **FOOT (METER)** for **ELECTRIC CABLE IN CONDUIT, NO. 20, 3/C, TWISTED, SHIELDED** or **ELECTRIC CABLE AERIAL SUSPENDED, NO. 20, 3/C, TWISTED, SHIELDED** which price shall be payment in full for furnishing and installing the lead-in cable and making all electrical connections. The electric cable shall be shielded and have three (3) stranded conductors colored blue, orange, and yellow with a stranded tinned copper drain wire. The cable shall meet the requirements of the manufacturer of the Emergency Vehicle Priority System Equipment.

Special Provision

Uninterruptible Power Supply (UPS)

This work shall consist of furnishing and installing an uninterruptible power supply (UPS).

The UPS shall have the power capacity to provide normal operation of a signalized intersection that utilizes all LED type signal head optics, for a minimum of six hours.

The UPS shall include, but not be limited to the following: inverter/charger, power transfer relay, batteries, battery cabinet, a separate manually operated non-electronic bypass switch, and all necessary hardware and interconnect wiring according to the plans. The UPS shall provide reliable emergency power to the traffic signals in the event of a power failure or interruption. The transfer from utility power to battery power and visa versa shall not interfere with the normal operation of traffic controller, conflict monitor/malfunction management unit, or any other peripheral devices within the traffic controller assembly.

The UPS shall be designed for outdoor applications, and shall meet the environmental requirements of, "NEMA Standards Publication No. TS 2 – Traffic Controller Assemblies", except as modified herein.

The UPS shall be line interactive and provide voltage regulation and power conditioning when utilizing utility power. The UPS shall be sized appropriately for the intersection's normal traffic signal operating connected load, plus 20 percent (20%). The total connected traffic signal load shall not exceed the published ratings for the UPS. The UPS shall provide a minimum of six (6) hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (25 °C) (minimum 700 W/VA active output capacity, with 90 percent minimum inverter efficiency).

The maximum transfer time from loss of utility power to switchover to battery backed inverter power shall be 65 milliseconds.

The UPS shall have a minimum of three (3) sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel mounted terminal block or locking circular connectors, rated at a minimum 120 V/1 A, and labeled so as to identify each contact according to the plans. Contact closures shall be energized whenever the unit:

- Switches to battery power. Contact shall be labeled or marked "On Batt".
- Has been connected to battery power for two (2) hours. Contact shall be labeled or marked "Timer".
- Has an inverter/charger failure. Contact shall be labeled or marked "UPS Fail".

Operating temperature for the inverter/charger, power transfer relay, and manual bypass switch shall be -35 to 165 °F (-37 to +74 °C).

Both the power transfer relay and manual bypass switch shall be rated at 240 VAC/30 amps, minimum.

The UPS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of 1.4 – 2.2 mV/°F (2.5 - 4.0 mV/°C) per cell. The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 6.5 ft (2 m) of wire.

Batteries shall not be recharged when battery temperature exceeds 122 °F ± 5 °F (50 °C ± 3 °C).

The UPS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 85 VAC to 135 VAC (± 2 VAC).

When utilizing battery power, the UPS output voltage shall be between 110 and 125 VAC, pure sine wave output, ≤ 3 percent THD, 60 Hz ± 3 Hz.

The UPS shall be compatible with the District's approved traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.

When the utility line power has been restored at above 90 VAC \pm 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

When the utility line power has been restored at below 130 VAC \pm 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

The UPS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service.

In the event of inverter/charger failure, the power transfer relay shall revert to the NC state, where utility line power is reconnected to the cabinet. In the event of an UPS fault condition, the UPS shall always revert back to utility line power.

Recharge time for the battery, from "protective low-cutoff" to 80 percent or more of full battery charge capacity, shall not exceed twenty hours.

The manual bypass switch shall be wired to provide power to the UPS when the switch is set to manual bypass.

When the intersection is in battery backup mode, the UPS shall bypass all internal cabinet lights, non LED confirmation beacons, ventilation fans, service receptacles, any lighted street name signs, any automated enforcement equipment and any other devices directed by the Engineer.

As the battery reserve capacity reaches 50 percent, the intersection shall automatically be placed in all-red flash. The UPS shall allow the controller to automatically resume normal operation after the power has been restored. The UPS shall log an alarm in the controller for each time it is activated.

A blue LED indicator light shall be mounted on the front of the traffic signal cabinet or on the side of the UPS cabinet facing traffic and shall turn on to indicate when the cabinet power has been disrupted and the UPS is in operation. The light shall be a minimum 1 in. (25 mm) diameter, be viewable from the driving lanes, and able to be seen from 200 ft (60 m) away.

All 24 volt and 48 volt systems shall include an external or internal component that monitors battery charging to ensure that every battery in the string is fully charged. The device shall compensate for the effects of adding a new battery to an existing battery system by ensuring that the charge voltage is spread equally across all batteries.

Mounting/Configuration.

The inverter/charger unit shall be rack or shelf-mounted.

All interconnect wiring provided between the power transfer relay, manual bypass switch, and cabinet terminal service block shall be at least 6.5 ft (2 m) of #10 AWG wire.

Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be 6.5 ft (2 m) of #18 AWG wire.

Battery Cabinet.

Batteries, inverter/charger and power transfer relay shall be housed in a separate NEMA Type 3R cabinet. The cabinet shall be Aluminum alloy, 5052-H32, 0.125-inch thick and have a natural mill finish.

The door shall open to the entire cabinet, have a neoprene gasket, an Aluminum continuous piano hinge with stainless steel pin, and a three point locking system. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided.

The manually bypass switch shall be installed inside the traffic signal cabinet.

No more than three batteries shall be mounted on individual shelves for a cabinet housing six batteries and no more than four batteries per shelf for a cabinet housing eight batteries.

A minimum of three shelves shall be provided. Each shelf shall support a load of 132 lb (60 kg) minimum.

The battery cabinet housing shall have the following nominal outside dimensions: a width of 25 in. (785 mm), a depth of 16 in. (440 mm), and a height of 41 to 48 in. (1.1 to 1.3 m). Clearance between shelves shall be a minimum of 10 in. (250 mm).

The battery cabinet shall be ventilated through the use of louvered vents, filters, and one thermostatically controlled fan. The cabinet fan shall not be energized when the traffic signals are on UPS power.

The battery cabinet shall have provisions for an external generator connection.

The UPS with battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting. A warning sticker shall be placed on the outside of the cabinet indicating that there is an uninterruptible power supply inside the cabinet.

Maintenance, Displays, Controls, and Diagnostics.

The UPS shall include a display and/or meter to indicate current battery charge status and conditions.

The UPS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.

The UPS shall be equipped with an integral system to prevent battery from destructive discharge and overcharge.

The UPS hardware and batteries shall be easily replaced without requiring any special tools or devices.

The UPS shall include a resettable front-panel event counter display to indicate the number of times the UPS was activated. The total number of hours the unit has operated on battery power shall be available from the controller unit or UPS unit.

The UPS shall be equipped with an RS-232 port.

The UPS shall include tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.

The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector shall be male type, twist-lock, rated as 15A, 125VAC with a NEMA L5-15P configuration and weatherproof lift cover plate (Hubbell model HBL4716C or approved equal). Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.

The manufacturer shall include two sets of equipment lists, operation and maintenance manuals, board-level schematic and wiring diagrams of the UPS, and battery data sheets. The manufacturer shall include any software needed to monitor, diagnose, and operate the UPS. The manufacturer shall include any required cables to connect the UPS to a laptop computer.

Battery System.

Individual batteries shall be 12 V type, 65 amp-hour minimum capacity at 20 hours, and shall be easily replaced and commercially available off the shelf.

The UPS shall consist of an even number of batteries that are capable of maintaining normal operation of the signalized intersection for a minimum of six hours. Calculations shall be provided showing the number of batteries of the type supplied that are needed to satisfy this requirement. A minimum of four batteries shall be provided.

All batteries supplied in the UPS shall be either gel cell or AGM type, deep cycle, completely sealed, prismatic leadcalcium based, silver alloy, valve regulated lead acid (VRLA) requiring no maintenance. All batteries in a UPS installation shall be the same type; mixing of gel cell and AGM types within a UPS installation is not permitted.

Batteries shall be certified by the manufacturer to operate over a temperature range of -13 to 160 °F (-25 to + 71 °C) for gel cell batteries and -40 to 140 °F (-40 to + 60 °C) for AGM type batteries.

The batteries shall be provided with appropriate interconnect wiring and corrosion resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.

Batteries shall indicate maximum recharge data and recharging cycles.

Battery interconnect wiring shall be via a modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. The harness shall be equipped with mating power-pole style connectors for the batteries and a single, insulated plug-in style connection to the inverter/charger unit. The harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.

Battery terminals shall be covered and insulated so as to prevent accidental shorting.

Warranty.

The warranty for an uninterruptible power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years from the date the traffic signal and UPS are placed into service.

Installation.

When a UPS is installed at an existing traffic signal cabinet, the UPS cabinet shall partially rest on the lip of the existing controller cabinet foundation and be secured to the existing controller cabinet by means of at least four (4) stainless steel bolts. The UPS cabinet shall be completely enclosed with the bottom and back constructed of the same material as the cabinet.

When a UPS is installed at a new signal cabinet and foundation, it shall be mounted as shown on the plans.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **UNINTERRUPTABLE POWER SUPPLY** for furnishing and installing the backup battery installation. The price shall include the UPS unit, bypass switch, batteries (four or six etc. , as recommended by the manufacturer), cabinet, wiring harnesses, and all associated equipment and materials necessary for proper operation.



**Illinois Department
of Transportation**

Storm Water Pollution Prevention Plan

Route FAU 1338
Section 05-00083-00-FP
County Cook

Marked Rt. Wise Road
Project No. M-8003(512)
Contract No. 83980

This plan has been prepared to comply with the provisions of the NPDES Permit Number ILR10, issued by the Illinois Environmental Protection Agency on May 30, 2003 for storm water discharges from Construction Site Activities. This plan has also been prepared to comply with the provisions of NPDES Permit Number ILR40 for discharges from small municipal separate storm sewer systems if checked below.

NPDES permits associated with this project:

- ILR10 Permit No. (if applicable): _____
- ILR40 Permit No. (if applicable): _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Steven R. Weinstock
Print Name
Director of Engineering and Public Works
Title
Village of Schaumburg
Agency

Steven R. Weinstock
Signature
9-17-07
Date

I. Site Description:

A. The following is a description of the project location:

This project is located along Wise Road and Plum Grove Road in the Village of Schaumburg in Cook County. The limits of the project on Wise Road are from Roselle Road on the west to approximately 1,310 feet east of Plum Grove Road. The project has a gross and net length of 6,559 feet (1.242 mile) on Wise Road. The limits of the project on Plum Grove Road are from approximately 560 feet south of Wise Road to approximately 576 feet north of Wise Road. The project has a net and gross length of 1,136.4 feet (0.215 mile) on Plum Grove Road. This project also includes work on the following cul-de-sacs: Crest Court, Jamestown Court, Durham Court, Rothbury Court, Hampshire Court, and Blackhawk Court. The project has a net and gross length on the cul-de-sacs of 1,500 feet (0.284 mile). The overall project net and gross length is 9,195.4 feet (1.741 mile).

B. The following is a description of the construction activity which is the subject of this plan:

This is primarily a roadway reconstruction project, and the work to be performed under this contract consists of earth excavation and pavement removal, construction of storm sewers and drainage structures, combination concrete curb and gutter, hot-mix asphalt surface removal, hot-mix asphalt binder and surface courses, hot mix asphalt and p.c.c. driveway reconstruction, traffic signal improvements, pavement markings, street lighting, landscape planting and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein. Median removal and p.c.c. pavement construction to extend the left turn lanes on Plum Grove Road is also included.

- C. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site, such as grubbing, excavation and grading:

Stage 1
Installation of Erosion Control Measures
Pavement Removal
Earth Excavation
Storm Sewer Installation
Subgrade Preparation
Paving

Stage 2
Installation of Erosion Control Measure
Pavement Removal
Earth Excavation
Storm Sewer Installation
Subgrade Preparation
Paving
Topsoil Placement and Sodding

Stage 3
Installation of Erosion Control Measures
Pavement Removal
Earth Excavation
Storm Sewer Installation
Subgrade Preparation
Paving
Topsoil Placement and Sodding

- D. The total area of the construction site is estimated to be 18.9 acres.

The total area of the site that is estimated will be disturbed by excavation, grading or other activities is 14.2 acres.

- E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

0.73

- F. The following is a description of the soil types found at the project site followed by information regarding their erosivity:

Markham silt loam, Ashkum silty clay loam, and Peotone silty clay loam. See the geotechnical report prepared by Applied Geoscience for additional information.

- G. The following is a description of potentially erosive areas associated with this project:

There are no highly erosive areas within the project limits. The proposed grades are less than 1:4.

- H. The following is a description of soil disturbing activities, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

Throughout the project area, once the existing pavement has been removed, the subgrade will be graded to the proposed elevation. Spoil from storm sewer installation will be removed from the site. After the curb and gutter have been constructed the area between the back of curb and the right-of-way will be regraded.

- I. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location

of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

- J. The following is a list of receiving water(s) and the ultimate receiving water(s), and areal extent of wetland acreage at the site. The location of the receiving waters can be found on the erosion and sediment control plans:

The storm water from the western limit of the project to Sta. 42+00 drain through the existing storm sewer to the pond north of Rothbury Court. The storm water from Sta. 42+00 to Plum Grove Road drain through the existing storm sewer to the dry bottom detention pond at the southwest corner of Wise Road and Plum Grove Road.

- K. The following pollutants of concern will be associated with this construction project:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Soil Sediment | <input type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete | <input type="checkbox"/> Antifreeze / Coolants |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Solid Waste Debris | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Solvents | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides | <input type="checkbox"/> Other (specify) |

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the contractor will be responsible for its implementation as indicated. The contractor shall provide to the resident engineer a plan for the implementation of the measures indicated. The contractor, and subcontractors, will notify the resident engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the permit. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. Erosion and Sediment Controls

1. **Stabilized Practices:** Provided below is a description of interim and permanent stabilization practices, including site specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of 21 or more calendar days.
- a. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following Stabilization Practices will be used for this project:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Preservation of Mature Vegetation | <input type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input checked="" type="checkbox"/> Sodding |
| <input checked="" type="checkbox"/> Protection of Trees | <input type="checkbox"/> Geotextiles |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Temporary Turf (Seeding, Class 7) | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Temporary Mulching | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Other (specify) |

Describe how the Stabilization Practices listed above will be utilized:

The existing trees along Wise Road that are not in conflict with the proposed roadway will be preserved. Temporary fencing and tree trunk protection will be placed around each of these trees. All erodible/bare areas will be seeded with Temporary Erosion Control Seeding every seven days. Sod will be placed after the placement of topsoil in the parkways.

2. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following Structural Practices will be used for this project:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input type="checkbox"/> Rock Outlet Protection |
| <input type="checkbox"/> Temporary Ditch Check | <input type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Temporary Pipe Slope Drain | <input type="checkbox"/> Retaining Walls |
| <input type="checkbox"/> Temporary Sediment Basin | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Temporary Stream Crossing | <input type="checkbox"/> Concrete Revetment Mats |
| <input type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders |
| <input type="checkbox"/> Turf Reinforcement Mats | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Check Dams | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Sediment Basin | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Aggregate Ditch | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Paved Ditch | <input type="checkbox"/> Other (specify) |

Describe how the Structural Practices listed above will be utilized:

Inlet filters will be installed at each existing and proposed open grate storm sewer structure in the curb line to prevent sediment from being carried off of the job site thru the newly constructed or existing storm sewer. The filters will be cleaned when directed by the Engineer in order to optimize the performance of the filters. Inlet and Pipe Protection shall be placed around structures with open lids within the parkway. Filter fence will be placed around all structures in the parkway for this same purpose. Perimeter erosion barrier will be placed along the right-of-way line in areas where soil could erode out of the project limits.

3. **Storm Water Management:** Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

- a. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Section 59-8 (Erosion and Sediment Control) in Chapter 59 (Landscape Design and Erosion Control) of the Illinois Department of Transportation Bureau of Design and Environment Manual. If practices other than those discussed in Section 59-8 are selected for implementation or if practices are applied to situations different from those covered in Section 59-8, the technical basis for such decisions will be explained below.

- b. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of Storm Water Management Controls.

The proposed storm sewer will discharge into the existing storm sewer systems. The slopes of the pipes have been designed to reduce the velocity of the storm water as much as possible without causing siltation within the pipes.

4. Other Controls:

- a. Vehicle Entrances and Exits – Stabilized construction entrances and exits must be constructed to prevent tracking of sediments onto roadways.

The contractor will provide the resident engineer with a written plan identifying the location of stabilized entrances and exits and the procedures (s)he will use to construct and maintain them.

- b. Material Delivery, Storage, and Use – The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:
- All products delivered to the project site must be properly labeled.
 - Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
 - A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.
 - Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
 - Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the resident engineer of this location.
- c. Stockpile Management – BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as but not limited to portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:
- Perimeter Erosion Barrier
 - Temporary Seeding
 - Temporary Mulch
 - Plastic Covers
 - Soil Binders
 - Storm Drain Inlet Protection

The contractor will provide the resident engineer with a written plan of the procedures (s)he will use on the project and how they will be maintained.

- d. Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.
- e. The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.
- f. The contractor shall provide a written and graphic plan to the resident engineer identifying where each of the above areas will be located and how they are to be managed.

5. Approved State or Local Laws

The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual, 1995. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local

officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

All management practices, controls and other provisions provided in this plan are in accordance with IDOT Standard Specifications for Road and Bridge Construction and the Illinois Urban Manual. Specific procedures are shown on the Erosion Control Plan.

III. Maintenance:

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. The resident engineer will provide maintenance guides to the contractor for the practices associated with this project.

The Resident Engineer on a bi-weekly basis shall inspect the project to determine that erosion control measures are in place and operating effectively and if other measures may be necessary. Sediment collected during construction by the various erosion control measures shall be disposed of on a regular basis per the Engineer.

All erosion and sediment control measures will be checked weekly by the Contractor and after each significant rainfall. The following items will be checked: 1) Erosion Control, Silt Fence; 2) Tree Protection; 3) Inlet Filters; 4) Inlet and Pipe Protection

All maintenance of the erosion and sediment control measures will be the Contractor's responsibility. All locations where vehicles enter and exit the construction site as well as all other areas subject to erosion will be inspected on a weekly basis and within 24 hours of a significant rainfall.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

- A. Disturbed areas, use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.), borrow sites, and waste sites shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.
- B. Based on the results of the inspection, the description of potential pollutant sources identified in section I above and pollution prevention measures identified in section II above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within ½ hour to 1 week based on the urgency of the situation. The resident engineer will notify the contractor of the time required to implement such actions through the weekly inspection report.
- C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section IV(B) shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.
- D. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the resident engineer shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The resident engineer shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may

have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

V. Non-Storm Water Discharges:

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

- A. Spill Prevention and Control – BMPs shall be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. The contractor shall produce a written plan stating how his/her company will prevent, report, and clean up spills and provide a copy to all of his/her employees and the resident engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the resident engineer of any spills immediately.
- B. Concrete Residuals and Washout Wastes – The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:
 - Temporary Concrete Washout Facilities shall be constructed for rinsing out concrete trucks. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
 - The contractor shall have the location of temporary concrete washout facilities approved by the resident engineer.
 - All temporary concrete washout facilities are to be inspected by the contractor after each use and all spills must be reported to the resident engineer and cleaned up immediately.
 - Concrete waste solids/liquids shall be disposed of properly.
- C. Litter Management – A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.
- D. Vehicle and Equipment Cleaning – Vehicles and equipment are to be cleaned in designated areas only, preferably off site.
- E. Vehicle and Equipment Fueling – A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the resident engineer as to which BMPs will be used on the project. The contractor shall inform the resident engineer how (s)he will be informing his/her employees of these BMPs (i.e. signs, training, etc.). Below are a few examples of these BMPs:
 - Containment
 - Spill Prevention and Control
 - Use of Drip Pans and Absorbents
 - Automatic Shut-Off Nozzles
 - Topping Off Restrictions
 - Leak Inspection and Repair
- F. Vehicle and Equipment Maintenance – On site maintenance must be performed in accordance with all environmental laws such as proper storage and no dumping of old engine oil or other fluids on site.

VI. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of an Erosion and Sediment Control Deficiency Deduction against the contractor and/or penalties under the NPDES permit which could be passed onto the contractor.



This certification statement is part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency on May 30, 2003.

| | | | |
|---------|-----------------------|--------------|--------------------|
| Route | <u>FAU 1338</u> | Marked Rt. | <u>Wise Road</u> |
| Section | <u>05-00083-00-FP</u> | Project No. | <u>M-8003(512)</u> |
| County | <u>Cook</u> | Contract No. | <u></u> |

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification. I have read and understand all of the information and requirements stated in the Storm Water Pollution Prevention Plan for the above mentioned project. I have provided all documentation required to be in compliance with the ILR10 and Storm Water Pollution Prevention Plan and will provide timely updates to these documents as necessary.

- Contractor
- Sub-Contractor

Print Name

Title

Name of Firm

Street Address

Signature

Date

Telephone

City/State/ZIP

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF INTENT (NOI)
GENERAL PERMIT TO DISCHARGE STORM WATER
CONSTRUCTION SITE ACTIVITIES**

OWNER INFORMATION

| | | | | | | | |
|------------------|-------------------------------|-------------------|--------|-------------------|-------------|--------|----------|
| NAME: | LAST Village of Schaumburg | FIRST | MIDDLE | (OR COMPANY NAME) | OWNER TYPE: | City | |
| MAILING ADDRESS: | 714 S. Plum Grove Road | | | | | | |
| CITY: | Schaumburg | STATE: | IL | ZIP: | 60193 | | |
| CONTACT PERSON: | Mr. Scott Kasper | TELEPHONE NUMBER: | | AREA CODE | 630 | NUMBER | 895-7100 |

CONTRACTOR INFORMATION

| | | | | | | | |
|------------------|-------|-------|--------|-------------------|-------------------|-----------|--------|
| NAME: | LAST | FIRST | MIDDLE | (OR COMPANY NAME) | TELEPHONE NUMBER: | AREA CODE | NUMBER |
| MAILING ADDRESS: | CITY: | | | STATE: | ZIP: | | |

CONSTRUCTION SITE INFORMATION

| | | |
|--|------------------------------------|---|
| SELECT ONE: | <input type="checkbox"/> New Site | <input type="checkbox"/> CHANGE OF INFORMATION TO PERMIT NO. ILR10_____ |
| FACILITY NAME: | OTHER NPDES PERMIT NOS.: | |
| FACILITY LOCATION: | TELEPHONE NUMBER: | AREA CODE NUMBER |
| CITY: | ST: IL | ZIP: LATITUDE: LONGITUDE: |
| COUNTY: | SECTION: | TOWNSHIP: RANGE: |
| APPROX. CONST. START DATE: / / | APPROX. CONSTRUCTION END DATE: / / | TOTAL SIZE OF CONSTRUCTION SITE IN ACRES: |
| STORM WATER POLLUTION PREVENTION PLAN COMPLETED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If no, separate notification required to Agency prior to construction.) | | |

TYPE OF CONSTRUCTION

| |
|---|
| TYPE BRIEF DESCRIPTION OF PROJECT: |
| Transportation Pavement reconstruction/resurfacing, storm sewer installation, lighting and signal installation. |

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

| |
|---|
| HAS THIS PROJECT SATISFIED APPLICABLE REQUIREMENTS FOR COMPLIANCE WITH ILLINOIS LAW ON: |
| HISTORIC PRESERVATION <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| ENDANGERED SPECIES <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

RECEIVING WATER INFORMATION

| | |
|---|------------------------------|
| DOES YOUR STORM WATER DISCHARGE DIRECTLY TO: | OWNER OF STORM SEWER SYSTEM: |
| <input type="checkbox"/> WATERS OF THE STATE OR <input checked="" type="checkbox"/> STORM SEWER | |
| NAME OF CLOSEST RECEIVING WATER: | |

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

OWNER SIGNATURE: _____

DATE: _____

FOR OFFICE USE ONLY

| | | |
|---|--|------------------|
| MAIL COMPLETED FORM TO: | ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF WATER POLLUTION CONTROL ATTN: PERMIT SECTION POST OFFICE BOX 19276 SPRINGFIELD, ILLINOIS 62794-9276 www.epa.state.il.us | LOG: |
| (DO NOT SUBMIT ADDITIONAL DOCUMENTATION UNLESS REQUESTED) | | PERMIT NO. ILR10 |
| | | DATE: |

Information required by this form must be provided to comply with 415 ILCS 5/39 (1996). Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

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State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
COOPERATION WITH UTILITIES

Effective: January 1, 1999
Revised: January 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

Replace Article 105.07 of the Standard Specifications with the following:

"105.07 Cooperation with Utilities. The adjustment of utilities consists of the relocation, removal, replacement, rearrangements, reconstruction, improvement, disconnection, connection, shifting, new installation or altering of an existing utility facility in any manner.

When the plans or special provisions include information pertaining to the location of underground utility facilities, such information represents only the opinion of the Department as to the location of such utilities and is only included for the convenience of the bidder. The Department assumes no responsibility in respect to the sufficiency or the accuracy of the information shown on the plans relative to the location of the underground utility facilities.

Utilities which are to be adjusted shall be adjusted by the utility owner or the owner's representative or by the Contractor as a contract item. Generally, arrangements for adjusting existing utilities will be made by the Department prior to project construction; however, utilities will not necessarily be adjusted in advance of project construction and, in some cases, utilities will not be removed from the proposed construction limits. When utility adjustments must be performed in conjunction with construction, the utility adjustment work will be shown on the plans and/or covered by Special Provisions.

When the Contractor discovers a utility has not been adjusted by the owner or the owner's representative as indicated in the contract documents, or the utility is not shown on the plans or described in the Special Provisions as to be adjusted in conjunction with construction, the Contractor shall not interfere with said utility, and shall take proper precautions to prevent damage or interruption of the utility and shall promptly notify the Engineer of the nature and location of said utility.

All necessary adjustments, as determined by the Engineer, of utilities not shown on the plans or not identified by markers, will be made at no cost to the Contractor except traffic structures, light poles, etc., that are normally located within the proposed construction limits as hereinafter defined will not be adjusted unless required by the proposed improvement.

- (a) Limits of Proposed Construction for Utilities Paralleling the Roadway. For the purpose of this Article, limits of proposed construction for utilities extending in the same longitudinal direction as the roadway, shall be defined as follows:
- (1) The horizontal limits shall be a vertical plane, outside of, parallel to, and 600 mm (2 ft) distant at right angles from the plan or revised slope limits.
- In cases where the limits of excavation for structures are not shown on the plans, the horizontal limits shall be a vertical plane 1.2 m (4 ft) outside the edges of structure footings or the structure where no footings are required.
- (2) The upper vertical limits shall be the regulations governing the roadbed clearance for the specific utility involved.
 - (3) The lower vertical limits shall be the top of the utility at the depth below the proposed grade as prescribed by the governing agency or the limits of excavation, whichever is less.
- (b) Limits of Proposed Construction for Utilities Crossing the Roadway. For the purpose of this Article, limits of proposed construction for utilities crossing the roadway in a generally transverse direction shall be defined as follows:
- (1) Utilities crossing excavations for structures that are normally made by trenching such as sewers, underdrains, etc. and all minor structures such as manholes, inlets, foundations for signs, foundations for traffic signals, etc., the limits shall be the space to be occupied by the proposed permanent construction unless otherwise required by the regulations governing the specific utility involved.
 - (2) For utilities crossing the proposed site of major structures such as bridges, sign trusses, etc., the limits shall be as defined above for utilities extending in the same general direction as the roadway.

The Contractor may make arrangements for adjustment of utilities outside of the limits of proposed construction provided the Contractor furnishes the Department with a signed agreement with the utility owner covering the adjustments to be made. The cost of any adjustments made outside the limits of proposed construction shall be the responsibility of the Contractor unless otherwise provided.

The Contractor shall request all utility owners to field locate their facilities according to Article 107.31. The Engineer may make the request for location from the utility after receipt of notice from the Contractor. On request, the Engineer will make an inspection to verify that the utility company has field located its facilities, but will not assume responsibility for the accuracy of such work. The Contractor shall be responsible for maintaining the excavations or markers provided by the utility owners. This field location procedure may be waived if the utility owner has stated in writing to the Department it is satisfied the construction plans are sufficiently accurate. If the utility owner does not submit such statement to the Department, and they do not field locate their facilities in both horizontal and vertical alignment, the Engineer will authorize the Contractor in writing to proceed to locate the facilities in the most economical and reasonable manner, subject to the approval of the Engineer, and be paid according to Article 109.04.

The Contractor shall coordinate with any planned utility adjustment or new installation and the Contractor shall take all precautions to prevent disturbance or damage to utility facilities. Any failure on the part of the utility owner, or their representative, to proceed with any planned utility adjustment or new installation shall be reported promptly by the Contractor to the Engineer orally and in writing.

The Contractor shall take all necessary precautions for the protection of the utility facilities. The Contractor shall be responsible for any damage or destruction of utility facilities resulting from neglect, misconduct, or omission in the Contractor's manner or method of execution or nonexecution of the work, or caused by defective work or the use of unsatisfactory materials. Whenever any damage or destruction of a utility facility occurs as a result of work performed by the Contractor, the utility company will be immediately notified. The utility company will make arrangements to restore such facility to a condition equal to that existing before any such damage or destruction was done.

It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utilities in their present and/or adjusted positions.

No additional compensation will be allowed for any delays, inconvenience, or damage sustained by the Contractor due to any interference from the said utility facilities or the operation of relocating the said utility facilities.

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
INSURANCE

Effective: February 1, 2007
Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

Village of Schaumburg

Cook County

Cook County Highway Department

Civiltech Engineering, Inc.

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

ALKALI-SILICA REACTION FOR CAST-IN-PLACE CONCRETE (BDE)

Effective: August 1, 2007

Description. This special provision is intended to reduce the risk of a deleterious alkali-silica reaction in concrete exposed to humid or wet conditions. The special provision is not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate or sodium formate. The special provision shall not apply to the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy. The special provision shall also not apply to precast products or precast prestressed products.

Aggregate Expansion Values. Each coarse and fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates and 0.03 percent to limestone or dolomite fine aggregates (manufactured stone sand); however the Department reserves the right to perform the ASTM C 1260 test.

Aggregate Groups. Each combination of aggregates used in a mixture will be assigned to an aggregate group. The point at which the coarse aggregate and fine aggregate expansion values intersect in the following table will determine the group.

| AGGREGATE GROUPS | | | |
|---|---|---------------------|------------|
| Coarse Aggregate or Coarse Aggregate Blend ASTM C 1260 Expansion | Fine Aggregate or Fine Aggregate Blend ASTM C 1260 Expansion | | |
| | $\leq 0.16\%$ | $> 0.16\% - 0.27\%$ | $> 0.27\%$ |
| | $\leq 0.16\%$ | Group I | Group II |
| $> 0.16\% - 0.27\%$ | Group II | Group II | Group III |
| $> 0.27\%$ | Group III | Group III | Group IV |

Mixture Options. Based upon the aggregate group, the following mixture options shall be used; however, the Department may prohibit a mixture option if field performance shows a deleterious alkali-silica reaction or Department testing indicates the mixture may experience a deleterious alkali-silica reaction.

- Group I - Mixture options are not applicable. Use any cement or finely divided mineral.
- Group II - Mixture options 1, 2, 3, 4, or 5 shall be used.
- Group III - Mixture options 1, 2 and 3 combined, 4, or 5 shall be used.
- Group IV - Mixture options 1, 2 and 4 combined, or 5 shall be used.

For Class PP-3 concrete the mixture options are not applicable, and any cement may be used with the specified finely divided minerals.

- a) Mixture Option 1. The coarse or fine aggregates shall be blended to place the material in a group that will allow the selected cement or finely divided mineral to be used.

When a coarse or fine aggregate is blended, the weighted expansion value shall be calculated separately for the coarse and fine aggregate as follows:

$$\text{Weighted Expansion Value} = (a/100 \times A) + (b/100 \times B) + (c/100 \times C) + \dots$$

Where: a, b, c... = percentage of aggregate in the blend;
A, B, C... = expansion value for that aggregate.

- b) Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow. The replacement ratio is defined as "finely divided mineral:portland cement".

1) Class F Fly Ash. For Class PV, BS, MS, DS, SC, and SI concrete and cement aggregate mixture II (CAM II), Class F fly ash shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

2) Class C Fly Ash. For Class PV, MS, SC, and SI Concrete, Class C fly ash with 18 percent to less than 26.5 percent calcium oxide content, and less than 2.0 percent loss on ignition, shall replace 20 percent of the portland cement at a minimum replacement ratio of 1:1; or at a minimum replacement ratio of 1.25:1 if the loss on ignition is 2.0 percent or greater. Class C fly ash with less than 18 percent calcium oxide content shall replace 20 percent of the portland cement at a minimum replacement ratio of 1.25:1.

For Class PP-1, RR, BS, and DS concrete and CAM II, Class C fly ash with less than 26.5 percent calcium oxide content shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

3) Ground Granulated Blast-Furnace Slag. For Class PV, BS, MS, SI, DS, and SC concrete, ground granulated blast-furnace slag shall replace 25 percent of the portland cement at a minimum replacement ratio of 1:1.

For Class PP-1 and RR concrete, ground granulated blast-furnace slag shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

For Class PP-2, ground granulated blast-furnace slag shall replace 25 to 30 percent of the portland cement at a minimum replacement ratio of 1:1.

- 4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.
- c) Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.60 percent. When aggregate in Group II is involved, any finely divided mineral may be used with a portland cement.
- d) Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.45 percent. When aggregate in Group II or III is involved, any finely divided mineral may be used with a portland cement.
- e) Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is ≤ 0.16 percent when performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. For latex concrete, the ASTM C 1567 test shall be performed without the latex. The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

If during the two year time period the Contractor needs to replace the cement, and the replacement cement has an equal or lower total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$), a new ASTM C 1567 test will not be required.

Testing. If an individual aggregate has an ASTM C 1260 expansion value > 0.16 percent, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The ASTM C 1293 test shall be performed with Type I or II cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container or wick of absorbent material, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 or 1567 test result. The Engineer will not accept the result if the precision and bias for the test methods are not met.

The laboratory performing the ASTM C 1567 test shall be inspected for Hydraulic Cement - Physical Tests by the Cement and Concrete Reference Laboratory (CCRL) and shall be approved by the Department. The laboratory performing the ASTM C 1293 test shall be inspected for Portland Cement Concrete by CCRL and shall be approved by the Department.

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)

Effective: November 2, 2006

Revised: January 2, 2007

Description. For projects with at least 1200 tons (1100 metric tons) of work involving applicable bituminous materials, cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and pavement preservation type surface treatments. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, or joint filling/sealing.

The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

Where: CA = Cost Adjustment, \$.

BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).

BPI_L = Bituminous Price Index, as published by the Department for the month prior to the letting, \$/ton (\$/metric ton).

%AC_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.

Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 24.99) / 1000$. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and % AC_V.

For bituminous materials measured in gallons: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$

For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

Where: A = Area of the HMA mixture, sq yd (sq m).

D = Depth of the HMA mixture, in. (mm).

G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.

V = Volume of the bituminous material, gal (L).

SG = Specific Gravity of bituminous material as shown on the bill of lading.

Basis of Payment. Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI_L and BPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
BITUMINOUS MATERIALS COST ADJUSTMENTS**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments. After award, this form, when submitted, shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract?

Yes No

Signature: _____ **Date:** _____

80173

CEMENT (BDE)

Effective: January 1, 2007

Revised: November 1, 2007

Revise Section 1001 of the Standard Specifications to read:

"SECTION 1001. CEMENT

1001.01 Cement Types. Cement shall be according to the following.

- (a) Portland Cement. Acceptance of portland cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland cement shall be according to ASTM C 150, and shall meet the standard physical and chemical requirements. Type I or Type II may be used for cast-in-place, precast, and precast prestressed concrete. Type III may be used according to Article 1020.04, or when approved by the Engineer. All other cements referenced in ASTM C 150 may be used when approved by the Engineer.

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement and the total of all inorganic processing additions shall be a maximum of 4.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids that improve the flowability of cement, reduce pack set, and improve grinding efficiency. Inorganic processing additions shall be limited to granulated blast-furnace slag according to the chemical requirements of AASHTO M 302 and Class C fly ash according to the chemical requirements of AASHTO M 295.

- (b) Portland-Pozzolan Cement. Acceptance of portland-pozzolan cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland-pozzolan cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type IP or I(PM) may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. The pozzolan constituent for Type IP shall be a maximum of 21 percent of the weight (mass) of the portland-pozzolan cement. All other cements referenced in ASTM C 595 may be used when approved by the Engineer.

For cast-in-place construction, portland-pozzolan cements shall not be used in concrete mixtures when the air temperature is below 40 °F (4 °C) without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to increase the cement or eliminate the cement factor reduction for a water-

reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall not be used.

- (c) Portland Blast-Furnace Slag Cement. Acceptance of portland blast-furnace slag cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland blast-furnace slag cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type I(SM) slag-modified portland cement may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. All other cements referenced in ASTM C 595 may be used when approved by the Engineer.

For cast-in-place construction, portland blast-furnace slag cements shall not be used in concrete mixtures when the air temperature is below 40 °F (4 °C) without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to increase the cement or eliminate the cement factor reduction for a water-reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall not be used.

- (d) Rapid Hardening Cement. Rapid hardening cement shall be used according to Article 1020.04 or when approved by the Engineer. The cement shall be on the Department's current "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs", and shall be according to the following.

- (1) The cement shall have a maximum final set of 25 minutes, according to Illinois Modified ASTM C 191.
- (2) The cement shall have a minimum compressive strength of 2000 psi (13,800 kPa) at 3.0 hours, and 4000 psi (27,600 kPa) at 24.0 hours, according to Illinois Modified ASTM C 109.
- (3) The cement shall have a maximum drying shrinkage of 0.050 percent at seven days, according to Illinois Modified ASTM C 596.
- (4) The cement shall have a maximum expansion of 0.020 percent at 14 days, according to Illinois Modified ASTM C 1038.

(5) The cement shall have a minimum 80 percent relative dynamic modulus of elasticity; and shall not have a weight (mass) gain in excess of 0.15 percent or a weight (mass) loss in excess of 1.0 percent, after 100 cycles, according to Illinois Modified AASHTO T 161, Procedure B. At 100 cycles, the specimens are measured and weighed at 73 °F (23 °C).

(e) Calcium Aluminate Cement. Calcium aluminate cement shall be used when specified by the Engineer. The cement shall meet the standard physical requirements for Type I cement according to ASTM C 150, except the time of setting shall not apply. The chemical requirements shall be determined according to ASTM C 114 and shall be as follows: minimum 38 percent aluminum oxide (Al_2O_3), maximum 42 percent calcium oxide (CaO), maximum 1 percent magnesium oxide (MgO), maximum 0.4 percent sulfur trioxide (SO_3), maximum 1 percent loss on ignition, and maximum 3.5 percent insoluble residue.

1001.02 Uniformity of Color. Cement contained in single loads or in shipments of several loads to the same project shall not have visible differences in color.

1001.03 Mixing Brands and Types. Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall not be mixed or used alternately in the same item of construction unless approved by the Engineer.

1001.04 Storage. Cement shall be stored and protected against damage, such as dampness which may cause partial set or hardened lumps. Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall be kept separate."

80166

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: January 1, 2007

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 percent 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 percent 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 15 % 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 working days after the date of letting. To meet the seven day requirement, the bidder may send the Plan by certified mail or delivery service within the seven 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 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 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 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 percent 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 percent 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 percent 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 percent 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 contract. 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 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
 - (3) 100 percent 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 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 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 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 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.

DOWEL BARS (BDE)

Effective: April 1, 2007

Revised: January 1, 2008

Revise the fifth and sixth sentences of Article 1006.11(b) of the Standard Specifications to read:

"The bars shall be epoxy coated according to AASHTO M 284, except the thickness of the epoxy shall be 7 to 12 mils (0.18 to 0.30 mm) and patching of the ends will not be required. The epoxy coating applicator shall be certified according to the current Bureau of Materials and Physical Research Policy Memorandum, "Epoxy Coating Plant Certification Procedure". The Department will maintain an approved list."

80178

ELECTRICAL SERVICE INSTALLATION - TRAFFIC SIGNALS (BDE)

Effective: January 1, 2007

Add the following to Article 805.02 of the Standard Specifications:

"(d) Wood Pole 1069.04"

Add the following to Article 805.03 of the Standard Specifications:

"When a service pole is necessary, it shall be installed according to Article 830.03(c)."

80167

ENGINEER'S FIELD OFFICE TYPE A (BDE)

Effective: April 1, 2007

Add the following to Article 670.02 of the Standard Specifications:

"(n) One wireless data router with wireless network connection to access the Department's network for the exclusive use of the Engineer. The wireless data router shall operate within a temperature range of 32 to 131°F (0 to 55°C) and have the following capabilities.

(1) Connection.

- a. CDMA wireless technology with authentication and identification system for security.
- b. CDMA based EV-DO(rev.A) transmission capabilities.
- c. EVDO(rev.A) shall be backward compatible through both EVDO(rev0) and 1XRTT.
- d. Connection shall be capable of compression in order to optimize the connection speed.

(2) Router.

- a. A minimum of four ethernet ports for wired connection.
- b. Capable of 802.11b & g for wireless LAN interface.
- c. Configurable ability to port data to fax capabilities through the router using efax or IP fax devices.
- d. Automatic receipt of IP addresses with DHCP server.
- e. Configurable OFDM (Orthogonal Frequency Division Multiplexing) technology.

(3) Security.

- a. Configurable capable of 64-bit or 128-bit WEP encryption, and WPA-PSK authentication wireless security (WiFi Protected Access - Pre-shared Key Mode).
- b. Configurable LAN security: NAT with DHCP, PPTP VPN pass-through, MAC filtering, IP filtering, and filter scheduling.
- c. Configurable firewall security at the router."

80179

EQUIPMENT RENTAL RATES (BDE)

Effective: August 2, 2007

Revised: January 2, 2008

Replace the second and third paragraphs of Article 105.07(b)(4)a. of the Standard Specifications with the following:

"Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4)."

Replace Article 109.04(b)(4) of the Standard Specifications with the following:

"(4) Equipment. Equipment used for extra work shall be authorized by the Engineer. The equipment shall be specifically described, be of suitable size and capacity for the work to be performed, and be in good operating condition. For such equipment, the Contractor will be paid as follows.

- a. Contractor Owned Equipment. Contractor owned equipment will be paid for by the hour using the applicable FHWA hourly rate from the "Equipment Watch Rental Rate Blue Book" (Blue Book) in effect when the force account work begins. The FHWA hourly rate is calculated as follows.

$$\text{FHWA hourly rate} = (\text{monthly rate}/176) \times (\text{model year adj.}) \times (\text{Illinois adj.}) + \text{EOC}$$

Where: EOC = Estimated Operating Costs per hour (from the Blue Book)

The time allowed will be the actual time the equipment is operating on the extra work. For the time required to move the equipment to and from the site of the extra work and any authorized idle (standby) time, payment will be made at the following hourly rate: $0.5 \times (\text{FHWA hourly rate} - \text{EOC})$.

All time allowed shall fall within the working hours authorized for the extra work.

The rates above include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhaul and maintenance of any kind, depreciation, storage, overhead, profits, insurance, and all incidentals. The rates do not include labor.

The Contractor shall submit to the Engineer sufficient information for each piece of equipment and its attachments to enable the Engineer to determine the proper equipment category. If a rate is not established in the Blue Book for a particular piece of equipment, the Engineer will establish a rate for that piece of equipment that is consistent with its cost and use in the industry.

- b. Rented Equipment. Whenever it is necessary for the Contractor to rent equipment to perform extra work, the rental and transportation costs of the equipment plus five percent for overhead will be paid. In no case shall the rental rates exceed those of established distributors or equipment rental agencies.

All prices shall be agreed to in writing before the equipment is used."

80189

EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: April 1, 2007

Revise Article 105.03(a) of the Standard Specifications to read:

- "(a) Erosion and Sediment Control Deficiency Deduction. When the Engineer is notified or determines an erosion and/or sediment control deficiency(s) exists, he/she will notify and direct the Contractor to correct the deficiency within a specified time. The specified time, which begins upon notification to the Contractor, will be from 1/2 hour to 1 week based on the urgency of the situation and the nature of the deficiency. The Engineer will be the sole judge.

A deficiency may be any lack of repair, maintenance, or implementation of erosion and/or sediment control devices included in the contract, or any failure to comply with the conditions of the National Pollutant Discharge Elimination System (NPDES) Storm Water Permit for Construction Site Activities. A deficiency may also be applied to situations where corrective action is not an option such as the failure to participate in a jobsite inspection of the project, failure to install required measures prior to initiating earth moving operations, disregard of concrete washout requirements, or other disregard of the NPDES permit.

If the Contractor fails to correct a deficiency within the specified time, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The calendar day(s) will begin with notification to the Contractor and end with the Engineer's acceptance of the correction. The daily monetary deduction will be either \$1000.00 or 0.05 percent of the awarded contract value, whichever is greater. For those deficiencies where corrective action was not an option, the monetary deduction will be immediate and will be valued at one calendar day."

80180

HMA - HAULING ON PARTIALLY COMPLETED FULL-DEPTH PAVEMENT (BDE)

Effective: January 1, 2008

Revise Article 407.08 of the Standard Specifications to read:

"407.08 Hauling on the Partially Completed Full-Depth Pavement. Legally loaded trucks will be permitted on the partially completed full-depth HMA pavement only to deliver HMA mixture to the paver, provided the last lift has cooled a minimum of 12 hours. Hauling shall be limited to the distances shown in the following tables. The pavement surface temperature shall be measured using an infrared gun. The use of water to cool the pavement to permit hauling will not be allowed. The Contractor's traffic pattern shall minimize hauling on the partially completed pavement and shall vary across the width of the pavement such that "tracking" of vehicles, one directly behind the other, does not occur.

| MAXIMUM HAULING DISTANCE FOR PAVEMENT SURFACE TEMPERATURE BELOW 105 °F (40 °C) | | | | |
|---|--------------------------------|-----------------------|---------------------------|------------------------|
| Total In-Place Thickness Being Hauled On, in. (mm) | Thickness of Lift Being Placed | | | |
| | 3 in. (75 mm) or less | | More than 3 in. (75 mm) | |
| | Modified Soil Subgrade | Granular Subbase | Modified Soil Subgrade | Granular Subbase |
| 3.0 to 4.0 (75 to 100) | 0.75 miles (1200 m) | 1.0 mile (1600 m) | 0.50 miles (800 m) | 0.75 miles (1200 m) |
| 4.1 to 5.0 (101 to 125) | 1.0 mile (1600 m) | 1.5 miles (2400 m) | 0.75 miles (1200 m) | 1.0 mile (1600 m) |
| 5.1 to 6.0 (126 to 150) | 2.0 miles (3200 m) | 2.5 miles (4000 m) | 1.5 miles (2400 m) | 2.0 miles (3200 m) |
| 6.1 to 8.0 (151 to 200) | 2.5 miles (4000 m) | 3.0 miles (4800 m) | 2.0 miles (3200 m) | 2.5 miles (4000 m) |
| Over 8.0 (200) | No Restrictions | | | |

| MAXIMUM HAULING DISTANCE FOR PAVEMENT SURFACE TEMPERATURE OF 105 °F (40 °C) AND ABOVE | | | | |
|--|--------------------------------|------------------------|---------------------------|------------------------|
| Total In-Place Thickness Being Hauled On, in. (mm) | Thickness of Lift Being Placed | | | |
| | 3 in. (75 mm) or less | | More than 3 in. (75 mm) | |
| | Modified Soil Subgrade | Granular Subbase | Modified Soil Subgrade | Granular Subbase |
| 3.0 to 4.0 (75 to 100) | 0.50 miles (800 m) | 0.75 miles (1200 m) | 0.25 miles (400 m) | 0.50 miles (800 m) |
| 4.1 to 5.0 (101 to 125) | 0.75 miles (1200 m) | 1.0 mile (1600 m) | 0.50 miles (800 m) | 0.75 miles (1200 m) |
| 5.1 to 6.0 (126 to 150) | 1.0 mile (1600 m) | 1.5 miles (2400 m) | 0.75 miles (1200 m) | 1.0 mile (1600 m) |
| 6.1 to 8.0 (151 to 200) | 2.0 miles (3200 m) | 2.5 miles (4000 m) | 1.5 miles (2400 m) | 2.0 miles (3200 m) |
| Over 8.0 (200) | No Restrictions | | | |

Permissive hauling on the partially completed pavement shall not relieve the Contractor of his/her responsibility for damage to the pavement. Any portion of the full-depth HMA pavement that is damaged by hauling shall be removed and replaced, or otherwise repaired to the satisfaction of the Engineer.

Crossovers used to transfer haul trucks from one roadway to the other shall be at least 1000 ft (300 m) apart and shall be constructed of material that will prevent tracking of dust or mud on the completed HMA lifts. The Contractor shall construct, maintain, and remove all crossovers."

80194

HOT-MIX ASPHALT - FIELD VOIDS IN THE MINERAL AGGREGATE (BDE)

Effective: April 1, 2007

Add the following to the table in Article 1030.05(d)(2)a. of the Standard Specifications:

| "Parameter | Frequency of Tests | Frequency of Tests | Test Method |
|--------------------|--|--------------------|--|
| | High ESAL Mixture Low ESAL Mixture | All Other Mixtures | See Manual of Test Procedures for Materials |
| VMA Note 5. | 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day) | 1 per day | Illinois-Modified AASHTO R 35 |

Note 5. The G_{sb} used in the voids in the mineral aggregate (VMA) calculation shall be the same average G_{sb} value listed in the mix design."

Add the following to the Control Limits table in Article 1030.05(d)(4) of the Standard Specifications:

| "CONTROL LIMITS | | | |
|-----------------|-----------------------|-----------------------|--------------------|
| Parameter | High ESAL Low ESAL | High ESAL Low ESAL | All Other |
| | Individual Test | Moving Avg. of 4 | Individual Test |
| VMA | -0.7 % ^{2/} | -0.5 % ^{2/} | N/A |

2/ Allowable limit below minimum design VMA requirement"

Add the following to the table in Article 1030.05(d)(5) of the Standard Specifications:

| "CONTROL CHART REQUIREMENTS | High ESAL Low ESAL | All Other |
|--------------------------------|-----------------------|-----------|
| | VMA" | |

Revise the heading of Article 1030.05(d)(6)a.1. of the Standard Specifications to read:

"1. Voids, VMA, and Asphalt Binder Content."

Revise the first sentence of the first paragraph of Article 1030.05(d)(6)a.1.(a.) of the Standard Specifications to read:

"If the retest for voids, VMA, or asphalt binder content exceeds control limits, HMA production shall cease and immediate corrective action shall be instituted by the Contractor."

Revise the table in Article 1030.05(e) of the Standard Specifications to read:

| "Test Parameter | Acceptable Limits of Precision |
|---|--------------------------------|
| % Passing: ^{1/} | |
| 1/2 in. (12.5 mm) | 5.0 % |
| No. 4 (4.75 mm) | 5.0 % |
| No. 8 (2.36 mm) | 3.0 % |
| No. 30 (600 μm) | 2.0 % |
| Total Dust Content No. 200 (75 μm) ^{1/} | 2.2 % |
| Asphalt Binder Content | 0.3 % |
| Maximum Specific Gravity of Mixture | 0.026 |
| Bulk Specific Gravity | 0.030 |
| VMA | 1.4 % |
| Density (% Compaction) | 1.0 % (Correlated) |

^{1/} Based on washed ignition."

80181

MAST ARM ASSEMBLY AND POLE (BDE)

Effective: January 1, 2008

Revise Article 1077.03 of the Standard Specifications to read:

"1077.03 Mast Arm Assembly and Pole. Mast arm assembly and pole shall be as follows.

(a) Steel Mast Arm Assembly and Pole and Steel Combination Mast Arm Assembly and Pole. The steel mast arm assembly and pole and steel combination mast arm assembly and pole shall consist of a traffic signal mast arm, a luminaire mast arm or davit (for combination pole only), a pole, and a base, together with anchor rods and other appurtenances. The configuration of the mast arm assembly, pole, and base shall be according to the details shown on the plans.

(1) Loading. The mast arm assembly and pole, and combination mast arm assembly and pole shall be designed for the loading shown on the Highway Standards or elsewhere on the plans, whichever is greater. The design shall be according to AASHTO "Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals" 1994 Edition for 80 mph (130 km/hr) wind velocity. However, the arm-to-pole connection for tapered signal and luminaire arms shall be according to the "ring plate" detail as shown in Figure 11-1(f) of the 2002 Interim, to the AASHTO "Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals" 2001 4th Edition.

(2) Structural Steel Grade. The mast arm and pole shall be fabricated according to ASTM A 595, Grade A or B, ASTM A 572 Grade 55, or ASTM A 1011 Grade 55 HSLAS Class 2. The base and flange plates shall be of structural steel according to AASHTO M 270 Grade 50 (M 270M Grade 345). Luminaire arms and trussed arms 15 ft (4.5 m) or less shall be fabricated from one steel pipe or tube size according to ASTM A 53 Grade B or ASTM A 500 Grade B or C. All mast arm assemblies, poles, and bases shall be galvanized according to AASHTO M 111.

(3) Fabrication. The design and fabrication of the mast arm assembly, pole, and base shall be according to the requirements of the Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals published by AASHTO. The mast arm and pole may be of single length or sectional design. If section design is used, the overlap shall be at least 150 percent of the maximum diameter of the overlapping section and shall be assembled in the factory.

The manufacturer will be allowed to slot the base plate in which other bolt circles may fit, providing that these slots do not offset the integrity of the pole. Circumferential welds of tapered arms and poles to base plates shall be full penetration welds.

(4) Shop Drawing Approval. The Contractor shall submit detailed drawings showing design materials, thickness of sections, weld sizes, and anchor rods to the Engineer

for approval prior to fabrication. These drawings shall be at least 11 x 17 in. (275 x 425 mm) in size and of adequate quality for microfilming.

- (b) Anchor Rods. The anchor rods shall be ASTM F 1554 Grade 105 according to Article 1006.09 and shall be threaded a minimum of 7 1/2 in. (185 mm) at one end and have a bend at the other end. The first 10 in. (250 mm) at the threaded end shall be galvanized. Two nuts, one lock washer, and one flat washer shall be furnished with each anchor rod. All nuts and washers shall be galvanized."

80196

MULTILANE PAVEMENT PATCHING (BDE)

Effective: November 1, 2002

Pavement broken and holes opened for patching shall be completed prior to weekend or holiday periods. Should delays of any type or for any reason prevent the completion of the work, temporary patches shall be constructed. Material able to support the average daily traffic and meeting the approval of the Engineer shall be used for the temporary patches. The cost of furnishing, placing, maintaining, removing and disposing of the temporary work, including traffic control, shall be the responsibility of the Contractor.

80082

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Revised: January 1, 2006

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 and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier 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 and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 109.07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain 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 and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section

| 7(b) of the State Prompt Payment Act. State law creates other and additional 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 according to the Public Construction Bond Act, 30 ILCS 550.

80022

PORTLAND CEMENT CONCRETE PLANTS (BDE)

Effective: January 1, 2007

Add the following to Article 1020.11(a) of the Standard Specifications.

- "(9) Use of Multiple Plants in the Same Construction Item. The Contractor may simultaneously use central-mixed, truck-mixed, and shrink-mixed concrete from more than one plant, for the same construction item, on the same day, and in the same pour. However, the following criteria shall be met.
- a. Each plant shall use the same cement, finely divided minerals, aggregates, admixtures, and fibers.
 - b. Each plant shall use the same mix design. However, material proportions may be altered slightly in the field to meet slump and air content criteria. Field water adjustments shall not result in a difference that exceeds 0.02 between plants for water/cement ratio. The required cement factor for central-mixed concrete shall be increased to match truck-mixed or shrink-mixed concrete, if the latter two types of mixed concrete are used in the same pour.
 - c. The maximum slump difference between deliveries of concrete shall be 3/4 in. (19 mm) when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the slump difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for slump by the Contractor. Thereafter, when a specified test frequency for slump is to be performed, it shall be conducted for each plant at the same time.
 - d. The maximum air content difference between deliveries of concrete shall be 1.5 percent when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the air content difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for air content by the Contractor. Thereafter, when a specified test frequency for air content is to be performed, it shall be conducted for each plant at the same time.
 - e. Strength tests shall be performed and taken at the jobsite for each plant. When a specified strength test is to be performed, it shall be conducted for each plant at the same time. The difference between plants for their mean strength shall not exceed 450 psi (3100 kPa) compressive and 80 psi (550 kPa) flexural. The strength standard deviation for each plant shall not exceed 650 psi (4480 kPa) compressive and 110 psi (760 kPa) flexural. The mean and standard deviation requirements shall apply to the test of record. If the strength difference requirements are exceeded, the Contractor shall take corrective action.

- f. The maximum haul time difference between deliveries of concrete shall be 15 minutes. If the difference is exceeded, but haul time is within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and check subsequent deliveries of concrete until the haul time difference is corrected."

80170

PRECAST CONCRETE HANDLING HOLES (BDE)

Effective: January 1, 2007

Add the following to Article 540.02 of the Standard Specifications:

“(g) Handling Hole Plugs..... 1042.16”

Add the following paragraph after the sixth paragraph of Article 540.06 of the Standard Specifications:

“Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar, or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar.”

Add the following to Article 542.02 of the Standard Specifications:

“(ee) Handling Hole Plugs 1042.16”

Revise the fifth paragraph of Article 542.04(d) of the Standard Specifications to read:

“Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation.”

Add the following to Article 550.02 of the Standard Specifications:

“(o) Handling Hole Plugs..... 1042.16”

Replace the fourth sentence of the fifth paragraph of Article 550.06 of the Standard Specifications with the following:

“Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation.”

Add the following to Article 602.02 of the Standard Specifications:

“(p) Handling Hole Plugs..... 1042.16(a)”

Replace the fifth sentence of the first paragraph of Article 602.07 of the Standard Specifications with the following:

“Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar.”

Add the following to Section 1042 of the Standard Specifications:

“1042.16 Handling Hole Plugs. Plugs for handling holes in precast concrete products shall be as follows.

- (a) Precast Concrete Plug. The precast concrete plug shall have a tapered shape and shall have a minimum compressive strength of 3000 psi (20,700 kPa) at 28 days.
- (b) Polyethylene Plug. The polyethylene plug shall have a “mushroom” shape with a flat round top and a stem with three different size ribs. The plug shall fit snugly and cover the handling hole.

The plug shall be according to the following.

| Mechanical Properties | Test Method | Value (min.) |
|--------------------------|-------------|-----------------------|
| Flexural Modulus | ASTM D 790 | 3300 psi (22,750 kPa) |
| Tensile Strength (Break) | ASTM D 638 | 1600 psi (11,030 kPa) |
| Tensile Strength (Yield) | ASTM D 638 | 1200 psi (8270 kPa) |

| Thermal Properties | Test Method | Value (min.) |
|-----------------------|-------------|-----------------|
| Brittle Temperature | ASTM D 746 | -49 °F (-45 °C) |
| Vicat Softening Point | ASTM D 1525 | 194 °F (90 °C)” |

80171

RECLAIMED ASPHALT PAVEMENT (RAP) (BDE)

Effective: January 1, 2007

Revised: August 1, 2007

In Article 1030.02(g), delete the last sentence of the first paragraph in (Note 2).

Revise Section 1031 of the Standard Specifications to read:

"SECTION 1031. RECLAIMED ASPHALT PAVEMENT

1031.01 Description. Reclaimed asphalt pavement (RAP) is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.

1031.02 Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. "Homogeneous Surface").

Prior to milling, the Contractor shall request the District to provide verification of the quality of the RAP to clarify appropriate stockpile.

- (a) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogenous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (b) Conglomerate 5/8. Conglomerate 5/8 RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate 5/8 RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate 5/8 RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (c) Conglomerate 3/8. Conglomerate 3/8 RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least B quality. This RAP may have an

inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate 3/8 RAP shall be processed prior to testing by crushing to where all RAP shall pass the 3/8 in. (9.5 mm) or smaller screen. Conglomerate 3/8 RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

- (d) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, Superpave (High or Low ESAL), HMA (High or Low ESAL), or equivalent mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (e) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

1031.03 Testing. When used in HMA, the RAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

- (a) Testing Conglomerate 3/8. In addition to the requirements above, conglomerate 3/8 RAP shall be tested for maximum theoretical specific gravity (G_{mm}) at a frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

- (b) Evaluation of Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable G_{mm} . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

| Parameter | Homogeneous / Conglomerate | Conglomerate "D" Quality |
|-----------------------------|----------------------------|--------------------------|
| 1 in. (25 mm) | | $\pm 5 \%$ |
| 1/2 in. (12.5 mm) | $\pm 8 \%$ | $\pm 15 \%$ |
| No. 4 (4.75 mm) | $\pm 6 \%$ | $\pm 13 \%$ |
| No. 8 (2.36 mm) | $\pm 5 \%$ | |
| No. 16 (1.18 mm) | | $\pm 15 \%$ |
| No. 30 (600 μm) | $\pm 5 \%$ | |
| No. 200 (75 μm) | $\pm 2.0 \%$ | $\pm 4.0 \%$ |
| Asphalt Binder | $\pm 0.4 \%$ ^{1/} | $\pm 0.5 \%$ |
| G_{mm} | ± 0.02 ^{2/} | |

1/ The tolerance for conglomerate 3/8 shall be $\pm 0.3 \%$.

2/ Applies only to conglomerate 3/8. When variation of the G_{mm} exceeds the ± 0.02 tolerance, a new conglomerate 3/8 stockpile shall be created which will also require an additional mix design.

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content test results fall outside the appropriate tolerances, the RAP shall not be used in HMA unless the RAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

1031.04 Quality Designation of Aggregate in RAP. The quality of the RAP shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

- (a) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) surface mixtures are designated as containing Class B quality coarse aggregate.
- (b) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder and IL-9.5L surface mixtures are designated as Class D quality coarse aggregate.
- (c) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.

- (d) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

1031.05 Use of RAP in HMA. The use of RAP in HMA shall be as follows.

- (a) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (b) Steel Slag Stockpiles. RAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) surface mixtures only.
- (c) Use in HMA Surface Mixtures (High and Low ESAL). RAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be either homogeneous or conglomerate 3/8, in which the coarse aggregate is Class B quality or better.
- (d) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be homogeneous, conglomerate 5/8, or conglomerate 3/8, in which the coarse aggregate is Class C quality or better.
- (e) Use in Shoulders and Subbase. RAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be homogeneous, conglomerate 5/8, conglomerate 3/8, or conglomerate DQ.
- (f) The use of RAP shall be a contractor's option when constructing HMA in all contracts. When the contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table for a given N Design.

Max RAP Percentage

| HMA MIXTURES ^{1/, 3/} | MAXIMUM % RAP | | |
|--------------------------------|------------------------|-----------------------|------------------|
| | Binder/Leveling Binder | Surface | Polymer Modified |
| Ndesign 30 | 30 | 30 | 10 |
| 50 | 25 | 15 | 10 |
| 70 | 15 / 25 ^{2/} | 10 / 15 ^{2/} | 10 |
| 90 | 10 | 10 | 10 |
| 105 | 10 | 10 | 10 |

1/ For HMA Shoulder and Stabilized Sub-Base (HMA) N-30, the amount of RAP shall not exceed 50% of the mixture.

2/ Value of Max % RAP if 3/8 RAP is utilized.

- 3/ When RAP exceeds 20%, the high & low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25% RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

1031.06 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP material meeting the above detailed requirements.

RAP designs shall be submitted for volumetric verification. If additional RAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP stockpiles may be used in the original mix design at the percent previously verified.

1031.07 HMA Production. The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

To remove or reduce agglomerated material, a scalping screen, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP and either switch to the virgin aggregate design or submit a new RAP design. When producing mixtures containing conglomerate 3/8 RAP, a positive dust control system shall be utilized.

HMA plants utilizing RAP shall be capable of automatically recording and printing the following information.

(a) Dryer Drum Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (4) Accumulated dry weight of RAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.

- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAP material as a percent of the total mix to the nearest 0.1 percent.
- (8) Aggregate and RAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP are printed in wet condition.)

(b) Batch Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) RAP weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram).
- (7) Residual asphalt binder in the RAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.08 RAP in Aggregate Surface Course and Aggregate Shoulders. The use of RAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Other". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

REFLECTIVE SHEETING ON CHANNELIZING DEVICES (BDE)

Effective: April 1, 2007

Revise the seventh paragraph of Article 1106.02 of the Standard Specifications to read:

"At the time of manufacturing, the retroreflective prismatic sheeting used on channelizing devices shall meet or exceed the initial minimum coefficient of retroreflection as specified in the following table. Measurements shall be conducted according to ASTM E 810, without averaging. Sheeting used on cones, drums and flexible delineators shall be reboundable as tested according to ASTM D 4956. Prestriped sheeting for rigid substrates on barricades shall be white and orange.

| Initial Minimum Coefficient of Retroreflection candelas/foot candle/sq ft (candelas/lux/sq m) of material | | | | |
|--|--------------------------|-------|--------|-----------------------|
| Observation Angle (deg.) | Entrance Angle (deg.) | White | Orange | Fluorescent Orange |
| 0.2 | -4 | 365 | 160 | 150 |
| 0.2 | +30 | 175 | 80 | 70 |
| 0.5 | -4 | 245 | 100 | 95 |
| 0.5 | +30 | 100 | 50 | 40" |

Revise the first sentence of the first paragraph of Article 1106.02(c) of the Standard Specifications to read:

"Barricades and vertical panels shall have alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass."

Revise the third sentence of the first paragraph of Article 1106.02(d) of the Standard Specifications to read:

"The bottom panels shall be 8 x 24 in. (200 x 600 mm) with alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass."

80183

REINFORCEMENT BARS (BDE)

Effective: November 1, 2005

Revised: January 2, 2008

Revise Article 1006.10(a) of the Standard Specifications to read:

" (a) Reinforcement Bars. Reinforcement bars will be accepted according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reinforcement Bar and/or Dowel Bar Plant Certification Procedure". The Department will maintain an approved list of producers.

(1) Reinforcement Bars (Non-Coated). Reinforcement bars shall be according to ASTM A 706 (A 706M), Grade 60 (420) for deformed bars and the following.

- a. For straight bars furnished in cut lengths and with a well-defined yield point, the yield point shall be determined as the elastic peak load, identified by a halt or arrest of the load indicator before plastic flow is sustained by the bar and dividing it by the nominal cross-sectional area of the bar.
- b. For bars without a well-defined yield point, including bars straightened from coils, the yield strength shall be determined by taking the corresponding load at 0.005 strain as measured by an extensometer (0.5% elongation under load) and dividing it by the nominal cross-sectional area of the bar.
- c. For bars straightened from coils or bars bent from fabrication, there shall be no upper limit on yield strength; and for bar designation Nos. 3 - 6 (10 - 19), the elongation after rupture shall be at least 9%.
- d. Heat Numbers. Bundles or bars at the construction site shall be marked or tagged with heat identification numbers of the bar producer.
- e. Guided Bend Test. Bars may be subject to a guided bend test across two pins which are free to rotate, where the bending force shall be centrally applied with a fixed or rotating pin of a certain diameter as specified in Table 3 of ASTM A 706 (A 706M). The dimensions and clearances of this guided bend test shall be according to ASTM E 190.
- f. Spiral Reinforcement. Spiral reinforcement shall be deformed or plain bars conforming to the above requirements or cold-drawn steel wire conforming to AASHTO M 32.

(2) Epoxy Coated Reinforcement Bars. Epoxy coated reinforcement bars shall be according to Article 1006.10(a)(1) and shall be epoxy coated according to AASHTO M 284 (M 284M) and the following.

- a. Certification. The epoxy coating applicator shall be certified according to the current Bureau of Materials and Physical Research Policy Memorandum, "Epoxy Coating Plant Certification Procedure". The Department will maintain an approved list.
- b. Coating Thickness. The thickness of the epoxy coating shall be 7 to 12 mils (0.18 to 0.30 mm). When spiral reinforcement is coated after fabrication, the thickness of the epoxy coating shall be 7 to 20 mils (0.18 to 0.50 mm).
- c. Cutting Reinforcement. Reinforcement bars may be sheared or sawn to length after coating, providing the end damage to the coating does not extend more than 0.5 in. (13 mm) back and the cut is patched before any visible rusting appears. Flame cutting will not be permitted."

80151

RETROREFLECTIVE SHEETING, NONREFLECTIVE SHEETING, AND TRANSLUCENT OVERLAY FILM FOR HIGHWAY SIGNS (BDE)

Effective: April 1, 2007

General. This special provision covers retroreflective sheeting and translucent overlay films intended for application on new or refurbished aluminum. The sheeting serves as the reflectorized background for sign messages and as cutout legends and symbols applied to the reflectorized background. Messages may be applied in opaque black or transparent colors.

This special provision also covers nonreflective sheeting for application on new or refurbished aluminum, and as material for cutout legends and symbols applied to the reflectorized background.

All material furnished under this specification shall have been manufactured within 18 months of the delivery date. All material shall be supplied by the same manufacturer.

Retroreflective Sheeting Properties. Retroreflective sheeting shall consist of a flexible, colored, prismatic, or glass lens elements adhered to a synthetic resin, encapsulated by a flexible, transparent plastic having a smooth outer surface and shall meet the following requirements.

Only suppliers whose products have been tested and approved in the Department's periodic Sheeting Study will be eligible to supply material. All individual batches and or lots of material shall be tested and approved by the Department. The Department reserves the right to sample and test delivered materials according to Federal Specification LS-300.

- (a) Adhesive. The sheeting shall have a Class 1, pre-coated, pressure sensitive adhesive according to ASTM D 4956. The adhesive shall have a protective liner that is easily removed when tested according to ASTM D 4956. The adhesive shall be capable of being applied to new or refurbished aluminum and reflectorized backgrounds without additional adhesive.
- (b) Color. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration and to the daytime and nighttime color requirements of ASTM D 4956. Sheeting used for side by side overlay applications shall have a Hunter Lab Delta E of less than 3.
- (c) Coefficient of Retroreflection. When tested according to ASTM E 810, without averaging, the sheeting shall have a minimum coefficient of retroreflection as shown in the following tables. The brightness of the sheeting when totally wet shall be a minimum of 90 percent of the values shown when tested according to the standard rainfall test specified in Section 7.10.1 of AASHTO M 268-84.

Type A Sheeting
Minimum Coefficient of Retroreflection
candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type A

| Observation Angle (deg.) | Entrance Angle (deg.) | White | Yellow | Orange | Red | Green | Blue | Brown |
|--------------------------|-----------------------|-------|--------|--------|-----|-------|------|-------|
| 0.2 | -4 | 250 | 170 | 100 | 45 | 45 | 20 | 12 |
| 0.2 | +30 | 150 | 100 | 60 | 25 | 25 | 12 | 8.5 |
| 0.5 | -4 | 95 | 65 | 30 | 15 | 15 | 8 | 5 |
| 0.5 | +30 | 75 | 50 | 25 | 10 | 10 | 5 | 3.5 |

Type AA Sheeting
 Minimum Coefficient of Retroreflection
 candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type AA (0 and 90 degree rotation)

| Observation Angle (deg.) | Entrance Angle (deg.) | White | Yellow | Red | Green | Blue | FO |
|--------------------------|-----------------------|-------|--------|-----|-------|------|-----|
| 0.2 | -4 | 800 | 660 | 215 | 80 | 43 | 200 |
| 0.2 | +30 | 400 | 340 | 100 | 35 | 20 | 120 |
| 0.5 | -4 | 200 | 160 | 45 | 20 | 9.8 | 80 |
| 0.5 | +30 | 100 | 85 | 26 | 10 | 5.0 | 50 |

Type AA (45 degree rotation)

| Observation Angle (deg.) | Entrance Angle (deg.) | Yellow | FO |
|--------------------------|-----------------------|--------|-----|
| 0.2 | -4 | 550 | 165 |
| 0.2 | +30 | 130 | 45 |
| 0.5 | -4 | 145 | 70 |
| 0.5 | +30 | 70 | 40 |

Type AP Sheeting
 Minimum Coefficient of Retroreflection
 candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type AP

| Observation Angle (deg.) | Entrance Angle (deg.) | White | Yellow | Red | Green | Blue | Brown | FO |
|--------------------------|-----------------------|-------|--------|-----|-------|------|-------|-----|
| 0.2 | -4 | 550 | 425 | 100 | 75 | 50 | 30 | 275 |
| 0.2 | +30 | 200 | 150 | 40 | 35 | 25 | 15 | 90 |
| 0.5 | -4 | 300 | 250 | 60 | 35 | 25 | 20 | 150 |
| 0.5 | +30 | 100 | 70 | 20 | 20 | 10 | 5 | 50 |

Type AZ Sheeting
Minimum Coefficient of Retroreflection
candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type AZ (0 degree rotation)

| Observation Angle (deg.) | Entrance Angle (deg.) | White | Yellow | Red | Green | Blue | FYG | FY |
|--------------------------|-----------------------|-------|--------|-----|-------|------|-----|-----|
| 0.2 | -4 | 430 | 350 | 110 | 45 | 20 | 325 | 240 |
| 0.2 | +30 | 235 | 140 | 60 | 24 | 11 | 200 | 150 |
| 0.5 | -4 | 250 | 200 | 60 | 25 | 10 | 235 | 165 |
| 0.5 | +30 | 170 | 135 | 40 | 19 | 7 | 105 | 75 |
| 1.0 | -4 | 70 | 45 | 10 | 10 | 4 | 70 | 30 |
| 1.0 | +30 | 30 | 20 | 7 | 5 | 2.5 | 45 | 15 |

Type AZ (90 degree rotation)

| Observation Angle (deg.) | Entrance Angle (deg.) | White | Yellow | Red | Green | Blue | FYG | FY |
|--------------------------|-----------------------|-------|--------|-----|-------|------|-----|-----|
| 0.2 | -4 | 320 | 250 | 100 | 45 | 20 | 300 | 220 |
| 0.2 | +30 | 235 | 140 | 40 | 24 | 11 | 200 | 150 |
| 0.5 | -4 | 240 | 200 | 60 | 25 | 10 | 235 | 165 |
| 0.5 | +30 | 100 | 85 | 20 | 10 | 7 | 80 | 75 |
| 1.0 | -4 | 30 | 30 | 7 | 5 | 4 | 65 | 20 |
| 1.0 | +30 | 15 | 15 | 5 | 2 | 2 | 30 | 10 |

(d) Gloss. The sheeting surface shall exhibit a minimum 85 degree gloss-meter rating of 50 when tested according to ASTM D 523.

(e) Durability. When processed and applied, the sheeting shall be weather resistant.

Accelerated weathering testing will be performed for 1000 hours (300 hours for orange/FO) according to ASTM G 151. The testing cycle will consist of 8 hours of light at 140 °F (60 °C), followed by 4 hours of condensation at 104 °F (40 °C). Following accelerated weathering, the sheeting shall exhibit a minimum of 80 percent of its initial minimum coefficient of retroreflection as listed in the previous tables.

Outdoor weathering will entail an annual evaluation of material placed in an outdoor rack with a 45 degree angle and a southern sun exposure. The sheeting will be evaluated for five years. Following weathering, the test specimens will be cleaned by immersing them in a five percent hydrochloric acid solution for 45 seconds, then rinsed with water and blotted dry with a soft clean cloth. Following cleaning, the applied sheeting shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change. The sheeting shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

- (f) Shrinkage. When tested according to ASTM D 4956, the sheeting shall not shrink in any dimension more than 1/32 in. (0.8 mm) in ten minutes and not more than 1/8 in. (3 mm) in 24 hours.
- (g) Workability. The sheeting shall show no cracking, scaling, pitting, blistering, edge lifting, inter-film splitting, curling, or discoloration when processed and applied using mutually acceptable processing and application procedures.
- (h) Splices. A single roll of sheeting shall contain a maximum of four splices per 50 yd (45 m) length. The sheeting shall be overlapped a minimum of 3/16 in. (5 mm) at each splice.
- (i) Adhesive Bond. The sheeting shall form a durable bond to smooth, corrosion and weather-resistant surfaces and adhere securely when tested according to ASTM D 4956.
- (j) Positionability. Sheeting, with ASTM D 4956 Class 3 adhesive, used for manufacturing cutout legends and borders shall provide sufficient positionability during the fabrication process to permit removal and reapplication without damage to either the legend or sign background and shall have a plastic liner suitable for use on bed cutting machines. Thereafter, all other adhesive and bond requirements contained in the specification shall apply.

Positionability shall be verified by cutting 4 in. (100 mm) letters E, I, K, M, S, W, and Y out of the positionable material. The letters shall then be applied to a sheeted aluminum blank using a single pass of a two pound roller. The letters shall sit for five minutes and then a putty knife shall be used to lift a corner. The thumb and fore finger shall be used to slowly pull the lifted corner to lift letters away from the sheeted aluminum. The letters shall not tear or distort when removed.

- (k) Thickness. The thickness of the sheeting without the protective liner shall be less than or equal to 0.015 in. (0.4 mm), or 0.025 in. (0.6 mm) for prismatic material.
- (l) Processing. The sheeting shall permit cutting and color processing according to the sheeting manufacturer's specifications at temperatures of 60 to 100 °F (15 to 38 °C) and within a relative humidity range of 20 to 80 percent. The sheeting shall be heat resistant and permit forced curing without staining the applied or unapplied sheeting at temperatures recommended by the manufacturer. The sheeting shall be solvent resistant and capable of being cleaned with VM&P naphtha, mineral spirits, and turpentine.

Transparent color and opaque black inks shall be single component and low odor. The inks shall dry within eight hours and not require clear coating. After color processing on white sheeting, the sheeting shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (e). The ink on the weathered, prepared panel shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

Transparent color electronic cutting films shall be acrylic. After application to white sheeting, the films shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (e). The films on the weathered, prepared panel shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

Transparent colors screened, or transparent acrylic electronic cutting films, on white sheeting, shall have a minimum initial coefficient of retroreflection values of 50 percent for yellow and red, and a minimum 70 percent for green, blue, and brown of the 0.2 degree observation angle/-4.0 degree entrance angle values as listed in the previous tables for the color being applied. After durability testing, the colors shall retain a minimum 80 percent of the initial coefficient of retroreflection.

- (m) Identification. The sheeting shall have a distinctive overall pattern in the sheeting unique to the manufacturer. If material orientation is required for optimum retroreflectivity, permanent orientation marks shall be incorporated into the face of the sheeting. Neither the overall pattern nor the orientation marks shall interfere with the reflectivity of the sheeting.
- (n) Packaging. Both ends of each box shall be clearly labeled with the sheeting type, color, adhesive type, manufacturer's lot number, date of manufacture, and supplier's name. Material Safety Data Sheets and technical bulletins for all materials shall be furnished to the Department with each shipment.

Nonreflective Sheeting Properties. Nonreflective sheeting shall consist of a flexible, pigmented cast vinyl film having a smooth, flat outer surface and shall meet the following requirements.

The Department reserves the right to sample and test delivered materials according to Federal Specification LS-300.

- (a) Adhesive. The sheeting shall have a Class 1, pre-coated, pressure sensitive adhesive according to ASTM D 4956. The adhesive shall have a protective liner that is easily removed when tested according to ASTM D 4956. The adhesive shall be capable of being applied to new or refurbished aluminum and reflectorized backgrounds without additional adhesive.
- (b) Color. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll.
- (c) Gloss. The sheeting shall exhibit a minimum 85 degree gloss-meter rating of 40 when tested according to ASTM D 523.
- (d) Durability. Applied sheeting that has been vertically exposed to the elements for seven years shall show no appreciable discoloration, cracking, crazing, blistering, delamination, or loss of adhesion. A slight amount of chalking is permitted but the sheeting shall not support fungus growth.

(e) Testing. Test panels shall be prepared by applying the sheeting to 6 1/2 x 6 1/2 in. (165 x 165 mm) pieces of aluminum according to the manufacturer's specifications. The edges of the panel shall be trimmed evenly and aged 48 hours at 70 to 90 °F (21 to 32 °C). Shrinkage and immersion testing shall be as follows.

(1) Shrinkage. The sheeting shall not shrink more than 1/64 in. (0.4 mm) from any panel edge when subjected to a temperature of 150 °F (66 °C) for 48 hours and shall be sufficiently heat resistant to retain adhesion after one week at 150 °F (66 °C).

(2) Immersion Testing. The sheeting shall show no appreciable decrease in adhesion, color, or general appearance when examined one hour after being immersed to a depth of 2 or 3 in. (50 or 75 mm) in the following solutions at 70 to 90 °F (21 to 32 °C) for specified times.

| Solution | Immersion Time (hours) |
|--|------------------------|
| Reference Fuel (M I L-F-8799A) (15 parts xylol and 85 parts mineral spirits by weight) | 1 |
| Distilled Water | 24 |
| SAE No. 20 Motor Oil | 24 |
| Antifreeze (1/2 ethylene glycol, 1/2 distilled water) | 24 |

(f) Adhesive Bond: The sheeting shall form a durable bond to smooth, corrosion and weather-resistant surfaces and adhere securely when tested according to ASTM D 4956.

(g) Thickness. The thickness of the sheeting without the protective liner shall be a maximum of 0.005 in. (0.13 mm).

(h) Cutting. Material used on bed cutting machines shall have a smooth plastic liner.

(i) Identification. The sheeting shall have a distinctive overall pattern in the sheeting unique to the manufacturer. If material orientation is required for optimum retroreflectivity, permanent orientation marks shall be incorporated into the face of the sheeting. Neither the overall pattern nor the orientation marks shall interfere with the reflectivity of the sheeting.

(j) Packaging. Both ends of each box shall be clearly labeled with the sheeting type, color, adhesive type, manufacturer's lot number, date of manufacture, and supplier's name. Material Safety Data Sheets and technical bulletins for all materials shall be furnished to the Department with each shipment.

SELF-CONSOLIDATING CONCRETE FOR CAST-IN-PLACE CONSTRUCTION (BDE)

Effective: November 1, 2005

Revised: January 1, 2007

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for cast-in-place concrete construction items involving Class MS, DS, and SI concrete.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. Article 1020.04 of the Standard Specifications shall apply, except as follows:

- (a) The cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m). The cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used.
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be ± 2 in. (± 50 mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-5, SCC-6, and Illinois Modified AASHTO T 22, 23, 121, 126, 141, 152, 177, 196, and 309 shall be used for testing of self-consolidating concrete mixtures.

Mix Design Submittal. The Contractor's Level III PCC Technician shall submit a mix design according to the "Portland Cement Concrete Level III Technician" course manual, except target slump information is not applicable and will not be required. However, a slump flow target range shall be submitted. In addition, the design mortar factor may exceed 1.10 and durability test data will be waived.

A J-ring value shall be submitted if a lower mix design maximum will apply. An L-box blocking ratio shall be submitted if a higher mix design minimum will apply. The Contractor shall also indicate applicable construction items for the mix design.

| Trial mixture information will be required by the Engineer. A trial mixture is a batch of concrete tested by the Contractor to verify the Contractor's mix design will meet specification requirements. Trial mixture information shall include test results as specified in the "Portland Cement Concrete Level III Technician" course manual. Test results shall also include slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index. For the trial mixture, the slump flow shall be near the midpoint of the proposed slump flow target range.

| Trial Batch. A minimum 2 cu yd (1.5 cu m) trial batch shall be produced, and the self-consolidating concrete admixture dosage proposed by the Contractor shall be used. The slump flow shall be within 1.0 in. (25 mm) of the maximum slump flow range specified by the Contractor, and the air content shall be within the top half of the allowable specification range.

The trial batch shall be scheduled a minimum of 21 calendar days prior to anticipated use and shall be performed in the presence of the Engineer.

The Contractor shall provide the labor, equipment, and materials to test the concrete. The mixture will be evaluated by the Engineer for strength, air content, slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index.

Upon review of the test data from the trial batch, the Engineer will verify or deny the use of the mix design and notify the Contractor. Verification by the Engineer will include the Contractor's target slump flow range. If applicable, the Engineer will verify the Contractor's maximum J-ring value and minimum L-box blocking ratio.

| A new trial batch will be required whenever there is a change in the source of any component material, proportions beyond normal field adjustments, dosage of the self-consolidating concrete admixture, batch sequence, mixing speed, mixing time, or as determined by the Engineer. The testing criteria for the new trial batch will be determined by the Engineer.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Mixing Portland Cement Concrete. In addition to Article 1020.11 of the Standard Specifications, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

Wash water, if used, shall be completely discharged from the drum or container before the succeeding batch is introduced.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Falsework and Forms. In addition to Articles 503.05 and 503.06 of the Standard Specifications, the Contractor shall consider the fluid nature of the concrete for designing the falsework and forms. Forms shall be tight to prevent leakage of fluid concrete.

Placing and Consolidating. Concrete placement and consolidation shall be according to Article 503.07 of the Standard Specifications, except as follows:

Revise the third paragraph of Article 503.07 of the Standard Specifications to read:

“Open troughs and chutes shall extend as nearly as practicable to the point of deposit. The drop distance of concrete shall not exceed 5 ft (1.5 m). If necessary, a tremie shall be used to meet this requirement. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer. For drilled shafts, free fall placement will not be permitted.”

Delete the seventh, eighth, ninth, and tenth paragraphs of Article 503.07 of the Standard Specifications.

Add to the end of the eleventh paragraph of Article 503.07 of the Standard Specifications the following:

“Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.”

Quality Control by Contractor at Plant. The specified test frequencies for aggregate gradation, aggregate moisture, air content, unit weight/yield, and temperature shall be performed as indicated in the contract plans.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed as needed to control production. The column segregation index test and hardened visual stability index test will not be required to be performed at the plant.

Quality Control by Contractor at Jobsite. The specified test frequencies for air content, strength, and temperature shall be performed as indicated in the contract plans.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed on the first two truck deliveries of the day, and every 50 cu yd (40 cu m) thereafter. The Contractor shall select either the J-ring or L-box test for jobsite testing.

The column segregation index test will not be required to be performed at the jobsite. The hardened visual stability index test shall be performed on the first truck delivery of the day, and every 300 cu yd (230 cu m) thereafter. Slump flow, visual stability index, J-ring value or L-box blocking ratio, air content, and concrete temperature shall be recorded for each hardened visual stability index test.

The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

If mix foaming or other potential detrimental material is observed during placement or at the completion of the pour, the material shall be removed while the concrete is still plastic.

Quality Assurance by Engineer at Plant. For air content and aggregate gradation, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract plans.

For slump flow, visual stability index, and J-ring or L-box tests, quality assurance independent sample testing and split sample testing will be performed as determined by the Engineer.

Quality Assurance by Engineer at Jobsite. For air content and strength, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract plans.

For slump flow, visual stability index, J-ring or L-box, and hardened visual stability index tests, quality assurance independent sample testing will be performed as determined by the Engineer.

For slump flow and visual stability index quality assurance split sample testing, the Engineer will perform tests at the beginning of the project on the first three tests performed by the Contractor. Thereafter, a minimum of ten percent of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design. The acceptable limit of precision will be 1.5 in. (40 mm) for slump flow and a limit of precision will not apply to the visual stability index.

For the J-ring or the L-box quality assurance split sample testing, a minimum of 80 percent of the total tests required of the Contractor will be witnessed by the Engineer per plant, which will

include a minimum of one witnessed test per mix design. The Engineer reserves the right to conduct quality assurance split sample testing. The acceptable limit of precision will be 1.5 in. (40 mm) for the J-ring value and ten percent for the L-box blocking ratio.

For each hardened visual stability index test performed by the Contractor, the cut cylinders shall be presented to the Engineer for determination of the rating. The Engineer reserves the right to conduct quality assurance split sample testing. A limit of precision will not apply to the hardened visual stability index.

80152

SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)

Effective: July 1, 2004

Revised: January 1, 2007

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for precast concrete products.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. The mix design criteria shall be as follows:

- (a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m).
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements of Article 1020.04 of the Standard Specifications shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be ± 2 in. (± 50 mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Placing and Consolidating. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer.

Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

Mix Design Approval. The Contractor shall obtain mix design approval according to the Department's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products".

80132

SILT FILTER FENCE (BDE)

Effective: January 1, 2008

For silt filter fence fabric only, revise Article 1080.02 of the Standard Specifications to read:

"1080.02 Geotextile Fabric. The fabric for silt filter fence shall be a woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence with less than 50 percent geotextile elongation."

Replace the last sentence of Article 1081.15(b) of the Standard Specifications with the following:

"Silt filter fence stakes shall be a minimum of 4 ft (1.2 m) long and made of either wood or metal. Wood stakes shall be 2 in. x 2 in. (50 mm x 50 mm). Metal stakes shall be a standard T or U shape having a minimum weight (mass) of 1.32 lb/ft (600 g/300 mm)."

80197

STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 2, 2004

Revised: April 1, 2007

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of steel cost adjustments.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)
Structural Steel
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), frames and grates, and other miscellaneous items will be subject to a steel cost adjustment when the pay item they are used in has a contract value of \$10,000 or greater.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) Evidence that increased or decreased steel costs have been passed on to the Contractor.
- (b) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (c) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars

Q = quantity of steel incorporated into the work, in lb (kg)

D = price factor, in dollars per lb (kg)

$$D = CBP_M - CBP_L$$

Where: CBP_M = The average of the Consumer Buying Price indices for Shredded Auto Scrap (Chicago) and No. 1 Heavy Melt (Chicago) as published by the American Metal Market (AMM) for the day the steel is shipped from the mill. The indices will be converted from dollars per ton to dollars per lb (kg).

CBP_L = The average of the Consumer Buying Price indices for Shredded Auto Scrap (Chicago) and No. 1 Heavy Melt (Chicago) as published by the AMM for the day the contract is let. The indices will be converted from dollars per ton to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the CBP_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the CBP_L and CBP_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(CBP_L - CBP_M) \div CBP_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

| Item | Unit Mass (Weight) |
|--|--------------------------------|
| Metal Piling (excluding temporary sheet piling) | |
| Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness | 23 lb/ft (34 kg/m) |
| Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness | 32 lb/ft (48 kg/m) |
| Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness | 37 lb/ft (55 kg/m) |
| Other piling | See plans |
| Structural Steel | See plans for weights (masses) |
| Reinforcing Steel | See plans for weights (masses) |
| Dowel Bars and Tie Bars | 6 lb (3 kg) each |
| Mesh Reinforcement | 63 lb/100 sq ft (310 kg/sq m) |
| Guardrail | |
| Steel Plate Beam Guardrail, Type A w/steel posts | 20 lb/ft (30 kg/m) |
| Steel Plate Beam Guardrail, Type B w/steel posts | 30 lb/ft (45 kg/m) |
| Steel Plate Beam Guardrail, Types A and B w/wood posts | 8 lb/ft (12 kg/m) |
| Steel Plate Beam Guardrail, Type 2 | 305 lb (140 kg) each |
| Steel Plate Beam Guardrail, Type 6 | 1260 lb (570 kg) each |
| Traffic Barrier Terminal, Type 1 Special (Tangent) | 730 lb (330 kg) each |
| Traffic Barrier Terminal, Type 1 Special (Flared) | 410 lb (185 kg) each |
| Steel Traffic Signal and Light Poles, Towers and Mast Arms | |
| Traffic Signal Post | 11 lb/ft (16 kg/m) |
| Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m) | 14 lb/ft (21 kg/m) |
| Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m) | 21 lb/ft (31 kg/m) |
| Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m) | 13 lb/ft (19 kg/m) |
| Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m) | 19 lb/ft (28 kg/m) |
| Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m) | 31 lb/ft (46 kg/m) |
| Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m) | 65 lb/ft (97 kg/m) |
| Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m) | 80 lb/ft (119 kg/m) |
| Metal Railings (excluding wire fence) | |
| Steel Railing, Type SM | 64 lb/ft (95 kg/m) |
| Steel Railing, Type S-1 | 39 lb/ft (58 kg/m) |
| Steel Railing, Type T-1 | 53 lb/ft (79 kg/m) |
| Steel Bridge Rail | 52 lb/ft (77 kg/m) |
| Frames and Grates | |
| Frame | 250 lb (115 kg) |
| Lids and Grates | 150 lb (70 kg) |

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
STEEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of steel cost adjustments. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans?

Yes

No

Signature: _____ Date: _____

80127

STONE GRADATION TESTING (BDE)

Effective: November 1, 2007

Revise the first sentence of note 1/ of the Erosion Protection and Sediment Control Gradations table of Article 1005.01(c)(1) of the Standard Specifications to read:

“A maximum of 15 percent of the total test sample by weight may be oversize material.”

80191

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.

80143

TEMPORARY EROSION CONTROL (BDE)

Effective: November 1, 2002

Revised: January 1, 2008

Revise the third paragraph of Article 280.03 of the Standard Specifications to read:

"Erosion control systems shall be installed prior to beginning any activities which will potentially create erodible conditions. Erosion control systems for areas outside the limits of construction such as storage sites, plant sites, waste sites, haul roads, and Contractor furnished borrow sites shall be installed prior to beginning soil disturbing activities at each area. These offsite systems shall be designed by the Contractor and be subject to the approval of the Engineer."

Add the following paragraph after the third paragraph of Article 280.03 of the Standard Specifications:

"The temporary erosion and sediment control systems shown on the plans represent the minimum systems anticipated for the project. Conditions created by the Contractor's operations, or for the Contractor's convenience, which are not covered by the plans, shall be protected as directed by the Engineer at no additional cost to the Department. Revisions or modifications of the erosion and sediment control systems shall have the Engineer's written approval."

Add the following paragraph after the ninth paragraph of Article 280.07 of the Standard Specifications:

"Temporary or permanent erosion control systems required for areas outside the limits of construction will not be measured for payment."

Delete the tenth (last) paragraph of Article 280.08 of the Standard Specifications.

80087

THERMOPLASTIC PAVEMENT MARKINGS (BDE)

Effective: January 1, 2007

Revise Article 1095.01(a)(2) of the Standard Specifications to read:

"(2) Pigment. The pigment used for the white thermoplastic compound shall be a high-grade pure (minimum 93 percent) titanium dioxide (TiO_2). The white pigment content shall be a minimum of ten percent by weight and shall be uniformly distributed throughout the thermoplastic compound.

The pigments used for the yellow thermoplastic compound shall not contain any hazardous materials listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1. The combined total of RCRA listed heavy metals shall not exceed 100 ppm when tested by X-ray fluorescence spectroscopy. The pigments shall also be heat resistant, UV stable and color-fast yellows, golds, and oranges, which shall produce a compound which shall match Federal Standard 595 Color No. 33538. The pigment shall be uniformly distributed throughout the thermoplastic compound."

Revise Article 1095.01(b)(1)e. of the Standard Specifications to read:

"e. Daylight Reflectance and Color. The thermoplastic compound after heating for four hours \pm five minutes at 425 ± 3 °F (218.3 ± 2 °C) and cooled at 77 °F (25 °C) shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degree circumferential/zero degree geometry, illuminant C, and two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm:

White: Daylight Reflectance75 percent min.

*Yellow: Daylight Reflectance45 percent min.

*Shall meet the coordinates of the following color tolerance chart.

| | | | | |
|---|-------|-------|-------|--------|
| x | 0.490 | 0.475 | 0.485 | 0.530 |
| y | 0.470 | 0.438 | 0.425 | 0.456" |

Revise Article 1095.01(b)(1)k. of the Standard Specifications to read:

"k. Accelerated Weathering. After heating the thermoplastic for four hours \pm five minutes at 425 ± 3 °F (218.3 ± 2 °C) the thermoplastic shall be applied to a steel wool abraded aluminum alloy panel (Federal Test Std. No. 141, Method 2013) at a film thickness of 30 mils (0.70 mm) and allowed to cool for 24 hours at room temperature. The coated panel shall be subjected to accelerated weathering

using the light and water exposure apparatus (fluorescent UV - condensation type) for 75 hours according to ASTM G 53 (equipped with UVB-313 lamps).

The cycle shall consist of four hours UV exposure at 122 °F (50 °C) followed by four hours of condensation at 104 °F (40 °C). UVB 313 bulbs shall be used. At the end of the exposure period, the panel shall not exceed 10 Hunter Lab Delta E units from the original material."

80176

TRAFFIC SIGNAL GROUNDING (BDE)

Effective: April 1, 2006

Revised: January 1, 2007

Revise Article 873.02 of the Standard Specifications to read:

"873.02 Materials. Materials shall be according to the following.

| Item | Article/Section |
|--|-----------------|
| (a) Electric Cable – Signal, Lead-in, Communication, Service, and Equipment Grounding Conductor | 1076.04 |
| (b) Electrical Raceway Materials | 1088.01" |

Revise Article 873.04 of the Standard Specifications to read:

"873.04 Grounding System. All traffic signal circuits shall include an equipment grounding conductor according to Article 801.04. The equipment grounding conductor shall consist of a continuous, green, insulated conductor Type XLP, No. 6 AWG, stranded copper installed in raceways and bonded to each metal enclosure (handhole, post, mast arm pole, signal cabinet, etc.). All clamps shall be bronze or copper, UL approved.

A grounding cable with connectors shall be installed between each handhole cover and frame. The grounding cable shall be looped over cable hooks installed in the handholes and 5 ft (1.5 m) of extra cable shall be provided between the frame and cover.

All equipment grounding conductors shall terminate at the ground bus in the controller cabinet. The neutral conductor and the equipment grounding conductor shall be connected in the service installation. At no other point in the traffic signal system shall the neutral and equipment grounding conductors be connected."

Revise Article 873.05 of the Standard Specifications to read:

"873.05 Method of Measurement. Electric cable will be measured for payment in feet (meters) in place. The length of measurement shall be the distance horizontally and vertically measured between the changes in direction, including cables in mast arms, mast arm poles, signal posts, and extra cable length as specified in Article 873.03. The vertical cable length shall be measured according to the following schedule.

| Location | Cable Length |
|--|--------------|
| Foundation (signal post, mast arm pole, controller cabinet) | 3 ft (1 m) |
| Mast Arm Pole (mast arm mounted signal head) | 20 ft (6 m) |
| Mast Arm Pole (bracket mounted signal head attached to mast arm pole) | 13 ft (4 m) |
| Signal Post (bracket or post mounted signal head) | 13 ft (4 m) |
| Pedestrian Push Button | 6 ft (2 m)" |

Add the following Article to Section 873 of the Standard Specifications:

"873.06 Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for ELECTRIC CABLE, of the method of installation (IN TRENCH, IN CONDUIT, or AERIAL SUSPENDED), of the type, size, and number of conductors specified.

The type specified will indicate the method of installation and whether the electric cable is Service, Signal, Lead-in, Communication, or Equipment Grounding Conductor."

Revise the heading of Article 1076.04 of the Standard Specifications to read:

"1076.04 Electric Cable – Signal, Lead-in, Communication, Service, and Equipment Grounding Conductor."

Add the following paragraph to the end of Article 1076.04 of the Standard Specifications:

"(e) Equipment Grounding Conductor. The cross linked polyethylene (XLP) insulated conductor shall be according to Articles 1066.02 and 1066.03. The stranded copper conductor shall be No. 6 AWG and the insulation color shall be green."

80161

TRAINING SPECIAL PROVISIONS (BDE) This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 4 . In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

WATER BLASTER WITH VACUUM RECOVERY (BDE)

Effective: April 1, 2006

Revised: January 1, 2007

Add the following to Article 783.02 of the Standard Specifications.

“(c) Water Blaster with Vacuum Recovery 1101.12”

Revise Article 1101.12 of the Standard Specifications to read.

1101.12 Water Blaster with Vacuum Recovery. The water blaster shall remove the stripe from the pavement using a high pressurized water spray with a vacuum recovery system to provide a clean, almost dry surface, without the use of a secondary cleanup process. The removal shall be to the satisfaction of the Engineer. The equipment shall contain a storage system that allows for the storage of the wastewater while retaining the debris. The operator shall be in immediate control of the blast head.”

80163

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

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ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4 and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

- a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
- b. Employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above

agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any

evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to

the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or quailifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the

contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or

disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not

listed on the wage determination unless the Administrator of the

be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits

Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall, upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan

or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period).

The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V.

This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U/S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for

inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractors' own organization (23 CFR 635).

- a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a

whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract.

Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S. C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification,

distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

“Whoever, being an officer, agent or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.”

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of

any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms “covered transaction,” “debarred,” “suspended,” “ineligible,” “lower tier covered transaction,” “participant,” “person,” “primary covered transaction,” “principal,” “proposal,” and “voluntarily excluded,” as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled

"Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealing.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion-Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.