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

PREQUALIFICATION

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

REQUESTS FOR AUTHORIZATION TO BID

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

WHO CAN BID ?

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

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

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

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

Each addendum will be placed with the contract number. Addenda will also be placed on the Addendum/Revision Checksheet and each subscription service subscriber will be notified by e-mail of each addendum 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 Roseanne Nance (217)-785-5875 or nancer@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	217/785-5875

ADDENDUMS TO THE PROPOSAL FORMS

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

RETURN WITH BID

101

Proposal Submitted By
Name
Address
City

Letting January 21, 2005

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

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

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

Springfield, Illinois 62764

Contract No. 62693
COOK County
Section 2021-922PT.1-AC
Route FAI 90/94
Project ACIM-943(367)57
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

Checked by F

(Printed by authority of the State of Illinois)

INSTRUCTIONS

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

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

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

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

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

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

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

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

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

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

RETURN WITH BID

Illinois Department of Transportation

PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

   _____

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

   Contract No. 62693
   COOK County
   Section 2021-922PT.1-AC
   Project ACIM-943(367)57
   Route FAI 90/94
   District 1 Construction Funds

   2.08 miles of reconstruction of frontage roads, retaining walls and ramps along FAI Route 90/94 (Dan Ryan Expressway) from 63rd Street to 59th Street in Chicago.

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.

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

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

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

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

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

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

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

Attach Cashier's Check or Certified Check Here

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

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

Item _____

Section No. _____

County _____

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

BD 354 (Rev. 11/2001)

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid Dollars	Cents

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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 62693

State Job # - C-91-072-04
PPS NBR - 1-74823-0550
County Name - COOK- -
Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number
ACIM-0943/367/057

Route
FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
XX001854	STAB SUB-BASE 6	SQ YD	4,327.000				
XX002082	SAN SEW REMOV 24	FOOT	1,511.000				
XX003704	SS LINING 24 D	FOOT	403.000				
XX004056	MECH ST EARTH RET WL	SQ FT	3,980.000				
XX004201	PAVT REINFORCEMENT 14	SQ YD	2,858.000				
XX004684	REP&REPL DAMAGED COND	FOOT	50.000				
XX104800	COMB CC&G TBV.12	FOOT	6,319.000				
XX152400	SAND CUSHION 3	CU YD	10.000				
XX157200	CITY ELECT MAN ADJ	EACH	26.000				
X0320080	ROD & CL DUCT EX COND	FOOT	1,683.000				
X0320772	WATER MAIN REMOV 12	FOOT	183.000				
X0322124	STORM SEW WM REQ 8	FOOT	390.000				
X0322256	TEMP INFO SIGNING	SQ FT	294.000				
X0323314	MANHOLE TY A (CHGO)	EACH	7.000				
X0323315	MANHOLE TY B (CHGO)	EACH	4.000				

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District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number ACIM-0943/367/057

Route FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0323426	SED CONT DR ST INL CL	EACH	374.000				
X0323768	ELECT HDHOLE 30/24F&L	EACH	7.000				
X0323814	SAN SEW REMOV 18	FOOT	322.000				
X0323900	CONC FDN TY 1	FOOT	4.000				
X0323907	COMMUNICATIONS VAULT	EACH	4.000				
X0323988	TEMP SOIL RETEN SYSTM	SQ FT	58,280.000				
X0324112	BARRIER BASE	FOOT	466.000				
X0324159	WHITEWASH CONC PAVT	SQ YD	9,257.000				
X0324165	COMB SEW ESVCP T2 12	FOOT	10.000				
X0324166	COMB SEW ESVCP T2 15	FOOT	35.000				
X0324347	COMB SEWER RCCP T2 24	FOOT	1,509.000				
X0324350	COMB SEW ESVCP T2 18	FOOT	329.000				
X0324354	TR & BKFIL W SCRN/SND	FOOT	2,492.000				
X0324415	CON EN RC 1-4 CNC	FOOT	107.000				
X0324420	PVC CON T 4 (S40)	FOOT	3,936.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
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Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0324421	RACK CABLE IN MAN/HH	EACH	9.000				
X0324424	TR & BKFIL W SCR/SOIL	FOOT	74.000				
X0324433	LT TOWER SERV PAD 6	SQ FT	105.000				
X0324435	CLEAN EX MAN/HAND	EACH	4.000				
X0324469	CON EN RC 2-4 CNC	FOOT	258.000				
X0324470	CON EN RC 3-4 CNC	FOOT	30.000				
X0324471	CON EN RC 4-4 CNC	FOOT	421.000				
X0324472	CON EN RC 5-4 CNC	FOOT	72.000				
X0324499	C EN RC 1-2RGC 5-4CNC	FOOT	34.000				
X0324501	C EN RC 3-2RGC 3-4CNC	FOOT	83.000				
X0324504	C EN RC 1-2RGC 2-4CNC	FOOT	26.000				
X0324515	ELECT HDHOLE 36/30F&L	EACH	2.000				
X0324646	CON EN RC 6-4 CNC	FOOT	243.000				
X0324648	INNERDUCT CON 1-1/4	FOOT	4,953.000				
X0324652	TRACER CABLE	FOOT	4,833.000				

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Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0324666	TEST FIBER OPTIC CABL	L SUM	1.000				
X0324669	STORM SEW ESVCP T2 8	FOOT	406.000				
X0324675	TEMP PAVEMENT 10 SPL	SQ YD	333.000				
X0324697	SOIL STABILIZERS	POUND	426,488.000				
X0324698	APPLY DUST SUP AGENTS	UNIT	333.000				
X0324699	SPL EX/REPL C CTA TRK	FOOT	36.000				
X0324791	UTIL TRANSFORM PAD 4	EACH	1.000				
X0324793	LT TOWER SERV PAD SPL	SQ FT	959.000				
X0324867	C EN RC 1-2RGC 4-4CNC	FOOT	16.000				
X0324868	C EN RC 2-2RGC 4-4CNC	FOOT	137.000				
X0324869	CITY E MH REC NEW F&G	EACH	3.000				
X0324870	CON EN RC 2-5 PVC	FOOT	52.000				
X0324871	CON T 4 COIL NM	FOOT	10.000				
X0324872	CIP T/D WSS RAMP DISB	SQ FT	83.000				
X0324873	CON EN RC 7-4 CNC	FOOT	155.000				

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District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0324874	C EN RC 3-2RGC 2-4CNC	FOOT	3.000				
X0324875	DRILL EXIST RET WALL	EACH	2.000				
X0324876	CONC BARRIER SPL	FOOT	75.000				
X0324877	FO HYB CABLE 6SM/6MM	FOOT	4,953.000				
X0712400	TEMP PAVEMENT	SQ YD	7,195.000				
X0934000	PVC CON T 4 (S80)	FOOT	1,196.000				
X2502930	SEEDING CL 5 MOD MW	ACRE	0.750				
X4022000	TEMP ACCESS- COM ENT	EACH	22.000				
X4023000	TEMP ACCESS- ROAD	EACH	9.000				
X4834090	PCC SHOULDERS 14	SQ YD	243.000				
X6020250	CB TC 2D T1F OL CHGO	EACH	5.000				
X6061003	COMB CC&G TM4.48 MOD	FOOT	3,203.000				
X6063401	COMB CC&G TM4.12	FOOT	2,326.000				
X6063600	COMB CC&G TM4.24	FOOT	395.000				
X6065740	CONC MED SURF 5 MOD	SQ FT	13,369.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
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Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number ACIM-0943/367/057

Route FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X6370910	CONC BAR 1F 32HT	FOOT	428.000				
X6640050	CH LK FENCE 42 ATS SP	FOOT	4,399.000				
X6643200	CH LK FEN GATE 42 SPL	EACH	5.000				
X7011015	TR C-PROT EXPRESSWAYS	L SUM	1.000				
X7013820	TR CONT SURVEIL EXPWY	CAL DA	206.000				
X7015000	CHANGEABLE MESSAGE SN	CAL MO	39.000				
X7040600	FUR TEMP CONC BARRIER	FOOT	742.000				
X8100040	CON ENC CONC 3 POLY	FOOT	136.000				
X8100060	CON T 4 GALVS PVC CTD	FOOT	20.000				
X8101300	CON T 5 GALVS PVC CTD	FOOT	132.000				
Z0002600	BAR SPLICERS	EACH	82.000				
Z0008248	DRIL SHAFT/SOIL 48	FOOT	119.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0018940	DRILL EX MAN/HANDHOLE	EACH	6.000				
Z0029999	IMPACT ATTENUATOR REM	EACH	1.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
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County Name - COOK- -
Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
Z0030020	IMP ATTEN FRD NAR TL2	EACH	2.000				
Z0030070	IMP ATTEN SU NAR TL3	EACH	2.000				
Z0030150	IMPACT ATTEN NRD TL3	EACH	1.000				
Z0030240	IMP ATTN TEMP NRD TL2	EACH	1.000				
Z0030250	IMP ATTN TEMP NRD TL3	EACH	1.000				
Z0040530	PIPE UNDERDRAIN REMOV	FOOT	3,602.000				
Z0048665	RR PROT LIABILITY INS	L SUM	1.000				
Z0076600	TRAINEES	HOUR	5,000.000		0.800		4,000.000
20101000	TEMPORARY FENCE	FOOT	204.000				
20200100	EARTH EXCAVATION	CU YD	18,885.000				
20201200	REM & DISP UNS MATL	CU YD	3,450.000				
20700220	POROUS GRAN EMBANK	CU YD	17,865.000				
20700400	POROUS GRAN EMB SPEC	CU YD	1,001.000				
20800150	TRENCH BACKFILL	CU YD	3,450.000				
21001000	GEOTECH FAB F/GR STAB	SQ YD	9,011.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
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Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
21101615	TOPSOIL F & P 4	SQ YD	13,506.000				
21101630	TOPSOIL F & P 8	SQ YD	6,915.000				
21101815	COMPOST F & P 4	SQ YD	6,915.000				
21301052	EXPLOR TRENCH 52	FOOT	598.000				
25000210	SEEDING CL 2A	ACRE	3.500				
25000400	NITROGEN FERT NUTR	POUND	316.000				
25000500	PHOSPHORUS FERT NUTR	POUND	316.000				
25000600	POTASSIUM FERT NUTR	POUND	316.000				
25000750	MOWING	ACRE	4.250				
25100401	EXCELSIOR BLANKET SPL	SQ YD	22.000				
25100630	EROSION CONTR BLANKET	SQ YD	20,401.000				
28000250	TEMP EROS CONTR SEED	POUND	422.000				
28000400	PERIMETER EROS BAR	FOOT	6,320.000				
28000510	INLET FILTERS	EACH	187.000				
31101600	SUB GRAN MAT B 8	SQ YD	26,893.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
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Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
31101860	SUB GRAN MAT B 24	SQ YD	9,011.000				
31200100	STAB SUB-BASE 4	SQ YD	4,930.000				
35101600	AGG BASE CSE B 4	SQ YD	472.000				
40600200	BIT MATLS PR CT	TON	8.700				
40600300	AGG PR CT	TON	19.000				
40600895	CONSTRUC TEST STRIP	EACH	3.000				
42000501	PCC PVT 10 JOINTED	SQ YD	24,684.000				
42000521	PCC PVT 11 JOINTED	SQ YD	3,535.000				
42001300	PROTECTIVE COAT	SQ YD	38,887.000				
42001400	BR APPROACH PAVT SPL	SQ YD	299.000				
42100380	CONT REINF PCC PVT 14	SQ YD	2,858.000				
42400200	PC CONC SIDEWALK 5	SQ FT	1,032.000				
44000100	PAVEMENT REM	SQ YD	32,408.000				
44000200	DRIVE PAVEMENT REM	SQ YD	705.000				
44000500	COMB CURB GUTTER REM	FOOT	25,419.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 62693

State Job # - C-91-072-04
PPS NBR - 1-74823-0550
County Name - COOK- -
Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
44000600	SIDEWALK REM	SQ FT	34,360.000				
44000700	APPROACH SLAB REM	SQ YD	287.000				
44002000	CONC CURB REMOV	FOOT	159.000				
44003100	MEDIAN REMOVAL	SQ FT	281.000				
44004250	PAVED SHLD REMOVAL	SQ YD	7,671.000				
44201337	CL C PATCH T1 9	SQ YD	4.000				
48200010	BIT SHOULDERS 1.5	SQ YD	472.000				
48202400	BIT SHLD SUPER 6	SQ YD	488.000				
48300600	PCC SHOULDERS 11	SQ YD	311.000				
50100300	REM EXIST STRUCT N1	EACH	1.000				
50100400	REM EXIST STRUCT N2	EACH	1.000				
50100500	REM EXIST STRUCT N3	EACH	1.000				
50100600	REM EXIST STRUCT N4	EACH	1.000				
50100700	REM EXIST STRUCT N5	EACH	1.000				
50100800	REM EXIST STRUCT N6	EACH	1.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 62693

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PPS NBR - 1-74823-0550
County Name - COOK- -
Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
50102400	CONC REM	CU YD	152.000				
50200100	STRUCTURE EXCAVATION	CU YD	22,627.000				
50300225	CONC STRUCT	CU YD	7,068.000				
50300255	CONC SUP-STR	CU YD	836.000				
50300300	PROTECTIVE COAT	SQ YD	9,740.000				
50300510	RUSTICATION FINISH	SQ FT	42,553.000				
50800105	REINFORCEMENT BARS	POUND	12,370.000				
50800205	REINF BARS, EPOXY CTD	POUND	988,340.000				
51201000	FUR MET PILE SHELL 12	FOOT	25,019.000				
51202600	DRIV & FILLING SHELLS	FOOT	25,019.000				
51203200	TEST PILE MET SHELLS	EACH	15.000				
51205200	TEMP SHT PILING	SQ FT	19,030.000				
54392000	GROUT SLURRY	CU FT	150.000				
550A0330	STORM SEW CL A 2 10	FOOT	39.000				
550A0340	STORM SEW CL A 2 12	FOOT	1,549.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
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Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
550A0360	STORM SEW CL A 2 15	FOOT	866.000				
550A0400	STORM SEW CL A 2 21	FOOT	16.000				
550A2520	SS RG CL A 2 12	FOOT	821.000				
550A2530	SS RG CL A 2 15	FOOT	67.000				
55039700	SS CLEANED	FOOT	1,868.000				
55100300	STORM SEWER REM 8	FOOT	698.000				
55100400	STORM SEWER REM 10	FOOT	516.000				
55100500	STORM SEWER REM 12	FOOT	191.000				
55100700	STORM SEWER REM 15	FOOT	40.000				
55101800	STORM SEWER REM 42	FOOT	6.000				
58600100	SAND BACKFILL	CU YD	39.000				
60107700	PIPE UNDERDRAINS 6	FOOT	3,723.000				
60108200	PIPE UNDERDRAIN 6 SP	FOOT	540.000				
60109582	P UNDR FOR STRUCT 6	FOOT	4,188.000				
60200105	CB TA 4 DIA T1F OL	EACH	8.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
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Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
60201205	CB TA 4 DIA T12F&G	EACH	4.000				
60201310	CB TA 4 DIA T20F&G	EACH	25.000				
60201340	CB TA 4 DIA T24F&G	EACH	4.000				
60202505	CB TA 4D T1FOL (CHGO)	EACH	35.000				
60208105	CB TC T12F&G	EACH	2.000				
60208210	CB TC T20F&G	EACH	5.000				
60218400	MAN TA 4 DIA T1F CL	EACH	19.000				
60221000	MAN TA 5 DIA T1F OL	EACH	1.000				
60221100	MAN TA 5 DIA T1F CL	EACH	3.000				
60235200	INLET TA T1FOL (CHGO)	EACH	12.000				
60236900	INLETS TA T12F&G	EACH	7.000				
60237420	INLETS TA T20F&G	EACH	4.000				
60250400	CB ADJ NEW T1F OL	EACH	6.000				
60255700	MAN ADJ NEW T1F OL	EACH	2.000				
60255800	MAN ADJ NEW T1F CL	EACH	40.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 62693

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County Name - COOK- -
Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
60258200	MAN RECON NEW T1F CL	EACH	3.000				
60260300	INLETS ADJ NEW T1F OL	EACH	13.000				
60265700	VV ADJUST	EACH	21.000				
60500040	REMOV MANHOLES	EACH	20.000				
60500050	REMOV CATCH BAS	EACH	42.000				
60500060	REMOV INLETS	EACH	38.000				
60601005	CONC CURB TB SPL	FOOT	78.000				
60604100	COMB CC&G TB6.12 MOD	FOOT	5,275.000				
60608300	COMB CC&G TM2.12	FOOT	800.000				
60611600	COMB CC&G SPL	FOOT	28.000				
60618320	CONC MEDIAN SURF 6	SQ FT	1,138.000				
60618324	CONC MEDIAN SURF 6 SP	SQ FT	1,158.000				
60619600	CONC MED TSB6.12	SQ FT	516.000				
63000000	SPBGR TY A	FOOT	559.000				
63100045	TRAF BAR TERM T2	EACH	1.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 62693

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County Name - COOK- -
Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
63100070	TRAF BAR TERM T5	EACH	2.000				
63100085	TRAF BAR TERM T6	EACH	3.000				
63100167	TR BAR TRM T1 SPL TAN	EACH	2.000				
63200310	GUARDRAIL REMOV	FOOT	1,840.000				
63700805	CONC BAR TRANS	FOOT	38.000				
66400105	CH LK FENCE 4	FOOT	735.000				
66900200	NON SPL WASTE DISPOSL	CU YD	6,227.000				
66900450	SPL WASTE PLNS/REPORT	L SUM	1.000				
66900530	SOIL DISPOSAL ANALY	EACH	4.000				
67000600	ENGR FIELD LAB	CAL MO	7.000				
67100100	MOBILIZATION	L SUM	1.000				
70101800	TRAF CONT & PROT SPL	L SUM	1.000				
70300240	TEMP PVT MK LINE 6	FOOT	12,330.000				
70300510	PAVT MARK TAPE T3 L&S	SQ FT	582.000				
70300520	PAVT MARK TAPE T3 4	FOOT	20,287.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 62693

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PPS NBR - 1-74823-0550
County Name - COOK- -
Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
70300570	PAVT MARK TAPE T3 24	FOOT	521.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	8,294.000				
70400100	TEMP CONC BARRIER	FOOT	10,820.000				
70400200	REL TEMP CONC BARRIER	FOOT	1,510.000				
72000200	SIGN PANEL T2	SQ FT	20.000				
72000300	SIGN PANEL T3	SQ FT	438.000				
72100100	SIGN PANEL OVERLAY	SQ FT	162.000				
72400330	REMOV SIGN PANEL T3	SQ FT	184.000				
72400720	RELOC SIGN PANEL T2	SQ FT	68.000				
72700100	STR STL SIN SUP BA	POUND	543.000				
72900200	METAL POST TY B	FOOT	29.000				
73000100	WOOD SIN SUPPORT	FOOT	130.000				
73000105	WOOD SIN SUPPORT SPL	FOOT	17.000				
73302210	OSS CANT 3CA 3-0X7-0	FOOT	68.000				
73305000	OVHD SIN STR WALKWAY	FOOT	32.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
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CONTRACT NUMBER - 62693

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Code - 31 - -
District - 1 - -
Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
73400100	CONC FOUNDATION	CU YD	2.000				
73400200	DRILL SHAFT CONC FDN	CU YD	16.000				
73600200	REMOV OH SIN STR-CANT	EACH	2.000				
73700100	REM GR-MT SIN SUPPORT	EACH	4.000				
73700200	REM CONC FDN-GR MT	EACH	4.000				
73700300	REM CONC FDN-OVHD	EACH	2.000				
78003110	PREF PL PM TB LINE 4	FOOT	3,273.000				
78003140	PREF PL PM TB LINE 8	FOOT	244.000				
78003150	PREF PL PM TB LINE 12	FOOT	949.000				
78003180	PREF PL PM TB LINE 24	FOOT	24.000				
78005100	EPOXY PVT MK LTR-SYM	SQ FT	292.000				
78005110	EPOXY PVT MK LINE 4	FOOT	8,380.000				
78005120	EPOXY PVT MK LINE 5	FOOT	1,357.000				
78005140	EPOXY PVT MK LINE 8	FOOT	3,007.000				
78005150	EPOXY PVT MK LINE 12	FOOT	362.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
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Section Number - 2021-922 PT.1-AC

Project Number: ACIM-0943/367/057
Route: FAI 90/94

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
78008200	POLYUREA PM T1 LTR-SY	SQ FT	111.000				
78008210	POLYUREA PM T1 LN 4	FOOT	12,303.000				
78008220	POLYUREA PM T1 LN 5	FOOT	1,956.000				
78008240	POLYUREA PM T1 LN 8	FOOT	4,469.000				
78008250	POLYUREA PM T1 LN 12	FOOT	1,261.000				
78100100	RAISED REFL PAVT MKR	EACH	30.000				
78200100	MONODIR PRIS BAR REFL	EACH	609.000				
78200410	GUARDRAIL MKR TYPE A	EACH	12.000				
78200530	BAR WALL MKR TYPE C	EACH	10.000				
78201000	TERMINAL MARKER - DA	EACH	2.000				
78300100	PAVT MARKING REMOVAL	SQ FT	11,500.000				
80700140	GROUND ROD 5/8 X 10	EACH	32.000				
81000600	CON T 2 GALVS	FOOT	2,930.000				
81000800	CON T 3 GALVS	FOOT	165.000				
81200120	CON EMB STR 2 GALVS	FOOT	22.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 62693

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District - 1 - -
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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
81301010	JUN BX SS ES 10X8X4	EACH	2.000				
81400100	HANDHOLE	EACH	1.000				
81400200	HD HANDHOLE	EACH	3.000				
81400205	HD HANDHOLE SPL	EACH	3.000				
81500200	TR & BKFIL F ELECT WK	FOOT	3,331.000				
83700250	LT TOWER FDN 44D	FOOT	146.000				
84200700	LIGHTING FDN REMOV	EACH	17.000				
87800100	CONC FDN TY A	FOOT	6.000				
89502385	REMOV EX CONC FDN	EACH	8.000				

CONTRACT NUMBER **62693**

THIS IS THE TOTAL BID **$** _____

NOTES:

1. **Each PAY ITEM should have a UNIT PRICE and a TOTAL PRICE.**
2. **The UNIT PRICE shall govern if no TOTAL PRICE is shown or if there is a discrepancy between the product of the UNIT PRICE multiplied by the QUANTITY.**
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 $150,700.00. Sixty percent of the salary is $90,420.00.

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

D. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

E. Inducements

1. The Illinois Procurement Code provides:

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

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

F. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

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

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

G. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

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

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

H. Confidentiality

1. The Illinois Procurement Code provides:

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

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

RETURN WITH BID

I. Insider Information

1. The Illinois Procurement Act provides:

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

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

III. CERTIFICATIONS

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

B. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

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

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

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

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

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

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

C. Educational Loan

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

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

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

D. Bid-Rigging/Bid Rotating

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

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

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

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

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

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

E. International Anti-Boycott

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

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

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

F. Drug Free Workplace

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

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

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance, including cannabis, is prohibited in the contractor’s workplace; specifying the actions that will be taken against employees for violations of such prohibition; and notifying the employee that, as a condition of employment on such contract, the employee shall abide by the terms of the statement, and notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(b) Establishing a drug free awareness program to inform employees about the dangers of drug abuse in the workplace; the contractor’s policy of maintaining a drug free workplace; any available drug counseling, rehabilitation, and employee assistance programs; and the penalties that may be imposed upon employees for drug violations.

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

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

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

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment, and rehabilitation is required and indicating that a trained referral team is in place.

(g) Making a good faith effort to continue to maintain a drug free workplace through implementation of the actions and efforts stated in this certification.

G. Debt Delinquency

1. The Illinois Procurement Code provides:

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

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

H. Sarbanes-Oxley Act of 2002

1. The Illinois Procurement Code provides:

Section 50-60(c).

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

I. ADDENDA

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

J. Section 42 of the Environmental Protection Act

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

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

In accordance with the provisions of Section 30-22 (6) of the Illinois Procurement Code, the bidder certifies that it is a participant, either as an individual or as part of a group program, in the approved apprenticeship and training programs applicable to each type of work or craft that the bidder will perform with its own forces. The bidder further certifies for work that will be performed by subcontract that each of its subcontractors submitted for approval either (a) is, at the time of such bid, participating in an approved, applicable apprenticeship and training program; or (b) will, prior to commencement of performance of work pursuant to this contract, begin participation in an approved apprenticeship and training program applicable to the work of the subcontract. The Department, at any time before or after award, may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and each of its subcontractors. Unless otherwise directed in writing by the Department, 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 may be indicated as to be subcontracted.

_____
_____
_____

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.

IV. DISCLOSURES

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

B. Financial Interests and Conflicts of Interest

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

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

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

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

C. Disclosure Form Instructions

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

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

CERTIFICATION STATEMENT

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

_____
(Bidding Company)

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

_____ _____
Signature of Authorized Representative Date

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

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

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

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

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

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

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

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

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

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

D. Bidders Submitting More Than One Bid

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

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

_____

_____

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A
Financial Information & Potential Conflicts of Interest Disclosure

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

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

DISCLOSURE OF FINANCIAL INFORMATION

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

FOR INDIVIDUAL (type or print information)

NAME: _____

ADDRESS _____

_____

Type of ownership/distributable income share:

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

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

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

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

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

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

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

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds $90,420.00, (60% of the Governor's salary as of 7/1/01) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No __

4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds $90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or minor children entitled to receive (i) more than 15% in 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 $90,420.00, (60% of the Governor's salary as of 7/1/01) 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 $90,420.00, (60% of the salary of the Governor as of 7/1/01) are you entitled to receive (i) more than 71/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No __

4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds $90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or 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 statues 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 __

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

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

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

APPLICABLE STATEMENT

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

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

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

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

NOT APPLICABLE STATEMENT

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

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

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____ _____
Signature of Authorized Representative — Date

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B
Other Contracts & Procurement Related Information Disclosure

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

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

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

THE FOLLOWING STATEMENT MUST BE SIGNED

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____ _____
Signature of Authorized Representative Date

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SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

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

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

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

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Illinois Department of Transportation

Contract No. 62693
COOK County
Section 2021-922PT.1-AC
Project ACIM-943(367)57
Route FAI 90/94
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													TABLE B: CURRENT EMPLOYEES TO BE ASSIGNED TO CONTRACT			
			MINORITY EMPLOYEES						TRAINEES							
JOB CATEGORIES	TOTAL EMPLOYEES		BLACK		HISPANIC		*OTHER MINOR.		APPREN-TICES		ON THE JOB TRAINEES		TOTAL EMPLOYEES		MINORITY EMPLOYEES	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
OFFICIALS (MANAGERS)																
SUPERVISORS																
FOREMEN																
CLERICAL																
EQUIPMENT OPERATORS																
MECHANICS																
TRUCK DRIVERS																
IRONWORKERS																
CARPENTERS																
CEMENT MASONS																
ELECTRICIANS																
PIPEFITTERS, PLUMBERS																
PAINTERS																
LABORERS, SEMI-SKILLED																
LABORERS, UNSKILLED																
TOTAL																

TABLE C

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

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

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.

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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. 62693
COOK County
Section 2021-922PT.1-AC
Project ACIM-943(367)57
Route FAI 90/94
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.

Firm Name _____

(IF AN INDIVIDUAL) Signature of Owner _____

Business Address _____

_____

Firm Name _____

By _____

(IF A CO-PARTNERSHIP) Business Address _____

_____
Name and Address of All Members of the Firm:

_____ _____

Corporate Name _____

By _____
Signature of Authorized Representative

(IF A CORPORATION)

_____
Typed or printed name and title of Authorized Representative

Attest _____
Signature

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

Corporate Name _____

By _____
Signature of Authorized Representative

(IF A JOINT VENTURE)

_____
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

Illinois Department of Transportation

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

Item No. _____
Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

_____

as PRINCIPAL, and _____

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

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

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

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

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

PRINCIPAL	**SURETY**
_____	_____
(Company Name)	(Company Name)
By: _____	By: _____
(Signature & Title)	(Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
COUNTY OF _____

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

_____and _____

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

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

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

My commission expires _____ _____
Notary Public

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

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

PROPOSAL ENVELOPE

Illinois Department of Transportation

PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

Engineer of Design and Environment - Room 323
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. 62693
COOK County
Section 2021-922PT.1-AC
Project ACIM-943(367)57
Route FAI 90/94
District 1 Construction Funds

Illinois Department of Transportation

Illinois Department of Transportation

NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., January 21, 2005. 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. 62693
   COOK County
   Section 2021-922PT.1-AC
   Project ACIM-943(367)57
   Route FAI 90/94
   District 1 Construction Funds

2.08 miles of reconstruction of frontage roads, retaining walls and ramps along FAI Route 90/94 (Dan Ryan Expressway) from 63rd Street to 59th Street in Chicago.

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

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

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

By Order of the
Illinois Department of Transportation

Timothy W. Martin, Secretary

BD 351 (Rev. 01/2003)

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2004

This sheet contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction
(Adopted 1-1-02) (Revised 1-1-04)

SUPPLEMENTAL SPECIFICATIONS

RECURRING SPECIAL PROVISIONS

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

TABLE OF CONTENTS

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2002, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAI 90/94 (I-90/94), Section (2021-922 PT. 1-AC), Project ACIM-094-3(367)057, County: Cook and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

FAI 90/94 (I-90/94)
Section: 2021-922 PT. 1-AC
County: Cook
Contract No.: 62693

LOCATION OF PROJECT

The project begins at a point on the centerline of the I-90/I-94 (Dan Ryan Expressway), just south of 63rd Street in the City of Chicago, in Cook County. The project extends northerly along the said centerline to just north of 59th Street in the City of Chicago, in Cook County.

Specifically, the work on the northbound I-90/I-94 local lanes begins at a point approximately 55 feet north of the centerline of 63rd Street and continues north along the local lanes to a point approximately 45 feet north of the centerline of 59th Street for a total distance of 2,645 feet (0.50 miles). The work on the southbound I-90/I-94 local lanes begins at a point approximately 150 feet south of the centerline of the Conrail railroad and continues north along the local lanes to a point approximately 45 feet north of the centerline of 59th Street for a total distance of 2,279 feet (0.43 miles). The work on S. Wentworth Street begins at a point approximately 445 feet south of the centerline of 63rd Street and continues north along the frontage road to a point approximately 95 feet north of the centerline of 59th Street for a total distance of 3,194 feet (0.60 miles). The work on S. Wells Street begins at a point approximately 90’ feet south of the centerline of 63rd Street and continues north along the frontage road to a point approximately 95 feet north of the centerline of 59th Street for a total distance of 2,840 feet (0.54 miles).

DESCRIPTION OF PROJECT

The project consists of the reconstruction of ramps, retaining walls, frontage roads, and other improvements between 63rd Street and 59th Street.

The northbound exit ramp and the southbound entrance ramp at 59th Street will be reconstructed. The northbound entrance ramp and southbound exit ramp at 63rd Street will be reconstructed.

New retaining walls will be provided for the ramps and frontage roads along S. Wentworth Avenue and S. Wells Street from 63rd Street to 59th Street.

Both S. Wentworth Avenue and S. Wells Street will be reconstructed between 63rd and 59th Street.
Other improvements include drainage improvements, traffic signal interconnect along S. Wentworth Avenue and S. Wells Street, traffic surveillance, and installation of the infrastructure for highway lighting.

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.

UTILITY COORDINATION - CITY OF CHICAGO
Effective: September 30, 1985 Revised: November 1, 1996

The City of Chicago is to make adjustments to their street lighting and/or traffic signal facilities. The Contractor shall coordinate his work and cooperate with the City of Chicago in these adjustments.

This coordination and cooperation by the Contractor will not be paid for separately but shall be considered included in the costs of the contract.

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 Adjustment
City of Chicago Department of Water Management	Fire hydrant relocations	Wentworth Ave. 131+52, Wells St. 553+98	Construction Period

SBC	Adjustment of frames and grates on manholes and access vaults	Wentworth Ave. & Wells St. 63rd St. to 59th St.	Construction Period
	9 MTD	60th St. Crossing Wentworth: 105+10 Wells: 508+56	Existing lines in this duct will be redirected prior to construction. Construction is scheduled to begin on May 02, 2005
	Underground Crossings with Storm Sewer Laterals	Wentworth Ave. & Wells St. 63rd St. to 59th St.	SBC to box and support duct package so that storm sewers can be installed below conduit during construction.
Commonwealth Edison	Adjustment of frames and grates on manholes and access vaults	Wentworth Ave & Wells St 63rd St. to 59th St.	Construction Period
	Underground Crossings with Storm Sewer Laterals	Wentworth Ave. & Wells St. 63rd St. to 59th St.	ComEd to box and support duct package so that storm sewers can be installed below conduit during construction.
	6 x 3 duct	60th St. Wells: 527+04 Wentworth: 123+70	The lines in this duct currently occupy the bottom row of the duct and will remain live during construction. The Contractor shall be responsible for all support of excavation in this location for ComEd to complete their work and take caution not to damage their duct package during installation of the support of excavation. The contractor shall excavate to an elevation 18 inches above the top of the existing duct. Starting July 18, 2005 ComEd will excavate the 18 inches and eliminate the top three rows of this duct package. ComEd shall complete the concrete encasement of the duct package by August 5, 2005. ComEd will have a total of fifteen (15) working days to complete this work. The contractor shall notify and coordinate with ComEd four (4) weeks prior to the start of the excavation of the roadway above and adjacent to this duct package. The contractor shall be responsible to incorporate the modified duct package into the proposed retaining walls. If there are any projected delays in the construction schedule the Contractor shall notify ComEd immediately to coordinate the timing and sequence of the work at this location.

FAILURE TO COMPLETE THE WORK ON TIME
Effective: September 30, 1985 Revised: June 28, 1996

Should the Contractor fail to complete the work on or before the completion date as specified in the Special Provision for "Completion Date Plus Guaranteed Working Days", or within such extended time as may have been allowed by the Department, the Contractor shall be liable to the Department in the amount of $ 6,200 , not as a penalty but as liquidated damages, for each calendar day or a portion thereof of overrun in the contract time or such extended time as may have been allowed.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Department's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. This said mode is an equitable rule for measurement of the Department's actual loss and fairly takes into account the loss of use of the roadway if the project is delayed in completion. The Department 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 every day shown on the calendar and starts at 12:00 midnight and ends at the following 12:00 midnight, twenty-four hours later.

COMPLETION DATE PLUS GUARANTEED WORKING DAYS

The Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 PM on, November 23, 2005 except as specified herein.

The Contractor will be allowed to complete all clean-up work and punch list items within 10 guaranteed working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the guaranteed working days allowed for clean up work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer.

Article 108.09 of the Standard Specifications or the Special Provision for Failure to Complete the Work on Time, if included in this contract, shall apply to both the completion date and the number of working days.

INTERIM COMPLETION DATES AND SEQUENCE OF OPERATION

The following locations require interim completion dates to avoid conflicts with other Contracts. The Contractor must complete all work at the following locations by 11:59 PM on the interim completion dates specified.

Description of Work	Interim Completion Date	Reason for Completion
Stage 1 of Wells St. consisting of ramps, retaining walls, electrical infrastructure, and roadway improvements between 63rd St. and 59th St.	September 23, 2005	Open ramps to traffic and begin Stage 2 of the traffic control plan.
Stage 1 of Wentworth Ave. consisting of ramps, retaining walls, electrical infrastructure, and roadway improvements between 63rd St. and 59th St.	October 14, 2005	Open ramps to traffic and begin Stage 2 of the traffic control plan.
Stage of Wells Street consisting of frontage road pavement, curb and gutter.	November 11, 2005	Needs to be complete for other contracts to meet their final completion date.

FAILURE TO COMPLETE THE INTERIM WORK ON TIME

Should the contractor fail to complete the work list previously on or before the completion date as specified in the Special Provision for INTERIM COMPLETION DATES AND SEQUENCE OF OPERATIONS or within such extended time as may have been allowed by the Department, the Contractor will be liable to the Department in the amount of $5,500 per location not as a penalty but as liquidated damages, for each calendar day or portion thereof of overrun in the Contract time or such extended time as may have been allowed.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Department's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. This said mode is an equitable rule for measurement for the Department's actual loss and fairly takes into account the loss of use of the roadway if the project is delayed in completion. The Department must not be required to provide any actual loss in order to recover these liquidated damages are very difficult to ascertain. Furthermore, no provision of this clause must be construed as a penalty, as such is not the intention of the parties.

A calendar day is every day shown on the calendar and starts at 12:00 midnight and ends at the following 12:00 midnight, twenty-four hours later.

All other work must meet the contract completion date specified in COMPLETION DATE PLUS GUARANTEED WORKING DAYS.

CTA COORDINATION

All work to be done by the Contractor on, over or in close proximity of the CTA (Chicago Transit Authority) right-of-way shall be performed in accordance with Article 107.12 of the Illinois Department of Transportation's "Standard Specifications for Road and Bridge Construction" adopted January 1, 2002, and the following additional CTA requirements.

The CTA's Representative for this project will be:

Mr. Marvin A. Watson
General Manager, Construction
312-733-7000, extension 7008

1. NOTIFICATION TO CTA:

   A. After the letting of the contract and prior to performing any work, the CTA Representative shall be notified by the Department to attend the pre-construction meeting. In this meeting, the Contractor shall confer with the CTA's Representative regarding the CTA's requirements for the protection of clearances, operations and safety.

   B. Prior to the start of any work on or over the CTA's right-of-way, the Contractor shall meet with the CTA Representative to determine his requirements for flagmen and all other necessary items related to the work activities on, over and next to the CTA facilities and to receive CTA's approval for the Contractor's proposed operations.

   C. The Contractor shall notify the CTA Representative 72-hours in advance of the time he intends to enter upon the CTA right-of-way for the performance of any work.

2. PROTECTION OF THE CTA TRAFFIC:

   A. The CTA will be operating trains during the construction of this project. The rail yard operations are 24 hours per day, seven days per week.

   B. The Contractor shall, at all times, take special care to conduct his operations over, under, adjacent to, or adjoining the CTA facilities in such a manner as to prevent settlement, damage or displacement or damage to any CTA structures, equipment, tracks or portions thereof, and to prevent interruption of train service.

   C. Any damage to the tracks, or other CTA facilities caused by the Contractor’s operations shall be replaced or repaired by the CTA at the Contractor's expense. Repair costs paid by the Contractor will not be reimbursed.

3. REIMBURSEMENT OF COSTS:

   A. The cost of all flagmen, engineering inspection, switchmen, and other workmen furnished by the CTA and authorized by the Resident Engineer shall be paid for directly to the CTA by the contractor.

   B. The amount paid to the Contractor shall be the amount charged to the Contractor for all authorized CTA charges including CTA additive rates audited and accepted by the Department, in accordance with Article 107.12 and Article 109.05 of the Standard Specifications.

C. Following approval of the CTA invoices by the Department, the Contractor shall pay all monies to the CTA as invoiced and shall submit to the Department certified and notarized evidence of the amount of payments. No overhead or profit will be allowed on these payments.

D. The Department will not be liable for any delays by the CTA in providing flagmen or other services required by this Special Provision.

E. Whenever any work, such as temporary shoring and erection procedures for spans over the CTA track, in the opinion of the CTA's inspector, may affect the safety of the trains and the continuity of the CTA's operations, the methods of performing such work shall first be submitted to the CTA for approval. If operations by the Contractor during construction are determined by the CTA's inspector to be hazardous to the CTA's operations, the Contractor shall suspend such work until reasonable remedial measures, and / or alternate methods, satisfactory to the CTA, are taken. Such remedial measures may include obtaining the services of the CTA personnel so that adequate protection may be provided.

4. CTA OPERATING REQUIREMENTS:

Operating requirements of the CTA, while work on this project is in progress are as follows:

A. Work that is adjacent to or over the CTA operating tracks, requiring CTA flagmen, is to be done during the following hours:

Monday through Saturday, inclusive - 7:00 p.m. to 5:00 am.

Sunday 12:00 am. to Monday 5:00 am.

B. As much work as possible is to be done under normal CTA operating conditions (under traffic) without disruption of train movements. A maximum interruption of service to the CTA traffic of 15 minutes or as agreed upon with the CTA will be allowed.

C. In order to request for single track (taking one track out of service), the Contractor, through the Resident Engineer, shall notify the CTA Representative fourteen (14) working days in advance of the proposed interruptions.

D. Interruptions will be provided solely at the CTA’s discretion, depending upon the transit service demands for special events and possible conflicts with prior commitments to other work scheduled on the same route.

E. No more than one service interruption will be allowed simultaneously on this CTA line.

F. If the Contractor is unable to return the CTA track to normal operation on time, liquidated damages of at least $ 100.00 per minute of delay shall be paid directly to the CTA by the Contractor.

G. Pedestrian traffic to the CTA facilities shall be maintained at all times.

H. A notice of at least seventy-two (72) hours shall be given to the CTA prior to any beam removal or replacement, which will cause interruption to the CTA facilities and service.

I. Simultaneous work on two piers that will require flagmen and affect the train operation shall not be allowed. Work which will require flagmen, shall be limited to only one side of the track at a time.

J. Two flagmen will be required for each direction of train traffic for any work within the CTA facilities.

K. CTA shall have access to all storage tracks and unrestricted train operation over special holidays and events as indicated below:

One of the special holidays is the **"Fourth of July"**. Dates for this holiday will be provided at the pre-construction meeting, or as soon as they are available.

One of the special events is the **"Taste of Chicago"**. Dates for this event will be provided at the pre-construction meeting, or as soon as they are available.

Dates for other special holidays and events such as conventions, auto shows, World Series, etc. if and when it happens, will be given to the Department whenever CTA finds out about it, during the pre-construction meeting or 30 days in advance of the construction, if possible, as requested by the Department.

L. The Contractor will be required to take all precautions to avoid debris, concrete and other materials falling over the tracks.

5. OTHER SPECIAL CONDITIONS:

A. The Contractor is warned of the presence of electrified third rail (600 volts dc) and moving trains on the CTA tracks and shall take all the necessary precautions to prevent damage to life or property through contact with the electrical or operating system.

B. The Contractor is also warned that any contact with the electrified third rail may result in a severe burn or death. Safety precautions such as insulating hoods or covers, approved by the CTA, shall be provided by the Contractor to cover that section of the live third rail adjacent to the work.

6. SAFETY TRAINING:

All employees of the Contractor or his Subcontractors who are required to work upon or adjacent to the CTA's operating tracks shall be required to attend and provide evidence of completion of a right-of- way safety training course administered by the CTA.

A. Arrangements for the safety training course shall be the Contractor's responsibility. Contact the CTA Representative to arrange for the safety course.

B. The cost of the course is $75.00 per person, payable to the CTA prior to taking the course. The cost of this course and the employee's time for the course shall be considered incidental to the cost of the contract. The course is one day long, from 8:00 am. to 4:00 p.m.

C. The Contractor, his Subcontractors, and all of his employees who are required to work on or around the CTA's operating tracks shall wear a CTA type safety vest. The cost of providing the vests shall be considered incidental to the contract.

7. RAPID TRANSIT CLEARANCES:

The Contractor shall perform his work in a manner that provides adequate clearance to the CTA tracks. The clearances shall not be less than the following for safe passage of trains.

7-2" horizontal to the center line of the nearest track

6'-1" horizontal to the centerline of the nearest track for short distances.

14'-6" vertical from the top of the high running rail.

8. PROTECTIVE SHIELD:

A. The Contractor shall furnish, install, and later remove a protective shield to protect the CTA traffic from damage due to failing material and objects during construction. The protective shield may be a platform, a net or any other Department approved structure.

B. A minimum vertical clearance of 4.42 m (14'-6") above the high running rail of the CTA tracks shall be provided at all times.

C. Any protective shield required, as indicated on the plans and the supporting members shall be designed to sustain a load of 200 pounds per square foot in addition to its own weight.

D. Drawings and design calculations for the protective shield shall be stamped by an Illinois Licensed Structural Engineer and shall be submitted to the Department for approval. The protective shield shall be constructed only after the Department has approved the drawings and the design.

E. The contractor shall be required to provide a schedule for material removal, delivery of new material, crane operation over and around the tracks and a schedule for access of workmen to the construction site.

9. PAINTING:

Whenever any blasting operation is to be done for painting of the MOT bridges or other structures that are over the CTA tracks, the CTA Representative shall be notified. The CTA does not allow steel blasting grits to be used over our operating R.O.W. Due to the presence of our 600-volt D.C. traction power system, fouling of our limestone ballast by

conductive material could contribute to power drainage or conductivity could cause problems with the rapid transit signaling system. The contractor shall use non-conductive abrasives such as "Black Beauty" for his blasting operations in the vicinity of the CTA tracks.

COORDINATION WITH ADJACENT AND/OR OVERLAPPING CONTRACTS

This Contract abuts and/or overlaps with other concurrent Contracts as listed below. Each Contract includes work items requiring close coordination between the Contractors regarding the sequence and timing for the execution of such work items.

Contract Number 62583	Contract Number 62799	Contract Number 62837
Contract Number 62586	Contract Number 62802	Contract Number 62838
Contract Number 62587	Contract Number 62805	Contract Number 62839
Contract Number 62589	Contract Number 62806	Contract Number 62840
Contract Number 62691	Contract Number 62807	Contract Number 62841
Contract Number 62733	Contract Number 62813	Contract Number 62842
Contract Number 62795	Contract Number 62814	CDOT Contract Number E-1-007
Contract Number 62796	Contract Number 62835	
Contract Number 62798	Contract Number 62836	

Supplemental to the requirements of the Standard Specifications article 105.08- Cooperation Between Contractors, the Contractors shall identify all such work items at the beginning of the Contract, and coordinate sequence and timing for their execution with the other Contractors through the Engineer. These work items shall be identified as separate line items in the Contractors' proposed Construction and Progress Schedule. Any conflicts between Contractors' schedules, the Department will be consulted through the Engineer to determine a resolution. Additional compensation or extension of the contract time will not be allowed for work and/or progress and/or lack of progress affected by lack of such coordination by the Contractor.

CONTRACTOR COOPERATION

The Contractor's attention is directed to the fact that other separate contracts may be under construction during the duration of this Contract and that the Contractor will be governed by Article 105.08 of the Standard Specifications.

The Contractor will coordinate proposed project start dates and sequence of construction with the Engineer and other Contractors to present an effective and timely schedule for successful completion of the project.

No additional compensation will be allowed the Contractor for the above requirements or for any delays or inconvenience resulting from the activities of other contractors.

ADVANCED PUBLIC NOTIFICATION

The Contractor shall provide notice to the public a minimum of 14 days in advance of any work that requires the closure of lanes or ramps through the use of a changeable message sign or temporary information signing.

TEMPORARY INFORMATION SIGNING

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, signs on temporary stands, 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:

	Item	Article/Section
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)	1090.01

Note 1. The Contractor may use 16mm (5/8 inch) instead of 19mm (3/4 inch) thick 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 1084.02(b).
Note 4. The overlay panels shall be 2mm (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 Article 702.05 and Article 720.04. The signs shall be 2.1m (7') above the near edge of the pavement and shall be a minimum of 600mm (2') 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 meters (square feet) edge to edge (horizontally and vertically).

All hardware, posts, 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 meter (square feet) for TEMPORARY INFORMATION SIGNING, which price shall be full compensation for all labor, equipment and materials required for performing the work as herein specified.

CHANGEABLE MESSAGE SIGNS

This item shall be as contained in the Special Provisions for "Portable Changeable Message Signs" except as follows:

Five (5) signs will be required for this contract.

CONSTRUCTION AIR QUALITY - DUST CONTROL

Description. This work shall consist of developing and implementing a detailed Dust Control Plan (DCP). Development of a DCP is required in “Non-attainment” and "Maintenance" areas, per Article 107.36 of the Standard Specifications. All construction activities shall be governed by the DCP. The nature and extent of dust generating activities, and specific control techniques appropriate to specific situations shall be discussed at the pre-construction meeting, with subsequent development of the DCP to include but not be limited to the requirements below.

The Contractor is responsible for the control of dust at all times during the duration of the contract, 24 hours per day, 7 days per week, including non-working hours, weekends, and holidays. This work shall be considered complete after the completion of all permanent erosion control measures required for the contract, and after all temporary and permanent seeding has taken place. Work on this contract shall be conducted in a manner that will not result in generating excessive air borne particulate matter (PM) or nuisance dust conditions.

The DCP shall include legible copies of the product literature and Material Safety Data Sheets for dust suppression agents and stabilizers the contractor proposes to use. The Dust Control Plan shall involve the implementation of control measures before, during and after conducting any dust generating operation. These controls must be in place on non-working days and after working hours, not just while work is being done on the site. The Dust Control Plan must contain information specific to the project site, proposed work, and dust control measures to be implemented. A copy of the Dust Control Plan must be available on the project site at all times.

The Dust Control Plan must contain, at a minimum, all of the following information:

Name, address and phone number of the person(s) responsible for the dust generating operation and for the submittal and implementation of the Dust Control Plan.
A drawing specifying the site boundaries of the project with the areas to be disturbed, the locations of the nearest public roads, and all planned exit and entrance locations to the site from any paved public roadways.
Control measures to be applied to all actual and potential fugitive dust sources before, during and after conducting any dust generating operation, including non-work hours and non-work days.

A list of dust suppressants to be applied, including product specifications, Material Safety Data Sheets, and product label instructions that include the method, frequency and intensity of applications; and information on the environmental impacts and approval or certifications related to the appropriate and safe use for ground applications.
A contingency plan consisting of at least one contingency measure for each activity occurring on the site in case the primary control measure proves inadequate.

The Contractor shall submit two copies of the DCP that outlines in detail the measures to be implemented by the Contractor complying with this section, including prevention, cleanup, and other measures at least 14 days before beginning any dust generating activity. The Contractor shall not begin any dust generating activities until the Engineer approves the DCP in writing. Failure to comply with the DCP or provisions herein will subject the contractor to an "Environmental Deficiency Deduction," as outlined below.

Materials

1. Dust Suppression Agents

Dust suppression agents shall be water soluble, non-toxic, non-reactive, non- volatile, and non-foaming. The use of petroleum for dust control is prohibited.
Calcium Chloride shall conform to the requirements of Article 1013.01 of the Standard Specifications. Other commercially available dust suppression agents may be substituted for calcium chloride subject to the approval of the Engineer. Material Safety Data Sheets must be reviewed and approved by the Engineer prior to the use of any substances other than Calcium Chloride.
Water shall meet the requirements of Article 1002 of the Standard Specifications.

2. Soil stabilizers shall consist of seed and mulch meeting the requirements of Article 1081.06 (a) (2) and (3).

3. Covers for stockpiles shall be commercially available plastic tarps, or other materials approved by the Engineer.

Construction Methods. Dust suppression agents shall be used to provide temporary control of dust on haul roads and other active work areas. Several applications per day may be necessary to control dust depending upon meteorological conditions and work activity. The Contractor shall apply dust suppression on a routine basis as necessary or as directed by the Engineer to control dust. Wet suppression consists of the application of water or a wetting agent in solution with water. Wetting agents shall not be applied directly to live plant material. Wet suppression equipment shall consist of sprinkler pipelines, tanks, tank trucks or other devices approved by the Engineer, capable of providing a regulated flow, uniform spray and positive shut off.

Calcium chloride dust suppression agents may be used in lieu of wet suppression only when freezing conditions exist. Calcium chloride shall be uniformly applied by a mechanical spreader at a rate of 1 and 1/2 pounds per square yard or its equivalent liquid, unless otherwise directed by the Engineer. Calcium chloride shall not be directly applied to live plant material.

Calcium chloride must not be stored outdoors without an impermeable cover. Storage must be on an impermeable surface such as paved asphalt or appropriately treated concrete of sufficient thickness to avoid exfiltration. Storage should be as airtight as possible to limit the calcium chloride's absorbing moisture from the air. No storage facilities will be allowed within 100 feet of

a storm sewer, or any other drain. Positive drainage must be maintained on all treated surfaces. Ditches, culverts and other structures must be kept clean to ensure proper drainage and to limit the amount of water infiltrating earth surfaces and thereby leeching out chlorides. If calcium chloride is applied dry, or during dry periods, and crystals are seen on the road surface, the road should be wetted sufficiently to dissolve the calcium chloride. Wetting should be limited to an amount that will sufficiently cause the calcium chloride to penetrate the surface but not to the point of causing any runoff from the road surface. Other approved dust suppression agents shall be applied and used as per the manufacturer's instructions.

Haul truck cargo areas shall be securely covered during the transport of materials on public roadways that are prone to cause dust.

Public Roadway Dust Control. Track out, including carryout and spillage of material that adheres to the exterior surfaces of or are spilled from motor vehicles and/or equipment and subsequently fall onto a paved public roadway must be controlled at all times. Clean up of carryout and spillage is required immediately if it extends a cumulative distance of 50 feet or more on a paved public roadway. If the extent of carryout is less than 50 feet, clean up at the end of the day is permissible. Clean up of paved surfaces shall be by wet spray power vacuum street sweeper. Dry power sweeping is prohibited.

Control of earthwork dust. During batch drop operations (i.e. earthwork with a front-end loader, clamshell bucket, or backhoe), the free drop height of excavated or aggregate material shall be reduced to minimum heights as necessary to perform the specified task, and to minimize the generation of dust. To prevent spills during transport, a minimum of 2 inches of freeboard space shall be maintained between the material load and the top of the truck cargo bed rail. A maximum drop height of two feet (or minimum height allowed by equipment) will be allowed, or to heights as directed by the Engineer.

Control of dust on stockpiles and inactive work areas. The Contractor shall use the following methods to control dust and wind erosion of stockpiles and inactive areas of disturbed soil:

Dust suppression agents shall be used during active stockpile load-in, load-out, and maintenance activities.
Soil stabilizers (hydraulic or chemical mulch) shall be applied to the surface of inactive stockpiles and other inactive areas of disturbed soil. Final grading and seeding of inactive areas shall occur immediately after construction activity is completed in an area and as directed by the Engineer.
Plastic tarps may be used on small stockpiles, secured with sandbags or an equivalent method approved by the Engineer, to prevent the cover from being dislodged by the wind. The Contractor shall repair or replace the covers whenever damaged or dislodged at no additional cost.

Method of Measurement. All measuring devices shall be furnished by the Contractor and approved by the Engineer.

Calcium chloride and other approved dust suppression agents shall be mixed with water at the rate specified by the manufacturer and measured for payment in units of 1000 Gallons of solution applied.

The application of soil stabilizers shall be measured by weight (pounds) of soil stabilizer. The soil stabilizer will then be added to water to form a solution in accordance with the manufacturer's recommendation.

All other dust control measures will not be measured for payment.

Basis of Payment. The application of dust suppression agents shall be paid for at the contract unit price per unit for **APPLYING DUST SUPPRESSION AGENT.**

Soil stabilizers will be paid for at the contract price per pound for **SOIL STABILIZERS**.

All other dust control measures will not be paid for directly but shall be considered as included in the various items involved and no additional compensation will be allowed.

CONSTRUCTION AIR QUALITY–DIESEL VEHICLE EMISSIONS CONTROLS

Description. The reduction of emissions of Carbon Monoxide (CO), Hydrocarbons (HC), Nitrogen oxides (NOx), and Particulate Matter (PM) will be accomplished by installing Retrofit Emission Control Devices and/or by using cleaner burning diesel fuels. The term “equipment” refers to any and all diesel fuel powered devices rated at 50 Horse power (HP) and above, to be used on the project site for any length of time, (including any “rented” or “rental” equipment).

All Contractor and Sub-contractor diesel powered equipment with engine horsepower (HP) ratings of 50 HP and above, that are on the project or are assigned to the contract shall be prohibited from using “off-road” diesel fuel (above 500 parts per million (ppm) sulfur content) at any time. In addition, diesel powered equipment shall be either (1) retrofitted with Emissions Control Devices *and* use Cleaner burning “on-road” diesel fuel (500 ppm sulfur content or less), or (2) use Ultra Low Sulfur Diesel fuel (ULSD) exclusively (15 ppm sulfur content or less), in order to reduce diesel particulate matter emissions. Large cranes (Sky cranes or Link Belt cranes), which are responsible for critical lift operations are exempt from installing Retrofit Emission Control Devices if they adversely affect equipment operation.

In addition, all construction motor vehicles (both on-road and off-road, gasoline or diesel fuel powered) shall comply with all pertinent State and Federal regulations relative to exhaust emission controls and safety, including opacity. Frequently Asked Questions (FAQ’s) regarding Illinois Environmental Protection Agency (IEPA) emissions testing for gasoline powered vehicles can be accessed at (www.epa.state.il.us/air/vim/faq/testing.html). Regulations regarding diesel powered vehicles over 16,000 pounds, and the Diesel Emission Inspection Program (Title 92: Transportation Part 460, Diesel Emission Inspection Program, Subpart A: General) can be accessed at (www.dot.state.il.us/regulations.html). Diesel powered vehicles less than 16,000 pounds are exempt from testing by IDOT. All diesel powered equipment used on the project site shall be subject to reasonable, random spot checks for compliance with the required emissions controls and proper diesel fuel usage. The Secretary of State, Illinois State Police and other law enforcement officers shall enforce Part 460. For additional information concerning Illinois diesel emission inspection requirements, please call the Illinois Department of Transportation, Diesel Emission Inspections Unit, at 217-557-6081.

The Retrofit Emission Control Devices shall consist of oxidation catalysts, or similar retrofit equipment control technology that (1) is included on the Environmental Protection Agency (EPA) *Verified Retrofit Technology List* (www.epa.gov/otaq/retrofit/retroverifiedlist.html) and (2) is

verified by EPA or certified by the manufacturer via letter, to provide a minimum emissions reduction of 20% PM10, 40% CO, and 50% HC when used with “on-road” diesel fuel. As noted above, the Retrofit Emission Control Device *must be used with on-road diesel fuel* (500 ppm sulfur content or less).

If used, ULSD fuel shall conform to American Society for Testing and Materials (ASTM) D-975 diesel with the following additional specifications:

ASTM D-5453 15 ppm Sulfur max.
ASTM D-6078 Lubricity (SBOCLE) 3100 g min.
ASTM D-613 Cetane 45 min.
Dyed (for Off-road use)

Construction shall not proceed until the contractor submits a certified list of the diesel powered equipment that will be retrofitted with emission control devices and use “on-road” diesel fuel, and a list of equipment that will use ULSD fuel only. The list(s) shall include (1) the equipment number, type, make, and contractor/sub-contractor name; (2) the emission control devices make, model and EPA verification number; and (3) the type and source of clean fuels to be used. Vehicles reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation by qualified staff, prior to being used on the project site. Diesel powered equipment in non-compliance will not be allowed to be used on the project site, and is also subject to a “Notice of Non-Compliance” as outlined below under “Environmental Deficiency Deduction.”

The contractor shall submit monthly summary reports, updating the list of construction equipment, and include certified copies of the diesel fuel delivery slips (for both “on-road” and ULSD) for the reporting time period, noting the type of diesel fuel used with each piece of diesel powered equipment. The addition or deletion of any diesel powered equipment shall be included in the summary and noted on the monthly report.

If any diesel powered equipment is found to be in non-compliance with any portion of this specification, the Engineer will issue the contractor a Notice of Non-Compliance and given an appropriate period of time, as outlined below under “Environmental Deficiency Deduction,” in which to bring the equipment into compliance or remove it from the project site. Failure to comply with the "Diesel Vehicle Emission Controls", shall also subject the Contractor or sub-contractor to an "Environmental Deficiency Deduction," as outlined below.

Any costs associated with bringing any diesel powered equipment into compliance with these "Diesel Vehicle Emissions Controls" shall be included in the overall cost of the contract. In addition, there shall be no time granted to the contractor for compliance with this notice. The contractor's compliance with this notice and any associated regulations shall also not be grounds for a claim.

A. IDLING. The contractor shall establish truck-staging areas for all diesel powered vehicles that are waiting to load or unload material at the contract area. Such zones shall be located where the diesel emissions from the equipment will have a minimum impact on adjacent abutters and sensitive receptors of the general public. The Department will coordinate such locations with the Contractor and City Of Chicago authorities, including local aldermen, in the selection of staging areas, whether within or outside the existing highway right-of-way (ROW), to avoid locations near sensitive areas or populations to the extent possible. Sensitive receptors include, but are not limited to hospitals, schools, residences, motels, hotels, daycare facilities,

elderly housing and convalescent facilities. Diesel powered engines shall also be located as far away as possible from fresh air intakes, air conditioners, and windows. Idling of diesel powered equipment shall not be permitted during periods of non-active vehicle use. Diesel powered engines shall not be allowed to idle for more than five consecutive minutes when the equipment is not in use, occupied by an operator, or otherwise in motion, except only as follows:

When the equipment is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control;
When it is necessary to operate auxiliary systems installed on the equipment, only when such system operation is necessary to accomplish the intended use of the equipment;
To bring the equipment to the manufacturer's recommended operating temperature;
When the outdoor temperature is below forty-five (45) degrees Fahrenheit or above eighty (80) degrees Fahrenheit;
When the equipment is being repaired.

All work shall be conducted to ensure that no harmful effects are caused to adjacent sensitive receptors. Equipment and equipment operators found in non-compliance with these idling provisions shall receive a warning, and on the next offense be subject to an Environmental Deficiency Deduction as outlined below. The contractor or sub-contractor may reserve the right to enforce this deduction on their own equipment operator, as necessary.

B. MITIGATION. Air quality monitoring will be conducted throughout the course of the Dan Ryan reconstruction project, by a separate air quality consultant. The contractor shall designate a point person to be responsive to IDOT in the event construction related air quality issues arise. If the ongoing monitoring detects an adverse air quality issue that is due to, or exacerbated by construction activities, the contractors point person will be required to consult with the Engineer, to determine the appropriate course of action.

Appropriate mitigation measures can include a variety of actions ranging from, but not limited to additional watering, removal of construction equipment from nearby sensitive receptors, shut down of diesel powered equipment, or other mitigation measures which may be required as data becomes available and as approved by the Engineer.

Method of Measurement and Basis of Payment:

The **CONSTRUCTION AIR QUALITY – DIESEL EMISSIONS CONTROLS** will not be measured for payment and the cost of this work shall be included in the unit prices bid and no additional compensation will be allowed.

CONSTRUCTION NOISE MITIGATION

Description. This work shall consist of implementing construction noise restrictions as outlined in a project Construction Noise Mitigation plan. Work on the project shall be in accordance with the Construction Noise Mitigation plan submitted by the contractor, applicable sections of Article 107.35 of the Standard Specifications, and modifications as contained herein for construction noise.

The contractor must provide advance notification, and secure approval from the Engineer prior to the use of heavy construction equipment outside normal construction work hours ("normal construction work hours" as specified in Article 107.35 of the Standard Specifications).

Inspection and maintenance of all vehicle exhaust systems shall be conducted on a monthly basis, (or as determined by the Engineer), for all such vehicles and other equipment assigned to or utilized on the project site. Inspections shall be conducted by personnel having a working knowledge of exhaust systems so that proper recommendations regarding the adequacy of the mufflers can be established.

Construction Equipment

Pavement Breakers create high concentrations of low frequency sound energy, and noise attenuation can be achieved through the introduction of high-mass material between the noise source and the receiver. The attachment of shrouds (sound curtains) to the steel frame around the breaker shall be installed, as equipment allows. The operation of pavement breakers shall be prohibited outside of normal work hours, as specified herein, unless otherwise approved by the Engineer.

Special care shall be taken with respect to the set up and operation of concrete batch and concrete crushing plants to minimize the potential noise impacts to the adjacent community. The Department will work with the Contractor and City Of Chicago authorities, including local aldermen in selecting construction concrete batch and/or crushing locations, whether within or outside the ROW, to avoid locations near sensitive areas or populations to the extent possible. All local, City, Village, Town and/or Township rules, regulations, and/or requirements regarding batch and crushing plants shall be followed, as instructed by the Engineer.

Compressors or generators shall be located as far away as possible from sensitive receptors. Compressors and generators shall be positioned such that the coding fan intake does not point towards the community. The Contractor shall review stationary equipment placement with the Engineer prior to commencement of work.

Method of Measurement and Basis of Payment:

The **CONSTRUCTION NOISE MITIGATION** will not be measured for payment and the cost of this work shall be included in the unit prices bid and no additional compensation will be allowed.

ENVIRONMENTAL DEFICIENCY DEDUCTION

To ensure a prompt response to incidents involving the integrity of work zone Environmental (Air Quality and Noise) Control, the Contractor shall provide a telephone number where a responsible individual can be contacted on a 24 hour a day basis.

When the Engineer is notified, or determines an environmental control deficiency exists, he/she will notify the Contractor in writing, and direct the Contractor to correct the deficiency within a specified time frame. The specified time frame, which begins upon contractor notification, will be from 1/2 hour to 24 hours long, based on the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge.

The deficiency may include lack of repair, maintenance or non-compliance with the Special Provisions for Construction Air Quality Dust Control and/or Construction Noise Mitigation.

If the Contractor fails to correct the deficiency within the specified time frame, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The calendar day(s) will begin with Contractor's notification and end with the Engineer's acceptance of the correction. The daily monetary deduction will be either $1,000.00 or 0.05 percent of the awarded contract value, whichever is greater.

In addition, if the Contractor or sub-contractor fails to respond within the allotted time frame, the Engineer may take action to correct the deficiency, or may cause the correction of the deficiency to be made by others, the cost thereof being deducted from monies due or which may become due the Contractor or sub-contractor. This corrective action will in no way relieve the Contractor or sub-contractor of his/her contractual requirements or responsibilities, and shall not be grounds for any claim.

If a Contractor or sub-contractor accumulates three (3) Deficiency Deductions for the same deficiency, in a contract period, the contractor will be shut down until the deficiency is corrected. Such a shut down will not be grounds for any extension of the completion date, waiver of penalties, or be grounds for any claim.

CONTRACTOR OFF-STREET PARKING RESTRICTION

The Contractor and all employees working on this project will not be allowed to park their vehicles and equipment on frontage roads or streets. The Contractor shall provide off-street parking facility for all vehicles and equipment. The Contractor shall also provide any transportation required to get his employees to and from the work site. The Contractor will provide the RE with written documentation of the off-site parking location.

The cost to comply with this requirement will not be paid for separately, but shall be considered as included in the contract unit bid prices of the contract, and no additional compensation will be allowed.

PRE-CONSTRUCTION VIDEO LOG

In addition to requirements in Article 107.20 of the standard specification, the Contractor shall prepare photo/video log of all structures adjacent to the Frontage Road right-of-way within the project limit prior to start of any construction work. The Contractor shall provide copy to the Engineer. Also the Contractor shall prepare and furnish photo/video log of final condition.

The cost to comply with this requirement will not be paid for separately, but shall be considered as included in the contract unit bid prices of the contract, and no additional compensation will be allowed.

KEEPING THE EXPRESSWAY OPEN TO TRAFFIC

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

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

LOCATION: Southbound and Northbound Local Lanes.

WEEK NIGHT	TYPE OF CLOSURE	ALLOWABLE LANE CLOSURE HOURS	
		INBOUND	OUTBOUND
Sunday thru Thursday	One Lane	8:00 p.m. - 5:00 a.m.	9:00 p.m. - 6:00 a.m.
	Two Lane	10:00 p.m. - 5:00 a.m.	11:59 p.m. - 6:00 a.m.
Friday	One Lane	8:00 p.m. (Fri) - 6:00 a.m. (Sat)	9:00 p.m. (Fri) - 7:00 a.m. (Sat)
	Two Lane	11:00 p.m. (Fri) - 6:00 a.m. (Sat)	11:59 p.m. (Fri) - 7:00 a.m. (Sat)
Saturday	One Lane	8:00 p.m. (Sat) - Noon (Sun)	9:00 p.m. (Sat) - Noon (Sun)
	Two Lane	11:00 p.m. (Sat) - 9:00 a.m. (Sun)	11:59 p.m. (Sat) - 9:00 a.m. (Sun)

Full Expressway Closures will only be permitted for a maximum of 15 minutes at a time during the low traffic volume hours of 1:00 a.m. to 5:00 a.m. Monday thru Friday and from 1:00 a.m. to 7:00 a.m. on Sunday. During Full Expressway Closures, the Contractor will be required to close off all lanes except one. Police forces should be notified and requested to close off the remaining lane at which time the work item may be removed or set in place. The District One Traffic Operations Department shall be notified (847-705-4155) seventy-two (72) hours in advance of the proposed road closure and will coordinate the closure operations with police forces.

All stage changes requiring the stopping and/or the pacing of traffic shall take place during the **allowable** hours for Full Expressway Closures and shall be approved by the Department.

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

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

All lane closure signs shall not be erected any earlier than one-half (1/2) hour before the starting hours listed above. Also, these signs should be taken down within one-half (1/2) hour after the closure is removed.

The Contractor will be required to cooperate with all other contractors when erecting lane closures on the expressway. All lane closures within one (1) mile of each other in one direction of the expressway shall be on the same side of the pavement and any lane closure within a half (1/2) mile of each other should be connected. The maximum length of any lane closure on the project and combined with any adjacent projects shall be three (3) miles. Gaps between successive permanent lane closures shall be no less than two (2) miles in length.

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

FAILURE TO OPEN TRAFFIC LANES TO TRAFFIC

Should the Contractor fail to completely open and keep open all the traffic lanes to traffic in accordance with the limitations specified under the Special Provisions for "Keeping the Expressway Open to Traffic", the Contractor shall be liable to the Department for the amount of:

One Lane Blocked = $3,000
Two Lanes Blocked = $5,000

Not as a penalty but as liquidated and ascertained damages for each and every 15 minute interval or a portion thereof that a lane is blocked outside the allowable time limitations. Such damages may be deducted by the Department from any monies due the Contractor. These damages shall apply during the contract time and during any extensions of the contract time.

TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)

Effective: 3/8/96 Revised: 08/19/03

This work shall include furnishing, installing, maintaining, replacing, relocating, and removing all traffic control devices used for the purpose of regulating, warning, or directing traffic. Traffic control and protection shall be provided as called for in the plans, applicable Highway Standards, District One Expressway details, Standards and Supplemental Specifications, these Special Provisions, or as directed by the Engineer.

GENERAL

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

The Contractor shall be responsible for the proper location, installation, and arrangement of all traffic control devices. Special attention shall be given to existing warning signs and overhead guide signs during all construction operations. Warning signs and existing guide signs with down arrows shall be kept consistent with the barricade placement at all times. The Contractor shall immediately remove, completely cover, or turn from the motorist's view all signs which are inconsistent with lane assignment patterns.

The Contractor shall coordinate all traffic control work on this project with adjoining or overlapping projects, including barricade placement necessary to provide a uniform traffic detour pattern. When directed by the Engineer, the Contractor shall remove all traffic control devices that were furnished, installed, or 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.

Signs

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. Throughout the duration of this project, all existing traffic signs shall be maintained by the Contractor. 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".

Exit Gore Signs
The exit gore signs as shown in Standard 701411 shall be a minimum size of 1.2m (48 inch) by 1.2m (48 inch) with 300mm (12 inch) capital letters and a 500mm (20inch) arrow.

Rough Grooved Surface Signs
The Contractor shall furnish and erect "Rough Grooved Surface" signs (W8-1107) on both sides of the expressway, 300m (1000') in advance of any milled area. These signs shall be erect on all ramps that enter the milled area. All signs shall be mounted at a minimum clearance height of 2.1m (7').

Drums/Barricades
Check barricades shall be placed in work areas perpendicular to traffic every 300m (1000'), one per lane and per shoulder, to prevent motorists from using work areas as a traveled way. Check barricades shall also be placed in advance of each open patch, or excavation, or any other hazard in the work area, the first at the edge of the open traffic lane and the second centered in the closed lane. Check barricades, either Type I or II, or drums shall be equipped with the flashing light.

To provide sufficient lane widths (3m [10'] minimum) for traffic and also working room, the Contractor shall furnish and install vertical barricades with steady burn lights, in lieu of Type II or drums, along the cold milling and asphalt paving operations. The vertical barricades shall be placed at the same spacing as the drums.

Vertical Barricades
Vertical barricades shall not be used in lane closure tapers, lane shifts, and exit ramp gores. Also, vertical barricades shall not be used as patch barricades or check barricades. Special attention shall be given, and ballast provided per manufacture's specification, to maintain the vertical barricades in an upright position and in proper alignment.

Temporary Concrete Barrier Wall
Prismatic barrier wall reflectors shall be installed on both the face of the wall next to traffic and the top of all temporary concrete barrier wall. These reflectors shall be placed at 50 foot centers along tangents and at 25 foot centers on curves. The color of these reflectors shall match the color of the edgelines (yellow on the left and crystal or white on the right). If the base of the temporary concrete barrier wall is 12 inches or less from the travel lane, then the wall shall also have a 6 inch wide temporary pavement marking edgeline (yellow on the left and white on the right).

Method of Measurement: This item of work will be measured on a lump sum basis for furnishing, installing, maintaining, replacing, relocating, and removing traffic control devices required in the plans and these Special Provisions. Traffic control and protection required under Standards 701101, 701400, 701401, 701402, 701406, 701411 and 701426 will be included with this item.

Basis of Payment:
a) This work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS). This price shall be payment in full for all labor, materials,

transportation, handling, and incidental work necessary to furnish, install, maintain, replace, relocate, and remove all Expressway traffic control devices required in the plans and specifications.

In the event the sum total value of all the work items for which traffic control and protection is required is increased or decreased by more than ten percent (10%), the contract bid price for Traffic Control and Protection will be adjusted as follows:

Adjusted contract price = .25P + .75P [1+(X-0.1)]

Where "P" is the bid unit price for Traffic Control and Protection:

Where "X" = Difference between original and final sum total value of all work items for which traffic control and protection is required. / Original sum total value of all work items for which traffic control and protection is required.

The value of the work items used in calculating the increase and decrease will include only items that have been added to or deducted from the contract under Article 104.02 of the Standard Specifications and only items which require use of Traffic Control and Protection.

b) The Engineer may require additional traffic control be installed in accordance with standards and/or designs other than those included in the plans. In such cases, the standards and/or designs will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for any additional traffic control required will be in accordance with Article 109.04 of the Standard Specifications.

c) Revisions in the phasing of construction or maintenance operations, requested by the Contractor, may require traffic control to be installed in accordance with standards and/or designs other than those included in the plans. Revisions or modifications to the traffic control shown in the contract shall be submitted by the Contractor for approval by the Engineer. No additional payment will be made for a Contractor requested modification.

Temporary concrete barrier wall will be measured and paid for according to Section 704.
Impact attenuators, temporary bridge rail, and temporary rumble strips will be paid for separately.

All temporary pavement markings will be measured and paid for according to Section 703 and Section 780.

All pavement marking removal will be measured and paid for according to Section 703 or Section 783.

Temporary pavement marking at the base of the temporary concrete barrier wall will be measured and paid for as TEMPORARY PAVEMENT MARKING, 6”.

All prismatic barrier wall reflectors will be measured and paid for according to Section 782.

TRAFFIC CONTROL AND PROTECTION (SPECIAL)

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 the 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, applicable sections of the Standard Specifications, or as directed by the Engineer.

The governing factor in the execution and staging of work for this project is to provide the motoring public with the safest possible travel conditions along the roadway through the construction zone. The Contractor shall arrange his operations to keep the closing of any lane of the roadway to a minimum.

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

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.

The Contractor shall coordinate all traffic control work on this project with adjoining or overlapping projects, including barricade placement necessary to provide a uniform traffic detour pattern. 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.

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. Throughout the duration of this project, all existing traffic signs shall be maintained by the Contractor. 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."

Whenever any vehicle, equipment, workers or their activities infringe on the shoulder or within 4.5 m (15 feet) of the traveled way and the traveled way remains unobstructed, then the applicable Traffic Control Standard shall be 701006. "Shoulder Work Ahead" sign (W21-5(0)-48) shall be used in lieu of the "Workers" sign (W21-1 or W21-1a).

Barricades. Any drop off greater than 75 mm (3 inches), within 2.5 m (8 feet) of the pavement edge shall be protected by Type I or II barricades equipped with mono-directional steady burn lights at 8 m (25 feet) center to center spacing. Barricades that are placed in excavated areas shall have leg extensions installed such that the top of the barricade is in compliance with the height requirements of Standard 702001.

All Type I and Type II barricades, drums, and vertical panels shall be equipped with a steady burn light when used during hours of darkness unless otherwise stated herein.

Check barricades shall be placed in work areas perpendicular to traffic every 300 m (1,000 feet), one per lane and per shoulder, to prevent motorists from using work areas as a traveled way. Two additional check barricades shall be placed in advance of each patch excavation or any hazard in the work area, the first at the edge of the open traffic lane and the second centered in the closed lane. Check barricades shall be Type I or II and equipped with a flashing light.

Public Convenience and Safety. At the preconstruction meeting, the Contractor shall furnish the name of the individual in his direct employ who is to be responsible for the installation and maintenance of the Traffic Control for this project. The Contractor shall also provide 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 Department concerning any request for improving or correcting traffic control devices and begin making the requested repairs within two hours from the time of notification.

Personal vehicles shall not park within the right-of-way except in specific areas designated by the Engineer.

No road closure, lane closures or restriction shall be permitted without prior approval by the Engineer.

Method of Measurement. This item of work will be measured on a lump sum basis for furnishing, installing, maintaining, replacing, relocating and removing the traffic control devices required in the plans, specifications and these Special Provisions.

Basis of Payment. This work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL), which price shall be payment in full for all labor,

materials, transportation, handling and incidentals necessary to furnish, install, maintain, replace, relocate and remove all traffic control devices indicated in the plans, specifications and these Special Provisions. The salvage value of the materials removed shall be reflected in the bid price for this item.

Delays to the Contractor caused by complying with these requirements will be considered incidental to the item for Traffic Control and Protection, and no additional compensation will be allowed.

(CTE – 03/05/2004)

TRAFFIC CONTROL PLAN

Effective: September 30, 1985 Revised: October 1, 1995

Traffic Control shall be in accordance with 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.

HIGHWAY STANDARDS

701101	Off-Road Operations, Multilane, 4.5 m (15') to 600 mm (24”) From Pavement Edge
701301	Lane Closure, 2L, 2W Short Time Operations
701400	Approach to Lane Closure, Freeway/Expressway
701401	Lane Closure, Freeway/Expressway
701402	Lane Closure, Freeway/Expressway
701406	Lane Closure, Freeway/Expressway, Day Operations Only
701411	Lane Closure, Multilane, At Entrance or Exit Ramp, For Speeds > or = 45
701426	Lane Closure Multilane, Intermittent or Moving Operations, For Speeds > or = 45 MPH
701601	Lane Closure, Multilane, 1W or 2W, With Non Traversable Median
701606	Urban Lane Closure, Multilane, 2W, With Mountable Median
701701	Urban Lane Closure, Multilane, Intersection
701801	Lane Closure, Multilane, 1W or 2W, Crosswalk or Sidewalk Closure, For Speeds < 45 MPH
702001	Traffic Control Devices
704001	Temporary Concrete Barrier

PLANS AND DETAILS

General Notes
Traffic Control General Notes and Summary
Suggested Stages of Construction and Traffic Control
TC-08 District 1, Entrance and Exit Ramp Closure Detail

TC-09 District 1, Freeway Single and Multi Lane Weave
TC-10 District 1, Traffic Control and Protection For Side Roads, Intersections and Driveways
TC-14 District 1, Traffic Control and Protection At Turn Bays (To Remain Open to Traffic)
TC-16 District 1, Pavement Marking Letters And Symbols For Traffic Staging
TC-17 District 1, Traffic Control For Shoulder Closures And Partial Ramp Closures
TC-18 District 1, Signing For Flagging Operations At Work Zone Openings
TC-22 District 1, Temporary Information Signing

RECURRING SPECIAL PROVISIONS AND SPECIAL PROVISIONS
Traffic Control and Protection (Expressways)
Traffic Control Surveillance (Expressways)
Changeable Message Signs
Temporary Information Signing
Advanced Public Notification
Traffic Control and Protection (Special)
Flagger Vests (BDE)
Portable Changeable Message Sign (BDE)
Temporary Concrete Barrier (BDE)
Traffic Control Deficiency Deduction (BDE)
Work Zone Public Information Signs (BDE)
Work Zone Traffic Control Devices (BDE)

TRAFFIC CONTROL SURVEILLANCE (EXPRESSWAYS)

The contractor shall provide a person with a vehicle to survey, inspect and maintain all temporary traffic control devices when a lane is closed to traffic and when hazards are present adjacent to or within 10 foot of the edge of pavement for more than 24 hours.

The surveillance person is required to drive through the project, to inspect all temporary traffic control devices, to correct all traffic control deficiencies, if possible, or immediately contact someone else to make corrections and to assist with directing traffic until such corrections are made, at intervals not to exceed 4 hours. This person shall list every inspection on an inspection form, furnished by the Engineer, and shall return a completed form on the first working day after the inspections are made.

The Contractor shall supply a telephone staffed on a 24-hour-a-day basis to receive any notification of any deficiencies regarding traffic control and protection or receive any request for improving, correcting or modifying traffic control, installations or devices, including pavement markings. The Contractor shall dispatch additional men, materials and equipment as necessary to begin to correct, improve or modify the traffic control as directed, within one hour of notification by this surveillance person or by the Department. Upon completion of such corrections and/or revisions, the Contractor shall notify the Department's Communication Center at (847) 705-4612.

Method of Measurement: Traffic Control Surveillance will be measured on calendar day basis. One calendar day is equal to a minimum of six (6) inspections. The inspections shall start within 4 hours after the lane is closed to traffic or a hazard exists within 10 foot from the edge of pavement and shall end when the lane closure or hazard is removed.

Basis of Payment: Surveillance will be paid for at the contract unit price per calendar day or fraction thereof for TRAFFIC CONTROL SURVEILLANCE (EXPRESSWAYS). The price shall include all labor and equipment necessary to provide the required inspection and maintenance on the expressway and on all cross streets which are included in the project. The cost of the materials for the maintenance of traffic control devices shall be included in the traffic control pay items.

TRAFFIC CONTROL FOR WORK ZONE AREAS

Effective: 9/14/95 Revised: 1/30/03

Work zone entry and exit openings shall be established daily by the Contractor with the approval of the Engineer. All vehicles including cars and pickup trucks shall exit the work zone at the exit openings. All trucks shall enter the work zone at the entry openings. These openings shall be signed in accordance with the details shown elsewhere in the plans and shall be under flagger control during working hours.

The Contractor shall plan his trucking operations into and out of the work zone as well as on to and off the expressway to maintain adequate merging distance. Merging distances to cross all lanes of traffic shall be no less than 1/2 mile. This distance is the length from where the trucks enter the expressway to where the trucks enter the work zone. It is also the length from where the trucks exit the work zone to where the trucks exit the expressway. The stopping of expressway traffic to allow trucks to change lanes and/or cross the expressway is prohibited.

Failure to comply with the above requirements will result in a Traffic Control Deficiency charge. The deficiency charge will be calculated as outlined in the special provision for **"TRAFFIC CONTROL DEFICIENCY DEDUCTION"**. The Contractor will be assessed this daily charge for each day a deficiency is documented by the Engineer.

EMBANKMENT

Description. This work shall be according to Section 205 of the Standard Specifications and the Embankment requirements in the EXTENDED LIFE CONCRETE PAVEMENT (30 YEAR) special provision except for the following.

Material. Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present.

CONSTRUCTION REQUIREMENTS

Samples. Embankment material shall be sampled and tested before use. The contractor shall identify embankment sources, and provide equipment as the Engineer requires, for the collection of samples from those sources. Samples will be furnished to the Geotechnical Engineer a minimum of three weeks prior to use in order that laboratory tests for compaction can be performed. Embankment material placement cannot begin until tests are completed.

Placing Material. In addition to Article 202.03, broken concrete, reclaimed asphalt with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities shall be placed in 150 mm (6 in.) lifts and disked with the underlying lift until a uniform homogenous material is formed. This process also applies to the overlaying lifts. The disk must have a minimum of 600 mm (24 in.) diameter blade.

Compaction. Soils classification for moisture content control will be determined by the Soils Inspector using visual field examination techniques and the IDH Textural Classification Chart.

When tested for density in place each lift shall have a maximum moisture content as follows.

a) A maximum of 110 percent of the optimum moisture for all forms of clay soils.

b) A maximum of 105 percent of the optimum moisture for all forms of clay loam soils.

(CTE – 03/05/2004)

NON-SPECIAL WASTE WORKING CONDITIONS

This work shall be according to Article 669 of the Standard Specifications for Road and Bridge Construction adopted January 1, 2002 and the following:

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (LUST) cleanups or that is prequalified in hazardous waste by the Department. Documentation includes but not limited to verifying remediation and special waste operations for sites contaminated with gasoline, diesel, or waste oil in accordance with all Federal, State, or local regulatory requirements and shall be provided to the Engineer for approval.

General. Implementation of this Special Provision will likely require the Contractor to subcontract for the execution of certain activities. It will be the Contractor's responsibility to assess the working conditions and adjust anticipated production rates accordingly.

The Contractor shall manage all contaminated materials as non-special waste as previously identified. This work shall include monitoring and potential sampling, analytical testing, and management of petroleum contaminated material.

The Contractor shall excavate and dispose of any soil classified as a non-special waste as directed by this project or the Engineer. Any excavation or disposal beyond what is required by this project or the Engineer shall be at the Contractor's expense. The preliminary site investigation (PSI) report, available through the District's Environmental Studies Unit, estimated the excavation quantity of non-special waste at the following location. The information available at the time of plan preparation determined the limits of the contamination and the quantities estimated were based on soil excavation for construction purposes only. The lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit which ever is less. The Environmental Firm shall continuously monitor for worker protection and the Contractor shall manage and dispose of all soils excavated within the following areas as classified below. Any soil samples or analysis without the approval of the Engineer shall be at the Contractor's expense.

1. **LOCATIONS TO BE PROVIDED.**

REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS

This work must consist of removing and disposing of unsuitable materials encountered during construction. This work will include but not be limited to the removal and disposal of the top 6 in. of topsoil encountered within the construction limits of this contract as shown on the plans or directed by the engineer.

This work must be performed, measured and paid for in accordance with Article 202 of the Standard Specification.

SEEDING, CLASS 5 (MODIFIED) WILDFLOWERS

This work shall consist of preparing the seed bed, placing the seed and other materials required in the seeding operation in areas as shown in the plans.

All work, materials, and equipment shall conform to Sections 250 and 1081 of the Standard Specifications except as modified herein.

The Class 5 (Modified) seed mix shall be supplied in separate bags of the three mix components: Temporary Cover, Permanent Grass, and Wildflower. All native species will be local genotype and will be from a radius of 150 miles from the site. The Class 5 (Modified) seed mix shall be supplied with the appropriate innoculants. Fertilizer is not required.

Article 250.07 Seeding Mixtures – Add the following to Table 1:

Temporary Cover for all mixtures shall be 50 Bulk Pounds/Acre of Winter Wheat.

Class 5 (Modified) Black-eyed Susans

Permanent Grass:
Andropogan scoparius (Big Bluestem) 5 Pure Live Seed Pounds/Acre

Wildflower:
Rudbeckia hirta (Black Eyed Susans) 2 Pure Live Seed Pounds/Acre

Class 5 (Modified) Milkweed

Permanent Grass:
Panicum virgatum (Switch Grass) 2 Pure Live Seed Pounds/Acre

Wildflower:
Asclepias incarnata (Swamp Milkweed) 4 Pure Live Seed Pounds/Acre

Notes:
1. The seeding time for this work shall be October 15 through December 15. Seeding done outside of this time frame will not be measured for payment.
2. The seedbed shall be prepared and approved by the Engineer prior to seeding. The Contractor shall delineate the perimeter of the seedbed with wooden lathe. The wooden lathe shall remain in place.
3. The Winter Wheat shall be thoroughly mixed with the Permanent Grass seed and seeded first using a mechanical seeder that applies the seed uniformly at a depth of ¼ inch. Second, the Wildflower seed shall be thoroughly mixed with 2 bushels of moistened horticultural grade vermiculite per acre and uniformly seeded at a depth of 1/8 inch. The seedbed shall be immediately mulched as specified and lightly compacted with a roller.
4. Purity and germination tests no older than twelve months old must be submitted for all seed supplied to verify quantities of bulk seed required to achieve KG PLS (LB PLS) specified.

If specified seed material is unavailable, the Engineer shall approve the substitutes. Adjustments will be made at no cost to the contract. Approval of substitutes shall in no way waive any requirements of the contract.

Article 250.09 – Add Seeding, Class 5 (Modified) Wildflowers

Article 250.10 – Add Seeding, Class 5 (Modified) Wildflowers

MOWING

Description: This work shall consist of mowing existing grass cover not disturbed by the project or areas that are seeded or sodded. The grass shall be cut to a height of 3 inches. All areas shall be mowed when the height of the grass 6 inches or when directed by the engineer. This work shall be done according to the applicable portions of Section 250.06 of the Standard Specification for Road and Bridge Construction.

The Method of Measurement and Basis of Payment will be according to Section 250.09 and 250.10 of the Standard Specification book

(District 1 05/07/04)

EXCELSIOR BLANKET, SPECIAL

Description. This work shall consist of furnishing and installing an excelsior blanket for use in corner gardens as specified in Article 251.04 of the Standard Specifications, with the following revisions:

Knitted Straw Blanket will not be allowed.

(CTE – 03/07/2004)

CLEARING, TREE REMOVAL AND PROTECTION, CARE AND REPAIR OF EXISTING PLANT MATERIAL

Revise Section 201.01 (a) to read:

(a) Clearing. Clearing shall consist of the removal and disposal of all obstructions such as fences, walls, foundations, buildings, accumulations of rubbish of whatever nature and existing structures, the removal of which is not otherwise provided for in Article 501.05; all logs, shrubs, bushes, saplings, grass, weeds, other vegetation and stumps.

(CTE – 03/07/2004)

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS

Effective: April 1, 2001

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 coarse 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, commercial entrance, or road 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.

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."

EXTENDED LIFE CONCRETE PAVEMENT (30 YEAR)

Description. This work shall consist of constructing concrete pavement, shoulders and appurtenances of an extended life (30 year) design. Work shall be performed according to the Standard Specifications except as modified herein:

Definitions.

a) Granular Subbase. The aggregate above the subgrade and below the granular subbase cap.

b) Granular Subbase Cap. The aggregate above the granular subbase and below the bituminous concrete base.

c) Bituminous Concrete Base. The bituminous concrete layer above the granular subbase cap and below the pavement.

Embankment. Add the following to Section 205:

"Embankment material shall be approved by the Engineer and shall have a standard laboratory density of not less than 90 lb/cu ft. It shall not have an organic content greater than ten percent when tested according to AASHTO T 194. Soils that demonstrate the following properties shall be restricted to the interior of the embankment:

a) A grain size distribution with less than 35 percent passing the #200 sieve.

b) A plasticity index (PI) of less than 12.

c) A liquid limit (LL) in excess of 50.

d) Potential for erosion.

e) Potential for excess volume change.

Such soils shall be covered on the side and top with a minimum of 3 ft of soil not characterized by any of the five items above."

Revised the second paragraph of Article 205.05 to read:

"All lifts shall be compacted to not less than 95 percent of the standard laboratory density."

Revise the first sentence of the third paragraph of Article 205.05 to read:

"The embankment shall not contain more than 110 percent of the optimum moisture content determined according to AASHTO T 99 (Method C)."

Subgrade Preparation. Add the following to the second paragraph of Article 301.06:
During compaction, the upper 8 in. of the subgrade shall not contain more than 110 percent of the optimum moisture content determined according to AASHTO T 99 (Method C)."

Granular Subbase and Granular Subbase Cap. Revise Article 311.02 to read:

"311.02 Materials. Materials shall meet the requirements of the following Articles of Section 1000 – Materials:
a) Granular Subbase (Note 1) 1004.04
b) Granular Subbase Cap (Note 2) 1004.04

Note 1. The quality requirements in Article 1004.04 (b) shall not apply. The granular subbase shall be subbase granular material Type B, shall be classified as Category III in the Aggregate Gradation Control System (AGCS), and shall meet the following gradation requirements:

Granular Subbase Gradations						
Coarse Aggregate Type	Sieve Size Percent Passing					
	8 in.	6 in.	4 in.	2 in.	#4	#200
Crushed Stone, Crushed Slag, and Crushed Concrete	100	97 ± 3	90 ± 10	45 ± 25		5 ± 5
Crushed Gravel		100	90 ± 10	55 ± 25	30 ± 20	5 ± 5

The granular subbase shall be well-graded from coarse to fine. Material that is gap-graded or single-sized will not be accepted.

Note 2. The granular subbase cap shall be subbase granular material, Type B and shall be CA 6 gradation." Reclaimed Asphalt Pavement (RAP) meeting Article 1004.07 of the Standard Specifications and having 100% passing the 3 inches sieve and well-graded down through fines may also be used as capping aggregate. RAP shall not contain steel slag or other expansive material. The results of the Department's tests on the RAP material will be the determining factor for consideration as expansive.

Add the following to Article 311.03:

"(h) Vibratory Roller ..... 1101.01 (g)"

Revise Article 311.05(c) to read:

"(c) Subbase Granular Material, Type B. The manner of placing and compacting the material shall be approved by the Engineer prior to starting the work.

The Granular subbase shall be constructed in layers not more than 2 ft thick when compacted. Each layer shall be compacted with a vibratory roller to the satisfaction of the Engineer.

After completion of the granular subbase, the granular subbase cap shall be placed. Each layer shall be compacted with a vibratory roller to the satisfaction of the Engineer.

If the moisture content of the material is insufficient to obtain satisfactory compaction, sufficient water shall be added, at the Contractors expense, so that satisfactory compaction can be obtained."
Revise that first sentence of the first paragraph of Article 311.08 (b) to read:

"Aggregate used in the granular subbase and granular subbase cap will be measured for payment in square meters (square yards)."

Bituminous Concrete Base. This work shall be performed according to the special provision, "Superpave Bituminous Concrete Mixtures. The mixture used shall be the Superpave IL-19.0, N50, 3.0% voids.

Pavement and Shoulders. Add the following to Articles 420.03, 421.03, and 483.03:

"The Contractor shall submit to the Engineer, for approval before paving, the proposed internal type vibrator spacing for the paver. The Contractor shall also provide the proposed vibrator operating frequencies for a paving speed greater than or equal to 3 ft./min and a paving speed less than 3 ft/min."

Portland Cement Concrete. Revise Article 1020.02 (d) to read:

"(d) Coarse Aggregate (Note 1) .....1004.01 – 1004.02"
Add the following to Article 1020.02:

"Note 1. For pavement, median, curb, gutter, combination curb and gutter and concrete barrier, the freeze-thaw rating expansion limit for the coarse aggregate shall be a maximum of 0.040 percent according to Illinois Modified AASHTO T 161, Procedure B."

Revise the curing table of Article 1020.13 as follows:

"The curing period for pavement, median, curb, gutter and combination curb and gutter shall be a minimum of 7 days."

Revise the first sentence of the second paragraph of Article 1020.13 (a)(4) to read:

"Membrane curing shall be completed within ten minutes after tining."

Add the following to Article 1020.14(a):

"Prior to placing concrete, the Contractor shall indicate to the Engineer how the temperature of the concrete mixture will be controlled. If the temperature requirements are not being met,

production of concrete shall stop until corrective action is taken. The Contractor shall be allowed to deliver concrete already en route to the paving site."

(CTE – 02/20/2004)

TYPE A FINAL FINISH OF PORTLAND CEMENT CONCRETE PAVEMENT WITH VARIABLY SPACED TINING

Revised: October 4, 2002

Revise the third paragraph of Article 420.11(e)(1) of the Standard Specifications to read:

"The metal comb shall consist of a single line of tempered spring steel tines variably spaced between 17 mm (11/16 in.) and 54 mm (2 1/8 in.) as shown in the table below, securely mounted in a suitable head. The tines shall be flat and of a size and stiffness sufficient to produce a groove of the specified dimensions in the plastic concrete without tearing of the pavement edge or surface. The Contractor shall modify the equipment or operations if an acceptable pavement or surface is not produced. The mechanically operated metal comb shall be attached to an exclusive piece of equipment, which is mechanically self-propelled and capable of traversing the entire pavement width being placed in a single pass. The artificial turf carpet drag may be attached to this piece of equipment provided a surface texture is produced satisfactory to the Engineer. The tining device shall be operated so as to produce a pattern of grooves at a 1:6 skew across the pavement, 3 to 5 mm (1/8 to 3/16 in.) deep and 2.5 to 3.2 mm (1/10 to 1/8 in.) wide. No other operation will be permitted with this equipment. Separate passes will be required for the turf dragging operation and the tining operation.

Metal Comb Tine Spacing (Metric, Center to Center of Tines, mm)

34	36	47	54	48	43	32	31	27	36	29	46
21	43	23	42	52	24	18	28	40	34	27	26
25	27	20	37	38	52	51	45	37	43	53	27
37	42	41	29	43	45	44	30	37	33	40	28
31	50	34	45	20	45	50	53	51	29	25	18
53	18	38	51	40	17	49	50	39	51	36	36
38	46	29	38	50	24	33					

Metal Comb Tine Spacing (English, Center to Center of Tines, in.)

1 5/16	1 7/16	1 7/8	2 1/8	1 7/8	1 11/16	1 1/4	1 1/4	1 1/16
1 7/16	1 1/8	1 13/16	13/16	1 11/16	7/8	1 5/8	2 1/16	15/16
11/16	1 1/8	1 9/16	1 5/16	1 1/16	1	1	1 1/16	13/16
1 7/16	1 1/2	2 1/16	2	1 3/4	1 7/16	1 11/16	2 1/16	1 1/16
1 7/16	1 5/8	1 5/8	1 1/8	1 11/16	1 3/4	1 3/4	1 3/16	1 7/16
1 5/16	1 9/16	1 1/8	1 1/4	1 15/16	1 5/16	1 3/4	13/16	1 3/4
1 15/16	2 1/16	2	1 1/8	1	11/16	2 1/16	11/16	1 1/2
2	1 9/16	11/16	1 15/16	1 15/16	1 9/16	2	1 7/16	1 7/16
1 1/2	1 13/16	1 1/8	1 1/2	1 15/16	15/16	1 5/16"		

TEMPORARY PAVEMENT

Description: This work shall consist of constructing a temporary pavement at the locations shown on the plans or as directed by the engineer.

The contractor shall use either portland cement concrete as outlined in Section 353 and 354 of the Standard Specifications or bituminous concrete according to Section 355, 356, 406 of the Standard Specifications, and the special provisions for Bituminous Base Course/Widening Superpave and Superpave Bituminous Concrete Mixtures. The bituminous mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both portland cement concrete and bituminous concrete are shown in the plans.

Articles 355.10 and 406.21 of the Standard Specifications shall not apply.

The removal of the Temporary Pavement shall conform to Section 440 of the Standard Specifications.

Method of Measurement: Temporary pavement will be measured in place and the area computed in square meters (square yards).

Basis of Payment: This work will be paid for at the contract unit price per square meter (square yard) for TEMPORARY PAVEMENT and TEMPORARY PAVEMENT (INTERSTATE).

Removal of temporary pavement will be paid for according to Article 440.08.

TEMPORARY PAVEMENT, 10" (SPECIAL)

Description. This work shall consist of constructing a temporary pavement at the locations shown on the plans or as directed by the engineer.
The contractor shall construct temporary bituminous pavement as outlined in Special Provisions SUPERPAVE BITUMINOUS CONCRETE MIXTURES (BDE) except the compacted lift thickness for constructing bituminous concrete binder IL-25 shall be 5 inches.

Articles 355.10 and 406.21 shall not apply.

The removal of the Temporary Pavement shall conform to Section 440 of the Standard Specification.

Method of Measurement. Temporary Pavement will be measured in place and the area computed in square meters (square yards).

Basis of Payment. This work will be paid for at the contract unit price per square meter (square yard) for TEMPORARY PAVEMENT, 10" (SPECIAL).
Removal of Temporary Pavement will be paid for at the unit contract price per square meter (square yard) for PAVEMENT REMOVAL.

(CTE – 05/07/2004)

WHITEWASHING FOR CONCRETE PAVEMENT

Description. This work shall consist of whitewashing the bituminous concrete base or bituminous stabilized subbase for portland cement concrete pavement and shoulders.

Materials. Materials shall meet the requirements of the following Articles of the Standard Specifications:

Item	Article/Section
(a) Water	1002
(b) Hydrated Lime	1012.01
(c) Calcium Carbonate Pigments	(Note 1)

Note 1. ASTM D-1199, Type GC or PC, Grade II or finer. Other materials or grades may be used with the approval of the Engineer provided the resulting coating is bright white and uniform in nature. By-product lime will not be allowed.

Equipment. Equipment shall be capable of mixing, continuously agitating, and applying the prepared solution in a uniform manner.

Construction Requirements. When the pavement or shoulders will be placed between May 15 and October 15, the surface of the bituminous concrete base or bituminous stabilized subbase underlying the pour shall be whitewashed. Whitewashing shall be completed prior to placing the reinforcing steel or load transfer devices. Whitewashing shall not be applied when rain is imminent.

The whitewash shall be prepared by combining two parts water to one part pigment by weight. The ingredients shall be mixed until smooth in consistency and free of lumps. If sufficient coating can be demonstrated, the ratio may be increased up to three parts water to one part pigment by weight with the approval of the Engineer. After mixing, the whitewash shall be continually agitated until applied.

The whitewash shall be uniformly applied to the entire bituminous concrete base or bituminous stabilized subbase at a rate of 0.075 gal/sq yd. The method of application shall be approved by the Engineer. Thick films from spills or over-application shall be removed by means that does not damage the base or subbase.

If a truck is used to apply the whitewash, a medium to long nap carpet shall be dragged behind the spray bar. The carpet shall be pre-dampened with whitewash and sufficiently weighted to ensure uniform application.

Once the whitewash coating is applied, it shall be maintained until placement of the reinforcing steel, load transfer devices or pavement.

Method of Measurement. This work will be measured for payment in place and the area computed in square meters (square yards). The measurements will be made along the top of bituminous concrete base or bituminous stabilized subbase whitewashed.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square yard) for WHITEWASHING FOR CONCRETE PAVEMENT.

(CTE – 02/20/2004)

APPROACH SLAB REMOVAL

This work shall consist of the complete removal of existing approach slabs including bituminous overlays, reinforcing bars, and sleeper slabs, at locations designated in the plans and in accordance with the applicable portions of Sections 440 and 501 of the Standard Specifications.

This work shall also include the removal of existing timber piles and pile caps to at least 300mm (1 ft) below the proposed elevation of subgrade or ground surface within the area of construction and within the limits of the right of way. This work shall also include the removal of any mud jack cylinders encountered within the existing approach slabs.

The Contractor shall remove the existing approach slabs in a manner so as not to damage the adjacent structures that are to remain.

Basis of Payment. This work will be paid for at the contract unit price per square yard for APPROACH SLAB REMOVAL, which price shall include all labor and equipment necessary to remove and dispose of the entire approach slab pavement.

(CTE – 02/20/2004)

COMBINATION CONCRETE CURB AND GUTTER

Description. This work shall consist of constructing combination concrete curb and gutter in accordance with Section 606 of the Standard Specifications, IDOT Highway Standard 606001, details in the plans, and to the lines, grades and cross sections shown on the plans and as directed by the Engineer.

Measurement and Payment. The work will be measured for payment at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MODIFIED); COMBINATION CONCRETE CURB AND GUTTER, TYPE B-V.12; COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.48 (MODIFIED); CONCRETE CURB AND GUTTER, TYPE M-4.24 (MODIFIED); COMBINATION CONCRETE CURB AND GUTTER, (SPECIAL) which price will be considered payment in full to perform the work as specified.

(CTE – 10/19/2004)

CONCRETE CURB, TYPE B (SPECIAL)

Description. This work shall be constructed in accordance with Section 606 of the Standard Specifications, State Standard 606001, special drawings in the plans, and to the lines, grades and cross section shown on the plans and as directed by the Engineer.

Method of Measurement. Tie Bars will not be measured for payment.

Measurement and Payment. The work will be measured for payment at the contract unit price per foot for CONCRETE CURB, TYPE B (SPECIAL).

(CTE – 03/10/2004)

CONCRETE MEDIAN SURFACE, 5" (MODIFIED)

Description. This work shall consist of the construction of concrete median as specified in Section 606 of the Standard Specifications with the following revisions:

606.10 Finishing. Revise the first sentence of the first paragraph to read:

All exposed surfaces shall be finished with a California Trowel Finish as shown in the details in the plans.

Basis of Payment. Concrete median as specified herein will be paid for at the contract unit price per square foot for CONCRETE MEDIAN SURFACE, 5" (MODIFIED).

(CTE – 02/20/2004)

CONCRETE MEDIAN SURFACE, 6" (SPECIAL)

Description: This work shall consist of coloring, patterning, sealing, and placing concrete median surface at locations shown in the plans or as directed by the Engineer. This work will be in accordance with the applicable sections of Section 606 of the Standard Specification, except modified herein. This work is specialized concrete finishing work requiring experienced concrete finishers.

The concrete median surface shall be integrally colored brick red, patterned, and sealed in accordance with the following:

Materials. Materials for the concrete median surface shall meet the following requirements.

a) Integrally Colored Concrete. Integrally colored concrete shall be according to Section 1020 of the Standard Specification for Class SI concrete except as follows.

Article 1020.04	The allowable water/cement ratio range shall be 0.40 minimum to 0.44 maximum.
Article 1020.04	The allowable slump range shall be 75 mm (3 in.) minimum to 125 mm (5 in.) maximum.
Article 1020.04	The allowable coarse aggregate gradations shall be CA 11, CA 13, CA 14, and CA 16.
Article 1020.05(b)	A calcium chloride accelerating admixture shall not be used.
Article 1020.05(b)	The cement factor shall not be reduced if a water-reducing or high range water-reducing admixture is used.
Article 1020.05(c)	Fly ash shall not be used.
Article 1020.05(k)	Ground granulated blast-furnace slag shall not be used.

Article 1020.11 Pigment for integrally colored concrete shall be added to the concrete and mixed per the Manufacturer's recommendation.

Article 1020.13 The curing method shall be Type I membrane curing.

Article 1020.13. The protection method shall be according to Article 1020.13(e)(1) and the protection period shall be 96 hours. No material, including the insulating material, shall be placed in direct contact with the concrete surface.

(b) Pigment for Integrally Colored Concrete. The pigment shall meet the requirements of ASTM C 979, match color number 30166 of Federal Standard 595, and be on the Department's Approved List of Pigments for Integrally Colored Concrete. The color shall meet the approval of the District One Landscape Architect, Rick Wanner (847-705-4171) prior to ordering.

(c) Release Agent for Concrete Stamping Tools. The release agent shall be according to the stamping tool manufacturer's recommendations and shall be a medium gray liquid that will evaporate. It shall not harm the concrete, and it shall allow the application of Type I membrane curing. The releasing agent shall meet the approval of the District One Landscape Architect, Rick Wanner (847-705-4171) prior to ordering

Patterning for the Concrete Median Surface 6" (Special) shall be stamped into the concrete median surface. The texture shall be applied in a running bond brick pattern in a direction perpendicular to the mainline travel lanes. The size of the bricks used in the pattern shall be approximately 4" wide by 8"long (+/-1/2). The brick pattern shall be approved by the District One Landscape Architect, Rick Wanner (847-705-4171) prior to ordering. Application shall be done in accordance to the manufacture's recommendations.

(e) The tamper shall be according to the manufacturer's recommendations for the brick pattern being used.

Sealer. A lacquer base acrylic sealer shall be applied to the surface with three (3) light even coats of a premium stain resistant waterbase. Application shall be done in accordance to the manufacture's recommendations.

CONSTRUCTION REQUIREMENTS

Stamping. The concrete shall be placed and finished according to Article 424.06 except the area to be stamped shall not be brushed. When the bleed water has been absorbed, stamping shall begin. The entire width of the concrete median surface shall be stamped at the same time. A single stamp or a combination of stamps may be used.

Prior to placing the stamp on the concrete, the stamp shall be coated with the release agent. When recommended by the manufacturer, the release agent shall also be applied to the concrete surface. Once the stamp has been placed on the concrete median surface, it shall remain down until the stamping is complete.
The entire area of the stamp shall be tamped with a short, slow, repetitive action such that the depth of the stamped area between the bricks shall be 1/2 inch to 5/8 inch. The surface of the concrete pattern shall be high enough so that water will drain out of the groves between the brick patterns. Stepping or walking on the stamp will not be allowed.

When stamping is complete, the stamp shall be removed and the concrete cured.

Method of Measurement: Concrete median surface, 6" (Special) will be measured for payment in place, and the area computed in square feet.

Basis of Payment: This work will be paid for at the contract unit price per square foot for CONCRETE MEDIAN SURFACE, 6" (SPECIAL).

(District 1 01/15/04)

CONCRETE BARRIER

Revise Section 637 of the Standard Specifications to read:

"**SECTION 637. CONCRETE BARRIER**

637.01 Description. This work shall consist of constructing a concrete barrier and its base.

637.02 Materials. Materials for concrete barrier and concrete base shall conform to the requirements of the following Articles of Section 1000 - Materials:

Item	Article/Section
(a) Portland Cement Concrete	1020
(b) Tie Bars (Note 1)	1006.10(a)(b)
(c) Dowel Bars	1006.11(b)
(d) Protective Coat	1023
(e) Non-Shrink Grout	1024
(f) Chemical Adhesive	1027
(g) Preformed Expansion Joint Filler	1051.01 – 1051.08

Note 1. Tie bars shall be Grade 400 (Grade 60).

The coarse aggregate to be used in the concrete barrier walls shall conform to the requirements for the coarse aggregate that is used for superstructure concrete.

Materials for bituminous concrete base shall conform to the requirements of Article 356.02.

637.03 Equipment. Equipment for concrete barrier shall conform to the requirements of the following Articles of Section 1100 - Equipment:

Item	Article/Section
(a) Hand Vibrator	1103.17(a)
(b) 3 m (10 ft) Straightedge	1103.17(h)

Equipment for portland cement concrete base shall conform to the requirements of Article 483.03.

Equipment for bituminous concrete base shall conform to the requirements of Article 356.03.

CONSTRUCTION REQUIREMENTS

637.04 Barrier Base. The base may be constructed separately or poured monolithically with the barrier. When constructed separately, portland cement concrete base shall be constructed according to Articles 483.04 – 483.06, except the surface shall be finished according to Article 503.09(a). Bituminous concrete base shall be constructed according to Articles 356.05 and 356.06.

637.05 Anchoring. Barrier shall be anchored to the base by the methods shown on the plans. When tie bars are used, they shall be installed in preformed or drilled holes with a non-shrink grout or chemical adhesive.

637.06 Barrier Construction. Concrete barrier shall be constructed according to the applicable portions of Articles 503.06 and 503.07. Where the horizontal alignment of the concrete barrier is curved, the barrier shall be constructed either on the curved alignment or on cords not more than 3 m (10 ft) in length.

When slipformed, the vertical centerline of the barrier shall not vary from the proposed centerline by more than 75 mm (3 in.) nor by more than 13 mm in 3 m (1/2 in. in 10 ft). All surfaces shall be checked with a 3 m (10 ft) straightedge as the concrete exits the slipform mold. Surface irregularities greater than 10 mm in 3 m (3/8 in. in 10 ft) shall be corrected immediately. Continued variations in the barrier surface exceeding 6 mm in 3 m (1/4 in. in 10 ft) will not be permitted and remedial action shall immediately be taken to correct the problem. Any deformations or bulges remaining after the initial set shall be removed by grinding after the concrete has hardened. All holes and honeycombs shall be patched immediately.

637.07 Barrier Transitions. Transitions between barriers of different design shall be constructed according to the details shown on the plans.

637.08 Joints. Joints shall be constructed as shown on the plans and as follows:

(a) Construction Joints. Construction joints shall be constructed in the barrier whenever there is an interruption in the pour of more than 30 minutes.

(b) Expansion Joints. Expansion joints shall be constructed in the barrier and the base in line with expansion joints in the adjacent pavement or shoulder. Expansion joints shall also be constructed at locations where the barrier abuts a rigid structure.

Prior to placing concrete, a light coating of oil shall be uniformly applied to the dowel bars.

(c) Contraction Joints. Contraction joints shall be constructed in the barrier at uniform intervals with a maximum spacing of 6 m (20 ft) or in line with contraction joints in the adjacent pavement or shoulder. Contraction joints shall be formed by a groove 3 mm (1/8 in.) wide by 50 mm (2 in.) deep either formed in the plastic concrete or sawed after the concrete has set.

637.09 Finishing. The surface of concrete barrier shall be finished according to Article 503.16(a).

637.10 Protective Coat. When required, the top and vertical surfaces of the barrier exposed to traffic shall receive a protective coat. The application of the protective coat shall be according to Article 420.21.

637.11 Method of Measurement. This work will be measured as follows:

(a) Contract Quantities. The requirements for the use of contract quantities shall be according to Article 202.07(a).

(b) Measured Quantities. New barrier base, both separate and monolithic, will be measured for payment in meters (feet) in place, along the centerline of the base or barrier. The width of the base will be defined as the width of the barrier.

Concrete barrier will be measured for payment in meters (feet) in place, along the centerline of the barrier.

Barrier transitions will be measured for payment in meters (feet) in place, along the centerline of the transition.

Protective coat will be measured for payment according to Article 420.22(b).

637.12 Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for BARRIER BASE; CONCRETE BARRIER, DOUBLE FACE, of the height specified; CONCRETE BARRIER, SINGLE FACE, of the height specified; CONCRETE BARRIER TRANSITION and CONCRETE BARRIER (SPECIAL), as specified in the plans.

Protective coat will be paid for according to Article 420.23."

(CTE – 03/18/2004)

FURNISH TEMPORARY CONCRETE BARRIER

Description. This work must consist of furnishing and placing temporary concrete barrier at locations shown on the plans or as directed by the Engineer.

This work must be in performed, measured and paid for in accordance with Section 704 of the Standard Specifications with the following revisions:

"704.03 General. The temporary concrete barrier will remain after the contract is complete."

Basis of Payment. Temporary concrete barrier as specified herein will be paid for at the contract unit price per foot for FURNISH TEMPORARY CONCRETE BARRIER.

(CTE – 07/23/2004)

POROUS GRANULAR EMBANKMENT, SPECIAL

Description. This work shall consist of the furnishing, transporting and placing a 6" minimum thickness layer of compacted, porous granular embankment material, beneath retaining wall footings, at locations as shown in the plans.

Materials. All materials shall meet the requirements of Article 207.02 (a) of the Standard Specifications for Porous Granular Embankment. The coarse aggregate gradation shall be CA – 5, 7, 8, 13, 14 or 15.

Construction Requirements. Backfilling shall be as detailed in the plans, conform to Article 207.03 of the Standard Specifications for Porous Granular Embankment, and as directed by the Engineer.

Method of Measurement. Backfill shall be Porous Granular Embankment, Special, measured for payment in conformance with Section 207 of the Standard Specifications. Limits of backfilling shall be as shown in the plans, described herein and as directed by the Engineer.

Basis of Payment. This item will be paid for at a contract unit price per cubic yard for POROUS GRANULAR EMBANKMENT, SPECIAL, as detailed in the plans and described herein.

BRIDGE APPROACH PAVEMENT (SPECIAL)

This work shall be done in accordance with Section 420 of the Standard Specifications, Highway Standard 420401 and as shown on the plans and as directed by the Engineer.

This work will be paid at the contract unit price per square yard for BRIDGE APPROACH PAVEMENT (SPECIAL) which price shall include concrete, reinforcement bars and expansion joint filler and sealer, and all labor for completing the work.

(Louis Berger – 03/12/2004)

REMOVAL OF EXISTING STRUCTURES NO. 1

Description. This work shall consist of the complete removal of partial lengths of existing Retaining Wall W-3 located along South Wells Street and the Dan Ryan Expressway (I-90/94) between 63rd Street and 59th Street to the limits shown in the plans. The work includes excavation, removal of existing concrete, reinforcing steel and miscellaneous steel embedded or attached thereto including electrical conduits, fencing or railings, at the locations designated in the plans and in accordance with Section 501 of the Standard Specifications.

Backfilling is not included with this work. Backfilling will be completed as a separate pay item in accordance with Section 207 of the Standard Specifications for Porous Granular Embankment.

This work shall also include the removal of any existing piles to at least 1 foot below the elevation of the bottom of new footings within the limits shown on the plans. If existing piles are to be incorporated into new construction, the locations of pile cut-offs shall be as designated in the individual retaining wall plans and as determined by the Engineer to avoid any conflict with the work proposed in the plans. If existing piles that are to remain are found to be in conflict with proposed piles for new construction, the existing piles in conflict shall be removed in accordance with the Special Provision for Pile Extraction.

This work shall also include the de-energizing of any electrical conduits embedded within or attached to the existing retaining wall prior to their removal.

Method of Measurement. This work will be measured for payment in units of each at the location designated on the plans for Removal of Existing Structures No. 1.

Removal and disposal of all fence, chain link fence, guard rail, or 3 line cable shoulder protection, posts, conduits and connecting hardware associated with the Removal of Existing Structures No. 1, will not be measured separately for payment.

Any existing piles which are to be removed and not cut-off will be measured for payment in accordance with the Special Provision for Pile Extraction.

Basis of Payment. This work will be paid for at the contract price per each for REMOVAL OF EXISTING STRUCTURES NO. 1.

All partial removals of top of existing retaining walls to the limits shown on the plans will be paid for at the contract unit price for CONCRETE REMOVAL in accordance with Section 501 of the Standard Specifications.

Backfilling will be paid for separately in accordance with Section 207 of the Standard Specifications for POROUS GRANULAR EMBANKMENT.

(CTE – 10/25/2004)

REMOVAL OF EXISTING STRUCTURES NO. 2

Description. This work shall consist of the complete removal of partial lengths of existing Retaining Wall W-1 located along South Wells Street and the Dan Ryan Expressway (I-90/94) between 63rd Street and 59th Street to the limits shown in the plans. The work includes excavation, removal of existing concrete, reinforcing steel and miscellaneous steel embedded or attached thereto including electrical conduits, fencing or railings, at the locations designated in the plans and in accordance with Section 501 of the Standard Specifications.

Backfilling is not included with this work. Backfilling will be completed as a separate pay item in accordance with Section 207 of the Standard Specifications for Porous Granular Embankment.

This work shall also include the removal of any existing piles to at least 1 foot below the elevation of the bottom of new footings within the limits shown on the plans. If existing piles are to be incorporated into new construction, the locations of pile cut-offs shall be as designated in the individual retaining wall plans and as determined by the Engineer to avoid any conflict with the work proposed in the plans. If existing piles that are to remain are found to be in conflict with proposed piles for new construction, the existing piles in conflict shall be removed in accordance with the Special Provision for Pile Extraction.

This work shall also include the de-energizing of any electrical conduits embedded within or attached to the existing retaining wall prior to their removal.

Method of Measurement. This work will be measured for payment in units of each at the location designated on the plans for Removal of Existing Structures No. 2.

Removal and disposal of all fence, chain link fence, guard rail, or 3 line cable shoulder protection, posts, conduits and connecting hardware associated with the Removal of Existing Structures No. 2, will not be measured separately for payment.

Any existing piles which are to be removed and not cut-off will be measured for payment in accordance with the Special Provision for Pile Extraction.

Basis of Payment. This work will be paid for at the contract price per each for REMOVAL OF EXISTING STRUCTURES NO. 2.

All partial removals of top of existing retaining walls to the limits shown on the plans will be paid for at the contract unit price for CONCRETE REMOVAL in accordance with Section 501 of the Standard Specifications.

Backfilling will be paid for separately in accordance with Section 207 of the Standard Specifications for POROUS GRANULAR EMBANKMENT.

(CTE – 10/25/2004)

REMOVAL OF EXISTING STRUCTURES NO. 3

Description. This work must consist of the complete removal of partial lengths of existing Retaining Wall E-4 located along South Wentworth Avenue and the Dan Ryan Expressway (I-90/94) between 63rd Street and 59th Street to the limits shown in the plans. The work includes excavation, removal of existing concrete, reinforcing steel and miscellaneous steel embedded or attached thereto including electrical conduits, fencing or railings, at the locations designated in the plans and in accordance with Section 501 of the Standard Specifications.

Backfilling is not included with this work. Backfilling will be completed as a separate pay item in accordance with Section 207 of the Standard Specifications for Porous Granular Embankment.

This work must also include the removal of any existing piles to at least 1 foot below the elevation of the bottom of new footings within the limits shown on the plans. If existing piles are to be incorporated into new construction, the locations of pile cut-offs must be as designated in the individual retaining wall plans and as determined by the Engineer to avoid any conflict with the work proposed in the plans. If existing piles that are to remain are found to be in conflict with proposed piles for new construction, the existing piles in conflict must be removed in accordance with the Special Provision for Pile Extraction.

This work must also include the de-energizing of any electrical conduits embedded within or attached to the existing retaining wall prior to their removal.

Method of Measurement. This work will be measured for payment in units of each at the location designated on the plans for Removal of Existing Structures No. 3.

Removal and disposal of all fence, chain link fence, guard rail, or 3 line cable shoulder protection, posts, conduits and connecting hardware associated with the Removal of Existing Structures No. 3, will not be measured separately for payment.

Any existing piles which are to be removed and not cut-off will be measured for payment in accordance with the Special Provision for Pile Extraction.

Basis of Payment. This work will be paid for at the contract price per each for REMOVAL OF EXISTING STRUCTURES NO. 3.

All partial removals of top of existing retaining walls to the limits shown on the plans will be paid for at the contract unit price for CONCRETE REMOVAL in accordance with Section 501 of the Standard Specifications.

Backfilling will be paid for separately in accordance with Section 207 of the Standard Specifications for POROUS GRANULAR EMBANKMENT.

(CTE – 10/25/2004)

REMOVAL OF EXISTING STRUCTURES NO. 4

Description. This work must consist of the complete removal of partial lengths of existing Retaining Wall E-3 located along South Wentworth Avenue and the Dan Ryan Expressway (I-90/94) between 63rd Street and 59th Street to the limits shown in the plans. The work includes excavation, removal of existing concrete, reinforcing steel and miscellaneous steel embedded or attached thereto including electrical conduits, fencing or railings, at the locations designated in the plans and in accordance with Section 501 of the Standard Specifications.

Backfilling is not included with this work. Backfilling will be completed as a separate pay item in accordance with Section 207 of the Standard Specifications for Porous Granular Embankment.

This work must also include the removal of any existing piles to at least 1 foot below the elevation of the bottom of new footings within the limits shown on the plans. If existing piles are to be incorporated into new construction, the locations of pile cut-offs must be as designated in the individual retaining wall plans and as determined by the Engineer to avoid any conflict with the work proposed in the plans. If existing piles that are to remain are found to be in conflict with proposed piles for new construction, the existing piles in conflict must be removed in accordance with the Special Provision for Pile Extraction.

This work must also include the de-energizing of any electrical conduits embedded within or attached to the existing retaining wall prior to their removal.

Method of Measurement. This work will be measured for payment in units of each at the location designated on the plans for Removal of Existing Structures No. 4.

Removal and disposal of all fence, chain link fence, guard rail, or 3 line cable shoulder protection, posts, conduits and connecting hardware associated with the Removal of Existing Structures No. 4, will not be measured separately for payment.

Any existing piles which are to be removed and not cut-off will be measured for payment in accordance with the Special Provision for Pile Extraction.

Basis of Payment. This work will be paid for at the contract price per each for REMOVAL OF EXISTING STRUCTURES NO. 4.

All partial removals of top of existing retaining walls to the limits shown on the plans will be paid for at the contract unit price for CONCRETE REMOVAL in accordance with Section 501 of the Standard Specifications.

Backfilling will be paid for separately in accordance with Section 207 of the Standard Specifications for POROUS GRANULAR EMBANKMENT.

(CTE – 10/25/2004)

REMOVAL OF EXISTING STRUCTURES NO. 5

Description. This work must consist of the complete removal of existing Retaining Wall E-2 located along South Wentworth Avenue and the Dan Ryan Expressway (I-90/94) between 63rd and 59th Streets to the limits shown in the plans. The work includes excavation, removal of existing concrete, reinforcing steel and miscellaneous steel embedded or attached thereto including electrical conduits, fencing or railings, at the locations designated in the plans and in accordance with Section 501 of the Standard Specifications.

Backfilling is not included with this work. Backfilling will be completed as a separate pay item in accordance with Section 207 of the Standard Specifications for Porous Granular Embankment.

This work must also include the removal of any existing piles to at least 1 foot below the elevation of the bottom of new footings within the limits shown on the plans. If existing piles are to be incorporated into new construction, the locations of pile cut-offs must be as designated in the individual retaining wall plans and as determined by the Engineer to avoid any conflict with the work proposed in the plans. If existing piles that are to remain are found to be in conflict with proposed piles for new construction, the existing piles in conflict must be removed in accordance with the Special Provision for Pile Extraction.

This work must also include the de-energizing of any electrical conduits embedded within or attached to the existing retaining wall prior to their removal.

Method of Measurement. This work will be measured for payment in units of each at the location designated on the plans for Removal of Existing Structures No. 5.

Removal and disposal of all fence, chain link fence, guard rail, or 3 line cable shoulder protection, posts, conduits and connecting hardware associated with the Removal of Existing Structures No. 5, will not be measured separately for payment.

Any existing piles which are to be removed and not cut-off will be measured for payment in accordance with the Special Provision for Pile Extraction.

Basis of Payment. This work will be paid for at the contract price per each for REMOVAL OF EXISTING STRUCTURES NO. 5.

Backfilling will be paid for separately in accordance with Section 207 of the Standard Specifications for POROUS GRANULAR EMBANKMENT.

(CTE – 10/25/2004)

REMOVAL OF EXISTING STRUCTURES NO. 6

Description. This work must consist of the complete removal of partial lengths of existing Retaining Wall E-1 located along South Wentworth Avenue and the Dan Ryan Expressway (I-90/94) between 63rd Street and 59th Street to the limits shown in the plans. The work includes excavation, removal of existing concrete, reinforcing steel and miscellaneous steel embedded or attached thereto including electrical conduits, fencing or railings, within the limits shown in the plans and in accordance with Section 501 of the Standard Specifications.

Backfilling is not included with this work. Backfilling will be completed as a separate pay item in accordance with Section 207 of the Standard Specifications for Porous Granular Embankment.

This work must also include the removal of any existing piles to at least 1 foot below the elevation of the bottom of new footings within the limits shown on the plans. If existing piles are to be incorporated into new construction, the locations of pile cut-offs must be as designated in the individual retaining wall plans and as determined by the Engineer to avoid any conflict with the work proposed in the plans. If existing piles that are to remain are found to be in conflict with proposed piles for new construction, the existing piles in conflict must be removed in accordance with the Special Provision for Pile Extraction.

This work must also include the de-energizing of any electrical conduits embedded within or attached to the existing retaining wall prior to their removal.

Method of Measurement. This work will be measured for payment per each at the location designated on the plans for Removal of Existing Structures No. 6.

Removal and disposal of all fence, chain link fence, guard rail, or 3 line cable shoulder protection, posts, conduits and connecting hardware associated with the Removal of Existing Structures No. 6, will not be measured separately for payment.

Any existing piles which are to be removed and not cut-off will be measured for payment in accordance with the Special Provision for Pile Extraction.

Basis of Payment. This work will be paid for at the contract price per each for REMOVAL OF EXISTING STRUCTURES NO. 6.

All partial removals of top of existing retaining walls to the limits shown on the plans will be paid for at the contract unit price for CONCRETE REMOVAL in accordance with Section 501 of the Standard Specifications.

Backfilling will be paid for separately in accordance with Section 207 of the Standard Specifications for POROUS GRANULAR EMBANKMENT.

(CTE – 10/25/2004)

CONCRETE STRUCTURES

Description. This work shall consist of the construction of cast-in-place concrete structures, at locations as shown in the Plans, except as amended herein.

Materials. Revise Article 503.02 to include the following:

The coarse aggregate to be used in the concrete for the retaining wall stems shall conform to the requirements for the coarse aggregate that is used for superstructure concrete.

(CTE – 02/20/2004)

STRUCTURE EXCAVATION

Description. This work shall consist of the excavation required for the construction of all new structures including all bailing, draining, and pumping; and the disposal of all material obtained from such excavation in accordance with Section 502 of the Standard Specifications, and as directed by the Engineer, except as amended herein.

Backfilling is not included with this work. Backfilling will be completed as a separate pay item in accordance with Section 205, Embankment or Section 207, Porous Granular Embankment of the Standard Specifications.

Structure Excavation shall also include removal and disposal of miscellaneous items appurtenant to the excavation including but not limited to drainage system components and other conduits buried in the soil. Existing asbestos cement conduits, metal conduits, electrical wires, hand holes, etc. to be abandoned shall be removed as part of this work item. Electrical conduits shall be de-energized prior to removal.

The Contractor shall take all necessary precautions in removing, handling, transporting and subsequent disposal of all materials removed containing asbestos. All such work shall be performed in conformance with all governing laws, codes, ordinances or other regulations.

Existing Plans. Available plans for the existing roadways and structures involved in this work are scanned and provided as reference drawings For Information Only within the contract plan drawings. Microfilm prints of drawings may also be requested by the Contractor by sending his/her written request to the Chief of Bureau of Maintenance, Illinois Department of Transportation - District One, 201 West Center Court, Schaumburg, Illinois 60196. The Contractor shall make an appointment with at least 48 hours notice to view or retrieve available microfilm drawings of the existing roadways and structures. The completeness of these plans is not guaranteed and no responsibility is assumed by the Department for their accuracy. Information is furnished for whatever value may be derived by the Contractor, and is to be used solely at the Contractor's risk.

Construction Requirements.

Where new structures are to be constructed at the same location as existing structures, the porous granular embankment backfill shall be placed after construction of new structure or as necessary to sequence the construction of work as shown by the plans.

If encountered, asbestos cement conduits shall be wet saw-cut and removed.

All removed materials containing asbestos shall be stockpiled separately from other removed materials. All stockpiled materials containing asbestos shall be hauled to an approved landfill

disposal site. These materials shall be wetted down and covered with an approved wetting material while stockpiled and being hauled away in trucks to prevent debris or dust from entering into the atmosphere.

Under no circumstances will the disposed material containing asbestos be permitted for use in recycling. The Contractor shall keep records of removal, stockpiling, trucking and the landfill disposal site used, and submit such records to the Engineer.

Method of Measurement. Structure Excavation will be measured for payment in cubic yards according to Article 502.14 of the Standard Specifications.

Basis of Payment. This item will be paid for at a contract unit price per cubic yard for STRUCTURE EXCAVATION according to Article 502.15 and as detailed in the plans, described herein and as directed by the Engineer.

Backfilling will be paid for separately in accordance with Section 207 of the Standard Specifications for POROUS GRANULAR EMBANKMENT.

(CTE – 02/20/2004)

RUSTICATION FINISH FOR RETAINING WALLS

Description. This work consists of providing the forms, materials and rusticated finish on retaining walls, in accordance with the details shown in the plans and the Special Provisions.

Materials. Materials shall conform to Article 503.02; of the Standard Specification and includes the following:

The coarse aggregate to be used in the concrete for the rustication finish shall conform to the requirements for coarse aggregate in concrete superstructure.

CONSTRUCTION REQUIREMENTS

Forms shall be constructed so that the completed concrete structures conform to the shape, lines and dimensions of the members as shown on the plans. Forms shall be properly braced or tied together to maintain position and shape. Forms shall be made sufficiently tight to prevent leakage of mortar.

Formliners shall be used to obtain the rustication finish on the retaining walls. Formwork shall have the strength and stability to ensure finished concrete dimensions within the tolerances specified herein. The quality of the formwork shall be maintained throughout the entire project.

Variations in dimensions for the wall sections with a rustication finish shall be within the following tolerances: the width and depth of rustication joints shall be within 3 mm (1/8 inch) ±, the location of the rustication joints shall be within 13 mm (1/2 inch)±, the maximum variation of a joint from a straight line shall be 6 mm (1/4 inch)± in 3 meters (10 feet).

The Contractor shall submit proposed construction procedures for the rustication finish on both inside and outside face of retaining walls and parapets. The Contractor's method of obtaining the surface texture specified on the plans shall be subject to approval by the Engineer.

Upon approval of the construction procedures by the Engineer, the Contractor shall pour a 9 m (30 feet) long test section of retaining wall at a location directed by the Engineer. After removal of the formwork, the Engineer will examine the test section of the wall and instruct the Contractor if the rustication finish is acceptable or if future wall sections need further modifications. If necessary, the Contractor shall pour additional test sections of wall at locations designated by the Engineer until a wall section meets with the Engineer's approval. The rustication finish of all subsequently installed wall sections shall match the approved test section. The Contractor shall repair all deviations from the approved rustication finish to the satisfaction of the Engineer at no additional cost to the contract.

The Contractor shall notify the Engineer at least 40 hours prior to placing concrete. Concrete shall not be placed until the Engineer has inspected the formwork and the placement of reinforcing bars for compliance with the plans.

Method of Measurement. Rustication finish will be measured in place and the area computed in square meters (square feet). The dimensions used to compute the area of rustication will be the dimensions indicated on the plans or directed by the Engineer of the outline of the plane area. Measurement will not be made on the actual surface area of rustication finish.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square foot) for RUSTICATION FINISH, which price includes all work as specified herein.

(CTE – 02/20/2004)

PIPE UNDERDRAINS FOR STRUCTURES 6″

Description. This work shall consist of furnishing and installing the perforated drain pipe, geotechnical fabric and/or impervious geomembrane, and coarse aggregate as shown on the plans, as specified herein, and as directed by the Engineer.
Materials. Materials shall meet the requirements as set forth below:

Pipe underdrains shall consist of perforated drain pipe in accordance with Article 601.02 of the Standard Specifications. Outlet pipes shall not be perforated.

The coarse aggregate shall have a gradation of CA5 or CA7 in accordance with Section 1004 of the Standard Specifications.

The fabric surrounding the coarse aggregate shall consist of Geotechnical Fabric for French Drains in accordance with Article 1080.05 of the Standard Specifications.

The impervious geomembrane surrounding the coarse aggregate shall be a minimum 20 mil in thickness and shall be manufactured from polypropylene, polyethylene, or polyvinyl chloride material.

Construction Requirements. All work shall be in accordance with the applicable requirements of Section 601 of the Standard Specifications except as modified below.

The drain pipe shall be situated within an area of coarse aggregate as shown on the plans. The coarse aggregate shall be wrapped completely in geotechnical fabric and/or impervious geomembrane as shown on the plans.

Method of Measurement. Pipe underdrains for structures shall be measured for payment in meters (feet), in place. Measurement shall be along the centerline of the pipe underdrains. All connectors, outlet pipes, elbows, and all other miscellaneous items shall be included in the measurement.

Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for PIPE UNDERDRAINS FOR STRUCTURES 6″, installed and measured as specified herein. Furnishing and installation of the coarse aggregate, geotechnical fabric, impervious geomembrane, forming holes in structural elements and any excavation required, will not be paid for separately, but shall be included in the cost of pipe underdrains for structures.

(Louis Berger – 03/12/2004)

CHAIN LINK FENCE AND GATES

Description. This work shall consist of fabricating and erecting chain link fence, 42” attached to structure (special); and chain link fence, 42” gate (special) on concrete parapet and knee walls at the locations shown in the contract plans according to Section 664 of the Standard Specifications and as modified herein.

Materials. Materials shall meet the requirements of Section 1000 of the Standard Specifications.

Fabric. The fabric shall be woven in 2 inch mesh with 0.148 inch diameter wire meeting the requirements of AASHTO M181, Type IV, Class B (polyvinyl chloride PVC) or ASTM F668 Class 2b (polyvinyl chloride PVC or polyolefin elastomer) coated galvanized steel.

Self Tapping Screws. Self tapping screws shall conform to S.A.E. J81 self tapping screws.

Coatings. The fabric tension wire and fabric ties shall be vinyl or polyolefin coated. The posts, post tops, base and cap plates, railings, braces, track, stretcher bars, fittings and hardware shall either be vinyl, polyolefin or polyester powder coated. All vinyl or polyolefin coating shall be according to the same requirements as the coating of the fabric. All material shall be hot dip galvanized or galvanize coated after fabrication according to Articles 1006.27, 1006.28 and 1006.34 of the Standard Specifications and ASTM F1043 prior to vinyl, polyolefin or polyester powder coating. Track shall be hot dip galvanized according to Article 1006.28 (d).

Polyester coating shall conform to 1006.29 (b) (5) and (c) and ASTM F1043. All steel to receive a polyester coating shall be pre-galvanized according to ASTM F1043 with a minimum zinc coating of 0.90 ounces per square foot (G90). All primary components, posts, post tops, base and cap plates, railings, braces, track, stretcher bars and fittings shall receive a pre-treatment process that cleans and prepares the galvanized surface to assure complete adhesion of the polyester coating after drilling and layout, to ensure maximum corrosion protection. All pre-treated steel shall be finished-color coated with polyester powder applied by the electrostatic spray gun method to a thickness of 2.5 mils and baked at 450 degrees F until cured.

The self tapping screws used to attach the welded wire mesh frames and closure angles to the fence frames shall be Zink Electroplated with a Service Condition SC 4, Type I Finish, Plain, Hex, Washer Head Thread Rolling Tapping Screws. Self tapping screws shall be galvanized by electroplating according to ASTM B633-98.

Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.

Color. The color of all vinyl, polyolefin or polyester powder coatings on fabric, posts, post tops, base and cap plates, railings, braces, stretcher bars, gates, fittings, hardware and accessories shall be the standard color Black according to ASTM F934.

Gates. The gates shall be welded HSS frame sections with chain link fabric attached. The gates are mounted on wheels which roll on tracks for opening and closing the gates as shown on plans. All hardware shall be thoroughly secured and in place, properly adjusted and left in perfect working order.

Wheels. V-groove wheels, as shown in the plans, shall be cast iron having 30,000 psi tensile strength. The wheels shall be finished with a black enamel paint prior to insertion of the bearing. Bearings shall be DuPont brand “Delrin”, one-piece self-lubricating bearings or Equal. A relief groove at the base of the “V” shall be provided to equalize load transfer to each face of the angle track. The V-groove angle shall be 90 degrees between opposite faces of the “V-groove.” Wheel faces and bore shall be machined for concentricity to ensure proper wheel tracking on the steel-angle track. The steel axle shaft for supporting the bearing and V-groove wheel shall be as shown in the plans.

Stretcher bars. Stretcher bars shall be used at all four sides of each gate and railing panel.

Braces. Braces shall be placed 6 inches down from the top of terminal posts.

Installing Posts. The Contractor shall locate the post according to the spacing shown in the contract plans. The posts shall be anchored to the concrete parapet and knee walls as shown in the plans. Posts shall be set vertical and in true alignment.

Anchor Bolt Assemblies and Base Plates. The anchor bolt assemblies and base plates shall be structural steel conforming to the requirements of AASHTO M270 Grade 36 and Article 1006.04 of the Standard Specifications.

Anchor Bolt Assembly Alternative. If the option of drilling and epoxy grouting the anchor rods is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchorages in pre-drilled holes according to the manufacturer’s recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of chemical adhesive.

Drawings. Before fabrication begins, the Contractor shall submit shop drawings for approval as described in Article 505.03 of the Standard Specifications.

Fabrication and Erection. Steel gates and steel railing shall be fabricated, inspected, stored and erected in accordance with the provisions of Articles 509.01, 509.03 and Section 505. Openings between railing components and adjacent surfaces shall not exceed 2" unless otherwise noted on drawings or required by structural design regarding expansion movement.

Method of Measurement. Chain Link Fence, 42” Attached to Structure (Special) will be measured for payment in feet, measured along the top of the fence from center to center of end posts excluding the length occupied by gates, installed and accepted.

Chain Link Fence, 42" Gate (Special) will be measured for payment at the contract unit price each for the gate assemblies of the size specified, installed and accepted.

Steel Railing, will be measured for payment in feet, measured along the top of the handrail from center to center of end posts, installed and accepted.

Basis of Payment. Payment for work under this item will be made in the following manner:

CHAIN LINK FENCE, 42" ATTACHED TO STRUCTURE (SPECIAL), as indicated in the Plans, will be paid for at the contract unit price per foot as specified herein, except gate posts, gates, fittings, and accessories for the gates, which will be paid for in accordance with the Special Provision for CHAIN LINK FENCE, 42" GATE (SPECIAL).

CHAIN LINK FENCE, 42" GATE (SPECIAL), as indicated on the Plans, will be paid for at the contract unit price per each gate, properly adjusted and left in perfect working order as specified herein.

STEEL RAILING, as indicated on the plans, will be paid for at the contract unit price per foot, as specified herein.

(CTE – 03/19/2004)

RAILROAD PROTECTIVE LIABILITY INSURANCE

Description. The Contractor will be required to carry Railroad Protective Liability and Property Damage Insurance in accordance with Article 107.11 of the Standard Specifications. The limits of liability shall be in accordance with Article 107.11 for the Standard Specifications unless otherwise noted. A separate policy is required for each railroad indicated below unless otherwise noted.

Named Insured & Address	Number & Speed of Passenger Trains	Number & Speed of Freight Trains
Chicago Transit Authority 120 N. Racine Avenue Chicago, IL 60607-2010	439 trains / day / 55 mph	0

For Freight/Passenger Information Contact: Syed Hussaini Phone: 312-664-7200 Ext. 6946

For Insurance Information Contact: Geoffrey Layhe Phone: 312-664-7200 Ext. 3610

Named Insured & Address	Number & Speed of Passenger Trains	Number & Speed of Freight Trains
Norfolk Southern Railway Company Pennsylvania Lines L.L.C. 3 Commercial Place Norfolk, VA 23510-2191	20 trains / day / 70 mph	50 trains / day / 50 mph

For Freight/Passenger Information Contact: Tom Bracey Phone: 404-527-2536

For Insurance Information Contact: David Fries, Director Risk Management Phone: 757-629-2701

Railroad Protective Liability Insurance: $5,000,000/occurrence; $10,000,000 aggregate/occurrence

Flagman Cost / $400 / 10 hour day.

Basis of Payment: The costs for providing insurance, as noted above, will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

APPROVAL OF INSURANCE: The ORIGINAL and one CERTIFIED copy of each required policy shall be submitted to ENGINEER OF DESIGN, ILLINOIS DEPARTMENT OF TRANSPORTATION, 2300 SOUTH DIRKSEN PARKWAY, SPRINGFIELD, ILLINOIS 62764 for approval. The contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Resident Engineer evidence that the required railroad protective liability insurance has been approved by the railroad(s). The Contractor shall also provide the Resident Engineer with expiration date of each required policy.

(CTE – 02/20/2004)

STORM SEWER AND COMBINED SEWER ADJACENT TO OR CROSSING WATER MAIN

This work consists of constructing storm sewer and combined sewer of the specified diameter adjacent to or crossing a water main, at the locations shown on the plans, meeting the material and installation requirements of the latest edition of the “Standard Specifications for Water and Sewer Main Construction in Illinois”, and the applicable portions of Section 550 of the Standard Specifications.

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the “Standard Specifications for Water and Sewer Main Construction in Illinois”, except PVC pipe will not be allowed. Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 52.

Encasing of standard type combined sewer, in accordance with the details for “Water and Sewer Separation Requirements (Vertical Separation)”, (DIV. V/STANDARD DRAWINGS) in the “Standard Specifications for Water and Sewer Main Construction in Illinois”, cannot be used for storm sewers and combined sewers crossing water mains.

Basis of Payment. This work will be paid for in accordance with Article 550.09 of the Standard Specifications, except the pay item shall be STORM SEWER (WATER MAIN REQUIREMENTS) and COMBINED SEWER (WATER MAIN REQUIREMENTS), of the diameter specified, and shall include all materials, labor, equipment, concrete collars and encasing pipe with seals.

(CTE – 09/13/2004)

BACKFILLING STORM SEWER UNDER ROADWAY

Effective: September 30, 1985 Revised: July 2, 1994

For storm sewer constructed under the roadway, backfilling methods two and three authorized under the provisions of Article 550.07 will not be allowed.

STORM SEWERS AND SEWER CONNECTIONS TO CITY OF CHICAGO SEWERS

Effective: September 30, 1985 Revised: July 2, 1994

This work consists of constructing storm sewers or sewer connections to City of Chicago sewers, in accordance with Section 550 of the Standard Specifications and the details shown in the plans at the locations shown on the plans.

All storm sewers and sewer connections 525 mm (21 inches) in diameter and smaller shall be best quality tile socket pipe conforming to the specifications for Extra Strength Clay Pipe, ASTM C 700, except as otherwise specified on the plans. Sewer pipes shall be gasketed in such a manner as to produce a compression type joint conforming to the requirements of ASTM C 425.

All storm sewer 600 mm (24 inches) in diameter or larger shall be reinforced concrete pipe conforming to the requirements of C-76, Class-III, wall "B" with "O-Ring" joints. Joints for catch basin and inlet connections shall be packed with oakum, caulked and beveled off with portland cement mortar.

This work will be measured and paid for at the contract unit price per meter (foot) for STORM SEWER in accordance with Articles 550.08 and 550.09 of the Standard Specifications.

CLEANING EXISTING DRAINAGE STRUCTURES

Effective: September 30, 1985 November 1, 1996

All existing storm sewers, pipe culverts, manholes, catch basins and inlets shall be considered as drainage structures insofar as the interpretation of this Special Provision is concerned. When specified for payment, the location of drainage structures to be cleaned will be shown on the plans.

All existing drainage structures which are to be adjusted or reconstructed shall be cleaned in accordance with Article 602.14 of the Standard Specifications. This work will be paid for in accordance with Article 602.15 of the Standard Specifications.

All other existing drainage structures which are specified to be cleaned on the plans will be cleaned in accordance with Article 602.14 of the Standard Specifications. This work will be paid for at the contract unit price each for DRAINAGE STRUCTURES TO BE CLEANED, and at the contract unit price per meter (foot) for STORM SEWERS TO BE CLEANED.

GROUT SLURRY

Description. This work shall consist of abandoning existing sewers/watermains by placing grout in storm sewers/watermains where shown on the plans or directed by the Engineer.

Materials. All materials shall meet the requirements of the following Articles of Section 1000 – Materials:

Item	Article/Section
(a) Portland Cement	1001
(b) Water	1002
(c) Fine Aggregate	1003.02
(d) Air-Entraining Admixture	1021.02
(e) Nonshrink Grout	1024

Fine Aggregate to be used in the grout slurry shall be Gradation FA 9.

CONSTRUCTION REQUIREMENTS

Proportioning. Sewer grout must consist of 1 part of Portland cement and 3 parts of fine aggregate by volume. The amount of entrained air must not be less than 3% or more than 5% of the volume of concrete.

General. The Contractor shall fill all existing storm sewers/watermains to be left in place and not remaining in service. Storm sewers/watermains to be abandoned shall be completely filled with grout. The remaining ends of the abandoned storm sewer/watermains shall have a plywood bulkhead as shown in the plans.

Method of Measurement. All grout slurry will be measured for payment and the volume computed in cubic feet.

Basis of Payment. This work will be paid for at the contract unit price per cubic foot of GROUT SLURRY and shall include all materials, labor, equipment, tools, and incidentals to complete the work as specified.

STORM SEWERS AND COMBINED SEWERS (CITY OF CHICAGO)

Description. This work shall consist of constructing Storm Sewers and Combined Sewers along the Frontage Road, as shown on the Plans or directed by the Engineer.

Project Conditions. Ground water and sand are expected to be encountered during excavation for sewers.

Materials.

Pipe and Fittings. Pipe for Storm Sewers and Combined Sewers, Type 1: Storm Sewers and Combined Sewers, Type 1 shall be constructed of ductile iron pipe and fittings conforming to ANSI A21.51, Class 2 Specification, with 0.33 inch wall thickness and have a push on type bell end.

Where less than 3 feet of cover exists, ductile iron pipe shall be used at no increase in cost unless a separate item is provided for ductile iron pipe of the diameter required.

Pipe for Storm Sewers and Combined Sewers, Type 2, 3 and 4, less than 24 inch diameter shall be vitrified clay socket pipe conforming with the specifications for Extra Strength Vitrified Clay Pipe, conforming to ASTM C700. Storm Sewers and Combined Sewers 24 inch and larger shall be constructed of reinforced concrete pipe conforming to Section 1040.03 of the Standard Specifications. The class of pipe required for Storm Sewers and Combined Sewers 24" and larger shall be according to Table IA in Section 542 of the Standard Specifications.

Catch Basin and Inlet Connections. Catch basin connections shall be 8-inch pipe of the type and quality specified herein.

Inlet connections shall be 8-inch Ductile Iron Pipe.

Joints. Joints for ductile iron pipe shall be push-on type and approved by the Engineer.

Joints for vitrified clay pipe shall conform to ASTM C425 Compression Joints for Vitrified Clay bell and spigot pipe.

Joints for reinforced concrete pipe used shall be rubber gasketed and sealed inside and outside with concrete mortar. Each length of pipe shall be provided with bell and spigot or tongue and groove ends of concrete formed on machined rings to insure accurate joint surfaces. The theoretical diameter and the actual diameters of the contact surfaces shall not vary more than 1/16 inch. Each spigot or tongue shall be recessed to accommodate either a round rubber gasket or other confined, compression-type rubber gasket.

The rubber gaskets shall be continuous, precision molded gaskets manufactured from a compound containing a basic polymer of not less than 50%, by volume, of neoprene and shall contain no vulcanized vegetable oil, reclaimed rubber of any deleterious substance and shall be the product of a manufacturer having at least 5 years experience in the manufacture of rubber gaskets for sewer pipe joints. Circular gaskets shall be of sufficient cross-sectional area and volume so that when the joint is assembled, the gasket will be compressed to form a water-tight seal. Gaskets shall be extruded or molded and cured in such a manner that any cross-section will be dense, homogenous and free from porosity, blisters, pitting, and other imperfections. The gaskets shall be molded or extruded to the tolerance as specified. All gaskets shall be manufactured within a tolerance of plus or minus 1/64 inch on any dimension measured at any cross section. The physical properties of the rubber gaskets shall conform to ASTM C443M-98. The Contractor shall submit to the Engineer for approval, detailed drawings of the pipe and pipe joint to be furnished and placed under this Contract, including the dimensions of the rubber gasket and the joint in the assembled pipe position. The gaskets shall be seated on the pipe in accordance with the manufacture’s specifications and the ends of the pipe and the gaskets shall be kept clean and free from damage until the joint has been made.

Bedding. The pipe foundation shall be bedding material consisting of gravel, crushed gravel, or crushed stone, having a CA-11 gradation and conforming to the applicable portions of Section 1004 of the Standard Specifications. Place at least 4 inches in depth below the pipe so that at least the lower half of the pipe will be uniformly supported for its entire length. The cost of furnishing, placing and compacting bedding material will be included for the bid price for STORM SEWERS and COMBINED SEWERS of the size specified.

Brick and Mortar. Brick shall be Grade S.W. Building Brick. Mortar shall be as specified for Brick Masonry under Article 602.05 of the Standard Specifications.

General Requirements. Work under these items shall be performed in accordance with Section 550 of the Standard Specifications and Standard Specification for Sewer Construction, Chicago Department of Water Management, except as herein modified.

No cracked, broken or otherwise defective lengths of pipe shall be used in the work. All pipe and fittings shall be reinspected for soundness and damage due to handling immediately before being laid, and any pipe not conforming to the requirements of these Specifications shall be rejected and removed immediately from the site of the work.

Dewatering. Trenches shall be kept as free as practicable from excess water until the mortar in the joints has sufficiently hardened.

Excavation and Trench Protection. Excavation, bedding and trench protection shall be in accordance with Article 550.04 of the Standard Specification.

Installation. Each length of pipe shall be laid to the required line and grade on a firm, even embedment as described in Article 206.5 of the Department Specifications and as shown on the Plans, with the groove end up-grade. After the gasketed pipe is lowered into position, it shall be drawn home by use of a winch and cable so as to be in proper alignment. The Contractor shall prevent excessive movement of the pipe when partially or completely home so as not to displace the rubber gasket or damage the pipe spigot or bell.

Seal all joints in reinforced concrete pipe sewers with portland cement mortar applied to the joint and finished smooth on the entire circumference of pipe on the inside and, so far as practicable, on the outside circumference. All foreign materials and excess mortar shall be removed from the inside of the sewer as pipe laying progresses.

Whenever pipe laying is discontinued, the unfinished end of the sewer shall be protected from displacement and cave-in or other injury and a suitable stopper or dam shall be placed in the end of the sewer.

Disposal of Excavated Material. Unless otherwise directed by the Engineer, all excess excavated material shall be disposed of in accordance with Section 202.03 of the Standard Specifications.

Connections to Existing and Proposed Sewers. Where a storm or combined sewer or drain connection is to be made to an existing ESVCP combined sewer, a manufactured Y or T branch shall be installed in the sewer at this junction. Where a storm sewer or drain connection is to be made to an existing RCP combined sewer a pipe section with a predrilled hole of the proper diameter shall be installed at this junction. The junction of the proposed storm sewers and combined sewers shall be constructed as shown on the Detail Construction Standards.

Where a storm sewer, combined sewer or drain connection is to be made to proposed RCP sewer, tapered holes shall be so formed that the drain connection will enter the sewer at an angle of approximately 90 degrees with the axis of the sewer. Whenever the diameter of a preformed tapered hole is equal to or exceeds 50% of the diameter of the pipe, additional reinforcement steel satisfactory to the Engineer shall be placed around the hole. Pipe sections shall not be less than 4 feet or more than 8 feet long unless otherwise approved by the Engineer. The work shall be carefully planned with regard to the matching of pipe openings to existing drain locations, and the cutting of pipes for connections will be permitted in special cases, and where permitted shall be done in a manner satisfactory to and approved by the Engineer. If preformed tapered holes have not been provided for the connection of the drains and for future drain connections, the Contractor shall make circular cored openings in the sewer pipe.

When a storm sewer, combined sewer or drain connection is to be made to an existing sewer, a "T" or "Y" saddle shall be installed per the Detail Construction Standards. The circular opening in the existing storm sewer and combined sewer shall be core drilled to the same size as the external diameter of the proposed storm sewer, and combined sewer or drain connection. The protrusion of the proposed sewer into the existing sewer shall not exceed a maximum of 1-inch. Edge of core holes shall be a minimum of 1.5 feet from the edge of pipe and a minimum distance of 5 feet horizontally between holes. Holes shall not be drilled higher than the 10 and 2 o'clock positions.

The joint between the existing combined sewer and the proposed storm sewer shall be completely sealed with brick and mortar as shown in the Detail Construction Standards.

If the existing sewer pipe is cracked, broken or otherwise damaged by the Contractor in making this cored opening, the Contractor shall replace this section of pipe with a pipe equal to and similar in all respects to the pipe of the existing sewer. The Contractor shall do this work in a careful manner, without extra compensation, and so as not to disturb the adjoining sections of existing pipe. The junction of the proposed and existing sewers shall be constructed as shown on the Detail Construction Standards included in the plans.

Maintenance of Sewer Flow. Flow in the sewers shall not be interrupted unless adequate provisions, approved by the Engineer, are made to continue service. A temporary flume pipe shall be installed at the end of each day between the existing and proposed sewers at locations where an existing sewer is being replaced.

Preventing Debris from Entering Sewers. Care shall be taken to prevent mud, sand or other obstructing materials from entering the sewer. All such materials which enter the sewer shall be removed and the sewer left clean and unobstructed upon completion of the work. This shall include all debris created in making the circular opening in existing sewers for purposes of storm sewer and combined sewers connections and all materials employed to seal the joints.

Replacement of Broken Tile. Where broken tile in the existing sewer is determined, the Contractor shall replace the broken tile and the work shall be paid for at the contract unit price per foot for Storm Sewer and Combined Sewers of the corresponding type and diameter.

Riser Pipes for Future Laterals. The Contractor shall when directed by the Engineer, place riser pipes for future laterals from their connection with the sewer to such a height as directed.

Abandoned Sewers and Drains. Abandoned sewers and drains, as designated by the Engineer, shall be plugged with Class SI concrete or brick and suitable mortar to the satisfaction of the Engineer. This work will not be paid for separately, but shall be considered as included in the contract unit price for the Storm Sewer and Combined Sewers items.

Openings in Existing Manholes. New opening or enlargements of existing openings in existing manholes that are required to accommodate the proposed storm or combined sewers will not be measured for payment but included in the cost of the combined sewer items.

Removal of Existing Sewers in Proposed Sewer Trench. Existing sewers within the proposed sewer trench shall be removed and disposed of in accordance with Section 202.03 of the Standard Specifications.

Method of Measurement. Storm Sewers and Combined Sewers of the type and size specified will be measured for payment in place in feet, with the exception of ductile iron pipe sewers within the first 4 feet of an inlet connection, which is included in the bid price for Inlet Type A (Including Frame & Lid). If more than 4 feet of pipe is required to connect an inlet to a catch basin, this additional pipe will be paid for at the contract unit price per foot for Storm Sewers and Combined Sewers, Ductile Iron Pipe, measured in place and as specified in Article 550.08 of the Standard Specifications. Existing sewers within the proposed sewer trench to be removed will not be measured for payment.

Pavement removal for proposed sewer trenches outside the limits of the scheduled pavement removal shall not be measured separately.

Catch basin half traps on proposed catch basins shall not be measured for payment but included with the item CATCH BASINS, TYPE A, 4' DIAMETER, TYPE 1 FRAME, OPEN LID (CITY OF CHICAGO).

Basis of Payment. This work will be paid for at the contract unit price per foot of STORM SEWERS and COMBINED SEWERS, of the class, type, and diameter specified, which price will include pipe, fittings, openings to existing manhole wall, excavation, and disposal of existing material, dewatering, sheeting and bracing, existing manholes, sewers, bedding, video taping and all other work required to complete the sewer installation as specified. Any dewatering and sheeting or shoring required to do the work as specified will not be paid for separately but will be included in to the contract unit price of this item.

All house drain connections and removals will be included with this pay item.

(CTE – 10/25/2004)

STORM SEWER WITH RUBBER GASKETS

Description. This item consists of furnishing and installing storm sewer with rubber gaskets in accordance with the applicable portions of Section 550 of the Standard Specifications.

All lengths of reinforced concrete pipe which are specified to have rubber gaskets shall be constructed with bell and spigot or tongue and groove ends of concrete formed on machine rings to ensure accurate joint surfaces. The contact surfaces shall be recessed or stepped to accommodate a round compression type rubber gasket for the entire diameter of the pipe.

Rubber gaskets shall be extruded or molded in such a manner that any cross section will be dense, homogenous, and free of porosity, blisters, pitting and other imperfections. The gaskets shall be fabricated from a high grade rubber compound containing no reclaimed rubber. The basic polymer shall be natural rubber, synthetic rubber, or a blend of both. The physical properties of the rubber gaskets and the permissible variations in dimensions shall conform to the requirements of AASHTO M 198.

Construction Methods. The gaskets shall be seated on the pipe in accordance with the manufacturer's specifications. Where adhesive is required to properly seat the gasket, the gaskets shall be applied not less than 24 hours before installing the pipe.

When the pipe is lowered into the trench, installers shall make certain that no dirt is clinging to the jointing surface or lodged under the gasket. The gasket and inside surface of the groove shall be thoroughly lubricated as specified by the gasket manufacturer. The tongue end shall be carefully centered in the groove so as to avoid displacement of the gasket, and the pipe shall be driven home, fully deforming the gasket, by use of a cable and winch set inside the pipeline, at least two pipe lengths back, or by other methods approved by the Engineer. Adjustment to line and grade shall be made in such a manner as not to disturb the deformed gasket.

Basis of Payment. This work shall be paid for at the contract unit price per lineal foot for STORM SEWERS, RUBBER GASKET of the type and diameter specified.

(CTE – 10/12/2004)

SANITARY SEWER REMOVAL

Description. This work shall consist of the removal and satisfactory disposal of existing sanitary or combined sewer, of the diameter specified, at the locations shown on the plans or as directed by the Engineer.

General Requirements. This work shall be in accordance with Section 551 of the standard specifications, the details in the plans and as herein specified.

Bulkheads to seal the ends of existing sewers to remain in place shall be made using concrete, brick and mortar, or other methods approved by the Engineer and shall be completed in a manner satisfactory to the Engineer.

Method of Measurement. Sanitary sewer removal of the various diameters shall be measured for payment in feet, measured as removed.

Trench backfill will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per foot for SANITARY SEWER REMOVAL, of the diameter specified, which will be payment in full for all excavation except excavation in rock, bulkheads, backfill, and removal and disposal of the pipe.

PIPE UNDERDRAINS, 6" (SPECIAL)

Description. This work shall consist of constructing pipe underdrains (special) of the required inside diameter.

Materials. Materials shall meet the requirements as set forth below:

Pipe underdrains special shall consist of Corrugated Polyvinyl Chloride (PVC) Pipe with a smooth interior in accordance with Section 601.02 (Article 1040.15) of the Standard Specifications.

Construction Requirements. Pipe underdrains (special) used for outletting pipe underdrains shall conform to the trench requirements for pipe underdrains.

The portion of the pipe underdrains (special) under the paved shoulder shall be backfilled with sand as specified for pipe underdrains. The remaining portion shall be backfilled with select material meeting the approval of the Engineer.

Method of Measurement. Pipe Underdrains, 6" (Special) will be measured for payment in feet, in place. Measurement of pipe underdrains (special) will be made from the inside diameter of the drainage structure to the center of the longitudinal pipe underdain material being used, more than one pipe underdrains (special) is required, only one run of pipe underdrains (special) will be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per foot for PIPE UNDERDRAINS, 6" (SPECIAL) of the diameter specified, or of the kind of material and diameter specified.

(CTE – 02/02/2004)

PIPE UNDERDRAIN REMOVAL

Description. This work consists of the removal and satisfactory disposal of existing pipe underdrain, of the diameter specified, 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 202 and 601 of the Standard Specifications, the details in the plans and as herein specified.

General Requirements. Disposal of pipe and other unsuitable material shall be according to Article 202.03.

Method of Measurement. Pipe Underdrain Removal of the various diameters will be measured for payment in feet, as removed.

Basis of Payment. This work will be paid for at the contract unit price per foot for PIPE UNDERDRAIN REMOVAL, of the diameter specified, which will be payment in full for excavation; except excavation in rock; removing and disposing of the pipe underdrain; and backfilling trench.

(CTE – 02/02/2004)

DRAINAGE STRUCTURES (CITY OF CHICAGO)

Description. This work shall consist of constructing manholes, catch basins with half traps, and inlets with frames and grates as specified in Section 602 of the Standard Specifications except as herein modified, and in accordance with the details shown in the plans.

602.07 Precast Reinforced Concrete Sections. Revise the last sentence as follows:

All precast units shall be installed on a ~~75 mm (3 in.)~~ 150 mm (6 in) thick sand cushion of ~~FA1 or~~ FA2 according to Article 1003.01.

Delete 602.09 Wooden Baffles and replace with the following:

602.09 Half Traps. Install half traps on all catch basins as shown on the Plans.

Where less than 3 feet of cover exists over proposed half traps, the half traps shall be constructed of ductile iron pipe. Where proposed catch basin is to be connected to a proposed or existing ductile iron sewer, the proposed half trap shall be constructed of ductile iron pipe. All half traps constructed of ESVCP shall be encased in concrete as indicated on the Plans.

Basis of Payment. This work will be paid for at the contract unit price per each for CATCH BASINS, TYPE A, 4' DIAMETER, TYPE 1 FRAME, OPEN LID (CITY OF CHICAGO); CATCH BASINS, TYPE C, 2' DIAMETER, TYPE 1 FRAME, OPEN LID (CITY OF CHICAGO), INLETS, TYPE A, TYPE 1 FRAME, OPEN LID (CITY OF CHICAGO), MANHOLES, TYPE A, CITY OF CHICAGO, and MANHOLES, TYPE B, CITY OF CHICAGO . The contract unit price will include the costs for all work, including but not limited to the costs for labor, materials, supplies, dewatering, sheeting, shoring, equipment, frames, lids, concrete, 6-inch sand cushion, precast structures, 8-inch half traps, trench backfill, removal and disposal, removal and disposal of any miscellaneous abandoned structures, all excavation and disposal except excavation in rock.

(CTE – 10/21/04)

CITY ELECTRIC MANHOLES TO BE ADJUSTED

Description. This classification consists of City electric manholes to be adjusted to grade where two feet or less of masonry will be added, removed or rebuilt to bring the specified casting to the finished grade of the proposed improvements.

General Requirements. This work consists of the adjustment of existing City electric manholes. The work will be done in accordance with Section 603 and applicable portions of Section 602 of the Standard Specifications and the Standard Detail for Frame Adjustment shown in the Plans, except as herein modified.

Prior to starting construction, an inspection of all the existing structures, will be made by the Engineer and the Contractor to determine the amount of existing debris in these structures. Upon completion of the work, the Contractor shall clean only those structures where debris has been added due to construction. This work will not be paid for separately, but shall be included in the cost of this item.

Backfilling to subbase elevation shall be done with sand as specified in Article 550.07; however, no separate payment for backfilling will be made under these items and the work shall be included in the cost of this item.

Bricks shall meet the requirements of Section 1041.

If in any load of brick more than ten percent are inferior, the whole load will be rejected. If less than ten percent are inferior, the brick may be accepted, provided the Contractor will, at his expense, cut out all inferior bricks, and remove them from the site of the work at once.

With approval of the Engineer the Contractor may use precast adjusting rings. Adjustment bricks, rings and structure frames are to be set in a full mortar bed. Shimming of the frame with wood and stones shall be allowed. The interior of the adjustment shall be "buttered" to the satisfaction of the Engineer. Use of partial bricks will not be allowed. Bricks shall be laid in full header courses only.

Existing frames and lids that are obsolete or damaged shall be replaced when ordered by the Engineer in writing, except that existing frames and lids damaged by the Contractor's operations during construction shall be replaced by the Contractor at his expense.

Removal and patching of pavement around a structure shall be considered as part of the adjustment or reconstruction of that structure, and no additional compensation will be made.

Patching of pavement with Bituminous concrete shall not be allowed. Only High Early Strength Concrete meeting the requirements of Section 1001 and 1020 shall be used. Construction shall be in accordance with the applicable portions of Section 503 of the Standard Specifications.

This work shall be performed such that when an adjacent is started, it shall be completed in the same day. Under no circumstances shall unfurnished work remain or debris be left in the street overnight.

Method of Measurement. This work will be measured on a per each basis which will include up to the first two (2') feet of required masonry work.

Basis of Payment. This work will be paid for at the contract unit price per each for CITY ELECTRIC MANHOLES TO BE ADJUSTED, as the case may be, which price will be paid in full for excavation, construction, backfilling, concrete, brick, mortar and disposal of surplus excavation, formwork and all labor and materials including reinforcement bars, and ladder rungs.

(CTE – 10/25/2004)

CITY ELECTRICAL MANHOLE RECONSTRUCTED WITH NEW FRAME & GRATE

Description. This item shall consist of removing the existing roof of an existing City electric manhole due to its condition or to its relationship to the new grade, where adjusting the frame and cover will not be sufficient.

Material. The frame and lid shall be re-used, unless the plans call for new, in which case the frame and lid will be paid for under a separate pay item.

Construction. The area above the roof shall be excavated. Sidewalk or pavement shall be removed if necessary. The existing roof shall be broken down and all debris removed. All debris shall be disposed of per Article 202.03 of the Standard Specifications. The existing manhole walls shall be preserved. The existing walls shall be keyed so as to form a better bond with the new concrete roof. Dowelling may be used by drilling holes in the existing walls and inserting reinforcement bars of sufficient size and grouting. Wooden forms shall be used to form the new concrete roof. The new roof shall be poured in place and shall be reinforced as per BOE Standard Detail Drawing 729 or drawing 730. The new roof shall be dimensioned as per Standard Detail Drawing 729 or drawing 730.

The roof for parkway or sidewalk areas shall accommodate a 24" frame and lid. The roof for a roadway shall accommodate a 30" frame and lid.

The parkway shall be restored to grade. Pavement shall be properly restored to the correct grade. Patching of the pavement shall be done with high early strength concrete meeting the requirements of Articles 1001 and 1020 of the Standard Specifications. Sidewalks shall be restored to the proper grade using a 5 inch thickness of concrete. The inside of the manhole shall be clean and free of all debris.

Method of Measurement. This item shall be paid for at the contract unit price per each unit installed.

Basis of Payment. This work will be paid for at the contract unit price, and shall include all excavation, backfilling, and restoration of parkway, sidewalk, and pavement. The unit measurement shall be each for CITY ELECTRICAL MANHOLE RECONSTRUCTED WITH NEW FRAME & GRATE. Removal of sidewalk or pavement shall be paid for separately.

(CTE – 10/21/2004)

SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING

Description. This work shall consist of cleaning sediment out of a drainage structure inlet filter when directed by the Engineer. This cleaning work is to be periodically performed as directed by the Engineer, for the duration of the use of each drainage structure inlet filter assembly. The Engineer will be the sole judge of the need for cleaning, based on the rate that debris and silt is collected at each inlet filter location.

Cleaning of the inlet filter shall consist of inspecting, 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 drainage structure inlet filter shall be measured for payment each time that the cleaning work is performed at each of the drainage structure inlet filter locations.

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

(CTE – 02/02/2004)

WATER MAIN REMOVAL

Description. This work consists of the removal and satisfactory disposal of existing water main, of the diameter specified, 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 202 and 550 of the Standard Specifications, the details in the plans and as herein specified.

General Requirements. Trenches resulting from the removal of water main shall be backfilled according to the applicable requirements of Article 550.07. Disposal of pipe and other unsuitable material shall be according to Article 202.03.

Method of Measurement. Water Main removal of the various diameters shall be measured for payment in feet, as removed.

Basis of Payment. This work will be paid for at the contract unit price per foot for WATER MAIN REMOVAL, of the diameter specified, which will be payment in full for excavation; except excavation in rock; removing and disposing of the pipe; and backfilling trench. If trench backfill is required, it will be paid for separately.

(CTE – 03/05/2004)

PREPARATORY CLEANING OF SANITARY SEWER (PRIOR TO LINING)

Description. The purpose of the sewer cleaning operation is to remove such accumulation of sediment, debris, blockage, mineral deposits, bricks, grease, etc. to permit pipelining of the designated sewer sections with the minimum amount of indentations or imperfections to the cured liner.

Since the final pipelining product depends a great deal on the cleanliness of the lines, the importance of this phase of the operation cannot be stressed too strongly. It is recognized that there are some conditions such as badly broken or eroded pipe or major blockages that may prevent cleaning from being accomplished or where additional sewer line damage would be done if cleaning is attempted or continued. Should conditions of this nature be encountered, the Contractor shall notify the Engineer immediately. The Engineer shall then determine an appropriate cleaning method or whether to not clean that specific sewer section. A sewer section is defined as the sewer between two (2) designated structures.

The equipment used for sewer cleaning shall be capable of removing all dirt, grease, rocks, roots and other deleterious materials. The equipment shall be selected by the Contractor to prevent damage to the pipe. Cleaning equipment capable of cleaning lengths up to one thousand feet (1000') shall be provided. Equipment must be able to clean this length with vehicular access to one structure only.

Cleaning shall be of the entire reach between structures. If cleaning of an entire section cannot be successfully performed from one structure, the equipment shall be set up on the other structure and cleaning again attempted without additional compensation.

Cleaning Equipment. The equipment may include high velocity water-jetting equipment, vacuum machines, hydraulically propelled equipment or mechanically powered equipment. Whatever equipment is used, any necessary pulleys and/or supports shall be installed in structures so as not to restrict the cleaning operation or damage existing structures.

Hydraulic Cleaning Equipment. The equipment used shall be of the movable dam type and be constructed such that a portion of the dam may be collapsed at any time during the cleaning operation to protect against flooding of the upstream sewer lines. The movable dam shall be of an external diameter equal to the internal diameter of the sewer being cleaned and shall be provided with a flexible scraper around the outer periphery to ensure total grease removal. If sewer cleaning balls, or other such equipment which cannot be collapsed instantly are used, precautions against flooding of upstream sewers (public or private) shall be taken.

High Velocity Hydro-Cleaning Equipment. All high velocity sewer cleaning equipment shall be constructed for ease and safety of operation. The equipment shall have a selection of two (2) or more high velocity nozzles. The nozzles shall be capable of producing a scouring action from 15 degrees to 45 degrees in all size lines designated to be cleaned. Equipment shall also include a high velocity gun for washing and scouring structure walls and bench. It shall be capable of producing flows from a fine spray to a long distance solid stream. The equipment shall carry its own water tank, auxiliary engines, pumps, and hydraulically driven hose reel. All controls shall be located so that the equipment is operated above ground.

Mechanical Cleaning Equipment.

Bucket machines shall be in pairs with sufficient power to perform the work in an efficient manner. Machines shall be belt operated or have an overload device. Machines with direct drive that could cause damage to the pipe will not be allowed. Where bucket machines and buckets are to be used, caution should be taken that a properly sized flexible cable be used so that breakage will not occur, hanging the cleaning equipment within the sewer.

A power rodding machine shall be of the continuous type capable of holding a minimum of one thousand feet (1000') of rod without joints, couplings, fittings or connectors. The rodding equipment shall be provided with a minimum rated 25 Hp motor drive unit. The rod shall be 4.0 gauge specifically treated steel. To ensure safe operations, the machine shall have a fully enclosed body and an automatic safety throw-out clutch or relief valve. The rodding unit shall be able to pull brushes, swabs, and other cleaning equipment as well as the television camera. It shall also have a footage meter attached so that the location of the cleaning tools and/or television camera will be known at all times.

Construction Requirements.

This item of work shall consist of sewer and adjacent structure cleaning with high velocity hydro-cleaning equipment, done in preparation of internal television inspection and pipelining so that an optimum viewing of the condition of the sewer, i.e.; cracked pipe, pipe sags, changes in sewer line grades, tree root penetration, etc can be attained.

Cleaning shall be performed on the entire sewer section between structures. This will normally consist of three (3) passes with the high velocity hydro-cleaning equipment. However, the contractor shall be required to perform such number of passes, as may be determined by the Engineer to be necessary to fully exploit this method, to provide a satisfactory preparatory cleaning of the sewer. Also, if cleaning of an entire section cannot be successfully performed from one structure, then the equipment shall be set up on the other structure and cleaning again attempted without additional compensation.

This work shall also include the cleaning, by means of the high velocity hydro-cleaning equipment, of the upstream, downstream and any intermittent structures within the sewer section.

Cleaning Precautions. During sewer cleaning operations, satisfactory precautions shall be taken in the use of cleaning equipment. When hydraulically propelled cleaning tools or tools which retard the flow in the sewer line are used, precautions shall be taken to insure that the water pressure created does not damage or cause flooding of public or private property being served by the sewer. When possible, the flow of sewage in the sewer shall be utilized to provide the necessary pressure for hydraulic cleaning devices.

Debris Removal and Disposal. All sludge, dirt, sand, rocks, grease, roots, corroded or broken pipe pieces, and other solid or semisolid material resulting from the cleaning operation shall be removed at the downstream structure of the section being cleaned. Passing material from structure section to structure section, which could cause line stoppages, accumulations of sand in wet wells or damage to pumping equipment, shall not be permitted. The material shall be removed from the site and disposed no less often than at the end of each workday in accordance with Article 202.03 of the Standard Specifications.

It is the sole responsibility of the Contractor to properly dispose of sewer debris on a daily basis. All requirements of the Illinois Environmental Protection Agency and all other regulating agencies shall be followed.

Heavy Cleaning of Sewers. Heavy cleaning shall be deemed necessary, when in the opinion of the Engineer, continued use of high velocity hydro-cleaning cannot be satisfactorily utilized due to obstructions present in the sewer, i.e.; heavy root penetrations, mineral deposits, built up debris in the line, etc.; that would prevent the optimal installation of the pipeliner.

At the direction of the Engineer, the Contractor shall then select such appropriate heavy cleaning equipment that would be capable of removing all dirt, grease, rocks, roots and other deleterious materials from the sewer line while preventing damage to that line.

Acceptance of Sewer Cleaning. Acceptance of sewer line cleaning shall be made upon the successful completion of the televising inspection and shall be to the satisfaction of the Engineer. If TV inspection shows the cleaning to be unsatisfactory, the Contractor shall be required to reclean and reinspect the sewer line until the cleaning is shown to be satisfactory, at no additional cost to the municipality.

This work, regardless of the number of set-ups or passes with the high velocity hydro-cleaning equipment, and including structure cleaning, will be merged into the contract unit price per lineal foot for STORM SEWER LINING, 24" DIAMETER.

(CTE – 10/25/2004)

SEWERS TO BE PIPELINED

This work shall consist of rehabilitating existing sanitary sewer mains by installation of a cured-in-place liner at locations indicated on the plans or as directed by the Engineer.

Description. This work consists of reconstructing existing sanitary sewer pipes with a resin-impregnated flexible pipe liner which is cured in place upon circulation of hot water. All work shall be performed at locations indicated on the plans or as directed by the Engineer.

Materials.

The sewer section shall be lined with an approved cured-in-place pipe liner. Contractors using a "NEW" pipe lining Product must furnish specifications as to the structural strength and flexibility of the liner to conform to the existing sewer diameter so that a restriction in sewer capacity is not caused by the liner. A list of references of previous installations in the Chicagoland area shall be required. The Engineer's decision concerning the acceptability of a "NEW" pipe liner shall be final.

The Contractor shall sufficiently clean the sewer section to be lined in accordance with the Special Provisions contained herein. After cleaning, the Contractor shall make sure the sewer section is sufficiently dry prior to lining to prevent loss of resins during the insertion phase.

The tube shall consist of one or more layers of absorbent fabric capable of carrying resin, and shall be capable of withstanding installation pressures and curing temperatures. The tube material shall be able to stretch to fit irregular pipe sections and negotiate bends up to 90^{o}. The outside layer shall be plastic coated with a material compatible with the resin system used.

The resin shall be a thermoset resin system that is compatible with the cured-in-place pipe installation. The resin shall be able to cure in the presence of water and the initiation temperature for curing shall be less than 180^{o} F. The bond between all CIPP layers shall be strong and uniform, with no part of the tube left unstaurated by resin.

The installed liner shall conform to the minimum structural standards as listed below.

CURED-IN-PLACE PIPE LINER STANDARD RESULTS

Tensile Stress ASTM D-638	3,000 psi
Flexural Stress ASTM D-790	4,500 psi
Modulus of Elasticity ASTM D-790	250,000 psi

The liner shall be fabricated to a size that when installed will neatly fit the internal circumference of the conduit. Circumferential stretching during insertion shall not exceed 3% of the tube's original size.

The finished liner in place shall be fabricated from materials which when cured will be chemically resistant to withstand internal exposure to domestic sewage.

The thickness of all liners shall be designed assuming a fully deteriorated host pipe with a minimum 2% ovality, a soil load of 120 lbs/ft^3, appropriate live loads where applicable, and a water table five feet (5') below the ground surface. The Contractor shall verify soil depths in the field, and shall include this factor into the liner thickness design. The liner shall be

manufactured to have sufficient structural strength to withstand the expected loads assuming no structural enhancement from the host pipe. All cured in place liner designs shall be in accordance with ASTM F1216. Prior to installation of any liners, the Contractor shall submit to the Engineer a written summary containing the proposed liner thickness, and supporting calculations, for each sewer section to be lined during this project.

Design variations for conditions other than those assumed in the preceding paragraph, based upon actual field data, must be approved by the Engineer prior to construction. Calculations justifying proposed changes to liner thicknesses shall be submitted in writing to the Engineer. If reductions in the liner thickness are approved by the Engineer, the Contractor shall provide the corresponding reduction in unit price to the Owner.

The minimum length shall be that deemed necessary by the contractor to effectively span the distance from the inlet to the outlet of the respective manholes unless otherwise specified. The Contractor shall verify the lengths and internal pipe diameters in the field before installation.

Construction Requirements.

The Contractor shall be responsible for maintaining uninterrupted sanitary and water service to all affected residences. Any shut-down time which affects service to any residences, businesses, etc. will require notice to such owners at least twenty-four (24) hours in advance indicating the day, time and length of time for interrupted service. This requirement, if necessary, shall be coordinated with the Department of Water Management or other officials so designated by the Engineer.

Preparation of existing sewer section: Prior to any lining of a sewer, the Contractor shall remove internal deposits, tree roots, etc. from the pipeline and clean the pipe to the Engineer's satisfaction in accordance with the applicable sewer cleaning specifications included within these Special Provisions.

Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles, and service connections by closed circuit television. The interior of the pipeline shall be carefully inspected to determine the location and extent of any structural failures. The location of any conditions which may prevent proper installation of lining materials into the pipeline shall be noted so that these conditions can be corrected. A videotape and suitable log shall be kept by the Contractor for later reference by the Owner and Engineer. Reports of previous internal inspections of the sewer, if any, will be made available for reference to the Contractor, at his request, by the Owner and/or Engineer.

It shall be the responsibility of the Contractor to clear the line of all obstructions such as solids, corrosion on inner pipe walls, dropped joints, protruding branch connections or broken pipe that will prevent the insertion of the liner. If inspection reveals an obstruction that cannot be removed by conventional cleaning or internal cutting equipment, then the Contractor shall inform the Owner and Engineer of the need for a point repair excavation. Such excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be considered a separate pay item. All necessary point repairs shall be performed by qualified contractors approved by the Owner and Engineer. If inspection of the sewer indicates one or more point repairs are needed, the Engineer, upon approval by the Owner, may call for abandoning pipe lining of the designated sewer.

Wetting Out Procedure. The tube should be vacuum-impregnated with resin (wet-out) under controlled conditions. The volume of resin should be sufficient to fill all voids in the tube material at nominal thickness and diameter. The volume should be adjusted by adding excess resin for the change in resin volume due to polymerization and to allow for any migration of resin into the cracks and joints in the original pipe. A roller system or other approved method shall be used to uniformly distribute the resin throughout the tube. Use of a catalyst or additive(s) compatible with resin and tube may be used as per the manufacturer's recommendations. The Contractor shall keep the wetted-out tube properly refrigerated during transportation to the project site, and until the time of installation.
Liner Installation. The pipe liner shall be inserted through an existing sewer manhole, unless otherwise approved and authorized prior to construction by the Owner and the Engineer. Tube installation forces or pressures shall be limited so as not to longitudinally stretch the tube by more than 3% of its original length. The finished lining shall be continuous over the entire length of the section so designated, and be as free as commercially possible from visual defects such as foreign inclusions, dry spots, pinholes and delamination. The lining shall be impervious and free from any leakage from the pipe to the surrounding ground or from the ground to the inside of the line pipe. Any defects which will affect, in the foreseeable future or warranty period, the integrity or strength of the lining, shall be repaired at the Contractor's expense, in a manner determined by the Engineer.

After installation, a suitable heat source and water recirculation equipment shall be utilized to circulate heated water throughout the pipe. This equipment shall be capable of delivering hot water and controlling temperatures such that a uniform cure of the resin is achieved. The curing process shall be as recommended by the resin manufacturer, including strict adherence to recommended initial cure and post-cure temperatures. Suitable gages shall be available to monitor the temperatures of the incoming and outgoing water supply.

The cured liner shall be cooled to a temperature below 100^{o} F before relieving the hydrostatic head, by the introduction of cool water into the line. The contractor shall take care in the release of the static head so that a vacuum will not develop which could damage the newly installed liner.

Seal at Manholes. The Contractor shall ensure that a watertight seal is achieved at pipe connections with existing manhole walls and inverts. The top half of the finished CIPP shall be neatly cut at least four inches (4") from the manhole wall. Shearing or breaking off of CIPP sections shall not be allowed. If an acceptable seal is not achieved at the manhole openings, the contractor shall fill the annular space with a resin mixture compatible with the CIPP. A hand brushed Portland Cement finish or other method approved by the Engineer, to completely seal the connection of the installed pipe liner to the interior walls and bench of the manhole, shall also be applied if required by the Engineer. The cost for this work shall be included in the cost of pipelining.

Modifications to the bench of the existing manhole(s) shall be made if required by the Engineer. The pipe channel in the manhole shall be a smooth continuation of the CIPP pipe(s), and shall be merged with other existing channels within the manhole structure. The cross section of all channels shall be semi-circular with a minimum height of one-half the pipe diameter. The manhole bench shall be reshaped with mortar or concrete and shall be included in the cost of pipelining.

Material Testing. For each inversion length installed during the project, the Contractor shall cut one sample from a section of cured CIPP at an intermediate manhole or termination point. The

sample should be large enough to provide a minimum of five specimens for flexural testing. The full CIPP sample wall thickness shall be tested, whenever possible. If the sample is irregular or distorted such that proper testing is inhibited, wall thickness shall be machined away from the inside pipe face of the sample.

Test specimens shall be oriented on the testing machine with the interior surface of the CIPP in tension. The initial tangent flexural modulus of elasticity and flexural stress should be measured for gravity pipe applications in accordance with Test Method D790, Test Method 1 - Procedure A, and shall meet the requirements specified above in Section B - Materials. Certification of sample testing results shall be provided to the Engineer prior to the Owner's final acceptance of the project.

Service Lateral Reinstatements. After the liner has been installed and cured, the Contractor shall reconnect the existing active service connections by means of a remotely controlled cutter. Inactive service laterals shall be identified by dye water testing or other appropriate method during the pre-insertion videotaping, and shall not be reinstated. A maximum of one lateral per property shall be reinstated, unless otherwise directed by the Engineer. Service reinstatements made by excavation shall not be permitted. The Contractor shall verify the location of all active service laterals to be reinstated by careful review of the pre-insertion videotape.

The remote cut shall be smooth and circular, and shall be verified with inspection by a 360^{o} closed circuit television camera. All finished holes shall be a minimum of 90%, and a maximum of 100%, of the service pipe diameter. Excess holes, wrong holes or trial cuts shall not be allowed. Defective reinstatements shall be repaired to the Engineer's satisfaction at the Contractor's expense.
If additional holes or cuts are made which lessen the installed liner's structural integrity, or allow visible infiltration, the Engineer may require removal and replacement of the liner for an entire sewer section. In this case, the Contractor shall cause the entire length of the liner to be removed, and shall install a new liner at no additional expense to the Owner.

After the work is completed, the Contractor will provide the Engineer with a videotape showing both the before lined and after lined conditions including the restored connections.

Any surface area damaged (sod, sidewalk, etc.) during the televising and/or pipe lining process shall be repaired or replaced to their original condition. The cost for any surface restoration and cleanup shall be included in the cost of the pipe lining.

Measurement and Payment.

Sewer lining work shall be measured for payment from the center of manhole to center of manhole for each sewer section lined. The cost for all labor, materials and equipment required to install the finished liner, including preparatory cleaning and televising of sewers, manhole cleaning, removal and disposal of debris, manufacture and transport of the flexible liner and resin impregnation system, installation of the liner, sealing at manhole walls, leakage testing, CIPP sample testing, post-insertion televising, restoration of disturbed areas, cutting of protruding taps and reinstatement of service laterals, dye testing or other appropriate method to verify active laterals, reinstatement of active laterals by remote cutter, and post-cutting internal inspection by a 360^{o} rotating camera, and cutting protruding taps prior to lining will be paid for at the contract unit price bid per lineal foot for STORM SEWER LINING, 24" DIAMETER.

(CTE – 10/25/2004)

SAND CUSHION, 3-INCH

Description. This work consists of replacing subgrade material from beneath proposed sidewalks with a 3-inch sand cushion, as directed by the Engineer.

Materials. The sand cushion shall be fine aggregate conforming to Section 1003 of the Standard Specifications with an FA-2 gradation.

General Requirements. Upon removal to proposed sub-base elevation of existing sidewalks, a 3-inch compacted thickness of sand shall be placed prior to placement of proposed portland cement concrete. The sand cushion shall be placed upon a prepared sub-grade and compacted to 95% of maximum density as determined by AASHTO T-99.

Disposal. Surplus excavated material shall not be stockpiled on the jobsite but disposed of in accordance with Article 202.03 of the Standard Specifications.

Method of Measurement. This item of work will be measured in place and the volume will be computed in cubic yards as determined by method of average end areas.

Basis of Payment. This work will be paid for at the Contract Unit Price per cubic yard for SAND CUSHION, 3-INCH, which price will include all cost for furnishing, installing and compacting the sand cushion.

(CTE – 10/25/2004)

GENERAL ELECTRICAL REQUIREMENTS

Add the following to Article 801 of the Standard Specifications:

Preconstruction Inspection:

General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a 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 preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date. The preconstruction inspection shall:

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 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.

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. The inventory shall be reviewed with and approved by the Engineer and a record of the inventory shall be submitted to the Engineer for the record.

Coordination Requirements with Other Contracts. This Contract abuts and or overlaps with concurrent IDOT Contract Number 62583 – Lighting and Surveillance from 31st Street to I-57. Each Contract includes work items requiring close coordination between the Contractors regarding the sequence and timing for the execution of work items.

The Contractor shall become familiar with the construction schedule and maintenance of traffic for Contract 62583. Work shall be coordinated between the Contracts such that none of the Contract's schedules are delayed. Failure by the Contractor to coordinate with the other Contract's construction schedule will be grounds for a penalty of $500.00 for each and every occurrence, to be deducted for the next pay estimate due to the Contractor.

Grounding of Lighting Systems. All electrical systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC, even though every detail of the requirements is not specified or shown. Good ground continuity throughout the electrical system shall be assured. Where connections are made to painted surfaces, the paint shall be scraped to fully expose metal at the connection point and serrated connectors or washers shall be used. Where metallic conduit is utilized as the equipment grounding conductor, extreme care shall be exercised to assure continuity at joints and termination points. Work which is extra to the contract will be paid extra. All connections to ground rods, structural steel, reinforcing steel or fencing shall be made with exothermic welds. Where such connections are made to insulated conductors, the connection shall be wrapped with at least 4 layers of electrical tape extended 152.4 mm (six inches) onto the conductor insulation. Where a ground field of "made" electrodes is provided, the exact locations of the rods shall be documented by dimensioned drawings as part of the Record Drawings. Equipment ground wires shall be bonded, using a splice and pigtail connection, to all boxes and other metallic enclosures throughout the wiring system.

Delete the last paragraph of Article 801.06 of the Standard Specifications.

Revise the 7th and 8th paragraphs of Article 801.08 of the Standard Specifications to read:

"Engineer's Stamp. After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings

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

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 801.12 of the Standard Specifications to read:

Lighting Operation and Maintenance Responsibility. The existing roadway lighting systems, including sign lighting, must remain operational throughout the project's duration. The maintenance of the existing roadway lighting system is not included in this Contract and will be maintained by another contractor under IDOT Contract 62583.

(CTE – 08/11/2004)

GROUND ROD

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)	Ground Rod	1087.01(b)
(b)	Copper Ground Wire	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 with 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 at ground mounted light towers shall be included in this pay item and be counted, each. Ground wires and connection of ground rods shall be included in this pay item. Ground rods installed at handholes, light tower foundation integral with retaining wall, barrier wall, and foundations for sign structures shall not be measured for payment but shall be included in the cost of the handhole or appropriate foundation pay item.

Basis of Payment. This item shall be paid at the contract unit price each for GROUND ROD, of the diameter and length indicated which shall be payment in full for the material and work described herein.

(CTE – 03/11/2004)

UNDERGROUND RACEWAYS

Revise Article 810.03 of the Standard Specifications to read:

> "Installation. All underground conduit shall have a minimum depth of 700 mm (30-inches) below the finished grade or as shown on plans."

Add the following to Article 810.03 of the Standard Specifications:

> "All metal conduit installed underground shall be Rigid Metal Conduit unless otherwise indicated on the plans."

(CTE – 10/22/2004)

TRENCH AND BACKFILL FOR ELECTRICAL WORK

Effective Date: January 1, 2002

Revise the first sentence of Article 815.03(a) of the Standard Specifications to read:

> "Trench. Trenches shall have a minimum depth of 760 mm (30 in.) or as otherwise indicated on the plans, and shall not exceed 300 mm (12 in.) in width without prior approval of the Engineer."

Revise Article 1066.05 of the Standard Specifications to read:

"Underground Cable Marking Tape. The tape shall be 150 mm (6 in.) wide; consisting of 0.2 mm (8 mil) polyethylene according to ASTM D882, and ASTM D2103.

The tape shall be red with black lettering or red with silver lettering reading "CAUTION – ELECTRICAL LINE BURIED BELOW".

The tape shall have reinforced metallic detection capabilities consisting of a woven reinforced polyethylene tape with a metallic core or backing."

COILABLE NONMETALLIC CONDUIT

Revise Article 1088.01(c) to read:

"(c) Coilable Nonmetallic Conduit.

Polyethylene Duct. The duct shall be a plastic duct which is intended for underground use and 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 shall be made of high density polyethylene which shall meet the requirements of ASTM D 2447, for schedule 40. The duct shall be composed of black high density polyethylene meeting the requirements of ASTM D 3350, Class C, Grade P33. The wall thickness shall be in accordance with Table 2 for ASTM D 2447.

Duct dimensions shall conform to the following table:

Nom. Duct Diameter		Nom. Outside Diameter		Min. Wall Thickness	
mm	In	mm	in	mm	in
27	1	33.4	1.315	3.4	0.133
35	1.25	42.2	1.660	3.6	0.140
41	1.5	48.3	1.900	3.7	0.145
53	2.0	60.3	2.375	3.9	0.154
76	3.0	88.9	3.500	5.5	0.216
102	4.0	114.3	4.500	6.0	0.237

Performance Tests. Polyethylene Duct testing procedures and test results shall meet the requirements of ASTM D 3485. Certified copies of the test report shall be submitted to the Engineer prior to the installation of the duct. Duct crush test results shall meet or exceed the following requirements:

Duct Diameter		Min. force required to deform sample 50%	
mm	in	N	lbs
27	1	5337	1200
35	1.25	4937	1110
41	1.5	4559	1025
53	2.0	3780	850
76	3.0		
102	4.0		

(CTE – 03/04/2004)

REINFORCED CONCRETE DUCTBANK

Description. This item shall consisting of forming and finishing a reinforced concrete ductbank including spacers, rebar and all required formwork as detailed on the plans and specified herein.

Execution. Construction of the ductbank shall be in accordance with Section 810 of the Standard Specifications. Refer to plan sheets for details.

The engineer shall inspect the ductbank and verify location of reinforcing rebar, conduit spacers and duct joints prior to placing of concrete. The Contractor shall be responsible for coordinating the Engineer's inspection and obtaining his approval.

Concrete used in ductbank shall be Class SI meeting the requirements of the Standard Specifications for Road and Bridge Construction Section 1020 and shall be tested in accordance with the applicable requirements of the Standard Specifications.

Basis of Payment. This item shall be paid for at the contract unit price per foot for CONDUIT ENCASED, REINFORCED CONCRETE of the diameter and quantity specified, which shall be payment in full for the material and work described herein.

(CTE – 03/04/2004)

LIGHT TOWER FOUNDATION

Description. This item shall consist of forming and finishing a light tower foundation for a ground mounted light tower and all required hardware as detailed in the plans and specified herein.

Execution. Construction of the light tower foundation shall be in accordance with Section 837 of the Standard Specifications. Refer to plan sheets for details.

The Engineer shall inspect foundation form work and verify location of anchor rods and conduit sleeves prior to the placement of concrete. The Contractor shall be responsible for coordinating the Engineer's inspection and obtaining his approval.

Basis of Payment. This item shall be paid for at the contract unit price per foot for LIGHT TOWER FOUNDATION of the diameter specified, which shall be payment in full for the material and work described herein.

(CTE – 03/04/2004)

REMOVE EXISTING CONCRETE FOUNDATION

Description. This work shall consist of furnishing all labor, equipment, and materials required for the removal of the existing Department TSC surveillance equipment cabinet foundations as indicated in the plans.

Removal. Removal of the existing TSC surveillance equipment foundations shall meet the requirements of Section 895 of the Standard Specifications.
The existing TSC surveillance equipment foundations shall be removed from the expressway right-of-way and disposed of at the expense of the Contractor. Foundation removals shall include backfilling and compacting any holes that were created by the removal of the foundations to the satisfaction of the Engineer.

Underground electric cables and conduit shall be removed by the Contractor to a depth of 300mm (1 ft) below ground level and abandoned. Electric cables in conduit may be removed from the duct and may become the property of the Contractor.

CONSTRUCTION REQUIREMENTS

All above ground TSC surveillance equipment shall be removed by others under separate contract. The above ground equipment shall be removed prior to the removal of the foundations.

No removal work shall be permitted without first notifying, and obtaining approval from, the Engineer.

Method of Measurement. Existing concrete foundations to be removed will be measured for payment per each foundation removed.

Basis of Payment. Payment for the removal of all surveillance equipment cabinet foundations will be made at the contract unit price per each for REMOVE EXISTING CONCRETE FOUNDATION.

(CTE – 07/23/2004)

LIGHT TOWER SERVICE PAD

Description. This work shall consist of the construction of light tower service pads. The service pads shall be built to the lines and grades and dimension shown on the plans. The work shall include the concrete, sub-base, epoxy coated rebar, and welded wire fabric required for the installation of the service pad. When shown on the plan a 9” concrete curb or a concrete

retaining wall shall be integrally constructed with the service pad. The work to provide the curb and retaining wall will be paid for separately in accordance with the Standard Specifications and is not included in this pay item. This work shall be done according to Section 606 of the Standard Specifications with the following revisions:

Revise Article 606.14 of the Standard Specifications to read:

> "Basis of Payment. Light tower service pads integral with retaining walls will be paid for at the contract unit price per square foot for LIGHT TOWER SERVICE PAD, 6" and LIGHT TOWER SERVICE PAD, SPECIAL, which shall be payment in full the material and work described herein.
>
> No additional compensation will be allowed for furnishing and compacting 6" of CA-6 sub-base, providing and finishing Class SI concrete, providing reinforcement bars, providing welded wire fabric, backfilling, and restoring slopes for the concrete pad as indicated in the plans or as directed by the Engineer."

(CTE – 08/21/2004)

CONCRETE FOUNDATION, TYPE 1

Description. Concrete foundations shall be constructed to support ITS equipment cabinets (Type 1 foundations) at locations as indicated on the Plans. This work shall include installing any necessary hardware (entering conduits, bolts, anchor rods, grounding, etc.) as shown on the Plans. This work shall also include any topsoil, fertilizing, seeding, and mulching of the distributed areas in accordance with Sections 211, 250, and 251 of the Standard Specifications.

Materials. Type 1 concrete foundations shall be according to materials defined in Article 836.02 of Section 836 of the Standard Specifications. All anchor bolts shall be in accordance with Section 1006.09 of the Standard Specifications except that all anchor bolts shall be hot dipped galvanized the full length of the anchor bolt including the hooks. Anchor bolts shall provide bolt spacing as shown in the Plans and as required by the cabinet manufacturer.

The Type 1 concrete foundations shall also be fabricated in accordance with Section 1070 of the Standard Specifications. These concrete foundations shall be fabricated from material new and unused in any previous application. The manufacturer shall provide a Certificate of Compliance that the materials are new and meet the specified requirements in accordance with the Standard Specifications and as shown on the Plans.

CONSTRUCTION REQUIREMENTS

The Engineer will determine the final placement of the Type 1 concrete foundations. Type 1 concrete foundation dimensions shall be in accordance with those dimensions shown in the Plans on the detail sheet "Concrete Foundation, Type 1 (Model 334 Cabinet) Detail". The foundation shall be located as required in order to avoid existing and relocated utilities. The top of the foundation shall be finished level. Shimming of the appurtenance to be attached will not be permitted.

Prior to pouring the foundation, the Contractor shall check the Plans for the specific number, size, and direction of conduit entrances required at the given location. All conduits in the

foundation shall be installed rigidly in place before concrete is deposited in the form. Bushings shall be provided at the ends of the conduit. Anchor rods and ground rod shall be set in place before the concrete is deposited by means of a template constructed to space the anchor rods according to the pattern of the bolt holes in the base of the appurtenance to be attached. The appurtenance shall not be erected on the foundation until the bases have cured for at least (7) days. The Concrete shall cure according to Article 1020.13 of the Standard Specifications.

Method of Measurement. Concrete foundations shall be measured for payment in feet of the concrete foundation in-place installed in accordance with the total length of concrete foundation required for Type 1 foundations as indicated on the Plans and as directed by the Engineer. Extra foundation depth, beyond the directive of the Engineer, will not be measured for payment.

Basis of Payment. Payment will be paid for at the contract unit price per feet (meter) of CONCRETE FOUNDATION, TYPE 1, of the diameter and length indicated. The price shall include payment in full for all necessary excavation, backfilling, disposal of unsuitable material, form work, furnishing, installing, and testing all materials (entering conduits, bolts, anchor rods, grounding, etc.) within the limits of the foundation. Any topsoil, fertilizing, seeding, and mulching of the distributed areas as well as all associated labor is to be included in this contract unit price.

(Edwards and Kelcey – 03/19/2004)

UTILITY TRANSFORMER PAD, 4”

Description. This item shall consist of furnishing and installing a concrete pad for a ground mounted utility transformer as shown on Commonwealth Edison Company (COMED) Standard Drawing C5288, as shown on the plans and as directed by COMED or the Engineer. All work shall be done in accordance with COMED standards and requirements.

All excavation, site preparation, formwork, concrete, steel reinforcement, conduit sleeves, grounding, subgrade materials, backfill, and grading work required to install the pad shall be included in this pay item.

Basis of Payment. This work will be paid for at the contract unit price each for UTILITY TRANSFORMER PAD, 4”, which shall be payment in full for the material and work described herein.

(CTE – 08/18/2004)

COMMUNICATIONS VAULT

Description. Work under this item shall consist of constructing a communications vault including a vault lid, in accordance with the details shown on the Plans and as provided herein.

Materials. The communications vault and vault lid shall be constructed of polymer concrete material, and shall be gray in color.

The communications vault shall be 30 inches x 48 inches and shall have an effective height of 57 inches, including one 24-inch tall stackable vault and one 36 inch stackable vault with 3 inch overlap.

The communications vault lid shall withstand AASHTO H 20 loading and shall have a permanently recessed logo that reads “IDOT COMMUNICATIONS”. The communications vault lid shall have two 2½-in x 4-in pull slots. The lid surface shall have a coefficient of friction of 0.50 in accordance with ASTM C-1028.

The Contractor shall install manufacturer-approved gasketing between the lid and the top 24-inch deep stackable vault to prevent water from entering the communications vault.

The communications vault lid shall be secured to the vault with two 3/8-inch NC stainless steel penta-head bolts and washers to lock the lid. In addition, a “lock tool” shall be provided for communications vault entry.

A fiber optic cable support assembly shall be recommended by the manufacturer and approved by the Engineer for fiber optic cable and splice enclosures used in the vault. Each support assembly shall consist of multiple brackets, racks, and/or rails required to suspend the required surplus cabling and any splice enclosures required.

The support assembly shall be made from or coated with weather resistant material such that there is no corrosion of the supports. The support assemblies shall be anchored to the vault using stainless steel hardware.

The fiber optic cable support assemblies shall be included in the contract unit price for the communications vault.

Void areas between openings and conduit shall be filled with self-curing caulking consisting of a permanent, flexible rubber which is unaffected by sunlight, water, oils, mild acids or alkalis. The caulking shall be mildew resistant and non-flammable. The material shall provide a permanent bond between the conduit entering the vault and the polymer concrete. The caulking shall be gray in color.

CONSTRUCTION REQUIREMENTS

Communications Vault shall be installed in accordance with applicable requirements of Section 800 of the Standard Specifications and as provided herein.

A manufacturer-approved knockout punch driver shall be used to provide openings in the vaults for conduit, or the required openings may be machined at the time of stackable vault fabrication. Voids between entering conduits and punch driven or machined openings shall not exceed ½-inch.

Any void areas shall be caulked from the interior and exterior of the communications vault. The caulk shall be allowed to fully cure per the manufacturer’s specifications, prior to backfilling.

The communications vault shall be placed on 12 inches of coarse aggregate, CA-5 Class A, as specified in Section 1004 of the Standard Specifications. Seal and flash test the vault per the manufacturer’s recommendations.

A minimum of 50 feet of excess cable shall be coiled in each communications vault containing splices to allow moving the splice enclosure to the splicing vehicle.

Basis of Payment. COMMUNICATIONS VAULT will be paid for at the contract unit price each. This price shall be payment for furnishing and installing all materials, for all excavation, backfilling, and for disposal of surplus material.

(CTE – 03/26/2004)

HEAVY DUTY HANDHOLE

Description. This item shall consist of furnishing the materials and constructing a heavy-duty handhole, or a heavy-duty handhole special, cast in place, complete with frame and cover. The handhole shall be constructed in accordance with the following requirements and conforming in all respects to the lines, grades, and dimensions shown on the Plans or as directed by the Engineer.

Materials. All materials shall conform to the requirements of Article 1088.10 of the Standard Specifications. All handholes shall be constructed of Class SI concrete meeting the requirements of the Standard Specifications for Road and Bridge Construction Section 1020. Ground rod materials shall conform to the requirements of Article 806.02 of the Standard Specifications.

CONSTRUCTION REQUIREMENTS

Handholes of the type specified shall be constructed in accordance with the details shown on the Plans and conform to the following requirements:

1.0 Concrete: Concrete construction shall be done in accordance with the provisions of Concrete for Structures and Incidental Construction contained in the Standard Specifications for Road and Bridge Construction Sec. 503.

2.0 Placing Castings: Castings shall be set accurately to the finished elevation so that no subsequent adjustment will be necessary. Castings shall be set flush with a sidewalk or pavement surfaces. When installed in an earth shoulder away from the pavement edge, the top surface of the casting shall be 25.4 mm (1 in.) above the finished surface of the ground.

3.0 Backfilling: Any backfilling necessary under a pavement, paved shoulder, and sidewalk or within 600 mm (2 ft.) of the pavement edge shall be made with sand or stone screenings.

4.0 Forming: Forms will be required for the inside face of the handhole wall, and across all trenches leading into the handholes excavation. The ends of conduits leading into the handhole shall fit into a conduit bell, which shall fit tightly against the inside form and the concrete shall be carefully placed around it so as to prevent leakage.

5.0 French Drain: A french drain conforming to the dimensions as shown on the Plans shall be constructed in the bottom of the handhole excavation.

6.0 Steel Hooks: Each handhole shall be provided with four galvanized steel hooks of appropriate size, one on each wall of the handhole.

7.0 Frame and Cover: The outside of the cover shall contain a recessed ring Type “G” for lifting and a legend "IDOT" cast-in.

8.0 Grounding: A 5/8” x 10’ ground rod shall be installed in each handhole. Ground rod connections shall be made by exothermic welds. Ground wire for connection to handhole cover frame shall be stranded uncoated bare copper in accordance with 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 be not les than No. 2 AWG.

9.0 Cleaning: The handhole shall be thoroughly cleaned of any accumulation of silt, debris, or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.

Basis of Payment. This work will be measured and paid for at the contract unit price each for HEAVY-DUTY HANDHOLE; or HEAVY-DUTY HANDHOLE (SPECIAL) of the size specified, which price shall be payment in full for the material and work described herein.

(Edwards & Kelcey – 03/04/2004)

CONDUIT 3” DIA., POLYETHYLENE

Description. This work shall consist of furnishing and installing 75 mm (3 in) schedule 80 HDPE conduits encased in concrete, fittings and accessories. This specification describes the minimum design, operational, functional and installation requirements for a non-invasive, magneto-inductive vehicle sensor conduit encased in concrete as described herein and as shown in the Plans.

Materials.

Conduit. The flexible electrical plastic duct shall be manufactured to comply with the American Society for Testing and Materials Standards (latest edition) cited by ASTM Designation D 3485, and to the standards of NEMA Publication No. TC-7.

The duct shall be manufactured from black polyethylene complying with ASTM Designation D1248, Type III, Grade 3, Class C with the following exceptions and additions:

1.0 The Elongation when tested by the procedure in ASTM Designation D-638 shall be a minimum of 300%.

2.0 The Brittle Temperature when tested by Procedure A in ASTM Designation D-746 shall be -70 degrees C. (-94 degrees F) or below.

3.0 The environmental Stress Crack Resistance when tested in accordance with ASTM Designation D-1693 shall produce not more than 2 failures per 10 specimens after 48 hours.

Construction: The duct shall be manufactured as polyethylene plastic pipe complying with ASTM Designation D-2104 with the following exceptions and additions:

1.0 The Outside Diameter, minimum wall thickness, and bending radius shall be as follows:

Nominal Size mm/(inches)	**Outside Diameter mm/(inches)**	**Minimum Wall Thickness mm(inches)**	**Minimum Bending Radius mm(inches)**
75/(3)	88.90 ± 0.305 (3.500 ± 0.012)	7.62 (0.3)	1000 (40)

The duct may be manufactured to the dimensions in the above table. The duct shall be capable of being bent within the minimum-bending radius listed above.

2.0 When tested in accordance with the procedures and test methods referred to in ASTM Designation D-2104 the test pressures used shall be 75% of the values listed in Tables III, V, VI, and VII.

3.0 The duct shall pass the following tests:

a. Freeze-up test: A 3.0 m (10 ft) 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 twenty-four hours. The duct shall not crack or burst during the test.

b. Compression Test: The test shall be conducted on three, 150.0 mm (6 in) samples of the duct, using equipment set at 50 mm (2 in) per minute. Samples are placed between 150.0 mm (6 in) plates and compressed at the rate of 12.0 mm (1/2 in) 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 mm (in)	Load N (lbs)
75.0 (3 in)	1556.87 (350 lbs)

The duct shall be permanently marked at regular intervals on the outside with the manufacturer's name or trademark.

The manufacturer shall certify that these tests were made and the results conform to specifications, using the apparatus and test methods listed above and shall be submitted to the Engineer for approval, prior to installation of duct.

Couplings shall be high density polyethylene or acetyl butyl styrene drive on pipe fittings.

Concrete. Concrete shall be Class SI complying with Section 503 of the Standard Specifications for Road and Bridge Construction.

CONSTRUCTION REQUIREMENTS

The 75 mm (3 in) Schedule 80, seamless polyethylene conduit shall meet or exceed Section 810 of the Standard Specifications for Road and Bridge Construction, which apply to coilable non-metallic conduit with the following additions and modifications:

1.0 The centerline of the conduit shall not deviate horizontally or vertically more than .25 inches per foot (2 cm/m).

2.0 At least one end of the conduit shall terminate at a standard size handhole or standard special size handhole and extend three inches (75 mm) into the handhole.

3.0 The conduit shall be sloped to drain into the handhole.

4.0 The far end of the conduit shall be capped when terminating or not terminating in a handhole.

5.0 The encased conduit shall not be reinforced.

Underground concrete-encased conduit shall be supported on interlocking plastic spacers specifically designed for the purpose, spaced along the length of the run as recommended by the manufacturer. Spacing between raceways within a common duct bank shall be not less than 50 mm (2 in). The interlocking spacers shall be used at a minimum interval of 2.5 m (8 ft).

Concrete cover overall shall not be less than 88.9 mm (3.5 in) above the conduit, 76.2 mm (3.0 in) below the conduit, and a 254 mm (10 in) by 254 mm (10 in) square. Space below the conduit, and concrete fill shall be assured. Care shall be exercised during concrete placement to assure that there are no voids, so that spacers are undisturbed, and so that conduit joints stay secure and unbroken. Concrete shall be deflected during placement to minimize the possible damage to or movement of the conduits.

The Contractor shall ensure the concrete encasement and conduit remains undamaged during construction. One method for ensuring the concrete encasement and conduit remains undamaged during construction is by providing a granular sub-base mound a minimum of 24” high at the center of the microloop conduit installation and extending 50’ on each side of the center of the microloop conduit installation. Other methods may be used, as the Contractor deems appropriate and as approved by the Engineer. Any damage to the concrete encasement and conduit during construction shall become the responsibility of the Contractor to repair or replace, as determined by the Engineer.

The Contractor shall ensure that the conduit is continuous, with no break from one handhole to the end cap as shown on the Plans. The Contractor shall test the integrity of the conduit upon completion of the roadway above each conduit. The Contractor shall install sensor carriers for the entire length of the conduit to demonstrate its suitability and correct installation. These carriers shall be removed upon approval of the Engineer and completion of the demonstration.

Method of Measurement. This item shall be measured for payment in meters (feet) for CONDUIT ENCASED, CONCRETE, 3” DIA., POLYETHYLENE. Measurements will be made in straight lines along the centerline of the conduit between ends.

Basis of Payment. This work shall be paid for at the contract unit price per meter (foot) for CONDUIT ENCASED, CONCRETE, 3" DIA., POLYETHYLENE of the type and diameter specified, which shall be payment in full for the material and work described herein.

(Edwards & Kelcey – 03/04/2004)

STAINLESS STEEL JUNCTION BOX

Effective: January 1, 2002

Revise the second sentence of the seventh paragraph of Article 1088.04 of the Standard Specifications to read:

"The gasket shall be extruded directly onto the junction box cover."

CITY OF CHICAGO TRAFFIC SIGNAL SPECIAL PROVISIONS

PVC CONDUIT IN TRENCH

Description. This item consists of furnishing and installing conduits, fittings, and accessories, laid in trench as specified herein, as shown on the Plans, and as directed by the Engineer.

Materials. Materials shall be according to the following Articles of Standard Specifications Section 1000 - Materials, except as noted below:

	Item	Requirement
(a)	Rigid Nonmetallic Conduit	Standard Specifications, Article 1088.01(b)

Polyvinylchloride (PVC) conduit shall conform to the requirements of National Electrical Manufacturers Association Standard, Publication Number TC2 for Schedule 40 and Schedule 80 conduit.

General Requirements. General requirements shall be in accordance with Section 801 of the Standard Specifications, and in accordance with Bureau of Electricity Standards and the City of Chicago Electrical Code, except as herein modified.

Location. Conduits will be installed at locations as shown diagrammatically on the Plans. Conduits shall be installed in the shortest practicable line between points of termination, or under adverse conditions, as directed by the Engineer. Conduits not shown on the Plans, but necessary for installation, will be paid for at the agreed bid unit price as additional units of construction.

Installation of Rigid Nonmetallic Conduit. Installation shall be in accordance with Article 810.03(b) of the Standard Specifications, except for paragraphs (4) and (5), which is revised to read as follows:

> "(4) All conduit runs shall be cleaned and swabbed before installation of electric cables. Crushed, obstructed or deformed conduit will not be accepted. The excavation for trenched conduit under pavement shall be located at least 24 inches from the face of curb unless noted otherwise on the Plans. All underground conduit shall have a minimum depth of 30 inches below grade.
>
> (5) When multiple conduits in a common trench are required, no more than three (3) 4 inch or smaller conduits shall be laid on a single, horizontal level. Four (4) or more conduits shall be installed on two (2) levels as directed by the Engineer."

The Contractor shall stake his installed conduits to protect them from being cut by other Contractors working in the same area.

Method of Measurement. Conduit in trench will be measured for payment in feet as installed and accepted, in place. Measurements will be made in straight lines along the centerline of the conduit, horizontally, between changes in direction. Vertical conduit and sweeps installed in foundations will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per foot for PVC CONDUIT IN TRENCH, of the size and type specified, which shall be payment in full for the material and work described herein. Excavation, including but not limited to trench and backfill, will not be included in this item and will be paid separately.

(CTE – 08/26/2004)

INNERDUCT IN CONDUIT, 1 1/4 INCH

Description. This item is for furnishing and installing innerduct in existing or proposed conduit for the eventual placement of fiber optic cable, as shown on the Plans or as directed by the Engineer.

Material.

Fiber optic innerduct shall be flexible plastic such as polyethylene with a minimum bending radius not less than the minimum bending radius of the fiber optic cable which it supports.

The innerduct shall be orange in color for ease of identification, and shall have a preinstalled pull rope or pull tape to facilitate cable pulling. Where used, innerduct shall not include pre-installed fiber optic cable. Fiber optic cable shall be installed in the innerduct after the innerduct is installed.

The innerduct shall meet, as a minimum, the following specifications:

Nominal Outside Diameter:	1.580"
Nominal Inside Diameter:	1.25"
Minimum Tensile Strength:	4000 lbs.
Minimum Impact Resistance:	25 lbs.
Minimum Crush Resistance:	900 lbs.
Maximum Pull Load:	1200 lbs.

The innerduct shall be ribbed longitudinally along the interior and exterior of the innerduct to minimize friction during cable installation and to prevent spiraling of the innerduct during installation in the conduit. The inside of the innerduct shall have a permanent coat of silicone or equivalent compound during manufacture to reduce friction during the installation of the cable.

Installation. The innerduct shall be pulled into the conduit per the manufacturer's instructions. The innerduct shall be used to protect and isolate the fiber optic cable. The cable shall be installed separately under a different pay item.

Method of Measurement. The innerduct will be measured per foot installed, and will include only horizontal distances as shown on the Plans, or as directed by the Engineer.
Basis of Payment. This work will be paid for at the contract unit price per foot for INNERDUCT IN CONDUIT, 1¼ INCH, which will be payment in full for the material and work described herein.

ROD AND CLEAN DUCT IN EXISTING CONDUIT SYSTEM

Description And Scope. This work shall consist of inserting a duct rod or electrical fish rod or tape of sufficient length and rigidity into an electrical conduit opening in one electrical manhole or handhole, and pushing the said rod through the conduit to emerge at the next or subsequent manhole in the conduit system at the location shown on the plans. The duct rod may be inserted and removed by any standard construction method which causes no damage to the conduit system. The size of the conduit may vary from two inch (2") to four inch (4"), but there shall be no differentiation in cost for the size of the conduit.

Any manhole which, in the opinion of the Engineer contains excessive debris, dirt or other materials to the extent that conduit rodding and cleaning is not feasible, will be cleaned at the Engineer's order and payment approval as a separate pay item, and not a part of this specification.

Prior to removal, of the duct rod, a duct cleaning attachment such as a properly sized wire brush or cleaning mandrel shall be attached to the duct rod, which by removal of the duct rod shall be pulled through the conduit to remove sand, grit, or other light obstructions from the duct to provide a clean, clear passage for the installation of cable. Whenever the installation of cables is not performed as an adjunct to or immediately following the cleaning of the duct, a light weight pulling line such as a 1/8" polyethylene line or conduit measuring tape shall be placed and shall remain in the conduit to facilitate future work. When great difficulty of either inserting the duct rod or removal of the cleaning mandrel is encountered, the duct may require further cleaning by use of a compressed air gun, or a low pressure water hose. In the case of a broken duct line, the conduit shall be excavated and repaired. The existence and location of breaks in the duct line may be determined by rodding, but the excavation and repair work shall be as part of item REPAIR AND REPLACE DAMAGED CONDUIT.

Method of Measurement. This work will be measured per lineal foot each for conduit cleaned. Measurements shall be made from point to point horizontally. No vertical rises shall count in the measurement.

Basis of Payment. This work will be paid for at the contract unit price per lineal foot for ROD AND CLEAN DUCT IN EXISTING CONDUIT SYSTEM, which will be payment in full for the

material and work described herein. When the number of cables to be installed require the use of more than one conduit in the same run, each additional conduit required shall be rodded and cleaned as a separate unit and paid for at the contract unit price.

(CTE – 03/04/2004)

REPAIR AND REPLACE DAMAGED CONDUIT

Description. This Work consists of the repair and replacement of short segments of damaged or crushed conduit, needed to complete rewiring of a signalized intersection, as directed by the Engineer. Short segments shall generally be considered as ten feet or less. Work shall include excavation of pavement or sidewalk, trenching, repair and replacement of the affected conduit using water-tight conduit splices, backfill of the trench, and restoration of disturbed pavement and sidewalk. The costs of sidewalk removal and replacement work, PAVEMENT REMOVED

AND REPLACED, and for trench and backfill work, when incurred under this item, will not be measured for payment but shall be included in the cost of this item. Before commencing repair and replacement, the Contractor shall submit a brief statement of the expected work method and effort for each section of damaged or crushed conduit to the Engineer. The actual work will not take place until the Engineer approves the Contractor submittal.

Method of Measurement. The length paid for will be the number of lineal feet of conduit repaired, replaced, and accepted, measured in place. The length for measurement will be the distance horizontally between changes in direction of the conduit plus the conduit vertically attached to structure.

Basis of Payment. This work will be paid per lineal foot for REPAIR AND REPLACE DAMAGED CONDUIT, which shall be payment in full for the material and work described herein.

(CTE – 10/25/2004)

DRILL EXISTING MANHOLE OR HANDHOLE

Description. This item consists of core drilling or opening a hole in an existing handhole or manhole for the installation of a new conduit(s).

Materials. Materials shall be according to the following Bureau of Electricity (BOE) Specifications and Articles of Standard Specifications Section 1000 - Materials:

	Item	Requirement
(a)	Epoxy Mortar	Standard Specifications, Article 1025.02
(b)	Rigid Nonmetallic Conduit	Standard Specifications, Article 1088.01(b)
(c)	Rigid Steel Conduit	BOE Specification 1462

General Requirements. General requirements shall be in accordance with Section 801 of the Standard Specifications, in accordance with ComEd Standards for ComEd handholes or manholes, and in accordance with Bureau of Electricity Standards and the City of Chicago Electrical Code for City electric handholes or manholes, except as herein modified.

Installation. The size of the hole shall be as close as possible to the size of the conduit. A conduit stub-out of the size required shall be installed in the drilled hole. A bushing shall be provided at the end of the conduit. The space between the conduit and the handhole or manhole shall be sealed with a waterproof, epoxy mortar. The type and orientation of the conduit shall be as shown on the Plans.

If a brick manhole or handhole is found where core drilling is not possible, then the Contractor shall break a hole using low impact pneumatic hammers so as to not damage the remaining structure. Conduit openings in the wall shall be plugged with mortar. The mortar shall seal the conduit openings effectively and as directed by the Engineer, and shall be finished flush with the inner surfaces of the wall.

Coordination with ComEd for ComEd handholes or manholes, and coordination with the Bureau of Electricity for city electric handholes or manholes shall be performed by the Contractor prior to starting any Work. Coordination shall be included in this item; separate or additional payment will not be made.

Cleaning the existing manhole or handhole will not be included in this item and will be paid for under a separate pay item.

Method of Measurement. Each hole that is drilled for a conduit, or hole that is made for a bank of conduits (drilling the hole, furnishing and installing the conduit(s) and bushing(s), and including all necessary excavation and backfilling outside of the handhole or manhole) as indicated will be counted as a unit for payment.

Basis of Payment. This work will be paid for at the contract unit price each for DRILL EXISTING MANHOLE OR HANDHOLE, which shall be payment in full for the material and work described herein.

(CTE – 03/04/2004)

CLEAN EXISTING MANHOLE OR HANDHOLE

Description. This item consists of cleaning an existing handhole or manhole for the installation of new conduit(s) and cable(s).

General Requirements. General requirements shall be in accordance with Section 801 of the Standard Specifications, and in accordance with Bureau of Electricity Standards and the City of Chicago Electrical Code, except as herein modified.

Installation. Existing cable hooks shall be relocated and existing cables shall be retrained as required prior to drilling the existing manhole or handhole. Existing and new debris shall be removed and disposed of off-site by the Contractor. Existing and new gas and water shall be pumped out as directed by the Engineer. Debris removal, de-gassing and water pumping shall be included in this item; separate payment will not be made.

Coordination with ComEd for ComEd handholes or manholes, and coordination with the Bureau of Electricity for city electric handholes or manholes shall be performed by the Contractor prior to starting any Work. Coordination shall be included in this item; separate or additional payment will not be made.

Drilling the existing manhole or handhole will not be included in this item and will be paid for under a separate pay item.

Method of Measurement. Each manhole or handhole that is cleaned (relocating existing cable hooks, installing new cable hooks, retraining cables, removing debris, and pumping out gas and water) as indicated will be counted as a unit for payment. Each manhole or handhole that is drilled will be measured for payment for cleaning, and will be measured for cleaning only once.

Basis of Payment. This work will be paid for at the contract unit price each for CLEAN EXISTING MANHOLE OR HANDHOLE, which shall be payment in full for the work described herein.

(CTE – 03/04/2004)

RACKING CABLES IN MANHOLE OR HANDHOLE

Description. This item consists of providing labor and materials for racking of fiber optic cable in split innerduct and/or traffic signal and lighting copper cable around the inside perimeter of a manhole, in conformance with the Plans. In each manhole, the Contractor shall furnish and install at least four support brackets attached to the manhole walls, on which neatly coiled fiber optic cable in split innerduct and copper cable can be secured. The support brackets shall be attached firmly by screws drilled into the wall. Specific racking layout and components shall be provided in a submittal to the Engineer for each manhole, for review and approval in advance of installation.

In the event that a cable enclosure or other protective treatment of cable is used in place of racking on brackets at the direction of the Engineer, such alternate treatment shall be included in the cost of this item.

Method of Measurement. This Work will be measured on a per each basis each for manhole or handhole racked.

Basis of Payment. This Work will be paid for at the Contract Unit Price each per RACKING CABLES IN MANHOLE OR HANDHOLE, which will be payment in full for the material and work described herein.

(CTE – 10/25/2004)

TRENCH AND BACKFILL WITH SCREENING AND/OR SAND

Description. This item consists of excavating a trench for the installation of cables or conduits, and backfilling with limestone screenings or bank sand in paved areas as specified herein, as shown on the Plans and as directed by the Engineer.

Materials. Materials shall be according to the following Articles of Standard Specifications Section 1000 - Materials:

	Item	Requirement
(a)	Underground Cable Marking Tape	Standard Specifications, Article 1066.06

General Requirements. General Requirements shall be in accordance with Section 801 of the Standard Specifications, and in accordance with Bureau of Electricity Standards and the City of Chicago Electrical Code, except as herein modified.

CONSTRUCTION REQUIREMENTS

Construction requirements shall be in accordance with Article 815.03 of the Standard Specifications, except for paragraph (b), which is revised to read as follows:

"(b) Installation: The bottom of the trench shall be tamped, and the trench inspected by the Engineer before cable or conduit is placed in the trench.

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 above the layer of limestone screenings or sand. The limestone screenings or sand shall be used to fill the bottom of the trench to a depth of 12 inches above the top of the conduit or cable. Cinders, rocks, or other inappropriate materials will not be permitted to be used as backfilling material.

Conduit and cable shall not be installed by plowing in lieu of trench and backfill. Conduit or cable installation performed by the plow method will not be measured for payment.

Method of Measurement. This work will be measured in feet along the centerline of the trench, with conduit or cable in place. TRENCH AND BACKFILL WITH SCREENINGS AND/OR SAND will include all conduit in trench installations regardless of conduit size.

Basis of Payment. This work will be paid for at the contract unit price per foot, for TRENCH AND BACKFILL WITH SCREENINGS AND/OR SAND, which shall be payment in full for the material and work described herein. Such price shall include the cost of disposal off-site of all surplus excavated material.

Horizontal boring made for the purpose of placing conduit or cable under pavement, sidewalks, tree roots, or driveways will be paid for at the same contract unit price per foot and designated as TRENCH AND BACKFILL SCREENINGS AND/OR SAND.

Excavation under sidewalks and driveways will be included in this pay item; separate payment will not be made. Sidewalk, driveway and pavement removal and replacement must be included in this item and will not be paid for separately.

Pavement shall be properly restored to the correct grade. Patching of the pavement shall be done with high early strength concrete meeting the requirements of Article 1001 and 1020 of the Standard Specifications. Sidewalks shall be restored to the proper grade using a 5 inch thickness of concrete.

TRENCH AND BACKFILL WITH SCREENING AND/OR SOIL

Description. This item consists of excavating a trench for the installation of cables or conduits, and backfilling with limestone screenings or soil in unpaved areas as specified herein, as shown on the Plans and as directed by the Engineer.

Materials. Materials shall be according to the following Articles of Standard Specifications Section 1000 - Materials:

	Item	Requirement
(a)	Underground Cable Marking Tape	Standard Specifications, Article 1066.06

General Requirements. General Requirements shall be in accordance with Section 801 of the Standard Specifications, and in accordance with Bureau of Electricity Standards and the City of Chicago Electrical Code, except as herein modified.

CONSTRUCTION REQUIREMENTS

Construction requirements shall be in accordance with Article 815.03 of the Standard Specifications, except for paragraph (b), which is revised to read as follows:

"(b) Installation: The bottom of the trench shall be tamped, and the trench inspected by the Engineer before cable or conduit is placed in the trench.

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 above the layer of limestone screenings or soil. The limestone screenings or soil shall be used to fill the bottom of the trench to a depth of 12 inches above the top of the conduit or cable. Cinders, rocks, or other inappropriate materials will not be permitted to be used as backfilling material.

Conduit and cable shall not be installed by plowing in lieu of trench and backfill. Conduit or cable installation performed by the plow method will not be measured for payment."

Method of Measurement. This work will be measured in feet along the centerline of the trench, with conduit or cable in place. TRENCH AND BACKFILL WITH SCREENINGS AND/OR SOIL will include all conduit in trench installations regardless of conduit size.

Basis of Payment. This work will be paid for at the contract unit price per foot, for TRENCH AND BACKFILL WITH SCREENINGS AND/OR SOIL, which shall be payment in full for the material and work described herein. Such price will include the cost of disposal off-site of all surplus excavated material.

Horizontal boring made for the purpose of placing conduit or cable under tree roots will be paid for at the same contract unit price per foot and designated as TRENCH AND BACKFILL SCREENINGS AND/OR SOIL.

ELECTRICAL HANDHOLE, 30", 24'' FRAME AND LID

Description. This item shall be for supplying and installing an electrical handhole 30" in diameter with a 24" frame and lid in a parkway or sidewalk.

Materials. The frame and lid shall meet the requirements of BOE Material Specification 1458. A 24" frame and lid shall also meet the requirements of BOE Standard Drawing 872. The ground rod shall meet the requirements of BOE Material Specification 1465. Bricks shall meet the requirements of Section 1021 of the Standard Specifications. All other materials used shall meet the appropriate material requirements of the Standard Specifications, including Article 1088.10.

General Requirements. Perform Work under this item in accordance with the applicable portions of Sections 800 and 814 of the Standard Specifications, except as herein modified, and in accordance with the Detail Construction standards.

Method of Construction. The handhole shall be a precast concrete structure, or, if conditions merit, a cast in place concrete structure, complete with cast iron frame and cover, and conforming in detail with BOE Drawing Number 867, except that the number of conduit openings shall be as shown on the Plans.

Each handhole shall be installed at the location specified on the Plans or at other locations as directed by the Engineer.

The area where the handhole is to be placed shall be properly excavated. All disposable material shall be properly disposed of per Article 202.03 of the Standard Specifications. Each handhole shall be set or constructed on a foundation of loose stone not less than eight inches (8") deep. The frame casting shall be accurately set on a full bed of mortar to the finished elevation so that no subsequent adjustment will be necessary. Mortar shall be mixed in a proportion of one (1) part of cement to three (3) parts sand by volume of dry materials. After entering laterals have been installed in place in the handhole, the openings in the wall shall be plugged in an approved manner flush with the inner surface. If backfill is required, screenings shall be used and properly compacted. Parkway shall be restored to the proper grade. Sidewalks shall be restored to the proper grade using a 5 inch thickness of concrete. The inside of the handhole shall be clean of all debris.

Method of Measurement. This item will be paid for at the contract unit price per each unit installed.

Basis of Payment. This work will be paid at the contract unit price each for ELECTRICAL HANDHOLE 30", 24” FRAME AND LID, which will be payment in full for the material and work described herein. No additional payment will be allowed for restoring parkway or sidewalk pavement. Removal of sidewalk will be paid for separately under a different pay item.

(CTE – 06/14/2004)

ELECTRICAL HANDHOLE, 36", 30” FRAME AND LID

Description. This item shall be for supplying and installing an electrical handhole 36” in diameter with a heavy duty 30” frame and lid in pavement.

Materials. The frame and lid shall meet the requirements of BOE Material Specification 1458. A 30” frame and lid shall also meet the requirements of Standard Drawings 874 and 10927. The ground rod shall meet the requirements of BOE Material Specification 1465. Bricks shall meet the requirements of Section 1021 of the Standard Specifications. All other materials used shall meet the appropriate material requirements of the Standard Specifications, including Article 1088.10.

General Requirements. Perform Work under this item in accordance with the applicable portions of Sections 800 and 814 of the Standard Specifications, except as herein modified, and in accordance with the Detail Construction standards.

Method of Construction. The handhole shall be a precast concrete structure, or, if conditions merit, a cast in place concrete structure, complete with cast iron frame and cover, and conforming in detail with either BOE Drawing Number 871, except that the number of conduit openings shall be as shown on the Plans.

Each handhole shall be installed at the location specified on the Plans or at other locations as directed by the Engineer.

The area where the handhole is to be placed shall be properly excavated. All disposable material shall be properly disposed of per Article 202.03 of the Standard Specifications. Each handhole shall be set or constructed on a foundation of loose stone not less than eight inches (8") deep. The frame casting shall be accurately set on a full bed of mortar to the finished elevation so that no subsequent adjustment will be necessary. Mortar shall be mixed in a proportion of one (1) part of cement to three (3) parts sand by volume of dry materials. After entering laterals have been installed in place in the handhole, the openings in the wall shall be plugged in an approved manner flush with the inner surface. If backfill is required, screenings shall be used and properly compacted. Pavement shall be properly restored to the correct grade. Patching of the pavement shall be done with high early strength concrete meeting the requirements of Articles 1001 and 1020 of the Standard Specifications. The inside of the handhole shall be clean of all debris.

Method of Measurement. This item will be paid for at the contract unit price per each unit installed.

Basis of Payment. This work will be paid at the contract unit price each for ELECTRICAL HANDHOLE 36", 30” FRAME AND LID, which will be payment in full for the material and work described herein. No additional payment will be allowed for restoring pavement. Removal of pavement will be paid for separately under a different pay item.

(CTE – 06/14/2004)

TESTING OF FIBER OPTIC CABLE

Description. The work of this Section consists of testing of fiber optic cable before and after installation to the satisfaction of the Engineer.

Testing.

Testing of fiber optic cable shall be as follows:

1. Manufacturer's Factory Tests. The Contractor shall insure that each finished and installed fiber optic cable segment shall be traceable to the test data on file for each step in its manufacturing process.

   The Engineer, or his/her authorized representative, shall have the right to make inspections and tests as are necessary to determine if the cable meets the requirements of this Specification. The Engineer will have the right to reject cable which is defective in any respect.

   The Engineer will be given ten (10) working days, advance notice of the date the cable will be ready for testing so that the Engineer will be present at the tests.

   Physical tests shall be made on samples selected at random at the place of production. Each test sample shall be taken from the accessible end of different reels. Each reel selected and the corresponding sample shall be identified. The number and lengths of samples shall be specified for the individual test. All applicable tests for the cable materials and cable construction specified shall be performed.

Optical tests shall be made on the entire length of each continuous fiber provided within each fiber optic cable. Each test shall be completed during manufacture as required, and again prior to shipping, after the cable is secured to the reel in final shipping packaged form.

The manufacturer shall provide, at the point of production, apparatus and labor for making any or all of the following tests under the supervision of the Engineer, to include, but not be limited to:

Tensile Strength
Impact Resistance, Crushing, and Flexing
Optical Attenuation
Optical Spectral Dispersion
Optical Time Domain Reflectometry (OTDR)

2. Installed Field Tests. Testing of installed fiber optic cable shall be performed after hybrid cable is brought into the manhole adjacent to each controller cabinet as shown on the Contract Drawings, and fifty feet (50') or more of cable slack is coiled in the manhole for future connection to the controller.

   The Contractor shall notify the Engineer in writing five (5) working days in advance of the testing of the cable so that the Engineer will be present at the tests.

   Optical testing shall be performed on all fibers within each cable, including those extra fibers which the Contractor elects to include above those invoiced, in order to meet the 100 percent fiber quality warranty.

   Testing shall be performed on the fibers, as terminated in the manhole.

   All necessary test equipment shall be provided by the Contractor to perform tests to include, but not be limited to, the following:

   a) Optical attenuation at 1310 and 1500 nm for single mode fibers and 850 nm and 1300 nm for the multimode fibers.

   b) Optical Time Domain Reflectometer (OTDR) records (labeled and identified), either photographic or computer printer/plotter output. Test shall be conducted for both directions of transmission. All OTDR tests shall be made with an OTDR approved by the Engineer.

Method of Measurement. This work will be counted as lump sum.

Basis of Payment. This work will be paid for at the contract lump sum price for TESTING OF FIBER OPTIC CABLE, which will be payment in full for materials, labor, equipment, and work described herein.

(CTE – 06/14/2004)

FIBER OPTIC HYBRID CABLE IN CONDUIT 6SM/6MM

Description. This item consists of furnishing and installing fiber optic cable inside an innerduct in a conduit, as shown on the plans or as directed by the Engineer.

Material. The cable shall meet the requirements of BOE Material Specification 1482.

Overview. The Dan Ryan Phase II Frontage Road (Wentworth/Wells) traffic signal interconnect system shall consist of one closed loop system. The following is a list of intersections included in the closed loop system.

Closed Loop System

1. Wentworth and 47th.
2. Wells and 47th.
3. Wentworth and 51st.
4. Wells and 51st.
5. Wentworth and 55th.
6. Wells and 55th.
7. Wentworth and 57th.
8. Wells and 57th.
9. Wentworth and 59th.
10. Wells and 59th.
11. Wentworth and 63rd.
12. Wells and 63rd.

As part of this contract, the Contractor shall install (2) 4" pvc conduits and handholes on the west side of Wells Street frontage road from 59th Street to 63rd Street. This Contractor shall also install a 1.25 inch innerduct and fiberoptic and tracer cables that will extend from 57th Street to 63rd Street along Wentworth Avenue crossing 59th Street bridge to Wells Street. Contractor shall coil and rack the fiber optic cable slack in the manhole next to the controller as shown on the plans. This work shall be coordinated with the traffic signal contracts at the intersections of 57th, 59th, and 63rd with Wentworth Avenue / Wells Street frontage roads. The Contractor shall take great care not to damage the fiber optic cable in the innerduct.

As part of separate contracts, 47th, 51st, 55th, 57th, 59th and 63rd bridge intersections will be interconnected and will join this contract to form a closed loop system.

This system will ultimately be interconnected by fiber optic cable to a master controller at northeast corner of eastbound Garfield Boulevard and Wentworth Avenue with a dial-up telephone modem.

The controllers in the system shall use an RS-232 interface to transfer data from the controller to a fiber optic modem. The optical modems shall operate in a drop-and-insert configuration, where each modem receives (drop) or transmits (insert) information relative to that local site. In addition, the modem shall regenerate signals from down stream modems with no loss of data or degradation of performance. This is also known as a daisy-chained configuration.

System video cameras with harness cables will be installed at the locations shown on the plans by others, which will transfer the information via dial-up phone to the existing equipment in the City Hall Computer Room by a single- mode fiber optic connection.

General Requirements.

Hybrid Fiber Optic Cable. The cable shall meet, as a minimum, the following specifications and conform with the latest issue of Bellcore TR-TSY-00020: Generic Requirement for Optical Fiber and Optical Fiber Cables. ANSI/EIA-472: Generic Specification of Fiber Optic Cables, and REA-PE-90; and appropriate Sectional Specifications thereof.

Cable Construction.

Cable construction, other than as specified, shall be approved by the Engineer.

1. The cable shall be constructed entirely from dielectric material.

2. A cable suitable for either direct installation into a duct bank or conduit shall be supplied.

3. The cable shall be of gel-filled, loose tube construction with up to 12 buffer tubes wrapped around a dielectric central strength member. All fiber(s) shall be contained within buffer tubes, and each buffer tube shall have an inside diameter much greater than the total diameter(s) of the fiber(s) it supports.

4. Each fiber or group of fibers shall be free-floating within the tubes such that all mechanically or environmentally induced stress placed upon the cable is de-coupled from the fibers. The air within the buffer tubes shall be displaced with a gel to prevent entry by water and to facilitate free movement of the fiber(s) within.

5. The buffer tubes shall be color coded in compliance with EIA/TIA-598: Color Coding of Fiber Optic Cables.

6. Cables constructed of less than six fibers shall have a buffer tube provided for each fiber: cables constructed of more than six fibers may have several fibers occupy a buffer tube, with equal distribution of fibers as far as practicable. All fibers shall be color coded in compliance with EIA/TIA-598: Color Coding of Fiber Optic Cables. Single-mode and multimode fibers shall not occupy the same buffer tube.

7. In buffer tubes containing multiple fibers, the colors shall be stable during temperature cycling and not subject to fading or smearing onto each other or into the gel filling material. Colors shall not cause fibers to stick together.

8. The cable shall have an interstitial filing between the buffer tubes and throughout the remainder of the cable to prevent entry of water.

9. A binder wrapping strength member of aramid fibers shall be provided as a final layer prior to application of the outer jacket.

10. The cable shall be provided in continuous lengths. Each fiber shall be pulled from the same optical waveguide form and shall be free of splices. Each optical fiber shall consist of a doped silica core surrounded by a concentric silical cladding: the use of any other material shall be approved by the Engineer.

11. A permanent marking shall be employed on the outer jacket of the cable which shall show the date of manufacture and the manufacturer’s name. A numerical sequence shall be marked on the outer jacket, at intervals no greater than ten (10) feet, to facilitate

determination of length of cable and amount of cable remaining on the reel. The height of the marking shall be 2.5 mm nominal.

12. All optical fibers shall be proof tested by the fiber manufacturer at a minimum load of 100 kpsi.

13. All optical fibers shall be 100% attenuation tested at the factory for compliance with performance specifications described herein. The attenuation of each fiber shall be provided with each cable reel.

14. The outer jacket shall be constructed of medium density polyethylene, minimum jacket thickness of 1.4 mm. Jacketing material shall be applied directly over the tensile strength members and flooding compound. The outer jacket shall be UV and fungus resistant.

Singlemode Optical Specifications.

1. Optical Specifications:

Operation Wavelength	1,300 nm and 1,550 nm
Optical Attenuation	@ 1,300 nm: 0.7 dBI/km @ 20C @ 1,550 nm: 0.6 dB/km @ 20C
Optical Dispersion	@ 1,300 nm: 3.5-4.5 psec/nm-km @ 1,550 nm: (</=) 20 psec/nm-km
Zero Dispersion Wavelength	1,300 to 1,320 nm. Nominal
Zero Dispersion Slope	<=0.092 ps/nm^2-km
Fiber Core Diameter	8.3 um. Typical
Fiber Coating Diameter	250+/-10 um
Fiber Cladding Diameter	125+/-2 um
Core to Cladding Offset	<=0.8 um
Cladding Non-Circularity	<=1.0%
Spot Size	9.3+/-0.5 um @ 1300 nm 10.5+/-1 um @ 1550 nm
Cutoff Wavelength	<=1250 nm

Multimodal Optical Specifications.

1. Optical Specification:

Operation Wavelength	850 nm and 1.300 nm
Optical Attenuation	@ 850 nm: 400 MHZ-km @ 20C @ 1,300 nm: 400 MHZ-km @ 20C
Fiber Core Diameter	62.5 um +/-3.0 um

Fiber Coating Diameter	250 +/-15 um
Fiber Cladding Diameter	125 +/-2.0 um
Core to Cladding Offset	<=3.0 um
Cladding Non-Circularity	<=2.0%
Core Non-Circularity	<=6.0%
Numerical Aperture	0.275+-0.015
Index	Graded Index

Hybrid Cable Mechanical Specifications.

Crush Resistance	5,000 n/m. Length of cable
Cable Outside Diameter	0.50" nominal
Minimum Bending Radius:	
Installation	20 times the cable diameter
Static	10 times the cable diameter
Temperature:	
Installation	-30C to +70C
Storage/Operation	-40C to +70C
Humidity	0 to 100%
Tensile Strength:	
Installation	2,700 N (600 ibf)
Static	600 N (135 ibf)

Installation. Cable shall be pulled through the conduit or innerduct as shown on the plans, or as directed by the Engineer. The manufacturer's instructions shall be carefully followed so as not to damage the cable. After the cable is pulled, traces shall be obtained from the installed cable using an OTDR (Optical Time Division Reflectometer) to insure that the cable is good. A bad trace will require that new cable be installed.

Method of Measurement. The cable will be measured per foot installed, and will include slack. Splicing and terminating fiber optic cable will be covered by different items.

Basis of Payment. This work will be paid for at the contract unit price per foot for FIBER OPTIC HYBRID CABLE IN CONDUIT 6SM/6MM, which will be payment in full for the material and work described herein.

(CTE – 08/26/2004)

TRACER CABLE

Description. This work consists of providing a trace cable (copper #10) with fiber optic cable in conduit for the purpose of locating a utility.

General Requirements. This work shall be in accordance with Section 871 Standard Specifications and the City of Chicago Bureau of Electricity except as herein modified.

Method of Measurement. The length of measurement will be the distance horizontally measured between changes in direction.

Basis of Payment. This work will be paid for at the contract unit price per lineal foot for TRACER CABLE, which will be payment in full for the material and work described herein.

(CTE – 03/08/2004)

SPECIAL EXCAVATION AND REPLACEMENT FOR CONDUIT UNDER CTA TRACK

Description. This Work consists of opening and restoring a section of existing pavement approximately eighteen inches (18") wide by eighteen feet (18') long which includes and encases street car rails attached to wooden ties, and excavating and backfilling a trench for the installation of conduit for electric cables. This operation shall be performed at the location indicated on the Plans, or as directed by the Engineer with the direction of trench construction perpendicular to the CTA track line, and any single such trench shall be large enough for the emplacement of a minimum for four-four inch (4-4") conduit, if required, without additional pavement opening.

General Requirements. Perform Work under this item in accordance with Section 353 and 441 of the Standard Specifications, Bureau of Electricity Standards and the City of Chicago Electrical Code, except as herein modified.

Materials. The materials to be installed shall meet the requirements of the Standard Specification for Class SI Concrete.

Method of Construction. The size of the areas to be worked precludes the use of large machinery, permitting generally the use of a hand operated pneumatic (jack) hammer, a machine operated hydraulic bull point, or a concrete saw, with manual labor or a small back-hoe to load the broken concrete into a high-lift bucket or a dump truck for removal and off-site disposal of the spoil.

To maintain necessary lanes open to traffic, Work should proceed in one lane at a time where possible. The use of a steel plate to cover cleared work areas shall be used to permit immediate resumption of vehicular traffic.

The concrete section of CTA roadbed containing rails and ties is approximately seventeen inches (17") thick and shall be removed to excavate the subgrade thereby requiring destructive removal of crossties which will not be replaced. Care shall be exercised to avoid cutting the CTA stranded copper ground drain cable which may or may not exist beneath the concrete.

When this cable is cut, it shall be repaired to the satisfaction of the Engineer. Care shall be exercised to avoid damaging CTA conduit located midway between the sets of rails. The rails shall not be cut.

The trench under the rail section shall be excavated to a depth to provide thirty inches (30") cover over the conduit which will be installed and connected to conduit extending from foundations, manholes, or handholes as shown on the Plans.

The trench shall be backfilled with sand for a depth of one foot and with other suitable fill to the bottom of the rails and compacted either by a mechanical or hand tamper meeting the approval of the Engineer.

The use of temporary steel plates to protect new concrete replacement shall be used to eliminate closing the roadway while the concrete cures.

Method of Measurement. This work will be measured for payment in feet.

Basis of Payment. This work will be paid for at the Contract Unit Price per lineal foot for SPECIAL EXCAVATION AND REPLACEMENT FOR CONDUIT UNDER CTA TRACK, which will be payment in full for the material and work described herein. Trenching and backfilling beneath the rails is also included in this pay item. The installation of the conduit will not be considered a part of this Work but will be paid for under a different unit cost schedule.

(CTE – 03/05/2004)

END OF CITY OF CHICAGO TRAFFIC SIGNAL SPECIAL PROVISIONS

DRILLED SHAFTS
Effective: May 1, 2001 Revised: June 21, 2004

Description. This work shall consist of all labor, materials, equipment and services necessary to complete the drilled shaft installation according to the details and dimensions shown on the plans, this specification and as directed by the Engineer.

Submittals. The Contractor shall submit the following:

(a) Qualifications. At the time of the preconstruction conference, the Contractor shall provide the following documentation:

(1) A list containing at least 3 projects completed within the 3 years prior to this project's bid date which the Contractor performing this work has installed drilled shafts of similar diameter, length and site conditions to those shown in the plans. The list of projects shall contain names and phone numbers of owner's representatives who can verify the Contractor's participation on those projects.

(2) Name and experience record of the drilled shaft supervisor, responsible for all facets of the shaft installation, and the drill operator(s) who will be assigned to this project. The supervisor and driller shall each have a minimum of 3 years experience in the construction of drilled shafts.

(3) A signed statement that the drilled shaft supervisor has inspected both the project site and all the subsurface information available. In addition to the subsurface information in the contract documents, rock core specimens and/or geotechnical reports, when available, should be requested for evaluation.

(b) Installation Procedure. A submittal detailing the installation procedure will be required for all drilled shafts, unless directed otherwise by the Engineer. The Contractor, meeting the above qualifications, shall prepare the installation procedure, addressing all items shown below and will be responsible for directing all aspects of the shaft construction. The installation procedure shall be submitted to the Engineer at least 45 days prior to drilled shaft construction and shall address each of the following items:

(1) List of proposed equipment to be used including cranes, drill rigs, augers, belling tools, casing, core barrels, bailing buckets, final cleaning equipment, slurry equipment, tremies or concrete pumps, etc.

(2) Details of the overall construction operation sequence, equipment access, and the sequence of individual shaft construction within each substructure bent or footing group. The submittal shall address the Contractor's proposed time delay and/or the minimum concrete strength necessary before initiating a shaft excavation adjacent to a recently installed drilled shaft.

(3) A step by step description of how the Contractor anticipates the shaft excavation to be advanced based on their evaluation of the subsurface data and conditions expected to be encountered. This sequence shall note the method of casing advancement, anticipated casing lengths, tip elevations and diameters, the excavation tools used and drilled diameters created. The Contractor shall indicate whether wet or dry drilling conditions are expected or if the water table will be sealed from the excavation.

(4) When slurry is proposed, details covering the measurement and control of the hardness of the mixing water, agitation, circulation, de-sanding, sampling, testing and chemical properties of the slurry shall be submitted.

(5) Method(s) and sequence proposed for the shaft cleaning operation as well as recommendations on how the shaft excavation will be inspected under the installation conditions anticipated.

(6) Details of reinforcement placement including cage centralization devices to be used and method to maintain proper elevation and plan location of cage within the shaft excavation during concrete placement. The method(s) of adjusting the cage length if rock is encountered at an elevation other than as estimated in the plans.

(7) Details of concrete placement including proposed operational procedures for free fall, tremie or pumping methods. The sequence and method of casing removal shall also be stated along with the top of pour elevation, and method of forming through water above streambed.

(8) The proposed concrete mix design(s).

The Engineer will evaluate the drilled shaft installation plan and notify the Contractor of acceptance, or if additional information is required, or if there are concerns with the installation's effect on the existing or proposed structure(s).

Materials. The materials used for the construction of the drilled shaft shall satisfy the following requirements:

(a) The drilled shaft portland cement concrete shall be according to Section 1020, except the mix design shall be as follows:

(1) A Type I or II cement shall be used at 395 kg/cu m (665 lb/cu yd). When specified in the plans that soil and ground water sulfate contaminates exceed 500 parts per million, a Type V cement shall be required.

(2) Class C or F fly ash may replace Type I or II cement. The cement replacement shall not exceed 15 percent by mass (weight) at a minimum replacement ratio of 1.5:1. The fly ash shall not be used in combination with ground granulated blast- furnace slag.

(3) Grade 100 or 120 ground granulated blast-furnace slag may replace Type I or II cement. The cement replacement shall not exceed 25 percent by mass (weight) at a minimum replacement ratio of 1:1. The ground granulated blast-furnace slag shall not be used in combination with fly ash.

(4) The maximum water/cement ratio shall be 0.44.

(5) The mortar factor shall be a value which produces a coarse aggregate content comprising between 55 and 65 percent of total aggregate by mass (weight).

(6) The slump at point of placement shall be 175 mm ± 25 mm (7 ± 1 in.). If concrete is placed to displace drilling fluid, or against temporary casing, the slump shall be 200

mm ± 25 mm (8 ± 1 in.) at point of placement. The concrete mix shall be designed to remain fluid throughout the anticipated duration of the pour plus 1 hour.

(7) An air entraining admixture shall be required and the air content range shall be 4.0 to 7.0 percent.

(8) The minimum compressive strength shall be 27,500 kPa (4000 psi) at 14 days. The minimum flexural strength shall be 4,650 kPa (675 psi) at 14 days.

(9) A retarding admixture shall be required.

(10) A water-reducing or high range water-reducing admixture shall be required.

(11) An accelerating admixture may be used with the permission of the Engineer in extraordinary situations.

(12) The coarse aggregate shall be a CA 13, CA 14, CA 16 or a blend of these gradations. The fine aggregate shall consist of washed sand only.

At the Engineers discretion, and at no additional cost to the Department, the Contractor may be required to conduct a minimum 0.76 cu m (1 cu yd) trial batch to verify the mix design.

(b) The sand-cement grout mix used to fill any visible gaps, which may exist between the permanent casing and either the drilled excavation or temporary casing, shall be as follows:

(1) A Type I or II cement shall be used at 110 kg/cu m (185 lb/cu yd). When specified in the plans that soil and ground water sulfate contaminates exceed 500 parts per million, a Type V cement shall be required. The cement shall be according to Section 1001.

(2) The fine aggregate shall be according to Articles 1003.01 and 1003.02.

(3) The water shall be according to Section 1002.

(4) The maximum water/cement ratio shall be 1.0.

(c) Reinforcement shall be according to Section 508 of the Standard Specifications.

(d) Drilling slurry, when required, shall consist of a polymer or mineral base material. Mineral slurry shall have both a mineral grain size that will remain in suspension with sufficient viscosity and gel characteristics to transport excavated material to a suitable screening system. The percentage and specific gravity of the material used to make the suspension shall be sufficient to maintain the stability of the excavation and to allow proper concrete placement. For polymer slurry, the calcium hardness of the mixing water shall not exceed 100 mg/L.

(e) Permanent casing, when required, shall be fabricated from steel satisfying ASTM A252 Grade 2, produced by electric seam, butt, or spiral welding to satisfy the outside diameter(s) and lengths shown in the contract plans or as shown in the Contractor's installation procedure. The minimum wall thickness shall be as required to resist the anticipated installation and dewatering stresses, as determined by the Contractor, but in no case less than 6 mm (1/4 in.).

Equipment. The drilling equipment shall have adequate capacity, including power, torque and down thrust, to create a shaft excavation of the maximum diameter specified to a depth of 20 percent beyond the depths shown on the plans. Standby equipment of sufficient capacity shall be available so that there will be no delay in placing of the concrete once the operation has started. Concrete equipment shall be according to Article 1020.03 of the Standard Specifications.

Construction Requirements. Excavation for drilled shaft(s) shall not proceed until written authorization is received from the Engineer. The Contractor shall furnish an installation log for each shaft installed. Excavation by blasting shall not be permitted unless authorized in writing by the Engineer.

No shaft excavation shall be made within 4 shaft diameters center to center of a shaft with concrete that has a compressive strength less than 10,342 kPa (1500 psi) unless otherwise approved in the Contractor's installation procedure. The site-specific soil strengths and installation methods selected will determine the actual required minimum spacing, if any, to address vibration and blow out concerns.

Materials removed or generated from the shaft excavations shall be disposed of by the Contractor according to Article 202.03 of the Standard Specifications.

The Contractor's methods and equipment shall be suitable for the anticipated conditions and the following requirements noted below:

(a) Construction Tolerances. The following construction tolerances shall apply to all drilled shafts unless otherwise stated in the contract documents:

(1) The center of the drilled shaft shall be within 75 mm (3 in.) of the plan station and offset at the top of the shaft.

(2) The center of the reinforcement cage shall be within 38 mm (1 1/2 in.) of plan station and offset at the top of the shaft.

(3) The out of vertical plumbness of the shaft shall not exceed 1.5 percent.

(4) The out of vertical plumbness of the shaft reinforcement cage shall not exceed 0.83 percent.

(5) The top of the reinforcing steel cage shall be no more than 25 mm (1 in.) above and no more than 75 mm (3 in.) below the plan elevation.

(6) The top of the shaft shall be no more than 25 mm (1 in.) above and no more than 75 mm (3 in.) below the plan elevation.

(7) Excavation equipment and methods used to complete the shaft excavation shall have a nearly planar bottom. The cutting edges of excavation equipment used to create the bottom of shafts in rock shall be normal to the vertical axis of the shaft within a tolerance of 6.25 percent.

(b) Construction Methods. The construction of drilled shafts may involve the use of one or more of the following methods to support the excavation during the various phases of shaft drilling, cleaning and concrete placement dependent on the site conditions encountered.

The following are general descriptions indicating the conditions when these methods may be used:

(1) Dry Method. The dry method consists of drilling the shaft excavation, removing accumulated water and loose material from the excavation, placing the reinforcing cage, and concrete in a predominately dry excavation. This method shall be used only at sites where the groundwater and soil conditions are suitable to permit the drilling and dewatering of the excavation without causing excessive water infiltration, boiling, squeezing, or caving of the shaft side walls. This method allows the concrete placement by tremie or concrete pumps, or if the excavation can be dewatered, the concrete can be placed by free fall within the limits specified for concrete placement.

(2) Wet Method. The wet construction method may be used at sites where dewatering the excavation would cause collapse of the shaft sidewalls or when the volume and head of water flowing into the shaft is likely to contaminate the concrete during placement resulting in a shaft defect. This method uses water or slurry to maintain stability of the shaft perimeter while advancing the excavation. After the excavation is completed, the water level in the shaft is allowed to seek equilibrium, the base is cleaned, the reinforcing cage is set and the concrete is discharged at the base using a tremie pipe or concrete pump, displacing the drilling fluid upwards.

(3) Temporary Casing Method. Temporary casing shall be used when either the wet or dry methods provide inadequate support to prevent sidewall caving or ensure excessive deformation of the hole. Temporary casing may also be used to reduce the flow of water into the excavation to allow dewatering, adequate cleaning and inspection, or to insure proper concrete placement. Temporary casing left in place may constitute a shaft defect; no temporary casing will be allowed to remain permanently in place without the specific approval of the Engineer.

Before the temporary casing is broken loose, the level of concrete in the casing shall be a minimum of 1.5 m (5 ft) above the bottom of the casing. After being broken loose and as the casing is withdrawn, additional concrete shall be added to maintain sufficient head so that water and soil trapped behind the casing can be displaced upward and discharged at the ground surface without contaminating the concrete in the shaft or at the finished construction joint.

(4) Permanent Casing Method. When called for on the plans or proposed as part of the Contractor's accepted installation procedure, the Contractor shall install a permanent casing of the diameter, length, thickness and strength specified. When permanent casings are used, the lateral loading design requires intimate contact between the casing and the surrounding soils. If the installation procedure used to set the permanent casing results in annular voids between the permanent casing and the drilled excavation, the voids shall be filled with a sand-cement grout to maintain the lateral load capacity of the surrounding soil, as assumed in the design. No permanent casing will be allowed to remain in place beyond the limits shown on the plans without the specific approval of the Engineer.

(5) Removable Forms. When the shaft extends above streambed through a body of water and permanent casing is not shown, the portion above the streambed shall be formed with removable casings, column forms, or other forming systems as approved by the Engineer. The forming system shall not scar or spall the finished concrete or leave in place any forms or casing within the removable form limits as

shown on the plans unless approved as part of the installation procedure. The forming system shall not be removed until the concrete has attained a minimum compressive strength of 17,237 kPa (2500 psi) and cured for a minimum of 72 hours. For shafts extending through water, the concrete shall be protected from water action after placement for a minimum of 7 days.

(c) Slurry. If the Contractor proposes to use a method of slurry construction, it shall be submitted with the installation plan. During construction, the level of the slurry shall be maintained at a height sufficient to prevent caving of the hole. In the event of a sudden or significant loss of slurry to the hole, the construction of that foundation shall be stopped and the shaft excavation backfilled or supported by temporary casing, until a method to stop slurry loss, or an alternate construction procedure has been approved by the Engineer.

(d) Obstructions. Obstructions shall be defined as any object (such as but not limited to, boulders, logs, old foundations etc.) that cannot be removed with normal earth drilling procedures but requires special augers, tooling, core barrels or rock augers to remove the obstruction. When obstructions are encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to core, break up, push aside, or remove the obstruction. Lost tools or equipment in the excavation as a result of the Contractor's operation shall not be defined as obstructions and shall be removed at the Contractor's expense.

(e) Top of Rock. The actual top of rock will be defined as the point when material is encountered which can not be drilled with a conventional earth auger and/or underreaming tool, and requires the use of special rock augers, core barrels, air tools, blasting or other methods of hand excavation.

(f) Sidewall overreaming. Sidewall overreaming shall be required when the sidewall of the hole is determined by the Engineer to have either softened due to the excavation methods, swelled due to delay in concreting, or degraded because of slurry cake buildup. It may also be required to correct a shaft excavation which has been drilled out of tolerance. Overreaming thickness shall be a minimum of 13 mm (1/2 in.). Overreaming may be accomplished with a grooving tool, overreaming bucket or other approved equipment. Any extra concrete needed as a result of the overreaming shall be furnished and installed at the Contractor's expense.

(g) Excavation Inspection. The Contractor shall be responsible for verification of the dimensions and alignment of each shaft excavation as directed by the Engineer. Unless otherwise specified in the contract documents, the Contractor's cleaning operation shall be adjusted so that a minimum of 50 percent of the base of each shaft shall have less than 13 mm (1/2 in.) of sediment or debris at the time of placement of the concrete. The maximum depth of sediment or any debris at any place on the base of the shaft shall not exceed 38 mm (1 1/2 in.).

Shaft cleanliness will be determined by the Contractor using the methods as submitted in their installation procedure. Visual inspection coupled with the use of a weighted tape may also be used to confirm adequate cleanliness.

(h) Design Modifications. If the top of rock elevation differs from that shown on the plans by more than 10 percent of the length of the shaft above the rock, the Engineer shall be contacted to determine if any drilled shaft design changes may be required. In addition, if

the type of soil or rock encountered is not similar to that shown in the subsurface exploration data, the Contractor may be required to extend the drilled shaft length(s) beyond those specified in the plans. In either case, the Engineer will determine if revisions are necessary and the extent of the modifications required.

(i) Reinforcement Cage Construction and Placement. The shaft excavation shall be cleaned, inspected and accepted prior to placing the reinforcement cage. The reinforcement cage shall be completely assembled prior to drilling and be ready for adjustment in length as required by the conditions encountered. The cage shall be lifted using multiple point sling straps or other approved methods to avoid cage distortion or stress. Additional cross frame stiffeners may also be required for lifting or to keep the cage in proper position during lifting and concrete placement.

The Contractor shall attach suitable centralizes to keep the cage away from the sides of the shaft excavation and ensure that at no point will the finished shaft have less than the minimum concrete cover(s) shown on the plans. The cage centralizes or other approved non-corrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3 m (10 ft) throughout the length of the shaft) to ensure proper cage alignment and clearance for the entire shaft.

If the top of rock encountered is deeper than estimated in the plans, and/or if the conditions differ such that the length of the shaft is increased, additional longitudinal bars shall be either mechanically spliced or lap spliced to the lower end of the cage and confined with either hoop ties or spirals to provide the additional length. If the additional shaft length is less than the lap splice shown, subject to the approval of the Engineer, a mechanical splice may be used in lieu of the lap splice in order to take advantage of or utilize that lap length in the extension of the shaft reinforcement. The Contractor shall have additional reinforcement available or fabricate the cages with additional length as necessary to make the required adjustments in a timely manner as dictated by the encountered conditions. The additional reinforcement may be non-epoxy coated at the option of the Contractor. Any reinforcement fabricated in advance but not incorporated into the installed shaft(s) shall not be paid for but shall remain the property of the Contractor.

(j) Concrete placement. Concrete work shall be performed according to the applicable portions of Section 503 of the Standard Specifications and as specified herein.

Concrete shall be placed as soon as possible after reinforcing steel is set and secured in proper position. The pour shall be made in a continuous manner from the bottom to the top elevation of the shaft as shown on the contract plan or as approved in the Contractor's installation procedure. Concrete placement shall continue after the shaft excavation is full and until good quality, uncontaminated concrete is evident at the top of shaft. The elapsed time from the beginning of concrete placement in the shaft to the completion of the placement shall not exceed 2 hours. The Contractor may request a longer placement time provided the concrete mix maintains the minimum slump requirements over the longer placement time as demonstrated by trial mix and slump loss tests. Concrete shall be placed either by free fall, or through a tremie or concrete pump subject to the following conditions:

(1) The free fall placement shall only be permitted in shafts that can be dewatered to ensure less than 75 mm (3 in.) of standing water exist at the time of placement without causing side wall instability. The maximum height of free fall placement shall not exceed 18.3 m (60 ft). Concrete placed by free fall shall fall directly to the base without contacting either the rebar cage or hole sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Drop chutes used to direct placement of free fall concrete shall consist of a smooth tube of either one continuous section or multiple pieces that can be added and removed. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. The drop chute shall be supported so that the free fall does not exceed 18.3 m (60 ft) at all times and to ensure the concrete does not strike the rebar cage. If placement cannot be satisfactorily accomplished by free fall in the opinion of the Engineer, the Contractor shall use either tremie or pumping to accomplish the pour.

(2) Tremies shall consist of a tube of sufficient length, weight, and diameter to discharge the initial concrete at the base of the shaft. The tremie shall be according to Article 503.08 of the Standard Specifications and contain no aluminum parts that may have contact with the concrete. The inside and outside surfaces of the tremie shall be clean and smooth to permit both flow of concrete and unimpeded withdrawal during concrete placement.

(3) Concrete pumps: Pumps and lines may be used for concrete placement and shall have a minimum 100 mm (4 in.) diameter.

The tremie or pump lines used for wet method concrete placement shall be watertight and not begin discharge until placed within 250 mm (10 in.) of the shaft base. Valves, bottom plates or plugs may be used only when they can be removed from the excavation or be of a material approved by the Engineer that will not cause a defect in the shaft if not removed. The discharge end shall be immersed at least 1.5 m (5 ft) in concrete at all times after starting the pour. Sufficient concrete head shall be maintained in the tremie at all times to prevent water or slurry intrusion in the shaft concrete.

If at any time during the concrete pour in the "wet" hole, the tremie or pump line orifice is removed from the fluid concrete and discharges through drilling fluid or water above the rising concrete level, the shaft may be considered defective.

Vibration of concrete is not recommended when placed while displacing drilling fluid or water. In dry excavations, vibration is allowed only in the top 3 m (10 ft) of the shaft.

Conformity with Contract. In addition to Article 105.03, the Contractor shall be responsible for correcting all out of tolerance excavations and completed shafts as well as repairing any defects in the shaft to the satisfaction of the Engineer at no additional cost to the Department. No time extensions will be allowed to repair or replace unacceptable work. When a shaft excavation is completed with unacceptable tolerances, the Contractor will be required to submit for approval his/her proposed corrective measures. Any proposed design modification with computations submitted by the Contractor shall be signed and sealed by an Illinois licensed Structural Engineer.

Method of Measurement. The items Drilled Shaft in Soil and Drilled Shaft in Rock, will be measured for payment and the length computed in meters (feet) for all drilled shafts installed according to the plans, specifications, and accepted by the Engineer. The length shall be measured at each shaft. The length in soil will be defined as the difference in elevation between the top of the drilled shaft shown on the plans, or as installed as part of the Contractor's installation procedure, and the bottom of the shaft or the top of rock (when present) whichever is higher. The length in rock will be defined as the difference in elevation between the measured

top of rock and the bottom of the shaft. When permanent casing is installed as specified on the plans, it will be measured in meters (feet) and shall be the length of casing installed.

Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for DRILLED SHAFT IN SOIL, and/or DRILLED SHAFT IN ROCK, of the diameter(s) specified. The price shall be payment in full for all labor, materials, equipment, and services necessary to complete the work as specified. When the shaft is detailed with a belled base, furnishing and installing it shall not be paid for separately but shall be included in the cost of the appropriate drilled shaft item(s).

When permanent casing is furnished and installed as specified, it will be paid for at the contract unit price per meter (foot) for PERMANENT CASING. Permanent casing installed at the Contractor's option shall not be included in this item, but shall be considered as included in the appropriate drilled shaft item(s) above.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

No additional compensation, other than noted above, will be allowed for removing and disposing of excavated materials, for furnishing and placing concrete, bracing, lining, temporary casings placed and removed or left in place, for grouting of any voids, or for any excavation made or concrete placed outside of the plan diameter(s) of the shaft(s) specified.

Reinforcement bars, spirals and ties shall be as specified and paid for under the items, REINFORCEMENT BARS or REINFORCEMENT BARS EPOXY COATED, according to Section 508 of the Standard Specifications.

TEMPORARY SHEET PILING

Effective: September 2, 1994 Revised: December 13, 2002

Description. This work shall consist of furnishing, driving, adjusting for stage construction when required and subsequent removal of the sheet piling according to the dimensions and details shown on the plans and according to the applicable portions of Section 512 of the Standard Specifications.

This work shall also include furnishing, installing and subsequent removal of all miscellaneous steel shapes, plates and connecting hardware when required to attach the sheeting to an existing substructure unit and/or to facilitate stage construction.

General. The Contractor may propose other means of supporting the sides of the excavation provided they are done so at no extra cost to the department. If the Contractor elects to vary from the design requirements shown on the plans, the revised design calculations and details shall be submitted to the Engineer for approval. The calculations shall be prepared and sealed by an Illinois Licensed Structural Engineer. This approval will not relieve the Contractor of responsibility for the safety of the excavation. Approval shall be contingent upon acceptance by all involved utilities and/or railroads.

Material. The sheet piling shall be made of steel and may be new or used material, at the option of the Contractor. The sheet piling shall have a minimum section modulus as shown on the plans or in the approved Contractor's alternate design. The sheeting shall have a minimum yield

strength of 265 MPa (38.5 ksi) unless otherwise specified. The sheeting, used by the Contractor, shall be identifiable and in good condition free of bends and other structural defects. The Contractor shall furnish a copy of the published sheet pile section properties to the Engineer for verification purposes. The Engineer's approval will be required prior to driving any sheeting. All driven sheeting not approved by the Engineer shall be removed at the Contractor's expense.

Construction. The Contractor shall verify locations of all underground utilities before driving any sheet piling. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department. The Contractor shall be responsible for determining the appropriate equipment necessary to drive the sheeting to the tip elevation(s) specified on the plans or according to the Contractor's approved design. The sheet piling shall be driven, as a minimum, to the tip elevation(s) specified, prior to commencing any related excavation. If unable to reach the minimum tip elevation, the adequacy of the sheet piling design will require re-evaluation by the Department prior to allowing excavation adjacent to the sheet piling in question. The Contractor shall not excavate below the maximum excavation line shown on the plans without the prior permission of the Engineer. The sheet piling shall remain in place until the Engineer determines it is no longer required.

The sheet piling shall be removed and disposed of by the Contractor when directed by the Engineer. When allowed, the Contractor may elect to cut off a portion of the sheet piling leaving the remainder in place. The remaining sheet piling shall be a minimum of 300 mm (12 in.) below the finished grade or as directed by the Engineer. Removed sheet piling shall become the property of the Contractor.

When an obstruction is encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to break up, push aside, or remove the obstruction. An obstruction shall be defined as any object (such as but not limited to, boulders, logs, old foundations etc.) where it's presence was not obvious or specifically noted on the plans prior to bidding, that cannot be driven through or around with normal driving procedures, but requires additional excavation or other procedures to remove or miss the obstruction.

Method of Measurement. The temporary sheet piling will be measured for payment in place in square meters (square feet). Any temporary sheet piling cut off, left in place, or driven to dimensions other than those shown on the contract plans without the written permission of the Engineer, shall not be measured for payment but shall be done at the contractor's expense.

If the Contractor is unable to drive the sheeting to the specified tip elevation(s) and can demonstrate that any further effort to drive it would only result in damaging the sheeting, then the Contractor shall be paid based on the plan quantity of temporary sheeting involved. However, no additional payment will be made for any walers, bracing, or other supplement to the temporary sheet piling, which may be required as a result of the re-evaluation in order to insure the original design intent was met.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square foot) for TEMPORARY SHEET PILING.

Payment for any excavation performed in conjunction with this work will not be included in this item but shall be paid for as specified elsewhere in this contract.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

MECHANICALLY STABILIZED EARTH RETAINING WALLS
Effective: February 3, 1999 Revised: June 21, 2004

Description. This work shall consist of preparing the design, furnishing the materials, and constructing the mechanically stabilized earth (MSE) retaining wall to the lines, grades and dimensions shown in the contract plans and as directed by the Engineer.

General. The MSE wall consists of a concrete leveling pad, precast concrete face panels, a soil reinforcing system, select fill and concrete coping (when specified). The soil reinforcement shall have sufficient strength, quantity, and pullout resistance, beyond the failure surface within the select fill, as required by design. The material, fabrication, and construction shall comply with this Special Provision and the requirements specified by the supplier of the wall system selected by the Contractor for use on the project.

The MSE retaining wall shall be one of the following pre-approved wall systems:

Advanced Reinforced Soil: Tensar Earth Technologies, Inc.
Hilfiker 5x5 Panel Wall: T & B Structural Systems, Inc.
MSE Plus 5x6 Panel System; SSL Construction Products
Reinforced Earth: The Reinforced Earth Company
Retained Earth: Foster Geotechnical
Strengthened Soil: Shaw Technologies, Inc.
Tricon Retained Soil Wall System: Tricon Precast LTD.

Pre-approval of the wall system does not include material acceptance at the jobsite.

Submittals. The wall system supplier shall submit complete design calculations and shop drawings to the Department for review and approval no later than 90 days prior to beginning construction of the wall. All submittals shall be sealed by an Illinois Licensed Structural Engineer and shall include all details, dimensions, quantities and cross sections necessary to construct the wall and shall include, but not be limited to, the following items:

(a) Plan, elevation and cross section sheet(s) for each wall showing the following:

(1) A plan view of the wall indicating the offsets from the construction centerline to the face of the wall at all changes in horizontal alignment. The plan view shall show the limits of soil reinforcement and stations where changes in length and/or size of reinforcement occur. The centerline shall be shown for all drainage structures or pipes behind or passing through and/or under the wall.

(2) An elevation view of the wall indicating the elevations of the top of the panels. These elevations shall be at or above the top of exposed panel line shown on the contract plans. This view shall show the elevations of the top of the leveling pads, all steps in the leveling pads and the finished grade line. Each panel type, the number, size and length of soil reinforcement connected to the panel shall be designated. The equivalent uniform applied bearing pressure shall be shown for each designed wall section.

(3) A listing of the summary of quantities shall be provided on the elevation sheet of each wall.

(4) Typical cross section(s) showing the limits of the reinforced select fill volume included within the wall system, soil reinforcement, embankment material placed behind the select fill, precast face panels, and their relationship to the right-of-way limits, excavation cut slopes, existing ground conditions and the finished grade line.

(5) All general notes required for constructing the wall.

(b) All details for the concrete leveling pads, including the steps, shall be shown. The top of the leveling pad shall be located at or below the theoretical top of the leveling pad line shown on the contract plans. The theoretical top of leveling pad line shall be 1.1 m (3.5 ft) below finished grade line at the front face of the wall, unless otherwise shown on the plans.

(c) Where concrete coping or barrier is specified, the panels shall extend up into the coping or barrier a minimum of 50 mm (2 in.). The top of the panels may be level or sloped to satisfy the top of exposed panel line shown on the contract plans. Cast-in-place concrete will not be an acceptable replacement for panel areas below the top of exposed panel line. As an alternative to cast in place coping, the Contractor may substitute a precast coping, the details of which must be included in the shop drawings and approved by the Engineer.

(d) All panel types shall be detailed. The details shall show all dimensions necessary to cast and construct each type of panel, all reinforcing steel in the panel, and the location of soil reinforcement connection devices embedded in the panels. These panel embed devices shall not be in contact with the panel reinforcement steel.

(e) All details of the wall panels and soil reinforcement placement around all appurtenances located behind, on top of, or passing through the soil reinforced wall volume such as parapets with anchorage slabs, coping, foundations, and utilities etc. shall be clearly indicated. Any modifications to the design of these appurtenances to accommodate a particular system shall also be submitted.

(f) When specified on the contract plans, all details of architectural panel treatment, including color, texture and form liners shall be shown.

(g) The details for the connection between concrete panels, embed devices, and soil reinforcement shall be shown.

The initial submittal shall include three sets of shop drawings and one set of calculations. One set of drawings will be returned to the Contractor with any corrections indicated. After approval, the Contractor shall furnish the Engineer with eight sets of corrected plan prints and one mylar set of plans for distribution by the Department. No work or ordering of materials for the structure shall be done until the submittal has been approved by the Engineer.

Materials. The MSE walls shall conform to the supplier's standards as previously approved by the Department, and the following:

(a) The soil reinforcing system, which includes the soil reinforcement, panel embeds and all connection devices, shall be according to the following:

Inextensible Soil Reinforcement. Steel reinforcement shall be either epoxy coated or galvanized. Epoxy coatings shall be according to Article 1006.10(b)(2), except the minimum thickness of epoxy coating shall be 457 microns (18 mils). No bend test will be required. Galvanizing shall be according to AASHTO M 232 or AASHTO M 111 as applicable.

Mesh and Loop Panel Embeds	AASHTO M 32M /M 32 and M 55M/M 55
Strips	AASHTO M 223M/M 223 Grade 450 (65)
Tie Strip Panel Embeds	AASHTO M 270M/M 270 Grade 345 (50)

Extensible Soil Reinforcement. Geosynthetic reinforcement shall be monolithically fabricated from virgin high density polyethylene (HDPE) resins having the following properties verified by mill certifications:

Property	Value	Test
Melt Flow Rate (g/cm)	0.060 – 0.150	ASTM D 1238, Procedure B
Density (g/cu m)	0.941 – 0.965	ASTM D 792
Carbon Black	2% (min)	ASTM D 4218

Panel embed/connection devices used with geosynthetic soil reinforcement shall be manufactured from virgin or recycled polyvinyl chloride having the following properties:

Property	Value	Test
Heat Deflection Temperature (°F)	155 - 164	ASTM D 1896
Notched IZOD 1/8 inch @ 73°F (ft-lb/in)	4 – 12	ASTM D 256
Coefficient of Linear Exp. (in/in/°F)	3.5 – 4.5	ASTM D 696
Hardness, Shore D	79	ASTM D 2240

(b) The select fill, defined as the material placed in the reinforced volume behind the wall, shall be according to the following:

(1) Select Fill Gradation. Either a coarse aggregate or a fine aggregate may be used. For coarse aggregate, gradations CA 6 thru CA 16 may be used. If an epoxy coated or geosynthetic reinforcing is used, the coarse aggregate gradations shall be limited to CA 12 thru CA 16. For fine aggregate, gradations FA 1, FA 2, or FA 20 may be used.

Other aggregate gradations may be used provided the maximum aggregate size is 38 mm (1 ½ in.), the maximum material passing the 425 μm (#40) sieve is 60 percent, and the maximum material passing the 75 μm (#200) sieve is 15 percent.

(2) Select Fill Quality. The coarse or fine aggregate shall be Class C quality or better, except that a maximum of 15 percent of the material can be finer than the #200 sieve.

(3) Select Fill Internal Friction Angle. The effective internal friction angle for the coarse or fine aggregate shall be a minimum 34 degrees according to AASHTO T 236 on samples compacted to 95 percent density according to ASHTO T 99. The AASHTO T 296 test with pore pressure measurement may be used in lieu of AASHTO T 236.

(4) Select Fill and Steel Reinforcing. When steel reinforcing is used, the select fill shall meet the following requirements.

a. The pH shall be 5.0 to 10.0 according to AASHTO T 289.
b. The resistivity shall be greater than 3000 ohm centimeters according to AASHTO T 288.
c. The chlorides shall be less than 100 parts per million according to AASHTO T 291 or ASTM D 4327. For either test, the sample shall be prepared according to AASHTO T 291.
d. The sulfates shall be less than 200 parts per million according to AASHTO T 290 or ASTM D 4327. For either test, the sample shall be prepared according to AASHTO T 290.
e. The organic content shall be a maximum 1.0 percent according to ASHTO T 267.

(5) Select Fill and Geosynthetic Reinforcing. When geosynthetic reinforcing is used, the select fill pH shall be 4.5 to 9.0 according to AASHTO T 289.

(6) Test Frequency. Prior to start of construction, a sample of select fill material shall be submitted to the Department for testing and approval. Thereafter, the minimum frequency of sampling and testing at the jobsite will be one per 15,500 cubic meters (20,000 cubic yards) of select fill material.

(c) The embankment material behind the select fill shall be according to Section 202 and/or Section 204. An embankment unit weight of 1921 kg/cubic meter (120 lbs/cubic foot) and an effective friction angle of 30 degrees shall be used in the wall system design, unless otherwise indicated on the plans.

(d) The geosynthetic filter material used across the panel joints shall be either a non-woven needle punch polyester or polypropylene or a woven monofilament polypropylene with a minimum width of 300 mm (12 in.) and a minimum non-sewn lap of 150 mm (6 in.) where necessary.

(e) The bearing pads shall be rubber, neoprene, polyvinyl chloride, or polyethylene of the type and grade as recommended by the wall supplier.

(f) All precast panels shall be manufactured with Class PC concrete, and shall be according to Section 504 and the following requirements:

(1) The minimum panel thickness shall be 140 mm (5 1/2 in.).

(2) The minimum reinforcement bar cover shall be 38 mm (1 1/2 in.).

(3) The panels shall have a ship lap or tongue and groove system of overlapping joints between panels designed to conceal joints and bearing pads.

(4) The panel reinforcement shall be epoxy coated.

(5) All dimensions shall be within 5 mm (3/16 in.).

(6) Angular distortion with regard to the height of the panel shall not exceed 5 mm (0.2 in.) in 1.5 m (5 ft).

(7) Surface defects on formed surfaces measured on a length of 1.5 m (5 ft.) shall not be more than 2.5 mm (0.1 in.).

(8) The panel embed/connection devices shall be cast into the facing panels with a tolerance not to exceed 25 mm (1 in.) from the locations specified on the approved shop drawings.

Unless specified otherwise, concrete surfaces exposed to view in the completed wall shall be finished according to Article 503.16. The back face of the panel shall be roughly screeded to eliminate open pockets of aggregate and surface distortions in excess of 6 mm (1/4 in.).

The precast panels shall be produced according to the latest Department's Policy Memorandum for "Quality Control/Quality Assurance Program for Precast Concrete Products."

Design Criteria. The design shall be according to the AASHTO Design Specifications for Mechanically Stabilized Earth Walls except as modified herein. The wall supplier shall be responsible for all internal stability aspects of the wall design and shall supply the Department with computations for each designed wall section. The analyses of settlement, bearing capacity and overall slope stability will be the responsibility of the Department.

External loads, such as those applied through structure foundations, from traffic or railroads, slope surcharge etc., shall be accounted for in the internal stability design. The presence of all appurtenances behind, in front of, mounted upon, or passing through the wall volume such as drainage structures, utilities, structure foundation elements or other items shall be accounted for in the internal stability design of the wall.

The design of the soil reinforcing system shall be according to the applicable AASHTO Design Specifications for "Inextensible" steel or "Extensible" geosynthetic reinforcement criteria. The reduced section of the soil reinforcing system shall be sized to allowable stress levels at the end of a 75 year design life.

Steel soil reinforcing systems shall be protected by either galvanizing or epoxy coating. The design life for epoxy shall be 16 years. The corrosion protection for the balance of the 75 year total design life shall be provided using a sacrificial steel thickness computed for all exposed surfaces according to the applicable AASHTO Design Specifications.

Geosynthetic soil reinforcing systems shall be designed to account for the strength reduction due to long-term creep, chemical and biological degradation, as well as installation damage.

To prevent out of plane panel rotations, the soil reinforcement shall be connected to the standard panels in at least two different elevations, vertically spaced no more than 760 mm (30 in.) apart.

The panel embed/soil reinforcement connection capacity shall be determined according to the applicable AASHTO Design Specifications.

The factor of safety for pullout resistance in the select fill shall not be less than 1.5, based on the pullout resistance at 13 mm (1/2 in.) deformation. Typical design procedures and details, once accepted by the Department, shall be followed. All wall system changes shall be submitted in advance to the Department for approval.

For aesthetic considerations and differential settlement concerns, the panels shall be erected in such a pattern that the horizontal panel joint line is discontinuous at every other panel. This shall be accomplished by alternating standard height and half height panel placement along the

leveling pad. Panels above the lowest level shall be standard size except as required to satisfy the top of exposed panel line shown on the contract plans.

At locations where the plans specify a change of panel alignment creating an included angle of 150° or less, precast corner joint elements will be required. This element shall separate the adjacent panels by creating a vertical joint secured by means of separate soil reinforcement.

Isolation or slip joints, which are similar to corner joints in design and function, may be required to assist in differential settlements at locations indicated on the plans or as recommended by the wall supplier. Wall panels with areas greater than 2.8 sq m (30 sq ft) may require additional slip joints to account for differential settlements. The maximum standard panel area shall not exceed 5.6 sq m (60 sq ft).

Construction. The Contractor shall obtain technical assistance from the supplier during wall erection to demonstrate proper construction procedures and shall include any costs related to this technical assistance in the unit price bid for this item.

The foundation soils supporting the structure shall be graded for a width equal to or exceeding the length of the soil reinforcement. Prior to wall construction, the foundation shall be compacted with a smooth wheel vibratory roller. Any foundation soils found to be unsuitable shall be removed and replaced, as directed by the Engineer, and shall be paid for separately according to Section 202.

When structure excavation is necessary, it shall be made and paid for according to Section 502 except that the horizontal limits for structure excavation shall be from the rear limits of the soil reinforcement to a vertical plane 600 mm (2 ft) from the finished face of the wall. The depth shall be from the top of the original ground surface to the top of the leveling pad. The additional excavation necessary to place the concrete leveling pad shall be included in this work.

The concrete leveling pads shall have a minimum thickness of 150 mm (6 in.) and shall be placed according to Section 503.

As select fill material is placed behind a panel, the panel shall be maintained in its proper inclined position according to the supplier specifications and as approved by the Engineer. Vertical tolerances and horizontal alignment tolerances shall not exceed 19 mm (3/4 in.) when measured along a 3 m (10 ft) straight edge. The maximum allowable offset in any panel joint shall be 19 mm (3/4 in.). The overall vertical tolerance of the wall, (plumbness from top to bottom) shall not exceed 13 mm per 3 m (1/2 in. per 10 ft) of wall height. The precast face panels shall be erected to insure that they are located within 25 mm (1 in.) from the contract plan offset at any location to insure proper wall location at the top of the wall. Failure to meet this tolerance may cause the Engineer to require the Contractor to disassemble and re-erect the affected portions of the wall. A 19 mm (3/4 in.) joint separation shall be provided between all adjacent face panels to prevent direct concrete to concrete contact. This gap shall be maintained by the use of bearing pads and/or alignment pins.

The back of all panel joints shall be covered by a geotextile filter material attached to the panels with a suitable adhesive. No adhesive will be allowed directly over the joints.

The select fill and embankment placement shall closely follow the erection of each lift of panels. At each soil reinforcement level, the fill material should be roughly leveled and compacted

before placing and attaching the soil reinforcing system. The soil reinforcement and the maximum lift thickness shall be placed according to the supplier's recommended procedures except, the lifts for select fill shall not exceed 255 mm (10 in.) loose measurement or as approved by the Engineer. Embankment shall be constructed according to Section 205.

At the end of each day's operations, the Contractor shall shape the last level of select fill to permit runoff of rainwater away from the wall face. Select fill shall be compacted according to the project specifications for embankment except the minimum required compaction shall be 95 percent of maximum density as determined by AASHTO T-99. Select fill compaction shall be accomplished without disturbance or distortion of soil reinforcing system and panels. Compaction in a strip 1 m (3 ft) wide adjacent to the backside of the panels shall be achieved using a minimum of 3 passes of a light weight mechanical tamper, roller or vibratory system.

Method of Measurement. Mechanically Stabilized Earth Retaining Wall will be measured for payment in square meters (square feet). The MSE retaining wall will be measured from the top of exposed panel line to the theoretical top of leveling pad line for the length of the wall as shown on the contract plans.

Basis of Payment. This work, including placement of the select fill within the soil reinforced wall volume shown on the approved shop drawings, precast face panels, soil reinforcing system, concrete leveling pad and accessories will be paid for at the contract unit price per square meter (square foot) for MECHANICALLY STABILIZED EARTH RETAINING WALL.

Concrete coping when specified on the contract plans will be included for payment in this work. Other concrete appurtenances such as anchorage slabs, parapets, abutment caps, etc. will not be included in this work, but will be paid for as specified elsewhere in this contract, unless otherwise noted on the plans.

All excavation necessary to construct the leveling pad and/or to place the select fill for the MSE wall shall be paid for as STRUCTURE EXCAVATION according to Section 502.

Embankment placed outside of the select fill volume will be measured and paid for according to Sections 202 and/or 204 as applicable.

TEMPORARY SOIL RETENTION SYSTEM
Effective: December 30, 2002

Description. This work shall consist of designing, furnishing, installing, adjusting for stage construction when required and subsequent removal of the temporary soil retention system according to the dimensions and details shown on the plans and in the approved design submittal.

General. The temporary soil retention system shall be designed by the Contractor as a minimum, to retain the exposed surface area specified in the plans or as directed by the Engineer.

The design calculations and details for the temporary soil retention system proposed by the Contractor shall be submitted to the Engineer for approval. The calculations shall be prepared and sealed by an Illinois Licensed Structural Engineer. This approval will not relieve the Contractor of responsibility for the safety of the excavation. Approval shall be contingent upon acceptance by all involved utilities and/or railroads.

Construction. The Contractor shall verify locations of all underground utilities before installing any of the soil retention system components or commencing any excavation. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department. The soil retention system shall be installed according to the Contractor's approved design, or as directed by the Engineer, prior to commencing any related excavation. If unable to install the temporary soil retention system as specified in the approved design, the Contractor shall have the adequacy of the design re-evaluated. Any reevaluation shall be submitted to the Engineer for approval prior to commencing the excavation adjacent to the area in question. The Contractor shall not excavate below the maximum excavation line shown in the approved design without the prior permission of the Engineer. The temporary soil retention system shall remain in place until the Engineer determines it is no longer required.

The temporary soil retention system shall be removed and disposed of by the Contractor when directed by the Engineer. When allowed, the Contractor may elect to cut off a portion of the temporary soil retention system leaving the remainder in place. The remaining temporary soil retention system shall be removed to a depth which will not interfere with the new construction, and as a minimum, to a depth of 300 mm (12 in.) below the finished grade, or as directed by the Engineer. Removed system components shall become the property of the Contractor.

When an obstruction is encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to break up, push aside, or remove the obstruction. An obstruction shall be defined as any object (such as but not limited to, boulders, logs, old foundations etc.) where it's presence was not obvious or specifically noted on the plans prior to bidding, that cannot be driven or installed through or around, with normal driving or installation procedures, but requires additional excavation or other procedures to remove or miss the obstruction.

Method of Measurement. The temporary soil retention system furnished and installed according to the Contractor's approved design or as directed by the Engineer will be measured for payment in place, in square meters (square feet). The area measured shall be the vertical exposed surface area envelope of the excavation supported by temporary soil retention system.

Any temporary soil retention system cut off, left in place, or installed beyond those dimensions shown on the contract plans or the approved contractor's design without the written permission of the Engineer, shall not be measured for payment but shall be done at the contractor's own expense.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square foot) for TEMPORARY SOIL RETENTION SYSTEM.

Payment for any excavation, related solely to the installation and removal of the temporary soil retention system and/or its components, shall not be paid for separately but shall be included in the unit bid price for TEMPORARY SOIL RETENTION SYSTEM. Other excavation, performed in conjunction with this work, will not be included in this item but shall be paid for as specified elsewhere in this contract.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

ADJUSTING FRAMES AND GRATES (BDE)

Effective: August 1, 2001 Revised: November 1, 2001

Add the following to Article 602.02 of the Standard Specifications:

"(k) High Density Polyethylene (HDPE) Plastic …….. Note 2
(l) Recycled Rubber……... Note 3

Note 2. HDPE plastic adjusting rings may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 75 mm (3 in.). They shall be installed and sealed underneath the frames according to the manufacturer's specifications.

HDPE plastic adjusting rings shall be manufactured from Class B HDPE plastic, as identified in ASTM D 1248, using the injection molding process. They shall be designed and tested to meet or exceed an HS25 wheel load according to the AASHTO Standard Specifications for Highway Bridges and shall be stabilized against the effects of ultra violet light.

Recycled material may be used. If recycled material is used, only polyethylene and less than two percent polypropylene will be allowed in the reclaim process. All feed stock shall be tested by the manufacturer on a procurement/production batch basis to verify the following property values:

Physical Property	Test Standard	Value
Melt Flow Index	ASTM D 1238	0.30 to 30.0 g/10 min (0.01 to 1.06 oz/10 min)
Specific Gravity	ASTM D 792	0.84 to 0.98
Tensile Strength, Yield	ASTM D 638	13,800 kPa (2000 psi) minimum

HDPE plastic adjusting rings shall have no void areas, cracks, or tears, and have no effects due to exposure to ultraviolet light. Ripples or sags are limited to less than ten percent of the surface. The actual diameter or length shall not vary more than 3 mm (0.125 in.) from the specified diameter or length. Variations in height are limited to $\pm$ 1.6 mm (0.063 in.) for parts up to 50 mm (2 in.) or $\pm$ 3 mm (0.125 in.) for parts from 50 mm (2 in.) to 75 mm (3 in.). Variations shall not exceed 6 mm (0.25 in.) from flat (dish, bow or convoluting edge) or 3 mm (0.125 in.) for bulges or dips in the surface.

Note 3. Riser rings fabricated from recycled rubber may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 50 mm (2 in.). They shall be installed and sealed underneath the frames according to the manufacturer's specifications.

Recycled rubber products shall consist of no less than 80 percent by weight recycled rubber. The riser shall meet or exceed the following when maintained at 23 ± 2°C (73 ± 3°F) for at least 24 hours prior to and during testing.

Physical Property	Test Standard	Value
Density	ASTM C 642-90	1.10 ± 0.034 g/cu cm (68.63 ± 2.11 lb/cu ft)
Durometer Hardness	ASTM D 2240-97 Shore A	72 ± 6[1]
Compression Deformation under 1000 kPa (145 psi)	ASTM D 575 –Test Method B Test of Specified Force	9 ± 4 %
Compression Set	ASTM D 395 – Illinois Modified Test Method B Compression Set under Constant Deflection in Air	5 ± 3 %[2]
Weathering (70 hrs at 70 °C (158 °F)) Hardness retained	ASTM D 573	98 %, minimum
Freeze/thaw when exposed to deicing chemicals	ASTM C 672-91	3 % loss, maximum

[1]Average of three tests over a 28 mm (1.12 in.) diameter sample.
[2] Samples compressed to 75 percent of initial height.

Recycled rubber adjusting rings shall have no void areas, cracks, or tears, and have no effects due to exposure to ultraviolet light. The actual diameter or length shall not vary more than 3 mm (0.125 in.) from the specified diameter or length. Variations in height are limited to ± 1.6 mm (0.063 in.) for parts up to 50 mm (2 in.)."

Revise Article 603.08 of the Standard Specifications to read:

"**603.08 Adjusting Rings.** As an option to Articles 603.03 through 603.07, the adjustment of frames and grates may be accomplished through the use of adjusting rings that fit on top of the frame. These adjusting rings shall be fabricated as a one-piece assembly from gray iron, ductile iron or structural steel. They shall provide a structural capacity equal to or greater than the existing frame and shall not affect the opening size or surface appearance. The rings shall have a device for positively positioning and fastening the ring to the existing frame to prevent movement under traffic."

AUTHORITY OF RAILROAD ENGINEER (BDE)
Effective: July 1, 2004

Revise Article 105.02 of the Standard Specifications to read:

"**105.02 Authority of Railroad Engineer.** Whenever the safety of railroad traffic is concerned, the Railroad Engineer will have jurisdiction over safety measures to be taken and his/her decision as to the methods, procedures, and measures used shall be final, and any and all Contractors performing work near or about the railroad shall be governed by such decision. Instructions to the Contractor by the Railroad Engineer will be given through the Engineer. Work ordered as specified herein will be classified and paid for according to Article 104.02. Work performed for the Contractor's convenience will not be paid for separately but shall be considered as included in the contract."

BITUMINOUS BASE COURSE / WIDENING SUPERPAVE
Effective: April 1, 2002 Revised: April 1, 2004

Description. This work shall consist of constructing bituminous base course Superpave and bituminous concrete base course widening Superpave according to Sections 355 and 356 respectively, of the Standard Specifications and the special provision, "Quality Control/Quality Assurance of Bituminous Concrete Mixtures" except as modified herein.

Revise Article 355.02(d) of the Standard Specifications to read:

" (d) RAP Material (Note3)"

Revise Note 2 of Article 355.02 of the Standard Specifications to read:

" Note 2. Unless otherwise specified on the plans, the bituminous material shall be performance graded (PG) asphalt cement (AC) , PG58-22. When more than 15 percent RAP is used, a softer PG binder may be required as determined by the Engineer. When the pavement has a structural number (D_t) of 3.00 or less, the low temperature grade of the asphalt cement shall be lowered one grade (i.e. PG58-28 replaces PG58-22)."

Add the following to the end Article 355.02 of the Standard Specifications:

" Note 3. RAP shall meet the requirements of the special provision "RAP for Use in Bituminous Concrete Mixtures"."

Revise Article 355.05 of the Standard Specifications to read:

"**355.05 Mixture Design.** The Contractor shall submit mix designs for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have completed the course, "Superpave Mix Design Upgrade". The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below:

AASHTO MP 2 Standard Specification for Superpave Volumetric Mix Design

AASHTO R 30 Standard Practice for Mixture Conditioning of Hot-Mix Asphalt (HMA)

AASHTO PP 28 Standard Practice for Designing Superpave HMA

AASHTO T 209 Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

AASHTO T 312 Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor

AASHTO T 308 Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

(a) Job Mix Formula (JMF). The JMF shall be according to the following limits:

Ingredient	Percent by Dry Weight
Aggregate	93.0 to 96.0
Asphalt Cement	4.0 to 7.0
Dust/AC Ratio	1.4

When RAP material is being used, the JMF shall be according to the following limits:

Ingredient	Percent by Dry Weight
Virgin Aggregate(s)	46.0 to 96.0
RAP Material(s) (Note 1)	0 to 50
Mineral Filler (if required)	0 to 5.0
Asphalt Cement	4.0 to 7.0
Dust/AC Ratio	1.4

Note 1. If specified on the plans, the maximum percentage of RAP shall be as specified therein.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

Bituminous concrete binder course Superpave mixture IL-25.0 or IL-19.0 meeting the requirements of the special provision, “Superpave Bituminous Concrete Mixtures" may also be used. The minimum compacted lift thickness specified therein shall apply.

(b) Volumetric Requirements.

Design Compactive Effort	**Design Air Voids Target (%)**
N_{DES} =50	2.0

(c) Determination of Need for Anti-Stripping Additive. The mixture designer shall determine if an additive is needed in the mix to prevent stripping. The determination will be made on the basis of tests performed according to Illinois Modified AASHTO T 283 using 4 in. Marshall bricks. To be considered acceptable by the Engineer as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSR) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSR values less than 0.75 will be considered unacceptable.

If it is determined that an additive is required, the additive may be hydrated lime, slaked quicklime, or a liquid additive, at the Contractor's option. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Engineer. The method of application shall be according to Article 406.12 of the Standard Specifications."

Revise Article 355.06 of the Standard Specifications to read:

"**355.06 Mixture Production.** The asphalt cement shall be transferred to the asphalt tanks and heated to a temperature of 120 °C (250 °F) to 175 °C (350 °F). If the loading temperature exceeds 175 °C (350 °F), the asphalt shall not be used until it has cooled to 175 °C (350 °F). Wide variations in temperature which affect the amount of asphalt delivered will not be permitted.

When a hot-mix plant conforming to Article 1102.01 is used, the aggregate shall be dried and heated in the revolving dryer to a temperature of 120 °C (250 °F) to 175 °C (350 °F).

The aggregate and bituminous material used in the bituminous aggregate mixture shall be measured separately and accurately by weight or by volume. When the aggregate is in the mixer, the bituminous material shall be added and mixing continued for a minimum of 30 seconds and until a homogeneous mixture is produced in which all particles of the aggregate are coated. The mixing period, size of the batch and the production rate shall be approved by the Engineer.

The ingredients shall be heated and combined in such a manner as to produce a mixture which, when discharged from the mixer, shall be workable and vary not more 10 °C (20 °F) from the temperature set by the Engineer.

When RAP material(s) is used in the bituminous aggregate mixture, the virgin aggregate(s) shall be dried and heated in the dryer to a temperature that will produce the specified resultant mix temperature when combined with the RAP material.

The heated virgin aggregates and mineral filler shall be combined with RAP material in such a manner as to produce a bituminous mixture which when discharged from the mixer shall not vary more than 15 °C (30 °F) from the temperature set by the Engineer. The combined ingredients shall be mixed for a minimum of 35 seconds and until a homogeneous mixture as to composition and temperature is obtained. The total mixing time shall be a minimum of 45 seconds consisting of dry and wet mixing. Variation in wet and dry mixing times may be permitted, depending on the moisture content and amount of salvaged material used. The mix temperature shall not exceed 175 °C (350 °F). Wide variations in the mixture temperature will be cause for rejection of the mix.

(a) Personnel. The QC Manager and Level I Technician shall have successfully completed the Department’s "Superpave Field Control Course”.

(b) Required Tests. Testing shall be conducted to control the production of the bituminous mixture using the test methods identified and performed at a frequency not less than indicated in the following table.

Parameter	Frequency of Tests Non-Class I Mixtures	Test Method
Aggregate Gradation Hot bins for batch and continuous plants. Individual cold-feeds or combined belt-feed for drier-drum plants. (% passing seives: 12.5 mm (1/2 In.), 4.75 mm (No. 4), 75 µm (No. 200))	1 gradation per day of production. The first day of production shall be washed ignition oven test on the mix. Thereafter, the testing shall alternate between dry gradation and washed ignition oven test on the mix. The dry gradation and the washed ignition oven test results shall be plotted on the same control chart.	Illinois Procedure (See Manual of Test Procedures for Materials).
Asphalt Content by ignition oven (Note 1.)	1 per day	Illinois-Modified AASHTO T 308
Air Voids Bulk Specific Gravity of Gyratory Sample Maximum Specific Gravity of Mixture	 1 per day 1 per day	 Illinois-Modified AASHTO T 312 Illinois-Modified AASHTO T 209

Note 1. The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine AC content.

During production, the ratio of minus 75 µm (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.6, and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 µm (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resumption of production.

During production, mixture containing an anti-stripping additive will be tested by the Engineer for stripping according to Illinois Modified AASHTO T 283. If the mixture fails to meet the TSR criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

(c) Control Charts/Limits. Control charts/limits shall be according to QC/QA requirements for Non-Class I Mixtures, except air voids shall be plotted on the control charts within the following control limits:

Air Void Control Limits	
Mixture	Individual Test
Shoulders	± 1.2 %
Others	± 1.2 %"

Revise Article 355.08 of the Standard Specifications to read:

" **355.08 Placing.** The bituminous mixture shall be placed with a spreading and finishing machine. The minimum compacted thickness of each lift shall be according to the following table:

Nominal Maximum Aggregate Size of Mixture	Minimum Compacted Lift Thickness
CA 10 - 19 mm (3/4 in.)	57 mm (2 1/4 in.)
CA 6 – 25 mm (1 in.)	76 mm (3 in.)

The maximum compacted thickness of each lift shall be 100 mm (4 in.). If the Contractor elects to substitute an approved vibratory roller for one of the required rollers, the maximum compacted thickness of the each lift, excluding the top lift, may be increased to 150 mm (6 in.) provided the required density is obtained.

The surface of each lift shall be clean and dry before succeeding lifts are placed."

Revise Article 355.13 of the Standard Specifications to read:

" **355.13 Basis of Payment**. This work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS BASE COURSE SUPERPAVE of the thickness specified."

Revise Article 356.02 of the Standard Specifications to read:

" **356.02 Materials.** The materials for the bituminous concrete mixture shall meet the requirements of Article 355.02, be designed according to Article 355.05 and produced according to Article 355.06. Bituminous concrete binder course Superpave mixture IL-25.0 or IL-19.0 meeting the requirements of the special provision, "Superpave Bituminous Concrete Mixtures" may also be used. The minimum compacted lift thickness specified therein shall apply."

Revise the first paragraph of Article 356.06 of the Standard Specifications to read:

" **356.06 Base Course Widening.** The bituminous concrete mixture shall be transported according to Article 406.14."

Revise the second sentence of the fifth paragraph of Article 356.06 of the Standard Specifications to read:

" The minimum compacted thickness of each lift shall be according to the table shown in Article 355.08."

Revise the first paragraph of Article 356.11 of the Standard Specifications to read:

" **356.11 Basis of Payment**. Where the Department requires that bituminous concrete be used, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE BASE COURSE WIDENING SUPERPAVE of the thickness specified."

BITUMINOUS EQUIPMENT, SPREADING AND FINISHING MACHINE (BDE)
Effective: January 1, 2005

Revise the fourth paragraph of Article 1102.03 of the Standard Specifications to read:

"The paver shall be equipped with a receiving hopper having sufficient capacity for a uniform spreading operation. The hopper shall be equipped with a distriction system to uniformly place a non-segregated mixture in front of the screed. The distribution system shall have chain curtains, deflector plates, and/or other devices designed and built by the paver manufacturer to prevent segregation during distribution of the mixture from the hopper to the paver screed. The Contractor shall submit a written certification that the devices recommended by; the paver manufacturer to prevent segregation have been installed and are operational. Prior to paving, the Contractor, in the presence of the Engineer, shall visually inspect paver parts specifically identified by the manufacturer for excessive wear and the need for replacement. The Contractor shall supply a completed check list to the Engineer noting the condition of the parts. Worn parts shall be replaced. The Engineer may require an additional inspection prior to the placement of a surface course or at other times throughout the work."

CHAIR SUPPORTS (BDE)
Effective: November 1, 2002 Revised: November 2, 2002

Revise the fourth and fifth paragraphs of Article 421.06(a) to read:

"Pavement reinforcement shall be supported on steel chair supports at the depth below the pavement surface as indicated on the plans. The Contractor shall submit prints of shop drawings showing details of chair supports and their spacing to the Engineer and obtain the Engineer's approval before any fabrication is begun.

The chair supports shall possess the necessary rigidity and be spaced at intervals close enough to hold the reinforcement at the proper depth and position. However, the spacing of the chair supports shall not exceed 900 mm (3 ft) transversely or 1.2 m (4 ft) longitudinally. The chair supports shall be fabricated with sand plates."

COARSE AGGREGATE FOR TRENCH BACKFILL, BACKFILL AND BEDDING (BDE)
Effective: April 1, 2001 Revised: November 1, 2003

Revise Article 208.02 of the Standard Specifications to read:

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

(a) Fine Aggregate (Note 1)..... 1003.04
(b) Coarse Aggregate (Note 2)..... 1004.06

Note 1. The fine aggregate shall be moist to the satisfaction of the Engineer.

Note 2. The coarse aggregate shall be wet to the satisfaction of the Engineer."

Revise the first sentence of the second paragraph of subparagraph (b) in Article 208.03 of the Standard Specifications to read:

"Any material meeting the requirements of Articles 1003.04 or 1004.06 which has been excavated from the trenches shall be used for backfilling the trenches."

Add the following to the end of Article 542.02 of the Standard Specifications:

"(bb) Fine Aggregate (Note 1) 1003.04
(cc) Coarse Aggregate (Note 2) 1004.06

Note 1. The fine aggregate shall be moist to the satisfaction of the Engineer.

Note 2. The coarse aggregate shall be wet to the satisfaction of the Engineer."

Revise the first and second sentences of the second paragraph of subparagraph (a) of Article 542.04 of the Standard Specifications to read:

"The unstable and unsuitable material shall be removed to a depth determined by the Engineer and for a width of one diameter (or equivalent diameter) of the pipe on each side of the pipe culvert, and replaced with aggregate. Rock shall be removed to an elevation 300 mm (1 ft) lower than the bottom of the pipe or to a depth equal to 40 mm/m (1/2 in./ft) of ultimate fill height over the top of the pipe culvert, whichever is the greater depth, and for a width as specified in (b) below, and replaced with aggregate."

Revise the second paragraph of subparagraph (c) of Article 542.04 of the Standard Specifications to read:

"Well compacted aggregate, at least 100 mm (4 in.) in depth below the pipe culvert, shall be placed the entire width of the trench and for the length of the pipe culvert, except well compacted impervious material shall be used for the outer 1 m (3 ft) at each end of the pipe. When the trench has been widened by the removal and replacement of unstable or unsuitable material, the foundation material shall be placed for a width not less than the above specified widths on each side of the pipe. The aggregate and impervious material shall be approved by the Engineer and shall be compacted to the Engineer's satisfaction by mechanical means."

Revise subparagraph (e) of Article 542.04 of the Standard Specifications to read:

"(e) Backfilling. As soon as the condition of the pipe culvert will permit, the entire width of the trench shall be backfilled with aggregate to a height of at least the elevation of the center of the pipe. The aggregate shall be placed longitudinally along the pipe culvert, except at the outer 1 m (3 ft) at each end of the culvert which shall be backfilled with impervious material. The elevation of the backfill material on each side of the pipe shall be the same. The space under the pipe shall be completely filled. The aggregate and impervious material shall be placed in 200 mm (8 in.) layers, loose measurement. When using PVC, PE, or corrugated metal pipe, the aggregate shall be continued to a

height of at least 300 mm (1 ft) above the top of the pipe and compacted to a minimum of 85 percent of standard lab density by mechanical means. When reinforced concrete pipes are used and the trench is within 600 mm (2 ft) of the pavement structure, the backfill shall be compacted to a minimum of 85 percent of standard lab density by mechanical means.

When using PVC, PE, or corrugated metal pipe a minimum of 300 mm (1 ft) of cover from the top of the pipe to the top of the subgrade will be required.

The installed pipe and its embedment shall not be disturbed when using movable trench boxes and shields, sheet pile, or other trench protection.

The remainder of the trench shall be backfilled with select material, from excavation or borrow, free from large or frozen lumps, clods or rock, meeting the approval of the Engineer. The material shall be placed in layers not exceeding 200 mm (8 in.) in depth, loose measurement and compacted to 95 percent of the standard laboratory density. Compaction shall be obtained by use of mechanical tampers or with approved vibratory compactors. Before compacting, each layer shall be wetted or dried to bring the moisture content within the limits of 80 to 110 percent of optimum moisture content determined according to AASHTO T 99 (Method C). All backfill material shall be deposited in the trench or excavation in such a manner as not to damage the culvert. The filling of the trench shall be carried on simultaneously on both sides of the pipe. The Contractor may, at his/her expense, backfill the entire trench with aggregate in lieu of select material. The aggregate shall be compacted to the satisfaction of the Engineer by mechanical means.

The backfill material for all trenches and excavations made in the subgrade of the proposed improvement, and for all trenches outside of the subgrade where the inner edge of the trench is within 600 mm (2 ft) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder, or sidewalk shall be according to Section 208. The trench backfill material shall be compacted to a minimum of 85 percent of standard lab density by mechanical means.

The Contractor may, at his/her expense, backfill the entire trench with controlled low strength material meeting the approval of the Engineer.

When the trench has been widened for the removal and replacement of unstable or unsuitable material, the backfilling with aggregate and impervious material, will be required for a width of at least the specified widths on each side of the pipe. The remaining width of each layer may be backfilled with select material. Each 200 mm (8 in.) layer for the entire trench width shall be completed before beginning the placement of the next layer."

Revise subparagraph (b) of Article 542.05 of the Standard Specifications to read:

"(b) Embankment. Embankment extending to an elevation of 300 mm (1 ft) over the top of the pipe shall be constructed according to Article 542.04(f), except the material up to the elevation of the center of the pipe and extending to a width of at least 450 mm (18 in.) on each side of the pipe, exclusive of the outer 1 m (3 ft) at each end of the pipe, shall consist of aggregate. At the outer 1 m (3 ft) at each end of the culvert, impervious material shall be used."

Add the following paragraph after the first paragraph of Article 542.10 of the Standard Specifications:

"Trench backfill will be measured for payment according to Article 208.03."

Add the following paragraph after the third paragraph of Article 542.11 of the Standard Specifications:

"Trench backfill will be paid for according to Article 208.04."

Add the following to of Article 550.02 of the Standard Specifications:

"(m) Fine Aggregate (Note 2) 1003.04
(n) Coarse Aggregate (Note 3) 1004.06

Note 2. The fine aggregate shall be moist to the satisfaction of the Engineer.

Note 3. The coarse aggregate shall be wet to the satisfaction of the Engineer."

Revise the first two sentences of the third paragraph of Article 550.04 of the Standard Specifications to read:

"Well compacted, aggregate bedding material at least 100 mm (4 in.) in depth below the pipe, shall be placed for the entire width of the trench and length of the pipe. The aggregate shall be compacted to the satisfaction of the Engineer by mechanical means."

Revise Article 550.07 of the Standard Specifications to read:

"**550.07 Backfilling.** As soon as the condition of the pipe will permit, the entire width of the trench shall be backfilled with aggregate to a height of at least the elevation of the center of the pipe. The aggregate shall be placed longitudinally along the pipe. The elevation of the backfill material on each side of the pipe shall be the same. The space under the pipe shall be completely filled. The aggregate backfill material shall be placed in 200 mm (8 in.) layers, loose measurement and compacted to the satisfaction of the Engineer by mechanical means. When using PVC pipe, the aggregate shall be continued to a height of at least 300 mm (12 in.) above the top of the pipe.

The installed pipe and its embedment shall not be disturbed when using movable trench boxes and shields, sheet pile, or other trench protection.

The remainder of the trench and excavation shall be backfilled to the natural line or finished surface as rapidly as the condition of the sewer will permit. The backfill material shall consist of suitable excavated material from the trench or of trench backfill as herein specified. All backfill material shall be deposited in the trench or excavation in such a manner as not to damage the sewer and shall be compacted to the satisfaction of the Engineer by mechanical means. The filling of the trench shall be carried on simultaneously on both sides of the pipe.

The backfill material for trenches and excavation made in the subgrade of the proposed improvement, and for all trenches outside of the subgrade where the inner edge of the trench is within 600 mm (2 ft) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder or sidewalk shall be according to Section 208. The backfill material shall be compacted to 85 percent of standard lab density by mechanical means.

All backfill material up to a height of 300 mm (1 ft) above the pipe shall be deposited in uniform layers not exceeding 200 mm (8 in.) thick, loose measurement. The material in each layer shall be compacted to the satisfaction of the Engineer by mechanical means. The backfilling above this height shall be done according to Method 1, 2 or 3 as described below, with the following exceptions.

When trench backfill or excavated material meeting the requirements of Section 208 is required above the first 300 mm (1 ft) of the pipe, the layers shall not exceed 200 mm (8 in.). Gradations CA6 or CA10 shall not be used with Method 2 or Method 3.

Method 1. The material shall be deposited in uniform layers not exceeding 300 mm (1 ft) thick, loose measurement, and each layer shall be compacted to the satisfaction of the Engineer by mechanical means.

Method 2. The material shall be deposited in uniform layers not exceeding 300 mm (1 ft) thick, loose measurement, and each layer shall be either inundated or deposited in water.

Method 3. The trench shall be backfilled with loose material, and settlement secured by introducing water through holes jetted into the backfill to a point approximately 600 mm (2 ft) above the top of the pipe. The holes shall be spaced as directed by the Engineer but shall be no farther than 2 m (6 ft) apart.

The water shall be injected at a pressure just sufficient to sink the holes at a moderate rate of speed. The pressure shall be such that the water will not cut cavities in the backfill material nor overflow the surface. If water does overflow the surface, it shall be drained into the jetted holes by means of shallow trenches.

Water shall be injected as long as it will be absorbed by the backfill material and until samples taken from test holes in the trench show a satisfactory moisture content. The Contractor shall bore the test holes not more than 15 m (50 ft) apart and at such other locations in the trench designated by the Engineer. As soon as the watersoaking has been completed, all holes shall be filled with soil and compacted by ramming with a tool approved by the Engineer.

Backfill material which has been watersoaked shall be allowed to settle and dry for at least 10 days before any surface course or pavement is constructed on it. The length of time may be altered, if deemed desirable, by the Engineer. Where the inner edge of the trench is within 600 mm (2 ft) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder or sidewalk, the provisions of this paragraph shall also apply.

At the end of the settling and drying period, the crusted top of the backfill material shall be scarified and, if necessary, sufficient backfill material added, as specified in Method 1, to complete the backfilling operations.

The method used for backfilling and compacting the backfill material shall be the choice of the Contractor. If the method used does not produce results satisfactory to the Engineer, the Contractor will be required to alter or change the method being used so the resultant backfill will be satisfactory to the Engineer. Should the Contractor be required to alter or change the method being used, no additional compensation will be allowed for altering or changing the method.

The Contractor may, at his/her expense, backfill the entire trench with controlled low strength material meeting the approval of the Engineer.

When sheeting and bracing have been used, sufficient bracing shall be left across the trench as the backfilling progresses to hold the sides firmly in place without caving or settlement. This bracing shall be removed as soon as practicable. Any depressions which may develop within the area involved in the construction operation due to settlement of the backfilling material shall be filled in a manner approved by the Engineer.

When the Contractor constructs the trench with sloped or benched sides according to Article 550.04, backfilling for the full width of the excavation shall be as specified, except no additional compensation will be allowed for trench backfill material required outside the vertical limits of the specified trench width.

Whenever excavation is made for installing sewer pipe across earth shoulders or private property, the topsoil disturbed by excavation operations shall be replaced as nearly as possible in its original position, and the whole area involved in the construction operations shall be left in a neat and presentable condition.

When using any PVC pipe, the pipe shall be backfilled with aggregate to 300 mm (1 ft) over the top of the pipe and compacted to a minimum of 85 percent of standard lab density by mechanical means.

When reinforced concrete pipes are used and the trench is within 600 mm (2 ft) of the pavement structure, the backfill shall be compacted to a minimum of 85 percent of standard lab density by mechanical means.

Deflection Testing for Storm Sewers. All PVC storm sewers will be tested for deflection not less than 30 days after the pipe is installed and the backfill compacted.

For PVC storm sewers with diameters 600 mm (24 in.) or smaller, a mandrel drag shall be used for deflection testing. For PVC storm sewers with diameters over 600 mm (24 in.), deflection measurements other than by a mandrel drag shall be used.

Where the mandrel is used, the mandrel shall be furnished by the Contractor and pulled by hand through the pipeline with a suitable rope or cable connected to each end. Winching or other means of forcing the deflection gauge through the pipeline will not be allowed.

The mandrel shall be of a shape similar to that of a true circle enabling the gauge to pass through a satisfactory pipeline with little or no resistance. The mandrel shall be of a design to prevent it from tipping from side to side and to prevent debris build-up from occurring between the channels of the adjacent fins or legs during operation. Each end of the core of the mandrel shall have fasteners to which the pulling cables can be attached. The mandrel shall have 9, various sized fins or legs of appropriate dimension for various diameter pipes. Each fin or leg shall have a permanent marking that states its designated pipe size and percent of deflection allowable.

The outside diameter of the mandrel shall be 95 percent of the base inside diameter, where the base inside diameter is:

For all PVC pipe (as defined using ASTM D 3034 methodology):

If the pipe is found to have a deflection greater than specified, that pipe section shall be removed, replaced, and retested."

Revise subparagraph (c) of Article 1003.04 of the Standard Specifications to read:

"(c) Gradation. The fine aggregate gradation shall be as follows:

Backfill, bedding and trench backfill for pipe
culverts and storm sewers ..... FA 1, FA 2, FA 6, or FA 21
Porous granular embankment and backfill, french drains,
and sand backfill for underdrains ..... FA 1, FA 2, or FA20 (Note 1)

Note 1: For FA 1, FA 2, and FA 20 the percent passing the 75 μm (No. 200) sieve shall be 2 ± 2."

Revise the title of Article 1004.06 of the Standard Specifications to read:

"Coarse Aggregate for Blotter, Embankment, Backfill, Trench Backfill, French Drains, and Bedding."

Add the following to the end of subparagraph (c) of Article 1004.06 of the Standard Specifications:

"Backfill, bedding, and trench backfill for pipe culverts
and storm sewers ..... CA 6, CA 10, and CA 18"

CONCRETE ADMIXTURES (BDE)
Effective: January 1, 2003 Revised: July 1, 2004

Revise Article 1020.05(b) of the Standard Specifications to read:

"(b) Admixtures. Except as specified, the use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted only when approved in writing by the Engineer. The Department will maintain an Approved List of Concrete Admixtures. When the Department permits the use of a calcium chloride accelerator, it shall be according to Article 442.02, Note 5.

When the atmosphere or concrete temperature is 18 °C (65 °F) or higher, a retarding admixture meeting the requirements of Article 1021.03 shall be used in the Class BD Concrete and portland cement concrete bridge deck overlays. The amount of retarding admixture to be used will be determined by the Engineer. The proportions of the ingredients of the concrete shall be the same as without the retarding admixture except that the amount of mixing water shall be reduced, as may be necessary, in order to maintain the consistency of the concrete as required. In addition, a high range water-reducing admixture shall be used in Class BD Concrete. The amount of high range water-reducing admixture will be determined by the Engineer. At the option of the Contractor, a water-reducing admixture may be used. Type I cement shall be used.

For Class PC and PS Concrete, a retarding admixture may be added to the concrete mixture when the concrete temperature is 18 °C (65 °F) or higher. Other admixtures may be used when approved by the Engineer, or if specified by the contract. If an accelerating admixture is permitted by the Engineer, it shall be the non-chloride type.

At the Contractor's option, admixtures in addition to an air-entraining admixture may be used for Class PP-1 concrete. The accelerator shall be the non-chloride type. If a water-reducing or retarding admixture is used, the cement factor may be reduced a maximum 18 kg/cu m (0.30 hundredweight/cu yd). If a high range water-reducing admixture is used, the cement factor may be reduced a maximum 36 kg/cu m (0.60 hundredweight/cu yd). Cement factor reductions shall not be cumulative when using multiple admixtures. An accelerator shall always be added prior to a high range water-reducing admixture, if both are used.

If Class C fly ash or ground granulated blast-furnace slag is used in Class PP-1 concrete, a water-reducing or high range water-reducing admixture shall be used. However, the cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used. In addition, an accelerator shall not be used.

For Class PP-2 or PP-3 concrete, a non-chloride accelerator followed by a high range water-reducing admixture shall be used, in addition to the air-entraining admixture. For Class PP-3 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-2 or PP-3 concrete, the Contractor has the option to use a water-reducing admixture. A retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

When the air temperature is less than 13 °C (55 °F) for Class PP-1 or PP-2 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-4 concrete, a high range water-reducing admixture shall be used in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture. An accelerator shall not be used. For stationary or truck mixed concrete, a retarding admixture shall be used to allow for haul time. The Contractor has the option to use a mobile portland cement concrete plant according to Article 1103.04, but a retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

If the Department specifies a calcium chloride accelerator for Class PP-1 concrete, the maximum chloride dosage shall be 1.0 L (1.0 quart) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.0 L (2.0 quarts) per 45 kg (100 lb) of cement if approved by the Engineer. If the Department specifies a calcium chloride accelerator for Class PP-2 concrete, the maximum chloride dosage shall be 1.3 L (1.3 quarts) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.6 L (2.6 quarts) per 45 kg (100 lb) of cement if approved by the Engineer.

For Class PV, MS, SI, RR, SC and SH concrete, at the option of the Contractor, or when specified by the Engineer, a water-reducing admixture or a retarding admixture may be used. The amount of water-reducing admixture or retarding admixture permitted will be determined by the Engineer. The air-entraining admixture and other admixtures shall be added to the concrete separately, and shall be permitted to intermingle only after they have separately entered the concrete batch. The sequence, method and equipment for adding the admixtures shall be approved by the Engineer. The water-reducing

admixture shall not delay the initial set of the concrete by more than one hour. Type I cement shall be used.

When a water-reducing admixture is added, a cement factor reduction of up to 18 kg/cu m (0.30 hundredweight/cu yd), from the concrete designed for a specific slump without the admixture, will be permitted for Class PV, MS, SI, RR, SC and SH concrete. When an approved high range water-reducing admixture is used, a cement factor reduction of up to 36 kg/cu m (0.60 hundredweight/cu yd), from a specific water cement/ratio without the admixture, will be permitted based on a 14 percent minimum water reduction. This is applicable to Class PV, MS, SI, RR, SC and SH concrete. A cement factor below 320 kg/cu m (5.35 hundredweight/cu yd) will not be permitted for Class PV, MS, SI, RR, SC and SH concrete. A cement factor reduction will not be allowed for concrete placed underwater. Cement factor reductions shall not be cumulative when using multiple admixtures.

For use of admixtures to control concrete temperature, refer to Articles 1020.14(a) and 1020.14(b).

The maximum slumps given in Table 1 may be increased to 175 mm (7 in.) when a high range water-reducing admixture is used for all classes of concrete except Class PV and PP."

Revise Section 1021 of the Standard Specifications to read:

"SECTION 1021. CONCRETE ADMIXTURES"

1021.01 General. Admixtures shall be furnished in liquid form ready for use. The admixtures may be delivered in the manufacturer's original containers, bulk tank trucks or such containers or tanks as are acceptable to the Engineer. Delivery shall be accompanied by a ticket which clearly identifies the manufacturer and trade name of the material. Containers shall be readily identifiable to the satisfaction of the Engineer as to manufacturer and trade name of the material they contain.

Prior to inclusion of a product on the Department's Approved List of Concrete Admixtures, the manufacturer shall submit a report prepared by an independent laboratory accredited by the AASHTO Accreditation Program. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications.

Tests shall be conducted using materials and methods specified on a "test" concrete and a "reference" concrete, together with a certification that no changes have been made in the formulation of the material since the performance of the tests. Per the manufacturer's option, the cement content for all required tests shall either be according to applicable specifications or 335 kg/cu m (5.65 cwt/cu yd). Compressive strength test results for six months and one year will not be required.

In addition to the report, the manufacturer shall submit AASHTO T 197 water content and set time test results on the standard cement used by the Department. The test and reference concrete mixture shall contain a cement content of 335 kg/cu m (5.65 cwt/cu yd). The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by the AASHTO Accreditation Program.

Prior to the approval of an admixture, the Engineer may conduct all or part of the applicable tests on a sample that is representative of the material to be furnished. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 335 kg/cu m (5.65 cwt/cu yd). For freeze-thaw testing, the Department will perform the test according to Illinois Modified AASHTO T 161, Procedure B.

The manufacturer shall include in the submittal the following information according to ASTM C 494; the average and manufacturing range of specific gravity, the average and manufacturing range of solids in the solution, and the average and manufacturing range of pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

When test results are more than seven years old, the manufacturer shall re-submit the infrared spectrophotometer trace and the report prepared by an independent laboratory accredited by the AASHTO Accreditation Program.

All admixtures, except chloride-based accelerators, shall contain no more than 0.3 percent chloride by mass (weight).

1021.02 Air-Entraining Admixtures. Air-entraining admixtures shall conform to the requirements of AASHTO M 154.

If the manufacturer certifies that the air-entraining admixture is an aqueous solution of Vinsol resin that has been neutralized with sodium hydroxide (caustic soda), testing for compliance with the requirements may be waived by the Engineer. In the certification, the manufacturer shall show complete information with respect to the formulation of the solution, including the number of parts of Vinsol resin to each part of sodium hydroxide. Before the approval of its use is granted, the Engineer will test the solution for its air-entraining quality in comparison with a solution prepared and kept for that purpose.

1021.03 Retarding and Water-Reducing Admixtures. The admixture shall comply with the following requirements:

(a) The retarding admixture shall comply with the requirements of AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).

(b) The water-reducing admixture shall comply with the requirements of AASHTO M 194, Type A.

(c) The high range water-reducing admixture shall comply with the requirements of AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).

When a Type F or Type G high range water-reducing admixture is used, water-cement ratios shall be a minimum of 0.32.

Type F or Type G admixtures may be used, subject to the following restrictions:

For Class MS, SI, RR, SC and SH concrete, the water-cement ratio shall be a maximum of 0.44.

The Type F or Type G admixture shall be added at the jobsite unless otherwise directed by the Engineer. The initial slump shall be a minimum of 40 mm (1 1/2 in.)

prior to addition of the Type F or Type G admixture, except as approved by the Engineer.

When a Type F or Type G admixture is used, retempering with water or with a Type G admixture will not be allowed. An additional dosage of a Type F admixture, not to exceed 40 percent of the original dosage, may be used to retemper concrete once, provided set time is not unduly affected. A second retempering with a Type F admixture may be used for all classes of concrete except Class PP and SC, provided that the dosage does not exceed the dosage used for the first retempering, and provided that the set time is not unduly affected. No further retempering will be allowed.

Air tests shall be performed after the addition of the Type F or Type G admixture.

1021.04 Set Accelerating Admixtures. The admixture shall comply with the requirements of AASHTO M 194, Type C (accelerating) or Type E (water reducing and accelerating)"

CURING AND PROTECTION OF CONCRETE CONSTRUCTION (BDE)
Effective: January 1, 2004

Revise the second and third sentences of the eleventh paragraph of Article 503.06 of the Standard Specifications to read:

"Forms on substructure units shall remain in place at least 24 hours. The method of form removal shall not result in damage to the concrete."

Delete the twentieth paragraph of Article 503.22 of the Standard Specifications.

Revise the "Unit Price Adjustments" table of Article 503.22 of the Standard Specifications to read:

"UNIT PRICE ADJUSTMENTS	
Type of Construction	Percent Adjustment in Unit Price
For concrete in substructures, culverts (having a waterway opening of more than 1 sq m (10 sq ft)), pump houses, and retaining walls (except concrete pilings, footings and foundation seals):	
When protected by:	
Protection Method II	115%
Protection Method I	110%
For concrete in superstructures:	
When protected by:	
Protection Method II	123%
Protection Method I	115%
For concrete in footings:	
When protected by:	
Protection Method I, II or III	107%
For concrete in slope walls:	
When protected by:	
Protection Method I	107%"

Delete the fourth paragraph of Article 504.05(a) of the Standard Specifications.

Revise the second and third sentences of the fifth paragraph of Article 504.05(a) of the Standard Specifications to read:

"All test specimens shall be cured with the units according to Article 1020.13."

Revise the first paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

"Curing and Low Air Temperature Protection. The curing and protection for precast, prestressed concrete members shall be according to Article 1020.13 and this Article."

Revise the first sentence of the second paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

"For curing, air vents shall be in place, and shall be so arranged that no water can enter the void tubes during the curing of the members."

Revise the first sentence of the third paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

"As soon as each member is finished, the concrete shall be covered with curing material according to Article 1020.13."

Revise the eighth paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

"The prestressing force shall not be transferred to any member before the concrete has attained the compressive strength of 28,000 kPa (4000 psi) or other higher compressive release strength specified on the plans, as determined from tests of 150 mm (6 in.) by 300 mm (12 in.) cylinders cured with the member according to Article 1020.13. Members shall not be shipped until 28-day strengths have been attained and members have a yard age of at least 4 days."

Delete the third paragraph of Article 512.03(a) of the Standard Specifications.

Delete the last sentence of the second paragraph of Article 512.04(d) of the Standard Specifications.

Revise the "Index Table of Curing and Protection of Concrete Construction" table of Article 1020.13 of the Standard Specifications to read:

"INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Cast-in-Place Concrete: [11/]			
Pavement Shoulder	1020.13(a)(1)(2)(3)(4)(5)[3/ 5/]	3	1020.13(c)
Base Course Base Course Widening	1020.13(a)(1)(2)(3)(4)(5)[1/ 2/]	3	1020.13(c)
Driveway Median Curb Gutter Curb and Gutter Sidewalk Slope Wall	1020.13(a)(1)(2)(3)(4)(5)[4/ 5/]	3	1020.13(c)[16/]
Paved Ditch Catch Basin Manhole Inlet Valve Vault	1020.13(a)(1)(2)(3)(4)(5)[4/]	3	1020.13(c)
Pavement Patching	1020.13(a)(1)(2)(3)(4)(5)[2/]	3[12/]	1020.13(c)
Pavement Replacement	1020.13(a)(1)(2)(3)(4)(5)[1/ 2/]	3	442.06(h) and 1020.13(c)
Railroad Crossing	1020.13(a)(3)(5)	1	1020.13(c)
Piles	1020.13(a)(3)(5)	7	1020.13(e)(1)(2)(3)
Footings Foundation Seals	1020.13(a)(1)(2)(3)(4)(5)[4/6/]	7	1020.13(e)(1)(2)(3)
Substructure	1020.13(a)(1)(2)(3)(4)(5)[1/7/]	7	1020.13(e)(1)(2)(3)
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5)[8/]	7	1020.13(e)(1)(2)
Deck	1020.13(a)(5)	7	1020.13(e)(1)(2)[17/]
Retaining Walls	1020.13(a)(1)(2)(3)(4)(5)[1/7/]	7	1020.13(e)(1)(2)
Pump Houses	1020.13(a)(1)(2)(3)(4)(5)[1/]	7	1020.13(e)(1)(2)
Culverts	1020.13(a)(1)(2)(3)(4)(5)[4/6/]	7	1020.13(e)(1)(2)[18/]
Other Incidental Concrete	1020.13(a)(1)(2)(3)(5)	3	1020.13(c)
Precast Concrete: [11/]			
Bridge Beams Piles Bridge Slabs Nelson Type Structural Member	1020.13(a)(3)(5)[9/10/]	As required.[13/]	504.06(c)(6), 1020.13(e)(2)[19/]
All Other Precast Items	1020.13(a)(3)(4)(5)[2/9/10/]	As required.[14/]	504.06(c)(6), 1020.13(e)(2)[19/]
Precast, Prestressed Concrete: [11/]			
All Items	1020.13(a)(3)(5)[9/10/]	Until strand tensioning is released.[15/]	504.06(c)(6), 1020.13(e)(2)[19/]

Notes-General:

1/ Type I, membrane curing only

2/ Type II, membrane curing only

3/ Type III, membrane curing only

4/ Type I, II and III membrane curing

5/ Membrane curing will not be permitted between November 1 and April 15.

6/ The use of water to inundate footings, foundation seals or the bottom slab of culverts is permissible when approved by the Engineer, provided the water temperature can be maintained at 7 °C (45 °F) or higher.

7/ Asphalt Emulsion for Waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18.

8/ On non-traffic surfaces which receive protective coat according to Article 503.19, a linseed oil emulsion curing compound may be used as a substitute for protective coat and other curing methods. The linseed emulsion curing compound will be permitted between April 16 and October 31 of the same year, provided it is applied with a mechanical sprayer according to Article 1101.09 (b), and meets the material requirements of Article 1022.07.

9/ Steam curing (heat and moisture) is acceptable and shall be accomplished by the method specified in Article 504.06(c)(6).

10/ A moist room according to AASHTO M 201 is acceptable for curing.

11/ If curing is required and interrupted because of form removal for cast-in-place concrete items, precast concrete products, or precast prestressed concrete products, the curing shall be resumed within two hours from the start of the form removal.

12/ Curing maintained only until opening strength is attained, with a maximum curing period of three days.

13/ The curing period shall end when the concrete has attained the mix design strength. The producer has the option to discontinue curing when the concrete has attained 80 percent of the mix design strength or after seven days. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.

14/ The producer shall determine the curing period or may elect to not cure the product. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.

15/ The producer has the option to continue curing after strand release.

16/ When structural steel or structural concrete is in place above slope wall, Article 1020.13(c) shall not apply. The protection method shall be according to Article 1020.13(e)(1).

17/ When Article 1020.13(e)(2) is used to protect the deck, the housing may enclose only the bottom and sides. The top surface shall be protected according to Article 1020.13(e)(1).

18/ For culverts having a waterway opening of 1 sq m (10 sq ft) or less, the culverts may be protected according to Article 1020.13(e)(3).

19/ The seven day protection period in the first paragraph of Article 1020.13(e)(2) shall not apply. The protection period shall end when curing is finished. For the third paragraph of Article 1020.13(e)(2), the decrease in temperature shall be according to Article 504.06(c)(6).”

Add the following to Article 1020.13(a) of the Standard Specifications:

"(5) Wetted Cotton Mat Method. After the surface of concrete has been textured or finished, it shall be covered immediately with dry cotton mats. The cotton mats shall be placed in a manner which will not mar the concrete surface. A texture resulting from the cotton mat material is acceptable. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. For bridge decks, a foot bridge shall be used to place and wet the cotton mats.

The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without marring the concrete surface. The soaker hoses shall be placed on top of the cotton mats at a maximum 1.2 m (4 ft) spacing. The cotton mats shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets.

For construction items other than bridge decks, soaker hoses or a continuous wetting system will not be required if the alternative method keeps the cotton mats wet. Periodic wetting of the cotton mats is acceptable.

For areas inaccessible to the cotton mats on bridge decks, curing shall be according to Article 1020.13(a)(3)."

Revise the first paragraph of Article 1020.13(c) of the Standard Specifications to read:

"Protection of Portland Cement Concrete, Other Than Structures, From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low of 0 °C (32 °F), or lower, or if the actual temperature drops to 0 °C (32 °F), or lower, concrete less than 72 hours old shall be provided at least the following protection:"

Delete Article 1020.13(d) and Articles 1020.13(d)(1),(2),(3),(4) of the Standard Specifications.

Revise the first five paragraphs of Article 1020.13(e) of the Standard Specifications to read:

"Protection of Portland Cement Concrete Structures From Low Air Temperatures. When the official National Weather Service Forecast for the construction area predicts a low below 7 °C (45 °F), or if the actual temperature drops below 7 °C (45 °F), concrete less than 72 hours old shall be provided protection. Concrete shall also be provided protection when placed during the winter period of December 1 through March 15. Concrete shall not be placed until the materials, facilities and equipment for protection are approved by the Engineer.

When directed by the Engineer, the Contractor may be required to place concrete during the winter period. If winter construction is specified, the Contractor shall proceed with the construction, including concrete, excavation, pile driving, steel erection and all appurtenant work required for the complete construction of the item, except at times when weather conditions make such operations impracticable.

Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced by the Contractor at his/her own expense."

Add the following at the end of the third paragraph of Article 1020.13(e)(1) of the Standard Specifications:

"The Contractor shall provide means for checking the temperature of the surface of the concrete during the protection period."

Revise the second sentence of the first paragraph of Article 1020.13(e)(2) of the Standard Specifications to read:

"The Contractor shall provide means for checking the temperature of the surface of the concrete or air temperature within the housing during the protection period."

Delete the last sentence of the first paragraph of Article 1020.13(e)(3) of the Standard Specifications.

Add the following Article to Section 1022 of the Standard Specifications:

"**1022.06 Cotton Mats.** Cotton mats shall consist of a cotton fill material, minimum 400 g/sq m (11.8 oz/sq yd), covered with unsized cloth or burlap, minimum 200 g/sq m (5.9 oz/sq yd), and be tufted or stitched to maintain stability.

Cotton mats shall be in a condition satisfactory to the Engineer. Any tears or holes in the mats shall be repaired.

Add the following Article to Section 1022 of the Standard Specifications:

"**1022.07 Linseed Oil Emulsion Curing Compound.** Linseed oil emulsion curing compound shall be composed of a blend of boiled linseed oil and high viscosity, heavy bodied linseed oil emulsified in a water solution. The curing compound shall meet the requirements of a Type I, II, or III according to Article 1022.01, except the drying time requirement will be waived. The oil phase shall be 50 ± 4 percent by volume. The oil phase shall consist of 80 percent by mass (weight) boiled linseed oil and 20 percent by mass (weight) Z-8 viscosity linseed oil. The water phase shall be 50 ± 4 percent by volume."

Revise Article 1020.14 of the Standard Specifications to read:

"**1020.14 Temperature Control for Placement.** Temperature control for concrete placement shall conform to the following requirements:

(a) Temperature Control other than Structures. The temperature of concrete immediately before placing, shall be not less than 10 °C (50 °F) nor more than 32 °C (90 °F). Aggregates and/or water shall be heated or cooled as necessary to produce concrete within these temperature limits.

When the temperature of the plastic concrete reaches 30 °C (85 °F), an approved retarding admixture shall be used or the approved water reducing admixture in use shall have its dosage increased by 50 percent over the dosage recommended on the

Department's Approved List of Concrete Admixtures for the temperature experienced. The amount of retarding admixture to be used will be determined by the Engineer. This requirement may be waived by the Engineer when fly ash compensated mixtures are used.

Plastic concrete temperatures up to 35 °C (96 °F), as placed, may be permitted provided job site conditions permit placement and finishing without excessive use of water on and/or overworking of the surface. The occurrence within 24 hours of unusual surface distress shall be cause to revert to a maximum 32 °C (90 °F) plastic concrete temperature.

Concrete shall not be placed when the air temperature is below 5 °C (40 °F) and falling or below 2 °C (35 °F), without permission of the Engineer. When placing of concrete is authorized during cold weather, the Engineer may require the water and/or the aggregates to be heated to not less than 20 °C (70 °F) nor more than 65 °C (150 °F). The aggregates may be heated by either steam or dry heat prior to being placed in the mixer. The apparatus used shall heat the mass uniformly and shall be so arranged as to preclude the possible occurrence of overheated areas which might damage the materials. No frozen aggregates shall be used in the concrete.

For pavement patching, refer to Article 442.06(e) for additional information on temperature control for placement.

(b) Temperature Control for Structures. The temperature of concrete as placed in the forms shall be not less than 10 °C (50 °F) nor more than 32 °C (90 °F). Aggregates and/or water shall be heated or cooled as necessary to produce concrete within these temperature limits. When insulated forms are used, the temperature of the concrete mixture shall not exceed 25 °C (80 °F). If the Engineer determines that heat of hydration might cause excessive temperatures in the concrete, the concrete shall be placed at a temperature between 10 °C (50 °F) and 15 °C (60 °F), per the Engineer's instructions. When concrete is placed in contact with previously placed concrete, the temperature of the concrete may be increased as required to offset anticipated heat loss.

Concrete shall not be placed when the air temperature is below 7 °C (45 °F) and falling or below 4 °C (40 °F), without permission of the Engineer. When placing of concrete is authorized during cold weather, the Engineer may require the water and/or the aggregates to be heated to not less than 20 °C (70 °F) nor more than 65 °C (150 °F). The aggregates may be heated by either steam or dry heat prior to being placed in the mixer. The apparatus used shall heat the mass uniformly and shall be so arranged as to preclude the possible occurrence of overheated areas which might damage the materials. No frozen aggregates shall be used in the concrete.

When the temperature of the plastic concrete reaches 30 °C (85 °F), an approved retarding admixture shall be used or the approved water reducing admixture in use shall have its dosage increased by 50 percent over the dosage recommended on the Department's Approved List of Concrete Admixtures for the temperature experienced. The amount of retarding admixture to be used will be determined by the Engineer. This requirement may be waived by the Engineer when fly ash compensated mixtures are used.

(c) Temperature. The concrete temperature shall be determined according to ASTM C 1064."

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000 Revised: June 1, 2004

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. 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. 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.

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 federally-assisted contracts. 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 25.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set forth in this Special Provision:

(a) The bidder documents that firmly committed DBE participation has been obtained to meet the goal; or

(b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders may consult the DBE Directory as a reference source for DBE companies certified by the Department. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's web site at www.dot.state.il.us.

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 nonresponsive.

(a) In order to assure the timely award of the contract, the as-read low bidder must submit a Disadvantaged Business Utilization Plan on Department form SBE 2026 within seven (7) working days after the date of letting. To meet the seven (7) day requirement , the bidder may send the Plan by certified mail or delivery service within the seven (7) working day period. If a question arises concerning the mailing date of a Plan, the mailing date will be established by the U.S. Postal Service postmark on the original certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service. It is the responsibility of the as-read low bidder to ensure that the postmark or receipt date is affixed within the seven (7) working days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Plan is to be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). It is the responsibility of the bidder to obtain confirmation of telefax delivery. The Department will not accept a Utilization Plan if it does not meet the seven (7) day submittal requirement, and the bid will be declared nonresponsive. In the event the bid is declared nonresponsive due to a failure to submit a Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration or to extend the time for award.

(b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.

(c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. The signatures on these forms must be original signatures. All elements of information indicated on the said form shall be provided, including but not limited to the following:

(1) The name and address of each DBE to be used;

(2) A description, including pay item numbers, of the commercially useful work to be done by each DBE;

(3) The price to be paid to each DBE for the identified work specifically stating the quantity, unit price and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;

(4) A commitment statement signed by the bidder and each DBE evidencing availability and intent to perform commercially useful work on the project; and

(5) If the bidder is a joint venture comprised of DBE firms and non-DBE firms, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s).

(d) The contract will not be awarded until the Utilization Plan submitted by the bidder is approved. The Utilization Plan will be approved by the Department if the Plan commits sufficient commercially useful DBE work performance to meet the contract goal. The Utilization Plan will not be approved by the Department if the Plan does not commit sufficient DBE performance to meet the contract goal unless the bidder documents that it made a good faith effort to meet the goal. The good faith procedures of Section VIII of this special provision apply. If the Utilization Plan is not approved because it is deficient in a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no less than a five (5) working day period in order to cure the deficiency.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR part 26.55, the provisions of which govern over the summary contained herein.

(a) DBE as the Contractor: 100% goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE firm does not count toward the DBE goals.

(b) DBE as a joint venture Contractor: 100% goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

(c) DBE as a subcontractor: 100% goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE firm does not count toward the DBE goal.

(d) DBE as a trucker: 100% goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed and insured by the

DBE must be used on the contact. Credit will be given for the full value of all such DBE trucks operated using DBE employed drivers. Goal credit will be limited to the value of the reasonable fee or commission received by the DBE if trucks are leased from a non -DBE company.

(e) DBE as a material supplier:

(1) 60% goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.

(2) 100% goal credit for the cost of materials or supplies obtained from a DBE manufacturer.

(3) 100% credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

GOOD FAITH EFFORT PROCEDURES. If the bidder cannot obtain sufficient DBE commitments to meet the contract goal, the bidder must document in the Utilization Plan the good faith efforts made in the attempt to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which could reasonably be expected to obtain sufficient DBE participation. The Department will consider the quality, quantity and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts are not good faith efforts; rather, the bidder is expected to have taken those efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

(a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.

(1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.

(2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

(3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) a. Negotiating in good faith with interested DBE companies. It is the bidder’s responsibility to make a portion of the work available to DBE subcontractors and

suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors 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 contractor'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 contractor'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 Contractor has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that a good faith effort has not been made, the Department will notify the bidder of that preliminary determination by contacting the responsible company official designated in the Utilization Plan. The preliminary determination shall include a statement of reasons why good faith efforts have not been found, and may include additional good faith efforts that the bidder could take. The notification will designate a five (5) working day period during which the bidder shall take additional efforts. The bidder is not limited by a statement of additional efforts, but may take other action beyond any stated additional efforts in order to obtain additional DBE commitments. The bidder shall submit an amended Utilization Plan if additional DBE commitments to meet the contract goal are secured. If additional DBE commitments sufficient to meet the contract goal are not secured, the bidder shall report the final good faith efforts made in

the time allotted. All additional efforts taken by the bidder will be considered as part of the bidder's good faith efforts. If the bidder is not able to meet the goal after taking additional efforts, the Department will make a pre-final determination of the good faith efforts of the bidder and will notify the designated responsible company official of the reasons for an adverse determination.

(c) The bidder may request administrative reconsideration of a pre-final determination adverse to the bidder within the five (5) working days after the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The pre-final determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issue of whether an adequate good faith effort was made to meet the contract goal. In addition, the request shall be considered a consent by the bidder to extend the time for award. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten (10) working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid nonresponsive.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal.

(a) No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.

(b) All work indicated for performance by an approved DBE shall be performed, managed and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the work of the terminated DBE with its own forces, those of an affiliate or those of another

subcontractor, whether DBE or not, without first obtaining the written consent of the Bureau of Small Business Enterprises to amend the Utilization Plan. If a DBE listed in the Utilization Plan is terminated for reasons other than convenience, or fails to complete its work on the contract for any reason, the Contractor shall make good faith efforts to find another DBE to substitute for the terminated DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, but only to the extent needed to meet the contract goal or the amended contract goal. The Contractor shall notify the Bureau of Small Business Enterprises of any termination for reasons other than convenience, and shall obtain approval for inclusion of the substitute DBE in the Utilization Plan. If good faith efforts following a termination of a DBE for cause are not successful, the Contractor shall contact the Bureau and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Bureau will evaluate the good faith efforts in light of all circumstances surrounding the performance status of the contract, and determine whether the contract goal should be amended.

(c) The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefor to the DBE by the Contractor, but not later than thirty (30) calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Report on Department form SBE 2115 to the District 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.

EPOXY COATINGS FOR STEEL REINFORCEMENT (BDE)
Effective: April 1, 2003

Revise Article 1006.10(b)(2) of the Standard Specifications to read:

"(2) Epoxy Coated Reinforcement Bars. Epoxy coated reinforcement bars shall conform to the requirements of AASHTO M 284M (M 284), except:

a. The maximum thickness of epoxy coating on spiral reinforcement, coated after fabrication, shall be 0.5 mm (20 mils).

b. No more than eight of the holidays permitted shall be in any 300 mm (1 ft) of length for continuity of coating.

The epoxy coating applicator shall be certified under the Concrete Reinforcing Steel Institute's (CRSI) Epoxy Plant Certification Program.

The epoxy coater shall provide access for the Engineer at any time during production or shipping. Random bars may be checked at the epoxy coater's facility or the jobsite for coating uniformity, thickness and discontinuity; cracks on the bends; and other damaged areas. Upon request, the coater shall provide samples for testing by the Engineer.

Bars may be sheared or sawn to length after coating, provided end damage to coating does not extend more than 15 mm (1/2 in.) back and the cut end is patched before any visible oxidation appears. Flame cutting will not be permitted."

Add the following paragraph after the first paragraph of Article 1006.11(b) of the Standard Specifications:

"The epoxy coating applicator shall be certified under the Concrete Reinforcing Steel Institute's (CRSI) Epoxy Plant Certification Program."

EPOXY PAVEMENT MARKING (BDE)

Effective: January 1, 2001 Revised: August 1, 2003

Revise Article 1095.04(b) of the Standard Specifications to read:

"(b) The Epoxide Value (WPE) of Component A shall be tested according to ASTM D 1652 on a pigment free basis. The WPE shall not vary more than plus or minus 50 units of the qualification samples."

Revise Article 1095.04(c) of the Standard Specifications to read:

"(c) The Total Amine Value of Component B shall be tested according to ASTM D 2074. The Total Amine Value shall not vary more than plus or minus 50 units of the qualification samples."

Revise Article 1095.04(g) of the Standard Specifications to read:

"(g) The epoxy pavement marking material, when mixed in the proper mix ratio and applied at 0.35 mm to 0.41 mm (14 to 16 mils) wet film thickness and with the proper saturation of glass spheres, shall exhibit a dry no pick-up time of twenty minutes or less when tested according to ASTM D 711."

Revise Article 1095.04(m) of the Standard Specifications to read:

"(m) The glass beads meet the requirements of Article 1095.07 and the following:

(1) The first drop glass beads shall be tested by the standard visual method of large glass spheres adopted by the Department. The beads shall have a silane coating and meet the following sieve requirements.

Sieve Size	U.S. Standard Sieve Number	% Passing (by weight)
1.70 mm	12	95-100
1.40 mm	14	75-95
1.18 mm	16	10-47
1.00 mm	18	0-7
850 μm	20	0-5

(2) The second drop glass beads shall be Type B."

Revise the second sentence of the first paragraph of Article 1095.04(n) of the Standard Specifications to read:

"Subject the coated panel for 75 hours to accelerated weathering using the light and water exposure apparatus (fluorescent UV – condensation type) as specified in ASTM G 53 (equipped with UVB-313 lamps)."

EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION (BDE)
Effective: August 1, 2001 Revised: November 1, 2001

When the Engineer is notified or determines an erosion and/or sediment control deficiency(s) exists, he/she will direct the Contractor in writing to correct the deficiency. The Contractor shall then correct the deficiency within 24 hours. The 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.

If the Contractor fails to correct the deficiency(s) within 24 hours, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The time period will begin with the initial written notification to the Contractor and end with the Engineer's acceptance of the corrected work. The per calendar day deduction will be either $1000.00 or 0.05 percent of the awarded contract value, whichever is greater.

If the Contractor fails to respond, the Engineer may correct the deficiencies and deduct the cost from monies due or which may become due the Contractor. This corrective action shall in no way relieve the Contractor of his/her contractual requirements or responsibilities.

EXPANSION JOINTS (BDE)
Effective: August 1, 2003

Add the following paragraph after the second paragraph of Article 420.10(e) of the Standard Specifications:

"After the dowel bars are oiled, plastic expansion caps shall be secured to the bars maintaining a minimum expansion gap of 50 mm (2 in.) between the end of the bar and the end of the cap. The caps shall fit snuggly on the bar and the closed end shall be watertight. For

expansion joints formed using dowel bar basket assemblies, the caps shall be installed on the alternating free ends of the bars. For expansion joints formed using a construction header, the caps shall be installed on the exposed end of each bar once the header has been removed and the joint filler material has been installed."

FLAGGER VESTS (BDE)
Effective: April 1, 2003

Revise the first sentence of Article 701.04(c)(1) of the Standard Specifications to read:

"The flagger shall be stationed to the satisfaction of the Engineer and be equipped with a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments and approved flagger traffic control signs conforming to Standard 702001 and Article 702.05(e)."

Revise Article 701.04(c)(6) of the Standard Specifications to read:

"(6) Nighttime Flagging. The flagger station shall be lit by additional overhead lighting other than streetlights. The flagger shall be equipped with a fluorescent orange or fluorescent orange and fluorescent yellow/green garment meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments."

FREEZE-THAW RATING (BDE)
Effective: November 1, 2002

Revise the first sentence of Article 1004.02(f) of the Standard Specifications to read:

"When coarse aggregate is used to produce portland cement concrete for base course, base course widening, pavement, driveway pavement, sidewalk, shoulders, curb, gutter, combination curb and gutter, median, paved ditch or their repair using concrete, the gradation permitted will be determined from the results of the Department's Freeze-Thaw Test."

HAND VIBRATOR (BDE)
Effective: November 1, 2003

Add the following paragraph to Article 1103.17(a) of the Standard Specifications:

"The vibrator shall have a non-metallic head for areas containing epoxy coated reinforcement. The head shall be coated by the manufacturer. The hardness of the non-metallic head shall be less than the epoxy coated reinforcement, resulting in no damage to the epoxy coating. Slip-on covers will not be allowed."

IMPACT ATTENUATORS (BDE)
Effective: November 1, 2003

Description. This work shall consist of furnishing and installing impact attenuators of the category and test level specified.

Materials. Materials shall meet the requirements of the impact attenuator manufacturer and the following:

Item	Article/Section
(a) Fine Aggregate (Note 1)	1003.01
(b) Steel Posts, Structural Shapes, and Plates	1006.04
(c) Rail Elements, End Section Plates, and Splice Plates	1006.25
(d) Bolts, Nuts, Washers and Hardware	1006.25
(e) Hollow Structural Tubing	1006.27(b)
(f) Wood Posts and Wood Blockouts	1007.01, 1007.02, 1007.06
(g) Preservative Treatment	1007.12

Note 1. Fine aggregate shall be FA-1 or FA-2, Class A quality. The sand shall be unbagged and shall have a maximum moisture content of five percent.

CONSTRUCTION REQUIREMENTS

General. Impact attenuators shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 for the test level specified and shall be on the Department's approved list. Fully redirective and partially redirective attenuators shall also be designed for bi-directional impacts.

Installation. Regrading of slopes or approaches for the installation shall be as shown on the plans.

Attenuator bases, when required by the manufacturer, shall be constructed on a prepared subgrade according to the manufacturer's specifications. The surface of the base shall be slightly sloped or crowned to facilitate drainage. For sand modules, the perimeter of each module and the specified mass (weight) of sand in each module shall be painted on the surface of the base.

Impact attenuators shall be installed according to the manufacturer's specifications and include all necessary transitions between the impact attenuator and the item to which it is attached.

Method of Measurement. This work will be measured for payment as each, where each is defined as one complete installation.

Basis of Payment. This work, will be paid for at the contract unit price per each for IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW); IMPACT ATTENUATORS (FULLY REDIRECTIVE, WIDE); IMPACT ATTENUATORS (SEVERE USE, NARROW); IMPACT ATTENUATORS (SEVERE USE, WIDE); IMPACT ATTENUATORS (PARTIALLY REDIRECTIVE); or IMPACT ATTENUATORS (NON-REDIRECTIVE), of the test level specified.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

IMPACT ATTENUATORS, TEMPORARY (BDE)

Effective: November 1, 2003 Revised: April 1, 2004

Description. This work shall consist of furnishing, installing, maintaining, and removing temporary impact attenuators of the category and test level specified.

Materials. Materials shall meet the requirements of the impact attenuator manufacturer and the following:

Item	Article/Section
(a) Fine Aggregate (Note 1)	1003.01
(b) Steel Posts, Structural Shapes, and Plates	1006.04
(c) Rail Elements, End Section Plates, and Splice Plates	1006.25
(d) Bolts, Nuts, Washers and Hardware	1006.25
(e) Hollow Structural Tubing	1006.27(b)
(f) Wood Posts and Wood Blockouts	1007.01, 1007.02, 1007.06
(g) Preservative Treatment	1007.12
(h) Rapid Set Mortar (Note 2)	

Note 1. Fine aggregate shall be FA-1 or FA-2, Class A quality. The sand shall be unbagged and shall have a maximum moisture content of five percent.

Note 2. Rapid set mortar shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitous Materials for Concrete Repairs. For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume or a packaged rapid set mortar shall be used. Mixing of the rapid set mortar shall be according to the manufacturer's instructions.

CONSTRUCTION REQUIREMENTS

General. Impact Attenuators shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 for the test level specified and shall be on the Department's approved list.

Installation. Regrading of slopes or approaches for the installation shall be as shown on the plans.

Attenuator bases, when required by the manufacturer, shall be constructed on a prepared subgrade according to the manufacturer's specifications. The surface of the base shall be slightly sloped or crowned to facilitate drainage.

Impact attenuators shall be installed according to the manufacturer's specifications and include all necessary transitions between the impact attenuator and the item to which it is attached.

When water filled attenuators are used between November 1 and April 15, they shall contain anti-freeze according to the manufacturer's recommendations.

Markings. Sand module impact attenuators shall be striped with alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes. There shall be at least two of each stripe on each module.

Other types of impact attenuators shall have a terminal marker applied to their nose and reflectors along their sides.

Maintenance. All maintenance of the impact attenuators shall be the responsibility of the Contractor until removal is directed by the Engineer.

Relocate. When relocation of temporary impact attenuators is specified, they shall be removed, relocated and reinstalled at the new location. The reinstallation requirements shall be the same as those for a new installation.

Removal. When the Engineer determines the temporary impact attenuators are no longer required, the installation shall be dismantled with all hardware becoming the property of the Contractor.

Surplus material shall be disposed of according to Article 202.03. Anti-freeze, when present, shall be disposed of/recycled according to local ordinances.

When impact attenuators have been anchored to the pavement, the anchor holes shall be repaired with rapid set mortar Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

Method of Measurement. This work will be measured for payment as each, where each is defined as one complete installation.

Basis of Payment. This work will be paid for at the contract unit price per each for IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW); IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, WIDE); IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, NARROW); IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, WIDE); or IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) of the test level specified.

Relocation of the devices will be paid for at the contract unit price per each for IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE); IMPACT ATTENUATORS, RELOCATE (SEVERE USE); or IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE); of the test level specified.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

INLET FILTERS (BDE)
Effective: August 1, 2003

Add the following to Article 280.02 of the Standard Specifications:

"(k) Inlet Filters..... 1081.15(h)"

Add the following paragraph after the first paragraph of Article 280.04(c) of the Standard Specifications:

"When specified, drainage structures shall be protected with inlet filters. Inlet filters shall be installed either directly on the drainage structure or under the grate of the drainage

structure resting on the lip of the frame. The fabric bag shall hang down into the drainage structure. Prior to ordering materials, the Contractor shall determine the size and shape of the various drainage structures being protected."

Revise Article 280.07(d) of the Standard Specifications to read:

"(d) Inlet and Pipe Protection. This work will be paid for at the contract unit price per each for INLET AND PIPE PROTECTION.

Protection of drainage structures with inlet filters will be paid for at the contract unit price per each for INLET FILTERS."

Add the following to Article 1081.15 of the Standard Specifications:

"(h) Inlet Filters. An inlet filter shall consist of a steel frame with a two piece geotextile fabric bag attached with a stainless steel band and locking cap that is suspended from the frame. A clean, used bag and a used steel frame in good condition meeting the approval of the Engineer may be substituted for new materials. Materials for the inlet filter assembly shall conform to the following requirements:

(1) Frame Construction. Steel shall conform to Article 1006.04.

Frames designed to fit under a grate shall include an overflow feature that is welded to the frame's ring. The overflow feature shall be designed to allow full flow of water into the structure when the filter bag is full. The dimensions of the frame shall allow the drainage structure grate to fit into the inlet filter assembly frame opening. The assembly frame shall rest on the inside lip of the drainage structure frame for the full variety of existing and proposed drainage structure frames that are present on this contract. The inlet filter assembly frame shall not cause the drainage structure grate to extend higher than 6 mm (1/4 in.) above the drainage structure frame.

(2) Grate Lock. When the inlet is located in a traffic lane, a grate lock shall be used to secure the grate to the frame. The grate lock shall conform to the manufacturer's requirements for materials and installation.

(3) Geotextile Fabric Bag. The sediment bag shall be constructed of an inner filter bag and an outer reinforcement bag.

a. Inner Filter Bag. The inner filter bag shall be constructed of a polypropylene geotextile fabric with a minimum silt and debris capacity of 0.06 cu m (2.0 cu ft). The bag shall conform to the following requirements:

Inner Filter Bag		
Material Property	Test Method	Minimum Avg. Roll Value
Grab Tensile Strength	ASTM D 4632	45 kg (100 lb)
Grab Tensile Elongation	ASTM D 4632	50%
Puncture Strength	ASTM D 4833	29 kg (65 lb)
Trapezoidal Tear	ASTM D 4533	20 kg (45 lb)
UV Resistance	ASTM D 4355	70% at 500 hours
Actual Open Size	ASTM D 1420	212 μm (No. 70 sieve US)
Permittivity	ASTM D 4491	2.0/sec
Water Flow Rate	ASTM D 4491	5900 Lpm/sq m (145 gpm/sq ft)

b. Outer Reinforcement Bag. The outer reinforcement bag shall be constructed of polyester mesh material that conforms to the following requirements:

Outer Reinforcement Bag		
Material Property	Test Method	Value
Content	ASTM D 629	Polyester
Weight	ASTM D 3776	155 g/sq m (4.55 oz/sq yd) ±15%
Whales (holes)	ASTM D 3887	7.5 ± 2 holes/25 mm (1 in.)
Chorses (holes)	ASTM D 3887	15.5 ± 2holes/25 mm (1 in.)
Instronball Burst	ASTM D 3887	830 kPa (120 psi) min.
Thickness	ASTM D 1777	1.0 ± 0.1 mm (0.040 ± 0.005 in.)

(4) Certification. The manufacturer shall furnish a certification with each shipment of inlet filters, stating the amount of product furnished, and that the material complies with these requirements."

MINIMUM LANE WIDTH WITH LANE CLOSURE (BDE)
Effective: January 1, 2005

Add the following paragraph after the eighth paragraph of Article 701.04(a) of the Standard Specifications.

"The minimum lane width adjacent to a closed lane during paving, patching, and other moving operations on freeways and expressways shall be a minimum of 3 m (10 ft). The 3 m (10 ft) shall be clear, unobstructed, and free of channelizing devices or other obstacles."

PARTIAL PAYMENTS (BDE)
Effective: September 1, 2003

Revise Article 109.07 of the Standard Specifications to read:

"**109.07 Partial Payments.** Partial payments will be made as follows:

(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the amount of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than $1000.00 will be approved for payment other than the final payment.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved. Furthermore, progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c).

(b) Material Allowances. At the discretion of the Department, payment may be made for materials, prior to their use in the work, when satisfactory evidence is presented by the

Contractor. Satisfactory evidence includes justification for the allowance (to expedite the work, meet project schedules, regional or national material shortages, etc.), documentation of material and transportation costs, and evidence that such material is properly stored on the project or at a secure location acceptable and accessible to the Department.

Material allowances will be considered only for nonperishable materials when the cost, including transportation, exceeds $10,000 and such materials are not expected to be utilized within 60 days of the request for the allowance. For contracts valued under $500,000, the minimum $10,000 requirement may be met by combining the principal (material) product of no more than two contract items. An exception to this two item limitation may be considered for any contract regardless of value for items in which material (products) are similar except for type and/or size.

Material allowances shall not exceed the value of the contract items in which used and shall not include the cost of installation or related markups. Amounts paid by the Department for material allowances will be deducted from estimates due the Contractor as the material is used. Two-sided copies of the Contractor's cancelled checks for materials and transportation must be furnished to the Department within 60 days of payment of the allowances or the amounts will be reclaimed by the Department."

PAVEMENT THICKNESS DETERMINATION FOR PAYMENT (BDE)

Effective: April 1, 1999 Revised: January 1, 2004

Description. This work shall consist of determining pavement thickness for payment for full depth bituminous concrete and all pcc pavements. Pavement pay items that individually contain at least 840 sq m (1000 sq yd) of contiguous pavement will be subject to this Special Provision with the following exclusions: temporary pavements; variable width pavement; radius returns and side streets less than 125 m (400 ft) in length; and turn lanes of constant width less than 125 m (400 ft) in length. The areas of pavement excluded from the pay adjustment as described in this Special Provision will be cored according to Article 407.10 of the Standard Specifications. Temporary pavements are defined as pavements constructed and removed under this contract.

Materials. Rapid set materials shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitous Materials For Concrete Repairs. Coarse aggregate may be added to the mortar if allowed by the manufacturer's instructions on the package. Mixing shall be according to the manufacture's recommendations.

Equipment. Cores shall be taken utilizing an approved coring machine. The cores shall have a diameter of 50 mm (2 in.). The cores shall be measured utilizing an approved measuring device.

CONSTRUCTION REQUIREMENTS

Tolerance in Thickness. Determination of the pavement thickness shall be performed after the pavement surface tests and all corrective grinding are complete according to Article 407.09 of the Standard Specifications. Adjustments made in the contract unit price for pavement thickness will be in addition to and independent of those made for the Profile Index.

The pavement will be divided into approximately equal lots of not more than 1500 m (5000 ft) in length. When the length of a continuous strip of pavement is less than 1500 m (5000 ft), these short lengths of pavement, ramps, turn lanes, and other short sections of continuous pavement shall be grouped together to form lots of approximately 1500 m (5000 ft) in length. Short segments between structures will be measured continuously with the structure segments omitted. Each lot will be subdivided into ten equal sublots. The width of a sublot and lot will be the width from the pavement edge to the adjacent lane line, from one lane line to the next, or between pavement edges for single-lane pavements.

Fifty millimeter (Two inch) cores shall be taken from the pavement by the Contractor at random locations selected by the Engineer. When computing the thickness of a lot, one core will be taken per sublot. Core locations will be specified by the Engineer prior to beginning the coring operations.

The Contractor and the Engineer shall witness the coring operations, the measurement, and recording of the cores. Core measurements will be determined immediately upon removal from the core bit and prior to moving to the next core location. Upon concurrence of the length, the core samples may be discarded.

Patching Holes. Upon completion of coring, all core holes shall be filled with a rapid set mortar or concrete. Only enough water to permit placement and consolidation by rodding shall be used, and the material shall be struck-off flush with the adjacent pavement.

For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume; or a packaged rapid set mortar shall be used. For a rapid set concrete mixture, a packaged rapid set mortar shall be combined with coarse aggregate according to the manufacturer's instructions or a packaged rapid set concrete shall be used. Mixing of a rapid set mortar or concrete shall be according to the manufacturer's instructions.

Deficient Sublot. When the thickness of the core in a sublot is deficient by more than ten percent of plan thickness, the Contractor will have the option of taking three additional cores selected at random by the Engineer within the same sublot at the Contractor's expense. The thickness of the additional three cores will be averaged with the original core thickness. When the average thickness shows the sublot to be deficient by ten percent or less, no additional action is necessary. If the Contractor chooses not to take additional cores, the pavement in the sublot shall be removed and replaced at the Contractor's expense. When additional cores are taken and the average thickness of the additional cores show the sublot to be deficient by more than ten percent, the pavement in that sublot shall be removed and replaced at the Contractor's expense. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing such thin pavement to remain in place. For Bituminous Concrete Pavement (Full Depth) allowed to remain in place, additional lift(s) may be placed, at the Contractor's expense, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The material thickness(es), areas to be overlaid, and method of placement used for additional lift(s) will be approved by the Engineer. When the thin pavement is removed and replaced or additional lifts are placed, the replacement pavement will be retested for thickness at the Contractor's expense. When the thin pavement is left in place and no additional lift(s) are placed, no payment will be made for the deficient pavement sublot. The thickness of the original core taken in the sublot will be used in determining the payment for the entire lot and no adjustment to the pay factor will be made for any corrective action taken.

Deficient Lot. After analyzing the cores, the Percent Within Limits will be calculated. A lot of pavement represented by the Percent Within Limits (PWL) of 60 percent or less, shall be

removed and replaced at the Contractor's expense. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing such pavement to remain in place. For Bituminous Concrete Pavement (Full Depth), allowed to remain in place, additional lift(s) may be placed, at the Contractor's expense, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The material, thickness(es), areas to be overlaid and method of placement used for the additional lift(s) will be approved by the Engineer. After either corrective action, the Contractor shall core the lot according to the "Coring Procedures" at no additional cost to the Department. The PWL will then be recalculated for the lot, however, the pay factor for the lot will be a maximum of 100 percent. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing, the lot to remain in place. When the lot is left in place and no additional lifts are placed the pay factor for the lot will be based on the calculated PWL.

Right of Discovery. When the Engineer has reason to believe the random core selection process will not accurately represent the true conditions of the work, he/she may order cores in addition to those specified. The additional cores shall be taken at specific locations determined by the Engineer. The Engineer will provide notice to the Contractor containing an explanation of the reasons for his/her action. These additional cores and locations will be determined prior to commencement of coring operations. When the additional cores show the pavement to be deficient by more than ten percent, additional cores shall be taken at locations determined by the Engineer to determine the limits of the deficient pavement area. The deficient pavement area will be defined as the area between two acceptable cores. An acceptable core is a core with a thickness of 90 percent or more of plan thickness. The defined pavement area shall be removed and replaced at the Contractor's expense. When requested by the Contractor, the Engineer, at his/her option, may permit in writing such thin pavement to remain in place. On Bituminous Concrete Pavement (Full Depth) allowed to remain in place, additional lift(s) may be placed to bring the deficient pavement to plan thickness when the Engineer determines that grade control conditions will permit such lift(s). The material, thickness(es), areas to be overlaid and method of placement for the additional lift(s) will be approved by the Engineer. When the thin pavement is removed and replaced or additional lifts are placed, the replacement pavement will be retested for thickness at the Contractor's expense. When the thin pavement is left in place and no additional lift(s) are placed, no payment will be made for the deficient pavement. When the additional cores show the pavement to be deficient by ten percent or less the additional cores will be paid for according to Article 109.04. When the additional cores show the pavement to be deficient by more than ten percent the additional cores taken in the deficient area shall be at the Contractor's expense.

Profile Index Adjustment. After any section of pavement is removed and replaced or any additional lifts are added, the corrected areas shall be tested for pavement smoothness and any necessary Profile Index adjustments and/or corrections will be made based on these final profile readings. Such surface testing shall be performed at the Contractor's expense.

Core Analysis. Cores will be analyzed according to the following:

(a) Definition:

x_i = Individual values (core lengths) under consideration
n = Number of individual values under consideration (10 per lot)

$\bar{x}$ = Average of the values under consideration
LSL = Lower Specification Limit (LSL = 0.98 plan thickness for pavement)
Q_L = Lower Quality Index
S = Sample Standard Deviation
PWL = Percent Within Limits

Determine $\bar{x}$ for the lot to the nearest two decimal places.

Compute the sample standard deviation to the nearest three decimal places using:

$$S = \sqrt{\frac{\sum\left(x_i - \bar{x}\right)^2}{n-1}}$$ where $\Sigma(x_i - \bar{x})^2 = (x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \ldots + (x_{10} - \bar{x})^2$

Determine the Lower Quality Index to the nearest two decimal places using:

$$Q_L = \frac{\left(\bar{x} - LSL\right)}{S}$$

Determine the percentage that will fall above the Lower Specification Limit (LSL) by going to the attached Table and utilizing calculated Q_L. Read the appropriate PWL value from the Table. For Q_L values less than zero the value shown in the table must be subtracted from 100 to obtain PWL.

Pay Adjustment. The following pay adjustment equation will be used to determine (to the nearest two decimal places) the pay factor for each lot.

Pay Factor (PF) in percent = 55 + 0.5 (PWL)

If $\bar{x}$ for a lot is less than the plan thickness, the maximum pay factor for that lot will be 100 percent.

Total Payment. The payment will be based on the appropriate pay items in Sections 407, 420, and 421. The final payment will be adjusted according to the following equation:

Total Payment = TPF[CUP (TOTPAVT - DEFPAVT)]

TPF = Total Pay Factor
CUP = Contract Unit Price
TOTPAVT = Area of Pavement Subject to Coring
DEFPAVT = Area of Deficient Pavement

The TPF for the entire pavement will be the average of the PF for all the lots, however, not more than 102 percent of plan quantity will be paid.

Deficient pavement is defined as an area of pavement represented by a sublot deficient by more than 10 percent which is left in place with no additional thickness added.

All work involved in determining the total payment will be included in the contract unit prices of the pay items involved.

Percent Within Limits							
Quality Index (Q_L)*	Percent Within Limits (PWL)	Quality Index (Q_L)*	Percent Within Limits (PWL)	Quality Index (Q_L)*	Percent Within Limits (PWL)	Quality Index (Q_L)*	Percent Within Limits (PWL)
0.00	50.00	0.40	65.07	0.80	78.43	1.20	88.76
0.01	50.38	0.41	65.43	0.81	78.72	1.21	88.97
0.02	50.77	0.42	65.79	0.82	79.02	1.22	89.17
0.03	51.15	0.43	66.15	0.83	79.31	1.23	89.38
0.04	51.54	0.44	66.51	0.84	79.61	1.24	89.58
0.05	51.92	0.45	66.87	0.85	79.90	1.25	89.79
0.06	52.30	0.46	67.22	0.86	80.19	1.26	89.99
0.07	52.69	0.47	67.57	0.87	80.47	1.27	90.19
0.08	53.07	0.48	67.93	0.88	80.76	1.28	90.38
0.09	53.46	0.49	68.28	0.89	81.04	1.29	90.58
0.10	53.84	0.50	68.63	0.90	81.33	1.30	90.78
0.11	54.22	0.51	68.98	0.91	81.61	1.31	90.96
0.12	54.60	0.52	69.32	0.92	81.88	1.32	91.15
0.13	54.99	0.53	69.67	0.93	82.16	1.33	91.33
0.14	55.37	0.54	70.01	0.94	82.43	1.34	91.52
0.15	55.75	0.55	70.36	0.95	82.71	1.35	91.70
0.16	56.13	0.56	70.70	0.96	82.97	1.36	91.87
0.17	56.51	0.57	71.04	0.97	83.24	1.37	92.04
0.18	56.89	0.58	71.38	0.98	83.50	1.38	92.22
0.19	57.27	0.59	71.72	0.99	83.77	1.39	92.39
0.20	57.65	0.60	72.06	1.00	84.03	1.40	92.56
0.21	58.03	0.61	72.39	1.01	84.28	1.41	92.72
0.22	58.40	0.62	72.72	1.02	84.53	1.42	92.88
0.23	58.78	0.63	73.06	1.03	84.79	1.43	93.05
0.24	59.15	0.64	73.39	1.04	85.04	1.44	93.21
0.25	59.53	0.65	73.72	1.05	85.29	1.45	93.37
0.26	59.90	0.66	74.04	1.06	85.53	1.46	93.52
0.27	60.28	0.67	74.36	1.07	85.77	1.47	93.67
0.28	60.65	0.68	74.69	1.08	86.02	1.48	93.83
0.29	61.03	0.69	75.01	1.09	86.26	1.49	93.98
0.30	61.40	0.70	75.33	1.10	86.50	1.50	94.13
0.31	61.77	0.71	75.64	1.11	86.73	1.51	94.27
0.32	62.14	0.72	75.96	1.12	86.96	1.52	94.41
0.33	62.51	0.73	76.27	1.13	87.20	1.53	94.54
0.34	62.88	0.74	76.59	1.14	87.43	1.54	94.68
0.35	63.25	0.75	76.90	1.15	87.66	1.55	94.82
0.36	63.61	0.76	77.21	1.16	87.88	1.56	94.95
0.37	63.98	0.77	77.51	1.17	88.10	1.57	95.08
0.38	64.34	0.78	77.82	1.18	88.32	1.58	95.20
0.39	64.71	0.79	78.12	1.19	88.54	1.59	95.33

*For Q_L values less than zero, subtract the table value from 100 to obtain PWL

Percent Within Limits (continued)

Quality Index (Q_L)*	Percent Within Limits (PWL)	Quality Index (Q_L)*	Percent Within Limits (PWL)	Quality Index (Q_L)*	Percent Within Limits (PWL)
1.60	95.46	2.00	98.83	2.40	99.89
1.61	95.58	2.01	98.88	2.41	99.90
1.62	95.70	2.02	98.92	2.42	99.91
1.63	95.81	2.03	98.97	2.43	99.91
1.64	95.93	2.04	99.01	2.44	99.92
1.65	96.05	2.05	99.06	2.45	99.93
1.66	96.16	2.06	99.10	2.46	99.94
1.67	96.27	2.07	99.14	2.47	99.94
1.68	96.37	2.08	99.18	2.48	99.95
1.69	96.48	2.09	99.22	2.49	99.95
1.70	96.59	2.10	99.26	2.50	99.96
1.71	96.69	2.11	99.29	2.51	99.96
1.72	96.78	2.12	99.32	2.52	99.97
1.73	96.88	2.13	99.36	2.53	99.97
1.74	96.97	2.14	99.39	2.54	99.98
1.75	97.07	2.15	99.42	2.55	99.98
1.76	97.16	2.16	99.45	2.56	99.98
1.77	97.25	2.17	99.48	2.57	99.98
1.78	97.33	2.18	99.50	2.58	99.99
1.79	97.42	2.19	99.53	2.59	99.99
1.80	97.51	2.20	99.56	2.60	99.99
1.81	97.59	2.21	99.58	2.61	99.99
1.82	97.67	2.22	99.61	2.62	99.99
1.83	97.75	2.23	99.63	2.63	100.00
1.84	97.83	2.22	99.66	2.64	100.00
1.85	97.91	2.25	99.68	$\geq$ 2.65	100.00
1.86	97.98	2.26	99.70		
1.87	98.05	2.27	99.72		
1.88	98.11	2.28	99.73		
1.89	98.18	2.29	99.75		
1.90	98.25	2.30	99.77		
1.91	98.31	2.31	99.78		
1.92	98.37	2.32	99.80		
1.93	98.44	2.33	99.81		
1.94	98.50	2.34	99.83		
1.95	98.56	2.35	99.84		
1.96	98.61	2.36	99.85		
1.97	98.67	2.37	99.86		
1.98	98.72	2.38	99.87		
1.99	98.78	2.39	99.88		

*For Q_L values less than zero, subtract the table value from 100 to obtain PWL

PAYMENTS TO SUBCONTRACTORS (BDE)
Effective: June 1, 2000 Revised: September 1, 2003

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts no later than 30 days from the receipt of each payment made to the Contractor.

State law addresses the timing of payments to be made to subcontractors. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, generally requires that when a Contractor receives any payment from the Department, the Contractor is required to make corresponding, proportional payments to each subcontractor performing work within 15 calendar days after receipt of the state payment. Section 7 of the State Prompt Payment Act further provides that interest in the amount of 2% per month, in addition to the payment due, shall be paid to any subcontractor by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

As progress payments are made to the Contractor in accordance with Article 109.07 of the Standard Specifications for Road and Bridge Construction, the Contractor shall make a corresponding partial payment within 15 calendar days to each subcontractor in proportion to the work satisfactorily completed by each subcontractor. The proportionate amount of partial payment due to each subcontractor shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors shall be paid in full within 15 calendar days after the subcontractor's work has been satisfactorily completed. The Contractor shall hold no retainage from the subcontractors.

This Special Provision does not create any rights in favor of any subcontractor against the State of Illinois or authorize any cause of action against the State of Illinois on account of any payment, nonpayment, delayed payment or interest claimed by application of the State Prompt Payment Act. The Department will neither determine the reasonableness of any cause for delay of payment nor enforce any claim to payment, including interest. Moreover, the Department will not approve any delay or postponement of the 15 day requirement. State law creates remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor’s payment bond in accordance with the Public Construction Bond Act, 30 ILCS 550.

PERSONAL PROTECTIVE EQUIPMENT (BDE)
Effective: July 1, 2004

All personnel, excluding flaggers, working outside of a vehicle (car or truck) within 7.6 m (25 ft) of pavement open to traffic shall wear a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/.green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments. Other types of garments may be substituted for the vest as long as the garments have manufacturers tags identifying them as meeting the ANSI Class 2 requirement.

PLASTIC BLOCKOUTS FOR GUARDRAIL (BDE)
Effective: November 1, 2004

Add the following to Article 630.02 of the Standard Specifications:

"(h) Plastic Blockouts (Note 1.)

Note 1. Plastic blockouts, 150 mm (6 in.) deep, may be used in lieu of 150 mm (6 in.) deep wood block-outs for steel plate beam guardrail. The plastic blockouts shall be on the Department's approved list."

POLYUREA PAVEMENT MARKING (BDE)
Effective: April 1, 2004

Description. This work shall consist of furnishing and applying pavement marking lines.

The type of polyurea pavement marking applied will be determined by the type of reflective media used. Polyurea Pavement Marking Type I shall use glass beads as a reflective media. Ployurea Pavement Marking Type II shall use a combination of composite reflective elements and glass beads as a reflective media.

Polyurea-based liquid pavement markings shall only be applied by Contractors on the list of Approved Polyurea Contractors maintained by the Engineer of Operations and in effect on the date of advertisement for bids.

Materials. Materials shall meet the following requirements:

(a) Polyurea Pavement Marking. The polyurea pavement marking material shall consist of 100 percent solid two part system formulated and designed to provide a simple volumetric mixing ratio of two components (must be two or three volumes of Part A to one volume of Part B). No volatile or polluting solvents or fillers will be allowed.

(b) Pigmentation. The pigment content by weight of component A shall be determined by low temperature ashing according to ASTM D 3723. The pigment content shall not vary more than ± two percent from the pigment content of the original qualified paint.

White Pigment shall be Titanium Dioxide meeting ASTM D 476 Type II, Rutile.

Yellow Pigment shall be an Organic Yellow and contain no heavy metals.

(c) Environmental. Upon heating to application temperature, the material shall not exude fumes which are toxic or injurious to persons or property.

(d) Daylight Reflectance. The daylight directional reflectance of the cured polyurea material (without reflective media) shall be a minimum of 80 percent (white) and 50 percent (yellow) relative to magnesium oxide when tested using a color spectrophotometer with a 45 degrees circumferential /zero degrees geometry, illuminant C, and two degrees 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. In addition, the color of the yellow polyurea shall visually match Color Number 33538 of Federal Standard 595a with chromaticity limits as follows:

X	0.490	0.475	0.485	0.539
Y	0.470	0.438	0.425	0.456

(e) Weathering Resistance. The polyurea marking material, when mixed in the proper ratio and applied at 0.35 to 0.41 mm (14 to 16 mils) wet film thickness to an aluminum alloy panel (Federal Test Std. No. 141, Method 2013) and allowed to cure for 72 hours at room temperature, shall be subjected to accelerated weathering for 75 hours. The accelerated weathering shall be completed by using the light and water exposure apparatus (fluorescent UV - condensation type) and tested according to ASTM G 53.

The cycle shall consist of four hours UV exposure at 50 °C (122 °F) and four hours of condensation at 40 °C (104 °F). UVB 313 bulbs shall be used. At the end of the exposure period, the material shall show no substantial change in color or gloss.

(f) Dry Time. The polyurea pavement marking material, when mixed in the proper ratio and applied at 0.35 to 0.41 mm (14 to 16 mils) wet film thickness and with the proper saturation of reflective media, shall exhibit a no-tracking time of ten minutes or less when tested according to ASTM D 711.

(g) Adhesion. The catalyzed polyurea pavement marking materials when applied to a 100 x 100 x 50 mm (4 x 4 x 2 in.) concrete block, shall have a degree of adhesion which results in a 100 percent concrete failure in the performance of this test.

The concrete block shall be brushed on one side and have a minimum strength of 24,100 kPa (3500 psi). A 50 mm (2 in.) square film of the mixed polyurea shall be applied to the brushed surface and allowed to cure for 72 hours at room temperature. A 50 mm (2 in.) square cube shall be affixed to the surface of the polyurea by means of an epoxy glue. After the glue has cured for 24 hours, the polyurea specimen shall be placed on a dynamic testing machine in such a fashion so that the specimen block is in a fixed position and the 50 mm (2 in.) cube (glued to the polyurea surface) is attached to the dynamometer head. Direct upward pressure shall be slowly applied until the polyurea system fails. The location of the break and the amount of concrete failure shall be recorded.

(h) Hardness. The polyurea pavement marking materials when tested according to ASTM D 2240, shall have a shore D hardness of between 70 and 100. Films shall be cast on a rigid substrate at 0.35 to 0.41 mm (14 to 16 mils) in thickness and allowed to cure at room temperature for 72 hours before testing.

(i) Abrasion. The abrasion resistance shall be evaluated according to ASTM D 4060 using a Taber Abrader with a 1,000 gram load and CS 17 wheels. The duration of the test shall be 1,000 cycles. The loss shall be calculated by difference and be less than 120 mgs. The tests shall be run on cured samples of polyurea material which have been applied at a film thickness of 0.35 to 0.41 mm (14 to 16 mils) to code S-16 stainless steel plates. The films shall be allowed to cure at room temperature for at least 72 hours and not more than 96 hours before testing.

(j) Reflective Media. The reflective media shall meet the following requirements:

(1) Type I - The glass beads shall meet the requirements of Article 1095.07 of the Standard Specifications and the following requirements:

a. First Drop Glass Beads The first drop glass beads shall be tested by the standard visual method of large glass spheres adopted by the Department. The beads shall have a silane coating and meet the following sieve requirements:

Sieve Size	U.S. Standard Sieve Number	% Passing (By Weight)
1.70 mm	12	95-100
1.40 mm	14	75-95
1.18 mm	16	10-47
1.00 mm	18	0-7
850 µm	20	0-5

b. Second Drop Glass Beads. The second drop glass beads shall meet the requirements of Article 1095.07 of the Standard Specifications for Type B.

(2) Type II - The combination of microcrystalline ceramic elements and glass beads shall meet the following requirements:

a. First Drop Glass Beads. The first drop glass beads shall meet the following requirements:

1. Composition. The elements shall be composed of a titania opacified ceramic core having clear and or yellow tinted microcrystalline ceramic beads embedded to the outer surface.

2. Index of Refraction. All microcrystalline reflective elements embedded to the outer surface shall have an index of refraction of 1.8 when tested by the immersion method.

3. Acid Resistance. A sample of microcrystalline ceramic beads supplied by the manufacturer, shall show resistance to corrosion of their surface after exposure to a one percent solution (by weight) of sulfuric acid. Adding 5.7 ml (0.2 oz) of concentrated acid into the water shall make the one percent acid solution. This test shall be performed by taking a 25 x 50 mm (1 x 2 in.) sample and adhering it to the bottom of a glass tray and placing just enough acid solution to completely immerse the sample. The tray shall be covered with a piece of glass to prevent evaporation and allow the sample to be exposed for 24 hours under these conditions. The acid solution shall be decanted (do not rinse, touch, or otherwise disturb the bead surfaces) and the sample dried while adhered to the glass tray in a 66 °C (150 °F) oven for approximately 15 minutes. Microscope examination (20X) shall show no white (corroded) layer on the entire surface.

b. Second Drop Glass Beads. The second drop glass beads shall meet the requirements of Article 1095.07 of the Standard Specifications for Type B or the following manufacturer's specification:

1. Sieve Analysis. The glass beads shall meet the following sieve requirements:

Sieve Size	U.S. Standard Sieve Number	% Passing (By Weight)
850 μm	20	100
600 μm	30	75-95
300 μm	50	15-35
150 μm	100	0-5

The manufacturer of the glass beads shall certify that the treatment of the glass beads meets the requirements of the polyurea manufacturer.

2. Imperfections. The surface of the glass beads shall be free of pits and scratches. The glass beads shall be spherical in shape and shall contain a maximum of 20 percent by weight of irregular shapes when tested by the standard method using a vibratile inclined glass plate as adopted by the Department.

3. Index of Refraction. The index of refraction of the glass beads shall be a minimum of 1.50 when tested by the immersion method at 25 °C (77 °F).

(k) Packaging. Microcrystalline ceramic reflective elements and glass beads shall be delivered in approved moisture proof bags or weather resistant bulk boxes. Each carton shall be legibly marked with the manufacturer, specifications and type, lot number, and the month and year the microcrystalline ceramic reflective elements and/or glass beads were packaged. The letters and numbers used in the stencils shall be a minimum of 12.7 mm (1/2 in.) in height.

(1) Moisture Proof Bags. Moisture proof bags shall consist of at least five ply paper construction unless otherwise specified. Each bag shall contain 22.7 kg (50 lb) net.

(2) Bulk Weather Resistance Boxes. Bulk weather resistance boxes shall conform to Federal Specification PPP-8-640D Class II or latest revision. Boxes are to be weather resistant, triple wall, fluted, corrugated-fiber board. Cartons shall be strapped with two metal straps. Straps shall surround the outside perimeter of the carton. The first strap shall be located approximately 50 mm (2 in.) from the bottom of the carton and the second strap shall be placed approximately in the middle of the carton. All cartons shall be shrink wrapped for protection from moisture. Cartons shall be lined with a minimum 4 mil polyester bag and meet Interstate Commerce Commission requirements. Cartons shall be approximately 1 x 1 m (38 x 38 in.), contain 910 kg (2000 lb) of microcrystalline ceramic reflective elements and/or glass beads and be supported on a wooden pallet with fiber straps.

(l) Packaging. The material shall be shipped to the job site in substantial containers and shall be plainly marked with the manufacturer's name and address, the name and color of the material, date of manufacture, and batch number.

(m) Verification. Prior to approval and use of the polyurea pavement marking materials, the manufacturer shall submit a notarized certification of an independent laboratory, together with the results of all tests, stating these materials meet the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, brand name of polyurea and date of manufacture. The certification shall be accompanied by one 1/2 L (1 pt) samples each of Part A and Part B. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B.

After approval by the Department, certification by the polyurea manufacturer shall be submitted for each batch used. New independent laboratory certified test results and samples for testing by the Department shall be submitted any time the manufacturing process or paint formulation is changed. All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer.

(n) Acceptance samples. Acceptance samples shall consist of one 1/2 L (1 pt) samples of Part A and Part B, of each lot of paint. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B. The samples shall be submitted to the Department for testing, together with a manufacturer's certification. The certification shall state the formulation for the lot represented is essentially identical to that used for qualification testing. All, acceptance samples will be taken by a representative of the Department. The polyurea pavement marking materials shall not be used until tests are completed and they have met the requirements as set forth herein.

(o) Material Retainage. The manufacturer shall retain the test sample for a minimum of 18 months.

Equipment. The polyurea pavement marking compounds shall be applied through equipment specifically designed to apply two component liquid materials, glass beads and/or reflective elements in a continuous and skip-line pattern. The two-component liquid materials shall be applied after being accurately metered and then mixed with a static mix tube or airless impingement mixing guns. The static mixing tube or impingement mixing guns shall accommodate plural component material systems that have a volumetric ratio of 2 to 1 or 3 to 1. This equipment shall produce the required amount of heat at the mixing head and gun tip and maintain those temperatures within the tolerances specified. The guns shall have the capacity to deliver materials from approximately 5.7 to 11.4 L/min (1.5 to 3 gal/min) to compensate for a typical range of application speeds of 10 to 13 km/h (6 to 8 mph). The accessories such as spray tip, mix chamber, and rod diameter shall be selected according to the manufacturer's specifications to achieve proper mixing and an acceptable spray pattern. The application equipment shall be maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc. This equipment shall also have as an integral part of the gun carriage, a high pressure air spray capable of cleaning the pavement immediately prior to making application.

The equipment shall be capable of spraying both yellow and white polyurea, according to the manufacturer's recommended proportions and be mounted on a truck of sufficient size and stability with an adequate power source to produce lines of uniform dimensions and prevent application failure. The truck shall have at least two polyurea tanks each of 415 L (110 gal) minimum capacity and be equipped with hydraulic systems and agitators. It shall be capable of placing stripes on the left and right sides and placing two lines on a three-line system simultaneously with either line in a solid or intermittent pattern, in yellow or white, and applying the appropriate reflective media according to manufacturer's recommendations. All guns shall be in full view of operations at all times. The equipment shall have a metering device to register the accumulated installed quantities for each gun, each day. Each vehicle shall include at least one operator who shall be a technical expert in equipment operations and polyurea application techniques. Certification of equipment shall be provided at the pre-construction conference.

The mobile applicator shall include the following features:

(a) Material Reservoirs. The applicator shall provide individual material reservoirs, or space for the storage of Part A and Part B of the resin composition.

(b) Heating Equipment. The applicator shall be equipped with heating equipment of sufficient capacity to maintain the individual resin components at the manufacturer's recommended temperature of ±2.8 °C (±5 ºF) for spray application.

(c) Dispensing Equipment. The applicator shall be equipped with glass bead and/or reflective element dispensing equipment. The applicator shall be capable of applying the glass beads and/or reflective elements at a rate and combination indicated by the manufacturer.

(d) Volumetric Usage. The applicator shall be equipped with metering devices or pressure gauges on the proportioning pumps as well as stroke counters to monitor volumetric usage. Metering devices or pressure gauges and stroke counters shall be visible to the Engineer.

(e) Pavement Marking Placement. The applicator shall be equipped with all the necessary spray equipment, mixers, compressors and other appurtenances to allow for the placement of reflectorized pavement markings in a simultaneous sequence of operations.

The Contractor shall provide an accurate temperature-measuring device(s) that shall be capable of measuring the pavement temperature prior to application of the material, the material temperature at the gun tip and the material temperature prior to mixing.

CONSTRUCTION REQUIREMENTS

General. The pavement shall be cleaned by a method approved by the Engineer to remove all dirt, grease, glaze or any other material that would reduce the adhesion of the markings with minimum or no damage to the pavement surface. New PCC pavements shall be air-blast-cleaned to remove all latents.

Widths, lengths, and shapes of the cleaned surface shall be of sufficient size to include the full area of the specified pavement marking to be placed.

The cleaning operation shall be a continuous moving operation process with minimum interruption to traffic.

Markings shall be applied to the cleaned surfaces on the same calendar day. If this cannot be accomplished, the surface shall be re-cleaned prior to applying the markings. No markings shall be applied until the Engineer approves the cleaning.

The pavement markings shall be applied to the cleaned road surface, during conditions of dry weather and subsequently dry pavement surfaces at a minimum uniform wet thickness of 0.4 mm (15 mils) according to the manufacturer's installation instructions. On new bituminous course surfaces the pavement markings shall be applied at a minimum uniform wet thickness of 0.5 mm (20 mils). The application of and combination of reflective media (glass beads and/or reflective elements) shall be applied at a rate specified by the manufacturer. At the time of installation the pavement surface temperature and the ambient temperature shall be above 4 °C (40 ºF) and rising. The pavement markings shall not be applied if the pavement shows any visible signs of moisture or it is anticipated that damage causing moisture, such as rain showers, may occur during the installation and set periods. The Engineer will determine the atmospheric conditions and pavement surface conditions that produce satisfactory results.

Using the application equipment, the pavement markings shall be applied in the following manner, as a simultaneous operation:

(a) The surface shall be air-blasted to remove any dirt and residue.

(b) The resin shall be mixed and heated according to manufacturer's recommendations and sprayed onto the pavement surface.

The edge of the center line or lane line shall be offset a minimum distance of 50 mm (2 in.) from a longitudinal crack or joint. Edge lines shall be approximately 50 mm (2 in.) from the edge of pavement. The finished center and lane lines shall be straight, with the lateral deviation of any 3 m (10 ft) line not to exceed 25 mm (1 in.).

Notification. The Contractor shall notify the Engineer 72 hours prior to the placement of the markings in order that he/she can be present during the operation. At the time of notification, the Contractor shall provide the Engineer the manufacturer and lot numbers of polyurea and reflective media that will be used.

Inspection. The polyurea pavement markings will be inspected following installation according to Article 780.10 of the Standard Specifications, except, no later than December 15, and inspected following a winter performance period that extends 180 days from December 15.

Method of Measurement. This work will be measured for payment in place, in meters (feet). Double yellow lines will be measured as two separate lines.

Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for POLYUREA PAVEMENT MARKING TYPE I – LINE of the line width specified or for POLYUREA PAVEMENT MARKING TYPE II – LINE of the line width specified.

PORTABLE CHANGEABLE MESSAGE SIGNS (BDE)
Effective: November 1, 1993 Revised: April 2, 2004

Description. This work shall consist of furnishing, placing, and maintaining changeable message sign(s) at the locations(s) shown on the plans or as directed by the Engineer.

The sign(s) shall be trailer mounted. The message panel shall be at least 2.1 m (7 ft) above the pavement, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time. Character height shall be 450 mm (18 in.).

The message panel shall be of either a bulb matrix or disc matrix design controlled by an onboard computer capable of storing a minimum of 99 programmed messages for instant recall. The computer shall be capable of being programmed to accept messages created by the operator via an alpha-numeric keyboard and able to flash any six messages in sequence. The message panel shall also be capable of being controlled by a computer from a remote location via a cellular linkage. The Contractor shall supply the modem, the cellular phone, and the necessary software to run the sign from a remote computer at a location designated by the Engineer. The Contractor shall promptly program and/or reprogram the computer to provide the messages as directed by the Engineer.

The message panel shall be visible from 400 m (1/4 mile) under both day and night conditions. The letters shall be legible from 250 m (750 ft).

The sign shall include automatic dimming for nighttime operation and a power supply capable of providing 24 hours of uninterrupted service.

The Contractor shall provide all preventive maintenance efforts s(he) deems necessary to achieve uninterrupted service. If service is interrupted for any cause and not restored within 24 hours, the Engineer will cause such work to be performed as may be necessary to provide this service. The cost of such work shall be borne by the Contractor or deducted from current or future compensation due the Contractor.

When the sign(s) are displaying messages, they shall be considered a traffic control device. At all times when no message is displayed, they shall be considered equipment.

Basis of Payment. When portable changeable message signs are shown on the Standard, this work will not be paid for separately but shall be considered as included in the cost of the Standard.

For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN.

PORTLAND CEMENT (BDE)
Effective: January 1, 2005

Replace the first sentence of the second paragraph of Article 1001.01 of the Standard Specifications with the following:

"For portland cement according to ASTM C 150, the addition of up to 5.0 percent limestone by mass (weight) to the cement will not be permitted. Also, the total of all organic processing additions shall not exceed 1.0 percent by mass (weight) of the cement and the total of all inorganic processing additions shall not exceed 4.0 percent by mass (weight) of the cement."

PORTLAND CEMENT CONCRETE (BDE)
Effective: November 1, 2002

Add the following paragraph after the fourth paragraph of Article 1103.01(b) of the Standard Specifications:

"The truck mixer shall be approved before use according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

Add the following paragraph after the first paragraph of Article 1103.01(c) of the Standard Specifications:

"The truck agitator shall be approved before use according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

Add the following paragraph after the first paragraph of Article 1103.01(d) of the Standard Specifications:

"The nonagitator truck shall be approved before use according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

Revise the first sentence of the first paragraph of Article 1103.02 of the Standard Specifications to read:

"The plant shall be approved before production begins according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

PRECAST CONCRETE PRODUCTS (BDE)

Effective: July 1, 1999 Revised: November 1, 2004

Product Approval. Precast concrete products shall be produced according to the Department's current Policy Memorandum, "Quality Control/Quality Assurance Program for Precast Concrete Products". The Policy Memorandum applies to precast concrete products listed under the Products Key of the "Approved List of Certified Precast Concrete Producers".

Precast Concrete Box Culverts. Add the following sentence to the end of the fourth paragraph of Article 540.06:

"After installation, the interior and exterior joint gap between precast concrete box culvert sections shall not exceed 38 mm (1 1/2 in.)."

Portland Cement Replacement. For precast concrete products using Class PC concrete or other mixtures, portland cement replacement with fly ash or ground granulated blast-furnace (GGBF) slag shall be governed by the AASHTO or ASTM standard specification referenced in the Standard Specifications.

For all other precast concrete products using Class PC concrete or other mixtures, portland cement replacement with fly ash or GGBF slag shall be approved by the Engineer. Class F fly ash shall not exceed 15 percent by mass (weight) of the total portland cement and Class F fly ash. Class C fly ash shall not exceed 20 percent by mass (weight) of the total portland cement and Class C fly ash. GGBF slag shall not exceed 25 percent by mass (weight) of the total portland cement and GGBF slag.

Concrete mix designs, for precast concrete products, shall not consist of portland cement, fly ash and GGBF slag.

Ready-Mixed Concrete. Delete the last paragraph of Article 1020.11(a) of the Standard Specifications.

Shipping. When a precast concrete product has attained the specified strength, the earliest the product may be loaded, shipped, and used is on the fifth calendar day. The first calendar day shall be the date casting was completed.

Acceptance. Products which have been lot or piece inspected and approved by the Department prior to July 1, 1999, will be accepted for use on this contract.

PREFORMED RECYCLED RUBBER JOINT FILLER (BDE)
Effective: November 1, 2002

Revise Article 503.02(c) of the Standard Specifications to read:

"(c) Preformed Expansion Joint Filler ..... 1051"

Revise Article 637.02(d) of the Standard Specifications to read:

"(d) Preformed Expansion Joint Filler ..... 1051"

Add the following Article to Section 1051 of the Standard Specifications:

"1051.10 Preformed Recycled Rubber Joint Filler. Preformed recycled rubber joint filler shall consist of ground tire rubber, free of steel and fabric, combined with ground scrap or waste polyethylene. It shall not have a strong hydrocarbon or rancid odor and shall meet the physical property requirements of ASTM D 1752. Water absorption by volume shall not exceed 5.0 percent."

RAP FOR USE IN BITUMINOUS CONCRETE MIXTURES (BDE)
Effective: January 1, 2000 Revised: April 1, 2002

Revise Article 1004.07 to read:

"**1004.07 RAP Materials.** RAP is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt pavement. RAP must originate from routes or airfields under federal, state or local agency jurisdiction. The Contractor shall supply documentation that the RAP meets these requirements.

(a) Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP will be allowed on top of the pile after the pile has been sealed.

(1) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only and represent the same aggregate quality, but shall be at least C quality or better, the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag), similar gradation and similar AC 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. Homogenous stockpiles shall meet the requirements of Article 1004.07(d). Homogeneous RAP stockpiles not meeting these requirements may be processed (crushing and screening) and retested.

(2) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only. The coarse aggregate in this RAP shall be crushed aggregate only and may represent more than one aggregate type and/or quality but shall be at least C quality or better. This RAP may have an inconsistent gradation and/or asphalt cement content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 16

mm (5/8 in.) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate RAP stockpiles shall meet the requirements of Article 1004.07(d).

(3) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP containing coarse aggregate (crushed or round) that is at least D quality or better. This RAP may have an inconsistent gradation and/or asphalt content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate DQ RAP shall meet the requirements of Article 1004.07(d).

Reclaimed Superpave Low ESAL IL-9.5L surface mixtures shall only be placed in conglomerate DQ RAP stockpiles due to the potential for rounded aggregate.

(4) Other. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Other". "Other" RAP stockpiles shall not be used in any of the Department's bituminous mixtures.

(b) Use. The allowable use of a RAP stockpile shall be set by the lowest quality of coarse aggregate in the RAP stockpile. Class I/Superpave surface mixtures are designated as containing Class B quality coarse aggregate only. Superpave Low ESAL IL-19.0L binder and IL-9.5L surface mixtures are designated as Class C quality coarse aggregate only. Class I/Superpave binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate only. Bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate only. Any mixture not listed above shall have the designated quality determined by the Department.

RAP containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in Class I/Superpave (including Low ESAL) surface mixtures only. RAP stockpiles for use in Class I/Superpave mixtures (including Low ESAL), base course, base course widening and Class B mixtures shall be either homogeneous or conglomerate RAP stockpiles except conglomerate RAP stockpiles shall not be used in Superpave surface mixture Ndesign 50 or greater. RAP for use in bituminous aggregate mixtures (BAM) shoulders and BAM stabilized subbase shall be from homogeneous, conglomerate, or conglomerate DQ stockpiles.

Additionally, RAP used in Class I/Superpave surface mixtures shall originate from milled or crushed mixtures only, in which the coarse aggregate is of Class B quality or better. RAP stockpiles for use in Class I/Superpave (including Low ESAL) binder mixes as well as base course, base course widening and Class B mixtures shall originate from milled or processed surface mixture, binder mixture, or a combination of both mixtures uniformly blended to the satisfaction of the Engineer, in which the coarse aggregate is of Class C quality or better.

(c) Contaminants. RAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

(d) Testing. All 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 450 metric tons (500 tons) for the first 1800 metric tons (2,000 tons) and one sample per 1800 metric tons (2,000 tons) thereafter. A minimum of five tests shall be required for stockpiles less than 3600 metric tons (4,000 tons).

For testing existing stockpiles, 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 extract representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to 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.

All of the extraction results shall be compiled and averaged for asphalt content and gradation. Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	Homogeneous / Conglomerate	Conglomerate "D" Quality
25 mm (1 in.)		± 5%
12.5 mm (1/2 in.)	± 8%	± 15%
4.75 mm (No. 4)	± 6%	± 13%
2.36 mm (No. 8)	± 5%	
1.18 mm (No. 16)		± 15%
600 μm (No. 30)	± 5%	
75 μm (No. 200)	± 2.0%	± 4.0%
AC	± 0.4%	± 0.5%

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt content test results fall outside the appropriate tolerances, the RAP will not be allowed to be used in the Department's bituminous concrete mixtures unless the RAP representing the failing tests is removed from the stockpile to the satisfaction of the Engineer. 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)".

(e) Designs. At the Contractor's option, bituminous concrete mixtures may be constructed utilizing RAP material meeting the above detailed requirements. The amount of RAP included in the mixture shall not exceed the percentages specified in the plans.

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 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.

(f) Production. The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the bituminous 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.

SEEDING AND SODDING (BDE)

Effective: July 1, 2004 Revised: November 1, 2004

Revise Class 1A and 2A seeding mixtures shown in Table 1 of Article 250.07 of the Standard Specifications to read:

"Table 1 - SEEDING MIXTURES			
Class – Type		Seeds	kg/hectare (lb/acre)
1A	Salt Tolerant Lawn Mixture 7/	Bluegrass Perennial Ryegrass Audubon Red Fescue Rescue 911 Hard Fescue Fults Salt Grass*	70 (60) 20 (20) 20 (20) 20 (20) 70 (60)
2A	Salt Tolerant Roadside Mixture 7/	Alta Fescue or Ky 31 Perennial Ryegrass Audubon Red Fescue Rescue 911 Hard Fescue Fults Salt Grass 1/	70 (60) 20 (20) 20 (30) 20 (30) 70 (60)"

Revise Note 7 of Article 250.07 of the Standard Specifications to read:

"Note 7. In Districts 1 through 6, the planting times shall be April 1 to June 15 and August 1 to November 1. In Districts 7 through 9, the planting times shall be March 1 to June 1 and August 1 to November 15. Seeding may be performed outside these dates provided the Contractor guarantees a minimum of 75 percent coverage over the entire seeded area(s) after one growing season. The guarantee shall be submitted to the Engineer in writing prior to performing the work. After one growing season, areas not sustaining 75 percent growth shall be interseeded or reseeded, as determined by the Engineer, at the Contractor's expense."

Add the following sentence to Article 252.04 of the Standard Specifications:

"Sod shall not be placed during the months of July and August."

Revise the first paragraph of Article 252.08 of the Standard Specifications to read:

"**252.08 Sod Watering.** Within two hours after the sod has been placed, water shall be applied at a rate of 25 L/sq m (5 gal/sq yd). Additional water shall be applied every other day at a rate of 15 L/sq m (3 gal/sq yd) for a total of 15 additional waterings. During periods exceeding 26 ºC (80 ºF) or subnormal rainfall, the schedule of additional waterings may be altered with the approval of the Engineer."

Revise Article 252.09 of the Standard Specifications to read:

"**252.09 Supplemental Watering.** During periods exceeding 26 ºC (80 ºF) or subnormal rainfall, supplemental watering may be required after the initial and additional waterings. Supplemental watering shall be performed when directed by the Engineer. Water shall be applied at the rate specified by the Engineer within 24 hours of notice."

Revise the first and third paragraphs of Article 252.12 of the Standard Specifications to read:

"**252.12 Method of Measurement**. Sodding will be measured for payment in place and the area computed in square meters (square yards). To be acceptable for final payment, the sod shall be growing in place for a minimum of 30 days in a live, healthy condition. When directed by the Engineer, any defective or unacceptable sod shall be removed, replaced and watered by the Contractor at his/her own expense."

"Supplemental watering will be measured for payment in units of 1000 L (1000 gal) of water applied on the sodded areas. Waterings performed in addition to those required by Article 252.08 or after the 30 day establishment period will be considered as supplemental watering."

Replace the first paragraph of Article 252.13 of the Standard Specifications with the following:

"**252.13 Basis of Payment.** Sodding will be paid for at the contract unit price per square meter (square yard) for SODDING or SODDING, SALT TOLERANT according to the following schedule.

(a) Initial Payment. Upon placement of sod, 25 percent of the pay item will be paid.

(b) Final Payment. Upon acceptance of sod, the remaining 75 percent of the pay item will be paid."

Revise Article 1081.03(b) of the Standard Specifications to read:

"(b) Salt Tolerant Sod.

Variety	Percent by Weight
Buffalo Grass Buchloe Dactyloides	30%
Amigo Fineleaf Tall Fescue	20%
Audubon Red Fescue	15%
Rescue 911 Hard Fescue	15%
Rugby Kentucky Bluegrass	5%
Fults Pucinnellia Distans	15%"

Revise Table II of Article 1081.04(c)(6) of the Standard Specifications to read:

TABLE II

Variety of Seeds	Hard Seed Percent Maximum	Purity Percent Minimum	Pure, Live Seed Percent Minimum	Weed Percent Maximum	Secondary Noxious Weeds No. per kg (oz) Max. Permitted*	Remarks
Alfalfa	20	92	89	0.50	211 (6)	1/
Brome Grass	-	90	75	0.50	175 (5)	-
Clover, Alsike	15	92	87	0.30	211 (6)	2/
Clover, Crimson	15	92	83	0.50	211 (6)	-
Clover, Ladino	15	92	87	0.30	211 (6)	-
Clover, Red	20	92	87	0.30	211 (6)	-
Clover, White Dutch	30	92	87	0.30	211 (6)	3/
Audubon Red Fescue	0	97	82	0.10	105 (3)	-
Fescue, Alta or Ky. 31	-	97	82	1.00	105 (3)	-
Fescue, Creeping Red	-	97	82	1.00	105 (3)	-
Fults Salt Grass	0	98	85	0.10	70 (2)	-
Kentucky Bluegrass	-	97	80	0.30	247 (7)	5/
Lespedeza, Korean	20	92	84	0.50	211 (6)	3/
Oats	-	92	88	0.50	70 (2)	4/
Orchard Grass	-	90	78	1.50	175 (5)	4/
Redtop	-	90	78	1.80	175 (5)	4/
Ryegrass, Perennial, Annual	-	97	85	0.30	175 (5)	4/
Rye, Grain, Winter	-	92	83	0.50	70 (2)	4/
Rescue 911 Hard Fescue	0	97	82	0.10	105 (3)	-
Timothy	-	92	84	0.50	175 (5)	4/
Vetch, Crown	30	92	67	1.00	211 (6)	3/ & 6/
Vetch, Spring	30	92	88	1.00	70 (2)	4/
Vetch, Winter	15	92	83	1.00	105 (3)	4/
Wheat, hard Red Winter	-	92	89	0.50	70 (2)	4/

SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)
Effective: July 1, 2004

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. The design and testing of a self-consolidating concrete mixture shall be according to Section 1020 of the Standard Specifications except as modified herein.

Materials. Materials shall conform to the following requirements:

(a) Self-Consolidating Admixtures. The self-consolidating admixture system shall consist of either a high range water-reducing admixture only or a high range water-reducing admixture combined with a separate viscosity modifying admixture. The one or two component admixture system shall be capable of producing a flowable concrete that does not require mechanical vibration.

The high range water-reducing admixture shall comply with the requirements of AASHTO M 194, Type F.

The viscosity modifying admixture will be evaluated according to the test methods and mix design proportions referenced in AASHTO M 194, except the following physical requirements shall be met:

(1) For initial and final set times, the allowable deviation of the test concrete from the reference concrete shall not be more than 1.0 hour earlier or 1.5 hours later.

(2) For compressive and flexural strengths, the test concrete shall be a minimum of 90 percent of the reference concrete at 3, 7 and 28 days.

(3) The length change of the test concrete shall be a maximum 135 percent of the reference concrete. However, if the length change of the reference concrete is less than 0.030 percent, the length change of the test concrete shall be a maximum 0.010 percentage units greater than the reference concrete.

(4) The relative durability factor of the test concrete shall be a minimum 80 percent.

(b) Fine Aggregate. A fine aggregate used alone in the mix design shall not have an expansion greater than 0.30 percent per ASTM C 1260. For a blend of two or more fine aggregates, the resulting blend shall not have an expansion greater than 0.30 percent.

The aggregate blend expansion will be calculated as follows:

Aggregate Blend Expansion = (a/100 x A) + (b/100 x B) + (c/100 x C) + ……etc.

Where: a, b, c, … = percent of aggregate blend
A, B, C, … = aggregate expansion according to ASTM C 1260

Mix Design Criteria. The slump requirements of Article 1020.04 of the Standard Specifications shall not apply. In addition, the allowable coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. The fine aggregate proportion shall be a maximum 50 percent by mass (weight) of the total aggregate used.

Trail Batch. A minimum 1 cu m (1 cu yd) trial batch shall be produced. The mixture will be evaluated for air content, slump flow, visual stability index, compressive strength, passing ability, and static/dynamic segregation resistance.

The trial batch shall be scheduled and performed in the presence of the Engineer. Testing shall be performed per the Department's test method or as approved by the Engineer.

For the trial batch, the air content shall be within the top half of the allowable specification range. The slump flow range shall be 510 mm (20 in.) minimum to 710 mm (28 in.) maximum.

The visual stability index shall be a maximum of 1. Strength shall be determined at 28 days. At the Contractor's option, strength may be determined for additional days.

Passing ability and static/dynamic segregation resistance shall be determined by tests selected by the Contractor and approved by the Engineer. The visual stability index shall not be used as the sole criteria for evaluating static segregation resistance.

After an acceptable mixture has been batched and tested, the mixture shall also be evaluated for robustness. Robustness shall be evaluated by varying the dosage of the self-consolidating admixture system and water separately. Additional trial batches may be necessary to accomplish this.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Quality Control. Once testing is completed and acceptable results have been attained, production test frequencies and allowable test ranges for slump flow, visual stability index, passing ability, and static/dynamic segregation resistance shall be proposed. The production test frequencies and allowable test ranges will be approved by the Engineer.

The slump flow range shall be ± 50 mm (± 2 in.) of the target value, and within the overall range of 510 mm (20 in.) minimum to 710 mm (28 in.) maximum. The visual stability index shall be a maximum of 1. The approved test ranges for passing ability and static/dynamic segregation resistance will be based on recommended guidelines determined by the Engineer.

STABILIZED SUBBASE AND BITUMINOUS SHOULDERS SUPERPAVE (BDE)
Effective: April 1, 2002 Revised: July 1, 2004

Description. This work shall consist of constructing stabilized subbase and bituminous shoulders Superpave according to Sections 312 and 482 respectively, of the Standard Specifications and the special provision, "Quality Control/Quality Assurance of Bituminous Concrete Mixtures" except as modified herein.

Revise Article 312.03(b) of the Standard Specifications to read:

"(b) RAP Material (Note 3)"

Revise Note 2 of Article 312.03 of the Standard Specifications to read:

"Note 2. Gradation CA 6, CA 10, or CA 12 shall be used."

Revise Note 3 of Article 312.03 of the Standard Specifications to read:

"Note 3. RAP shall meet the requirements of the special provision "RAP for Use in Bituminous Concrete Mixtures". RAP containing steel slag shall be permitted for use in top-lift surface mixtures only."

Revise Note 4 of Article 312.03 of the Standard Specifications to read:

"Note 4. Unless otherwise specified on the plans, the bituminous material shall be performance graded asphalt cement, PG58-22. When more than 15 percent RAP is used, a softer PG binder may be required as determined by the Engineer."

Revise Article 312.06 of the Standard Specifications to read:

"**312.06 Mixture Design.** The Contractor shall submit mix designs for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have completed the course, "Superpave Mix Design Upgrade". The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below:

AASHTO MP 2	Standard Specification for Superpave Volumetric Mix Design
AASHTO R 30	Standard Practice for Mixture Conditioning of Hot-Mix Asphalt (HMA)
AASHTO PP 28	Standard Practice for Designing Superpave HMA
AASHTO T 209	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
AASHTO T 312	Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
AASHTO T 308	Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

(a) Job Mix Formula (JMF). The JMF shall be according to the following limits:

Ingredient	Percent by Dry Weight
Aggregate	94.0 to 96.0
Asphalt Cement	4.0 to 6.0*
Dust/AC Ratio	1.4

*Upper limit may be raised for the lower or top lifts if the Contractor elects to use a highly absorptive coarse and/or fine aggregate requiring more than six percent asphalt. The additional asphalt shall be furnished at no cost to the Department.

When RAP material is being used, the JMF shall be according to the following limits:

Ingredient	Percent by Dry Weight
Virgin Aggregate(s)	46.0 to 96.0
RAP Material(s) (Note 1)	0 to 50
Mineral Filler (if required)	0 to 5.0
Asphalt Cement	4.0 to 7.0
Dust/AC Ratio	1.4

Note 1. If specified on the plans, the maximum percentage of RAP shall be as specified therein.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

(b) Volumetric Requirements.

Design Compactive Effort	Design Air Voids Target (%)
N_{DES} =30	2.0

(c) Determination of Need for Anti-Stripping Additive. The mixture designer shall determine if an additive is needed in the mix to prevent stripping. The determination will be made on the basis of tests performed according to Illinois Modified AASHTO T 283 using 4 in. Marshall bricks. To be considered acceptable by the Engineer as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSR) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSR values less than 0.75 will be considered unacceptable.

If it is determined that an additive is required, the additive may be hydrated lime, slaked quicklime, or a liquid additive, at the Contractor's option. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Engineer. The method of application shall be according to Article 406.12 of the Standard Specifications."

Revise Article 312.08 of the Standard Specifications to read:

"**312.08 Mixture Production.** When a hot-mix plant conforming to Article 1102.01 is used, the aggregate shall be dried and heated in the revolving dryer to a temperature of 120 °C (250 °F) to 175 °C (350 °F).

The aggregate and bituminous material used in the bituminous aggregate mixture shall be measured separately and accurately by weight or by volume. When the aggregate is in the mixer, the bituminous material shall be added and mixing continued for a minimum of 35 seconds and until a homogeneous mixture is produced in which all particles of the aggregate are coated. The mixing period, size of the batch and the production rate shall be approved by the Engineer.

The ingredients shall be heated and combined in such a manner as to produce a mixture which, when discharged from the mixer, shall be workable and vary not more 10 °C (20 °F) from the temperature set by the Engineer.

When RAP material(s) is used in the bituminous aggregate mixture, the virgin aggregate(s) shall be dried and heated in the dryer to a temperature that will produce the specified resultant mix temperature when combined with the RAP material.

The heated virgin aggregates and mineral filler shall be combined with RAP material in such a manner as to produce a bituminous mixture which when discharged from the mixer shall not vary more than 15 °C (30 °F) from the temperature set by the Engineer. The combined ingredients shall be mixed for a minimum of 35 seconds and until a homogeneous mixture as to composition and temperature is obtained. The total mixing time shall be a minimum of 45

seconds consisting of dry and wet mixing. Variation in wet and dry mixing times may be permitted, depending on the moisture content and amount of salvaged material used. The mix temperature shall not exceed 175 °C (350 °F). Wide variations in the mixture temperature will be cause for rejection of the mix.

(a) Personnel. The QC Manager and Level I Technician shall have successfully completed the Department's "Superpave Field Control Course".

(b) Required Tests. Testing for stabilized subbase and bituminous shoulders shall be conducted to control the production of the bituminous mixture using the test methods identified and performed at a frequency not less than indicated in the following table.

Parameter	Frequency of Tests Non-Class I Mixtures	Test Method
Aggregate Gradation Hot bins for batch and continuous plants. Individual cold-feeds or combined belt-feed for drier-drum plants. (% passing seives: 12.5 mm (1/2 In.), 4.75 mm (No. 4), 75 µm (No. 200))	1 gradation per day of production. The first day of production shall be washed ignition oven test on the mix. Thereafter, the testing shall alternate between dry gradation and washed ignition oven test on the mix. The dry gradation and the washed ignition oven test results shall be plotted on the same control chart.	Illinois Procedure (See Manual of Test Procedures for Materials).
Asphalt Content by ignition oven (Note 1.)	1 per day	Illinois-Modified AASHTO T 308
Air Voids Bulk Specific Gravity of Gyratory Sample Maximum Specific Gravity of Mixture	 1 per day 1 per day	 Illinois-Modified AASHTO T 312 Illinois-Modified AASHTO T 209

Note 1. The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the AC content.

During production, the ratio of minus 75 µm (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.6, and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 µm (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resumption of production.

During production, mixture containing an anti-stripping additive will be tested by the Engineer for stripping according to Illinois Modified AASHTO T 283. If the mixture fails to meet the TSR criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

(c) Control Charts/Limits. Control charts/limits shall be according to QC/QA requirements for Non-Class I Mixtures except air voids shall be plotted on the control charts within the following control limits:

Air Void Control Limits	
Mixture	Individual Test
Shoulders	± 1.2 %
Others	± 1.2 %"

Replace the first paragraph of Article 312.10 of the Standard Specifications with the following:

"**312.10 Placing and Compacting.** After the subgrade has been compacted and is acceptable to the Engineer, the bituminous aggregate mixture shall be spread upon it with a mechanical spreader. The maximum compacted thickness of each lift shall be 150 mm (6 in.) provided the required density is obtained. The minimum compacted thickness of each lift shall be according to the following table:

Nominal Maximum Aggregate Size of Mixture	Minimum Compacted Lift Thickness
CA 12 – 12.5 mm (1/2 in.)	38 mm (1 1/2 in.)
CA 10 - 19 mm (3/4 in.)	57 mm (2 1/4 in.)
CA 6 – 25 mm (1 in.)	76 mm (3 in.)

The surface of each lift shall be clean and dry before succeeding lifts are placed."

Revise Article 482.02 of the Standard Specifications to read:

"**482.02 Materials.** Materials shall meet the requirements of Article 312.03. For the top lift, the aggregate used shall meet the gradation requirements for a CA 10 or CA 12. Blending of aggregates to meet these gradation requirements will be permitted."

Revise the first paragraph of Article 482.04 of the Standard Specifications to read:

"**482.04 General.** For pavement and shoulder resurfacing projects, Superpave binder and surface course mixtures may be used in lieu of bituminous aggregate mixture for the resurfacing of shoulders, at the option of the Contractor, or shall be used when specified on the plans."

Revise Article 482.04(c) of the Standard Specifications to read:

"(c) Mixture Production .....312.08"

Revise Article 482.05 of the Standard Specifications to read:

"**482.05 Composition of Bituminous Aggregate Mixture.** The composition of the mixture shall be according to Article 312.06, except that the amount of asphalt cement used in the top lift shall be increased up to 0.5 percent more than that required in the lower lifts. For resurfacing projects when the Superpave binder and surface course mixtures option is used, the asphalt cement used in the top lift shall not be increased. Superpave mixtures used on the top lift of such shoulders shall meet the gradation requirements of the special provision "Superpave Bituminous Concrete Mixtures".

For shoulder and strip construction, the composition of the Superpave binder and surface course shall be the same as that specified for the mainline pavement."

In the following locations of Section 482 of the Standard Specifications, change “Class I” to “Superpave”:

the second paragraph of Article 482.04
the first sentence of the second paragraph of Article 482.06
the first sentence of the fourth paragraph of Article 482.06
the second sentence of the fourth paragraph of Article 482.06
the first sentence of the third paragraph of Article 482.08(b)

Revise the first paragraph of Article 482.06 of the Standard Specifications to read:

“**482.06 Placing and Compacting.** This work shall be according to Article 312.10. The mechanical spreader for the top lift of shoulders shall meet the requirements of Article 1102.03 when the shoulder width is 3 m (10 ft) or greater.”

Revise Article 482.09 of the Standard Specifications to read:

"**482.09 Basis of Payment**. When bituminous shoulders are constructed along the edges of the completed pavement structure, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS SHOULDERS SUPERPAVE of the thickness specified. The specified thickness shall be the thickness shown on the plans at the edge of the pavement.

On pavement and shoulder resurfacing projects, the shoulder resurfacing will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS SHOULDERS SUPERPAVE.

The construction of shoulder strips for resurfacing pavements will be paid according to the special provision, “Superpave Bituminous Concrete Mixtures”.”

SUBGRADE PREPARATION (BDE)
Effective: November 1, 2002

Revise the tenth paragraph of Article 301.03 of the Standard Specifications to read:

“Equipment of such weight, or used in such a way as to cause a rut in the finished subgrade of 13 mm (1/2 in.) or more in depth, shall be removed from the work or the rutting otherwise prevented.”

SUPERPAVE BITUMINOUS CONCRETE MIXTURES (BDE)
Effective: January 1, 2000 Revised: April 1, 2004

Description. This work shall consist of designing, producing and constructing Superpave bituminous concrete mixtures using Illinois Modified Strategic Highway Research Program (SHRP) Superpave criteria. This work shall be according to Sections 406 and 407 of the Standard Specifications and the special provision, "Quality Control/Quality Assurance of Bituminous Concrete Mixtures”, except as follows.

Materials.

(a) Fine Aggregate Blend Requirement. The Contractor may be required to provide FA 20 manufactured sand to meet the design requirements. For mixtures with Ndesign $\geq$ 90, at least 50 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation.

(b) Reclaimed Asphalt Pavement (RAP). If the Contractor is allowed to use more than 15 percent RAP, as specified in the plans, a softer performance-graded binder may be required as determined by the Engineer.

RAP shall meet the requirements of the special provision, “RAP for Use in Bituminous Concrete Mixtures”.

RAP will not be permitted in mixtures containing polymer modifiers.

RAP containing steel slag will be permitted for use in top-lift surface mixtures only.

(c) Bituminous Material. The asphalt cement (AC) shall be performance-graded (PG) or polymer modified performance-graded (SBS-PG or SBR-PG) meeting the requirements of Article 1009.05 of the Standard Specifications for the grade specified on the plans.

The following additional guidelines shall be used if a polymer modified asphalt is specified:

(1) The polymer modified asphalt cement shall be shipped, maintained, and stored at the mix plant according to the manufacturer's requirements. Polymer modified asphalt cement shall be placed in an empty tank and shall not be blended with other asphalt cements.

(2) The mixture shall be designed using a mixing temperature of 163 $\pm$ 3 °C (325 $\pm$ 5 °F) and a gyratory compaction temperature of 152 $\pm$ 3 °C (305 $\pm$ 5 °F).

(3) Pneumatic-tired rollers will not be allowed unless otherwise specified by the Engineer. A vibratory roller meeting the requirements of Article 406.16 of the Standard Specifications shall be required in the absence of the pneumatic-tired roller.

Laboratory Equipment.

(a) Superpave Gyratory Compactor. The superpave gyratory compactor (SGC) shall be used for all QC/QA testing.

(b) Ignition Oven. The ignition oven shall be used to determine the AC content. The ignition oven shall also be used to recover aggregates for all required washed gradations.

The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the AC content.

Mixture Design. The Contractor shall submit mix designs, for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have successfully completed the course, “Superpave Mix Design Upgrade”. Articles 406.10 and 406.13 of the Standard Specifications shall not apply. The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below.

AASHTO MP 2 Standard Specification for Superpave Volumetric Mix Design

AASHTO R 30 Standard Practice for Mixture Conditioning of Hot-Mix Asphalt (HMA)

AASHTO PP 28 Standard Practice for Designing Superpave HMA

AASHTO T 209 Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

AASHTO T 312 Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor

AASHTO T 308 Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

(a) Mixture Composition. The ingredients of the bituminous mixture shall be combined in such proportions as to produce a mixture conforming to the composition limits by weight. The gradation mixture specified on the plans shall produce a mixture falling within the limits specified in Table 1.

TABLE 1. MIXTURE COMPOSITION (% PASSING)[1/]

Sieve Size	IL-25.0 mm		IL-19.0 mm		IL-12.5 mm[4/]		IL-9.5 mm[4/]	
	min	max	min	max	Min	max	min	max
37.5 mm (1 1/2 in.)		100						
25 mm (1 in.)	90	100		100				
19 mm (3/4 in.)		90	82	100		100		
12.5 mm (1/2 in.)	45	75	50	85	90	100		100
9.5 mm (3/8 in.)						89	90	100
4.75 mm (#4)	24	42[2/]	24	50[2/]	28	65	28	65
2.36 mm (#8)	16	31	20	36	28	48[3/]	28	48[3/]
1.18 mm (#16)	10	22	10	25	10	32	10	32
600 μm (#30)								
300 μm (#50)	4	12	4	12	4	15	4	15
150 μm (#100)	3	9	3	9	3	10	3	10
75 μm (#200)	3	6	3	6	4	6	4	6

1/ Based on percent of total aggregate weight.

2/ The mixture composition shall not exceed 40 percent passing the 4.75 mm (#4) sieve for binder courses with Ndesign $\geq$ 90.

3/ The mixture composition shall not exceed 40 percent passing the 2.36 mm (#8) sieve for surface courses with Ndesign $\geq$ 90.

4/ The mixture composition for surface courses shall be according to IL-12.5 mm or IL-9.5 mm, unless otherwise specified by the Engineer.

One of the above gradations shall be used for leveling binder as specified in the plans and according to Article 406.04 of the Standard Specifications.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

(b) Dust/AC Ratio for Superpave. The ratio of material passing the 75 μm (#200) sieve to total asphalt cement shall not exceed 1.0 for mixture design (based on total weight of mixture).

(c) Volumetric Requirements. The target value for the air voids of the hot mix asphalt (HMA) shall be 4.0 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix and shall conform to the requirements listed in Table 2.

TABLE 2. VOLUMETRIC REQUIREMENTS

	Voids in the Mineral Aggregate (VMA), % minimum				Voids Filled with Asphalt (VFA), %
Ndesign	**IL-25.0**	**IL-19.0**	**IL-12.5**	**IL-9.5**	
50	12.0	13.0	14.0	15	65 - 78
70					65 - 75
90					
105					

(d) Determination of Need for Anti-Stripping Additive. The mixture designer shall determine if an additive is needed in the mix to prevent stripping. The determination will be made on the basis of tests performed according to Illinois Modified T 283 using 4 in. Marshall bricks. To be considered acceptable by the Department as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSRs) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSRs less than 0.75 will be considered unacceptable.

If it is determined that an additive is required, the additive may be hydrated lime, slaked quicklime, or a liquid additive, at the Contractor's option. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Department. The method of application shall be according to Article 406.12 of the Standard Specifications.

Personnel. The QC Manager and Level I Technician shall have successfully completed the Department's "Superpave Field Control Course".

Required Plant Tests. Testing shall be conducted to control the production of the bituminous mixture. The Contractor shall use the test methods identified to perform the following mixture tests at a frequency not less than that indicated in Table 3.

TABLE 3. REQUIRED PLANT TESTS for SUPERPAVE

Parameter		Frequency of Tests	Test Method
Aggregate Gradation Hot bins for batch and continuous plants Individual cold-feeds or combined belt-feed for drier drum plants. (% passing sieves: 12.5 mm (1/2 in.), 4.75 mm (No. 4), 2.36 mm (No. 8), 600 µm (No. 30), 75 µm (No. 200))		1 dry gradation per day of production (either morning or afternoon sample). And 1 washed ignition oven test on the mix per day of production (conduct in afternoon if dry gradation is conducted in the morning or vice versa). NOTE. The order in which the above tests are conducted shall alternate from the previous production day (example: a dry gradation conducted in the morning will be conducted in the afternoon on the next production day and so forth). The dry gradation and washed ignition oven test results shall be plotted on the same control chart.	Illinois Procedure (See Manual of Test Procedures for Materials).
Asphalt Content by Ignition Oven (Note 1.)		1 per half day of production	Illinois Modified AASHTO T 308
Air Voids	Bulk Specific Gravity of Gyratory Sample	1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	Illinois Modified AASHTO T 312
	Maximum Specific Gravity of Mixture		Illinois Modified AASHTO T 209

Note 1. The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the AC content.

During production, the ratio of minus 75 µm (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.2 and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 µm (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resuming production.

During production, mixtures containing an anti-stripping additive will be tested by the Department for stripping according to Illinois Modified T 283. If the mixture fails to meet the TSR criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

Construction Requirements

Lift Thickness.

(a) Binder and Surface Courses. The minimum compacted lift thickness for constructing bituminous concrete binder and surface courses shall be according to Table 4:

TABLE 4 – MINIMUM COMPACTED LIFT THICKNESS	
Mixture	Thickness, mm (in.)
IL-9.5	32 (1 1/4)
IL-12.5	38 (1 1/2)
IL-19.0	57 (2 1/4)
IL-25.0	76 (3)

(b) Leveling Binder. Mixtures used for leveling binder shall be as follows:

TABLE 5 – LEVELING BINDER	
Nominal, Compacted, Leveling Binder Thickness, mm (in.)	Mixture
≤ 32 (1 1/4)	IL-9.5
32 (1 1/4) to 50 (2)	IL 9.5 or IL-12.5

Density requirements shall apply for leveling binder when the nominal, compacted thickness is 32 mm (1 1/4 in.) or greater for IL-9.5 mixtures and 38 mm (1 1/2 in.) or greater for IL-12.5 mixtures.

(c) Full-Depth Pavement. The compacted thickness of the initial lift of binder course shall be 100 mm (4 in.). The compacted thickness of succeeding lifts shall meet the minimums specified in Table 4 but not exceed 100 mm (4 in.).

If a vibratory roller is used for breakdown, the compacted thickness of the binder lifts, excluding the top lift, may be increased to 150 mm (6 in.) provided the required density is obtained.

(d) Bituminous Patching. The minimum compacted lift thickness for constructing bituminous patches shall be according to Table 4.

Control Charts/Limits. Control charts/limits shall be according to QC/QA Class I requirements, except density shall be plotted on the control charts within the following control limits:

TABLE 6. DENSITY CONTROL LIMITS		
Mixture	Parameter	Individual Test
12.5 mm / 9.5 mm	Ndesign ≥ 90	92.0 – 96.0%
12.5 mm / 9.5 mm	Ndesign < 90	92.5 – 97.4%
19.0 mm / 25.0 mm	Ndesign ≥ 90	93.0 – 96.0%
19.0 mm / 25.0 mm	Ndesign < 90	93.0 – 97.4%

Basis of Payment. On resurfacing projects, this work will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, LEVELING BINDER (HAND METHOD),

SUPERPAVE, of the Ndesign specified, LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

On resurfacing projects in which polymer modifiers are required, this work will be paid for at the contract unit price per metric ton (ton) for POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, POLYMERIZED LEVELING BINDER (HAND METHOD), SUPERPAVE, of the Ndesign specified, POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and POLYMERIZED BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

On full-depth pavement projects, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE PAVEMENT, (FULL-DEPTH), SUPERPAVE, of the thickness specified.

On projects where widening is constructed and the entire pavement is then resurfaced, the binder for the widening will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition, Ndesign, and thickness specified. The surface and binder used to resurface the entire pavement will be paid for according to the paragraphs above for resurfacing projects.

SURFACE TESTING OF PAVEMENTS (BDE)
Effective: April 1, 2002 Revised: July 1, 2004

Bituminous Concrete Overlays

Revise Article 406.03(k) of the Standard Specifications to read:

"(k) Pavement Surface Test Equipment .....1101.10"

Revise Article 406.21 of the Standard Specifications to read:

"**406.21 Surface Tests.** The finished surface of the pavement shall be tested for smoothness within 24 hours and before the pavement is opened to traffic. All objects and debris shall be removed from the pavement surface prior to testing. Testing shall be performed in the presence of the Engineer.

(a) Test Sections/Equipment.

(1) High-Speed Mainline Pavement. High-speed mainline pavement shall consist of pavements, ramps and loops with a posted speed greater than 75 km/hr (45 mph). These sections shall be tested using a California Profilograph or an approved equivalent.

(2) Low-Speed Mainline Pavement. Low-speed mainline pavement shall consist of pavements, ramps and loops with a posted speed of 75 km/hr (45 mph) or less. These sections shall be tested using a California Profilograph or an approved equivalent.

(3) Miscellaneous Pavement. Miscellaneous pavement shall consist of:

a. pavement on horizontal curves with a centerline radius of curvature of less than or equal to 300 m (1000 ft) and pavement within the superelevation transition of such curves;

b. the first or last 4.5 m (15 ft) of a pavement section where the Contractor is not responsible for the adjoining surface;

c. intersections;

d. variable width pavements;

e. side street returns;

f. crossovers;

g. connector pavement from mainline pavement expansion joint to the bridge approach pavement;

h. bridge approach pavement; and

i. other miscellaneous pavement surfaces (i.e. a turn lane) as determined by the Engineer.

Miscellaneous pavement shall be tested using a 5 m (16 ft) straightedge set to a 10 mm (3/8 in.) tolerance.

(b) Lots/Sublots. Mainline pavement test sections will be divided into lots and sublots.

(1) Lots. A lot will be defined as a continuous strip of pavement 1600 m (1 mile) long and one lane wide. When the length of a continuous strip of pavement is less than 1600 m (1 mile), that pavement will be included in an adjacent lot. Structures will be omitted when measuring pavement length.

(2) Sublots. Lots will be divided into 160 m (0.1 mile) sublots. A partial sublot resulting from an interruption in the pavement will be subject to the same evaluation as a whole sublot.

(c) Testing Procedure. One wheel track shall be tested per lane. Testing shall be performed 1 m (3 ft) from and parallel to the edge of the lane away from traffic. A guide shall be used to maintain the proper distance.

The profile trace generated shall have stationing indicated every 150 m (500 ft) at a minimum. Both ends of the profile trace shall be labeled with the following information: contract number, beginning and ending stationing, which direction is up on the trace, which direction the profilograph was pushed, and the profilograph operator name(s). The top portion of the Department supplied form, “Profilograph Report of Pavement Smoothness” shall be completed and secured around the trace roll.

Although surface testing of intermediate lifts will not be required, they may be performed at the Contractor’s option. When this option is chosen, the testing shall be performed and the profile traces shall be generated as described above.

The Engineer may perform his/her own testing at any time for monitoring and comparison purposes.

(d) Trace Reduction and Bump Locating Procedure. All traces shall be reduced. Traces produced by a mechanical recorder shall be reduced using an electronic scanner and computer software. This software shall calculate the profile index of each sublot in mm/km (in./mile) and indicate any high points (bumps) in excess of 8 mm (0.30 in.) with a line intersecting the profile on the printout. Computerized recorders shall provide the same information.

The profile index of each track, average profile index of each sublot, average profile index of the lot and locations of bumps shall be recorded on the form.

All traces and reports shall be provided to the Engineer for the project file.

The Engineer will use the results of the testing to evaluate paving methods and equipment. If the average profile index of a lot exceeds 635 mm/km (40.0 in./mile) for high-speed mainline pavement or 1025 mm/km (65.0 in./mile) for low-speed mainline pavement, the paving operation will be suspended until corrective action is taken by the Contractor.

(e) Corrective Work. All bumps in excess of 8 mm (0.30 in.) in a length of 8 m (25 ft) or less shall be corrected. If the bump is greater than 13 mm (0.50 in.), the pavement shall be removed and replaced to the satisfaction of the Engineer at the Contractor's expense. The minimum length of pavement to be removed shall be 900 mm (3 ft).

(1) High-Speed Mainline Pavement. Any sublot having a profile index within the range of, greater than 475 (30.0) to 635 (40.0) mm/km (in./mile) including bumps, shall be corrected to reduce the profile index to 475 mm/km (30.0 in./mile) or less on each trace. Any sublot having a profile index greater than 635 mm/km (40.0 in./mile) including bumps, shall be corrected to reduce the profile index to 475 mm/km (30.0 in./mile) or less on each trace, or replaced at the Contractor's option.

(2) Low-Speed Mainline Pavement. Any sublot having a profile index within the range of, greater than 710 (45.0) to 1025 (65.0) mm/km (in./mile) including bumps, shall be corrected to reduce the profile index to 710 mm/km (45.0 in./mile) or less on each trace. Any sublot having a profile index greater than 1025 mm/km (65.0 in./mile) including bumps, shall be corrected to reduce the profile index to 710 mm/km (45.0 in./mile) or less on each trace, or replaced at the Contractor's option.

(3) Miscellaneous Pavement. Surface variations which exceed the 10 mm (3/8 in.) tolerance will be marked by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed using either an approved grinding device consisting of multiple saws or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area squared normal to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the sublot(s) shall be retested. The Contractor shall furnish the profilograph tracing(s) and the completed form(s) to the Engineer within two working days after corrections are made. If the profile index and/or bumps still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at the Contractor's expense.

(f) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each sublot of mainline pavement, per the Smoothness Assessment Schedule. Assessments will be based on the average profile index of each sublot prior to performing any corrective work unless the Contractor has chosen to remove and replace the sublot. For sublots that are replaced, assessments will be based on the profile index determined after replacement.

Assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein.

SMOOTHNESS ASSESSMENT SCHEDULE (Bituminous Concrete Overlays)		
High-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Low-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Assessment per sublot
95 (6.0) or less	240 (15.0) or less	+$150.00
>95 (6.0) to 160 (10.0)	>240 (15.0) to 400 (25.0)	+$80.00
>160 (10.0) to 475 (30.0)	>400 (25.0) to 710 (45.0)	+$0.00
>475 (30.0) to 635 (40.0)	>710 (45.0) to 1025 (65.0)	+$0.00
Greater than 635 (40.0)	Greater than 1025 (65.0)	-$300.00

Smoothness assessments will not be applied to miscellaneous pavement sections."

Bituminous Concrete Pavement (Full-Depth)

Revise Article 407.09 of the Standard Specifications to read:

"**407.09 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.21 except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 1 m (3 ft) from and parallel to each lane edge."

SMOOTHNESS ASSESSMENT SCHEDULE (Full-Depth Bituminous)		
High-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Low-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Assessment per sublot
95 (6.0) or less		+$800.00
>95 (6.0) to 175 (11.0)	240 (15.0) or less	+$550.00
>175 (11.0) to 270 (17.0)	>240 (15.0) to 400 (25.0)	+$350.00
>270 (17.0) to 475 (30.0)	>400 (25.0) to 710 (45.0)	+$0.00
>475 (30.0) to 635 (40.0)	>710 (45.0) to 1025 (65.0)	+$0.00
Greater than 635 (40.0)	Greater than 1025 (65.0)	-$500.00

Delete the fourth paragraph of Article 407.13 of the Standard Specifications.

Portland Cement Concrete Pavement

Revise Article 420.12 of the Standard Specifications to read:

"**420.12 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.21 except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 1 m (3 ft) from and parallel to each lane edge.

Membrane curing damaged during testing shall be repaired as directed by the Engineer at the Contractor's expense.

No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to ground areas according to Article 420.21 at the Contractor's expense."

For pavement that is corrected by removal and replacement, the minimum length to be removed shall meet the requirements of either Class A or Class B patching.

SMOOTHNESS ASSESSMENT SCHEDULE (PCC)		
High-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Low-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Assessment per sublot
95 (6.0) or less		+$1200.00
>95 (6.0) to 175 (11.0)	240 (15.0) or less	+$950.00
>175 (11.0) to 270 (17.0)	>240 (15.0) to 400 (25.0)	+$600.00
>270 (17.0) to 475 (30.0)	>400 (25.0) to 710 (45.0)	+$0.00
>475 (30.0) to 635 (40.0)	>710 (45.0) to 1025 (65.0)	+$0.00
Greater than 635 (40.0)	Greater than 1025 (65.0)	-$750.00

Delete the sixth paragraph of Article 420.23 of the Standard Specifications.

Testing Equipment

Revise Article 1101.10 of the Standard Specifications to read:

"**1101.10 Pavement Surface Test Equipment.** Required surface testing and analysis equipment and their jobsite transportation shall be provided by the Contractor.

(a) 5 m (16 ft) Straightedge. The 5 m (16 ft) straightedge shall consist of a metal I-beam mounted between two wheels spaced 5 m (16 ft) between the axles. Scratcher bolts which can be easily and accurately adjusted, shall be set at the 1/4, 1/2, and 3/4 points between the axles. A handle suitable for pushing and guiding shall be attached to the straightedge. The straightedge shall meet the approval of the Engineer.

(b) California Profilograph. The California Profilograph or approved equivalent shall consist of a frame 8 m (25 ft) in length supported upon multiple wheels at either end. The profile shall be recorded from the vertical movement of a wheel attached to the frame at mid point. All traces from pavement sections tested with a California Profilograph or approved equivalent shall be recorded on paper with scales of 300:1 longitudinally and 1:1 vertically. Data filters for an automated California Profilograph shall be set according to the parameters outlined in California Test 526, except the blanking band shall be set to 0.0 mm (0.00 in.).

(1) Calibration. The Contractor shall demonstrate to the Engineer that the testing equipment has proper tire pressure inflation, trueness of tire travel, and is calibrated for vertical displacement and horizontal distance. This calibration shall consist of the following:

a. A 150 to 300 m (500 to 1000 ft) long calibration test section shall be located on the project. This test section should be relatively straight and flat. The profilograph shall be calibrated for longitudinal distance on this test section to the satisfaction of the Engineer.

b. Longitudinal calibration consists of pushing, at walking speed (approximately 5 km/hr (3 mph)), the profilograph over the pre-measured test section and determining the chart scale factor. To calculate the chart scale factor, divide the pre-measured test distance, in millimeters (inches), by the length of the profile trace from this test section, in millimeters (inches). This factor should be 300 ± 0.5. If the profilograph produces charts with a different scale factor, adjustment of the profilograph shall be made to bring the scale factor to the tolerance specified above.

c. Vertical calibration consists of placing the center recording wheel of the profilograph on a base plate and recording the base elevation. Two plates, 13 mm (0.5 in.) thick each, are added under the center wheel, one at a time, and the change in elevation noted. The two plates are removed, one at a time, and the change in elevation noted. Each step in the process shall show a change in height of 13 mm $\pm$ 1.0 mm (0.5 in. $\pm$ 0.01 in.). If the profilograph produces results not conforming to the above limits, it shall be adjusted to the tolerance specified.

d. The automatic trace reduction capability of a machine so equipped shall be checked by comparing the machine's results to the results obtained through manual trace reduction using California Test 526 with a 0.0 mm (0.00 in.) blanking band. The comparison shall be made with the trace obtained on the pre-measured test section. The results of the comparison shall not differ by more than 30 mm/km (2.0 in./mile).

e. All calibration traces and calculations shall be submitted to the Engineer for the project file.

The Engineer may retest the pavement at any time to verify the accuracy of the equipment.

(2) Trace Analysis. The Contractor shall reduce/evaluate these traces using a 0.0 mm (0.00 in.) blanking band and determine a profile index in mm/km (in./mile) for each section of finished pavement surface. If the Contractor's profilograph is equipped with a computerized recorder, the trace produced will be evaluated without further reduction. If the profilograph has a mechanical recorder, the Contractor shall provide an electronic scanner, a computer, and software to reduce the trace. All analysis equipment (electronic scanner, computerized recorder, etc.) shall be able to accept 0.0 mm (0.00 in.) for the blanking band."

TEMPORARY CONCRETE BARRIER (BDE)

Effective: October 1, 2002 Revised: November 1, 2003

Revise Section 704 of the Standard Specifications to read:

"**SECTION 704. TEMPORARY CONCRETE BARRIER**

704.01 Description. This work shall consist of furnishing, placing, maintaining, relocating and removing precast concrete barrier at temporary locations as shown on the plans or as directed by the Engineer.

704.02 Materials. Materials shall meet the requirements of the following Articles of Section 1000 - Materials:

Item	Article/Section
(a) Portland Cement Concrete	1020
(b) Reinforcement Bars (Note 1)	1006.10(a)(b)
(c) Connecting Pins and Anchoring Pins	1006.09
(d) Connecting Loop Bars (Note 2)	
(e) Rapid Set Mortar (Note 3)	

Note 1. Reinforcement bars shall be Grade 400 (Grade 60).

Note 2. Connecting loop bars shall be smooth bars conforming to the requirements of ASTM A 36.

Note 3. Rapid set materials shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitous Materials for Concrete Repairs. For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume or a packaged rapid set mortar shall be used.

Mixing of the rapid set mortar shall be according to the manufacturer's instructions.

CONSTRUCTION REQUIREMENTS

704.03 General. Precast concrete barrier produced after October 1, 2002 shall meet National Cooperative Highway Research Program (NCHRP) Report 350, Category 3, Test Level 3 requirements and have the F shape. Precast concrete barrier shall be constructed according to the Bureau of Materials and Physical Research's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products", applicable portions of Sections 504 and 1020, and to the details shown on the plans.

Precast units shall not be removed from the casting beds until a flexural strength of 2,000 kPa (300 psi) or a compressive strength of 10,000 kPa (1400 psi) is attained. When the concrete has attained a compressive strength according to Article 1020.04, and not prior to four days after casting, the units may be loaded, shipped and used.

704.04 Installation. F shape barrier units shall be seated on bare, clean pavement or paved shoulder and pinned together in a smooth, continuous line at the exact locations provided by the Engineer. The barrier unit at each end of the installation shall be secured to the pavement or paved shoulder using six anchoring pins and protected with an impact attenuator as shown on the plans.

F shape and New Jersey shape barrier units shall not be mixed in the same run.

Barrier units or attachments damaged during transportation or handling, or by traffic during the life of the installation, shall be repaired or replaced by the Contractor at his/her expense. The Engineer will be the sole judge in determining which units or attachments require repair or replacement.

The temporary barriers shall be removed when no longer required by the contract. After removal, all anchoring holes in the pavement or paved shoulder shall be filled with a rapid set mortar. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

704.05 New Jersey Shape Barrier. New Jersey shape barrier produced prior to October 1, 2002 according to earlier Department standards, may be used until January 1, 2008.

Barrier units or attachments damaged during transportation or handling, or by traffic during the life of the installation, shall be repaired or replaced by the Contractor at his/her expense. The Engineer will be the sole judge in determining which units or attachments require repair or replacement.

F shape and New Jersey shape barrier units shall not be mixed in the same run.

The barrier unit at each end of the installation shall be secured to the pavement or paved shoulder using six dowel bars and protected with an impact attenuator as shown on the plans.

The temporary barriers shall be removed when no longer required by the contract. After removal, all anchoring holes in the pavement or paved shoulder shall be filled with a rapid set mortar. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

704.06 Method of Measurement. Temporary concrete barrier will be measured for payment in meters (feet) in place along the centerline of the barrier. When temporary concrete barrier is relocated within the limits of the jobsite, the relocated barrier will be measured for payment in meters (feet) in place along the centerline of the barrier.

704.07 Basis of Payment. When the Contractor furnishes the barrier units, this work will be paid for at the contract unit price per meter (foot) for TEMPORARY CONCRETE BARRIER or RELOCATE TEMPORARY CONCRETE BARRIER.

When the Department furnishes the barrier units, this work will be paid for at the contract unit price per meter (foot) for TEMPORARY CONCRETE BARRIER, STATE OWNED or RELOCATE TEMPORARY CONCRETE BARRIER, STATE OWNED.

Impact attenuators will be paid for separately."

TRAFFIC BARRIER TERMINALS (BDE)
Effective: January 1, 2003

Revise Article 631.05 of the Standard Specifications to read:

"**631.05 Traffic Barrier Terminal, Type 5 and Type 5A.** The face of the guardrail shall be installed flush with the face of the bridge rail or parapet."

Revise Article 631.06 of the Standard Specifications to read:

"**631.06 Traffic Barrier Terminal, Type 6.** When attaching the end shoe to concrete constructed with forms and with a thickness of 300 mm (12 in.) or less, the holes may be formed, core drilled or an approved 20 mm (3/4 in.) cast-in-place insert may be used.

When attaching the end shoe to concrete constructed with forms and with a thickness greater than 300 mm (12 in.), an approved M20 (3/4 in.) bolt with an approved expansion device may be used in lieu of formed or core drilled holes.

When attaching the end shoe to concrete constructed by slipforming, the holes shall be core drilled.

The tapered, parapet, wood block out shall be used on all appurtenances with a sloped face.

When no bridge approach curb is present, Type B concrete curb shall be constructed as shown on the plans according to Section 606."

Revise Article 631.07 of the Standard Specifications to read:

"**631.07 Traffic Barrier Terminal, Type 6B.** Attachment of the end shoe to concrete shall be according to Article 631.06 except the tapered, parapet, wood block out will not be required."

Delete the third and fourth paragraphs of Article 631.11 of the Standard Specifications.

Add the following paragraph to the end of Article 631.11 of the Standard Specifications:

"Construction of the Type B concrete curb for TRAFFIC BARRIER TERMINAL, TYPE 6 will be paid for according to Article 606.14."

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)
Effective: April 1, 1992 Revised: January 1, 2005

To ensure a prompt response to incidents involving the integrity of work zone traffic control, the Contractor shall provide a telephone number where a responsible individual can be contacted 24 hours-a-day.

When the Engineer is notified, or determines a traffic control deficiency 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 12 hours based upon the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge.

A deficiency may be any lack of repair, maintenance, or non-compliance with the traffic control plan. A deficiency may also be applied to situations where corrective action is not an option such as the use of non-certified flaggers for short term operations; working with lane closures beyond the time allowed in the contract; or failure to perform required contract obligations such as traffic control surveillance.

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 $1,000 or 0.05 percent of the awarded contract value, whichever is greater. For those deficiencies where corrective action was not an option this monetary deduction will be immediate.

In addition, if the Contractor fails to respond, the Engineer may correct the deficiency and the cost thereof will be deducted from monies due or which may become due the Contractor. This corrective action will in no way relieve the Contractor of his/her contractual requirements or responsibilities.

TRAFFIC STRUCTURES (BDE)
Effective: November 1, 2002

Add the following sentence to the end of the first paragraph of Article 1069.01(a)(1) of the Standard Specifications:

"Light poles shall be designed for 145 km/hr (90 mph) wind velocity and a minimum design life of 50 years."

Add the following sentence to the end of the third paragraph of Article 1069.04(a) of the Standard Specifications:

"Light towers shall be designed for 145 km/hr (90 mph) wind velocity and a minimum design life of 50 years."

Revise the last sentence of the first paragraph of Article 1077.03(a)(1) of the Standard Specifications to read:

"The design shall be according to AASHTO "Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals" 1994 Edition for 130 km/hr (80 mph) wind velocity. However the arm-to-pole connection 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."

TRAINING SPECIAL PROVISIONS

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 10. 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 then 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.

TRUCK BED RELEASE AGENT (BDE)
Effective: April 1, 2004

Add the following sentence after the third sentence of the first paragraph of Article 406.14 of the Standard Specifications.

"In addition to the release agent, the Contractor may use a light scatter of manufactured sand (FA 20 or FA 21) evenly distributed over the bed of the vehicle."

UNDERDRAIN OPERATIONS (BDE)
Effective: November 1, 2002

Underdrain operations shall be completed prior to weekend periods. Should delays of any type or for any reason prevent the completion of the work, the underdrain trenches shall be temporarily backfilled. Material able to support the average daily traffic and meeting the approval of the Engineer shall be used for the temporary backfill. The cost of furnishing, placing, maintaining, removing and disposing of the temporary work, including traffic control, shall be the responsibility of the Contractor.

WEIGHT CONTROL DEFICIENCY DEDUCTION
Effective: April 1, 2001 Revised: August 1, 2002

The Contractor shall provide accurate weights of materials delivered to the contract for incorporation into the work (whether temporary or permanent) and for which the basis of payment is by weight. These weights shall be documented on delivery tickets which shall identify the source of the material, type of material, the date and time the material was loaded, the contract number, the net weight, the tare weight when applicable and the identification of the

transporting vehicle. For aggregates, the Contractor shall have the driver of the vehicle furnish or establish an acceptable alternative to provide the contract number and a copy of the material order to the source for each load. The source is defined as that facility that produces the final material product that is to be incorporated into the contract pay items.

The Department will conduct random, independent vehicle weight checks for material sources according to the procedures outlined in the Documentation Section Policy Statement of the Department's Construction Manual and hereby incorporated by reference. The results of the independent weight checks shall be applicable to all contracts containing this Special Provision. Should the vehicle weight check for a source result in the net weight of material on the vehicle exceeding the net weight of material shown on the delivery ticket by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. No adjustment in pay quantity will be made. Should the vehicle weight check for a source result in the net weight of material shown on the delivery ticket exceeding the net weight of material on the vehicle by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. The Engineer will adjust the net weight shown on the delivery ticket to the checked delivered net weight as determined by the independent vehicle weight check.

The Engineer will also adjust the method of measurement for all contracts for subsequent deliveries of all materials from the source based on the independent weight check. The net weight of all materials delivered to all contracts containing this Special Provision from this source, for which the basis of payment is by weight, will be adjusted by applying a correction factor "A" as determined by the following formula:

$$A = 1.0 - \left(\frac{B - C}{B}\right); \text{ Where } A \le 1.0; \ \left(\frac{B - C}{C}\right) > 0.50\% \text{ (0.70\% for aggregates)}$$

Where A = Adjustment factor
B = Net weight shown on delivery ticket
C = Net weight determined from independent weight check

The adjustment factor will be applied as follows:

Adjusted Net Weight = A x Delivery Ticket Net Weight

The adjustment factor will be imposed until the cause of the deficient weight is identified and corrected by the Contractor to the satisfaction of the Engineer. If the cause of the deficient weight is not identified and corrected within seven (7) calendar days, the source shall cease delivery of all materials to all contracts containing this Special Provision for which the basis of payment is by weight.

Should the Contractor elect to challenge the results of the independent weight check, the Engineer will continue to document the weight of material for which the adjustment factor would be applied. However, provided the Contractor furnishes the Engineer with written documentation that the source scale has been calibrated within seven (7) calendar days after the date of the independent weight check, adjustments in the weight of material paid for will not be applied unless the scale calibration demonstrates that the source scale was not within the specified Department of Agriculture tolerance.

At the Contractor's option, the vehicle may be weighed on a second independent Department of Agriculture certified scale to verify the accuracy of the scale used for the independent weight check.

WORK ZONE PUBLIC INFORMATION SIGNS (BDE)
Effective: September 1, 2002 Revised: January 1, 2005

Description. This work shall consist of furnishing, erecting, maintaining, and removing work zone public information signs.

Camera-ready artwork for the signs will be provided to sign manufacturing companies upon request by contacting the Central Bureau of Operations at 217-782-2076. The sign number is W21-I116-6048.

Freeways/Expressways. These signs are required on freeways and expressways. The signs shall be erected as shown on Highway Standard 701400 and according to Article 702.05(a) of the Standard Specifications.

All Other Routes. These signs shall be used on other routes when specified on the plans. They shall be erected in pairs midway between the first and second warning signs.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the Standard.

WORK ZONE SPEED LIMIT SIGNS (BDE)
Effective: April 2, 2004 Revised: April 15, 2004

Delete Article 702.05(c).

Revise Article 702.05(d) to read:

"(d) Work Zone Speed Limit Signs. Work zone speed limit sign assemblies shall be provided and located as shown on the plans. Two additional assemblies shall be placed 150 m (500 ft) beyond the last entrance ramp for each interchange. The individual signs that make up an assembly may be combined on a single panel. The sheeting for the signs shall be reflective and conform to the requirements of Article 1084.02.

All permanent "SPEED LIMIT" signs located within the work zone shall be removed or covered. This work shall be coordinated with the lane closure(s) by promptly establishing a reduced posted speed zone when the lane closure(s) are put into effect and promptly reinstating the posted speed zone when the lane closure(s) are removed.

The work zone speed limit signs and end work zone speed limit signs shown in advance of and at the end of the lane closure(s) shall be used for the entire duration of the closure(s).

The work zone speed limit signs shown within the lane closure(s) shall only be used when workers are present in the closed lane adjacent to traffic; at all other times, the signs shall be promptly removed or covered. The sign assemblies shown within the lane closure(s) will not be required when the worker(s) are located behind a concrete barrier wall.

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: January 1, 2003 Revised: November 1, 2004

Add the following to Article 702.01 of the Standard Specifications:

"All devices and combinations of devices shall meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 for their respective categories. The categories are as follows:

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, flexible delineators and plastic drums with no attachments. Category 1 devices shall be crash tested and accepted or may be self-certified by the manufacturer.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include drums and vertical panels with lights, barricades and portable sign supports. Category 2 devices shall be crash tested and accepted for Test Level 3.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions, truck mounted attenuators and other devices not meeting the definitions of Category 1 or 2. Category 3 devices shall be crash tested and accepted for either Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals and area lighting supports. Currently, there is no implementation date set for this category and it is exempt from the NCHRP 350 compliance requirement.

The Contractor shall provide a manufacturer's self-certification letter for each Category 1 device and an FHWA acceptance letter for each Category 2 and Category 3 device used on the contract. The letters shall state the device meets the NCHRP 350 requirements for its respective category and test level, and shall include a detail drawing of the device."

Delete the third, fourth and fifth paragraphs of Article 702.03(b) of the Standard Specifications.

Delete the third sentence of the first paragraph of Article 702.03(c) of the Standard Specifications.

Revise the first sentence of the first paragraph of Article 702.03(e) of the Standard Specifications to read:

"Drums shall be nonmetallic and have alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes."

Add the following to Article 702.03 of the Standard Specifications:

"(h) Vertical Barricades. Vertical barricades may be used in lieu of cones, drums or Type II barricades to channelize traffic."

Delete the fourth paragraph of Article 702.05(a) of the Standard Specifications.

Revise the sixth paragraph of Article 702.05(a) of the Standard Specifications to read:

"When the work operations exceed four days, all signs shall be post mounted unless the signs are located on the pavement or define a moving or intermittent operation. When approved by the Engineer, a temporary sign stand may be used to support a sign at 1.2 m (5 ft) minimum where posts are impractical. Longitudinal dimensions shown on the plans for the placement of signs may be increased up to 30 m (100 ft) to avoid obstacles, hazards or to improve sight distance, when approved by the Engineer. "ROAD CONSTRUCTION AHEAD" signs will also be required on side roads located within the limits of the mainline "ROAD CONSTRUCTION AHEAD" signs."

Delete all references to "Type 1A barricades" and "wing barricades" throughout Section 702 of the Standard Specifications.

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)
Effective: January 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.

PILE INSTALLATION

Description. This work shall consist of installing Temporary Sheet Piling, Temporary Soil Retention System sheet piling and soldier piles and Foundation Piling at locations shown in the Plans and in accordance with the applicable requirements of the Special Provisions and Section 512 of the Standard Specifications except as amended herein. The installation of foundation pile by driving is replaced with the method specified herein.

Construction.

Steel Sheet Piling:
Impact hammers of any kind will not be allowed to install the sheet piling. All sheet piling shall be installed with a vibratory hammer or any other method such as "press-in method". Integral augering or jetting may be required to facilitate driving of the sheet piles.

Foundation Piles:
Impact hammers of any kind will not be allowed to install the foundation piles. A drilled shaft 3" larger than the pile shall be precored to the top of bedrock. The pile shall be (1) inserted in the

drilled shaft with tip on top of bedrock, (2) shell filled with concrete and (3) annular space between pile and excavated hole grouted. The Contractor shall satisfy the following requirements.

(a) Drilling Methods. The pile installation may involve the use of one or more of the following requirements:

(1) Dry Method. The dry method consists of drilling the shaft excavation, removing accumulated water and loose material from the excavation, and placing the pile in a predominately dry excavation. This method shall be used only at sites where the groundwater and soil conditions are suitable to permit the drilling and dewatering of the excavation without causing excessive water infiltration, boiling, squeezing, or caving of the excavation side walls.

(2) Wet Method. The wet construction method may be used at sites where dewatering the excavation would cause collapse of the excavation sidewalls. This method uses water or slurry to maintain stability of the shaft perimeter while advancing the excavation. After the excavation is completed, the water level in the shaft is allowed to seek equilibrium, the base is cleaned, the pile is set and the concrete is placed inside the pile.

(3) Temporary Casing Method. Temporary casing shall be used when either the wet or dry methods provide inadequate support to prevent sidewall caving or to ensure there is not excessive deformation of the hole. Temporary casing may also be used to reduce the flow of water into the excavation to allow dewatering, adequate cleaning, or to ensure proper pile placement.

Temporary casing will not be allowed to remain permanently in place without the approval of the Engineer. Before the temporary casing is broken loose, the level of grout outside the pile shall be completely filled. After being broken loose, and as the casing is withdrawn, additional grout shall be added to maintain sufficient head so that water and soil trapped behind the casing can be displaced upward and discharged at the ground surface.

No shaft excavation shall be made adjacent to a pile until the surrounding grout has achieved a compressive strength not less than 1000 psi. Materials removed or generated from the shaft excavations shall be disposed of by the Contractor according to Article 202.03. Excavation by blasting will not be permitted.

(b) Drilling Slurry. During construction, the level of the slurry shall be maintained at a height sufficient to prevent caving of the hole. In the event of a sudden or significant loss of slurry to the hole, the construction of that shaft shall be stopped and the shaft excavation backfilled or supported by temporary casing until a method to stop slurry loss, or an alternate construction procedure, has been developed by the Contractor and approved by the Engineer.

(c) Obstructions. Obstructions shall be defined as any object (such as but not limited to, boulders, logs, old foundations, etc.) that cannot be removed with normal earth drilling procedures, but requires special augers, tooling, core barrels or rock augers to remove the obstruction. When obstructions are encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to

core, break up, push aside, or remove the obstruction. Impact hammers or breakers will not be allowed. Payment for the extra work will be in accordance with IDOT Standard Specifications Article 109.04. Lost tools or equipment in the excavation, as a result of the Contractor's operation, shall not be defined as obstructions and shall be removed at the Contractor's expense.

(d) Top of Rock. The actual top of rock will be defined as the point where material is encountered which can not be drilled with a conventional earth auger and/or under-reaming tool, and requires the use of special rock augers, core barrels, air tools or other methods of hand excavation.

When embedment in rock is indicated on the plans, modification to the length of a pile may be required to satisfy the required embedment. The modification shall be made to the top of the pile unless otherwise approved by the Engineer. When the top of rock encountered is above the estimated elevation indicated on the plans, the piles shall be cut to the required length. If the top of rock encountered is below that estimated on the plans, the Contractor shall either furnish longer piles or splice on additional length of soldier pile per Article 512.05(b) to satisfy the required embedment in rock. In order to avoid delays, the Contractor shall have additional pile sections fabricated as necessary to make the required adjustments. Additional pile quantities, above those shown on the plans, shall not be furnished without prior written approval by the Engineer.

(e) Concrete Placement. Concrete work shall be performed according to the applicable portions of Section 512 and as specified herein.

The sand-cement grout mix used to fill gaps between the permanent pile and either the drilled excavation, or temporary casing, shall be as follows:

(a) A Type I or II cement shall be used at 185 lb/cu yd. The cement shall be according to Section 1001.

(b) The fine aggregate shall be according to Articles 1003.01 and 1003.02.

(c) The water shall be according to Section 1002.

(d) The maximum water/cement ratio shall be 1.0.

Drilling slurry, when required, shall consist of a polymer or mineral base material. Mineral slurry shall have both a mineral grain size that will remain in suspension with sufficient viscosity and gel characteristics to transport excavated material to a suitable screening system. The percentage and specific gravity of the material used to make the suspension shall be sufficient to maintain the stability of the excavation and to allow proper concrete placement. For polymer slurry, the calcium hardness of the mixing water shall not exceed 100 mg/L.

The cost to comply with this requirement will not be paid for separately, but shall be considered as included in the contract unit bid prices for TEMPORARY SHEET PILING, TEMPORARY SOIL RETENTION SYSTEM and DRIVING AND FILLING SHELLS of the contract, and no additional compensation will be allowed.

DRILL EXISTING RETAINING WALL

Description. This item shall consist of providing all work and materials required coring drill through an existing retaining wall and installing a conduit sleeve with epoxy mortar as shown on the plans and as directed by the Engineer.

Materials. Materials shall comply with Articles 1025.02 and 1088.01(b) of the Standard Specifications.

A hole shall be core drilled through the existing retaining wall at the location(s) shown on the plans. The diameter of the core drilled hole shall be sized as close as possible to the outside diameter of the conduit sleeve. The rigid non-metallic conduit sleeve shall be of the diameter specified on the plans or as directed by the Engineer. The conduit sleeve shall be grouted into the core drilled hole.

The Contractor shall precautions to avoid drilling through the reinforcement steel embedded in the existing retaining wall. The Engineer will be notified immediately of any damage done to the retaining wall during the core drilling. The damage will be immediately repaired to the satisfaction of the Engineer at no additional cost to IDOT

Method of Measurement. This work shall be measured of a per each basis for each hole core drilled through an existing concrete retaining wall.

Basis of Payment. This work will be paid for at the contract unit price each for DRILL EXISTING RETAINING WALL which shall be payment in full for the material and work described herein.

IMPACT ATTENUATOR REMOVAL

Description. This work shall consist of the removal and disposal of existing impact attenuators. All materials shall become property of the contractor.

Method of Measurement. Impact attenuator removal shall be measured per each location.

Basis of Payment. This work shall be paid for at the contract unit price per EACH system for IMPACT ATTENUATOR REMOVAL.

CONTRACTOR'S DAILY WORK SCHEDULE

Description:
The Contractor shall submit a daily work schedule to the Resident Engineer for the purpose of coordinating the Contractor's activities for the next working day. The daily schedule must be submitted by 3:00 pm the day before. This schedule is necessary for the Engineer to schedule inspection, testing and layout checking for the following day.

The schedule shall include the location and type of all work to be performed that day and all material deliveries. It shall identify all concrete pours, the concrete mix design numbers, and estimated number of cubic yards. The placement of bituminous materials shall be identified, including the mix design numbers, location and number of estimated tons to be placed. The Contractor shall identify all locations where survey verification is required and shall give sufficient advance notification to the Engineer so as not to cause delay.

Method of Measurement:
This coordination work will not be measured for payment.

Basis of Payment:
Preparation and submittal of the Contractor's Daily Work Schedule shall not be paid for separately, but shall be included in the cost of the contract items of work.

WOOD SIGN SUPPORT, SPECIAL

Description. Replace Section 730.01 of the Standard Specifications with the following:

This work shall consist of furnishing and installing nominal 150 mm (6 in.) by 150 mm (6 in.) wood sign supports for ground-mounted signs.

Basis of Payment. Replace Section 730.06 of the Standard Specifications with the following:

This work will be paid for at the contract unit price per meter (foot) for WOOD SIGN SUPPORT, SPECIAL. No extra compensation will be allowed for any cutting and treating.

Cast In Place Tactile/Detectable Warning Surface System For Ramps For People With Disabilities

PART 1 GENERAL

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Special Conditions and Division 1 Specifications Section, apply to this Section.

2. DESCRIPTION

A. This Section specifies furnishing and installing cast-in-place tactile tile modules where indicated.

3. SUBMITTALS

A. Product Data: Submit manufacturer's literature describing products, installation procedures and routine maintenance.

B. Samples for Verification Purposes: Submit two (2) samples minimum 6"x8" of the kind proposed for use.

C. Shop drawings are required for products specified showing fabrication details; composite structural system; plans of placement including joints, and material to be used as well as outlining installation materials and procedure.

D. Material Test Reports: Submit test reports from qualified independent testing laboratory indicating that materials proposed for use are in compliance with requirements and meet the properties indicated. All test reports must be conducted on a tactile system as certified by a qualified independent testing laboratory.

E. Maintenance Instructions: Submit copies of manufacturer's specified maintenance practices for each type of tactile system and accessory as required.

4. QUALITY ASSURANCE

A. Provide tactile system and accessories as produced by a single manufacturer.

B. Installer's Qualifications: Engage an experienced Installer certified in writing by tactile manufacturer as qualified for installation, who has successfully completed installations similar in material, design, and extent to that indicated for Project.

C. Americans with Disabilities Act (ADA): Provide tactile warning surfaces which comply with the detectable warnings on walking surfaces section of the Americans with Disabilities Act (Title 49 CFR TRANSPORTATION, Part 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, Appendix A, Section 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES.

D. California Code of Regulations (CCR): Provide only approved DSAAC detectable warning products as provided in the California Code of Regulations (CCR). Title 24, Part 1, Articles 2, 3 and 4 and Part 2, Section 205 definition of "Detectable Warning". Section 1127B.5 for "Curb Ramps" and Section 1133B.8.5 for "Detectable Warnings at Hazardous Vehicle Area's".

E. The tile must incorporate an in-line dome pattern of truncated domes 0.2" in height, 0.9" diameter at the base, and 0.4" diameter at top of dome spaced 2.35" nominal as measured on a diagonal and 1.70" nominal as measured side by side. For wheelchair safety the field area must consist of a non-slip surface with a minimum of 40 - 90º raised points 0.045" high, per square inch; "EZ set "tile as manufactured by . E-Z Set Corporation, and distributed by Traffic Control Corporation, 780 W. Belden Ave, STE D, Addison, IL, 630-543-1300, as suggested.

1. Dimensions: Tile Assemblies must be held within the following dimensions and tolerances:

Length and Width:	24"x 24" nominal, Plus or minus 1/16".
Depth:	1.500" ± 5% max.
Face Thickness:	0.1875 ± 5% max.
Warpage of Edge:	0.5% ± max.

2. Water Absorption of Tile when tested by ASTM-D 570 not to exceed 0.35%.

3. Slip Resistance of Tile when tested by ASTM-C 1028 the combined wet/dry static co-efficient of friction not to be less than 0.90 on top of domes and field area.

4. Compressive Strength of tile when tested by ASTM-D 695-91 not to be less than 18,000 psi.

5. Tensile Strength of Tile when tested by ASTM-D 638-91 not to be less than 10,000 psi.

6. Flexural Strength of Tile when tested by ASTM - C293-94 not to be less than 24,000 psi.

7. Chemical Stain Resistance of Tile when tested by ASTM-D 543-87 to withstand without discoloration or staining - 1% hydrochloric acid, urine, calcium chloride, stamp pad ink, gum and red aerosol paint.

8. Abrasive Wear of Tile when tested by BYK - Gardner Tester ASTM-D 2486* with reciprocating linear motion of 37 □ cycles per minute over a 10" travel. The abrasive medium, a 40 grit Norton Metallite sand paper, to be fixed and leveled to a holder. The combined mass of the sled, weight and wood block to be 3.2 lb. Average wear depth must not exceed 0.030 after 1000 abrasion cycles measured on the top surface of the dome representing the average of three measurement locations per sample.

9. Fire Resistance: When tested to ASTM E84 flame spread be less than 25.

10. Gardner Impact to geometry "GE" of the standard when tested by ASTM-D 5420-93 to have a mean failure energy expressed as a function of specimen thickness of not less than 450 in. 1bf/in. A failure is noted if a hairline fracture is visible in the specimen.

11. Accelerated Weathering of Tile when tested by ASTM-G26-95 for 2000 hours must exhibit the following result - no deterioration, fading or chalking of surface of tile.

5. DELIVERY, STORAGE AND HANDLING

A. Deliver glass fiber reinforced ceramic cement warning panels to worksite in such quantities and at such times to assure continuity of installation. Handle and transport units in a position consistent with their shape and design in order to avoid excessive stresses or damage.

B. Store units at worksite to prevent cracking, distorting, warping, staining or other physical damage and so that markings are visible.

C. Keep panels under cover and protected until installed.

D. Deliver ABS anchors in sufficient quantity for the work to be done before the start of construction.

6. SITE CONDITIONS

A. Environmental Conditions and Protection: Maintain minimum temperature of 40 degrees F in spaces to receive tactile tiles for at least 48 hours prior to installations, during installation, and for not less than 48 hours after installation. Store tactile tile material in spaces where they will be installed for at least 48 hours before beginning installation. Subsequently, maintain minimum temperature of 40 degrees F in areas where work is completed.

B. The use of water for work, cleaning or dust control, etc. must be contained and controlled and must not be allowed to come into contact with the passengers or public. Provide barricades or screens to protect passengers or public.

C. Disposal of any liquids or other materials of possible contamination must be made in accordance with federal state and local laws and ordinances.

D. Cleaning materials must have code acceptable low VOC solvent content and low flammability if used on the site.

7. EXTRA STOCK

A. Deliver extra stock to storage area designated by engineer. Furnish new materials from same manufactured lot as materials installed and enclose in protective packaging with appropriate identification for cast-in-place tactile tiles. Furnish not less than two (2)% of the supplied materials for each type, color and pattern installed.

8. GUARANTEE

A. Cast-in-place tactile tiles must be guaranteed in writing for a period of five years from date of final completion. The guarantee includes defective work, breakage, deformation, and loosening of tiles.

PART 2 PRODUCTS

1. MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:

2. GLASS FIBER REINFORCED CERAMIC CEMENT (GFRCC)

A. Proprietary Ceramic Cement Blend.

1. Use only one brand, type and source of supply of cement throughout GFRCC production unless noted otherwise.

B. Aggregates

1. Proprietary blend

C. Water. Potable, free from foreign materials in amounts harmful to concrete.

D. Admixtures: conform to ASTM C260 for air entrapment, ASTM C494 for chemical admixtures, or ASTM> C618 for fly ash or natural pozzolan admixtures, at manufacturers option. Do not use admixtures that contain more than 0.1% chloride ions.

E. Coloring Agent

1. Conform to ASTM C979, ultraviolet resistant, high temperature stable, harmless to concrete set or strength.

2. The amount of coloring agent must not exceed 10% of the cement weight.

3. Color: Federal Brick Red 30166 Color must be homogeneous throughout the tile.

3. ANCHORS AND SUBSYSTEMS

A. Each GFRCC panel is to be attached to the supporting concrete with a minimum of 4 E-Z Set ABS anchors in the top horizontal plane and in the preformed holes.

PART 3 EXECUTION

1. INSTALLATION

A. During all concrete pouring and tile installation procedures, ensure adequate safety guidelines are in place and that they are in accordance with the applicable industry and government standards.

B. The specifications of the concrete sealants and related materials must be in strict accordance with the contract documents and the guidelines set by their respective manufacturers.

C. The physical characteristics of the concrete must be consistent with the contract specifications while maintaining a slump range of 4 - 7 to permit solid placement of the Cast-In-Place Tile System. An overly wet mix will cause the Cast-In-Place System to float, therefore under these conditions suitable weights such as 2 concrete blocks or sandbags (25 lb) must be placed on each tile.

D. Prior to placement of the Cast-In-Place System, the contract drawings must be reviewed.

E. The concrete pouring and finishing operations require typical mason's tools, however, a 4' long level with electronic slope readout, 25 lb. weights, vibrator and small sledge hammer with 2" x 6" x 20" wood tamping plate are specific to the installation of the Cast-In Place System.

F. The concrete must be poured and finished, true and smooth to the required dimensions and slope prior to tile placement. Immediately after finishing the concrete, the electronic level should be used to check that the required slope is achieved. The tile must be placed true and square to the curb edge in accordance with the contract drawings. The Cast-In-Place Tiles must be tamped or vibrated into the fresh concrete to ensure that the field level of tile is flush to the adjacent concrete surface. The contract drawings indicate that the tile field level (base of truncated dome) is flush to adjacent surfaces to permit proper water drainage and eliminate tripping hazards between adjacent finishes. The tolerance for elevation differences between tile and adjacent surface is 1/16".
Place the second panel next to the first, leaving no gap (tiles must be abutted to one another) and press into the wet concrete using a twisting back and forth motion. Be certain that the second panel is even and level with the first and with the surrounding concrete

G. Immediately after tile placement, the tile elevation is to be checked to adjacent concrete. The tile elevation and slope should be set consistent with contract drawings to permit water drainage to curb as the design dictates.

While concrete is workable a steel trowel must be used to trowel the concrete around the tile perimeter to the field level of the tile. - Trowel concrete flat, remove any excess concrete and leaving no gap (tiles must be abutted to one another) between the panels. Apply broom finish or other recommended finish to the area immediately surrounding the panels

H. Remove the protective plastic coating and insert one ABS anchor into each of the preformed holes, being certain that the anchors are inserted completely, flush to the panel surface. Tap the top of each anchor 5-6 times using the trowel handle. This will insure good contact of the concrete with the anchor.

I. During and after the tile installation and the concrete curing stage, it is imperative that there is no walking, leaning or external forces placed on the tile to rock the tile, causing a void between the underside of tile and concrete.

J. Following tile placement, review installation tolerances to contract drawings and adjust tile before the concrete sets, 2 suitable weights of 25 lb each must be placed on each tile as necessary to ensure solid contact of tile underside of concrete.

K. Following the curing of the concrete, the protective plastic wrap is to be removed from the tile face by cutting the plastic with a sharp knife tight to the concrete/tile interface. If concrete bleeding occurs, a wire brush will clean the residue without damage to the tile surface.

2. CLEANING AND PROTECTING

A. Protect tiles against damage during construction period to comply with tactile tile manufacturer's specification.

B. Protect tiles against damage from rolling loads following installation by covering with plywood or hardwood.

C. Clean tactile tiles not more than four days prior to date scheduled for inspection intended to establish date of substantial completion in each area of project. Clean tactile tile by method specified by tactile tile manufacturer.

Method of Measurement: CAST IN PLACE TACTILE/DETECTABLE WARNING SURFACE SYSTEM FOR RAMPS FOR PEOPLE WITH DISABILITIES will be measured per square foot.

Basis of Payment: The work under this item will be paid for at the contract unit price per square foot as shown in the Schedule of Unit Prices for CAST IN PLACE TACTILE/ DETECTABLE WARNING SURFACE SYSTEM FOR RAMPS FOR PEOPLE WITH DISABILITIES which price will include all labor, installation, equipment, materials and incidental work necessary to complete the work as specified.

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004 Revised: July 1, 2004

Description. At the bidder's option, a steel cost adjustment will be made to provide additional compensation to the Contractor or a credit to the Department for fluctuations in steel prices. The bidder must indicate on the attached form whether or not steel cost adjustments will be part of this contract. This attached form shall be submitted with the bid. Failure to submit the form 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 kg (lb), shipped from the mill to the fabricator.

(c) The quantity of steel, in kg (lb), 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 kg (lb)
D = price factor, in dollars per kg (lb)

$D = CBP_M - CBP_L$

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 kg (lb).

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 kg (lb).

The unit masses (weights) 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:

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 steel items 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.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling)	
Furnishing Metal Pile Shells 305 mm (12 in.), 3.80 mm (0.179 in.) wall thickness)	34 kg/m (23 lb/ft)
Furnishing Metal Pile Shells 305 mm (12 in.), 6.35 mm (0.250 in.) wall thickness)	48 kg/m (32 lb/ft)
Furnishing Metal Pile Shells 356 mm (14 in.), 6.35 mm (0.250 in.) wall thickness)	55 kg/m (37 lb/ft)
Other piling	See plans
Structural Steel	See plans for weights
Reinforcing Steel	See plans for weights
Dowel Bars and Tie Bars	3 kg (6 lb) each
Mesh Reinforcement	310 kg/sq m (63 lb/100 sq ft)
Guardrail	
Steel Plate Beam Guardrail, Type A w/steel posts	30 kg/m (20 lb/ft)
Steel Plate Beam Guardrail, Type B w/steel posts	45 kg/m (30 lb/ft)
Steel Plate Beam Guardrail, Types A and B w/wood posts	12 kg/m (8 lb/ft)
Steel Plate Beam Guardrail, Type 2	140 kg (305 lb) each
Steel Plate Beam Guardrail, Type 6	570 kg (1260 lb) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	330 kg (730 lb) each
Traffic Barrier Terminal, Type 1 Special (Flared)	185 kg (410 lb) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	16 kg/m (11 lb/ft)
Light Pole, Tenon Mount and Twin Mount, 9 m – 12 m (30 - 40 ft)	21 kg/m (14 lb/ft)
Light Pole, Tenon Mount and Twin Mount, 13.5 m – 16.5 m (45 - 55 ft)	31 kg/m (21 lb/ft)
Light Pole w/Mast Arm, 9 m – 15.2 m (30 - 50 ft)	19 kg/m (13 lb/ft)
Light Pole w/Mast Arm, 16.5 m – 18 m (55 - 60 ft)	28 kg/m (19 lb/ft)
Light Tower w/Luminaire Mount, 24 m – 33.5 m (80 - 110 ft)	46 kg/m (31 lb/ft)
Light Tower w/Luminaire Mount, 36.5 m – 42.5 m (120 - 140 ft)	97 kg/m (65 lb/ft)
Light Tower w/Luminaire Mount, 45.5 m – 48.5 m (150 - 160 ft)	119 kg/m (80 lb/ft)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	95 kg/m (64 lb/ft)
Steel Railing, Type S-1	58 kg/m (39 lb/ft)
Steel Railing, Type T-1	79 kg/m (53 lb/ft)
Steel Bridge Rail	77 kg/m (52 lb/ft)
Frames and Grates	
Frame	115 kg (250 lb)
Lids and Grates	70 kg (150 lb)

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

OPTION FOR
STEEL COST ADJUSTMENT

The bidder shall submit this form with his/her bid. Failure to submit the form 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

STORM WATER POLLUTION PREVENTION PLAN

Illinois Department of Transportation

Storm Water Pollution Prevention Plan

Route I-90/94 Dan Ryan Expressway

Marked Dan Ryan Expressway
I-57 at Illinois Route 1 (Halsted St) &
I-90 at MLK to 31st Street

Section See individual contract

Project No. Various Contract Numbers – Refer to Attachment

County Cook, IL

This plan has been prepared to comply with the provisions of the MSY-Phase II NPDES Permit Number ILR40, issued by the Illinois Environmental Protection Agency for storm water discharges.

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.

John P. Kos
Signature

August 5, 2008
Date

District Engineer
Title

1 Site Description

a. The following is a description of the construction activity which is the subject of this plan (use additional pages, as necessary):

The project is located at Interstate 94 (the Dan Ryan Expressway) from the I-57 interchange to Illinois 1 (Halsted Street) to the west and Martin Luther King (MLK) Drive to the east, and continues in a northerly direction to 31st Street.

Construction Descriptions

The Dan Ryan Expressway project consists of roadway improvements including added lanes, mainline and shoulder reconstruction, construction of retaining walls, new collector-distributor roadways, new and relocated exit and entrance ramps, lighting, drainage, signing, and surveillance improvements.

The Dan Ryan Expressway reconstruction project was designed in three segments in Phase I. The three segments are described from south to north.

The segment from 95th to 67th Streets (U.S. Route 20 / 45), the improvement includes reconstruction of the eight traffic lanes of the existing Dan Ryan Expressway pavement, the addition of a through travel lane in each direction, and modifications to entrance and exit ramps. The improvement involves the addition of a through travel lane along both northbound and southbound Dan Ryan onto Interstate 57 to the interchange with Halsted Street (Illinois Route 1). There are intersection improvements at 79th Street.

The segment from 67th to 47th Street includes reconstruction of the existing northbound and southbound express lanes (four lanes in each direction) and local lanes (two lanes in each direction). The improvement will also provide for an additional through travel lane in each direction to the local traffic lanes, and modifications to all entrance and exit ramps. There are intersection improvements at 67th Street. Frontage roads will be reconstructed both northbound and southbound from 63rd to 47th Streets. Additional work will involve bridge construction and reconfiguration of the Chicago Skyway / Dan Ryan Expressway interchange to provide an additional entrance ramp from the Chicago Skyway to connect directly to the northbound Dan Ryan Expressway express lanes.

The scope of the roadway work between 47th and 31st Streets will include reconstruction of the existing northbound and southbound express lanes (four lanes in each direction) and local lanes (three lanes in each direction) to the Dan Ryan Expressway pavement, and the reconstruction and/or reconfiguration of entrance and exit ramps. The Root Street structure (41st Street) will be removed.

The drainage work consists of removing or abandoning the existing collector storm sewer system and surface water collection system and constructing a new collector storm sewer and surface water collection system. The existing main drain will remain in place and remain functional, with new connections for the proposed storm sewer system. New collector sewers to drain the area directly tributary to the Dan Ryan Expressway (CTA tracks, local lanes, and adjacent ramps and grass areas), and overflows from offsite tributary areas (frontage roads) are planned. Separate collector sewers are required to drain the northbound and southbound lanes of the Dan Ryan Expressway. These proposed collector sewers are to be designed to convey the 50-year storm event.

The work will include the construction of new retaining walls and the rehabilitation, and/or modifications of several existing retaining walls and any roadway and traffic signal improvements required at cross streets and alternate routes.

In addition, other improvements include:

- A new highway lighting system (110 foot towers with lights on 11-foot mounting rings).
- New expressway signing (provides four new and upgrade three changeable message signs).
- Replacement of traffic surveillance equipment with upgraded technology.
- Closed circuit television for traffic conditions and crash incident monitoring.
- Accident investigation sites.
- Other incidental work as required completing the reconstruction of this segment of the expressway to AASHTO and IDOT criteria.

The improvement will also consolidate several points of access and improve the unsafe weaving conditions created by the existing substandard weaving distances. Currently, ramps are spaced evenly at one-half mile increments, resulting in weaving distances in the range of 300 feet. This is a major safety concern and suspected cause for the high incidence of sideswipe collisions in the ramp influence areas. The proposed access consolidation plan improves many of the mainline weaving movements while minimally influencing the local access to the Dan Ryan Expressway through the addition of collector-distributor roadways and both entrance and exit ramp removals. The presence of parallel city street frontage roads facilitates local access without substantive changes in through and local travel patterns. The proposals for ramp closure are:

- Northbound (NB) exit and southbound (SB) entrance at 76th Street (2 ramps)
- Northbound (NB) and southbound (SB) exits and entrances at 59th Street (4 ramps)
- Northbound (NB) and southbound (SB) exits and entrances at 51st Street (4 ramps)
- Northbound (NB) exit and southbound (SB) entrance at 43rd Street (2 ramps)

Capacity analyses indicate unsatisfactory conditions at the intersections of 55th Street (Garfield Boulevard) / Wells Street and 55th Street (Garfield Boulevard) / Wentworth Avenue. The improvements necessary to make this interchange operate effectively require right-of-way acquisition from three separate parcels. The parcels on the southwest quadrant of 55th Street (Garfield Boulevard) / Wells Street is occupied by a “Mobil Service Station” in which a portion of each of the two parcels shall be acquired to construct an eastbound to southbound right turn lane. In addition, dual right turn lanes are proposed for the northbound to eastbound movement at the intersection of 55th Street (Garfield Boulevard) / Wentworth Avenue. These right turn lanes require securing property, the portion of the parcel that is currently vacant.

To construct the proposed two-lane, left-hand exit to the Chicago Skyway from the southbound lanes on the Dan Ryan Expressway, Wells Street needs to be relocated from 64th Street to 65th Street. The improvement requires reconstruction of an18 foot high retaining wall adjacent to the mainline and the full replacement of the frontage road (Wells Street) pavement. The realignment shifts the centerline of the road approximately 10 feet west. A relocation and reconstruction of the west sidewalk bordering Wells Street does encroach into a parcel currently owned by the Chicago Housing Authority for the “Yale Street Apartment”. The corner parcel would facilitate the relocation and reconstruction of the 5 foot sidewalk and modifications to the bituminous parking lot.

The right-of-way uses are summarized in the tabulation below:

Right-of-Way Acquisition	Acres	Number of Parcels
SW Corner of 55th / Wells Street	0.05	6
SE Corner of 55th / Wentworth Avenue	0.10	1
NE Corner of 57th / Wentworth Avenue	0.12	2
SE Corner of 57th / Wentworth Avenue	0.24	1
NE Corner of 59th / Wentworth Avenue	0.007	1
SE Corner of 59th / Wentworth Avenue	0.014	1
NW Corner of 63rd / Wells Street	0.05	1
Along West edge of Wells Street From 65th Street to 64th Street	0.11	1
Temporary Construction Easement	**Acres**	**Number of Parcels**
Along west edge of Wells Street From 65th Street to 64th Street	0.07	1

The Total Acquired Right-of-Way (ROW) is 0.691 acres involving eight parcels, with a Temporary Construction Easement (TCE) of 0.07 acres involving one parcel.

Environmental Descriptions

Special waste for the Dan Ryan project has **HIGH** risk for the occurrence of regulated substances or natural hazards at twelve sites. A Preliminary Environmental Site Assessment (PESA #1106) with stipulations for excavation depths varies for twelve high risk locations. Depth stipulations can be met at Sites: 808-10A, 1106-17B, 1106-25B, 1106-44A, and 1106-51. A request for Preliminary Site Investigation (PSI) will be required for Sites: 1106-2B, 1106-4A, 1106-6A, and 1106-9, 1106-33B, 1106-47, and 1106-52.

Besides special waste, there are no ecologically sensitive areas in the Dan Ryan project area. The Environmental Survey Request Form (ESRF) on 10/15/99 requested only biological and special waste survey because all of the ground had been previously disturbed and no new right-of-way is to be involved with areas not previously occupied, excavated, or disturbed. The project, as described on the ESRF, does not require biological or wetland surveys. The Illinois Department of Natural Resources (IDNR) Natural Heritage Database has no records of listed species, natural areas or nature preserves within the Dan Ryan project corridor (IDNR Agency Action Report dated September 20, 1999). By agreement, no coordination with the Illinois Department of Natural Resources (IDNR) and the U.S. Fish and Wildlife Service (USFWS) are necessary.

No streams or rivers are involved with this project. There is no water resources in the area involved with the project. A closed drainage system for storm water and urban roadway cross section, including pavement and shoulder, will continue.

The project will result in the disturbance of 0.4 or more hectares (1.0 acre). Permit coverage for the project is secured either under the IEPA Phase II General Permit for Storm-water Discharges (NPDES Permit No. ILR40) or under an individual NPDES permit. Requirements applicable for a permit will be followed, including the preparation of a Storm-water Pollution Prevention Plan. The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the construction site. The plan shall describe and ensure the implementation of practices that will reduce the pollutants in discharges associated with construction site activity and assure compliance with terms of the permits.

Although there may be a remote possibility (not likely) of a potable water well within 200 feet (60 meters) of the centerline, this threshold is only relevant for routes and sources of groundwater pollution. Since this project will not introduce any new routes of groundwater pollution (dry wells, “French drains”, or borrow pits) or sources (bulk road oil or deicing storage facilities), then there will be no violation of the wellhead setback requirements.

According to the National Flood Insurance Rate Maps (FIRM), there are no flood plains involved within this project limits.

From field inspection by project team environmental and wetland specialists, and their review of the available and published National Wetlands Inventory (NWI) maps, and the most recent available aerial photography of the area, determined wetlands are not involved. The project is within the existing rights-of-way, and no wetlands are located within or adjacent to the required parcels, which include: west edge of Wells Street from 65th to 64th Street; 63rd Street and South Wells Street, 59th Street and Wentworth Avenue; 57th Street and Wentworth Avenue; 55th Street and South Wentworth Avenue, and 55th Street and South Wells Street.

There is no use or proposed use of protected Section 4(f), Section 6f lands, or lands that have OSLAD funds involved with their purchase and/or development.

b. The following is a description of the intended sequence of major activities for the reconstruction of the Dan Ryan Expressway. The construction year, contract number, description, duration of construction, and highlights of work to be completed follow.

Contract # – Name/Description
Contract Duration
- Major Activities

Construction Year 2003

62573 – Shoulder Repair and Median Cross-Over
August 18 – October 31, 2003
- Reconstruction of the 65th to 47th Street local lane inside shoulder

62591 – Storm Sewer Jacking
November 15, 2003 – June 4, 2004
- Storm sewer jacking from 95th to 67th Streets

Construction Year 2004 to 2005

62594 – 83rd to 79th Street C-D System and Ramps
March 1 – October 31, 2004
- Reconstruction and reconfiguration of the collector-distributor (C-D) ramps between 83rd and 79th Streets
- Replacement of the storm sewer
- Retaining wall construction

62691 – Reconstruct Watermain Crossing under the Dan Ryan from 32nd Street to 63rd Street
May 3, 2004 – June 20, 2005

62590 – 71st to 67th Street C-D System and Ramps
June 21, 2004 – August 15, 2005
- Reconstruction of the collector-distributor (C-D) ramps between 71st and 67th Street
- Improvements to 67th Street / State Street intersection
- Retaining wall construction
- Reconstruction of the 67th Street bridge

62587 – Wentworth Avenue Overpass and Wells Street Realignment
June 21, 2004 – June 30, 2005
- Reconstruction of Wells Street from 67th to 63rd Street
- Reconstruction of Wentworth Avenue bridge

62589 – Skyway Interchange Bridges and Local Lanes Wentworth Avenue to 67th Street
June 21, 2004 – August 15, 2005
- Dan Ryan / Skyway interchange
- Reconstruction of local lanes from 67th to 63rd Street
- Retaining wall construction

62586 – 57th Street Bridge, Retaining Walls, Ramps and Frontage Roads 63rd to 47th Streets

August 1, 2004 – October 31, 2005

- Reconstruction of the frontage roads, Wells Street and Wentworth Avenue, between 63rd and 47th Street
- Construction of eight (8) new ramps between 63rd and 47th Street
- Construction of the new 57th Street bridge over the Dan Ryan
- Retaining walls

62585 – Reconstruct SB Ramps between 39th and 31st Street and Shoulder Reconstruction

September 13, 2004 – November 30, 2005

- Reconstruction of the SB ramps between 39th and 31st Street

62584 – Reconstruct NB Ramps between 39th and 31st Street and Shoulder Reconstruction

September 13, 2004 – November 30, 2004

- Reconstruction of the NB ramps between 39th and 31st Street

62692 – Reconstruct Watermain Crossings under the Dan Ryan from 75th Street to the I-57 Interchange

September 27, 2004 – July 1, 2005

TBA – Reconstruct I-57 Bridge over WB Cross Connection from I-94 and Tunnel over SB I-94

December 21, 2004 – July 4, 2005

62694 – NB Retaining Walls and Ramps from 71st to I-57 and 71st to 75th Street C-D System

February 28, 2005 – December 30, 2005

62695 – SB Retaining Walls and Ramps from 71st Street to I-57 and 71st to 75th Street C-D System

February 28, 2005 – December 30, 2005

Construction Year 2006

62592 – NB Outside Lanes (4, 5, and Shoulder), 71st to I-57 and Miscellaneous Ramps

March 6 – October 27, 2006

- Reconstruction of the local lanes 4, 5, and the outside shoulder for the Dan Ryan I-57 interchange
- Replacement of the storm sewer
- Retaining wall construction

62593 – SB Outside Lanes (4, 5, and Shoulder), 71st to I-57 and Miscellaneous Ramps

March 6 – October 27, 2006

- Reconstruction of the local lanes 4, 5, and the outside shoulder for the Dan Ryan I-57 interchange
- Replacement of the storm sewer
- Retaining wall construction

62302 – SB Express Lanes 71st to 47th Streets
March 6 – October 27, 2006
- Reconstruction of the express lanes between 67th and 47th Street
- Construction of lanes 4 & 5 between 71st and 67th Street

62300 – NB Express Lanes 71st to 31st Streets
March 6 – October 27, 2006
- Reconstruction of the NB and SB express lanes between 71st to 31st Street

Construction Year 2007

62304 – NB Inside Lanes (1, 2 and 3, shoulder and barrier wall) from 71st Street and the I-57 Interchange and Miscellaneous Ramps
March – November 2007
- Reconstruction of the NB local lane 3
- Reconstruction of the I-57 interchange
- Replacement of the storm sewer
- Reconstruction of NB Dan Ryan inside Lanes 1 and 2
- Reconstruction of CTA wall

62305 – SB Inside Lanes (1, 2 and 3, shoulder and barrier wall) from 71st Street and the I-57 Interchange and Miscellaneous Ramps
March – November 2007
- Reconstruction of the SB local lanes 3
- Reconstruction of the I-57 interchange
- Replacement of the storm sewer
- Reconstruction of SB Dan Ryan inside Lanes 1 and 2
- Reconstruction of CTA wall

62303 – SB Local Lanes 71st to 31st Streets and Miscellaneous Ramps
March – November 2007
- Reconstruction of the local lanes between 67th and 47th Street
- Reconstruction of the local lanes 1, 2, and 3 between 71st and 67th Street
- Construction of the WB Skyway ramp to NB Dan Ryan Local

62301 – NB Local Lanes 71st to 31st Streets and Miscellaneous Ramps
March 7 – November 2007
- Reconstruction of the NB and SB local lanes between 47th to 31st Street

c. The total area of the construction site is estimated to be 612 acres.

The total area of the site that it is estimated will be disturbed by excavation, grading or other activities is acres 433.

d. The estimated runoff coefficients of the various areas of the site after construction activities are completed are contained in the project drainage study, which is hereby incorporated by reference in this plan. Information describing the soils at the site is contained in individual Soils Reports for each construction contract.

e. The design/project report, hydraulic report, or plan documents, hereby incorporated by reference, contain site map(s) indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of major soil disturbance, the location of major structural and nonstructural 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 a surface water.

f. The names of receiving water(s) and areal extent of wetland acreage at the site are in the design/project report or plan documents, which are incorporated by reference as a part of this plan.

2. Controls

This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b. above. For each measure discussed, the contractor that will be responsible for its implementation is indicated. Each such contractor has signed the required certification on forms which are attached to, and a part of, this plan:

a. Erosion and Sediment Controls

(i) Stabilization 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: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided in 2.a.(i).(A) and 2.b., 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 ceased on all disturbed portions of the site where construction activity 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.

Description of Stabilization Practices:

1. Temporary Erosion Control Seeding shall be applied in accordance with the Special Provision. Seed mixture will depend on the time of year it is applied. Oats will be applied from January 1 to July 31 and Hard Red Winter Wheat from August 1 to December 31.

2. Short Term Seeding - Seeding Class 2A shall be used to protect bare earth from more than just one or two summer-winter cycles. Due to the length and complexity of this project, it is necessary that short term, final graded slopes be short term seeded as directed by the Engineer.

3. Stone Riprap - Class A4 stone riprap with filter fabric will be used as protection at the discharge end of most storm sewer and culvert end sections to prevent scouring at the end of pipes and to prevent downstream erosion.

4. Temporary Tree Protection - Shall consist of items “temporary fencing” and “tree trunk protection” as directed by the engineer and in accordance with Article 201.05 of the Illinois Department of Transportation’s Standard Specifications for Road and Bridge Construction.

5. Permanent Stabilization - All areas disturbed by construction will be stabilized as soon as permitted with permanent seeding following the finished grading, but always within seven days with Temporary Erosion

Control Seeding. Erosion Blankets will be installed over fill slopes, which have been brought to final grade and have been seeded to protect the slopes from rill and gully erosion and allow seeds to germinate properly.

6. Erosion Control Blankets and Mulching - Erosion control blankets will be installed over fill slopes and in high velocity areas that have been brought to final grade and seeded to protect slopes from erosion and allow seeds to germinate. Mulch will be applied in relatively flat areas to prevent further erosion.

(ii) 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 silt fences, earth dikes, drainage swales, sediment traps, check dams, 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.

Description of Structural Practices:

1. Sediment Control, Stabilized Construction Access - Coarse aggregate overlaying a geotextile fabric will be placed in locations necessary for contractor access. The aggregate surface of the access points will capture soil debris, reducing the amount of soil deposits placed on to the roadway by vehicles leaving the work zones.

2. Inlet Filters - Inlet and Pipe Protection will be provided for storm sewers. These filters will be placed in every inlet, catch basis or manhole with an open lid, which will drain water during at least a 10-year storm event. The Erosion Control Plan will identify the structures requiring Inlet filters.

3. Sediment Control, Silt Fence - A silt fence will be placed adjacent to the areas of construction to intercept waterborne silt and prevent it from leaving the site. These areas are marked on the erosion control plans in each contract.

4. Sediment Control, Temporary Ditch Checks - Rolled excelsior ditch checks will be placed in swales at the rate of one for every 0.3 meters in vertical drop, or as directed by the Engineer, in order to prevent downstream erosion.

5. Sediment Control, Temporary Stream Crossing - Coarse aggregate overlaying a geotextile fabric will be placed in locations necessary for contractor access over water channels. The aggregate surface of the crossing will reduce the amount of soil disturbance in the streams.

6. Sediment Control, Temporary Pipe Slope Drain - This item consists of a pipe with flared end sections, placed daily, along with anchor devices in conjunction with temporary berms that direct runoff down an unstabilized slope.

7. Sediment Control, Dewatering Basins will be provided at wherever the contractor is removing and discharging water from excavated areas and the water is not being routed through a sediment trap or basin.

8. Stone riprap will be provided at several storm and culvert outlets as a measure for erosion and sediment control where needed during and after the project.

9. Bridges will be designed to reduce the potential for scouring.

10. Underdrains will be used to minimize potential erosion caused by surface water flows by reducing the subsurface water which can cause failed pavements, unstable shoulders and other disturbed areas.

11. Covers will be placed on open ends of pipes in trenches.

The structural practices indicated above may not be used in every contract. The Erosion Control Plans included in every contract will indicate which structural practices are required for that contract.

b. 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.

(i) Such practices may include: 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 10-300 (Design Considerations) in Chapter 10 (Erosion and Sedimentation Control) of the Illinois Department of Transportation Drainage Manual. If practices other than those discussed in Section 10-300 are selected for implementation or if practices are applied to situations different from those covered in Section 10-300, the technical basis for such decisions will be explained below.**

(ii) 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).

(iii) The Department proposes to remove vegetation within the project limits as necessary for construction. The Department proposes to revegetate according to the City of Chicago Landscape Framework Plan.

c. Other Controls

(i) Waste Disposal. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

(ii) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

d. Approved State or Local Plans

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 or site permits or 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 ILR40 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: See Landscape Design and Erosion Control for further details. In addition, Guidance Memorandums #02-14 and #02-22 leading up to the ILR40NPDES Permit Requirements IDOT Strategies of Storm Water Management will be complied with along with Construction Memorandum 02-60.

3. Maintenance

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan:

Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or pollution runoff in compliance with environmental law and EPA Water Quality Regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site. The construction field engineer on a weekly basis shall inspect the project to determine that erosion controls efforts are in place and effective and if other control is necessary. Sediment collected during construction by the various temporary erosion systems shall be disposed on the site on a regular basis as directed by the Engineer.

All erosion and sediment control measures will be checked weekly and after each significant rainfall (13 mm (0.5 inch) or greater in a 24 hour period). The following items will be checked:

1. Seeding - all erodable bare earth areas will be temporarily seeded and inspected on a weekly basis to minimize the amount of erodable surface within the contract limits.
2. Silt Filter Fence, all types
3. Erosion Control Blanket
4. Tree Protection
5. Ditch Checks
6. Temporary slope drains
7. Sediment/dewatering basins
8. Stabilized construction entrances

All maintenance of the erosion control systems will be the responsibility of the contractor. All locations where vehicles enter and exit the construction site and all other areas subject to erosion should also be inspected periodically. Inspection of these areas shall be made at least once every seven days and within 24 hours of the end of each 13 mm (0.5 inch) or greater rainfall, or an equivalent snowfall.

4. Inspections

Qualified personnel shall inspect disturbed areas of the construction site, which have not been finally stabilized, structural control measures, and locations where vehicles enter or 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 and areas used for storage of materials that are exposed to precipitation 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. Where discharge locations or points are accessible, they 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 1 above and pollution prevention measures identified in section 2 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 7 calendar days following the inspection.

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 4.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 or Resident Technician shall complete and file an “Incidence of Noncompliance” (ION) report for the identified violation. The Resident Engineer or Resident Technician 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 report of noncompliance 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

5. 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 is described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

Dewatering activities for footing and pier construction of retailing walls and bridges will be a source of non-storm water discharge during construction. Contractors should discharge dewatering activities to a temporary settling basing surrounded by silt fence.

The cutting of joints in PCC pavements or bridge deck grooving will result in slurry. This slurry shall be contained on the deck/pavement and cleaned up.

An additional source of non-storm water discharge during construction is the slurry from washing out redi-mix concrete trucks. Redi-mix concrete trucks should wash out in designated areas surrounded by silt fence. After all PCC items have been constructed, the dried concrete wash material should be cleaned up and properly disposed of. It will be the contractor's responsibility to secure these designated areas for the duration of their use. The Engineer will approve the locations.

On site maintenance of equipment shall be performed in accordance with environmental law, such as proper storage and no dumping of old engine oil or other fluids on site.

Good Housekeeping

1. An effort will be made to store only enough product required to do the job.
2. All materials stored on site will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
3. Products will be kept in their original containers with the original manufacturer's label.
4. Substances will not be mixed with one another unless recommended by the manufacturer.
5. The site superintendent will inspect daily to ensure proper use and disposal of materials on the site.
6. Whenever possible, all of a product will be used up before disposing of the container.
7. Follow manufacturer's recommended practices for use and disposal.

Illinois Department of Transportation

CONTRACTOR CERTIFICATION STATEMENT

This certification statement is a part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with NPDES Permit No. ILR40, issued by the Illinois Environmental Protection Agency on ____ ___, 2003.

Project Information:

Route I-90/94 Dan Ryan Expressway

Marked Dan Ryan Expressway
I-57 at Illinois Route 1 (Halsted St)
& I-90 at MLK to 31st Street

Section See individual contract

Project No. Various Contract Numbers – Refer to Attachment

County Cook

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 40) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature

Date

Title

Name of Firm

Street Address

City State

Zip Code

Telephone Number

Storm Water Pollution Prevention Plan – Attachment

Project Limits: Dan Ryan Expressway I-57 at Illinois Route 1 (Halsted St) & I-90 at MLK to 31st Street

Attachment: Contract Numbers and Description. Note that the contract numbers are listed in numerical order.

IDOT Contract No.	Description
62300	Reconstruct NB Express Lanes from 31st Street to 71st Street
62301	Reconstruct NB Local Lanes from 31st St. to Wentworth Ave. and Misc. Ramps
62302	Reconstruct SB Express Lanes from 31st Street to 71st Street
62303	Reconstruct SB Local Lanes from 31st St. to Wentworth Ave. and Misc. Ramps
62304	Reconstruct NB Inside Lanes (1-3, shoulder and barrier wall) from 71st Street to I-57 Interchange
62305	Reconstruct SB Inside Lanes (1-3, shoulder and barrier wall) from 71st Street to I-57 Interchange
62573	Shoulder Rehabilitation from 47th St. to 71st St.
62584	Reconstruct NB ramps between 31st and 39th Street and Shoulder Rehabilitation
62585	Reconstruct SB ramps between 31st and 39th Street and Shoulder Rehabilitation
62586	Reconstruct 57th St. Bridge, and Frontage Rds., Retaining Walls, and Ramps between 47th and 59th. Streets
62587	Wentworth Avenue Overpass Reconstruction and Wells Street Realignments
62589	Skyway Interchange Bridges and Local Lanes from Wentworth Avenue to 67th Street
62590	Reconstruct 67th St. Bridge and NB and SB C-D System between 67th and 71st St.
62591	Storm Sewer Jacking & Collector Sewers from 67th Street to 95th Street.
62592	Reconstruct NB Outside Lanes (4, 5, shoulder) from 71st to I-57 Interchange
62593	reconstruct SB Outside Lanes (4, 5, shoulder) from 71st to I-57 Interchange
62594	Reconstruct NB and SB C-D System and Ramps between 79th and 83rd Streets
62691	Reconstruct Watermain crossings under Dan Ryan from 32nd to 63rd
62692	Reconstruct Watermain Crossings Under the Dan Ryan from 75th St. to I-57 Interchange
62693	Frontage Rds., Retaining Walls, and Ramps between 59th. and 63rd.
62694	Reconstruct NB Retaining Walls & Ramps from 71st to I-57 Interchange, and 71st to 75th C-D System
62695	Reconstruct SB Retaining Walls & Ramps from 71st to I-57 Interchange, and 71st to 75th C-D System
TBA	Reconstruct NB I-57 Bridge over WB cross connection from I-94 & tunnel over SB I-94

BUREAU OF ELECTRICITY SPECIFICATIONS

Specification No:

1458 - ROUND MANHOLE FRAMES AND COVERS 24 INCH AND 30 INCH DIAMETER

1462 - RIGID STEEL CONDUIT (HOT DIPPED GALVANIZED)

1465 - GROUND RODS

1482 - CABLE: TELECOMMUNICATIONS HYBRID FIBER OPTIC

SPECIFICATION 1458
BUREAU OF ELECTRICITY
DEPARTMENT OF STREETS AND SANITATION
CITY OF CHICAGO
APRIL 28, 1992

ROUND MANHOLE FRAMES AND COVERS 24 INCH AND 30 INCH DIAMETER

SCOPE

The Contractor must furnish and deliver F.O.B., City of Chicago, 24" and 30" Circular MANHOLE FRAMES AND COVERS all in accordance with the Standard Specifications, Drawings 872 , 874 and 10927 and Detailed Specifications.

GENERAL REQUIREMENTS

Conformance: The manhole frames and covers must conform with every detail of the requirements herein stated and to the Specifications and Methods of Test of the American Society for Testing Materials cited by ASTM Designation Number in which the most recently published revision will govern.

Acceptance: Frames and covers not conforming to this specification will not be accepted.

Drawings: The drawings mentioned herein are drawings of the Department of Streets and Sanitation, Bureau of Electricity, and must be interpreted as part of these specifications. The FRAMES AND COVERS must each conform in detail to the design shown on Drawings 872, 874 and 10927.

Weight: Each frame and cover must weigh approximately as shown on the drawings.

Machining: The bearing surfaces of both the COVER and the FRAME must be machine finished as indicated on the drawings.

Workmanship: The frames and covers must be mutually interchangeable size for size, so that each lid will fit every frame neatly without jamming and with only such clearance as the drawings indicate. In addition, 24" & 30" covers must fit existing 24" & 30" frames, as shown on drawings 872, 874 and 10927. The castings must be neat, true to pattern and free from cracks and casting flaws. No welding of defective castings will be permitted nor must the castings be painted.

SAMPLE

Upon request, one complete manhole frame and cover of the manufacture intended to be furnished must be submitted within fourteen (14) business days after the bid opening date. If the Bidder supplying the samples is awarded a contract, the samples delivered will be credited as part of the order. The samples must be delivered to the Bureau of Electricity Storeroom, 4101 South Cicero Avenue, Chicago, Illinois.

MATERIAL

The frames and covers must be made of Class 30 Cast Iron described in the specifications for Gray Iron Castings of ASTM A48. No plugging of defective castings will be permitted.

TESTS

Test bars of the metal used for the castings must be made and tested for tensile and transverse strength in accordance with ASTM A48. The Metal must be tested at the works of the manufacturer. The manufacturer must furnish a certified copy of all test data sheets to the City prior to delivery of the castings. Where the number of castings on a single order exceeds four hundred (400), a representative from the Bureau of Electricity must witness these tests. Frames and covers must each be considered a separate casting for determining the requirement of witness testing.

The manufacturer must include in his bid the cost of travel, food and lodging for one (1) representative. Travel for 150 miles or greater must utilize a major airline. Lodging arrangements must be equal to those provided at a Holiday Inn. The engineer must be given ten (10) working days' notice of all travel arrangements.

SPECIFICATION 1462
BUREAU OF ELECTRICITY
DEPARTMENT OF STREETS AND SANITATION
CITY OF CHICAGO
AUGUST 7, 1992

RIGID STEEL CONDUIT
(HOT DIPPED GALVANIZED)

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1. SCOPE

This specification describes rigid steel conduit, zinc coated.

2. GENERAL REQUIREMENTS

Rigid steel conduit must be zinc coated by the hot-dip process. Conduit must be furnished in 10 foot lengths, threaded on each end and with one coupling attached to one end and a protective cap at the other end.

3. STANDARDS

The conduit must be manufactured according to Underwriters Laboratories Standard U.L. - 6 and must meet ANSI Standard C 80.1 and the requirements of NEC Article 244. In addition, conduit must be recognized as an equipment grounding conductor as per NEC Article 250.118(2). There will be no exceptions to meeting these standards.

4. STEEL

Conduit must be formed from steel suitable for use as an electrical raceway. It must be structurally sound so that it will hang straight and true when supported by hangers in accordance with Chicago electrical code requirements and must be capable of being field bent without deformation of the walls.

Conduit must have a circular cross section sufficiently accurate to permit the cutting of threads in accordance with Table 2 and must provide a uniform wall thickness throughout. All surfaces must be smooth and free of injurious defects. The dimensions and weights of rigid steel conduit must be in accordance with Table 1.

5. THREADING AND CHAMFERING

Each length of conduit, and each nipple, elbow and bend must be threaded on both ends, and each end must be chamfered to remove burrs and sharp edges.

The number of threads per inch, and the length of the threaded portion at each end of each length of conduit, nipple and elbow must be as indicated in Table 2. The perfect thread must be tapered for its entire length, and the taper must be 3/4 inch per foot.

6. ZINC COATING

After all cutting threading and chamfering all conduit surfaces must be thoroughly cleaned before application of zinc. The cleaning process must leave the interior and exterior surfaces of the conduit in such a condition that the zinc will be firmly adherent and smooth.

The conduit must be hot dipped galvanized both inside and out to provide approximately two (2) ounces of zinc per square foot. This is equivalent to 3.4 mils of zinc coating. An additional interior coating to aid in the installation of wires is required.

7. COUPLINGS

Couplings must comply with the following requirements:

(a) The outside surface of couplings must be protected by means of a zinc coating. The zinc content of the coating on the outside surface must be equivalent to a minimum thickness of 3.4 mils.

(b) Couplings must be so made that all threads will be covered when the coupling is pulled tight on standard conduit threads.

(c) Both ends of the coupling must be chamfered to prevent damage to the starting threads.

(d) The outside diameter, length and weight of coupling must be as indicated in Table 3.

(e) Couplings must be straight tapped, except that the 2 ½ inch and larger sizes may be taper-tapped.

8. PACKING AND IDENTIFICATION

The pipe must be delivered in bundles. Each length of conduit must be marked with the manufacturer's name or trademark. Securely attached to each bundle at two (2) locations on the bundle must be a weather resistant tag containing the following information:

(a) conduit size
(b) footage of bundle
(c) gross weight of bundle

Precaution will be taken by the contractor in handling during shipment or delivery of conduit, and any conduit found to be damaged will not be accepted.

9. TEST AND INSPECTION

Galvanized rigid conduit must be capable of being bent cold into a quarter of a circle around a mandrel, the radius of which is four times the nominal size of the conduit, without developing cracks at any portion and without opening the weld.

The protective coatings used on the outside and inside surfaces of rigid steel conduit must be sufficiently elastic to prevent their cracking or flaking off when a finished sample of ½ inch conduit is tested within one year after the time of manufacture, by bending it into a half of a circle around a mandrel, the radius of which is 3 ½ inches.

Tests on sizes other than ½ inch may be conducted within one year after the time of manufacture. If such tests are conducted, the conduit must be bent into a quarter of a circle around a mandrel, the radius of which is six times the nominal size of the conduit.

One of the following three test methods must be employed for measuring the thickness or extent of the external zinc coating on conduit:

(a) Magnetic test.
(b) Dropping test.
(c) Preece test (Material which will withstand four 1-minute immersions will be considered as meeting requirements as follows; the zinc content of the coating on the outside surface must be equivalent to a minimum thickness of 3.4 mils).

All tests and inspections must be made at the place of manufacture prior to shipment unless otherwise specified, and must be so conducted as not to interfere with normal manufacturing processes.

Each length of conduit must be examined visually both on the outside and inside to determine if the product is free from slivers, burrs, scale or other similar injurious defects (or a combination thereof), and if coverage of the coating is complete.

If any samples of rigid steel conduit tested as prescribed in this specification should fail, two additional samples must be tested, both of which must comply with the requirements of the specification.

All pipe which may develop any defect under tests, or which may before testing or on delivery be found defective, or not in accordance with these specifications, must be removed by the Contractor at his own expense; and such pipe so removed by the Contractor must be replaced by him within ten (10) days of such rejection with other pipe which will conform to these specifications.

TABLE 1

Design Dimension and Weights of Rigid Steel Conduit

Nominal or Trade Size of Conduit	Inside Diameter	Outside Diameter	Wall Thickness	Length Without Coupling	Minimum Weight of Ten Unit Lengths With Couplings
(Inches)	(Inches)	(Inches)	(Inches)	(Feet & Inches)	(Pounds)
½	0.622	0.840	0.109	9-11 1/4	79.00
3/4	0.824	1.050	0.113	9-11 1/4	105.0
1	1.049	1.315	0.133	9-11	153.0
1 1/4	1.380	1.660	0.140	9-11	201.0
1 ½	1.610	1.900	0.145	9-11	249.0
2	2.067	2.375	0.154	9-11	334.0
2 ½	2.469	2.875	0.203	9-10 ½	527.0
3	3.068	3.500	0.216	9-10 ½	690.0
3 ½	3.548	4.000	0.226	9-10 1/4	831.0
4	4.026	4.500	0.237	9-10 1/4	982.0

NOTE: The applicable tolerances are:

Length: + 1/4 inch (without coupling)

Outside diameter: + 1/64 inch or -1/32 inch for the 1 ½ inch and smaller sizes, ± 1 percent for the 2-inch and larger sizes.

Wall thickness: - 12 ½ percent

TABLE 2

Dimensions of Threads

Nominal or Trade Size of Conduit (Inches)	Threads per Inch	Pitch Diameter at end of Thread (Inches) Tapered 3/4 Inch per foot	Length of Thread (Inches)	
			Effective L2	Overall L4
1/2	14	0.7584	0.53	0.78
3/4	14	0.9677	0.55	0.79
1	11 1/2	1.2136	0.68	0.98
1 1/4	11 1/2	1.5571	0.71	1.01
1 1/2	11 1/2	1.7961	0.72	1.03
2	11 1/2	2.2690	0.76	1.06
2 1/2	8	2.7195	1.14	1.57
3	8	3.3406	1.20	1.63
3 1/2	8	3.8375	1.25	1.68
4	8	4.3344	1.30	1.73

NOTE: The applicable tolerances are:

Threaded Length (L_4 Col 5): Plus or minus one thread

Pitch Diameter (Col 3): Plus or minus one turn is the maximum variation permitted from the gaging face of the working thread gages. This is equivalent to plus or minus one and one half turns from basic dimensions, since a variation of plus or minus one half turn from basic dimensions is permitted in working gages.

TABLE 3

Designed Dimensions and Weights of Couplings

Nominal or Trade Size of Conduit (INCHES)	Outside Diameter (INCHES)	Minimum Length (INCHES)	Minimum Weight (POUNDS)
1/2	1.010	1-9/16	0.115
3/4	1.250	1-5/8	0.170
1	1.525	2	0.300
1 1/4	1.869	2-1/16	0.370
1 1/2	2.155	2-1/16	0.515
2	2.650	2 1/8	0.671
2 1/2	3.250	3-1/8	1.675
3	3.870	3-1/4	2.085
3 1/2	4.500	3-3/8	2.400
4	4.875	3-1/2	2.839

THIS SPECIFICATION MUST NOT BE ALTERED

SPECIFICATION 1465
BUREAU OF ELECTRICITY
DEPARTMENT OF STREETS AND SANITATION
CITY OF CHICAGO
REVISED AUGUST 28, 1995

GROUND RODS

SUBJECT

1. This specification states requirements for ground rods to be used for ground connections in street lighting, traffic signal, fire alarm, and miscellaneous electrical circuits.

GENERAL

2. (a) Ground Rods must be copper clad, steel rods suitable for driving into the ground without deformation of the rod or scoring, separation or other deterioration of the copper cladding.

DESIGN

3. (a) Ground rods must be made of mild steel core suitable for driving into the earth without deformation.

(b) A heavy, uniform covering of electrolytic copper must be metallically bonded to the steel core to provide a corrosion resistant, inseparable bond between the steel core and the copper overlay.

(c) The rod must be processed to work harden the copper providing a scar resistant surface.

(d) The finished rod must be of uniform cross-section; straight, and free of nicks, cuts or protuberances.

(e) The rod must be pointed at one end and chamfered at the other end.

(f) All ground rods must be three-quarter inches (3/4") in diameter. The length must be as specified elsewhere. The length of the rod must be clearly and permanently marked near the top of the rod (chamfered end).

(g) All ground rods must conform to U.L. 467 and must be listed as such.

(h) All ground rods must be supplied with a Blackburn G6 clamp, or equivalent.

ACCEPTANCE

4. (a) The contractor must furnish one sample of the ground rod proposed to be furnished within fourteen business days from receipt of notice. The approved sample must be the standard, in all respects, to which all ground rods furnished must conform. The accepted ground rod will be credited as part of the order.

(b) The sample ground rod must be delivered to the Engineer of Electricity, 2451 S. Ashland Avenue, Chicago, Illinois 60608.

(c) Ground rods not accepted must be removed at the sole expense of the contractor.

THIS SPECIFICATION MUST NOT BE ALTERED

SPECIFICATION 1482
BUREAU OF ELECTRICITY
DEPARTMENT OF STREETS AND SANITATION
CITY OF CHICAGO
MARCH 20, 1997

CABLE: TELECOMMUNICATIONS
HYBRID FIBER OPTIC

MATERIALS

1. (a) Hybrid fiber optic cable
The cable must meet, as a minimum, the following specifications and conform with the latest issue of Bellcore TR-TSY-00020: Generic requirement for Optical Fiber and Optical Fiber Cables, ANSI/EIA-472: Generic Specification of Fiber Optic Cables, and REA-PE-90; and appropriate Sectional Specifications thereof.

(b) Cable Construction
Cable construction, other than as specified, must be approved by the ENGINEER.

1. The cable must be constructed entirely from dielectric material.

2. A cable suitable for either direct installation into a duct bank or conduit must be supplied.

3. The cable must be of gel-filled, loose tube construction with up to 12 buffer tubes wrapped around a dielectric central strength member. All fiber(s) must be contained within buffer tubes, and each buffer tube must have an inside diameter much greater than the total diameter(s) of the fibers(s) it supports.

4. Each fiber or group of fibers must be free-floating within the tubes such that all mechanically or environmentally induced stress placed upon the cable is de-coupled from the fibers. The air within the buffer tubes must be displaced with a gel to prevent entry by water and to facilitate free movement of the fibers(s) within.

5. The buffer tubes must be color coded in compliance with EIA/TIA-598; Color Coding of Fiber Optic Cables.

6. Cables constructed of less than six fibers must have a buffer tube provided for each fiber: cables constructed of more than six fibers may have several fibers occupy a buffer tube, with equal distribution of fibers as far as practicable. All fibers must be color coded in compliance with EIA/TIA-598: Color Coding of Fiber Optic Cables. Single-mode and multimode fibers must not occupy the same buffer tube.

7. In buffer tubes containing multiple fibers, the colors must be stable during temperature cycling and not subject to fading or smearing onto each other or into the gel filling material. Colors must not cause fibers to stick together.

8. The cable must have an interstitial filing between the buffer tubes and throughout the remainder of the cable to prevent entry of water.
9. A binder wrapping strength member of aramid fibers must be provided as a final layer prior to application of the outer jacket.

10. The cable must be provided in continuous lengths. Each fiber must be pulled from the same optical waveguide form and must be free of splices. Each optical fiber must consist of a doped silica core surrounded by a concentric silical cladding; the use of any other material must be approved by the CITY.

11. A permanent marking must be employed on the outer jacket of the cable which must show the date of manufacture and the manufacturer's name. A numerical sequence must be marked on the outer jacket, at intervals no greater than ten (10) feet to facilitate determination of length of cable and amount of cable remaining on the reel. The height of the marking must be 2.5 mm nominal.

12. All optical fibers must be 100% attenuation tested at the factory for compliance with performance specifications described herein. The attenuation of each fiber must be provided with each cable reel.

13. The outer jacket must be constructed of medium density polyethylene, minimum jacket thickness of 1.4 mm. Jacketing material must be applied directly over the tensile strength members and flooding compound. The outer jacket must be UV and fungus resistant.

(c) Single Mode Optical Specifications

Optical Wavelength	1,300nm and 1.550 nm
Optical Attenuation	@ 1,300 nm: 0.7 dB/km @ 20 C @ 1,550 nm: 0.6 dB/km @ 20 C
Optical Dispersion	@ 1,300 nm: 3.5-4.5 psec/nm-km @ 1,550 nm:(</=) 20 psec/nm-km
Zero-Dispersion Wavelength	1300 to 1320 nm, nominal
Zero Dispersion Slope	<=0.092 ps/nm^2-km
Fiber Core Diameter	8.3 um, typical
Fiber Coating Diameter	250+/-10 um
Fiber Cladding Diameter	125+/-2 um
Core to Cladding Offset	<=1.8 um

Cladding Non-Circularity	<=1.0%
Spot Size	9.3+/-0.5 UM @ 1300 nm 10.5+/-1 UM @ 1550 nm
Cutoff Wavelength	<=1250 nm

(d) Multimode Optical Specifications

Operational Wavelength	850 nm and 1,300 nm
Optical Attenuation @850 nm:	400 MHZ-km @ 20 C
@ 1,300 nm:	400 MHZ-km @ 20 C
Fiber Core Diameter	62.5 um +/-3.0 um
Fiber Coating Diameter	250 +/-15 um
Fiber Cladding Diameter	125 +/-2.0 um
Core to Cladding offset	<=3.0 um
Cladding Non-Circularity	<=6.0%
Numerical Aperture	0.275+/0.015
Index	Graded Index

(e) Hybrid Cable Mechanical Specifications

Crush Resistance	5,000 N/m. length of cable
Cable Outside Diameter	0.50' nominal
Minimum Bending Radius:	
Installation	20 times the cable diameter
Static	10 times the cable diameter
Temperature:	
Installation	-30 C to + 70 C
Storage/Operation	-40 C to + 70 C
Humidity	0 to 100%
Tensil Strength:	

Installation	2,700 N (600 ibf)
Static	600 N (125 ibf)

FIBER OPTIC PIGTAILS

2. The optical pigtail provided under this Contract must consist of multiple fibers, factory connectorized on one end, suitable for installation in an outdoor duct run. Each fiber must be individually jacketed, with aramid yarn fibers between the fiber and the sub-jacket. The fibers must then be contained in a medium density polyethylene outer jacket. The multi-fiber pigtail must be provided in eight (8) multimode fibers/configuration.

   The factory installed ST connectors furnished as part of pigtails must meet or exceed the requirements for approval connectors specified herein. There must be a S-T type connector installed on all eight (8) multi-mode Fiber Optic Pigtails will be determined on Sub-orders placed.

   The cable must be suitable for installation in outdoor manholes with water and/or ice.

   Each jacketed fiber must have a tensile strength in excess of 50 lbs.

Storm Water Pollution Prevention Plan

Illinois Department of Transportation

Storm Water Pollution Prevention Plan

Route	I-90/94 Dan Ryan Expressway	Marked	Dan Ryan Expressway I-57 at Illinois Route 1 (Halsted St) & I-90 at MLK to 31st Street
Section	See individual contract	Project No.	Various Contract Numbers – Refer to Attachment
County	Cook, IL		

This plan has been prepared to comply with the provisions of the MSY-Phase II NPDES Permit Number ILR40, issued by the Illinois Environmental Protection Agency for storm water discharges.

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.

John P. Kuc — Signature

August 5, 2008 — Date

District Engineer — Title

1 Site Description

a. The following is a description of the construction activity which is the subject of this plan (use additional pages, as necessary):

The project is located at Interstate 94 (the Dan Ryan Expressway) from the I-57 interchange to Illinois 1 (Halsted Street) to the west and Martin Luther King (MLK) Drive to the east, and continues in a northerly direction to 31st Street.

Construction Descriptions

The Dan Ryan Expressway project consists of roadway improvements including added lanes, mainline and shoulder reconstruction, construction of retaining walls, new collector-distributor roadways, new and relocated exit and entrance ramps, lighting, drainage, signing, and surveillance improvements.

The Dan Ryan Expressway reconstruction project was designed in three segments in Phase I. The three segments are described from south to north.

The segment from 95th to 67th Streets (U.S. Route 20 / 45), the improvement includes reconstruction of the eight traffic lanes of the existing Dan Ryan Expressway pavement, the addition of a through travel lane in each direction, and modifications to entrance and exit ramps. The improvement involves the addition of a through travel lane along both northbound and southbound Dan Ryan onto Interstate 57 to the interchange with Halsted Street (Illinois Route 1). There are intersection improvements at 79th Street.

The segment from 67th to 47th Street includes reconstruction of the existing northbound and southbound express lanes (four lanes in each direction) and local lanes (two lanes in each direction). The improvement will also provide for an additional through travel lane in each direction to the local traffic lanes, and modifications to all entrance and exit ramps. There are intersection improvements at 67th Street. Frontage roads will be reconstructed both northbound and southbound from 63rd to 47th Streets. Additional work will involve bridge construction and reconfiguration of the Chicago Skyway / Dan Ryan Expressway interchange to provide an additional entrance ramp from the Chicago Skyway to connect directly to the northbound Dan Ryan Expressway express lanes.

The scope of the roadway work between 47th and 31st Streets will include reconstruction of the existing northbound and southbound express lanes (four lanes in each direction) and local lanes (three lanes in each direction) to the Dan Ryan Expressway pavement, and the reconstruction and/or reconfiguration of entrance and exit ramps. The Root Street structure (41st Street) will be removed.

The drainage work consists of removing or abandoning the existing collector storm sewer system and surface water collection system and constructing a new collector storm sewer and surface water collection system. The existing main drain will remain in place and remain functional, with new connections for the proposed storm sewer system. New collector sewers to drain the area directly tributary to the Dan Ryan Expressway (CTA tracks, local lanes, and adjacent ramps and grass areas), and overflows from offsite tributary areas (frontage roads) are planned. Separate collector sewers are required to drain the northbound and southbound lanes of the Dan Ryan Expressway. These proposed collector sewers are to be designed to convey the 50-year storm event.

The work will include the construction of new retaining walls and the rehabilitation, and/or modifications of several existing retaining walls and any roadway and traffic signal improvements required at cross streets and alternate routes.

In addition, other improvements include:

- A new highway lighting system (110 foot towers with lights on 11-foot mounting rings).
- New expressway signing (provides four new and upgrade three changeable message signs).
- Replacement of traffic surveillance equipment with upgraded technology.
- Closed circuit television for traffic conditions and crash incident monitoring.
- Accident investigation sites.
- Other incidental work as required completing the reconstruction of this segment of the expressway to AASHTO and IDOT criteria.

The improvement will also consolidate several points of access and improve the unsafe weaving conditions created by the existing substandard weaving distances. Currently, ramps are spaced evenly at one-half mile increments, resulting in weaving distances in the range of 300 feet. This is a major safety concern and suspected cause for the high incidence of sideswipe collisions in the ramp influence areas. The proposed access consolidation plan improves many of the mainline weaving movements while minimally influencing the local access to the Dan Ryan Expressway through the addition of collector-distributor roadways and both entrance and exit ramp removals. The presence of parallel city street frontage roads facilitates local access without substantive changes in through and local travel patterns. The proposals for ramp closure are:

- Northbound (NB) exit and southbound (SB) entrance at 76th Street (2 ramps)
- Northbound (NB) and southbound (SB) exits and entrances at 59th Street (4 ramps)
- Northbound (NB) and southbound (SB) exits and entrances at 51st Street (4 ramps)
- Northbound (NB) exit and southbound (SB) entrance at 43rd Street (2 ramps)

Capacity analyses indicate unsatisfactory conditions at the intersections of 55th Street (Garfield Boulevard) / Wells Street and 55th Street (Garfield Boulevard) / Wentworth Avenue. The improvements necessary to make this interchange operate effectively require right-of-way acquisition from three separate parcels. The parcels on the southwest quadrant of 55th Street (Garfield Boulevard) / Wells Street is occupied by a "Mobil Service Station" in which a portion of each of the two parcels shall be acquired to construct an eastbound to southbound right turn lane. In addition, dual right turn lanes are proposed for the northbound to eastbound movement at the intersection of 55th Street (Garfield Boulevard) / Wentworth Avenue. These right turn lanes require securing property, the portion of the parcel that is currently vacant.

To construct the proposed two-lane, left-hand exit to the Chicago Skyway from the southbound lanes on the Dan Ryan Expressway, Wells Street needs to be relocated from 64th Street to 65th Street. The improvement requires reconstruction of an18 foot high retaining wall adjacent to the mainline and the full replacement of the frontage road (Wells Street) pavement. The realignment shifts the centerline of the road approximately 10 feet west. A relocation and reconstruction of the west sidewalk bordering Wells Street does encroach into a parcel currently owned by the Chicago Housing Authority for the "Yale Street Apartment". The corner parcel would facilitate the relocation and reconstruction of the 5 foot sidewalk and modifications to the bituminous parking lot.

The right-of-way uses are summarized in the tabulation below:

Right-of-Way Acquisition	**Acres**	**Number of Parcels**
SW Corner of 55th / Wells Street	0.05	6
SE Corner of 55th / Wentworth Avenue	0.10	1
NE Corner of 57th / Wentworth Avenue	0.12	2
SE Corner of 57th / Wentworth Avenue	0.24	1
NE Corner of 59th / Wentworth Avenue	0.007	1
SE Corner of 59th / Wentworth Avenue	0.014	1
NW Corner of 63rd / Wells Street	0.05	1
Along West edge of Wells Street From 65th Street to 64th Street	0.11	1
Temporary Construction Easement	**Acres**	**Number of Parcels**
Along west edge of Wells Street From 65th Street to 64th Street	0.07	1

The Total Acquired Right-of-Way (ROW) is 0.691 acres involving eight parcels, with a Temporary Construction Easement (TCE) of 0.07 acres involving one parcel.

Environmental Descriptions

Special waste for the Dan Ryan project has **HIGH** risk for the occurrence of regulated substances or natural hazards at twelve sites. A Preliminary Environmental Site Assessment (PESA #1106) with stipulations for excavation depths varies for twelve high risk locations. Depth stipulations can be met at Sites: 808-10A, 1106-17B, 1106-25B, 1106-44A, and 1106-51. A request for Preliminary Site Investigation (PSI) will be required for Sites: 1106-2B, 1106-4A, 1106-6A, and 1106-9, 1106-33B, 1106-47, and 1106-52.

Besides special waste, there are no ecologically sensitive areas in the Dan Ryan project area. The Environmental Survey Request Form (ESRF) on 10/15/99 requested only biological and special waste survey because all of the ground had been previously disturbed and no new right-of-way is to be involved with areas not previously occupied, excavated, or disturbed. The project, as described on the ESRF, does not require biological or wetland surveys. The Illinois Department of Natural Resources (IDNR) Natural Heritage Database has no records of listed species, natural areas or nature preserves within the Dan Ryan project corridor (IDNR Agency Action Report dated September 20, 1999). By agreement, no coordination with the Illinois Department of Natural Resources (IDNR) and the U.S. Fish and Wildlife Service (USFWS) are necessary.

No streams or rivers are involved with this project. There is no water resources in the area involved with the project. A closed drainage system for storm water and urban roadway cross section, including pavement and shoulder, will continue.

The project will result in the disturbance of 0.4 or more hectares (1.0 acre). Permit coverage for the project is secured either under the IEPA Phase II General Permit for Storm-water Discharges (NPDES Permit No. ILR40) or under an individual NPDES permit. Requirements applicable for a permit will be followed, including the preparation of a Storm-water Pollution Prevention Plan. The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the construction site. The plan shall describe and ensure the implementation of practices that will reduce the pollutants in discharges associated with construction site activity and assure compliance with terms of the permits.

Although there may be a remote possibility (not likely) of a potable water well within 200 feet (60 meters) of the centerline, this threshold is only relevant for routes and sources of groundwater pollution. Since this project will not introduce any new routes of groundwater pollution (dry wells, "French drains", or borrow pits) or sources (bulk road oil or deicing storage facilities), then there will be no violation of the wellhead setback requirements.

According to the National Flood Insurance Rate Maps (FIRM), there are no flood plains involved within this project limits.

From field inspection by project team environmental and wetland specialists, and their review of the available and published National Wetlands Inventory (NWI) maps, and the most recent available aerial photography of the area, determined wetlands are not involved. The project is within the existing rights-of-way, and no wetlands are located within or adjacent to the required parcels, which include: west edge of Wells Street from 65th to 64th Street; 63rd Street and South Wells Street, 59th Street and Wentworth Avenue; 57th Street and Wentworth Avenue; 55th Street and South Wentworth Avenue, and 55th Street and South Wells Street.

There is no use or proposed use of protected Section 4(f), Section 6f lands, or lands that have OSLAD funds involved with their purchase and/or development.

b. The following is a description of the intended sequence of major activities for the reconstruction of the Dan Ryan Expressway. The construction year, contract number, description, duration of construction, and highlights of work to be completed follow.

Contract # – Name/Description
Contract Duration
- Major Activities

Construction Year 2003

62573 – Shoulder Repair and Median Cross-Over
August 18 – October 31, 2003
- Reconstruction of the 65th to 47th Street local lane inside shoulder

62591 – Storm Sewer Jacking
November 15, 2003 – June 4, 2004
- Storm sewer jacking from 95th to 67th Streets

Construction Year 2004 to 2005

62594 – 83rd to 79th Street C-D System and Ramps
March 1 – October 31, 2004
- Reconstruction and reconfiguration of the collector-distributor (C-D) ramps between 83rd and 79th Streets
- Replacement of the storm sewer
- Retaining wall construction

62691 – Reconstruct Watermain Crossing under the Dan Ryan from 32nd Street to 63rd Street
May 3, 2004 – June 20, 2005

62590 – 71st to 67th Street C-D System and Ramps
June 21, 2004 – August 15, 2005
- Reconstruction of the collector-distributor (C-D) ramps between 71st and 67th Street
- Improvements to 67th Street / State Street intersection
- Retaining wall construction
- Reconstruction of the 67th Street bridge

62587 – Wentworth Avenue Overpass and Wells Street Realignment
June 21, 2004 – June 30, 2005
- Reconstruction of Wells Street from 67th to 63rd Street
- Reconstruction of Wentworth Avenue bridge

62589 – Skyway Interchange Bridges and Local Lanes Wentworth Avenue to 67th Street
June 21, 2004 – August 15, 2005
- Dan Ryan / Skyway interchange
- Reconstruction of local lanes from 67th to 63rd Street
- Retaining wall construction

62586 – 57th Street Bridge, Retaining Walls, Ramps and Frontage Roads 63rd to 47th Streets

August 1, 2004 – October 31, 2005

- Reconstruction of the frontage roads, Wells Street and Wentworth Avenue, between 63rd and 47th Street
- Construction of eight (8) new ramps between 63rd and 47th Street
- Construction of the new 57th Street bridge over the Dan Ryan
- Retaining walls

62585 – Reconstruct SB Ramps between 39th and 31st Street and Shoulder Reconstruction

September 13, 2004 – November 30, 2005

- Reconstruction of the SB ramps between 39th and 31st Street

62584 – Reconstruct NB Ramps between 39th and 31st Street and Shoulder Reconstruction

September 13, 2004 – November 30, 2004

- Reconstruction of the NB ramps between 39th and 31st Street

62692 – Reconstruct Watermain Crossings under the Dan Ryan from 75th Street to the I-57 Interchange

September 27, 2004 – July 1, 2005

TBA – Reconstruct I-57 Bridge over WB Cross Connection from I-94 and Tunnel over SB I-94

December 21, 2004 – July 4, 2005

62694 – NB Retaining Walls and Ramps from 71st to I-57 and 71st to 75th Street C-D System

February 28, 2005 – December 30, 2005

62695 – SB Retaining Walls and Ramps from 71st Street to I-57 and 71st to 75th Street C-D System

February 28, 2005 – December 30, 2005

Construction Year 2006

62592 – NB Outside Lanes (4, 5, and Shoulder), 71st to I-57 and Miscellaneous Ramps

March 6 – October 27, 2006

- Reconstruction of the local lanes 4, 5, and the outside shoulder for the Dan Ryan I-57 interchange
- Replacement of the storm sewer
- Retaining wall construction

62593 – SB Outside Lanes (4, 5, and Shoulder), 71st to I-57 and Miscellaneous Ramps

March 6 – October 27, 2006

- Reconstruction of the local lanes 4, 5, and the outside shoulder for the Dan Ryan I-57 interchange
- Replacement of the storm sewer
- Retaining wall construction

62302 – SB Express Lanes 71st to 47th Streets
March 6 – October 27, 2006
- Reconstruction of the express lanes between 67th and 47th Street
- Construction of lanes 4 & 5 between 71st and 67th Street

62300 – NB Express Lanes 71st to 31st Streets
March 6 – October 27, 2006
- Reconstruction of the NB and SB express lanes between 71st to 31st Street

Construction Year 2007

62304 – NB Inside Lanes (1, 2 and 3, shoulder and barrier wall) from 71st Street and the I-57 Interchange and Miscellaneous Ramps
March – November 2007
- Reconstruction of the NB local lane 3
- Reconstruction of the I-57 interchange
- Replacement of the storm sewer
- Reconstruction of NB Dan Ryan inside Lanes 1 and 2
- Reconstruction of CTA wall

62305 – SB Inside Lanes (1, 2 and 3, shoulder and barrier wall) from 71st Street and the I-57 Interchange and Miscellaneous Ramps
March – November 2007
- Reconstruction of the SB local lanes 3
- Reconstruction of the I-57 interchange
- Replacement of the storm sewer
- Reconstruction of SB Dan Ryan inside Lanes 1 and 2
- Reconstruction of CTA wall

62303 – SB Local Lanes 71st to 31st Streets and Miscellaneous Ramps
March – November 2007
- Reconstruction of the local lanes between 67th and 47th Street
- Reconstruction of the local lanes 1, 2, and 3 between 71st and 67th Street
- Construction of the WB Skyway ramp to NB Dan Ryan Local

62301 – NB Local Lanes 71st to 31st Streets and Miscellaneous Ramps
March 7 – November 2007
- Reconstruction of the NB and SB local lanes between 47th to 31st Street

c. The total area of the construction site is estimated to be 612 acres.

The total area of the site that it is estimated will be disturbed by excavation, grading or other activities is acres 433.

d. The estimated runoff coefficients of the various areas of the site after construction activities are completed are contained in the project drainage study, which is hereby incorporated by reference in this plan. Information describing the soils at the site is contained in individual Soils Reports for each construction contract.

e. The design/project report, hydraulic report, or plan documents, hereby incorporated by reference, contain site map(s) indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of major soil disturbance, the location of major structural and nonstructural 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 a surface water.

f. The names of receiving water(s) and areal extent of wetland acreage at the site are in the design/project report or plan documents, which are incorporated by reference as a part of this plan.

2. Controls

This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b. above. For each measure discussed, the contractor that will be responsible for its implementation is indicated. Each such contractor has signed the required certification on forms which are attached to, and a part of, this plan:

a. Erosion and Sediment Controls

(i) Stabilization 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: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided in 2.a.(i).(A) and 2.b., 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 ceased on all disturbed portions of the site where construction activity 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.

Description of Stabilization Practices:

1. Temporary Erosion Control Seeding shall be applied in accordance with the Special Provision. Seed mixture will depend on the time of year it is applied. Oats will be applied from January 1 to July 31 and Hard Red Winter Wheat from August 1 to December 31.

2. Short Term Seeding - Seeding Class 2A shall be used to protect bare earth from more than just one or two summer-winter cycles. Due to the length and complexity of this project, it is necessary that short term, final graded slopes be short term seeded as directed by the Engineer.

3. Stone Riprap - Class A4 stone riprap with filter fabric will be used as protection at the discharge end of most storm sewer and culvert end sections to prevent scouring at the end of pipes and to prevent downstream erosion.

4. Temporary Tree Protection - Shall consist of items "temporary fencing" and "tree trunk protection" as directed by the engineer and in accordance with Article 201.05 of the Illinois Department of Transportation's Standard Specifications for Road and Bridge Construction.

5. Permanent Stabilization - All areas disturbed by construction will be stabilized as soon as permitted with permanent seeding following the finished grading, but always within seven days with Temporary Erosion

Control Seeding. Erosion Blankets will be installed over fill slopes, which have been brought to final grade and have been seeded to protect the slopes from rill and gully erosion and allow seeds to germinate properly.

6. Erosion Control Blankets and Mulching - Erosion control blankets will be installed over fill slopes and in high velocity areas that have been brought to final grade and seeded to protect slopes from erosion and allow seeds to germinate. Mulch will be applied in relatively flat areas to prevent further erosion.

(ii) 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 silt fences, earth dikes, drainage swales, sediment traps, check dams, 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.

Description of Structural Practices:

1. Sediment Control, Stabilized Construction Access - Coarse aggregate overlaying a geotextile fabric will be placed in locations necessary for contractor access. The aggregate surface of the access points will capture soil debris, reducing the amount of soil deposits placed on to the roadway by vehicles leaving the work zones.

2. Inlet Filters - Inlet and Pipe Protection will be provided for storm sewers. These filters will be placed in every inlet, catch basis or manhole with an open lid, which will drain water during at least a 10-year storm event. The Erosion Control Plan will identify the structures requiring Inlet filters.

3. Sediment Control, Silt Fence - A silt fence will be placed adjacent to the areas of construction to intercept waterborne silt and prevent it from leaving the site. These areas are marked on the erosion control plans in each contract.

4. Sediment Control, Temporary Ditch Checks - Rolled excelsior ditch checks will be placed in swales at the rate of one for every 0.3 meters in vertical drop, or as directed by the Engineer, in order to prevent downstream erosion.

5. Sediment Control, Temporary Stream Crossing - Coarse aggregate overlaying a geotextile fabric will be placed in locations necessary for contractor access over water channels. The aggregate surface of the crossing will reduce the amount of soil disturbance in the streams.

6. Sediment Control, Temporary Pipe Slope Drain - This item consists of a pipe with flared end sections, placed daily, along with anchor devices in conjunction with temporary berms that direct runoff down an unstabilized slope.

7. Sediment Control, Dewatering Basins will be provided at wherever the contractor is removing and discharging water from excavated areas and the water is not being routed through a sediment trap or basin.

8. Stone riprap will be provided at several storm and culvert outlets as a measure for erosion and sediment control where needed during and after the project.

9. Bridges will be designed to reduce the potential for scouring.

10. Underdrains will be used to minimize potential erosion caused by surface water flows by reducing the subsurface water which can cause failed pavements, unstable shoulders and other disturbed areas.

11. Covers will be placed on open ends of pipes in trenches.

The structural practices indicated above may not be used in every contract. The Erosion Control Plans included in every contract will indicate which structural practices are required for that contract.

b. 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.

(i) Such practices may include: 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 10-300 (Design Considerations) in Chapter 10 (Erosion and Sedimentation Control) of the Illinois Department of Transportation Drainage Manual. If practices other than those discussed in Section 10-300 are selected for implementation or if practices are applied to situations different from those covered in Section 10-300, the technical basis for such decisions will be explained below.**

(ii) 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).

(iii) The Department proposes to remove vegetation within the project limits as necessary for construction. The Department proposes to revegetate according to the City of Chicago Landscape Framework Plan.

c. Other Controls

(i) Waste Disposal. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

(ii) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

d. Approved State or Local Plans

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 or site permits or 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 ILR40 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: See Landscape Design and Erosion Control for further details. In addition, Guidance Memorandums #02-14 and #02-22 leading up to the ILR40NPDES Permit Requirements IDOT Strategies of Storm Water Management will be complied with along with Construction Memorandum 02-60.

3. Maintenance

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan:

Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or pollution runoff in compliance with environmental law and EPA Water Quality Regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site. The construction field engineer on a weekly basis shall inspect the project to determine that erosion controls efforts are in place and effective and if other control is necessary. Sediment collected during construction by the various temporary erosion systems shall be disposed on the site on a regular basis as directed by the Engineer.

All erosion and sediment control measures will be checked weekly and after each significant rainfall (13 mm (0.5 inch) or greater in a 24 hour period). The following items will be checked:

1. Seeding - all erodable bare earth areas will be temporarily seeded and inspected on a weekly basis to minimize the amount of erodable surface within the contract limits.
2. Silt Filter Fence, all types
3. Erosion Control Blanket
4. Tree Protection
5. Ditch Checks
6. Temporary slope drains
7. Sediment/dewatering basins
8. Stabilized construction entrances

All maintenance of the erosion control systems will be the responsibility of the contractor. All locations where vehicles enter and exit the construction site and all other areas subject to erosion should also be inspected periodically. Inspection of these areas shall be made at least once every seven days and within 24 hours of the end of each 13 mm (0.5 inch) or greater rainfall, or an equivalent snowfall.

4. **Inspections**

Qualified personnel shall inspect disturbed areas of the construction site, which have not been finally stabilized, structural control measures, and locations where vehicles enter or 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 and areas used for storage of materials that are exposed to precipitation 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. Where discharge locations or points are accessible, they 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 1 above and pollution prevention measures identified in section 2 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 7 calendar days following the inspection.

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 4.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 or Resident Technician shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technician 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 report of noncompliance 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

5. **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 is described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

Dewatering activities for footing and pier construction of retailing walls and bridges will be a source of non-storm water discharge during construction. Contractors should discharge dewatering activities to a temporary settling basing surrounded by silt fence.

The cutting of joints in PCC pavements or bridge deck grooving will result in slurry. This slurry shall be contained on the deck/pavement and cleaned up.

An additional source of non-storm water discharge during construction is the slurry from washing out redi-mix concrete trucks. Redi-mix concrete trucks should wash out in designated areas surrounded by silt fence. After all PCC items have been constructed, the dried concrete wash material should be cleaned up and properly disposed of. It will be the contractor's responsibility to secure these designated areas for the duration of their use. The Engineer will approve the locations.

On site maintenance of equipment shall be performed in accordance with environmental law, such as proper storage and no dumping of old engine oil or other fluids on site.

Good Housekeeping

1. An effort will be made to store only enough product required to do the job.
2. All materials stored on site will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
3. Products will be kept in their original containers with the original manufacturer's label.
4. Substances will not be mixed with one another unless recommended by the manufacturer.
5. The site superintendent will inspect daily to ensure proper use and disposal of materials on the site.
6. Whenever possible, all of a product will be used up before disposing of the container.
7. Follow manufacturer's recommended practices for use and disposal.

Illinois Department of Transportation

Contractor Certification Statement

This certification statement is a part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with NPDES Permit No. ILR40, issued by the Illinois Environmental Protection Agency on ____ ___, 2003.

Project Information:

Route I-90/94 Dan Ryan Expressway

Marked Dan Ryan Expressway
I-57 at Illinois Route 1 (Halsted St)
& I-90 at MLK to 31st Street

Section See individual contract

Project No. Various Contract Numbers –
Refer to Attachment

County Cook

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 40) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature

Date

Title

Name of Firm

Street Address

City State

Zip Code

Telephone Number

Storm Water Pollution Prevention Plan – Attachment

Project Limits: Dan Ryan Expressway I-57 at Illinois Route 1 (Halsted St) & I-90 at MLK to 31st Street

Attachment: Contract Numbers and Description. Note that the contract numbers are listed in numerical order.

IDOT Contract No.	Description
62300	Reconstruct NB Express Lanes from 31st Street to 71st Street
62301	Reconstruct NB Local Lanes from 31st St. to Wentworth Ave. and Misc. Ramps
62302	Reconstruct SB Express Lanes from 31st Street to 71st Street
62303	Reconstruct SB Local Lanes from 31st St. to Wentworth Ave. and Misc. Ramps
62304	Reconstruct NB Inside Lanes (1-3, shoulder and barrier wall) from 71st Street to I-57 Interchange
62305	Reconstruct SB Inside Lanes (1-3, shoulder and barrier wall) from 71st Street to I-57 Interchange
62573	Shoulder Rehabilitation from 47th St. to 71st St.
62584	Reconstruct NB ramps between 31st and 39th Street and Shoulder Rehabilitation
62585	Reconstruct SB ramps between 31st and 39th Street and Shoulder Rehabilitation
62586	Reconstruct 57th St. Bridge, and Frontage Rds., Retaining Walls, and Ramps between 47th and 59th. Streets
62587	Wentworth Avenue Overpass Reconstruction and Wells Street Realignments
62589	Skyway Interchange Bridges and Local Lanes from Wentworth Avenue to 67th Street
62590	Reconstruct 67th St. Bridge and NB and SB C-D System between 67th and 71st St.
62591	Storm Sewer Jacking & Collector Sewers from 67th Street to 95th Street.
62592	Reconstruct NB Outside Lanes (4, 5, shoulder) from 71st to I-57 Interchange
62593	reconstruct SB Outside Lanes (4, 5, shoulder) from 71st to I-57 Interchange
62594	Reconstruct NB and SB C-D System and Ramps between 79th and 83rd Streets
62691	Reconstruct Watermain crossings under Dan Ryan from 32nd to 63rd
62692	Reconstruct Watermain Crossings Under the Dan Ryan from 75th St. to I-57 Interchange
62693	Frontage Rds., Retaining Walls, and Ramps between 59th. and 63rd.
62694	Reconstruct NB Retaining Walls & Ramps from 71st to I-57 Interchange, and 71st to 75th C-D System
62695	Reconstruct SB Retaining Walls & Ramps from 71st to I-57 Interchange, and 71st to 75th C-D System
TBA	Reconstruct NB I-57 Bridge over WB cross connection from I-94 & tunnel over SB I-94

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. These contract provisions shall apply to all word 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

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

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 advised 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

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 listed on the wage determination unless the Administrator of the 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 suncontractors.

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 that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked 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 he 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 form the total original contract price before computing the amount of work required to be performed by the contractor's 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 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.

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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.

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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 tie 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.

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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.

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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

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.il.gov/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.il.gov/desenv/subsc.html.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.